



**Resources
Regulator**

ARR0001622

MULLION CREEK QUARRY ANNUAL REHABILITATION REPORT

Tuesday 19 November 2024 to Tuesday 18 November 2025

Summary table

Detail	
Mine	Mullion Creek Quarry
Reference	ARR0001622
Annual report period commencement date	Tuesday 19 November 2024
Annual report period end date	Tuesday 18 November 2025
Forward program	FWP0001510
Mining leases	ML 1235 (1973)
Lease holder(s)	Csr Building Products Limited
Contact	Sinead Kelly
Date of submission	undefined
Document URL	https://www.pghbricks.com.au/resources/other-resources/nsw-environmental-reporting
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Important

The department may make the information in your program and any supporting information available for inspection by members of the public, including by publication on its website or by displaying the information at any of its offices. If you consider any part of your program to be confidential, please communicate this to the department via the message function on this submission within the Resources Regulator Portal.

Mine Details

Project description

PGH Bricks & Pavers Pty Ltd operates Mullion Creek Clay Mine, an open cut mine located approximately 13km north of Orange and is zoned RU1-Primary Production. No further extraction of clay is proposed for the mining lease. The mine was previously under care and maintenance, and rehabilitation works commenced in 2023 towards final landform. CSR Building Products (trading as PGH Bricks & Pavers Pty Ltd) was granted Development Application DA 2009/153 on 20/06/2010. This is the most recent consent documentation and does not list an expiry date. Consultation with the Landowner on the closure plan was undertaken and an agreement was signed in 2023, prior to commencing rehabilitation of the landform previously under care and maintenance. PGH intends to relinquish the mining lease once the final landform is rehabilitated to the Regulator's and Landowner's specifications.

Life of mine

2 years

Current development consents, leases and licences

Development consents granted under the *Environmental Planning and Assessment Act 1979*

DA009/153

Authorisations covering the mining area granted under the *Mining Act 1992*

ML 1235 (1973)

Any other approvals, licences, or authorities issued by government agencies that are relevant to the progress of mining operation and rehabilitation activities

Summary of the scope and/or purpose of the new applications or modifications to existing approvals (if applicable)

No changes to approvals were made during the reporting period.

Changes to land ownership and land use

No changes to land ownership or land use were made during the reporting period.

Surface disturbance and rehabilitation activities during the reporting period

Surface disturbance and rehabilitation activities that were conducted and an analysis of the progress against the rehabilitation schedule

As rehabilitation works are now nearing completion, current activities are focused on addressing any remaining issues or required corrective actions. The 2024 FWP outlined several commitments, including monitoring of new final batters for signs of erosion; monitoring newly rehabilitated areas to assess vegetation establishment and identify opportunities for improvement or reseeded; undertaking water quality monitoring to ensure runoff leaving the site meets appropriate standards; and conducting visual inspections during site visits to assess overall rehabilitation progress. All of these rehabilitation activities have been carried out during the most recent reporting period. Any surface disturbance or rehabilitation work undertaken at this stage is now limited to addressing specific issues as they arise.

Overview of rehabilitation management and maintenance activities

Rehabilitation management and maintenance activities undertaken during the most recent reporting period included monitoring new final batters for evidence of erosion; assessing newly rehabilitated areas to evaluate vegetation establishment and identify any requirements for improvement or reseeded; conducting water quality monitoring to ensure runoff leaving the site complies with relevant standards; and performing visual inspections during site visits to assess overall rehabilitation progress.

Key production milestones

MATERIAL	UNIT	FWP0001510 YEAR1		THIS REPORT
Stripped topsoil (if applicable)	(m ³)	0		0
Rock/overburden	(m ³)	0		0
Ore	(Mt)	0		0
Reject material ¹	(Mt)	0		0
Product	(Mt)	0		0

¹This includes coarse rejects, tailings and any other wastes resulting from beneficiation.

Disturbance and rehabilitation statistics

Current disturbance and rehabilitation progression

ELEMENT		UNIT	THIS REPORT
A	Total disturbance footprint - surface disturbance	(ha)	5.86
B	Total active disturbance	(ha)	0.45
C	Rehabilitation - land preparation	(ha)	0
D	Ecosystem and land use establishment	(ha)	5.43
E	Ecosystem and land use development	(ha)	0
F	Rehabilitation completion	(ha)	0

Attachment 1 - Reporting Definitions

REPORTING CATEGORY		DEFINITION
A1	Total disturbance footprint - surface disturbance	All areas within a mining lease that either have at some point in time or continue to pose a rehabilitation liability due to surface disturbance activities. The total disturbance footprint is the sum of the total active disturbance, decommissioning, landform establishment, growth medium development, ecosystem and land use establishment, ecosystem and land use development and rehabilitation completion (see definitions below). Underground mining operations should not include the footprint of underground mining areas/subsidence management areas in the total disturbance footprint.
A2	Underground Mining Area	Underground mining operations areas/subsidence management areas.
B	Total active disturbance	Includes on-lease exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste rock emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped) and temporary stabilised areas (e.g. areas sown with temporary cover crops for dust mitigation and temporary rehabilitation).
C	Rehabilitation - land preparation	Includes the sum of all disturbed land within a mining lease that have commenced any, or all, of

REPORTING CATEGORY		DEFINITION
		the following phases of rehabilitation - decommissioning, landform establishment and growth medium development. Refer to the glossary of terms in this document for the definition of these phases of rehabilitation.
D	Ecosystem and land use establishment	Includes the area which has been seeded/planted with the target vegetation species for the intended final land use. However, vegetation has not matured to a stage where it can be demonstrated that it will be sustainable for the long term and or require only a maintenance regime consistent with target reference/analogue sites. Typically, rehabilitation areas would be in this phase for at least two years (and usually more) before rehabilitation can be classified as being in the ecosystem and land use development phase. This phase does not apply to infrastructure areas that are being retained as part of final land use for the site.
E	Ecosystem and Land Use Development	Rehabilitation has matured to a level where target revegetation outcomes are on a trajectory towards meeting the final rehabilitation objectives and rehabilitation completion criteria (as verified by monitoring). This phase includes infrastructure areas that are to be retained for an approved post mining land use, following completion of all necessary measures to render the infrastructure fit for this purpose (for example structural integrity).

REPORTING CATEGORY		DEFINITION
F	Rehabilitation Completion	The Resources Regulator has determined in writing that the mining area has achieved the approved rehabilitation objectives and approved rehabilitation completion criteria and final landform and rehabilitation plan following the submission of Form: <i>Rehabilitation completion and/or review of rehabilitation cost estimate and/or notification of mine or petroleum site closure</i> .
G	New active disturbance area	The area of any new active disturbance that has been created during the annual reporting period (definition A1 in Table 5).

Attachment 2 - Definitions

WORD	DEFINITION
Active	In the context of rehabilitation, land associated with mining domains is considered 'active' for the period following disturbance until the commencement of rehabilitation.
Active mining phase of rehabilitation	In the context of rehabilitation, the active mining phase of rehabilitation constitutes the rehabilitation activities undertaken during mining operations such as salvaging and managing soil resources, salvaging habitat resources, and native seed collection. This phase also includes management actions taken during operations to manage risks to rehabilitation and enhance rehabilitation outcomes such as selective handling of waste rock and management of tailings emplacements.
Analogue site	In the context of rehabilitation, an analogue site is a 'reference site' that represents an example of the defining characteristics (such as vegetation composition and structure or agricultural productivity) of the final land use. Characteristics of analogue sites can be assessed to develop the rehabilitation objectives and completion criteria for final land use domains.
Annual rehabilitation report and forward program	As described in the Mining Regulation 2016.
Annual reporting period	As defined in the Mining Regulation 2016.

WORD	DEFINITION
Closure	A whole-of-mine-life process, which typically culminates in the relinquishment of the mining lease. It includes decommissioning and rehabilitation to achieve the approved final land use(s).
Decommissioning	The process of removing mining infrastructure and removing contaminants and hazardous materials.
Decommissioning Phase of Rehabilitation	Activities associated with the removal of mining infrastructure and removal and/or remediation of contaminants and hazardous materials. In the context of the rehabilitation management plan this phase of rehabilitation may also include studies and assessments associated with decommissioning and demolition of infrastructure or works carried out to make safe or 'fit for purpose' built infrastructure to be retained for future use(s) following lease relinquishment.
Department	Department of Primary Industries and Regional Development.
Disturbance	See Surface Disturbance.
Disturbance area	An area that has been disturbed and that requires rehabilitation. This may include areas such as on-licence exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily stabilised (i.e. managed to minimise dust generation and/or erosion).

WORD	DEFINITION
Domain	An area (or areas) of the land that has been disturbed by mining and has a specific operational use (mining domain) or specific final land use (final land use domain). Land within a domain typically has similar geochemical and/or geophysical characteristics and therefore requires specific rehabilitation activities to achieve the associated final land use.
Ecosystem and Land Use Development	This phase of rehabilitation consists of the activities to manage maturing rehabilitation areas on a trajectory to achieving the approved rehabilitation objectives and completion criteria. For vegetated land uses this phase may include processes to develop characteristics of functional self-sustaining ecosystems, such as nutrient recycling, vegetation flowering and reproduction, and increasing habitat complexity, and development of a productive, self-sustaining soil profile. This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.
Ecosystem and Land Use Establishment	This phase of rehabilitation consists of the processes to establish the approved final land use following construction of the final landform. For vegetated land uses this rehabilitation phase includes establishing the desired vegetation community and implementing land management activities such as weed control. This phase of rehabilitation may also include habitat augmentation such as installation of nest boxes.
Exploration	Has the same meaning as that term under the State Environmental Planning Policy (Mining,

WORD	DEFINITION
	Petroleum Production and Extractive Industries) 2007.
Final landform and rehabilitation plan	As defined in the Mining Regulation 2016.
Final land use	As defined in the Mining Regulation 2016.
Form and way	Means the form and way approved by the Secretary. Approved form and way documents are available on the department's website.
Growth Medium Development	This phase of rehabilitation consists of activities required to establish the physical, chemical and biological components of the substrate required to establish the desired vegetation community (including short lived pioneer species). This phase may include spreading the prepared landform with topsoil and/or subsoil and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, and actions to minimise loss of growth media due to erosion.
Habitat	Has the same meaning as that term under the Biodiversity Conservation Act 2016 and the Fisheries Management Act 1994 (as relevant).
Indicator	An attribute of the biophysical environment (e.g. pH, topsoil depth, biomass) that can be used to approximate the progression of a biophysical process. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion

WORD	DEFINITION
	criterion (i.e. defined end point). It may be aligned to an established protocol and used to evaluate changes in a system.
Land	As defined in the Mining Act 1992.
Landform Establishment	This phase of rehabilitation consists of the processes and activities required to construct the final landform. In addition to profiling the surface of rehabilitation areas to the approved final landform profile this phase may include works to construct surface water drainage features, encapsulate problematic materials such as tailings, and prepare a substrate with the desired physical and chemical characteristics (e.g. rock raking or ameliorating sodic materials).
Large mine	As defined in the Mining Regulation 2016.
Lease holder	The holder of a mining lease.
Life of mine	The timeframe of how long a mine is approved to mine, from commencement to closure.
Mine rehabilitation portal	Means the Resources Regulator's online portal that lease holders must use (via a registered account) to:

WORD	DEFINITION
	▪ upload rehabilitation geographical information system (GIS) spatial data ▪ develop rehabilitation GIS spatial data (using online tracing functions) ▪ generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities. Data submitted to the mine rehabilitation portal is collated in a centralised geodatabase for use by the Resources Regulator to regulate rehabilitation performance of lease holders.
Mining area	As defined in the Mining Act 1992.
Mining domain	A land management unit with a discrete operational function (e.g. overburden emplacement), and therefore similar geophysical characteristics, that will require specific rehabilitation treatments to achieve the final land use(s).
Mining land	As defined in the Mining Act 1992.
Native vegetation	Has the same meaning as that term under section 60B of the Local Land Services Act 2013.
Overburden	Material overlying coal or a mineral deposit.
Performance indicator	An attribute of the biophysical environment (for example pH, slope, topsoil depth, biomass) that can be used to demonstrate achievement of a rehabilitation objective. It can be measured and audited to

WORD	DEFINITION
	demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion, that is, a defined end point. It may be aligned to an established protocol and used to evaluate changes in a system.
Phases of rehabilitation	The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are: ▪ active mining ▪ decommissioning ▪ landform Establishment ▪ growth medium development ▪ landform Establishment ▪ ecosystem and land use establishment ▪ ecosystem and land use development
Progressive rehabilitation	The progress of rehabilitation towards achieving the approved rehabilitation completion criteria. This may be described in terms of domains, phases, performance indicators and rehabilitation completion criteria.
Rehabilitation Completion	The final phase of rehabilitation when a rehabilitation area has achieved the approved rehabilitation objectives and rehabilitation completion criteria for the final land use. Rehabilitation areas may be classified as complete when the Resources Regulator has determined in writing that the relevant

WORD	DEFINITION
	rehabilitation obligations have been fulfilled following submission of <i>Form ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate application</i> by the lease holder.
Rehabilitation Completion criteria	As defined in the Mining Regulation 2016.
Rehabilitation cost estimate	As defined in the Mining Regulation 2016.
Rehabilitation management plan	As defined in the Mining Regulation 2016.
Rehabilitation objectives	As defined in the Mining Regulation 2016.
Rehabilitation risk assessment	As defined in the Mining Regulation 2016.
Rehabilitation schedule	The defined timeframes for progressive rehabilitation set out in the forward program.
Relevant stakeholders	Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: ▪ the relevant development consent authority ▪ the local council ▪ the relevant landholder(s) ▪ community consultative committee (if required under the development consent) or equivalent

WORD	DEFINITION
	consultative group ▪ affected land holder(s) ▪ government agencies relevant to the final land use ▪ affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities) ▪ local Aboriginal communities, and ▪ any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.
Risk	The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood (AS/NZS ISO 31000:2009).
Secretary	The Secretary of the department.
Security deposit	An amount that a mining lease holder is required to provide and maintain under a mining lease condition, to secure funding for the fulfilment of obligations under the lease (including obligations that may arise in the future).
Surface disturbance	Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.

WORD	DEFINITION
Tailings	A combination of the fine-grained solid material remaining after the recoverable metals and minerals have been extracted from the mined ore, and any process water ² .

Waste	Has the same meaning as that term under the <i>Protection of the Environment Operations Act 1997</i> .
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²Commonwealth of Australia (DITR), 2007. Tailings Management.

Attachment 3 - Rehabilitation Complaints

DATE	COMPLAINANT	COMPLAINT DETAILS	RESPONSE DETAILS	STATUS OF RESPONSE	DATE RESPONSE COMPLETED (IF APPLICABLE)
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Attachment 4 - Plans

Plan 1A attachment not provided.

Plan 1B attachment not provided.