NSW GOVERNMENT

Resources Regulator

FWP0001743

LUDDENHAM CLAY MINE FORWARD PROGRAM

Tuesday 14 October 2025 to Friday 13 October 2028

Summary

Detail	
Mine	Luddenham Clay Mine
Reference	FWP0001743
Forward program commencement date	Tuesday 14 October 2025
Forward program end date	Friday 13 October 2028
Forward program revision (if applicable)	
Contact	Sinead Kelly
Mining leases	ML 1816 (1992)
Project location	Luddenham Operations Pty Limited
Date of submission	Tuesday 9 December 2025
Document URL *Security reminder: Please exercise caution before opening external links. If a link appears suspicious, avoid clicking it and report it to the Resources Regulator.*	https://luddenhamquarry.com.au/#report

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.

Three-year forecast - surface disturbance activities

Project description

The Luddenham Clay/Shale mine is located at 275 Adams Road, Luddenham, NSW (Lot 2 DP 623799) within the Liverpool City Council Municipality. CFT No 13 Pty Ltd, a member of Coombes Property Group (CPG), currently owns the property. Mining operations were originally approved under State Significant Development (SSD) consent DA No. 315-7-2003 issued by the Minister for Infrastructure, Planning and Natural Resources on 23 May 2004. The existing consent has been modified a number of times and the latest modification, MOD 5, was approved May 2021. The mine was approved to produce and transport up to 300,000 tonnes per annum (tpa) of clay and shale product up to 31 December 2024, when the consent expired and extraction ceased. Rehabilitation is to continue beyond the expiry of the extraction activities.

Description of surface disturbance activities

Exploration activities

No exploration is proposed on site for the next three years.

Construction activities

No construction activities are proposed on site for the next three years. If approval is obtained to fill the void then an amended forward program describing construction activities will be submitted.

Mining schedule

Mining development method and sequencing and general mine features.

Mining ceased on 31 December 2024. For the years 2025-2027 no new disturbance is proposed however rehabilitation has commenced with the temporary stockpiling of materials to support future rehabilitation requirements.

Areas identified for emplacements, the sequencing of emplacements, construction, and management.

Overburden, if any, will be emplaced on perimeter bunds or within the void where possible.

Processing infrastructure activities and the location of tailings facilities and schedule for emplacement.

Not applicable.

Waste disposal and materials handling operations.

Raw natural burden materials like sandstone, siderite and laminite will be stored for rehabilitation purposes when required. Putrescible waste, such as nonrecyclables from the office and workshop will be collected by Council waste pickups. Hydrocarbons from potential fuel spills will be contained and collected using spill kits and will be taken to an appropriately licenced landfill and documented. Any contaminated soils will be assessed and will be treated as directed by appropriately qualified specialists.

Key production milestones

MATERIAL	UNIT	YEAR 1	YEAR 2	YEAR 3

Stripped topsoil (if applicable)	(m^3)	0	0	0
Rock/overburden	(m^3)	0	0	0
Ore	(Mt)	0	0	0
Reject material[1]	(Mt)	0	0	0
Product	(Mt)	0	0	0

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

Three-year rehabilitation forecast

Rehabilitation planning schedule

Rehabilitation planning schedule

- The final void will continue to be maintained in a stable condition, with stockpiled materials progressively removed from the quarry site. - Weed management activities will continue during the next reporting period to control regrowth and maintain the riparian zone biodiversity value. - Water levels within the final void will be actively managed and reduced as required to maintain safety and site stability compliance. - Approval will be sought for the planned infilling of the void in accordance with rehabilitation objectives.

Stakeholder consultation

Consultation has been undertaken with a number of authorities during the EIS process. In addition, comments were provided from relevant authorities on the drafts of the Site Rehabilitation Plan, Biodiversity Management Plan, Soil and Water Management Plan and Final Landuse Management Plans required under the consent. The issues raised were incorporated into the final plans required by conditions of consent and approved by DPIE. No further consultation is planned.

Rehabilitation studies, risk assessments and/or design work

Not applicable. To be updated if consent to fill the void is granted.

Rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS

Rehabilitation maintenance and corrective actions

No maintenance activities or knowledge gaps have been identified in the ARR for 2024-2025.

Rehabilitation schedule

It is expected to continue in 2025 as shown in Plan 2A attached. No 'new' areas of rehabilitation are proposed for this FWP. As per the RMP: - Infrastructure such as roads and services not required in final landform unless being utilised for void filling activities subject to separate approval. - Overburden material will be utilised to assist in battering the in-pit slopes. Slopes will be lightly ripped where possible to key in the overburden material. - Topsoil material stored in bunds may be reused on final surfaces. - Seeding/planting of pasture species will be undertaken on finished surfaces. - Rehabilitation progress to be monitored, conduct repairs if required as well as weed and pest management.

Completion of rehabilitation

No areas are expected to be completed for sign-off in the next three years.

Subsidence remediation for underground operations

Not applicable.

Progressive mining and rehabilitation statistics

Three-yearly forecast cumulative disturbance and rehabilitation progression

	Forecast	UNIT	YEAR 1	YEAR 2	YEAR 3
A1	**Total disturbance footprint - surface disturbance**	(ha)	9.91	9.91	9.91
O	**Total active disturbance**	(ha)	0.29	0.29	0.29
P	**Total new area of land proposed for active rehabilitation**	(ha)	8.72	8.72	8.72

Rehabilitation key performance indicators (KPIs)

	Forecast	UNIT	YEAR 1	YEAR 2	YEAR 3
O	**Total new disturbance area during reporting period**	(ha)			
P	**Total new area of land proposed for rehabilitation during the reporting period**	(ha)	8.72		
Q	**Annual rehabilitation to disturbance ratio**				

Attachment 1 - Reporting Definitions

REPORTING CATEGORY		DEFINITION
A	**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.
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

REPORTING CATEGORY		DEFINITION
		any, or all, of 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.
O		The area of any new active disturbance that will be created during the next three years, as defined under definition A1 (definition A1 Table 5).
P		The sum of any new rehabilitation to be commenced in the next three years. These areas may be in the phases "Rehabilitation - Land Preparation" or the "Ecosystem & Land Use Establishment" (definitions C & D in Table 5).

REPORTING CATEGORY	DEFINITION
Q	The rehabilitation to disturbance ratio (S / R) indicates how many hectares of new rehabilitation are undertaken for each hectare of land disturbed during the three years. A ratio of 1/1 indicates that the area of new rehabilitation and disturbance in that period are the same.

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 *Form ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate application* 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 *Protection of the Environment Operations Act 1997*.

[2]Commonwealth of Australia (DITR), 2007. Tailings Management.

Attachment 3 - Plans

Luddenham Clay Mine Plan 2A Year 1, FWP14 Oct 2025 to 13 Oct 2026

Legend

- Forecast Data Year1
  - Forecast Disturbance
  - Forecast Land Prepared for Rehabi
  - Ecosystem and Land Use Establish
- Project Approval Boundary
- Mine Operations Area
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

Notes

Submission IDs:
2112
11117

206.7 0 103.33 206.7 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Luddenham Clay Mine Plan 2B Year 2, FWP 14 Oct 2026 to 1 Oct 2027

Legend

- Forecast Data Year2
  - Forecast Disturbance
  - Forecast Land Prepared for Rehabi
  - Ecosystem and Land Use Establish
- Forecast Data Year3
  - Forecast Disturbance
  - Forecast Land Prepared for Rehabi
  - Ecosystem and Land Use Establish
- Project Approval Boundary
- Mine Operations Area
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

Notes

Submission IDs:
2112
No new areas of disturbance/rehabilitation are proposed for 2026-2027 period.

229.3 0 114.66 229.3 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Luddenham Clay Mine Plan 2C Year 2, FWP 14 Oct 2027 to 1 Oct 2028

Legend

- Forecast Data Year2
  - Forecast Disturbance
  - Forecast Land Prepared for Rehabi
  - Ecosystem and Land Use Establish
- Forecast Data Year3
  - Forecast Disturbance
  - Forecast Land Prepared for Rehabi
  - Ecosystem and Land Use Establish
- Project Approval Boundary
- Mine Operations Area
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

Notes

Submission IDs:
2112
No new areas of disturbance/rehabilitation are proposed for 2027-2028 period.

229.3 0 114.66 229.3 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

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Open Cut Summary Rehabilitation Cost Estimation

Note: Sections of this page are automatically filled in from the registration page

Mine Name:	Luddenham Clay Mine
Lease(s):	ML 1816
Authorisation Owner:	Luddenham Operations Pty Ltd
Term of RCE:	2025-2028
Current Security:	$468,000
Date of Last Security Deposit Review:	4/12/2024
Mine Contact:	Harry Scarlis

Domain		Security Deposit
Domain 1: Infrastructure		$144,765
Domain 2: Tailings & Rejects		
Domain 3: Overburden & Waste		$4,162
Domain 4: Active Mine & Voids		$77,627
Domain 5: Management Activities		$113,375
Subtotal (Domains and Sundry Items)		$339,929
Contingency	10%	$33,993
Post Closure Environmental Monitoring	10%	$33,993
Project Management and Surveying	10%	$33,993
Total Security Deposit for the Mining Project (excl. of GST)		$441,907

Note: GST is not included in the above calculation or as part of rehabilitation security deposits required by the Department.

☐ Alterations have been made to unit prices within this spreadsheet. (Attach a separate sheet providing details of changes).

☑ The proposed rehabilitation design is generally consistent with the development consent for the project.

This mine security calculation has been estimated using the best available information at the time.
It is a true and accurate reflection of the total rehabilitation liability held by this mine.

Harry Scarlis
Company Representative's Name

3/12/25
Date

Director
Company Representative's Role / Responsibility

[redacted]
Signature