

05 September 2024

Environmental Officer
Native Vegetation Assessment Branch
Department of Energy, Mines, Industry Regulation and Safety
100 Plain Street
EAST PERTH WA 6004

Via email: nvab@dmirs.wa.gov.au

Dear Sir/Madam

APPLICATION FOR A NEW CLEARING PERMIT FOR THE LAKE GOORLY GYPSUM OPERATIONS, SHIRE OF DALWALLINU

Lake Goorly Contracting ('LGC'), formerly trading as Bywaters Gypsum Supplies, has been mining gypsum at Lake Goorly since 2003. The Lake Goorly Gypsum Operation ('the Operation') is located at the northern end of Lake Goorly, approximately 245km northeast from Perth or 31km east-northeast from Wubin in the northern wheatbelt (Figure 1).

LGC is owned and operated by Craig and Phillip Bywaters who are also the owners of the surrounding farming land. The Operation is conducted under:

- Mining Proposal Reg. ID 47944 approved 04 June 2014.
- Mine Closure Plan Reg. ID 69523 approved 16 October 2017.
- Mine Closure Plan Reg. ID 103524 not assessed under the DEMIRS Approvals Response Plan with new due date in August 2028.

There are also two new mining proposals for M70/1403 and M70/1404 that are under a Section 18 assessment by DLPH and have not as yet had mining approved by DEMIRS.

There are 18 mining tenements associated with the Operation (Figure 2). These mining tenements are; G70/200, L70/141, L70/226, L70/72, L70/84, M70/1079, M70/1114, M70/1118, M70/1191, M70/1255, M70/1256, M70/1257, M 0/1258, M70/1259, M70/1272, M70/1312, M70/1403 and M70/1404. All mining tenements are held jointly by Craig and Phillip Bywaters with the exception of M70/1079 that is held solely by Phillip Bywaters. The DEMIRS Tenement Enquiry Report for all of the above tenements is attached.

The Operation has always been linked with progressive rehabilitation (Figure 3).

Mining initially occurred under a number of smaller mining proposals and clearing permits that were superseded by an overall mining proposal (MP Reg. ID 47944) and an overall clearing permit (CPS 5955/3) that were both approved in 2014. CPS 5955/3 expired on 19/04/2024 and this native vegetation clearing permit ('NVCP') has been lodged to replace CPS 5955/3, with some amendments. A copy of CPS 5955/3 is attached. The new NVCP is a purpose permit with the coverage envelope formed by all of the above listed 18 mining tenements.

Under CPS 5955/3, 36.6ha of ground was cleared from the purpose permit allotment of 84.47ha. The 84.47ha was based on the area approved under Mining Proposal Reg. ID 47944. Hence, 47.87ha of unused clearing permit area remained at the expiry of CPS 5955/3.

This NVCP would like to allow for the completion of clearing activities proposed under CPS 5955/3 and to add in the new areas under the MPs for M70/1403 and M70/1404. The area of clearing under this NVCP application is outlined in Table 1.

Table 1: Area of clearing under this NVCP application

Description	Area (ha)
Area remaining from CPS 5955/3	47.87
MP M70/1403	9.36
MP M70/1404	9.7
Total area applied for	66.93

To summarise the difference between this NVCP and CPS 5955/3:

- M70/1403, M70/1404 and L70/226 have been added to the purpose permit envelope.
- M70/1115, that was part of CPS 5955/3, has been surrendered and so is no longer relevant to this NVCP.
- All other tenements remain in the purpose permit envelope.
- The area of clearing is now 66.93ha (as against 84.47ha in CPS 5955/3).

The Operation is subject to two Section 18(3) consents under the *Aboriginal Heritage Act 1972* due to the presence of the Mongers Lake Waterway Registered Site ID 24380. The Section 18(3) consents cover all mining tenements involved with the Operation with the exception of the new tenements granted in 2021 (M70/1403, M70/1404 and L70/226). The S18 consents were based on three heritage surveys that can be provided to DEMIRS on request. The two current Section 18(3) consents are attached.

A third S18 application has been lodged for the new tenements and remains under assessment. The S18 application will hopefully be finalised by the end of 2024. The delay in issuing the S18 was caused by the introduction of the new heritage act that were in turn repealed. LGC is awaiting advice from DPLH on how to proceed.

The Operation produces approximately 10,000 to 30,000 tonnes per year ('tpa') of gypsum. There are two product streams:

- commercial gypsum for cement manufacture (run of mine).
- agricultural gypsum (screened).

Approximately 8,000 to 12,000 tpa of agricultural gypsum is sold per year to local farmers for soil amelioration. The agricultural gypsum is screened to remove the gypsum solids that form as lumps of material up to 100mm in diameter. Normally, the lumps represent less than 1% of material mined. The remainder of sales consists of run of mine unscreened material that is transported to Perth for cement manufacture.

Mining operations involve the 'free-dig' harvesting of gypsum from the lakebed in a strip mining sequence. The gypsum resource is patchy in occurrence and up to 1.0m deep from

surface. Additional resource is located in raised dunes on the eastern lake margin on M70/1079. Mining has always been linked to progressive rehabilitation such that the areas mined are usually rehabilitated in the same 12 months period.

The mining sequence involves:

- Topsoil (kopi) and vegetation is pushed to one side of the initial strip mining area as a linear windrow. At least 150mm of topsoil is removed. The strip mining areas are then excavated, averaging 200m long by 50m in width. An average mining depth of 0.6m is assumed.
- Gypsum is then removed via excavator or front-end loader and trucked to the stockpiling and processing area on M70/1118. Stockpiling also occurs of M70/1079 as this area is geographically separated from the rest of the Operation.
- The mined-out area is then landscaped to natural looking lakebed contours and the topsoil and vegetation windrow is replaced back across the rehabilitated surface.

The mining operation involves the progressive rehabilitation of mined-out areas. All redundant mining areas have been rehabilitated. The objective for the post-mining landform is the restoration of mined-out areas to a natural looking salt lake landscape similar to the surrounding environment. The rehabilitation endpoint is to reinstate a chenopod - samphire community similar to the surrounding vegetation and with a functioning natural ecosystem. The post-mining land use is natural ecosystem. From previous experience at Lake Goorly, the above post-mining landform and rehabilitation endpoint objectives are readily achievable. The Operation is thus considered as being a temporary surface disturbance. As of June 2024, 94.36ha or 73.88% out of a total area of disturbance of 127.71ha has been rehabilitated. The rehabilitated areas are displayed in Figure 3. Of the rehabilitated area, 56.01ha was assessed as being at Stage 2.

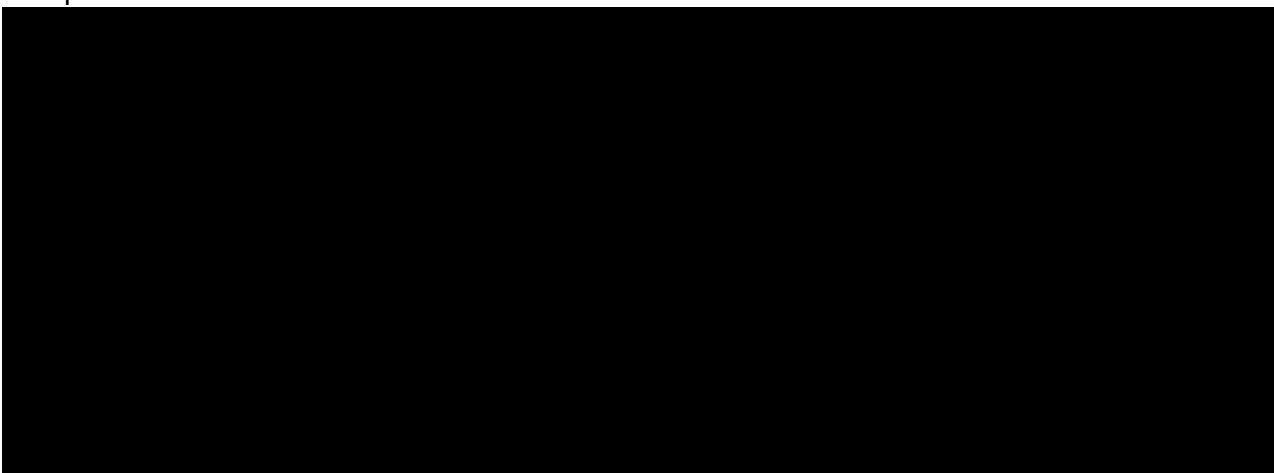
Site photos are attached.

The Operation has been the subject of three vegetations surveys lodged on IBSA:

- IBSA-2024-0364.
- IBSASUB-20240905-CAC85336.
- IBSASUB-20240905-9DE885CC.

The MCP was updated in 2022 and provides detailed biological baseline information. A copy of the MCP is attached.

Reference is also made to the previous NVCP amendment in 2019 in which a supporting information report was provided that included an assessment against the 10 clearing principles. The assessment is considered to be current as there have been no changes to the Operation or baseline conditions. This previous assessment can be provided on request.





CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	5955/3
Duration of Permit:	From 19 April 2014 to 19 April 2024
Permit Holder:	Phillip John Bywaters and Craig Anthony Bywaters

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I - CLEARING AUTHORISED

1. Land on which clearing is to be done

General Purpose Lease 70/200
Mining Lease 70/1079
Mining Lease 70/1114
Mining Lease 70/1115
Mining Lease 70/1118
Mining Lease 70/1191
Mining Lease 70/1255
Mining Lease 70/1256
Mining Lease 70/1257
Mining Lease 70/1258
Mining Lease 70/1259
Mining Lease 70/1272
Mining Lease 70/1312
Miscellaneous Licence 70/72
Miscellaneous Licence 70/84
Miscellaneous Licence 70/141

2. Purpose for which clearing may be done

Clearing for the purposes of gypsum mining and associated activities.

3. Area of Clearing

The Permit Holder shall not clear more than 84.47 hectares of native vegetation within the areas cross-hatched yellow on attached Plan 5955/3.

4. Type of Clearing Authorised

The Permit Holder shall not clear native vegetation unless the purpose for which the clearing is authorised is enacted within three months of the authorised clearing being undertaken.

5. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

PART II – MANAGEMENT CONDITIONS

6. Weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:

- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (ii) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

PART III - RECORD KEEPING AND REPORTING

7. Records to be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

In relation to the clearing of native vegetation authorised under this Permit:

- (i) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (ii) the date that the area was cleared;
- (iii) the size of the area cleared (in hectares); and
- (iv) purpose for which clearing was undertaken.

8. Reporting

- (a) The Permit Holder shall provide a report to the General Manager Environmental Compliance, Resource and Environmental Compliance Division, Department of Mines, Industry Regulation and Safety by 31 August each year for the life of this permit, demonstrating adherence to all conditions of this permit, and setting out the records required under Condition 7 of this permit in relation to clearing carried out between 1 August and 31 July of the previous year.
- (b) Prior to 19 April 2024, the Permit Holder must provide to the General Manager Environmental Compliance, Resource and Environmental Compliance Division, Department of Mines, Industry Regulation and Safety a written report of records required under Condition 7 of this Permit where these records have not already been provided under Condition 8(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

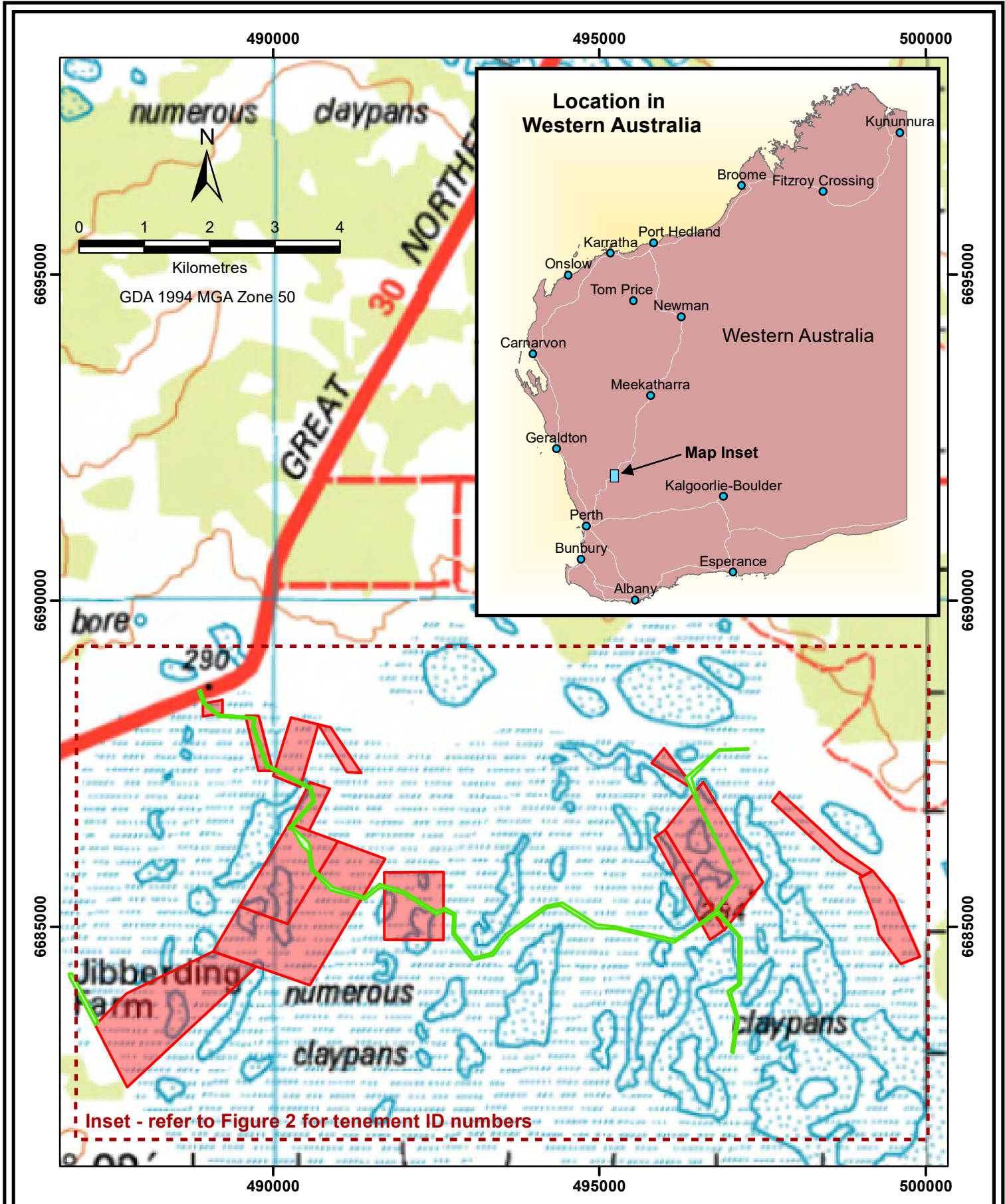
weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

A handwritten signature in blue ink, appearing to be 'Daniel Endacott', written in a cursive style.

Daniel Endacott
General Manager Environmental Compliance
Resource and Environmental Compliance Division
04 April 2019

Officer with delegated authority under Section 20
of the *Environmental Protection Act 1986*



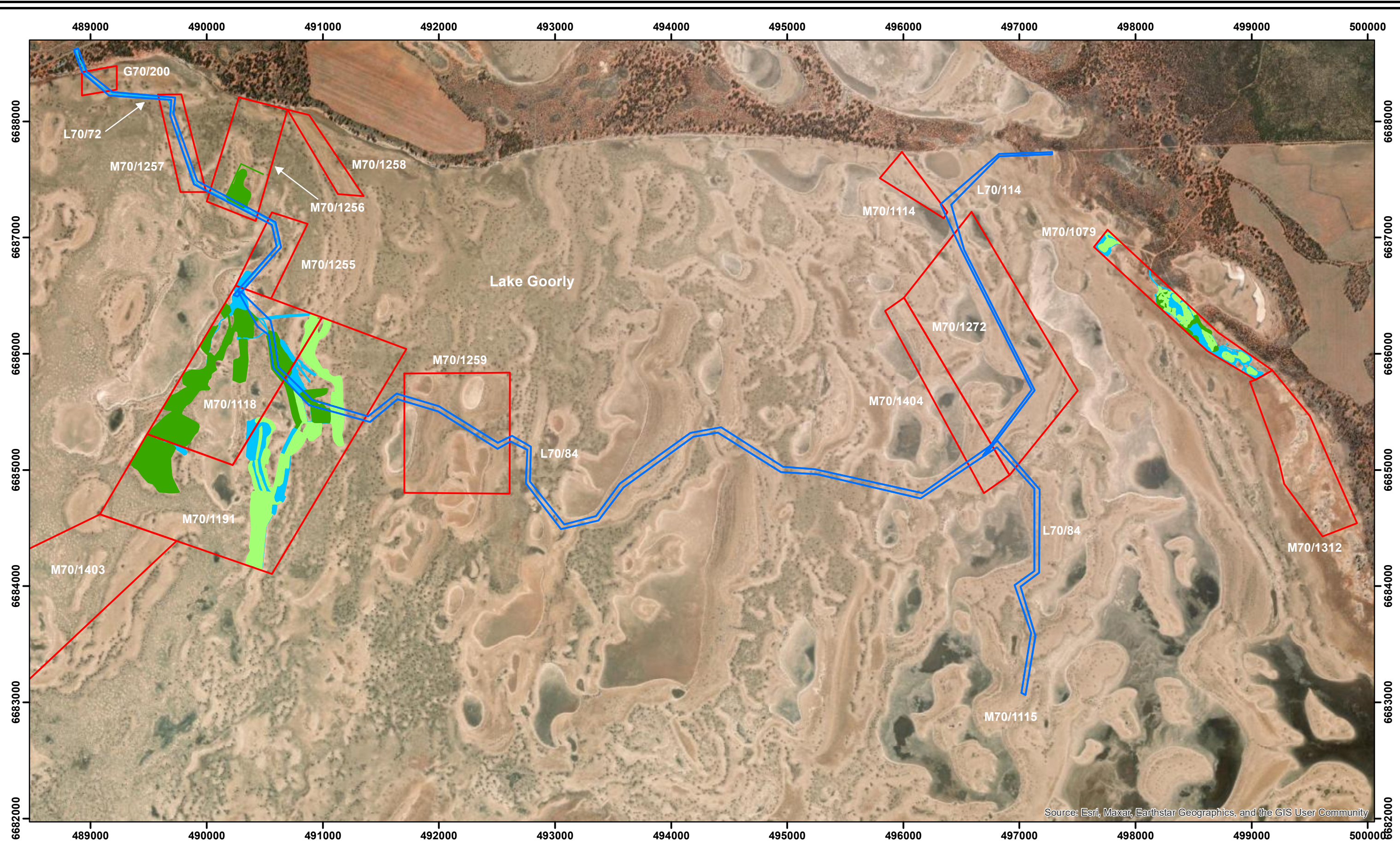
Lake Goorly Contracting

Figure 1: Regional location of the Lake Goorly mining tenements

Drawn: C Newland	Date: 28/08/2024
Authored: C Bywaters	Print Size: A4
Map Name: Figure 1 Regional Location Lake Goorly Mining Tenements	
Base Map: Base Map: Geoscience Australia Natmap Digital 2008 Edition 'zone50_mga.ecw'	

Legend

- Mining and general purpose leases
- Miscellaneous licences



Lake Goorly Contracting

Figure 3: Location of rehabilitation at the Lake Goorly Gypsum Operation

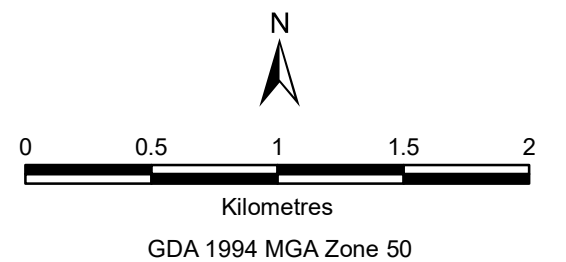
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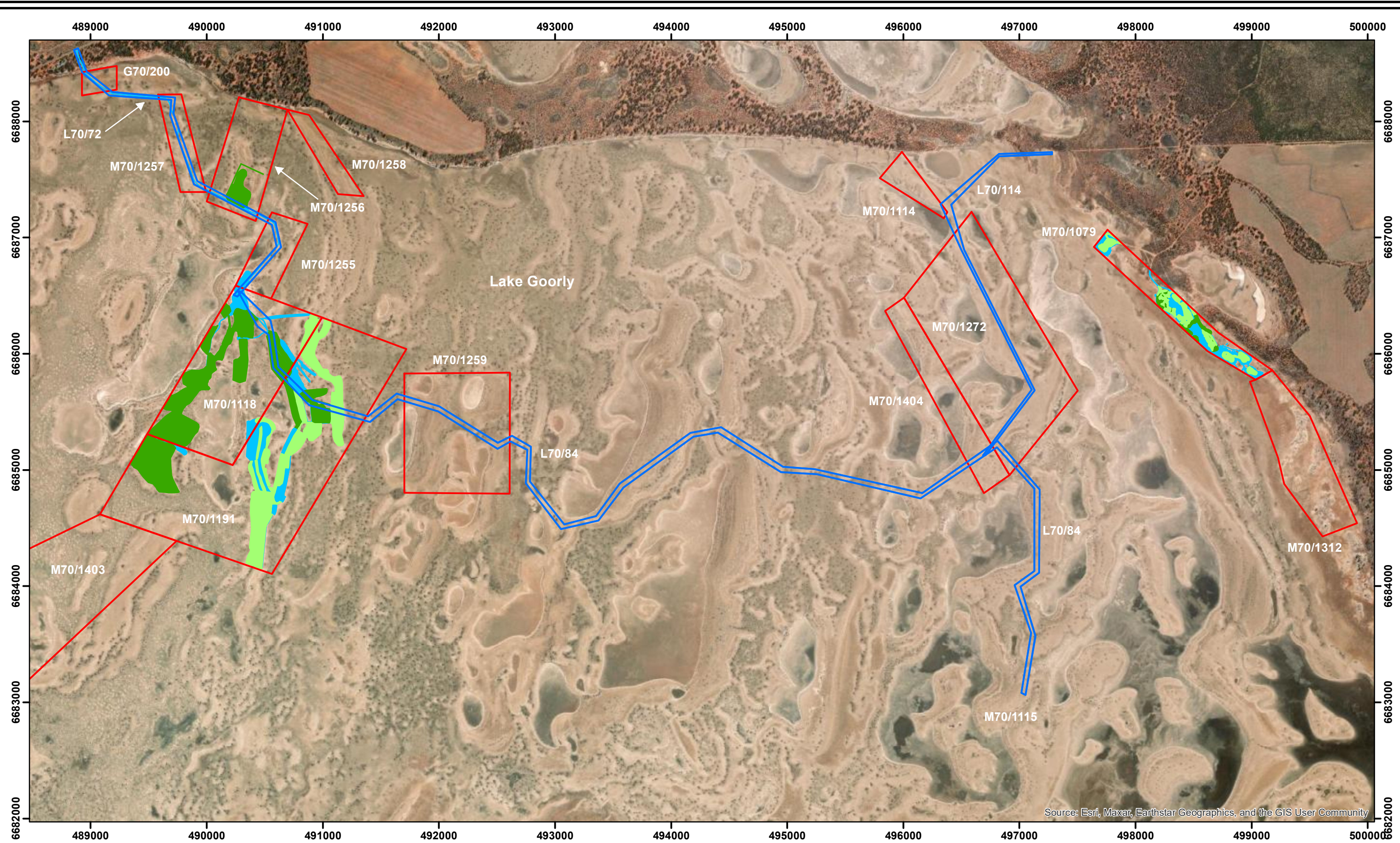
Map Name: Figure 3 Location Rehabilitation Lake Goorly Gypsum Operation.mxd

Base Map: ESRI Basemap "World Imagery" date 17/06/2023

Legend

- Mining and general purpose leases
- Miscellaneous licences
- No rehabilitation
- Rehabilitation Stage 1
- Rehabilitation Stage 2





Lake Goorly Contracting

Figure 3: Location of rehabilitation at the Lake Goorly Gypsum Operation

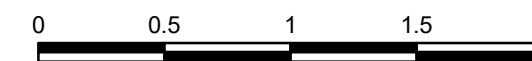
Drawn: C Newland | Authored: C Bywaters | Print Size: A3 | Date: 28/08/2024

Map Name: Figure 3 Location Rehabilitation Lake Goorly Gypsum Operation.mxd

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Legend

- Mining and general purpose leases
- Miscellaneous licences
- No rehabilitation
- Rehabilitation Stage 1
- Rehabilitation Stage 2



Kilometres
GDA 1994 MGA Zone 50



Plate 1: Drone image of Lake Goorly looking west from M70/1079



Plate 2L Stockpile areas on M70/1118 looking towards mining area on M70/1191



Plate 3: Typical vegetated lakebed surface with simple samphire communities



Plate 4: Typical barren lakebed surface with no vegetation (subject to ponding)



Plate 5: Typical gypsum dune fringing the lakebed with low open shrublands



Plate 6: Entrance to the Lake Goorly Gypsum Operation on L70/72



Plate 7: Entry signage on L70/72



Plate 8: Access road on L70/72, looking towards the stockpiling area on M70/1118



Plate 9: Stockpiling area on M70/1118



Plate 10: Load-out at the stockpiling area on M70/1118



Plate 11: Gypsum product for agricultural use



Plate 12: Gypsum product for cement manufacture



Plate 13: Site office and ablution block on M70/1255



Plate 14: Mining operations at M70/1191



Plate 15: Mining area on M70/1118 showing resource depth



Plate 16: Strip mining sequence showing of quarry excavation (RHS), gypsum windrow (middle) and topsoil material as outer windrow (LHS)



Plate 17: Rehabilitation photo taken 11/06/2015 at M70/1191



Plate 18: Ground surface immediately after rehabilitation earthworks at M70/1191



Plate 19: Monitoring Site 5 in 2015 (immediately after rehabilitation earthworks)



Plate 20: Monitoring Site 5 in 2021 (six years after rehabilitation earthworks)



Plate 21: Monitoring Site 7 in 2015 (immediately after rehabilitation earthworks)



Plate 22: Monitoring Site 7 in 2021 (six years after rehabilitation earthworks)



Plate 23: Monitoring Site 5 Control (analogue) in 2021 (refer to Plate 20)

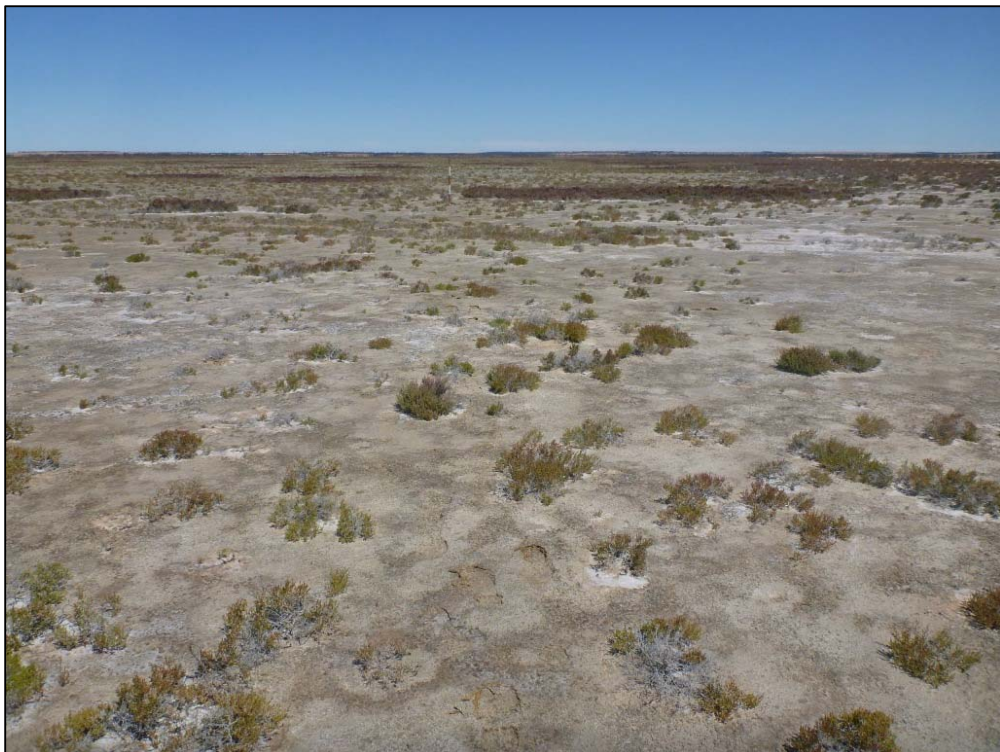


Plate 24: Monitoring Site 7 Control (analogue) in 2021 (refer to Plate 22)



Plate 25: Monitoring Site 1 in 2021 (12 years after rehabilitation)



Plate 26: Monitoring Site 1 Control (analogue) in 2021



Plate 27: Monitoring Site 4 in 2023 (10 years after rehabilitation)



Plate 28: Monitoring Site 4 Control (analogue) in 2023



Plate 29: Monitoring Site 3 in 2023 (18 years after rehabilitation earthworks)



Plate 30: Monitoring Site 3 Control (analogue) in 2023



Plate 31: View of Monitoring Site 3 LHS after rehabilitation earthworks in 2015 and natural lakebed RHS

With reference to Plates 29 to 31, some mined areas had no vegetation prior to mining and thus the rehabilitation endpoint is the original landscape of barren lakebed. It should be noted that the barren areas of lakebed are no longer mined due to poor gypsum availability.



Plate 32: Panoramas showing integration of rehabilitated landform RHS into the natural lakebed surface LHS in M70/1191



Plate 33: Rehabilitation from 2015 with natural lakebed on the far LHS in M70/1191



Plate 34: Mining area from 2023 under rehabilitation on M70/1079



Plate 35: Close-up of ground surface from above plate



Plate 36: Ripped access roads to mined-out areas on M70/1079



Plate 37: Topsoil pushed to edge of excavation on M70/1079



Plate 38: Rehabilitated area at the dune mining area on M70/1079 in 2021



Plate 39: Close-up of regrowth from the above area (rehabilitation 2 years old)



Plate 40: Rehabilitated area at the dune mining area on M70/1079 in 2017



Plate 41: Same area as Plate 40 with photo taken in 2024



Plate 42: Rehabilitation using a scarifier on M70/1079



Plate 43: Typical dune vegetation on M70/1079 middle and RHS, excavation on LHS