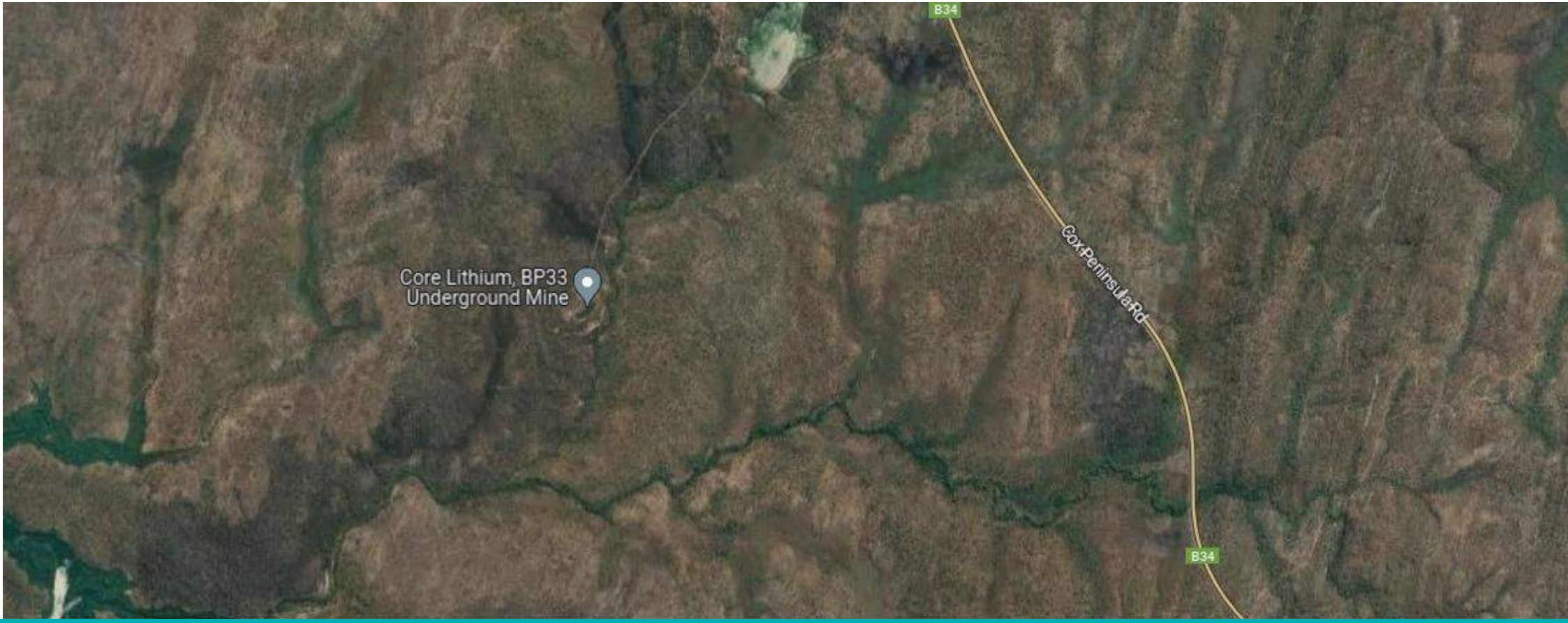
EROSION AND SEDIMENT CONTROL PLAN

BP33 LITHIUM PROJECT – CORE LITHIUM



CLIENT: CORE LITHIUM

DOCUMENT NUMBER: 23-0061 / R2688C

VERSION: C

DATE: 7/05/2024

1 SCOPE

Topo were engaged by Core Lithium to develop a CPESC certified Erosion and Sediment Control Plan (ESCP) for works associated with the development of the proposed BP33 Lithium mine approximately 3.5 km south east of the Grants ore resource on Mineral Lease (ML) 31726, located on the Cox Peninsula, Northern Territory.

This ESCP revision (Rev C) presents updated site conditions, current ESC measures and includes additional scope such as the site access road and Carlton access track.

1.1. GUIDELINES

This ESCP has been prepared in accordance with the following documents:

- Best Practice Erosion and Sediment Control (IECA, 2008)
- Revised Appendix B (IECA, 2018)
- Soil, Land and Vegetation Guidelines and Fact Sheets (NT.GOV.AU)
- Land Clearing Guidelines (Department of Environment and Natural Resources)
- Environmental Assessment Act 1982
- Waste Management and Pollution Control Act 1998
- Soil Conservation and Land Utilisation Act 1969

1.2. OBJECTIVES

This ESCP is part of a hierarchy of documentation prepared to minimise the potential environmental impacts associated with the proposed site works. With respect to ESC, this plan has been prepared specifically to assist the project in achieving the following objectives:

1. Take all reasonable and practicable measures to minimise actual or potential environmental harm resulting from soil or water movement as a consequence of the proposed construction phase activities
2. Ensure temporary ESC measures do not unreasonably impact upon the economic and safety-related attributes of the project
3. Slope data derived from the available site survey identified that the majority of disturbed areas will contain slopes between 2 and 3 %. The Land Clearing Guidelines class slopes between 2 and 3 % as having an associated high risk of erosion (refer Table 1)

Table 1 - Acceptability of erosion risk associated with clearing works based on slope gradient (DENR Land Clearing Guidelines)

Slope (%)	Erosion risk	Recommendation
0 to 1%	Low	Risk is acceptable; management required.
1 to 2%	Moderate	
2 to 3%	High	Required management is prohibitive; clearing not recommended.
>3%	Very High	

This ESCP has been prepared to demonstrate the management strategies for the project and thus satisfy DENR requirements.

1.3. CERTIFICATION

I Terry Clark certify that this Erosion and Sediment Control Plan (ref: R2688) has been prepared to satisfy the following requirements:

- The intent and minimum standards nominated within the IECA (2008) Best Practice Erosion and Sediment Control Guideline and relevant supporting appendices.

If implemented correctly, it will assist the contractor in meeting environmental obligations defined in the *Waste Management and Pollution Control Act 1998* (NT) for site activities throughout the year.

CPESC No: 6089

1.4. REVISION

VERSION	DATE	AUTHOR	REVIEWER	APPROVED
A	31/03/2023	R Kleijn CPESC 9754	T Clark CPESC 6089	T Clark CPESC 6089
B	16/06/2023	T Clark CPESC 6089	R Kleijn CPESC 9754	T Clark CPESC 6089
C	7/05/2024	T Clark CPESC 6089	R Kleijn CPESC 9754	T Gunns (Core Lithium)

2 PROJECT DESCRIPTION

2.1. LOCATION

The project works are located on the Cox Peninsula, approximately 33km west of Berry Springs in the Northern Territory. The site is accessed via a haul road which runs past Observation Hill Dam to the north to Cox Peninsula Road.

The approximate site location is presented in Figure 1.

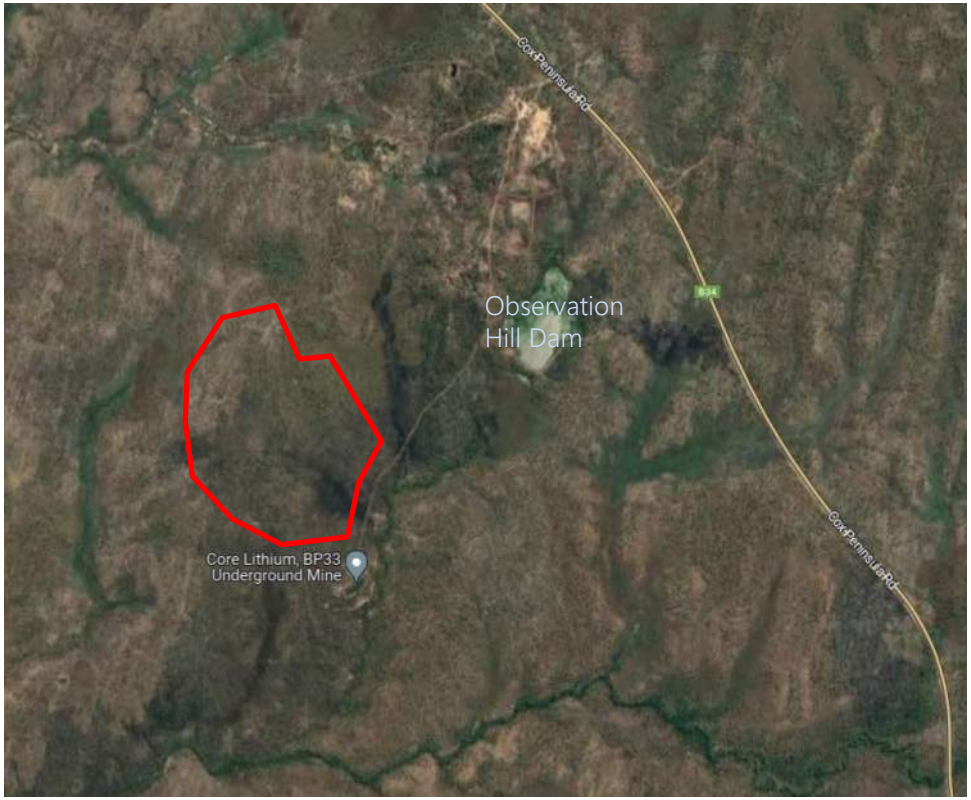


Figure 1 – Site Location (Source: Google Maps)

2.2. SITE DESCRIPTION & PROJECT WORKS

Works include:

- Box-cut
- Waste Rock Stockpiles
- New internal roads
- Haul Road, Site Access Intersection
- ROM Pad
- Contractor Area
- Raw Water Dam
- Mine Settling Dam
- Sediment basins

Site works have commenced, and the current layout of the project is shown in Appendix A. The broad intent and work areas are identified and considered within the ESC layout and control measures proposed.

To capture sediment during the construction phase, two temporary high efficiency (Type B HES) sediment basins have been installed. These basins may be retained and continued to be operated and maintained during the mine operational phase to provide an ongoing means to manage surface water runoff quality.

2.3. CLIMATE

The historic rainfall for the region is presented in Figure 2.

The project location is subject to distinct wet and dry seasons, as is typical for the Northern Territory.

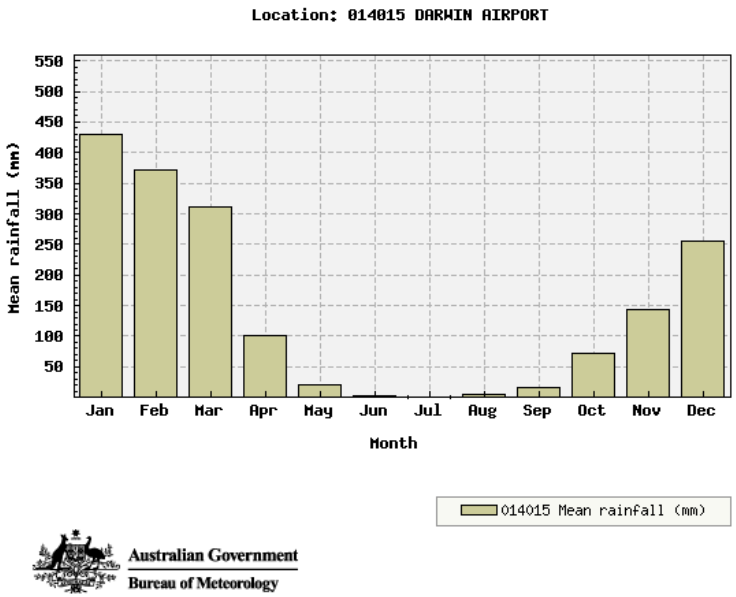


Figure 2 – Historic rainfall (Source: BoM)

2.4. TOPOGRAPHY AND DRAINAGE

The site generally falls to the south, towards a natural stream that runs from Observation Hill Dam to a confluence with the Charlotte River to the west. The western portion of the site grades towards the northwest along the project extents. Runoff from a small catchment to the north may have potential to enter the northern solar array and is intended to be diverted around the project works.

Grades on the site are generally between 1 % and 3 %. A detailed catchment plan is provided in Appendix A and shown in Figure 3.

2.5. SOILS

Land units within the project area were ground-truthed (by others) and described in the ecological assessment dated 23 April 2020 (EcOz Environmental Consultants, EZ19171). The report identifies the soil types in Table 2 are likely to be encountered during the works.

Table 2 – Soil Types

NO.	LANDFORM	DRAINAGE	SOIL
2a1	Rises	Rapid	Rudosols
5a	Alluvial Plains	Slow, subject to wet-season waterlogging and inundation	Hydrosols
6b	Drainage System	Very poor (subject to wet-season inundation)	Hydrosols

Rudosols generally have low fertility and low water-holding capacity. These are minimally developed soils that occur as young sedimentary deposits along flood plains. They are typically acidic with variable nutrient availability and good infiltration.

Hydrosols are typically soils that are saturated with water for long periods of time. They commonly occur in swamps and lower-lying depressions.

Elevations on the site range between 15m Australian Height Datum (AHD) in the southern portion, to approximately 30m AHD in the northern section.

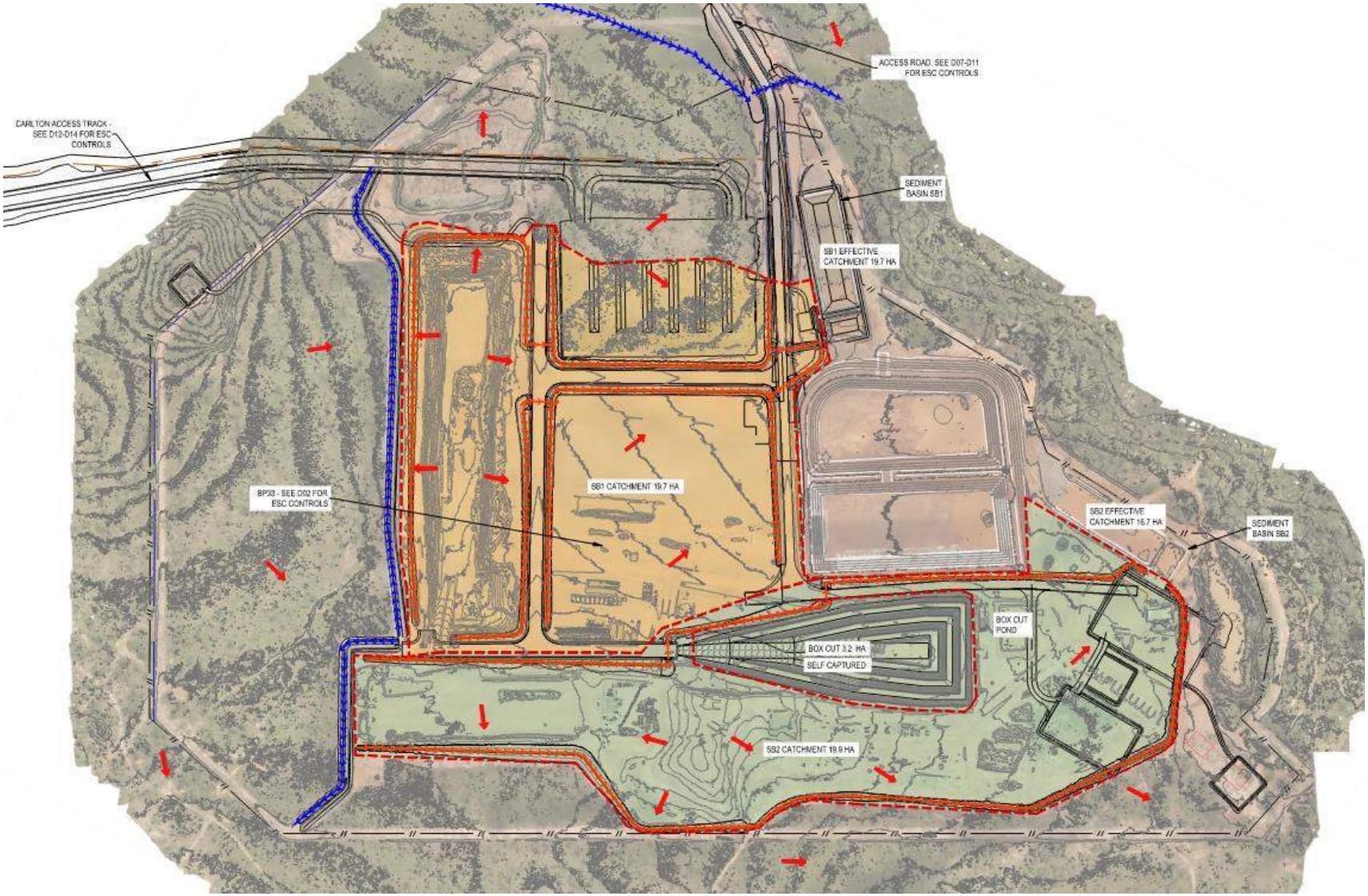


Figure 3 – Catchment Plan

3 EROSION RISK ASSESSMENT

An erosion risk assessment has been conducted using the Revised Universal Soil Loss Equation (RUSLE). The calculated soil loss is then used to determine the level of sediment control required, as well as stabilisation and staging requirements.

$$A = K \times R \times LS \times P \times C$$ Equation 1 (IECA 2008)

Where:

A is the predicted soil loss per hectare per year
K is the soil erodibility factor
R is the rainfall erosivity factor
LS is the slope length/gradient factor
P is the erosion control practice factor
C is the ground cover and management factor

3.1. K-FACTOR – SOILS

The Soil and Landscape Grid of Australia Facility has produced a comprehensive fine-resolution grid of soil attributes and important land surface parameters. The data is consistent with the Specifications of the GlobalSoilMap and is managed as part of the Australian Soil Resource Information System (ASRIS). There are a range of soil attribute products available from the Soil Facility, including the K factor. A K-factor of 0.030 was determined for the site based on the available K-factor mapping.

3.2. R- FACTOR – RAINFALL

An annual erosivity factor of 15,291 has been adopted based on information derived and provided by the NT government. The site is located relatively close to Humpty Doo thus the published R-factor values for that location were used, as per Table 3. The reported R-factors are significantly higher compared to a calculated annual R-factor of 5,923 when determined using the equation provided within Appendix E of IECA (2008) and the 2 year, 6 hour rainfall intensity of 16.1 mm/hr for the site.

Table 3 – R-factor Humpty Doo

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4158	3019	2831	688	117	0	0	52	91	539	1254	2542

3.3. LS - SLOPE-LENGTH

A range of LS factors have been adopted for the site based on individual site grades and slope lengths as shown in Section 3.5 and Table 4.

3.4. COVER (C) AND PRACTICE (P) FACTORS

Default factors of 1 (C factor) and 1.3 (P factor) have been adopted for across the site, in accordance with IECA (2008).

3.5. ESTIMATED SOIL LOSS

The erosion risk assessment was undertaken for the site catchments. Due to grades on site the estimated annual soil loss ranged between 113 and 262 t/ha/yr.

Although results of the soil loss estimation are not an accurate representation of actual soil loss it does provide a basis for the erosion risk assessment and support the general understanding that project works present a **very low to moderate erosion risk**.

A monthly RUSLE Assessment has been provided in Table 4. The risk assessment confirms that during the dry season period between May and September, erosion risk is very low and reduced controls can be implemented in accordance with best practice provisions.

Table 4 – Summary of monthly RUSLE Assessment

CATCHMENT RISK ASSESSMENT - MONTHLY SOIL LOSS

CATCHMENT ID	AREA (HA)	R	K	SLOPE LENGTH (m)	SLOPE (%)	LS	P	C	Jan (t/ha/month)	Feb (t/ha/month)	Mar (t/ha/month)	Apr (t/ha/month)	May (t/ha/month)	Jun (t/ha/month)	Jul (t/ha/month)	Aug (t/ha/month)	Sep (t/ha/month)	Oct (t/ha/month)	Nov (t/ha/month)	Dec (t/ha/month)	A (t/ha/yr)	A (t/yr)	CONTROL
1	6.30	15291	0.030	100	2.0	0.44	1.3	1.00	71.35	51.81	48.58	11.81	2.01	0.00	0.00	0.89	1.56	9.25	21.52	43.62	262	1,653	TYPE 1
									TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 1	TYPE 1	TYPE 1			
2	1.70	15291	0.030	100	1.0	0.20	1.3	1.00	32.43	23.55	22.08	5.37	0.91	0.00	0.00	0.41	0.71	4.20	9.78	19.83	119	203	TYPE 1
									TYPE 1	TYPE 1	TYPE 1	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 1	TYPE 1			
3	0.90	15291	0.030	80	1.0	0.19	1.3	1.00	30.81	22.37	20.98	5.10	0.87	0.00	0.00	0.39	0.67	3.99	9.29	18.84	113	102	TYPE 2
									TYPE 1	TYPE 1	TYPE 1	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 2	TYPE 1			
4	26.10	15291	0.030	100	2.0	0.44	1.3	1.00	71.35	51.81	48.58	11.81	2.01	0.00	0.00	0.89	1.56	9.25	21.52	43.62	262	6,848	TYPE 1
									TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 1	TYPE 1	TYPE 1			
5	0.40	15291	0.030	50	3.0	0.52	1.3	1.00	84.32	61.23	57.41	13.95	2.37	0.00	0.00	1.05	1.85	10.93	25.43	51.55	310	124	TYPE 1
									TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 2	TYPE 1	TYPE 1			
6	6.40	15291	0.030	100	2.0	0.44	1.3	1.00	71.35	51.81	48.58	11.81	2.01	0.00	0.00	0.89	1.56	9.25	21.52	43.62	262	1,679	TYPE 1
									TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 3	TYPE 1	TYPE 1	TYPE 1			

4 SEDIMENT CONTROL

The sediment control standard is determined using Table B1 from the revised Appendix B (IECA, 2018) which defines the sediment control standard based on catchment area and soil loss rate. This table is reproduced below at Table 5.

Table 5 – Sediment Control Standard (Table B1 Appendix B IECA 2018)

AREA LIMIT (m^2)	SOIL LOSS RATE LIMIT (T/HA/YR)		
	TYPE 1	TYPE 2	TYPE 3
1000	N/A	N/A	All cases
2500	N/A	> 75	75
> 2500	> 150	150	75
> 10000	>75	N/A	75

Based on the estimated soil loss rates in Table 4 and the IECA sediment control standards per Table 5, Type 1 sediment control measures (i.e. sediment basins) are triggered throughout site, given the long duration of works (i.e. not limited to the low risk dry season).

For the site, the majority of runoff will be directed to two High Efficiency Sediment (HES) basins (Type B), which have been sized for their maximum contributing catchment. Type 1 sediment controls are typically designed to achieve 80% hydrologic efficiency.

4.1. SEDIMENT BASINS

Operation of the HES basins should be based on the principals within Appendix B (IECA, 2018) and the intended adaptive management approach. Figure 4 provides guidance on the operational review and performance assessment which should be undertaken on site to demonstrate treatment effectiveness.

4.1.1. AUTOMATED DOSING SYSTEM

Type B basins require the use of automated coagulant/flocculant dosing. It is recommended a flow activated system be installed for all sediment basins. Sensors should be mounted over a concrete lined inlet channel.

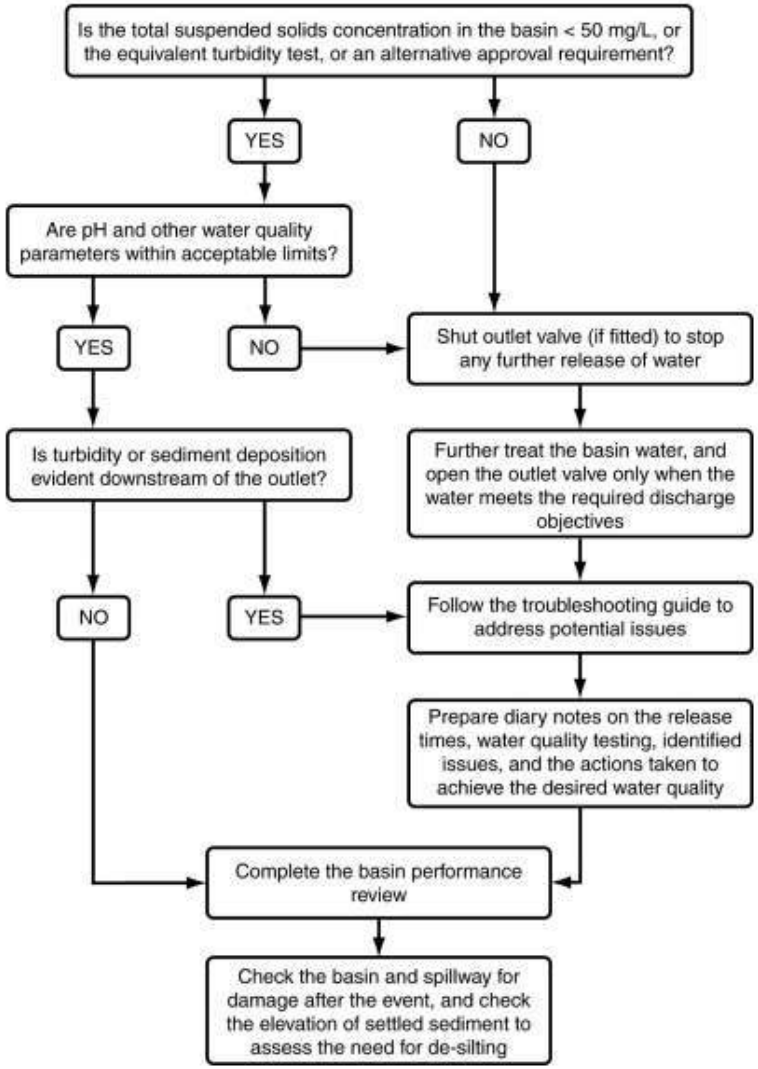


Figure 4 – Basin Performance Assessment Process (Source: IECA 2018)

4.1.2. COAGULANT/FLOCCULANT

Jar tests shall be undertaken to determine the preferred coagulant or flocculant for site soils and optimum dose rate. Testing shall occur during construction as soon as appropriate & representative material is available to be assessed. Selected materials from across the disturbance footprint should be selected to provide a realistic assessment of potential surface water quality that may be encountered in the sediment basin during the wet season.

The sediment basin sizing has been undertaken based on a nominal settlement rate of 150mm in 15 minutes for the Type B sizing, which is considered a reasonable and achievable settlement efficiency. Suitability for site soils to achieve this settlement rate has been confirmed through jar tests and ongoing monitoring of runoff at the spillways.

4.1.3. DEWATERING

It is proposed that the HES basins be operated full, with monitoring to confirm ongoing performance and suitability. Water retained in the basins can be utilised as a water source for site activities.

4.2. WATER QUALITY RELEASE CRITERIA

Construction phase water quality release criteria for runoff captured on site is shown below. The below values are consistent with that specified within the approved MMP Water Management Plan and prior ESCP. It is expected that all runoff discharging via HES basins will achieve these limits:

- 90th percentile NTU reading not exceeding 100 NTU
- 50th percentile NTU reading not exceeding 60 NTU
- pH – 6.5 to 8.5

Operational phase water quality limits are not known and should be confirmed prior to mining works.

4.3. TYPE 2 AND TYPE 3

Due to site topography constraints a number of localised catchments cannot be effectively drained to the nominated sediment basins. In these locations Type 2 sediment control measures comprising sumps and enlarged rock filter dams are proposed, with sizing presented within Appendix A. It is intended that where practical the extent of exposed area and duration of exposure will be limited by stabilisation of the contributing catchment. Establishing and maintaining stable surfaces within the catchment areas upslope of the proposed measures will reduce the maintenance requirements and reliance on such controls.

Temporary type 2 and/or type 3 sediment controls are proposed for the construction of permanent storage dams and sediment basins.

5 DRAINAGE CONTROL

Drainage control considers three main principles; diverting external flow before it enters site, directing site runoff to an appropriate sediment control, and ensuring runoff is conveyed in a non-erosive manner.

A catchment assessment has been undertaken as part of the proposed drainage layout based on available site layout information to consider catchment areas during clearing, construction and post construction phases. Sizing of drainage measures is based on the expected maximum catchment area for a given control measure.

All drains and berms have been sized to cater for a 1 in 10 year ARI due to the proposed construction timeframe in accordance with Table A1 of IECA (2008).

Emergency spillways have been sized to cater for a 1 in 50 year ARI due to the proposed construction timeframe in accordance with Table A1 of IECA (2008).

6 EROSION CONTROL

Erosion management techniques for various erosion risk ratings in accordance with IECA (2008) guidelines are presented in Table 6. Based on Section 3.5, the majority of the site is considered to present a **Very Low to Moderate erosion risk**. These areas are to achieve stabilisation (70%) within 20 to 30 days once works area completed. Prior to the wet season a review of site stabilisation should be undertaken based on the current work activities and identify potential to increase the level of erosion control across both active and operational work areas.

Table 6 - Erosion Risk Rating Based on Soil Loss and Required Management (adapted from Table 4.4.7 of IECA, 2008)

EROSION RISK RATING	SOIL LOSS RATE (T/HA/YEAR)	ADVANCE LAND CLEARING ALLOWED (WKS WORK)	MAX DAYS TO STABILISATION	STAGED CONSTRUCTION AND STABILISATION OF EARTH BATTERS >6H:1V	STOCKPILES STABILISED
Very Low	0 to 150	8	30 (60%)		
Low	150 to 225	8	30 (70%)		
Moderate	225 to 500	6	20 (70%)	✓	
High	500 to 1500	4	10 (75%)	✓	✓
Extreme	> 1500	2	5 (80%)	✓	✓

The following erosion control strategy should be implemented as site works and conditions progress:

Solar Array

- Limit disturbance to that practical during construction of the solar array and related infrastructure
- Following completion, stabilise area and direct runoff via the proposed clean water diversion drain
- Continue to inspect and monitor vegetation establishment to ensure non erosive overland flow.

Stockpiles

- Stabilise long term stockpiles with suitable erosion control or surface treatment. Topsoil stockpile is to be vegetated.

Laydowns, Pads, Contractor Work Area, Active Work Areas and Haul Road

- Minimise disturbance throughout the site to the extent practical
- Retain vegetation where possible through staging and sequencing of activities
- Provide trafficable and low erodible surface treatments where possible to reduce sediment volumes entering the HES basins.

Decommissioning of sediment basins should not occur until upslope catchment areas are adequately stabilised and provide a low risk of long term soil loss.

7 ROLES AND RESPONSIBILITIES

Responsibilities of project personnel in respect to ESC are outlined below:

ROLE	RESPONSIBILITY
Project Manager	+ Overall responsibility of ESC implementation + Notify the Administrator of any non-compliance with ESCP + Ensure the prompt implementation of measures to mitigate erosion and sediment generation + Notify ESC Consultant when controls implemented per plan to inspect site and provide inspection certificate + Notify ESC Consultant prior to decommissioning of basins (conversion to bio basins) to confirm adequate upslope catchment stabilisation achieved
Site Supervisor/Foremen	+ Undertake inspection of all control measures, discharge points and boundary of works per inspection requirements + Monitor daily rainfall + Notify Environmental Advisor/Consultant when runoff generating rainfall occurs in the previous 24 hours + Maintain current records of rainfall, storage volumes, water quality, treatment practices, discharge volumes (as appropriate) + Installation and maintenance of ESC
Project Team	+ Provide design information as required + Conduct in-situ monitoring (as required) + Collect and submit samples to laboratory (as required) + Collate results and prepare reports (as required) + Conduct site inspections and audits (as required) + Inspect ESC installation and maintenance + Inspect offsite impacts and management + Provide advice regarding ESC site improvement (as required)
All Personnel	+ Report any damage to ESC devices and any potential or actual environmental harm in line with Duty to Notify under the requirements of the Environmental Protection Act 1994

8 SITE INSPECTION AND MONITORING

Site inspections and monitoring is to be undertaken in accordance with Sections 6.17 and 7.4 of the Best Practice Erosion and Sediment Control Document (IECA, 2008) as detailed below and/or as outlined within the project Environmental Management Plan.

The ESCP should be considered a live document that in some instances will require review and updating as site conditions change, or if the adopted measures fail to achieve the required treatment standard.

When a site inspection detects a notable failure in the adopted ESC measures, the source of this failure must be reported, investigated and appropriate amendments made to the site and the ESCP.

Best practice site management requires all ESC measures to be inspected at the following frequencies and include the following checks as a minimum:

Daily site inspections (during rainfall)

+ All drainage, erosion and sediment control measures
+ Occurrences of excessive sediment deposition (whether on-site or off-site)
+ All site discharge points (including dewatering activities as appropriate)

Weekly site inspections (even if work is not occurring on-site)

+ All drainage, erosion and sediment control measures
+ Occurrences of excessive sediment deposition (whether on-site or off-site)
+ Occurrences of construction materials, litter or sediment placed, deposited, washed or blown from the site, including deposition by vehicular movements
+ Litter and waste receptors
+ Oil, fuel and chemical storage facilities

Prior to anticipated runoff producing rainfall (within 24 hours of expected rainfall)

+ All drainage, erosion and sediment control measures
+ All temporary flow diversion and drainage works

Following runoff producing rainfall (within 18 hours of rainfall event)

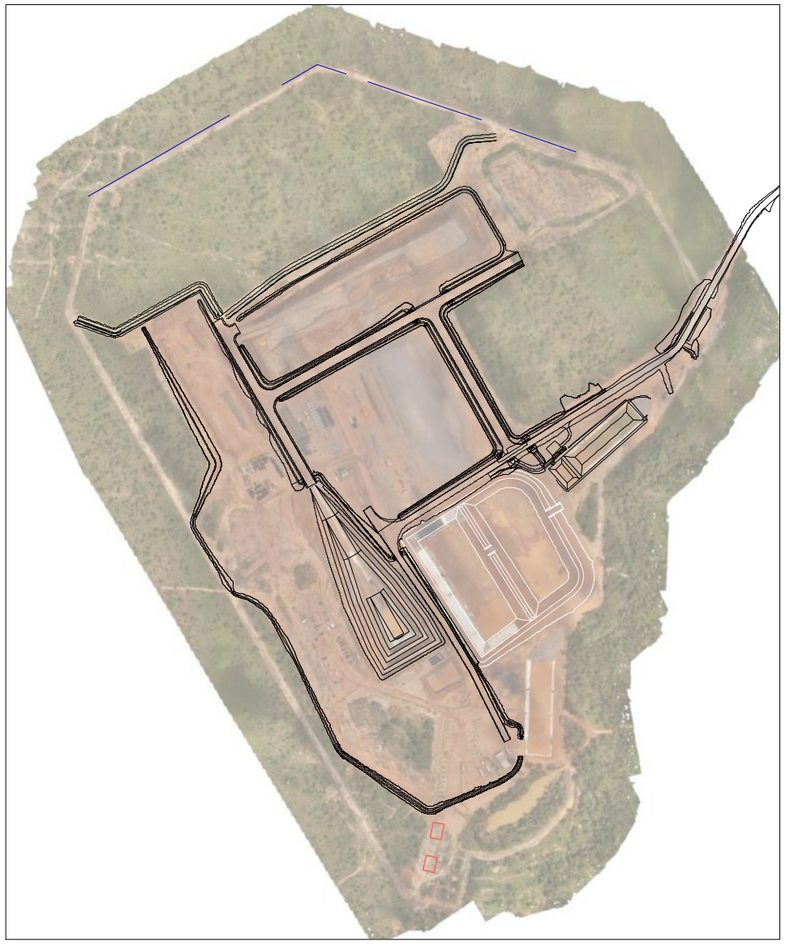
+ All drainage, erosion and sediment control measures
+ Occurrences of excessive sediment deposition (whether on-site or off-site)

Occurrences of construction materials, litter or sediment placed, deposited, washed or blown from the site, including deposition by vehicular movements.

APPENDIX A

EROSION AND SEDIMENT CONTROL DRAWINGS

EROSION AND SEDIMENT CONTROL DRAWINGS
CORE LITHIUM - BP33 PROJECT



DRAWING LIST:

REFER TO REPORT **(REFERENCE: R2688)** FOR ADDITIONAL DETAILS RELATING TO GUIDELINES USED, PROJECT AND SITE DESCRIPTION, CLIMATE, TOPOGRAPHY, SOILS, EROSION RISK ASSESSMENT, EROSION, SEDIMENT AND DRAINAGE CONTROL SPECIFICATIONS, SEDIMENT BASIN OPERATION, ROLES AND RESPONSIBILITIES AND SITE INSPECTION AND MONITORING

LEGEND

- CLEAN WATER DRAIN
- DIRTY WATER DRAING
- CURRENT CONTOURS
- CATCHMENT BOUNDARY
- CATCHMENTS - CARLTON TRACK
- SB1 CATCHMENT
- SB2 CATCHMENT
- INDICATIVE FLOW DIRECTION
- BASIN FLOW DIRECTION
- HES SEDIMENT BASIN
- SUMP
- ROCK FILTER DAM
- MULCH BUND

REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE - DRAWING NUMBERS CHANGED	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

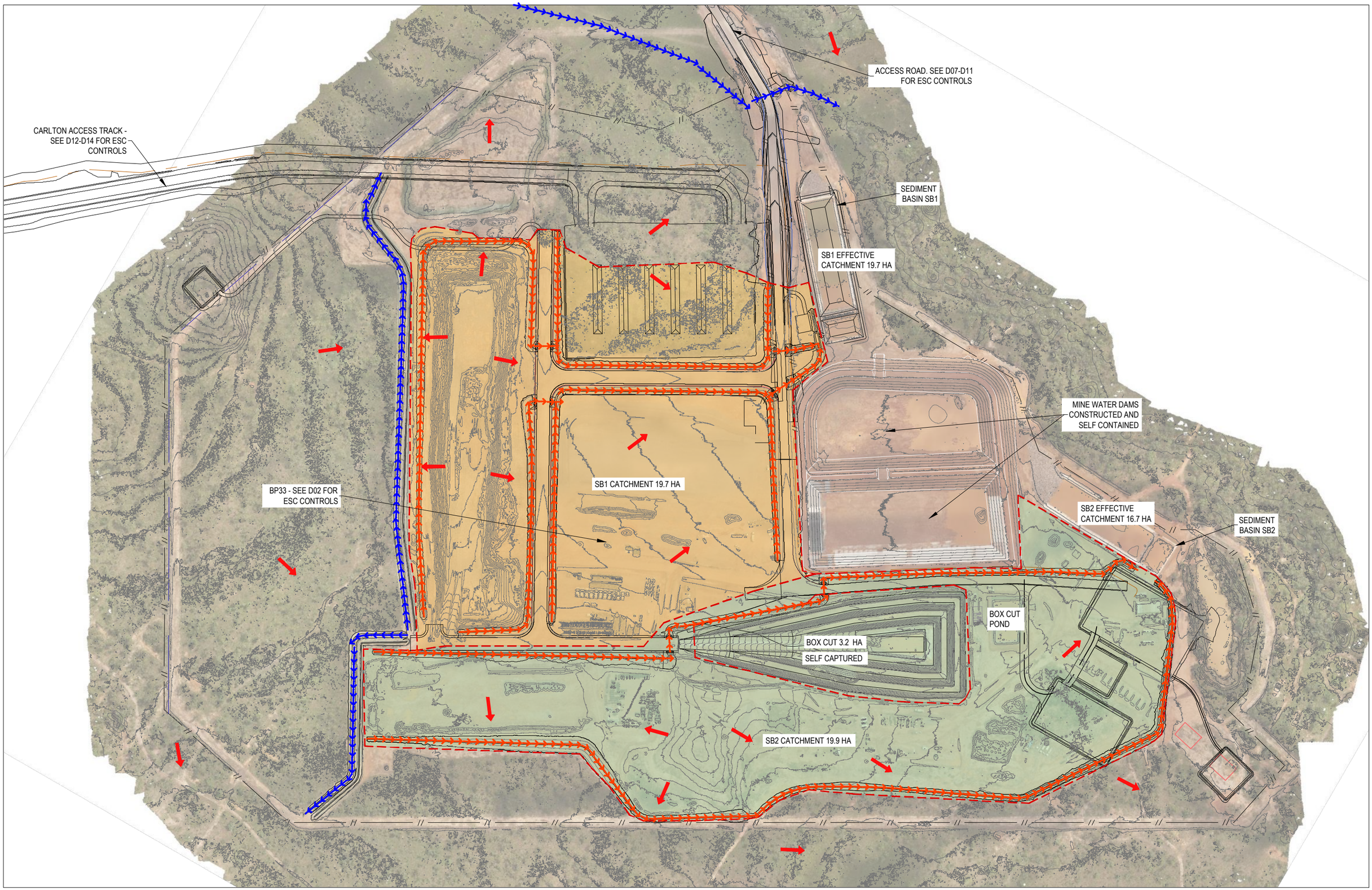
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS DRAWING INDEX AND LEGEND

PROJECT No: 23-0061 | DRAWING No: D00 | REVISION: C



TOPO.

REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

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A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

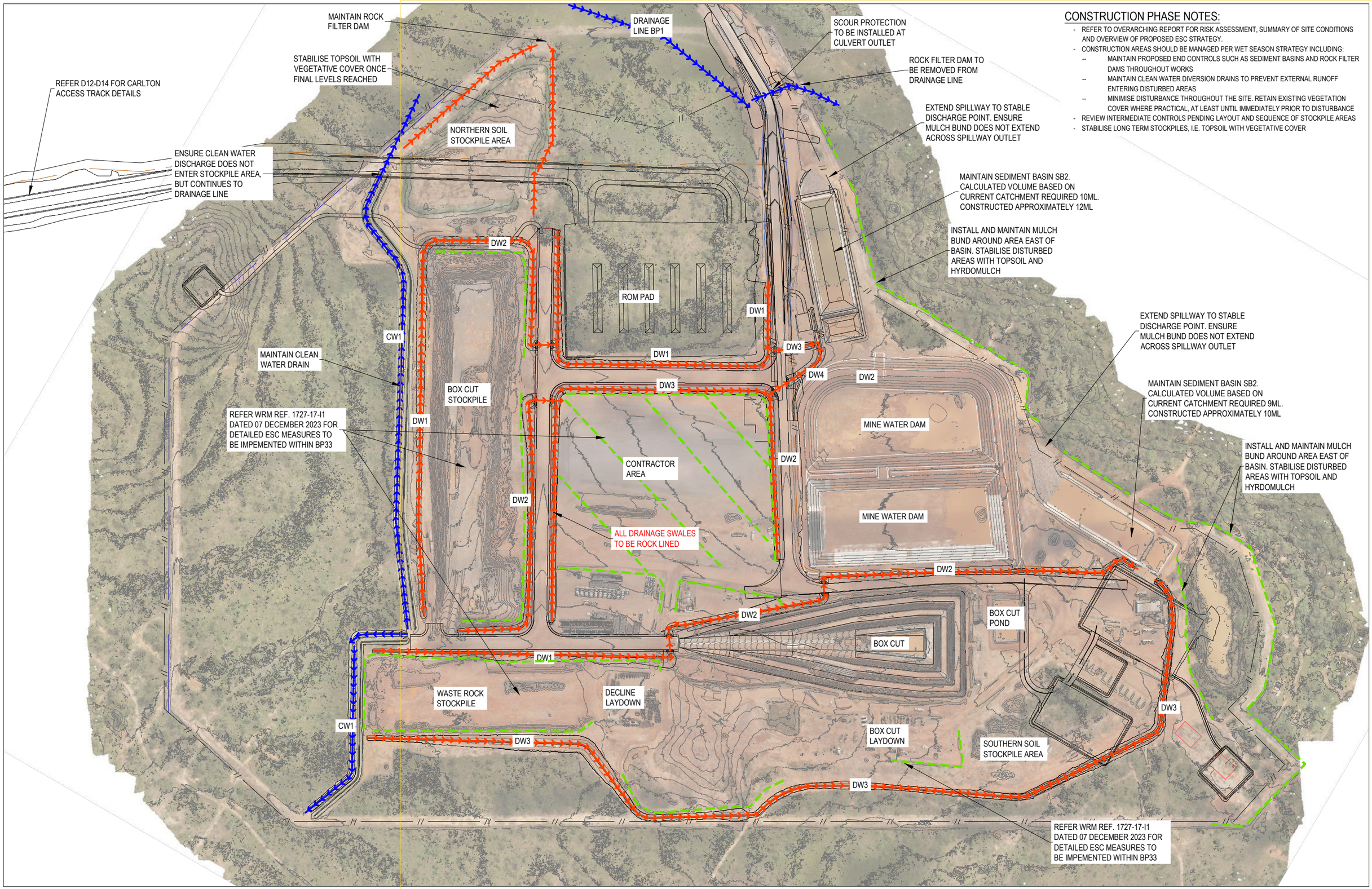
DRAWN	DESIGNED	DATE
RK	TC	16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS CURRENT CATCHMENT PLAN

PROJECT No	DRAWING No	REVISION
23-0061	D01	C



CONSTRUCTION PHASE NOTES:

- REFER TO OVERARCHING REPORT FOR RISK ASSESSMENT, SUMMARY OF SITE CONDITIONS AND OVERVIEW OF PROPOSED ESC STRATEGY.
- CONSTRUCTION AREAS SHOULD BE MANAGED PER WET SEASON STRATEGY INCLUDING:
  - MAINTAIN PROPOSED END CONTROLS SUCH AS SEDIMENT BASINS AND ROCK FILTER DAMS THROUGHOUT WORKS
  - MAINTAIN CLEAN WATER DIVERSION DRAINS TO PREVENT EXTERNAL RUNOFF ENTERING DISTURBED AREAS
  - MINIMISE DISTURBANCE THROUGHOUT THE SITE. RETAIN EXISTING VEGETATION COVER WHERE PRACTICAL, AT LEAST UNTIL IMMEDIATELY PRIOR TO DISTURBANCE
- REVIEW INTERMEDIATE CONTROLS PENDING LAYOUT AND SEQUENCE OF STOCKPILE AREAS
- STABILISE LONG TERM STOCKPILES, I.E. TOPSOIL WITH VEGETATIVE COVER

TOPO.

REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

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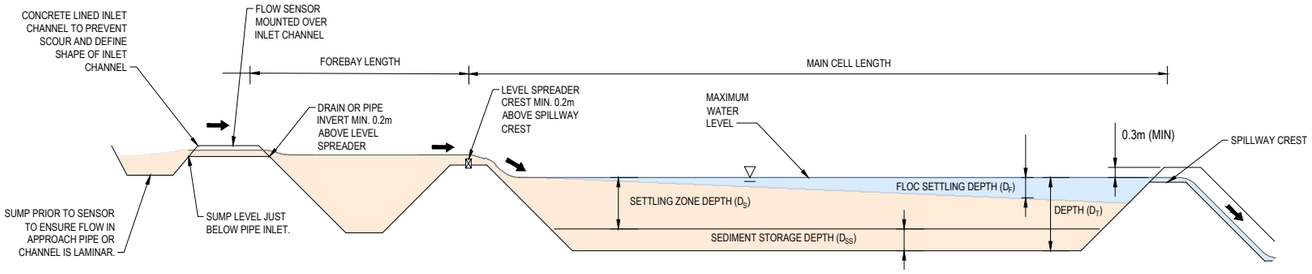
SCALE 1:4000
A3

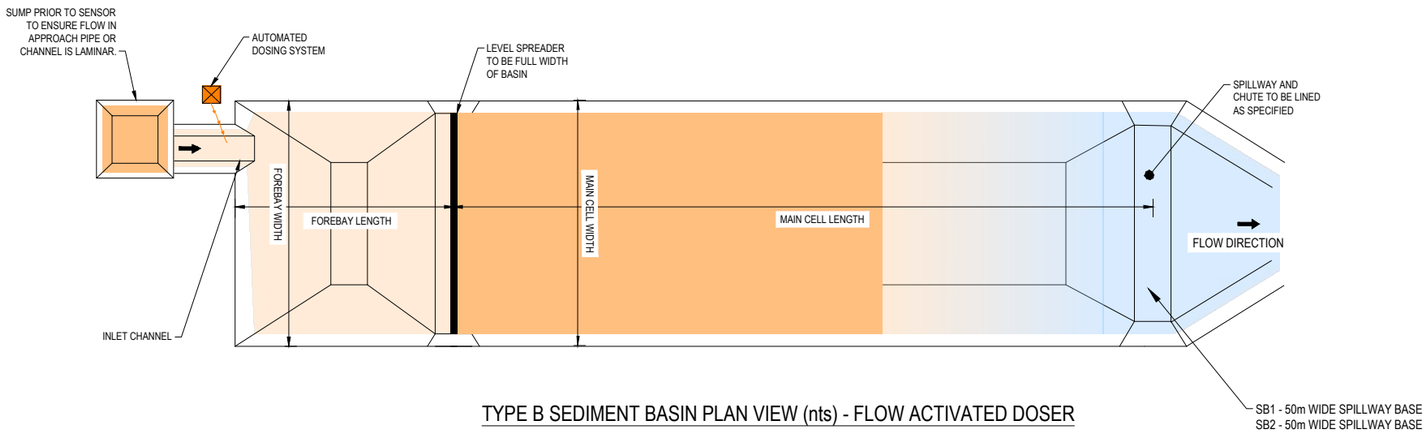
ISSUED FOR USE

CLIENT: CORE LITHIUM
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023
RPEQ / SIGNATURE (IF REQUIRED)

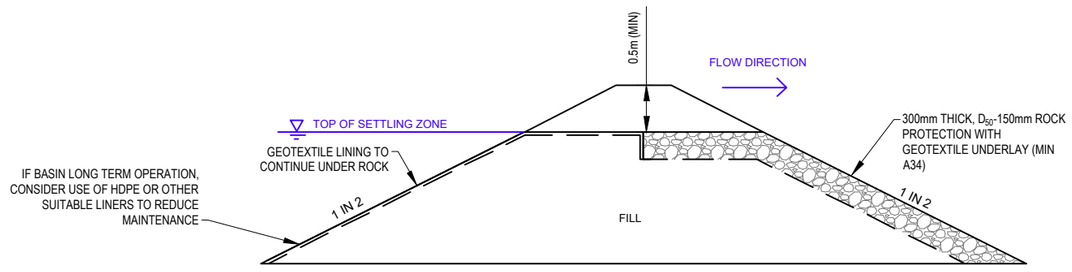
PROJECT: BP33 MINE
DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS CURRENT CONTROLS
PROJECT No: 23-0061 | DRAWING No: D02 | REVISION: C



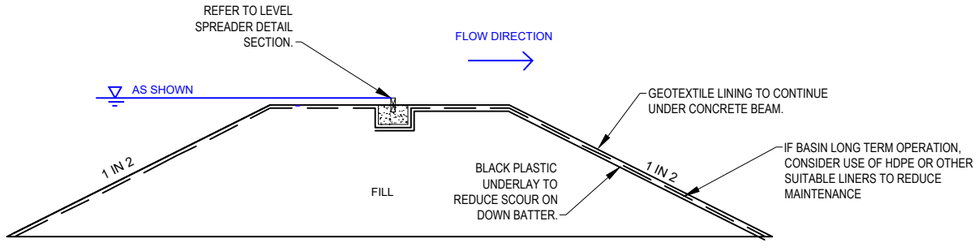
TYPE B SEDIMENT BASIN TYPICAL SECTION (nts) - FLOW ACTIVATED DOSER



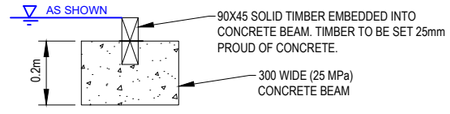
TYPE B SEDIMENT BASIN PLAN VIEW (nts) - FLOW ACTIVATED DOSER



SPILLWAY TYPICAL WALL SECTION - BOXED IN ROCK



LEVEL SPREADER SECTION



LEVEL SPREADER DETAIL SECTION

HIGH-EFFICIENCY SEDIMENT (HES) BASIN NOTES:

- KEY PRINCIPLES OF HES BASIN IS A FOREBAY, AUTO-DOSER AND TO ENSURE UNIFORM FLOW THROUGH MAIN CELL
- ALL FLOW ENTERING HES BASIN IS TO ENTER THROUGH THE FOREBAY ONLY. NO FLOW TO ENTER THE SIDE OF THE MAIN CELL
- LEVELS ARE TO CASCADE THROUGH BASIN AS SHOWN ON TYPICAL DETAILS
- BASIN PERFORMANCE REPORT IN ACCORDANCE WITH IECA (2016) TO BE COMPLETED POST RAINFALL FOR HES

BASIN ACCESS NOTES:

- INSTALL FENCE (FLAGS OR SIMILAR) AROUND BASIN FOR PUBLIC SAFETY
- INSTALL ACCESS RAMP OR SAFETY EQUIPMENT AS DEEMED SUITABLE DURING ON SITE ASSESSMENT

AUTO DOSER NOTES:

- JAR TESTING IS TO BE UNDERTAKEN FOR CONTRIBUTING CATCHMENT TO DETERMINE DOSE RATE FOR HES BASIN
- FLOW ACTIVATED DOSING IS RECOMMENDED ON LARGE BASINS AND BASINS WHERE PUMPED INFLOWS (FOLLOWING RAINFALL) WILL OCCUR
- INLET CHANNEL CONFIGURATION TO BE FINALISED WITH AUTOMATED DOSER SUPPLIER
- ASSUME INLET CHANNEL TO BE CONCRETE LINED ON MINIMUM 2% GRADE TO PREVENT SEDIMENT ACCUMULATION OR DEPOSITION IN INLET CHANNEL
- INLET CHANNEL TO ALLOW ACCURATE DEPTH / FLOWRATE READING

BASIN OPERATION NOTES:

- INSTALL DEPTH MARKER UPON CONSTRUCTING OF BASIN. DEPTH MARKER TO INDICATE TOP OF SEDIMENT STORAGE ZONE
- OPTION TO INSTALL DISCHARGE PIPE WITH VALVED OUTLET AT END OF BASIN (THROUGH SPILLWAY) AND FOREBAY (THROUGH LEVEL SPREADER) TO ALLOW DRAINING OF BASIN IF REQUIRED FOR MAINTENANCE
- RECOMMENDED TO INSTALL ACCESS RAMP INTO FOREBAY AND MAIN BASIN CELL TO ALLOW FOR MAINTENANCE

FOR CONSTRUCTION DETAILS, REFER DRAWINGS:
B23015-2300-DRG-CIV-001
B23015-2300-DRG-CIV-002
B23015-2400-DRG-CIV-001
B23015-2400-DRG-CIV-002

TOPO.

REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

A3

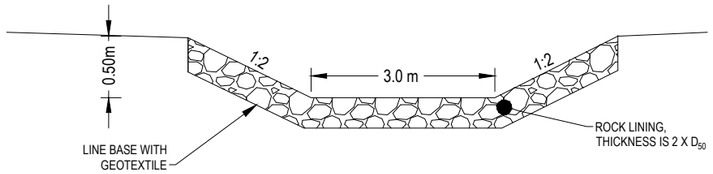
ISSUED FOR USE

CLIENT: CORE LITHIUM
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023
RPEQ / SIGNATURE (IF REQUIRED)

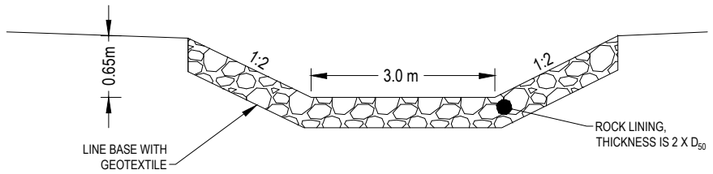
PROJECT: BP33 MINE
DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
SEDIMENT BASIN TYPICAL DETAILS
PROJECT No: 23-0061 | DRAWING No: D03 | REVISION: C

DRAIN NOTES:

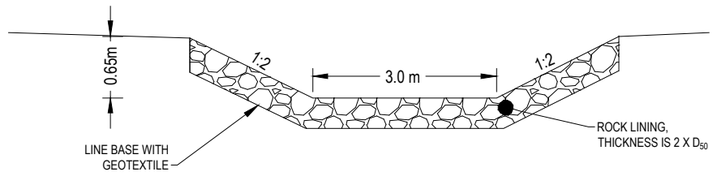
- DRAINS TO BE EXCAVATED TO RECESS ROCK LINING AT DEPTHS SHOWN
- FINISHED LEVEL OF ROCK TO JOIN NEATLY WITH SURROUNDING LEVELS (I.E. DOES NOT FORM A BERM)



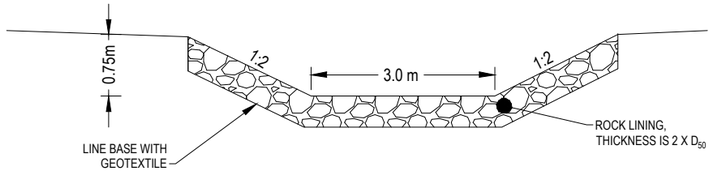
ROCK LINED DRAIN - TYPICAL SECTION - DW1



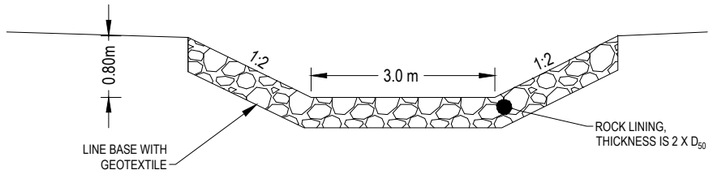
ROCK LINED DRAIN - TYPICAL SECTION - DW3



ROCK LINED DRAIN - TYPICAL SECTION - CW1



ROCK LINED DRAIN - TYPICAL SECTION - DW3



ROCK LINED DRAIN - TYPICAL SECTION - DW4

TOPO.

REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
DRAINAGE TYPICAL SECTIONS

PROJECT No: 23-0061 | DRAWING No: D04 | REVISION: C

SEDIMENT BASIN CALCULATIONS

														SEDIMENT STORAGE					APPROX. DIMENSIONS				
BASIN ID	CATCH AREA (HA)	BATTERS (1 IN X)	L:W RATIO	SETTLING DEPTH D_S (m)	C_1	TIME OF CONC (MINS)	I_1 (mm/hr)	$0.5Q_1$ (m^3/s)	JAR TEST SETTLE AFTER 15 MINUTES (mm)	FLOC SETTLE DEPTH D_F (m)	MINIMUM A_s (m^2)	ACTUAL V_s (m^3)	SCOUR CHECK	SED STORAGE OPTION?	RUSLE SOIL LOSS (t/ha/yr)	CLEAN OUT FREQUENCY (MONTHS)	MIN SED. STORAGE VOLUME (m^3)	APPROX. REQ SED STORAGE DEPTH (m)	APPROX. LENGTH AT SPILLWAY (m)	APPROX. WIDTH AT SPILLWAY (m)	APPROX. DEPTH AT SPILLWAY (m)	SETTLING VOLUME (m^3)	TOTAL VOLUME AT SPILLWAY (m^3)
SB1	19.7	3	3	2.80	0.67	20	90	1.638	150	0.60	2828	7918	BAFFLE	RUSLE	300	6	2364	1.1	117.3	39.1	3.9	7918	10282
SB2	16.7	3	3	2.80	0.67	20	90	1.399	150	0.60	2398	6713	BAFFLE	RUSLE	300	6	2004	1.1	110.0	36.7	3.9	6713	8717

CONSTRUCTED BASIN VOLUMES:
SB1 - APPROX. 12ML
SB2 - APPROX. 10ML

NOTES
1. SEDIMENT BASIN IS SIZED BASED ON SETTLEMENT RATE OF 150mm IN 15 MINS. DOSE RATE HAS BEEN VERIFIED ON SITE. PERFORMANCE OF BASINS IS MONITORED DURING CONSTRUCTION.
2. DUE TO VELOCITY AT OUTLET EXCEEDING DESIGN SCOUR VELOCITY OF 1.5cm/s IT IS RECOMMENDED THAT MONITORING OCCUR AND A PERMEABLE BAFFLE BE INSTALLED A THIRD OF THE WAY DOWN THE BASIN

SPILLWAY CALCULATIONS

							WEIR						CHUTE						DISSIPATER			
BASIN ID	CATCH AREA (HA)	ARI	C_{ARI}	TIME OF CONC (MINS)	I_{ARI}	FLOW - Q (m^3/s)	BASE WIDTH	SIDE SLOPE 1 (1 in x)	U/S WATER LEVEL (m)	FREEBOARD (m)	MIN. HEIGHT SPILLWAY TO TOB (m)	TOP WIDTH (m)	LONG. SLOPE (m/m)	ROCK SIZE - D_{50} (mm)	MANNING ROUGH COEFF	DESIGN VEL (m/s)	DEPTH OF FLOW (m)	DEPTH WITH F/BOARD (m)	MEAN ROCK SIZE - D_{50} (mm)	WIDTH 1 (m)	WIDTH 2 (m)	LENGTH (m)
SB1	19.7	50	0.805	20	164	7.22	35	2	0.24	0.3	0.54	37.16	0.3	150	0.098	1.48	0.14	0.44	100	37.4	37.6	2.1
SB2	16.7	50	0.805	20	164	6.12	35	2	0.22	0.3	0.52	37.08	0.3	150	0.096	1.40	0.12	0.42	100	37.3	37.5	2.1

DRAINAGE CALCULATIONS

DRAIN ID	CATCH AREA (HA)	ARI	C_{ARI}	TIME OF CONC (MINS)	I_{ARI}	FLOW - Q (m^3/s)	LONG. SLOPE (m/m)	BASE WIDTH	SIDE SLOPE 1 (1 in x)	SIDE SLOPE 2 (1 in x)	ROCK SIZE - D50 (mm)	MANNING ROUGH COEFF	DESIGN VEL (m/s)	DEPTH OF FLOW (m)	FREEBOARD (m)	DEPTH WITH F/BOARD (m)	TOTAL DRAIN WIDTH (m)
CW1	10	10	0.7	15	152	2.96	0.01	3	2	2	54	0.034	1.53	0.49	0.15	0.64	5.55
DW1	5	10	0.7	10	175	1.70	0.015	3	2	2	52	0.037	1.38	0.33	0.15	0.48	4.94
DW2	10	10	0.7	15	152	2.96	0.015	3	2	2	68	0.039	1.61	0.47	0.15	0.62	5.47
DW3	15	10	0.7	20	135	3.94	0.015	3	2	2	77	0.039	1.73	0.55	0.15	0.70	5.82
DW4	20	10	0.7	20	135	5.25	0.015	3	2	2	88	0.040	1.86	0.65	0.15	0.80	6.22

TOPO.

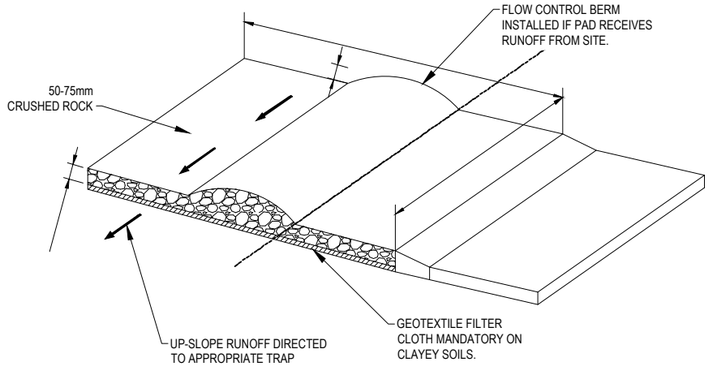
REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

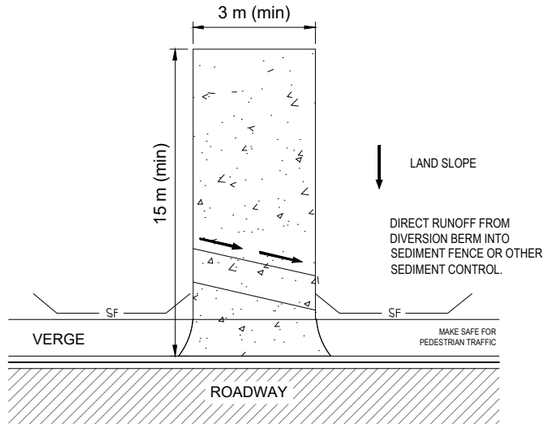
A3

ISSUED FOR USE

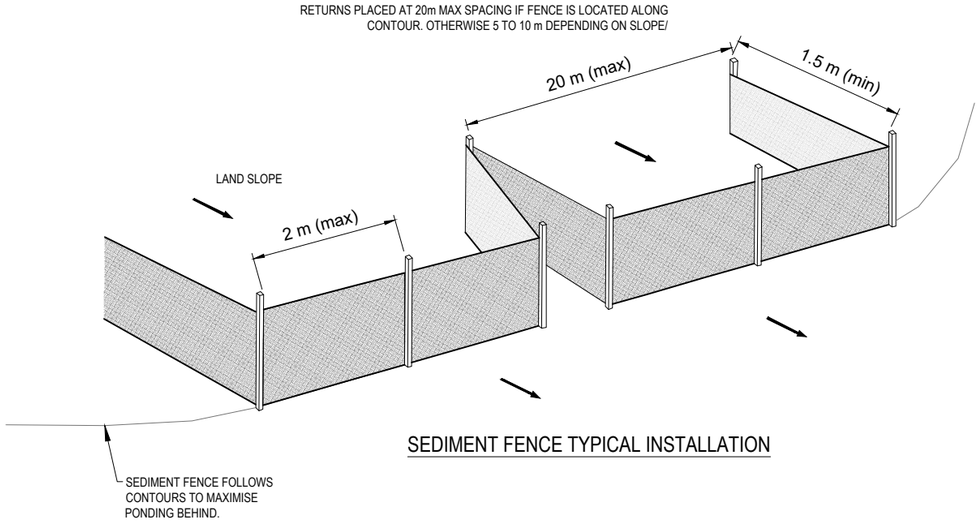
CLIENT: CORE LITHIUM
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023
RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE
DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS CALCULATIONS
PROJECT No: 23-0061 | DRAWING No: D05 | REVISION: C

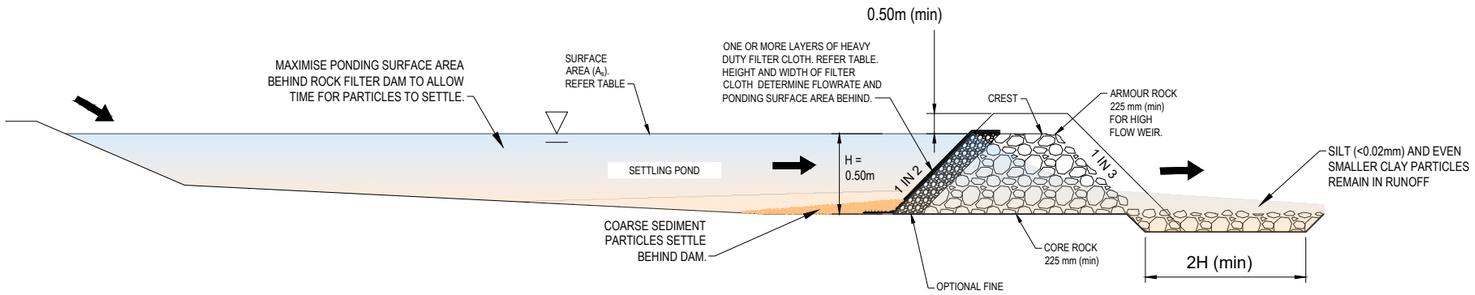




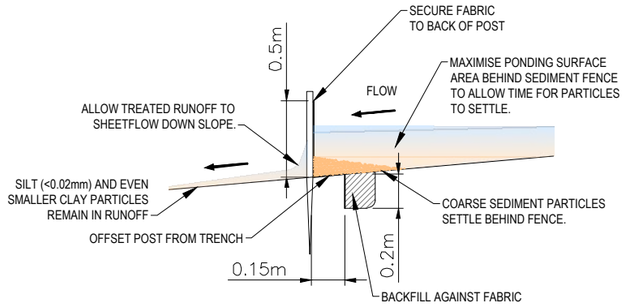
STABILISED ENTRY / EXIT



SEDIMENT FENCE TYPICAL INSTALLATION



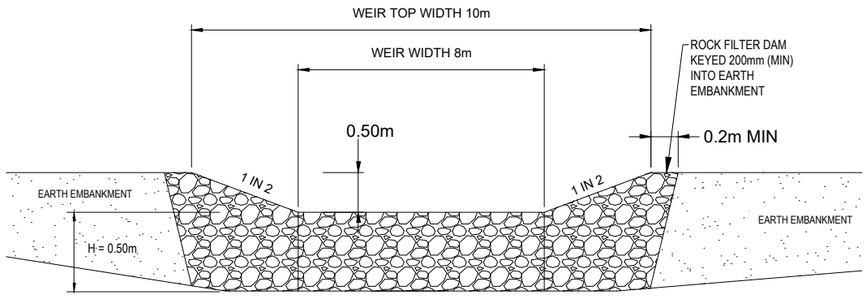
ROCK FILTER DAM



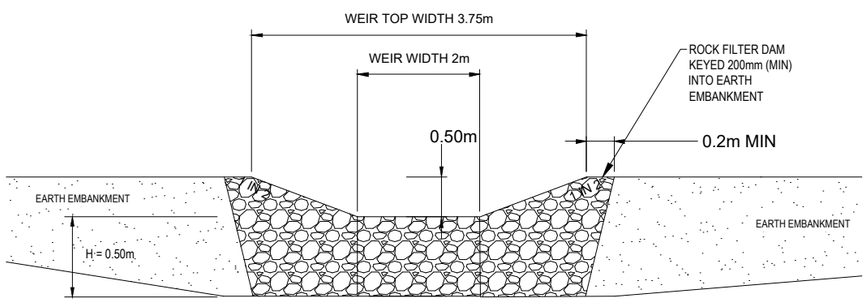
ANCHORING OF SEDIMENT FENCE

NOTES:

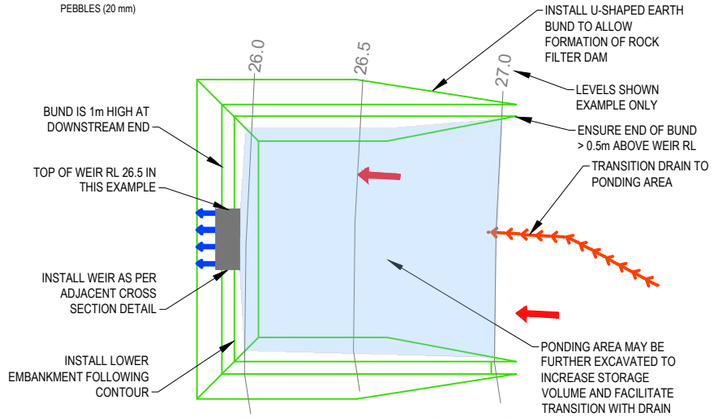
- ONLY SUITABLE FOR SHEET FLOW. SEDIMENT FENCE TO BE INSTALLED ALONG A LINE OF CONSTANT GROUND EXCAVATION WHERE PRACTICAL.
- IF CONCENTRATED FLOW EXISTS, INSTALL U-SHAPED SEDIMENT TRAP INSTEAD.
- BOTH ENDS OF THE SEDIMENT FENCE TO EXTEND UP THE SLOPE AT LEAST 1.5 m.
- MINIMUM 4 STAPES OR TIE WIRES PER STAKE



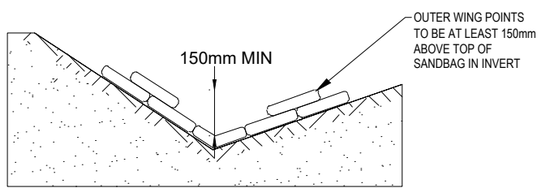
ROCK FILTER DAM WEIR - CROSS SECTION - RFD1



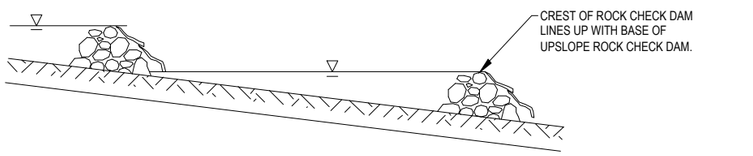
ROCK FILTER DAM WEIR - CROSS SECTION - RFD2



ROCK FILTER DAM TYPICAL LAYOUT



SAND BAG CHECK DAM TYPICAL DETAIL



ROCK CHECK DAM TYPICAL DETAIL

REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

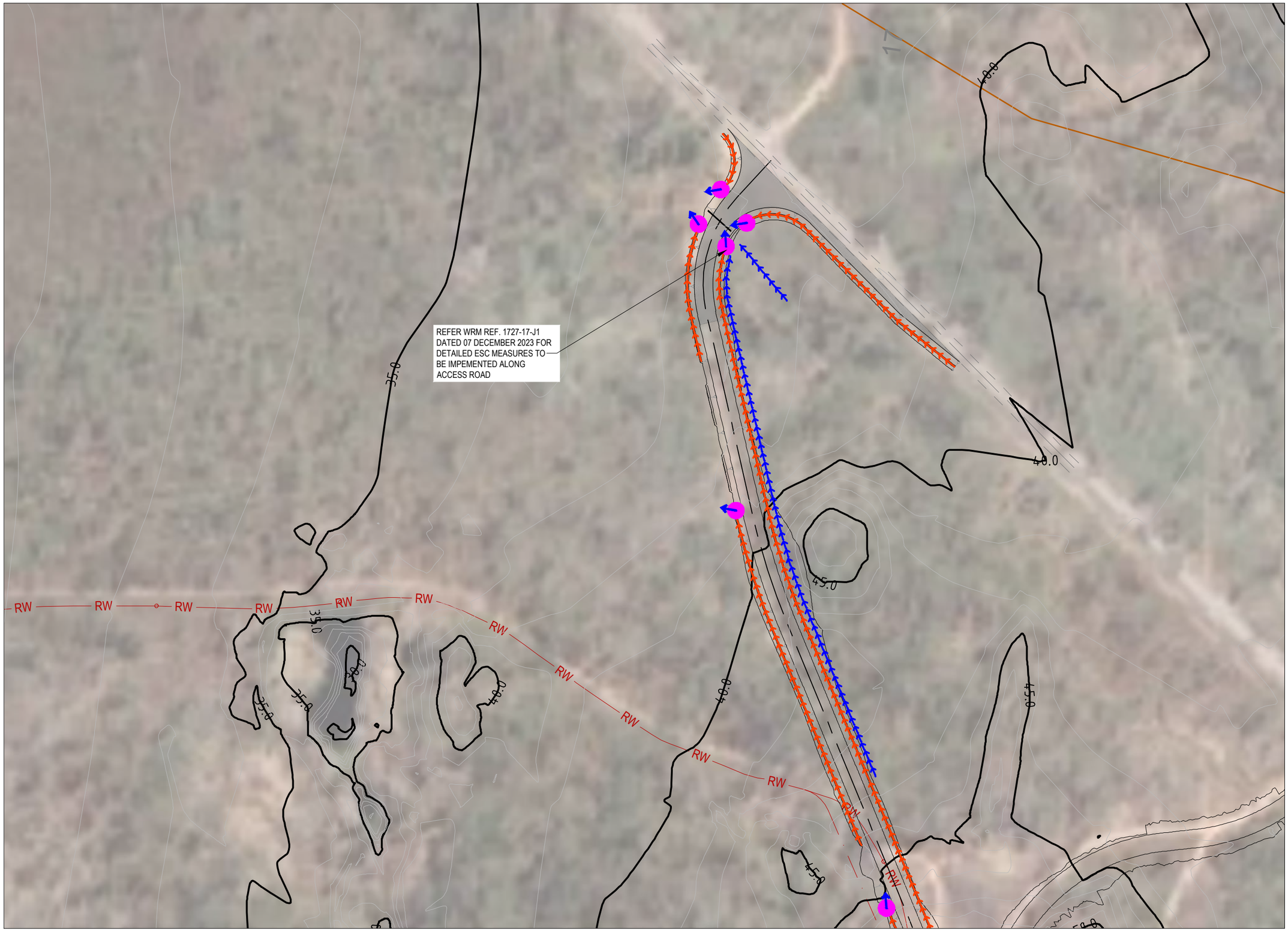
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS STANDARD DRAWINGS

PROJECT No: 23-0061 | DRAWING No: D06 | REVISION: C



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A	ORIGINAL ISSUE	TC	24.03.2023

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SCALE 1:1000
NORTH
A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

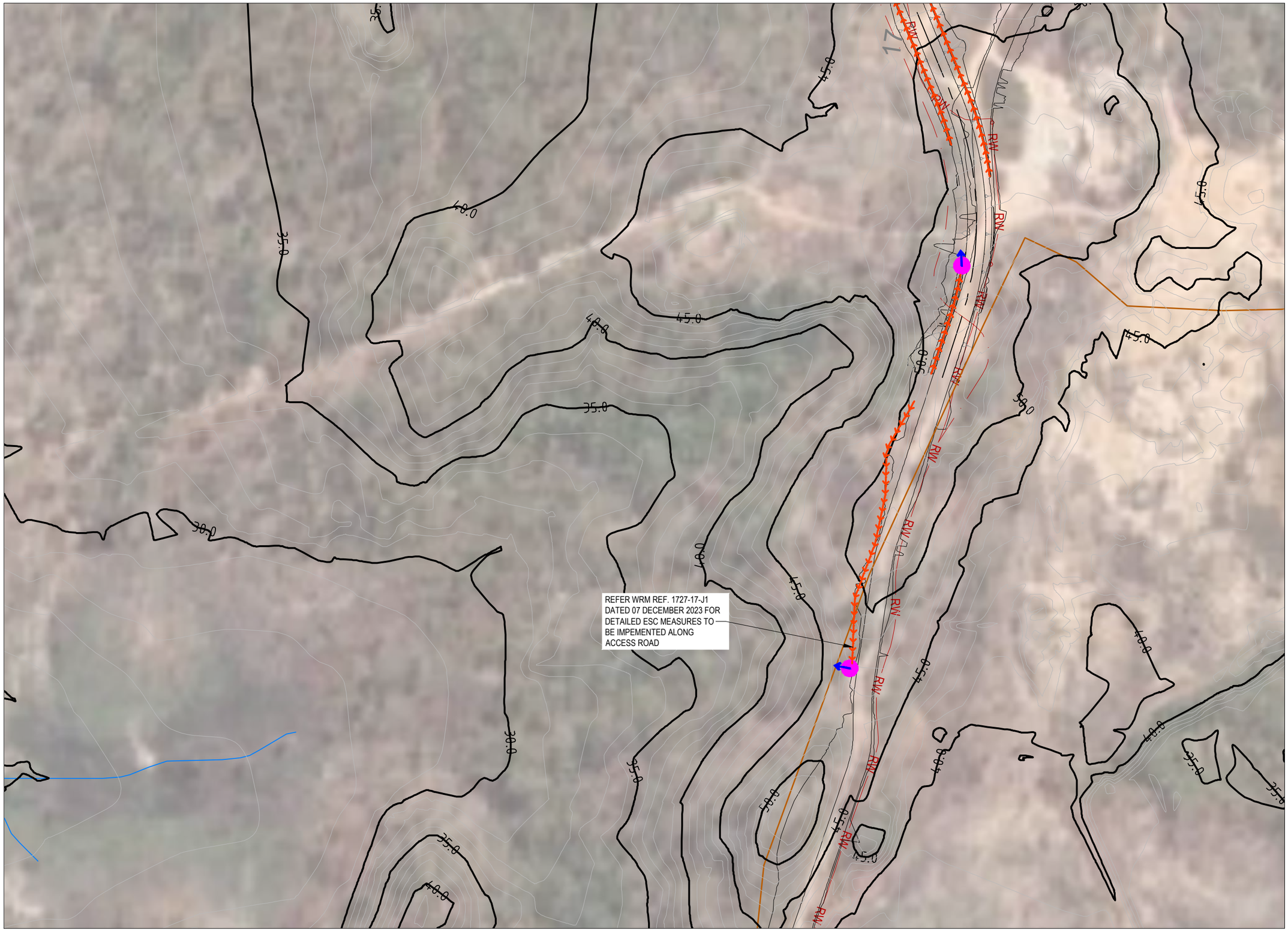
DRAWN	DESIGNED	DATE
RK	TC	16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
ACCESS ROAD SHEET 1 OF 5

PROJECT No	DRAWING No	REVISION
23-0061	D07	C



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REVISION	DESCRIPTION	APPROVED BY	DATE
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B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

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SCALE 1:1000
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A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

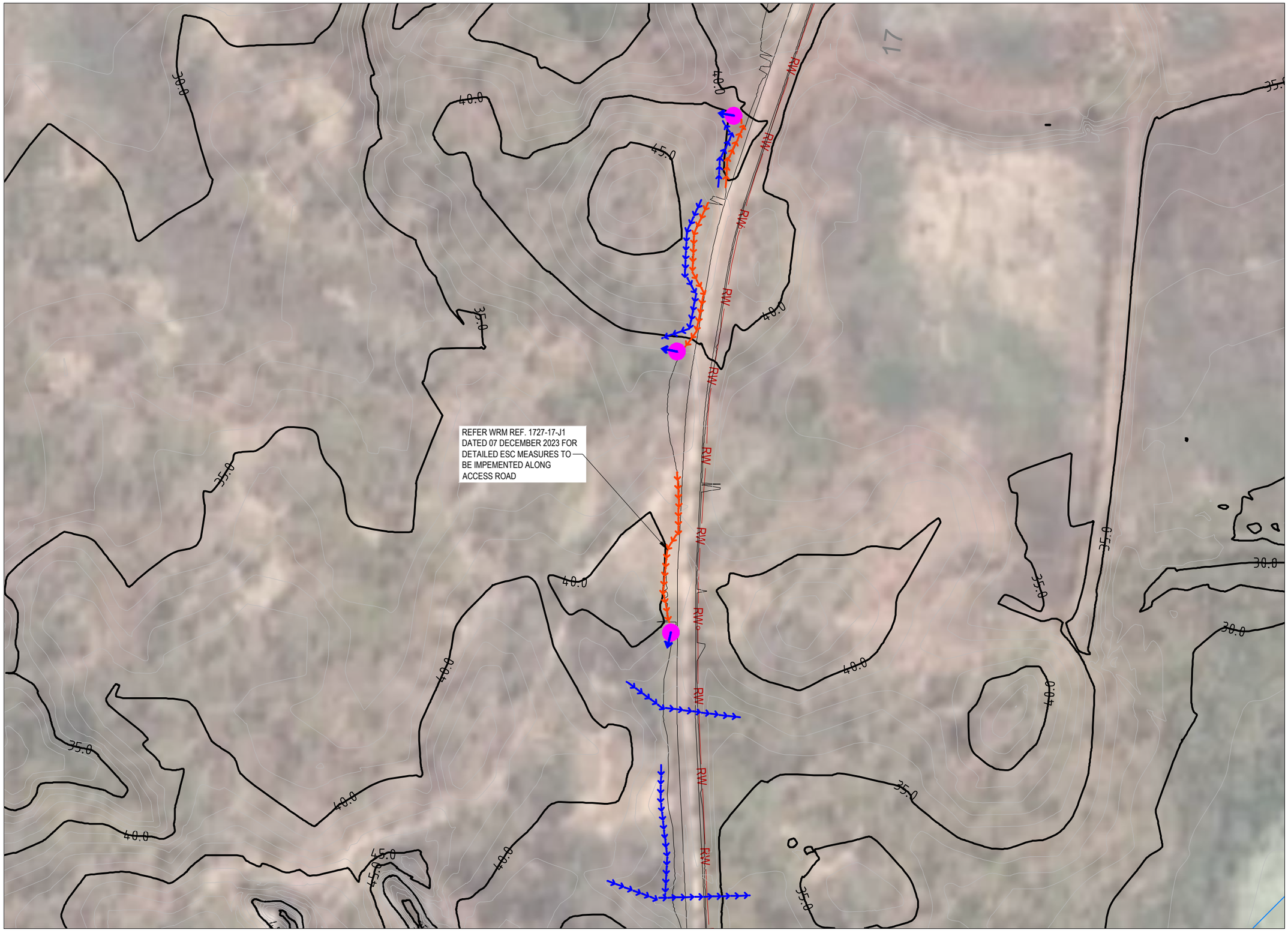
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
ACCESS ROAD SHEET 2 OF 5

PROJECT No: 23-0061 | DRAWING No: D08 | REVISION: C



REVISION	DESCRIPTION	APPROVED BY	DATE
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A	ORIGINAL ISSUE	TC	24.03.2023

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NORTH
A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

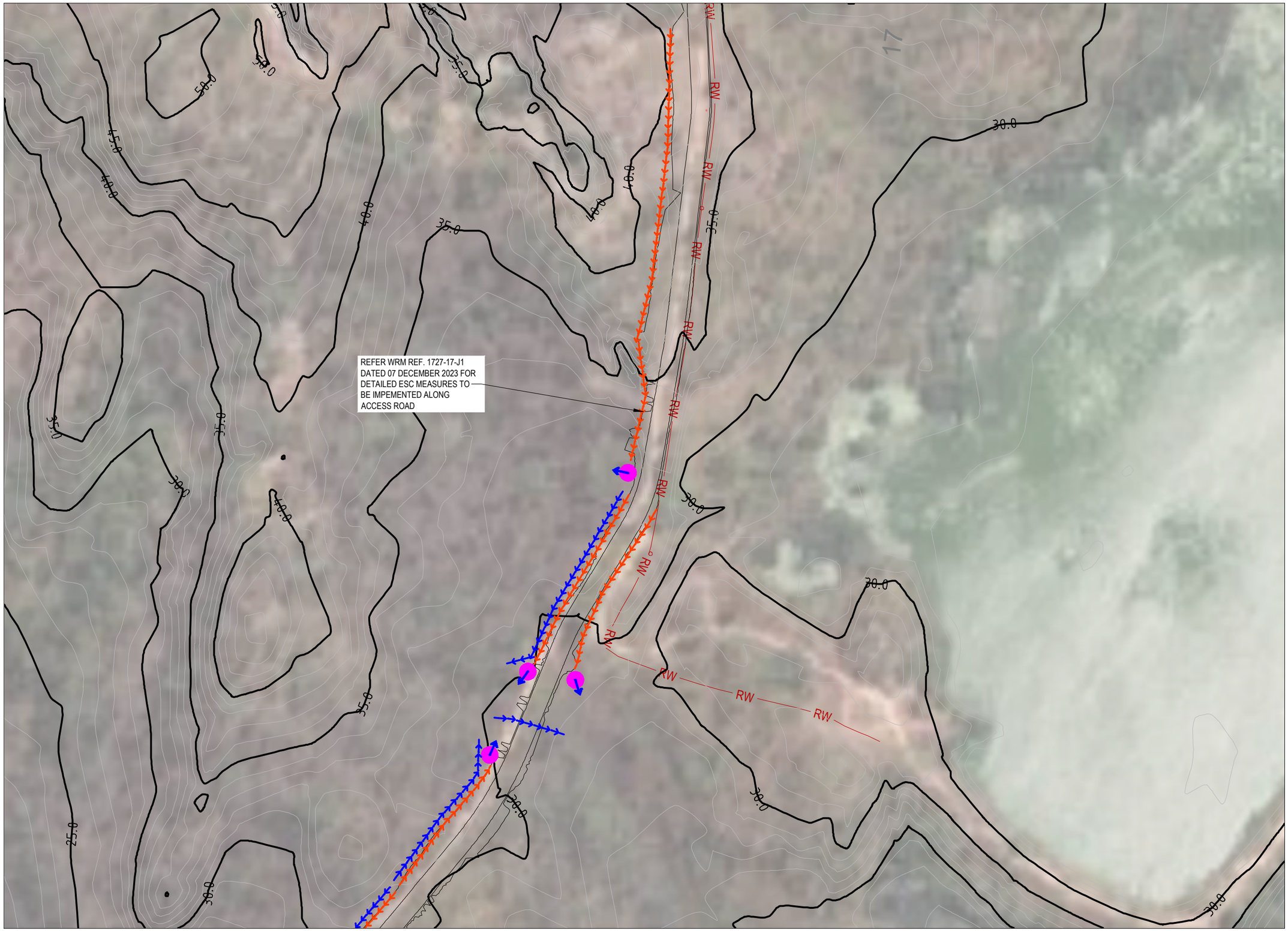
DRAWN	DESIGNED	DATE
RK	TC	16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
ACCESS ROAD SHEET 3 OF 5

PROJECT No	DRAWING No	REVISION
23-0061	D09	C



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SCALE 1:1000
NORTH
A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

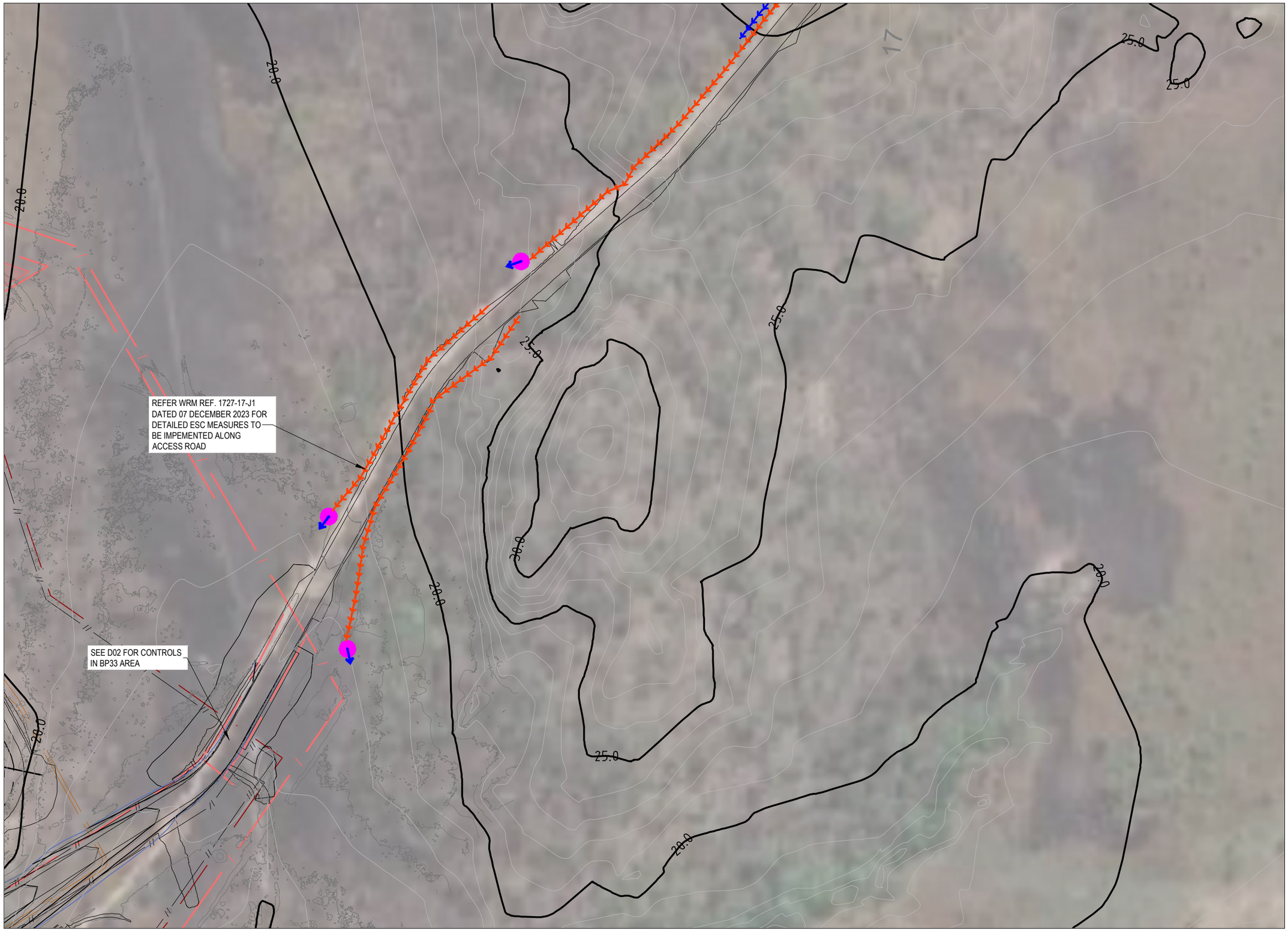
DRAWN	DESIGNED	DATE
RK	TC	16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
ACCESS ROAD SHEET 4 OF 5

PROJECT No	DRAWING No	REVISION
23-0061	D10	C



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REVISION	DESCRIPTION	APPROVED BY	DATE
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B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

0 20
SCALE 1:1000
NORTH
A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

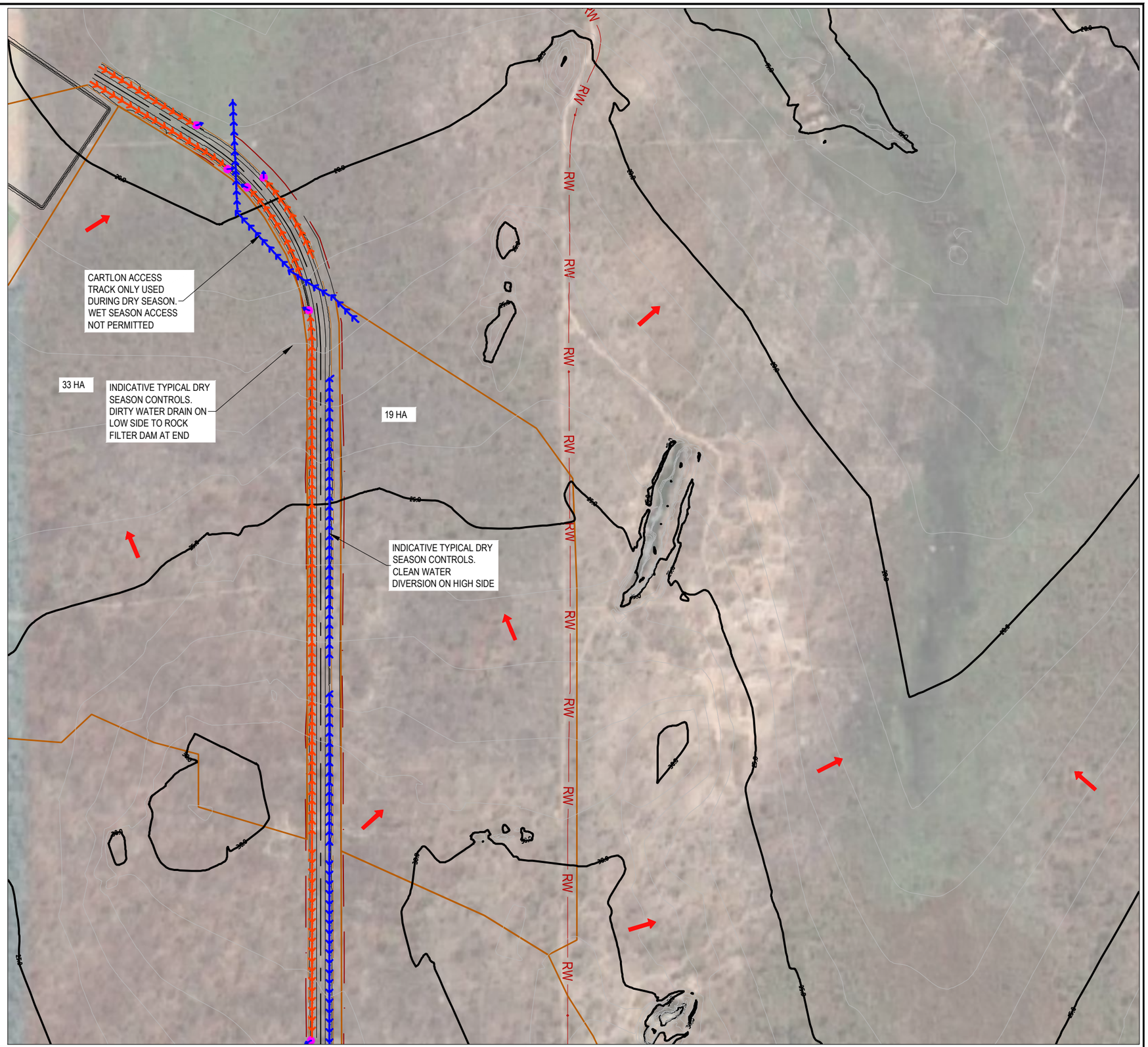
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
ACCESS ROAD SHEET 5 OF 5

PROJECT No: 23-0061 | DRAWING No: D11 | REVISION: C



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REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
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NORTH

A3

ISSUED FOR USE

CLIENT: CORE LITHIUM

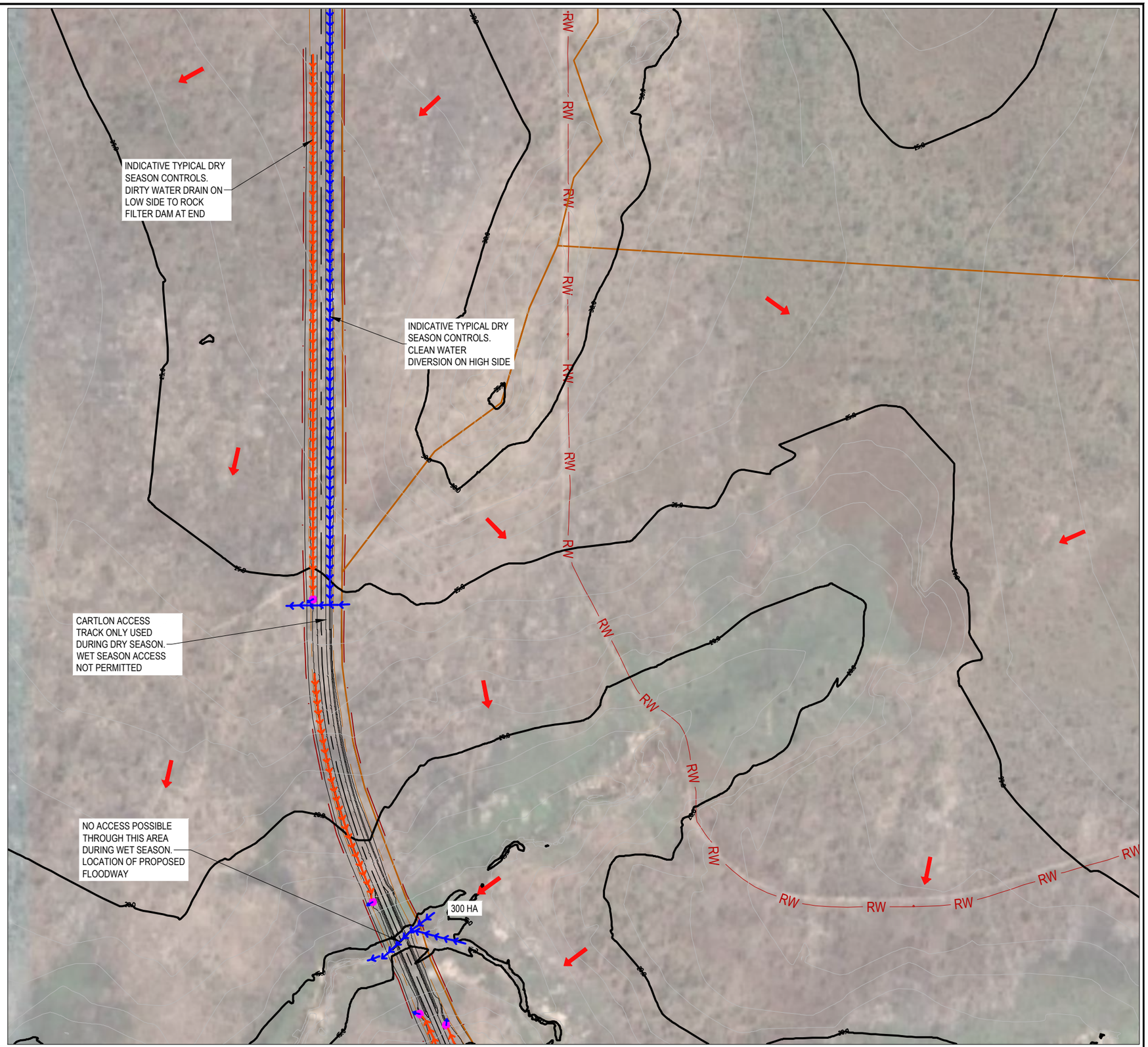
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023

RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
CARLTON ACCESS TRACK - SHEET 1 OF 3

PROJECT No: 23-0061 | DRAWING No: D12 | REVISION: C



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REVISION	DESCRIPTION	APPROVED BY	DATE
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B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

0 100
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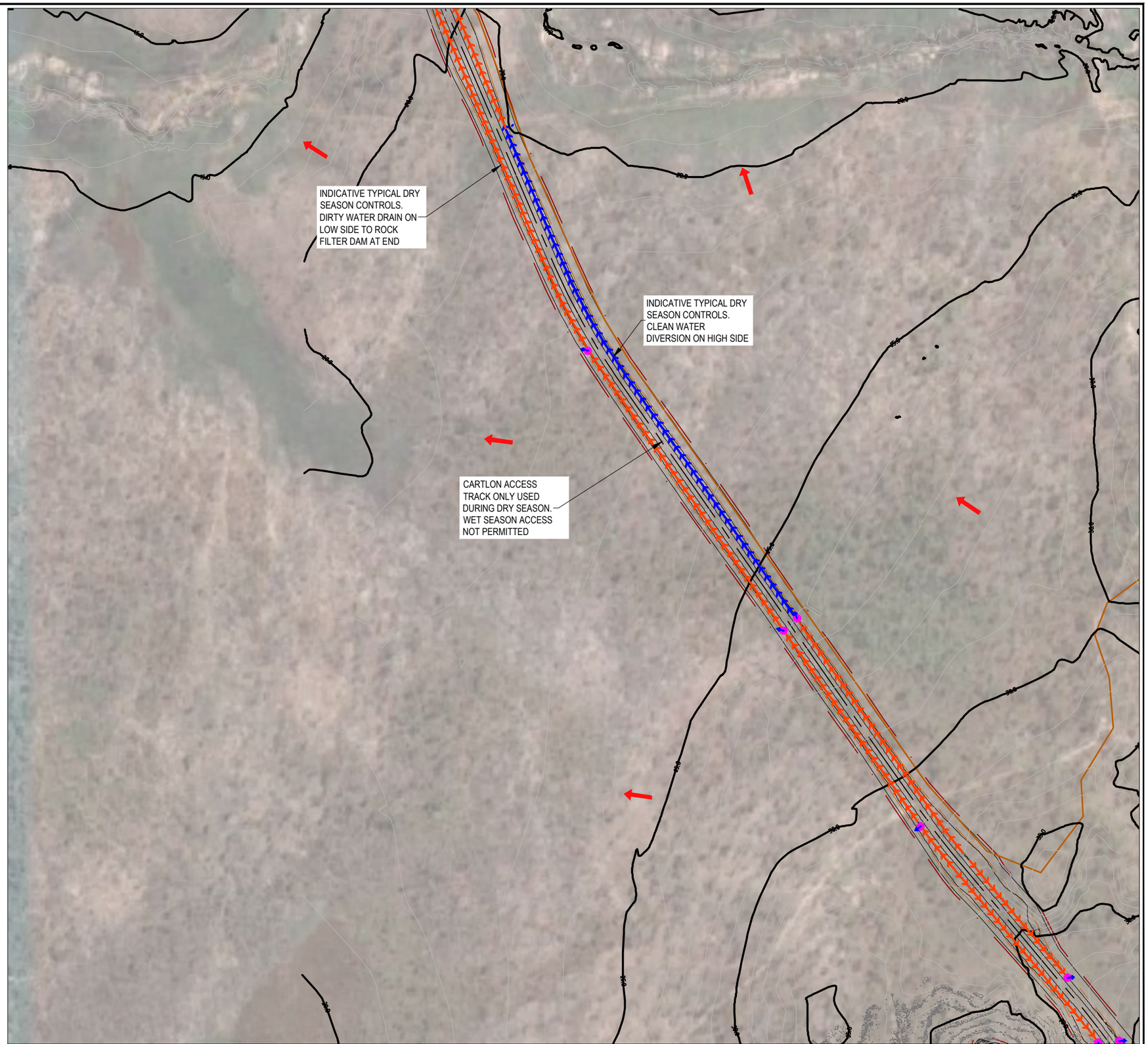
NORTH
A3

ISSUED FOR USE

CLIENT: CORE LITHIUM
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023
RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE
DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS
CARLTON ACCESS TRACK - SHEET 2 OF 3
PROJECT No: 23-0061 | DRAWING No: D13 | REVISION: C



TOPO.

REVISION	DESCRIPTION	APPROVED BY	DATE
C	2024 UPDATE	TC	22.04.2024
B	ADDED TEMPORARY CONTROLS	TC	19.06.2023
A	ORIGINAL ISSUE	TC	24.03.2023

0 100
SCALE 1:5000
NORTH
A3

ISSUED FOR USE

CLIENT: CORE LITHIUM
DRAWN: RK | DESIGNED: TC | DATE: 16.03.2023
RPEQ / SIGNATURE (IF REQUIRED)

PROJECT: BP33 MINE
DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLANS CARLTON ACCESS TRACK - SHEET 3 OF 3
PROJECT No: 23-0061 | DRAWING No: D14 | REVISION: C