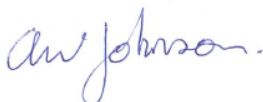


STATEMENT OF REASONS

Issued for a decision made under Section 74 of the *Water Act 1992* (Water Act)

Licensee	Lithium Developments (Grants NT) Pty Ltd ABN 70 622 047 232
Waste Discharge Licence (WDL) Number	WDL248
Licensed Action	Controlled discharge of wastewater from Mine Water Dam 1 (MWD1) through authorised discharge point (DP1) and into an unnamed ephemeral stream that feeds into West Arm, Darwin Harbour in accordance with Table 2 and subject to the conditions of this licence.
Application	Application by Lithium Developments (Grants NT) Pty Ltd to renew WDL248-02.
Decision	In accordance with section 74 of the Water Act, I grant WDL248-03.
Decision-maker	Andrew Johnson Controller of Water Resources
Signature	
Date	18 July 2025

In making the decision to grant the waste discharge licence (WDL), I have considered the following matters:

A. BACKGROUND

1. Lithium Developments (Grants) NT Pty Ltd (the applicant) has approval to operate an open-cut lithium mine on mineral lease ML31726 under Deemed Mining Licence 1021-01 at Cox Peninsula Rd, Berry Springs. Lithium-bearing ore is mined using drilling and blasting techniques and processed on site to increase the lithium concentration of the product. Concentrate is hauled in road trains on public roads to the Darwin Port for export. Pit dewatering is required to manage groundwater and rainfall inflows. Lithium Grants completed mining in January 2024, with final ore processing on 4 June 2024. A notice to transition to Care and Maintenance was submitted to the Minister on 30 April 2024.
2. WDL248 was granted on 25 July 2022 and authorises discharges of mine-affected water from the Mine Water Dam 1 (MWD1) to an ephemeral stream that reports to the West Arm of Darwin Harbour.
3. On 6 September 2023, the applicant submitted an application for an amendment of WDL248-01 pursuant to section 93(1) of the Water Act and was subsequently granted WDL248-02 on 20 December 2023.

B. APPLICATION

4. The applicant submitted an application to renew WDL248-02 on 29 April 2025 in the approved form (the application).
5. The application included supporting information in accordance with the requirements stated in the approved form.
6. The application was submitted more than 60 business days prior to the expiry of the WDL in accordance with regulation 15 of the Water Regulations 1992 (NT).
7. The applicant proposed to amend the trigger value for total phosphorus (TP) from 10 µg/L to 35µg/L. A background monitoring dataset and details of the trigger value calculation methodology was provided to support the proposed value (see paragraph 25).

C. REASONS FOR DECISION

In accordance with section 90(1) of the Water Act, I have taken into account the following factors in deciding to amend this waste discharge licence:

The availability of water in the area in question (s 90(1)(a))

8. Water availability in the area around the Grants mine is highly seasonal. The nearby unnamed creek flows only during the wet season, with flow usually stopping early in the dry season. While some small pools of water may remain, most of the creek dries up. The length of the dry period depends on how much rain fell during the previous wet season.
9. Groundwater in the area also fluctuates seasonally. Groundwater is recharged during the wet season and levels depend on how much rain has fallen. Groundwater generally flows from south to north and helps maintain flow in nearby creeks during and just after the wet season.

10. The WDL does not authorise any water extraction and is unlikely to materially affect surface water or groundwater flows in the area.

Any water allocation plan applying to the area in question (s 90(1)(ab))

11. There are no water allocation plans in place for the area affected by the proposed WDL.

The existing and likely future demand for water for domestic purposes in the area in question (s 90(1)(b))

12. There are no residential land uses within 10 km of the mine site. The mine site is located on Vacant Crown Land and the surrounding land is subject to various mining leases. There is unlikely to be future demand for water for domestic purposes in the immediate surrounds.
13. For the above reasons, the WDL is unlikely to affect the future demand for water for domestic purposes in the area.

Any adverse effects likely to be created as a result of activities under the WDL on the supply of water to which any person other than the Applicant is entitled under the Water Act (s 90(1)(c))

14. The WDL will not restrict the availability of water for extraction in the area because the WDL will not change the ephemeral flows of water in the surface water catchment or alter groundwater levels.
15. The WDL is unlikely to result in adverse effects on the supply of water, as there are no licensed users downstream of the mine site or the proposed discharge point.
16. The WDL does not authorise extraction of water. The applicant does not supply water to any person or organisation.
17. For the above reasons, the WDL is not likely to affect water supply.

The quantity or quality of water to which the Applicant is or may be entitled from other sources (s 90(1)(d))

18. This WDL does not authorise the extraction of water by the applicant.
19. The applicant holds Surface Water Extraction Licence (SWEL) 8151018, which permits the extraction of up to 620 ML per annum of surface water from the existing Observation Hill Dam for the beneficial use of mining. Observation Hill Dam is located approximately 5 km to the south of the area affected by WDL248 and is on mineral lease (ML) 32074.

The designated beneficial uses of the water and the quality criteria pertaining to the beneficial uses (s 90(1)(e))

20. The relevant declared beneficial uses for Darwin Harbour are declared in Gazettal notice *Gazette* No. 27 on 7 July 2010. The following beneficial uses are prescribed: aquaculture, agriculture, cultural, environment, rural stock and domestic.
21. The relevant declared beneficial uses for the Darwin Rural Adelaide River Water Control District are declared in Gazettal notice *Gazette* No. S61 on 28 June 2024. The following beneficial uses are prescribed: Aboriginal economic development, agriculture, aquaculture, cultural, environment, industry, mining activity, petroleum activity, public water supply and rural stock and domestic.

22. The water quality objectives which apply in relation to the Darwin Harbour Region are the water quality objectives specified in Tables 8 and 9 in the document entitled *Water Quality Objectives for the Darwin Harbour Region Background Document*. The relevant guidelines specified in Chapters 3, 4 and 5 of the document entitled *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC 2000) may also apply.
23. In addition to the above, the *Australian & New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018) and the *Guidelines for Managing Risks in Recreational Water* published by the National Health and Medical Research Council (NHMRC, 2008) have been considered in the granting of the WDL.
24. A number of conditions are included in the WDL to ensure adequate protection of the environment from discharge activities and therefore prevent or minimise impact on beneficial uses. These conditions include:
 - a. The WDL includes water quality trigger values. Trigger values apply to a range of contaminants which may be found in discharge waters. These trigger values indicate the concentration of contaminants below which aquatic ecosystems are very likely to be protected. The most sensitive beneficial use in the area is aquatic ecosystem protection, therefore trigger values are designed to protect this beneficial use (which will also protect other beneficial uses).
 - b. Depending on the contaminant, the trigger values are based on default guideline values for toxicants from ANZG (2018) for 95% species protection or are site-specific trigger values derived by the licensee from reference data or ecotoxicological assessments.
 - c. The WDL stipulates that authorised discharges must not cause a number or proportion of trigger value exceedances depending on the parameter and as defined in the WDL (condition 21.2, item 16). Trigger value exceedances are recorded and reported to the Department in accordance with the WDL (condition 24, condition 25, item 10 and condition 40.1).
 - d. Compliance with trigger values at the compliance point is managed through adjusting releases based on calculation of dilution ratios using real-time flow data from the unnamed tributary and latest available laboratory water quality data from within the catchment and the wastewater source prior to and ongoing during releases.
 - e. The WDL also requires the applicant to conduct an extensive water quality, sediment and ecological monitoring program (comprising seagrass, macroinvertebrate and riparian vegetation monitoring) to ensure early detection of non-compliance and environmental impacts.
25. The applicant proposed to amend the WDL248-02 trigger value for total phosphorus (TP) from 10 µg/L to 35 µg/L. The reasons for and nature of proposed amendment is as below:
 - a. The applicant proposed this amendment to adopt a site-specific trigger value for TP that has been derived using background monitoring data inclusive of natural variation in rainfall and creek flow.
 - b. Background water quality data have been collected at the upstream control site for WDL248, GUS SW7, from 23 December 2020 to 7 April 2025 (38 wet season data points). During this time period, several TP concentrations were below the detection limit of 10 µg/L. To incorporate these data into the calculation of the 80th percentile, one half of the limit of detection has been used. As there are unequal numbers of data points for each month, the average monthly TP concentrations have been used to derive the 80th

percentile of monthly data. Based on these calculations, the 80th percentile proposed to be adopted as the trigger value for TP is 35 µg/L.

- c. The methodology used to calculate the trigger value is consistent with Australian & New Zealand Governments' guidance for deriving guideline values for water quality using reference site data (ANZG, 2018). That is, background data for over 2 years of monthly sampling are used to derive the 80th percentile. Only wet season (December – April) data have been used to account for seasonal conditions.
- d. The potential environmental impact of the proposed amendment is negligible. The proposed TV represents the 80th percentile of TP in upstream reference water quality. Hence, the proposed TP trigger value is within the natural variation of water quality occurring in the region. On this basis, the proposed amendment is also unlikely to pose a risk of adversely impacting the biodiversity values or conservation significance of Darwin Harbour or the declared Beneficial Uses and Objectives for the Darwin Harbour Region.
- e. The WDL retains the requirement that authorised discharges must not cause the median of each year's measurements for TP at the compliance point to exceed the trigger value (Condition 21.2, item 16). This is in accordance with ANZG (2018) guidance on the application of trigger values derived from reference site data to slightly to moderately disturbed ecosystems.

The provisions of any agreement made by or on behalf of the Territory with a State of the Commonwealth concerning the sharing of water (s 90(1)(f))

26. There are no water sharing arrangements in place in the Northern Territory concerning the sharing of water in the area.

The existing or proposed facilities on, or in the area of, the land in question for the retention, recovery, or release of drainage water, whether surface or sub-surface drainage water (s 90(1)(g))

27. The applicant maintains facilities for the retention and release of water on the mining lease including mine water dams, transfer pumps and pipelines. This WDL authorises discharge of mine affected wastewater from existing surface structure Mine Water Dam 1 (MWD1) through the authorised discharge point (DP1).
28. Infrastructure on the mining lease is regulated by the Mining Division in the Department of Lands, Planning and Environment under a Deemed Mining Licence issued pursuant to the *Environment Protection Act 2019*.

The adverse effects, if any, likely to be created by such drainage water resulting from activities under the WDL on the quality of any other water or on the use or potential use of any other land (s 90(1)(h))

29. This WDL authorises discharge of mine-affected wastewater from existing surface structure MWD1 through the authorised discharge point. There is a mixing zone between the discharge point and the compliance point, within which some impact on water quality is considered acceptable. Monitoring of macroinvertebrates, sediments and riparian vegetation in the downstream receiving environment indicates that mine-affected wastewater discharges from MWD1 have had no significant impact on the aquatic systems of waterways feeding into Darwin Harbour.
30. Paragraphs 24 and 25 explain why the amendments included in the proposed WDL are unlikely to change the impact of discharges on water quality.

31. The WDL is not expected to materially impact the water quality of the Darwin Harbour beneficial uses or any other land beyond the mixing zone.

The provisions under the Planning Act 1999 (NT) relating to the development or use of land in the area in question (s 90(1)(j))

32. The activities conducted on the land do not require development consent under the Planning Scheme established under the *Planning Act 1999* (NT), for the following reason:
- a. The land to which the Application relates is subject to approved Mineral Leases. The provisions of the *Planning Act 1999* have been considered as part of mineral lease approvals.

Other factors the Controller considers should be taken into account or that the Controller is required to take into account under any other law in force in the Territory (s 90(1)(k))

Monitoring and Modelling

33. The applicant conducts surface water, fluvial sediment and biota monitoring programs as part of the requirements of this licence.
34. The applicant generally demonstrates compliance with the monitoring requirements of the WDL. Data submitted by the applicant relating to the 2023-2024 reporting year demonstrated that monitoring was conducted in accordance with the conditions of the WDL with the exception of a small number of samples (see paragraph 36).

Compliance

35. The Applicant has generally complied with the conditions of the existing WDL248-02.
36. The following non-compliances were noted during the 2023-2024 reporting year:
- a. Levels of iron, total nitrogen, TP and turbidity at the compliance point were not compliant with the number of acceptable exceedances for these parameters set by condition 26.2 and item 15 of WDL248-02.
 - b. The applicant failed to investigate non-notifiable exceedances (condition 27 of WDL248-02), submitted 9 out of 13 incident notifications late, and failed to report 3 incidents as required under Condition 41.
 - c. The applicant failed to submit an investigation report for turbidity exceedances reported on 14 March 2024, breaching condition 43.
37. The department has investigated the above non-compliances and issued a formal warning letter to the applicant. The department has engaged with the applicant to ensure they understood the obligations laid out in the WDL.
38. The revised TP trigger value corrects an overly conservative trigger value in WDL248-02. In 2023-2024, the median total phosphorus level at the compliance point was 30 µg/L. This was recorded as a non-compliance as it exceeded the trigger value of 10 µg/L. However, the downstream level was not dissimilar to long-term background conditions. The revised TP trigger value is more appropriate and will prevent this situation re-occurring.
39. The applicant has received Infringement Notice WR0158 under Section 46(1) of the Act for a breach of Surface Water Extraction Licence 8151018. The breach related to an incident of non-compliance where water consumption for the 2023-2024 water year exceeded the

entitlement for that period. The infringement amount was \$1,800 for a body corporate including a \$40 victims levy.

40. These non-compliances do not affect the decision to amend the WDL because:
- Non-compliances with reporting requirements do not pose potential harm to the environment.
 - The applicant pro-actively proposed corrective actions for all non-compliances, some of which have already been implemented including improvements to sediment basins, revegetation across the site and improvements to record keeping procedures

Consultation

41. The draft WDL has been considered and accepted by the applicant.
42. The WDL was also provided to the following stakeholders for feedback. Their feedback is summarised below.
- Mining Division (Division of Lands, Planning and Environment): Mining Division supported the standard conditions applied to this renewal and agreed with the deletion of standard conditions 24.1 and 24.2 (relating to investigating and taking corrective action for individual trigger value exceedances, see paragraph 45.h), noting that while investigations for all exceedances may not be necessary, consistent records should be maintained. Mining Division endorsed the revised TP trigger value. They recommended clarifying the inconsistent use of "trigger value" and "limit" within the WDL. This feedback has been incorporated into the WDL.
 - There are no identified stakeholders downstream of the WDL discharge point.

Conditions of WDL

43. WDL248-03 is largely the template licence containing standard conditions.
44. WDL248-02 was issued in a previous template, meaning that the renewed licence has a few structural and typological changes which do not affect the function of the WDL. For example, several conditions have changed number.
45. The proposed licence contains changes to:
- Expiry Date: The WDL has been issued for a 5-year period until 30 June 2030.
 - Schedule 1, Item 1: The beneficial uses for the Darwin Rural Adelaide River Water Control District, declared in June 2024, have been added.
 - Schedule 1, Items 12 and 13: The reporting period dates have been adjusted to run from 1 May to 30 April of the preceding year, rather than 25 July to 24 July. The monitoring report and annual return submission date remains the same, that is within 10 business days of 24 July each year. This allows the applicant more time after the end of the reporting period to receive laboratory results and prepare their report.
 - Schedule 1, Item 15: Special conditions have been added to specify requirements for annual returns and monitoring reports, namely:
 - The annual return required by condition 38 must contain details of all notifiable incidents and non-compliances with this licence during the reporting period.

- ii. The monitoring report required by condition 39 must include:
 - 1. The records of trigger value exceedances collected in accordance with Condition 24.3.
 - 2. An assessment of compliance with Condition 21.2 including supporting data analysis.
- e. Schedule 1, Item 16 specifies non-compliance criteria.
 - i. The criteria specify what number or percentage of water quality measurements are allowed to exceed the trigger values during the reporting period (see paragraph 24.c).
 - ii. These criteria were included in WDL248-02.
 - iii. In the standard licence template, condition 21.2 refers to Item 7 and prohibits exceedances of trigger values. To include the non-compliance criteria, Condition 21.2 was adjusted to refer to Item 16. Consequently, condition 16 prohibits exceeding the trigger values beyond the number or percentage specified at Item 16.
 - iv. This change to the standard licence design brings the WDL in line with ANZG (2018) guidance for assessing impacts to water quality in slightly to moderately disturbed ecosystems (see paragraph 24.c).
- f. Condition 18 of WDL248-02, which related to the provision of a monitoring report upon expiry or surrender, has been deleted as this is now covered by Item 13.
- g. Condition 22 of WDL248-02, which related to changing plant and equipment has been deleted as it is no longer a standard condition.
- h. Conditions 27.1 and 27.2 of WDL248-02, relating to investigating and taking corrective action for individual trigger value exceedances, have been removed. As several WDL trigger values are based on the 80th percentile of background data, 20% of measurements can be expected to exceed the trigger value. Investigating individual exceedances of trigger values is excessive, considering the requirements to investigate consecutive and substantial exceedances as required by condition 25.
- i. Condition 31 of WDL248-02 has been removed. It related to the design of the monitoring program but was redundant as the monitoring program is already included in the WDL as per Appendix 3, 4 and 5 of the WDL.
- j. Appendix 2: As requested by the applicant, the total phosphorus (TP) trigger value has been amended from 10 µg/L to 35 µg/L (see paragraph 25).
- k. Appendix 3: An additional upstream surface water sampling point (Hang Gong – GUS SW8) has been added with the same sampling regime as the other upstream sites. This addition follows the applicant's completion of requirements of the special conditions of WDL248-02 which required an additional upstream sampling point to be investigated and selected.
- l. Appendix 6 of WDL248-02 has been removed. Relevant information that was contained in Appendix 6 is included in the licence conditions and monitoring program, and it is redundant.

Assessment under the Environment Protection Act 2019 (NT) or the Environmental Assessment Act 1982 (NT) (now repealed)

46. The Grants Lithium Project, including potential waste discharges, was assessed under the *Environmental Assessment Act 1982* (now repealed).
47. Details of the assessment are available in Assessment Report 89 on the NT EPA website. Assessment Report 89 provides the NT EPA's recommendations following their assessment of the Grants Lithium Project.
48. The WDL is consistent with the recommendations of the NT EPA in Assessment Report 89 as it:
 - a. Requires that discharge water quality is managed to ensure the activity does not adversely affect the receiving environment, declared beneficial uses or water quality objectives and prohibits adverse impacts of controlled discharges;
 - b. Requires that water quality meet specified discharge criteria;
 - c. Applies seasonal, site-specific surface water quality trigger values and 95% species protection default guideline values appropriate to ensure the protection of aquatic ecosystems;
 - d. Restricts the discharge of water treated with polyacrylamide flocculants with more than 0.05% of the neuro-toxin acrylamide monomer;
 - e. Requires the licensee to undertake a monitoring program designed to monitor and detect potential impacts;
 - f. Requires a stakeholder engagement plan to be developed and complied with, including maintaining a community feedback line and complaints log.
49. The proposed amendments to the WDL do not contravene the NT EPA recommendations following their assessment of the proposal.
50. The amendments proposed under this renewal are not likely to have the potential for significant impact. Accordingly, it is not considered necessary to refer the application to the NT EPA.

D. MATERIAL CONSIDERED

Application to renew WDL248-02 submitted by the applicant on 29 April 2025 and comments on the draft WDL248-03 provided on 17 June 2025.

ANZECC. 2000. Australian and New Zealand Environmental Conservation Council. *Australian and New Zealand Guidelines for fresh and marine water quality*. Canberra (ACT).

ANZG, 2018. *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Australian and New Zealand Governments and Australian state and territory governments, Canberra.
Available at: www.waterquality.gov.au/anz-guidelines

Comments on the draft WDL and proposed amendments provided by Mining Division (Department of Lands, Planning and Environment) on 30 May 2025.

Declared Beneficial Use Declarations Darwin Harbour declared in Gazettal notice *Gazette* No. 27 on 7 July 2010.

Declared Beneficial Use Declarations Darwin Rural Adelaide River in Gazettal notice *Gazette* No. S61 on 28 June 2024.

Deemed Mining Licence 1021-01 issued to Lithium Developments (Grants NT) Pty Ltd

Surface Water Extraction Licence 8151018

The *Guidelines for Managing Risks in Recreational Water* published by the National Health and Medical Research Council (NHMRC, 2008)

WDL248 Annual Monitoring report 2023-2024

WDL248-02 Annual Return 2023-2024

E. CONCLUSION AND FINAL DECISION

On the basis of the above reasons, I have decided to issue WDL248-03.