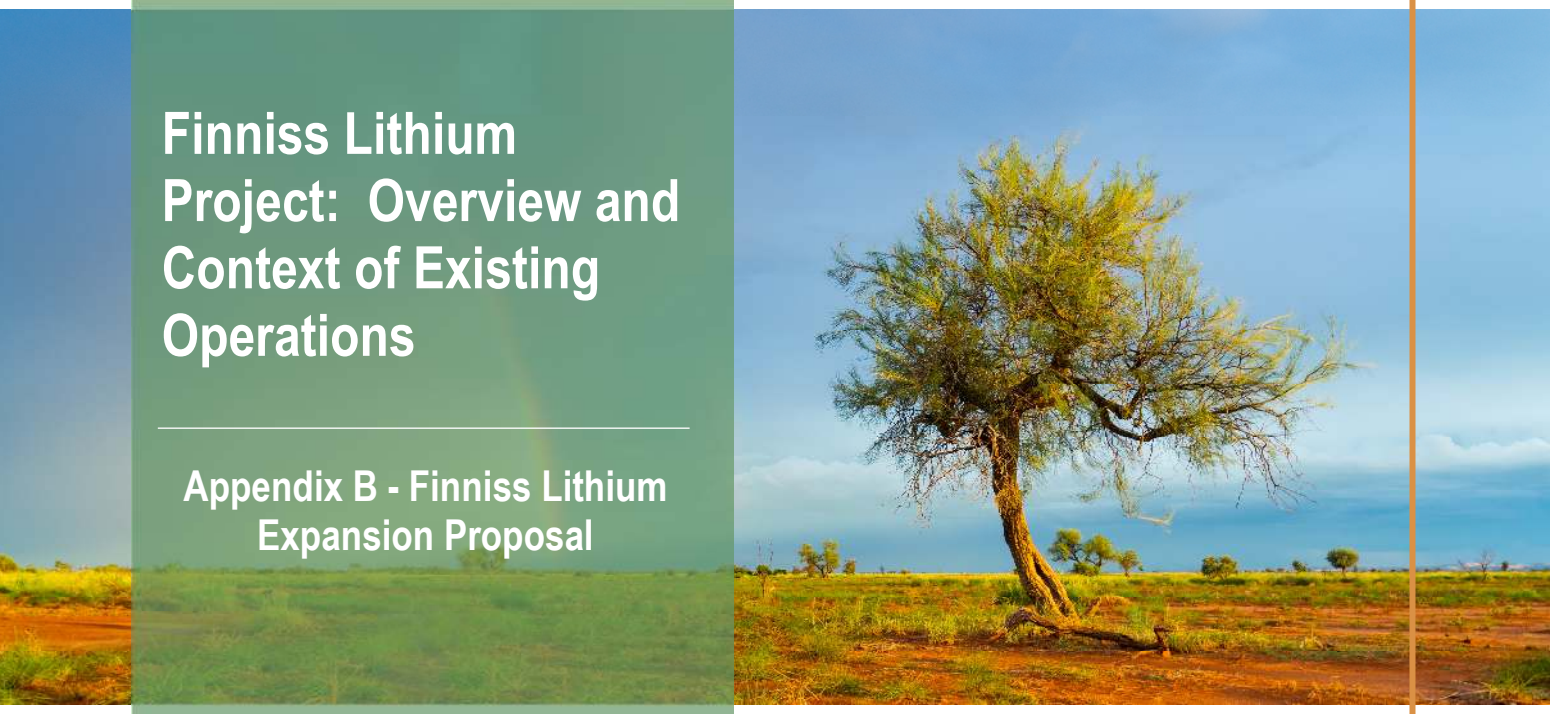
APPENDIX B

Finniss Lithium – Contextual Summary Report (GreenValues, 2026)

GREEN VALUES AUSTRALIA



Finniss Lithium Project: Overview and Context of Existing Operations

Appendix B - Finniss Lithium Expansion Proposal

CORE LITHIUM LTD

Tenements:	ML31726, ML32074, ML32278, ML32346
Revision No:	Rev 0
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Acronyms

Acronym	Meaning
AAPA	Aboriginal Areas Protection Authority
ANCOLD	Australian National Committee on Large Dams
AHD	Australian height datum
AMD	Acid mine drainage
BCF	Burrell Creek Formation
BCM	Bank cubic metres
BoM	Bureau of Meteorology
BP33	Finniss Lithium Project BP33 Underground Mine
C&M	Care and maintenance
CO_2eq	Carbon dioxide equivalent
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Commonwealth)
DLPE	Department of Lands, Planning and Environment (NT)
DLRM	Former Department of Land Resource Management (most functions now administered by DLPE)
DML	Deemed mining licence
DP	Discharge point
EIS	Environmental impact statement
EL	Exploration licence
EML	Environmental Mining Licence
EMP	Extractive Mineral Permit
EP Act	Northern Territory *Environmental Protection Act 2019*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
GDE	Groundwater dependent ecosystem
GHG	Greenhouse Gas
ha	Hectares
kL	Kilolitres
km	Kilometres
kW	Kilowatt
Li	Lithium
LOM	Life of mine

Acronym	Meaning
L/s	Litres per second
m	Metres
m^3	Cubic metres
mbgl	Metres below ground level
mg	Milligrams
MNES	Matters of national environmental significance
ML	Megalitres
ML	Mineral Lease
MLN	Mineral Lease (Northern)
mm	Millimetre
MMP	Mine management plan
Mt	Million tonnes
Mtpa	Million tonnes per annum
MW	Mega Watt
MWD	Mine water dam
NGER Act	*National Greenhouse and Energy Reporting Act 2007* (Commonwealth)
NT	Northern Territory
NT EPA	Northern Territory Environmental Protection Agency
NTU	Nephelometric turbidity units
OHD	Observation Hill Dam
RL	Reduced level
SER	Supplementary Environmental Report
SWEL	Surface water extraction licence
TDS	Total dissolved solids
TPWCA	Territory Parks and Wildlife Conservation Act
TSF	Tailings storage facility
WDL	Waste discharge licence
WRD	Waste rock dump

1 INTRODUCTION

This document has been prepared as an attachment to Lithium Developments (Grants) Northern Territory (LDGNT) referral documentation for the Finniss Lithium Project (Expansion of Operations) proposal. It provides a brief overview of the assessment and permitting history for components of the Finniss Lithium Project that have been approved previously and includes a summary of:

- The key features of the project components approved to date.[1]
- Key factors previously assessed by the EPA and other administering authorities as part of their respective permitting processes.[2]
- Social and/or environmental characteristics of the Grants and BP33 project areas, as they were described at the time of NT EPA's assessments of each project.
- Environmental authorisations currently in place for components of the Finniss Lithium Project[3]

The information provided in this document is intended to help stakeholders (including both regulators and members of the broader community) understand the history and current status of environmental assessments for mining activities included in the Finniss project by providing concise contextual information. This is consistent with the Northern Territory Government's support for the community's right to know (NT EPA, 2025). Citations for documents used as the basis for this summary are provided in Section 5.

The two components of the Finniss project described in this document are the:

- Grants Lithium Project on mineral lease (ML) 31726 and
- BP33 Underground Mine on mineral leases ML32346 and MLN16

The locations of these two components of the Finniss project are shown on Figure 1-1.

[1] A detailed proposal description for the proposed Finniss Lithium expansion project is provided in Section 3 of the Finniss Lithium referral.

[2] Information on environmental factors for the proposed Finniss Lithium expansion project is provided in Section 8 of the Finniss Lithium referral.

[3] Information on legislation, policies and guidelines applicable to the proposed Finniss Lithium expansion project is provided in Section 6 of the Finniss Lithium referral.

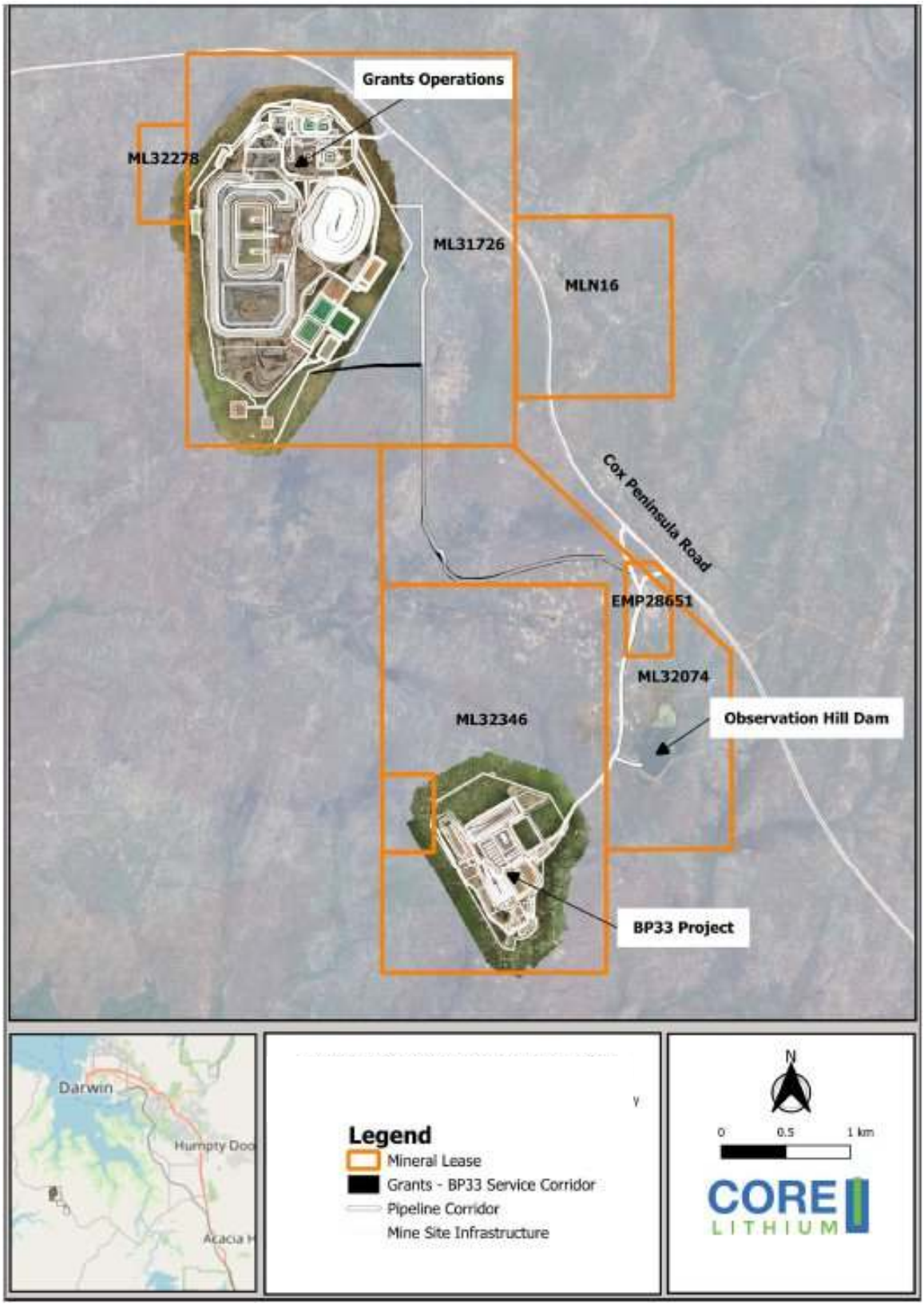

Figure 1-1: Locations of Grants lithium mine and BP33 underground lithium mine

2 OVERVIEW OF SOCIAL AND ENVIRONMENTAL CONDITIONS

This section provides a condensed version of information originally presented in documents that served as the basis for NT EPA's assessment of the Grants Lithium Project. This summary of pre-mining social and environmental conditions in the Finniss Lithium Project area mainly draws on information sourced from technical reports and impact assessments available at the time that the Grants project was assessed (between 2017 and 2020) and the BP33 project was assessed (between 2020 and 2022). Because the Grants and BP33 sites are contiguous, the pre-mining social and environment conditions of the two operations are similar.

2.1 Landforms, geology, soils

2.1.1 Grants

The Grants project area is characterised by lowland plains and rises, intersected by drainage lines and alluvial plains. The land is mostly flat with slopes less than 5%, except for minor occurrences of steep ridges, where slopes may approach 10-40% (EcOz, 2017). The land generally slopes down from south to north and the highest elevation is approximately 35 mAHD in the south of the mining lease and the lowest elevation is approximately 10 mAHD, where local drainage lines flow under the Cox Peninsula Road.

The mine operations area lies predominantly on land characterised as low rises with gravelly well-drained soils. A small area of the pit, waste rock dump and inundation bund are located on broad drainage floors and the inundation bund and off-site dams lie on narrow upland alluvial plains associated with ephemeral drainage lines. The water pipeline corridor traverses low rises with gravelly well-drained soils and broad drainage floors. Short sections of the pipeline route traverse steep ridges and narrow upland alluvial plains.

The geology in the Grants mine operations area comprises a thin (<5m thick) surface layer of Cainozoic sediments – mainly laterite gravel, sand and clay –underlain by sedimentary rocks of the Proterozoic Burrell Creek Formation (BCF). These comprise shales, siltstones, and strongly foliated phyllite. The orebody is hosted in lithium-rich pegmatites intruded into the surrounding BCF materials (Figure 2-1).

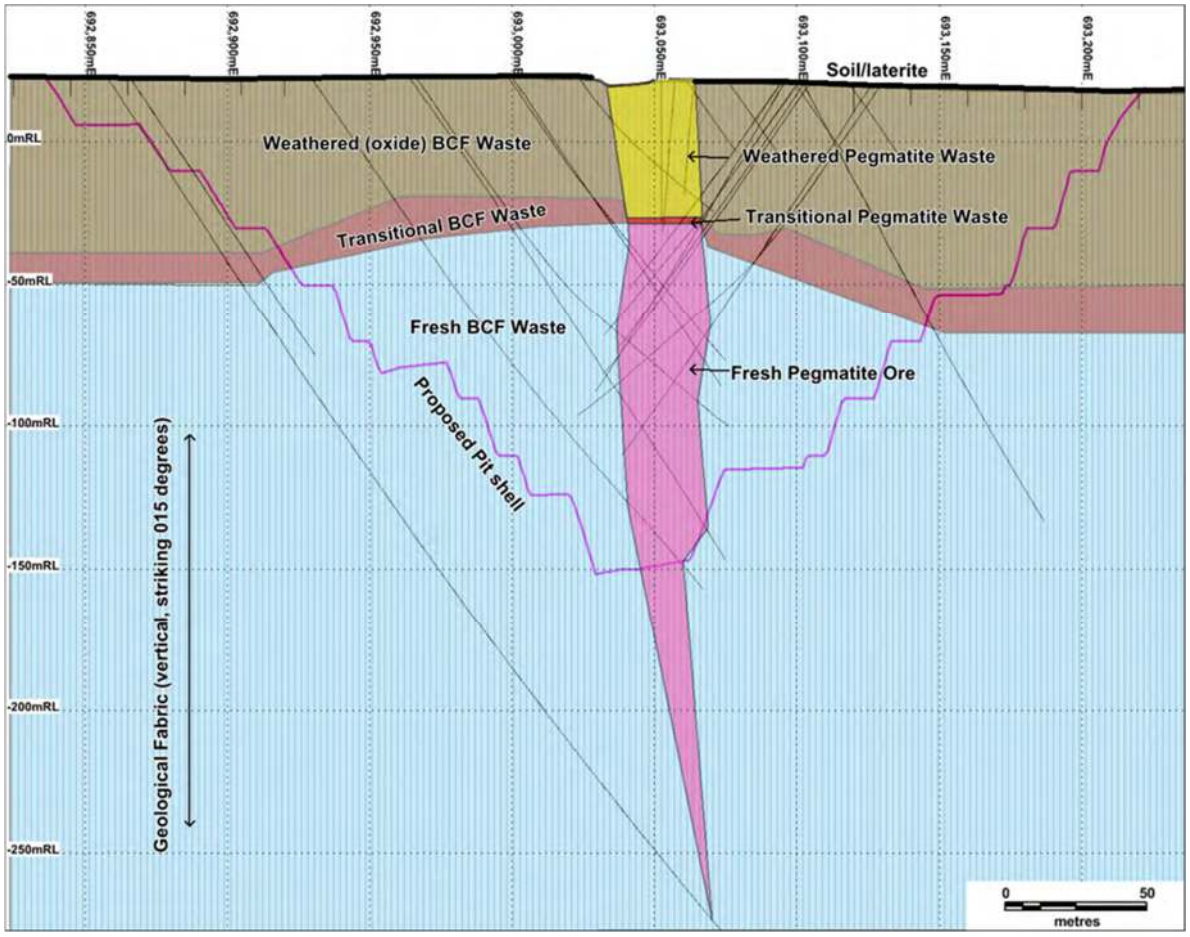

Figure 2-1: Simplified cross-section of Grants pit showing dominant lithological units

Source: Grants Lithium Project Draft Environmental Impact Statement, October 2018

Waste rock characterisation work undertaken for the Grants project indicates there is a low risk of acid mine drainage (EcOz, 2018a, Core Lithium, 2025). The waste rock that will be mined and stored at the site has low concentrations of sulphur, which is typical of the sedimentary environment in which it was deposited. The acid neutralizing capacity of the waste rock that will be mined far exceeds the acid generating capacity that may occur in small sections of the deposit. The concentrations of total metals in waste rock[4] are unremarkable and testing of representative waste rock samples concluded that the risk of metalliferous or saline drainage from waste rock was low. Notwithstanding this, NT EPA Recommendation No 6 advised that an Acid and Metalliferous Drainage Management Plan should be developed and implemented at Grants.

[4] Metals and metalloids tested in waste rock included aluminium, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, vanadium and zinc.

Materials that will be excavated from the mine pit shell also have negligible concentrations of naturally occurring radioactive materials (EcOz, 2018a).

Soils in the Grants project area predominantly consist of sandy loams, sandy clay loams and gravelly sands, generally with a clay content of greater than 10 percent (EcOz, 2018a). Nonetheless, the water holding capacity the soils is relatively low and this could affect rehabilitation success. Major plant nutrient concentrations (nitrogen, phosphorous, sulphur) in soils are relatively low, as are concentrations of organic carbon. Naturally occurring metals concentrations measured in representative soil samples were consistently well below the Investigation Levels for Areas of Ecological Significance (ASC NEPM) and with the range of preferred levels for crop/plant growth.

About 60% of soil samples tested during baseline studies for the Grants Project were classified as 'sodic', meaning that a high proportion of exchangeable cations in the soils consists of sodium, rather than calcium or magnesium. Sodic soils can disperse when exposed to fresh water and this makes the soils susceptible to erosion. About 46% of the samples tested were classified as moderately or highly sodic. The NT EPA report for the Grants Project noted Core's commitment to implementing an Erosion and Sediment Control Plan (Recommendation 8 of NT EPA report No 89).

2.1.2 BP33

The geology of the BP33 resource is almost identical to that of the Grants resource (described in Section 2.1.1). Within the BP33 weathering zones there are two dominant lithologies, phyllite and pegmatite. The spodumene ore is hosted within fresh pegmatite. The phyllite is associated with the sedimentary Burrell Creek Formation (BCF).

Soils within the project disturbance footprint comprise two main soil types: rudosols and hydrosols. The rudosols consist of well drained gravelly sandy loams or loamy sands of low fertility. The hydrosols, which mainly occur along drainage lines, typically consist of imperfectly drained earthy sands or duplex soils, with a layer of fine sandy loam overlying clayey subsoil with minor amounts of ferruginous gravels (EcOz, 2020b). None of the soils tested during baseline investigation were classified as dispersive (Egi, 2020).

The general locality of the BP33 mine is characterized by low hills and rises, intersected by ephemeral drainage lines and alluvial plains. The BP33 mine site is situated in a subtle valley, with a south to south-west orientation (Figure 2-2). Natural surface drainage from the site flows in a generally southwesterly direction, towards the Charlotte River, which ultimately discharges to Bynoe Harbour.

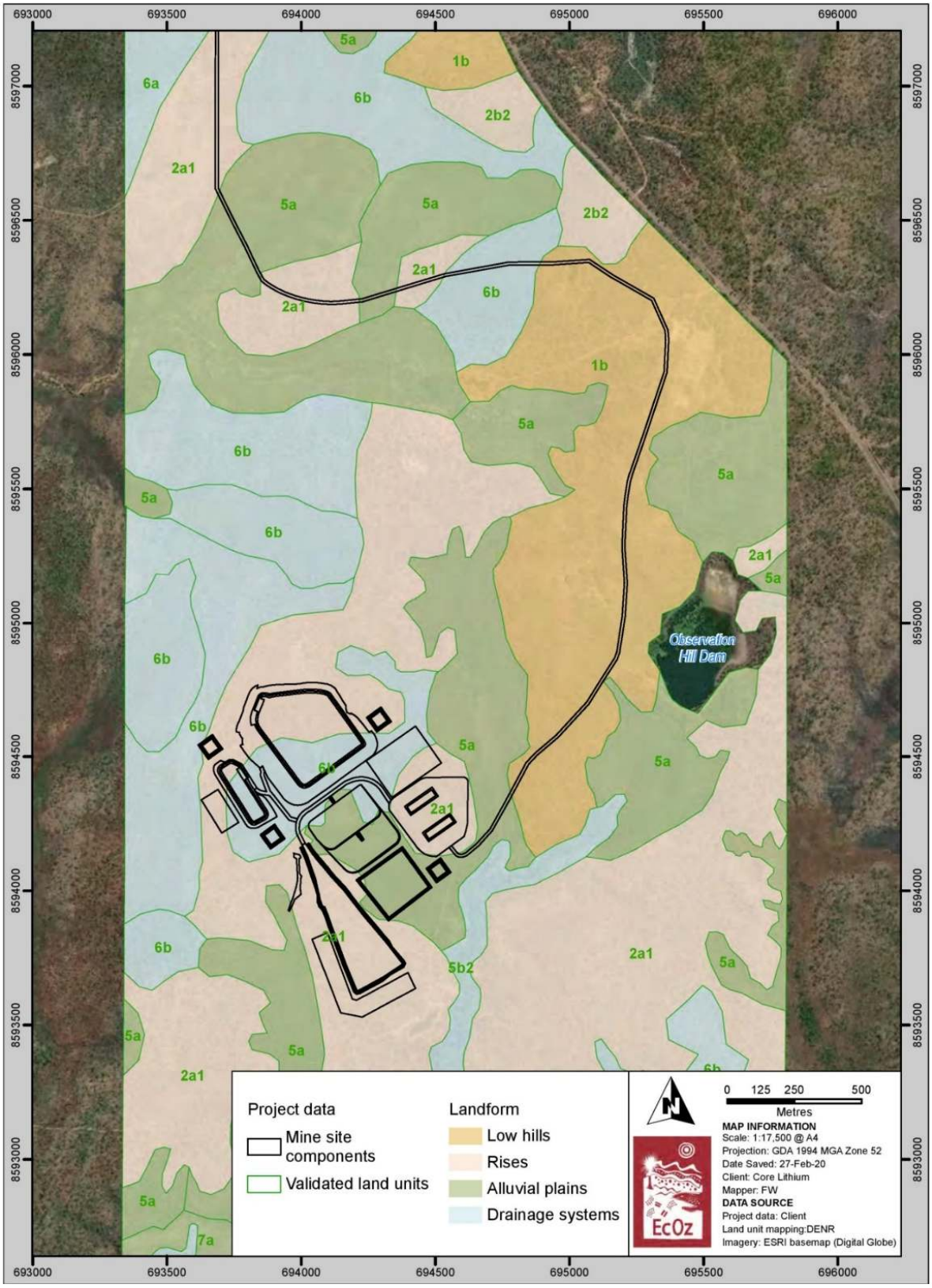

Figure 2-2: Land units in BP33 project area

Source: BP33 Underground Mine Supporting Information Document (April 2020)

2.2 Inland waters: groundwater and surface water

2.2.1 Grants

Surface water

The majority of the Grants mining tenement and whole of the mine site disturbance footprint, are located in the West Arm catchment of Darwin Harbour. The Grants mine operations area intersects two subcatchments, which form the headwaters of the West Arm catchment. Minor drainage lines to the south and north of the mine site flow north through culverts beneath the Cox Peninsula Road and meet approximately 1 km downstream. A further 1 km downstream, the watercourse discharges into a mangrove-lined tidal inlet of West Arm (EcOz, 2018b). The minor drainage lines that originate in the south-west corner of mining tenement ML31726 (outside of the mine site disturbance footprint) flow south-west into a tidal inlet of Bynoe Harbour.

Surface water quality in the project locality is low in salt, with a variable pH (ranging from about pH 5.4 to pH 8.1). There is no apparent correlation between season and water pH. Turbidity is consistently low (<20 NTU), even during high rainfall periods. With the exception of aluminium, dissolved metals concentrations in surface water are very low. Surface waters are generally well oxygenated. Concentrations of inorganic nitrogen (nitrate) in surface waters frequently exceeds default ecosystem guideline values, but reactive phosphorus (phosphate) concentrations are generally low (EcOz, 2018c).

Groundwater

The main water bearing stratum underlying the Grants operations area is the Burrell Creek Formation (BCF) fractured sedimentary rock aquifer. Groundwater in this aquifer is typically intersected within and at the base of the weathering zone. The un-weathered BCF is less permeable. Typical bore yields from this aquifer are low (less than 0.5 L/s) largely due to the lack of primary porosity and open fracturing within the host rock (CloudGMS, 2018 and 2021)

Shallow Cainozoic sediments may function as minor aquifers in areas with thicker alluvial cover (i.e. along drainage lines) or where the laterite profile deeper.

The Berry Springs Dolostone aquifer is located around 22 km east of the project area. There are current concerns regarding over-extraction from this aquifer, and water allocation is subject to the Berry Springs Water Allocation Plan 2016-2026 (DLRM, 2016). The BCF fractured rock aquifer beneath the project area has no connection to the Berry Springs Dolostone aquifer and Core does not propose to source water from the Berry Springs aquifer.

Depths to groundwater in the BCF aquifer range from about half a metre below ground level (bgl) to 2.0 mbgl in the wet season, and 4.0 to 6.5 mbgl in the dry season. This amounts to a seasonal fluctuation in the BCF groundwater level of between 3.3 m and 4.5 m. Groundwater levels in the shallow laterite aquifer range from artesian (flowing at the surface) during the wet season, to around 2.7 mbgl in the dry season. Groundwater levels in the shallow unconfined aquifer are levels are highly responsive to rainfall, with spikes following individual rainfall events in the early wet season, sustained levels close to ground level during the wettest months of the wet season, and a steep drop in groundwater levels once wet season rains finish. The contribution of groundwater discharge to baseflow in surface watercourses during the dry season is thought to be small, although some flows from around the location of the Observation Hill Dam may contribute to stream flow during the wet season. There is no evidence of spring-fed surface water flows from the dam during the dry season, although some seepage from the dam may report to groundwater.

Groundwater quality in the shallow unconfined aquifer has many characteristics similar to rainfall: it is low in salinity, well oxygenated and slightly acidic. Dissolved metals concentrations are variable. Concentrations of copper, zinc and lead appear to be naturally elevated, presumably reflecting the laterite geology of the aquifer. Most other metals concentrations (cadmium, chromium, mercury, nickel, selenium and tin) are low. Reactive phosphorus levels commonly exceed default guideline values recommended for freshwater ecosystems.

Groundwater chemistry in the main BCF aquifer generally has low salinity and slightly acidic to slightly alkaline pH. Dissolved oxygen levels are low. Most dissolved metals concentrations are low, although arsenic, zinc, lithium and iron show natural enrichment. Lithium concentrations are, as expected, higher in part of the aquifer in contact with lithium-bearing rocks. Concentrations of total and reactive phosphorus regularly exceed default guideline values recommended for fresh surface water ecosystems. This appears to reflect the influence of the geology of the BCF aquifer.

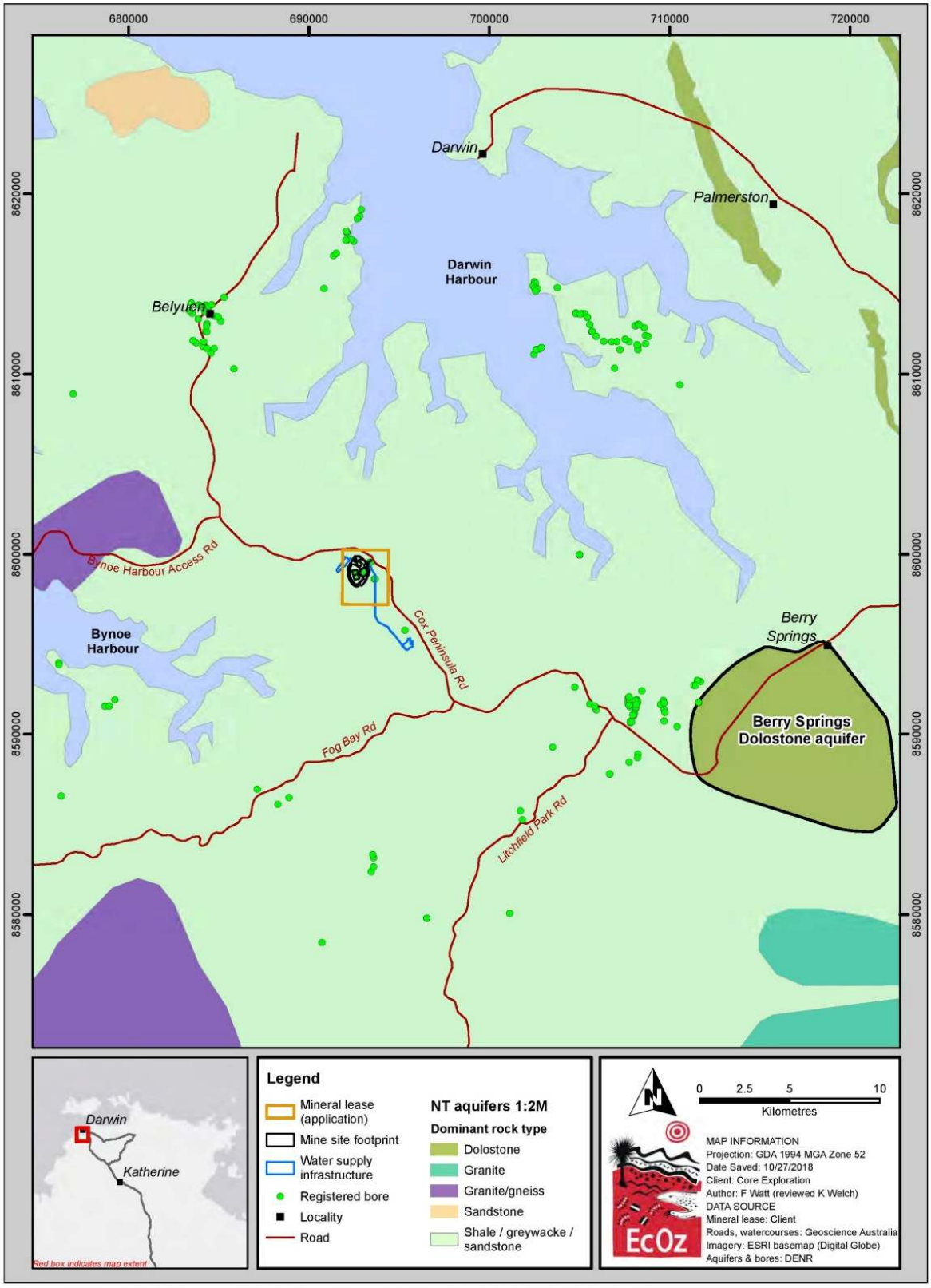

Figure 2-3: Regional groundwater aquifers within 20 km of Grants mine

Source: Grants Lithium Project Water Management Plan (October 2018)

2.2.2 BP33

Surface water

The BP33 mine operations area is located in the Finniss River drainage basin. The Charlotte River runs approximately 2.5 km to the south of the project area (Core Lithium, 2021). There are no permanent watercourses in the mine operations area, however multiple minor drainage lines flow from the project area into the Charlotte River (Figure 2-4). Dense riparian vegetation lines the ephemeral watercourses.

Natural surface water in the BP33 project area has low salinity and variable pH (ranging from about pH 5 to over pH 9). Low oxygen levels can occur in surface water during periods of low flow due to the decomposition of organic matter and lack of oxygenated rainfall input. Dissolved metals concentrations are generally low, although arsenic is frequently detectable (but within default guideline values for protection of aquatic ecosystems). Inorganic nitrogen concentrations in surface water often exceed default freshwater ecosystem objectives, but phosphorus concentrations are generally low.

There are no consumptive users of surface water downstream of the BP33 mine area. However, the Charlotte River and Bynoe Harbour support freshwater and marine ecosystems also have recreational and cultural value for local people.

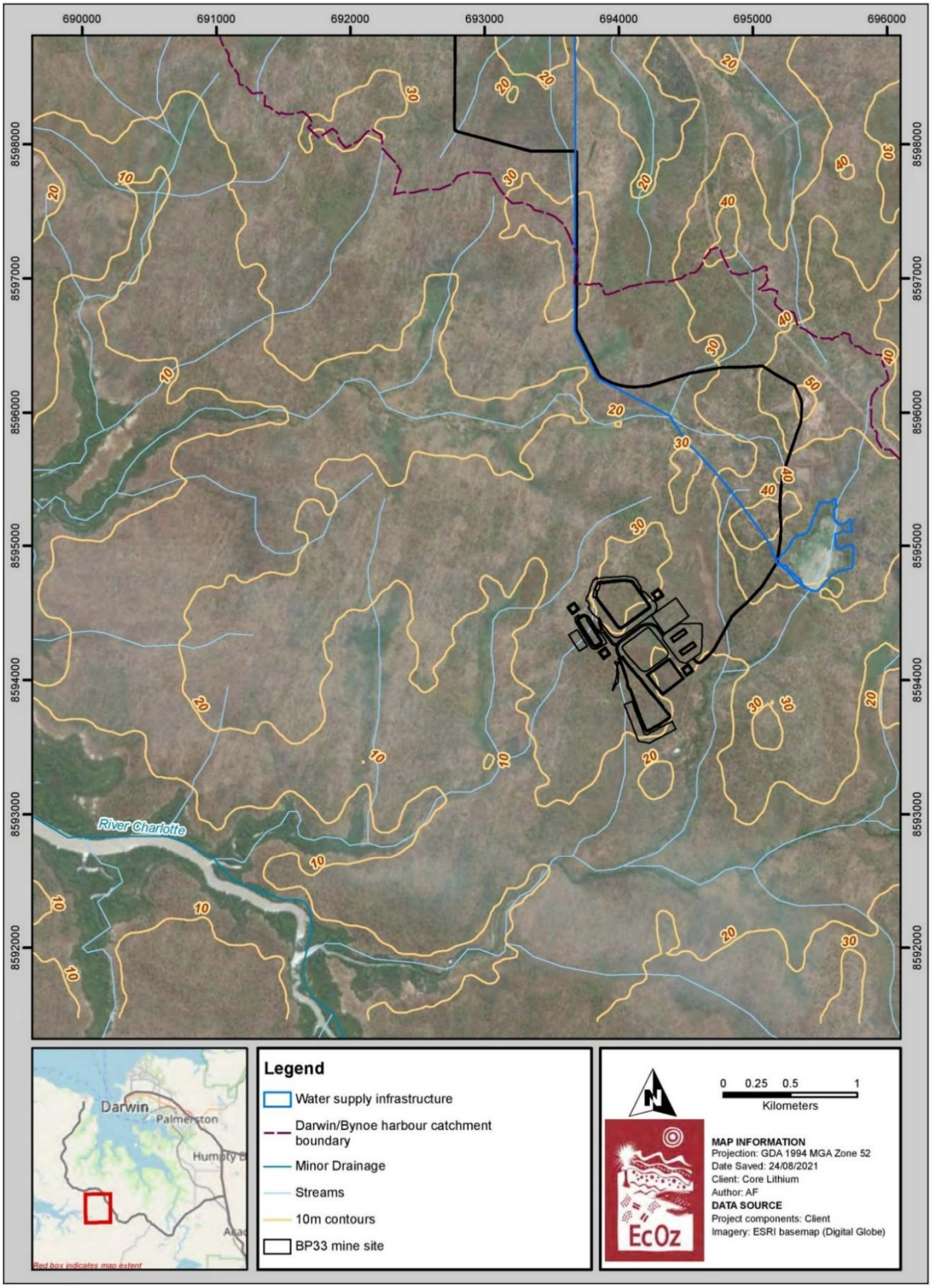

Figure 2-4: Drainage lines in BP33 project area

Source: BP33 Underground Mine Supporting Information Document (April 2020)

Groundwater

The BP33 mine site is underlain by the Burrell Creek Groundwater System. The aquifer consists of weakly fractured and weathered rocks, with a comparatively low yield. As a result, there is limited use of the aquifer for domestic, stock or agricultural water supply. Excluding monitoring bores and mineral exploration bores, there are six registered groundwater bores within 10 km of the BP33 site (Figure 2-5). The closest groundwater production bore is RN023177, located 2.5 km north of BP33. RN023177 was drilled in 1984 and was constructed in the BCF as a potential water supply bore for Greenex mining operations at Observation Hill Dam. The bore is currently not in use. The next closest groundwater bore (RN041993 is located approximately 4.6 km south of BP33 on the Fog Bay Road. RN041993) was drilled in 2020 to provide a rural / domestic water supply. The only other production bore with a nominal 10 km radius of the Finniss Lithium Project is a domestic water supply bore (RN038217) located approximately 9.5 km southwest of the BP33 operations area (Figure 2-5).

Groundwater in the BCF aquifer is typically intersected at the base of the weathering zone, at the transition to fresh rock. At BP33 this occurs at depths of about 60 m to 80 m below ground surface level. Standing water levels in drilled bores typically stabilize at depths ranging from 4.2 m to 10.5 m below ground and are generally shallower to the east of the BP33 deposit. At a local scale, the natural groundwater flow direction is to the south and east, moving from the more elevated parts of the mine site to lower lying areas near the drainage lines in the southeastern part of the mining lease.

Groundwater quality in the BCF aquifer has low salinity and a near-neutral pH. Oxygen levels are low, as would be expected of a deep aquifer system. Baseline monitoring of groundwater in the BCF aquifer found that groundwater in less weathered parts of the aquifer (below a nominal depth of about 36 m) was generally low in dissolved metals but had naturally elevated concentrations of arsenic, lithium and iron. Phosphorus also was naturally enriched in deeper parts of the aquifer (Core Lithium SER).

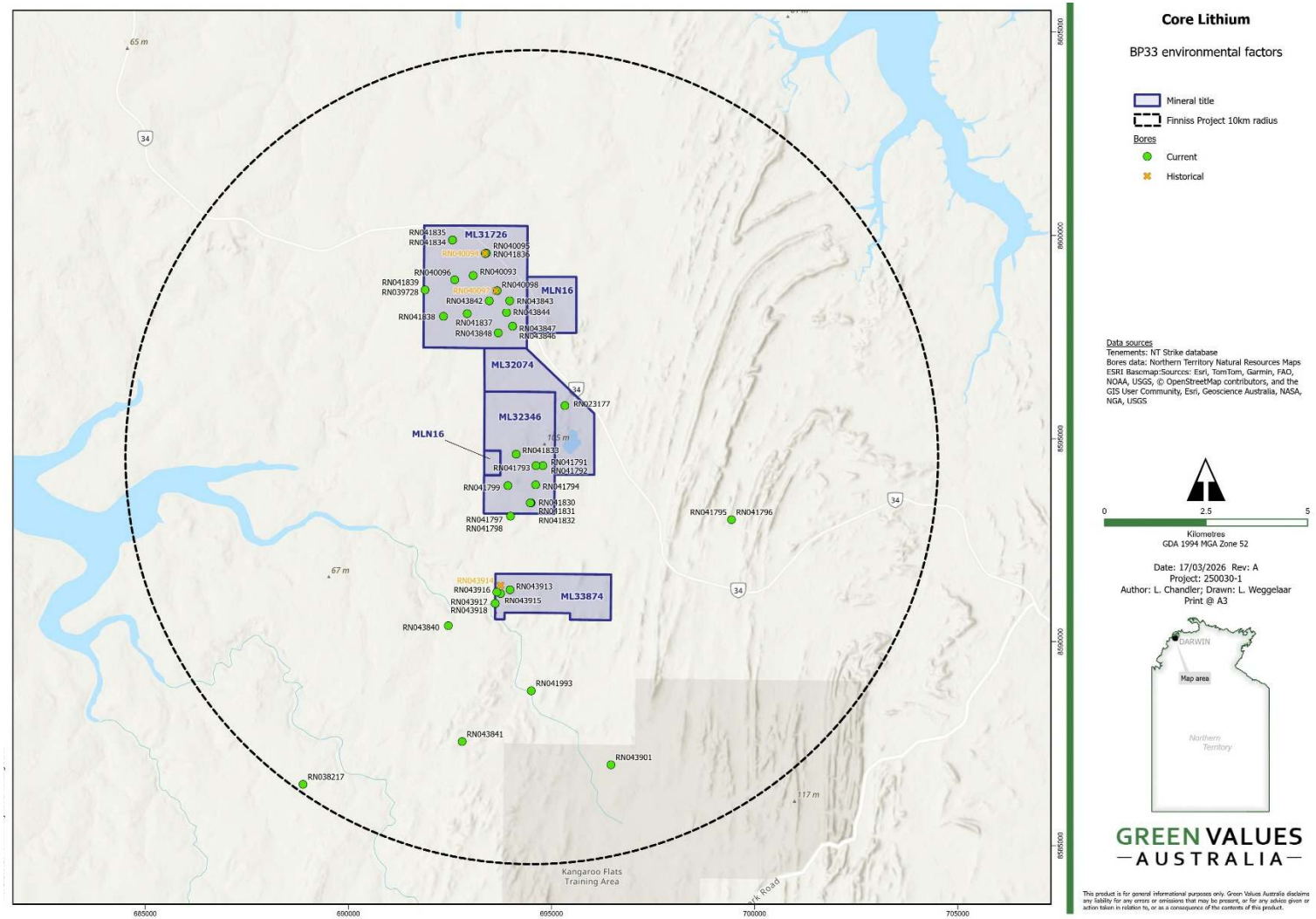

Figure 2-5: Groundwater bores within 10 km of the Finniss Lithium Project

2.3 Vegetation and flora

2.3.1 Grants

The disturbance footprint resulting from implementation of the Grants Project mostly corresponds to areas hosting *Eucalyptus miniata*, *E. tetrodonta* and *Corymbia bleeseri* woodland over open tussock grassland. This vegetation type covers approximately 75 % of the disturbance footprint (Table 2-1, Figure 2-6). About 17% of the disturbance footprint overlies drainage lines with *Pandanus spiralis*, *Lophostemon lactifluus* and *Livistona humilis* isolated trees over tussock understorey and a small area of *Eucalyptus alba* woodland. The remainder of the disturbance footprint intersects small patches of shrubland to open woodland areas of *Grevillea pteridifolia* and *Melaleuca nervosa* over open tussock grassland.

Table 2-1: Vegetation occurrence in Grants disturbance footprint

Vegetation description	Area (ha)			Total (ha)
	Mine site	Off-site dams	Water pipeline	
Rises				
Woodland of *Eucalyptus miniata, E. tectifica, Corymbia foelscheana* over *Sorghum plumosum*	-	2	1	**3**
Open woodland of *Eucalyptus miniata, E. tetrodonta* and *Corymbia bleeseri* over *Livistona humilis, Xanthostemon paradoxus* and *Erythrophleum chlorostachys* over open tussock grassland *Heteropogon triticeus, Sorghum intrans* and *Eriachne obtusa*	173	9	2	**184**
Drainage systems				
Low open woodland of *Grevillia pteridifolia, Melaleuca nervosa +/- Syzygium eucalyptoides subsp. Bleeseri* over open shrubland of *Petalostigma pubescens, Livistona humilis, Banksia dentata* over open tussock grassland of *Themeda triandra, Eriachne obtusa* and *Heteropogon triticeus*	30	2	2	**34**
Alluvial plains				
Low isolated trees of *Pandanus spiralis, Lophostemon lactifluus, Livistona humilis* over sparse shrubland of *Pandanus spiralis, Lophostemon lactifluus, Livistona humilis* over tussock grassland of *Sorghum stipoideum, Eriocaulon spectabile, Melaleuca nervosa*	14	6	<1	**21**
Woodland of *Eucalyptus alba* over a sparse shrubland of *Eucalyptus alba, Lophostemon lactifluus, Pandanus spiralis* over tussock grassland of *Sorghum plumosum, Germania grandifolia, Lophostemon lactifluus*	-	9	-	**9**
	217 ha	**28 ha**	**6 ha**	**251 ha**

Source: Grants Lithium Project Draft Environmental Impact Statement Supplement, March 2019

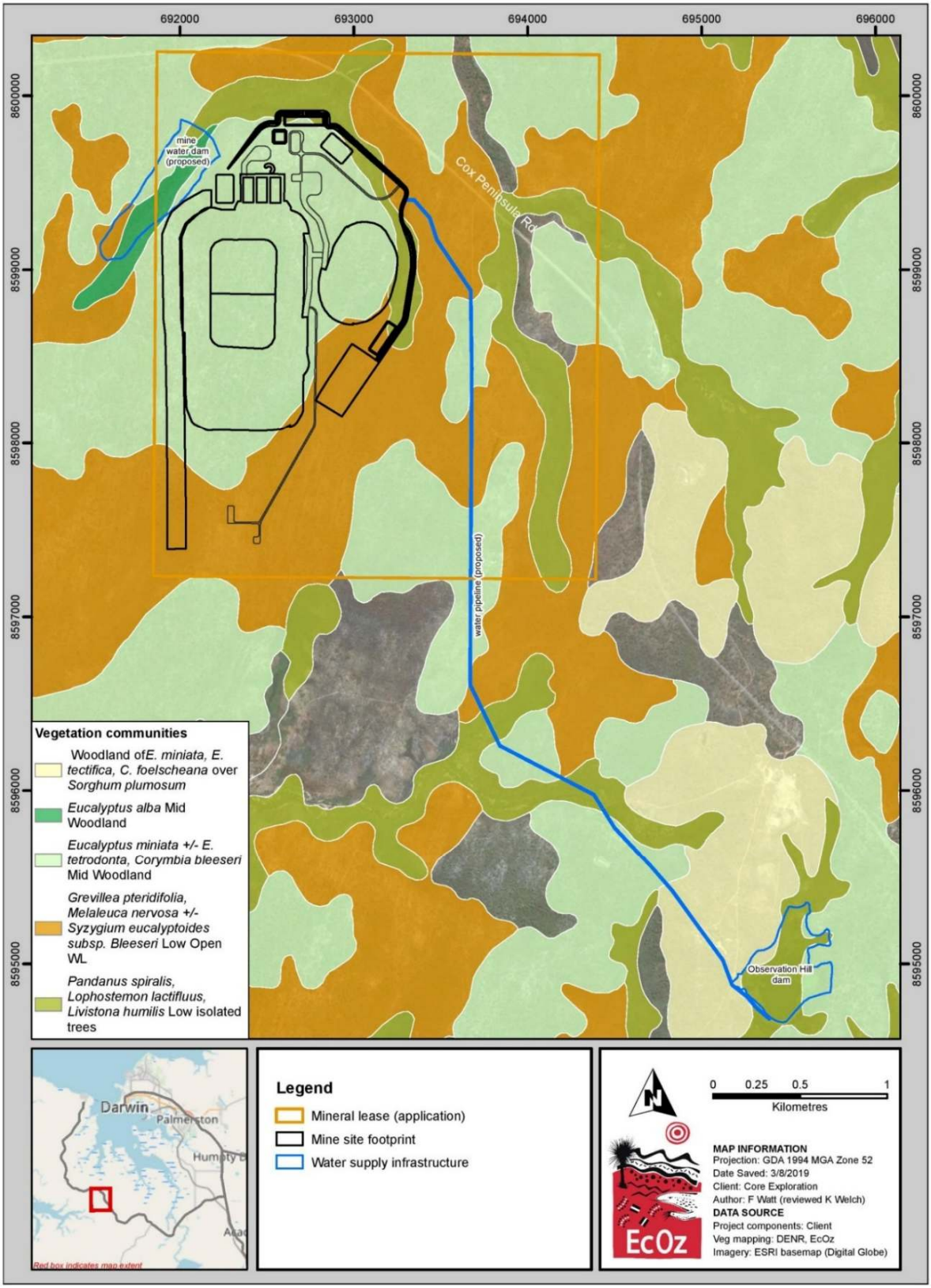

Figure 2-6: Vegetation units in Grants Project Area

Source: Grants Lithium Project Draft Environmental Impact Statement Supplement, March 2019

At the time of baseline surveys conducted for the Grants Project, weed density was observed to be low across the mining lease. Although the area has historically been used for mineral exploration and resource extraction, weeds have generally not become established. A small patch of Annual Mission Grass was recorded along the existing access track from Cox Peninsula Road to the mine site. Annual Mission Grass was also observed along Cox Peninsula Road near the project area.

In the Northern Territory, sensitive vegetation types often include (but are not limited to) vegetation communities that are reliant on particular hydrological conditions. Examples include rainforest, vine thickets, closed forest or riparian vegetation, mangroves and monsoon vines forests. Some riparian vegetation associated with ephemeral streams occurs in the Grants Project locality and some seasonal wetlands (drainage depressions) occur within mining lease and surrounding areas (Figure 2-7). Mangrove vegetation associated with the upper reaches of West Arm occurs approximately 1.7 km downstream of the mine site. There are no permanent wetlands within the project area. No riparian, wetland or mangrove communities are located in the disturbance footprint resulting from mining activities.

Baseline surveys for the Grants Project identified riparian rainforest to the south and east of the mining lease along unnamed tributaries of the Charlotte River (downstream of Observation Hill Dam). The riparian rainforest vegetation starts from a point around 2 km downstream of the dam wall (Figure 2-7). The communities are supported by streamflows later into the dry season, possibly as a result of groundwater discharge. Small pools of water have been observed to persist in the Charlotte River late into the dry season. While the riparian vegetation is not rare in the region and does not represent habitat of any specific threatened species, it may offer refuge habitat value to terrestrial and/or aquatic fauna. The impact assessment for the Grants Project considered the potential for project activities to result in indirect impacts to riparian vegetation and/or mangroves downstream of the project area associated with alteration of flow regimes or changes in water quality.

At the time of the Grants Project assessment two threatened plant species – *Stylidium ensatum* and *Typhonium praetermissum* – were considered as possibly occurring in the project locality. *Stylidium ensatum* is listed as Endangered under both the Australian Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and NT *Territory Parks and Wildlife Conservation Act*. *Typhonium praetermissum* is listed as Vulnerable in the NT. The species is not currently formally protected under the EPBC Act, but is proposed for listing as Endangered (DCCEEW, 2025).

Targeted surveys for *Stylidium ensatum* were undertaken in June 2018, focusing on areas considered likely to offer suitable habitat. Despite searching in potentially suitable sites at an appropriate time of year no *Stylidium ensatum* plants were found, although three non-threatened species of *Stylidium* were found. Previous floristic surveys undertaken in areas around the project area at an appropriate time of also have not recorded the species. It is possible that high fire frequencies in the project locality are a factor detrimental to the survival of this species and reduce the likelihood of its occurrence. On-ground observations of habitat concluded that the suitability of the project area for *Stylidium ensatum was* low or negligible (EcOz, 2017).

On-ground surveys for *T. praetermissum* in potentially suitable habitats within the project area were conducted in January 2018 when plants were known to be visible in other known populations in the Darwin region. No *T. praetermissum* plants were detected in the surveys. The outcomes of desktop study and field surveys indicate that it is unlikely that a population of *T. praetermissum* occurs within the Grants disturbance footprint (EcOz, 2017).

The locations of threatened flora and fauna known to exist in the general project locality at the time of NT EPA's assessment of the Grants Lithium Project are shown in Figure 2-8.

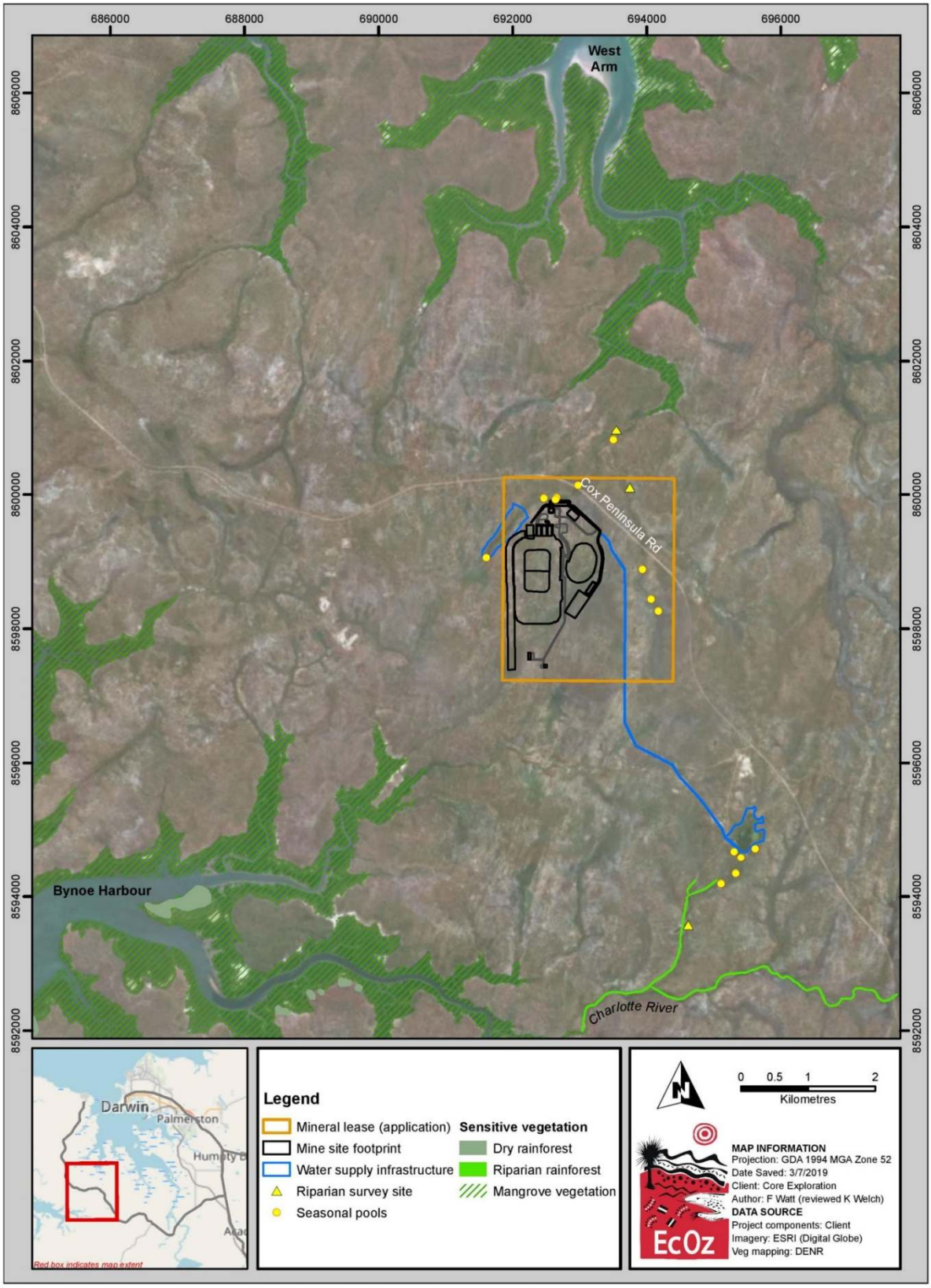

Figure 2-7: Sensitive vegetation types in Grants Project locality

Source: Grants Lithium Project Draft Environmental Impact Statement Supplement, March 2019

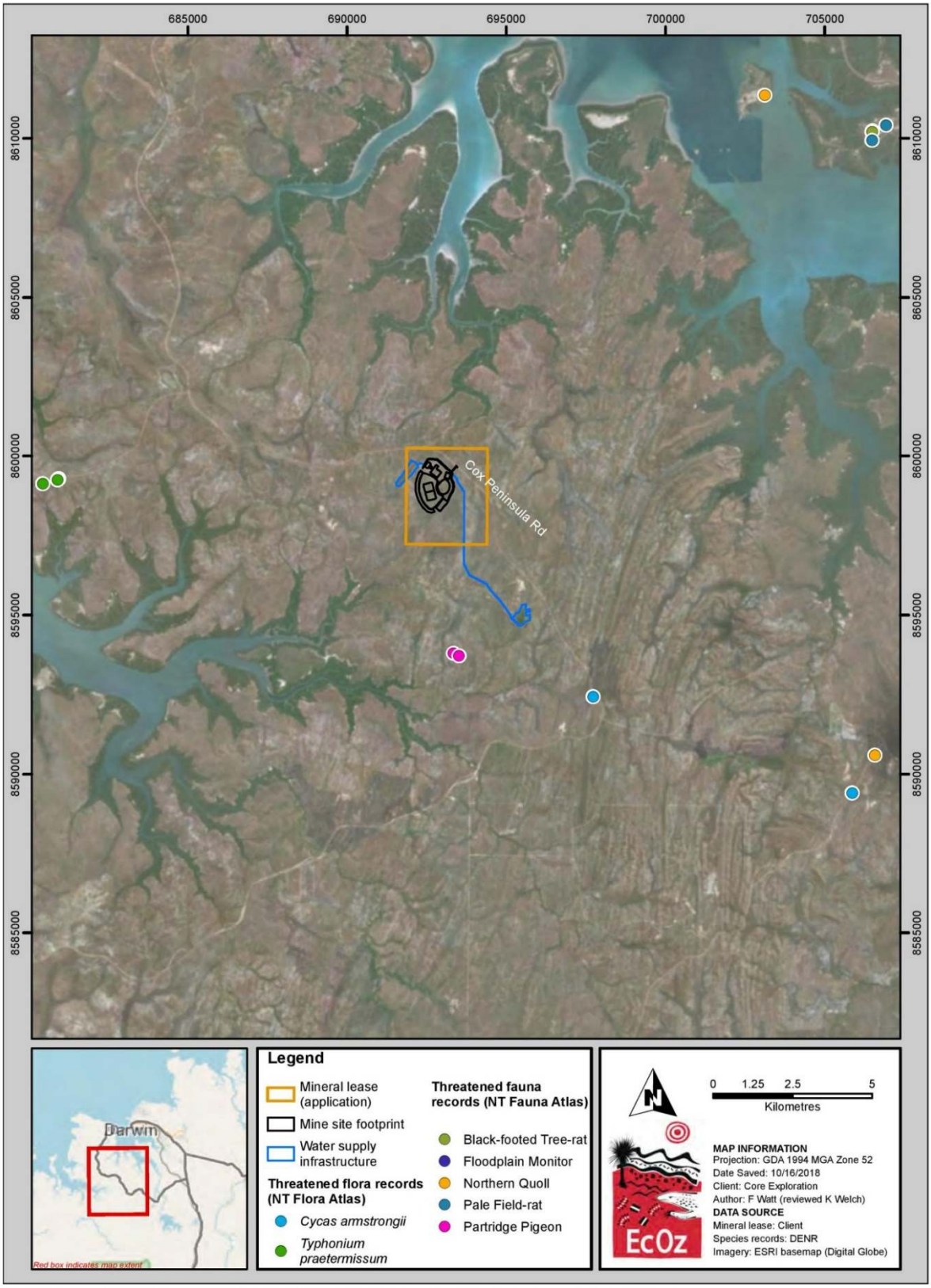

Figure 2-8: Records of threatened flora / fauna in Grants locality (October 2018)

Source: Grants Lithium Project Draft Environmental Impact Statement, October 2018

2.3.2 BP33

Flora and vegetation

Eight distinct land units were delineated in the BP33 project area during baseline ecological investigations (EcOz, 2020a). The most widespread land unit (land unit 2a1) is *Eucalyptus miniata* and *Eucalyptus tetrodonta* mid- high woodland on rises, followed by *Eucalyptus alba* mid open woodland on alluvial plains and areas of poorly-drained *Grevillea pteridifolia*, *Pandanus spiralis*, and *Lophostemon lactifluus* shrublands associated with local drainage systems.

Government modelling indicates that the BP33 project area provides potential habitat for two threatened flora species – *Typhonium praetermissum* and *Stylidium ensatum.* Of the land units likely to be intersected by the project disturbance footprint, land units 2a1 and 6b (Figure 2-2) are considered most likely to provide suitable habitat for *T praetermissium*. That is, the species is most likely to occur along the margin of land units where an eroding low rise of one land unit creates a gravelly surface adjacent to a low lying wetter area. Surveys conducted over an area of approximately 3.4 ha of potentially suitable habitat in February 2020 did not identify any *T praetermissum* plants.

Potentially suitable habitat for *Stylidium ensatum* in the BP33 project generally corresponds to land unit 5a, 6b and 7a (alluvial plains or drainage systems - Figure 2-2). Surveys carried out in July 2020 were not able to confirm the presence of these species[5] (EcOz, 2020b). It is possible that frequent fires in the project locality have reduced the likelihood of occurrence of *S ensatum*.

The only sensitive vegetation type relevant to the BP33 project is the narrow fringe of riparian vegetation along an ephemeral watercourse downstream of the project area – land unit 5b2, as shown in Figure 2-2 and Figure 2-10. The well-developed riparian vegetation indicates some level of groundwater dependence supporting this vegetation community throughout the dry season; however, there is no evidence of spring-fed surface water flows.

[5] S ensatum is most readily identified when flowering – which normally occurs in June or July.

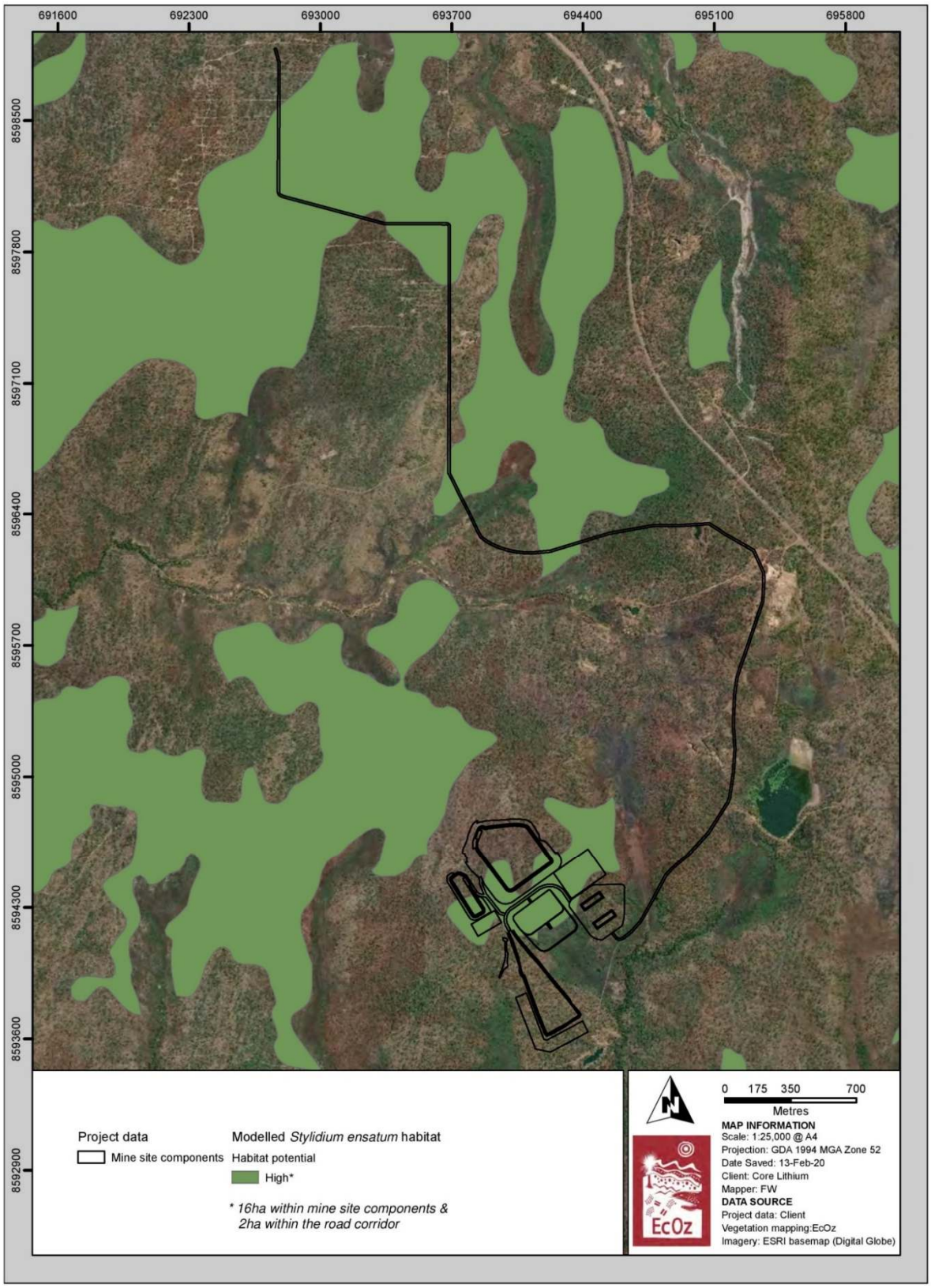

Figure 2-9: Modelled distribution of Stylidium ensatum habitats

Source: EcOz, 2020 (Ecological Assessment – BP33 Lithium Mine)

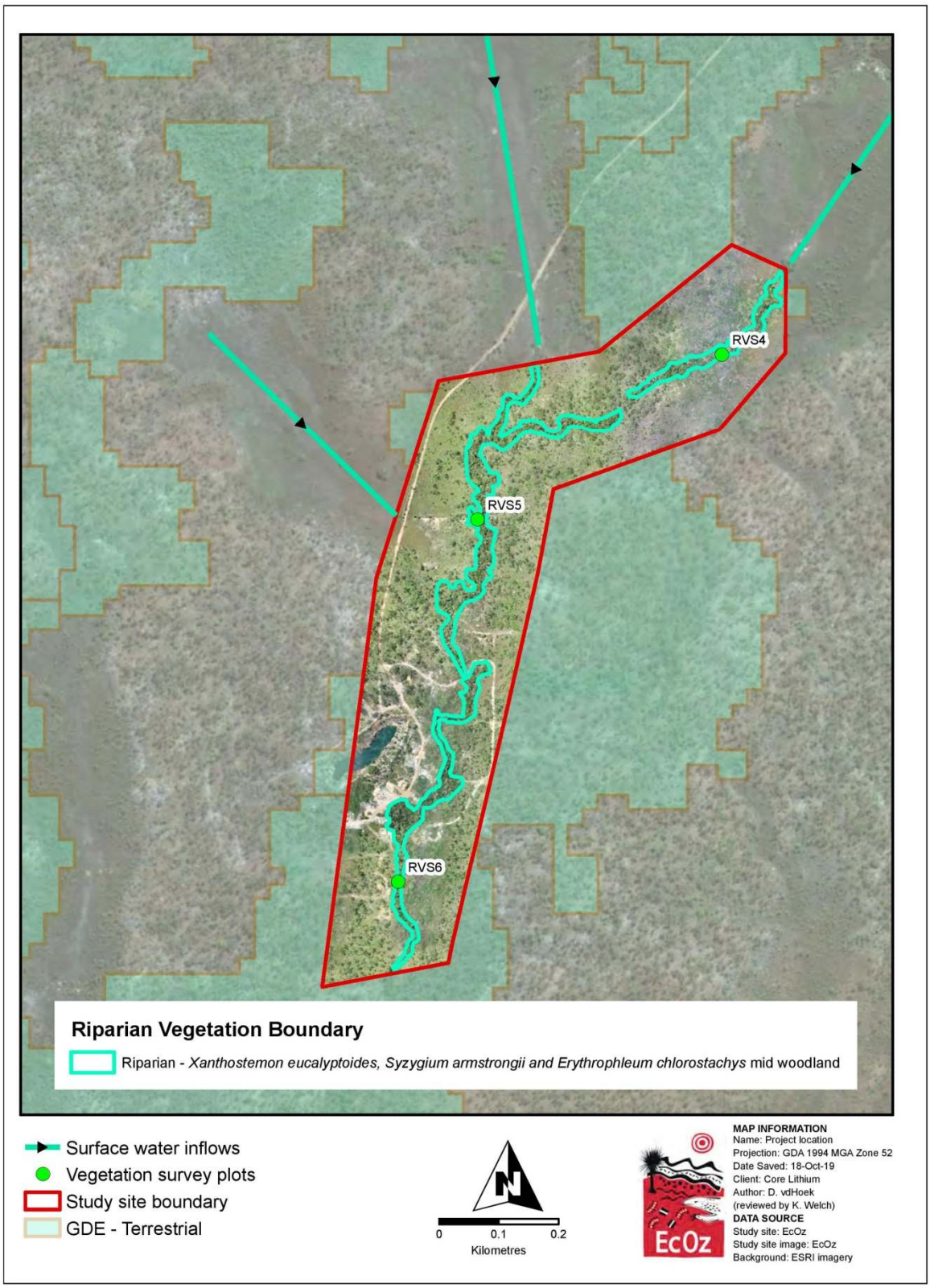

Figure 2-10: Riparian vegetation in BP33 project locality

Source: Core Lithium, 2021 (Finniss Lithium Project BP33 Underground Mine - Water Management Plan)

2.4 Fauna and habitats

2.4.1 Grants

At the time of NT EPA's assessment of the Grants Project, only two threatened fauna species were assessed as having a high likelihood of occurring in the project locality:

- Partridge Pigeon (eastern subspecies) (*Geophaps smithii smithii*) – listed as Vulnerable under the EPBC Act and the NT Territory Parks and Wildlife Conservation Act (TPWCA), and
- Black-footed Tree-rat (Kimberley and mainland NT subspecies) (*Mesembriomys gouldi**i** gouldii)* formerly listed as Vulnerable under the TPWCA but now listed as Endangered under both the EPBC Act and the TPWCA.

Field surveys concluded that while habitat for these species was present in the Grants project locality, it would generally represent sub-optimal habitat due to high fire frequency and/or the lack of preferred food tree species.

Other threatened species that have been identified as possibly occurring in the Grants project locality include:

- Northern quoll (*Dasyurus hallucatus*) – Endangered (EPBC); Critically endangered (TPWCA)
- Brush-tailed rabbit rat (*Conilurus penicillatus*) – Vulnerable (EPBC); Endangered (TPWCA) -
- Pale field-rat (*Rattus tunneyi*) – Vulnerable (TPWCA)
- Northern brushtail possum (Trichosurus vulpecula arnhemensis) – Vulnerable (EPBC)
- Bare-rumped sheathtail bat (*Saccolaimus saccolaimus* (*nudicluniatus*)) – Vulnerable (EPBC)
- Masked owl (*Tyto novaehollandiae kimberli*) – Vulnerable (EPBC)
- Red goshawk (*Erythrotriorchis radiatus*) – Endangered (EPBC); Vulnerable (TPWCA)
- Floodplain monitor (*Varanus panoptes*) – Vulnerable (TPWCA)
- Mertens water monitor (*Varanus mertensi*) - Endangered (EPBC); Vulnerable (TPWCA)

- Mitchell's Water Monitor (*Varanus mitchelli*) – Critically endangered (EPBC); Vulnerable (TPWCA)

Although desktop reviews conducted at the time of the original impact assessment did not find public records of introduced fauna within 10 km of the project area, cane toads and feral cats were observed on site during the field surveys. It was noted that drainage lines in the project locality provide suitable habitat for pigs and disturbance possibly caused by pigs was observed in seasonally inundated areas.

2.4.2 BP33

Database searches of the BP33 site and surrounds identified three threatened fauna species having a high likelihood of occurrence within the Project footprint: Bare-rumped Sheath-tail Bat (*Saccolaimus saccolaimus* (*nudicluniatus*)), Black-footed Tree-rat (*Mesembriomys gouldii gouldii*) and Partridge Pigeon (*Geophaps smithii smithii)*. Habitats suitable for these species are widespread throughout the Cox Peninsula.

The Partridge Pigeon occurs in open forests and woodlands with an understorey of grasses (Woinarski 2006). The species prefers woodland dominated by *Eucalyptus tetrodonta* and *E. miniata* (Braithwaite 1985; Garnett et al. 2011; Higgins & Davies 1996). Partridge Pigeons favour a structurally patchy savanna understorey. In all seasons, the species prefers to feed in areas that have an open ground layer (e.g. following fire); however, pairs are more likely to nest where there is dense vegetation cover. Within the Project footprint, such habitat occurs within land units 1b, 2a1, 2b2, 5a, 6a and 6b (Figure 2-2). Partridge pigeons are largely sedentary; however, can travel distances of 5 to 10 km in the wet season on search of food and water resources. Their usual home ranges vary seasonally between 8 ha and 31 hectares.

The Black-footed tree rat occurs in woodlands and open forests with large trees and a moderately diverse mid-storey in near-coastal areas. Such habitats typically occur with land units 1b, 2a1, 2b2, 5a, 5b2, 6a and 6b (Figure 2-2). The nearest known record of a Black-footed tree rat at the time of the NT EPA's assessment was about 15 km to the east of the BP33 project footprint.

In the Northern Territory, Bare-rumped sheath-tail bats have mostly been collected from *Pandanus* woodland fringing the sedgelands of the South Alligator River and from *Eucalyptus* tall open forests. Most records occur within near-coastal habitats (although they have been observed as far as 150 km inland). The species forages above the canopy and roosts in deep tree hollows within *Eucalyptus miniata*, *E. tetrodonta* and *Melaleuca leucadendra*. Hollows in these tree species may be used as breeding roosts. The nearest known record of a Bare-

rumped Sheath-tail Bat at the time of the NT EPA's assessment was about 35 km to the southeast of the BP33 project footprint.

Baseline investigations conducted at the time of the BP33 environmental impact assessment generally found that suitable habitat for these three threatened species was likely to be present within the BP33 mineral lease and throughout the Cox Peninsula. The assessment concluded that habitats within the BP33 project area did not constitute habitat of particular importance to the three species because of the wider available of comparable habitat in surrounding areas.

There is potential for one or more threatened reptile species (Floodplain monitor, Mertens water monitor, Mitchell's water monitor) to occur near the Observation Hill dam. It has been reported (D. Rhind, DEWPS 2025; Section 4.4.7 of Referral) that Pale field-rat observations have recently been recorded to the south of the BP33 site, but no confirmed records exist within the Finniss tenement package.

2.5 Social and cultural values (Grants and BP33)

The Grants operations area and BP33 mine and surrounding areas are on undeveloped vacant Crown Land on the Cox Peninsula. The Larrakia Indigenous people are the traditional owners of the Cox Peninsula. The Peninsula was handed back to the Larrakia traditional owners in 2000 and in 2016, a large section of land on the Cox Peninsula was granted as Aboriginal land under the *Aboriginal Land Rights Act (Northern Territory) 1976*. As part of the settlement, the Northern Land Council and Northern Territory Government negotiated an access agreement to allow people to access the beaches and waters for fishing without a permit, and to restrict or prohibit access to some other areas with the land settlement area.

A search of the NT Archaeological Site Database in 2024 (Earth Sea, 2024) returned 295 sites and isolated artefacts within 25 km of the Finniss Project Area. Five of these lie within the Project development envelopes. Four of the sites are historic tin mining sites that are not protected within the meaning of the NT Heritage Act. The fifth site is a stone artefact scatter and knapping floor recorded in 1992 during a survey for the Darwin to Katherine optical fibre project. The site is located in the northwest corner of ML31726 (Grants operations area) but is not intersected by the proposed disturbance footprint. An additional artefact scatter has been identified outside the Finniss tenement package, approximately 3 km east of the BP33 operations area and about 200 m east of the Cox Peninsula Road.

Two site specific studies within the Finniss Lithium tenement package (Ellengowan Enterprises 2021 and 2023) reported finding a possible grave site (not of Larrakia origin) at the historic Grants mine site. The site is referenced in an Aboriginal Areas Protection Authority

Certificate granted to Core Exploration in March 2019 (refer Appendix D of Finniss Expansion referral).

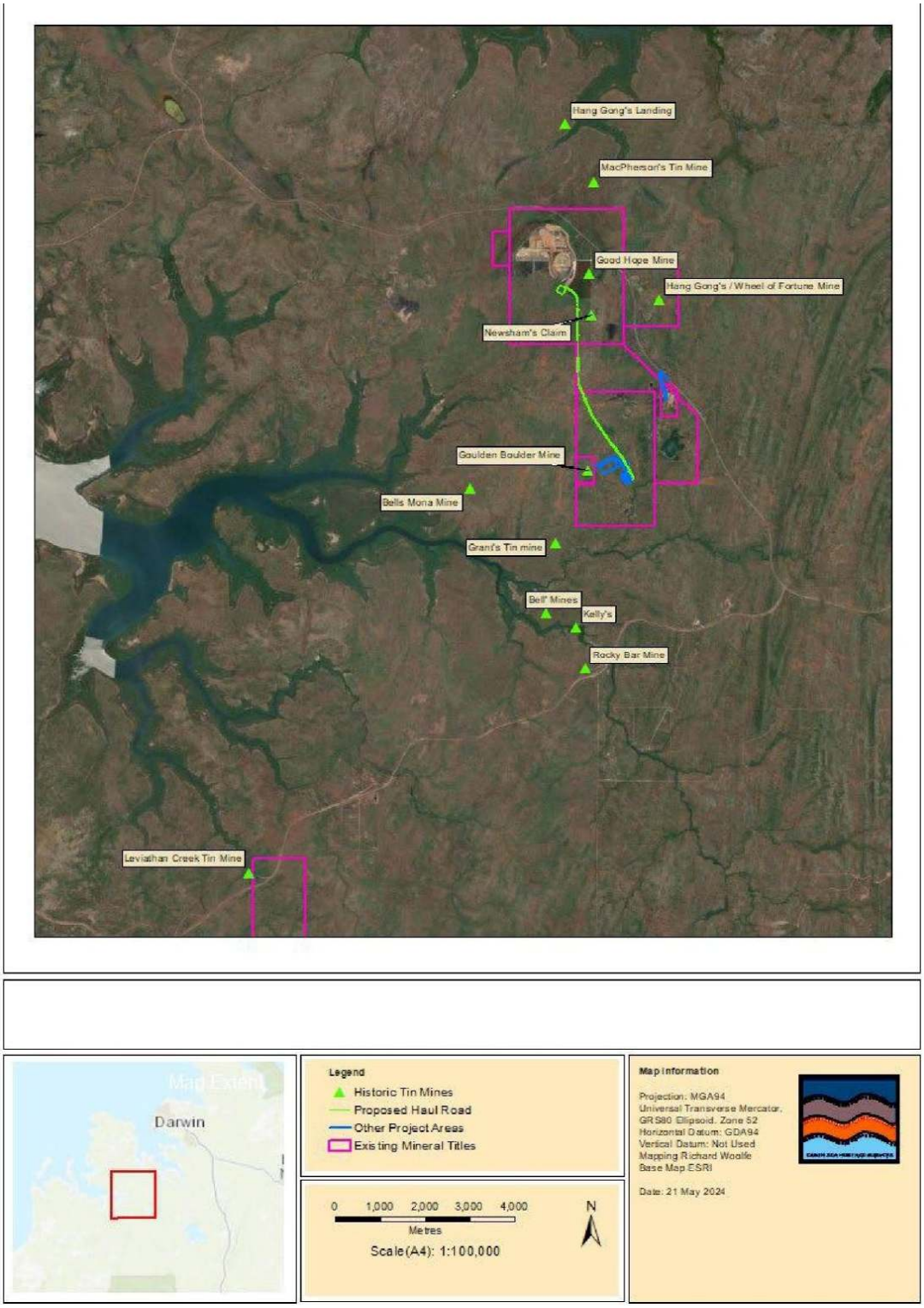

Figure 2-11: Historic mining in Finniss Project Locality

Source: Earth Sea Heritage Surveys (2024)

The land immediately surrounding the Grants and BP33 mine sites is sparsely populated, however there are several nearby communities located along the proposed haul route between the project site and East Arm (Darwin) Port. This includes the communities of Berry Springs, Noonamah, Humpty Doo, Bees Creek, Freds Pass, Coolalinga and the outskirts of Palmerston and Darwin. Except for Palmerston and Darwin, the communities along the haul route are mostly small, rural communities. The Grants and BP33 sites are accessed from Cox Peninsula Road, approximately 15 kilometres north of the Fog Bay Road turnoff. The project areas are unfenced and can be accessed by the public via informal tracks.

There are no residences, farms or industry within the catchment areas upstream or immediately downstream of the mine operations area, although there is evidence of historic disturbance from mining (pits and dams) in the project locality (Figure 2-11). The BP33 deposit was mined for a number of years in the 1980s and 1990s as an open pit mine (True North, 2021). The ore was trucked to a central processing facility located nearby at Observation Hill. The Observation Hill processing facility operated for more than a decade. The proposed Lei Lithium project lies approximately 2 km south of ML32346 (BP33 mine site).

The nearest formal residence is located on a freehold parcel of land approximately 10 km to the south of the proposed mine. Prior to the development of the Finniss Project there was little infrastructure development in the project area apart from the sealed Cox Peninsula Road and some unsealed access tracks.

In recent times, mineral exploration has been the predominant land-use in the Grants / BP33 areas. Rural living, recreation and tourism occur across the Cox Peninsula. The region is popular with tourists visiting Berry Springs, the Territory Wildlife Park and travelling through the region to Litchfield National Park. Local residents frequent Dundee Beach, Crab Claw Island resort and numerous sites around the peninsula for camping, recreation and fishing. Residents and visitors to the Cox Peninsula (including but not limited to the Larrakia Traditional Owners) conduct a range of customary activities, including camping, hunting and fishing across the Peninsula. The Darwin Regional Land Use Plan identifies agricultural/ grazing as the likely long-term land use within and surrounding the project area. There are no Native Title claims, parks or reserves or other formal land-uses within or adjoining the project area.

The nearest community is Belyuen, located approximately 15 km to the north-west (

Figure 2-12). Berry Springs, a small township approximately 22 km east of the project, is the closest area of intensive land-use (mainly horticulture and some cattle grazing). Berry Springs

lies on the haul route between the Grants mine site and the port at Darwin. Some rural areas of outer Darwin (Noonamah, Bees Creek, McMinns Lagoon, Freds Pass, Coolalinga and Humpty Doo) are located along the haul route. The communities of Wagait Beach and Dundee Beach accessed principally via the Cox Peninsula Road, but do not lie on the haulage route. Darwin and Palmerston are the nearest densely populated areas.

The key communities within the Finniss Project's area of influence are:

- Berry Springs (relatively short distance from the project site and located on Cox Peninsula Road and along the haul route)
- Belyuen, (proximity to the project site, but not on haulage route)
- Tumbling Waters, (proximity to Cox Peninsula Road and haulage route)
- Darwin and Palmerston (likely to be a source of employment, services and supply).

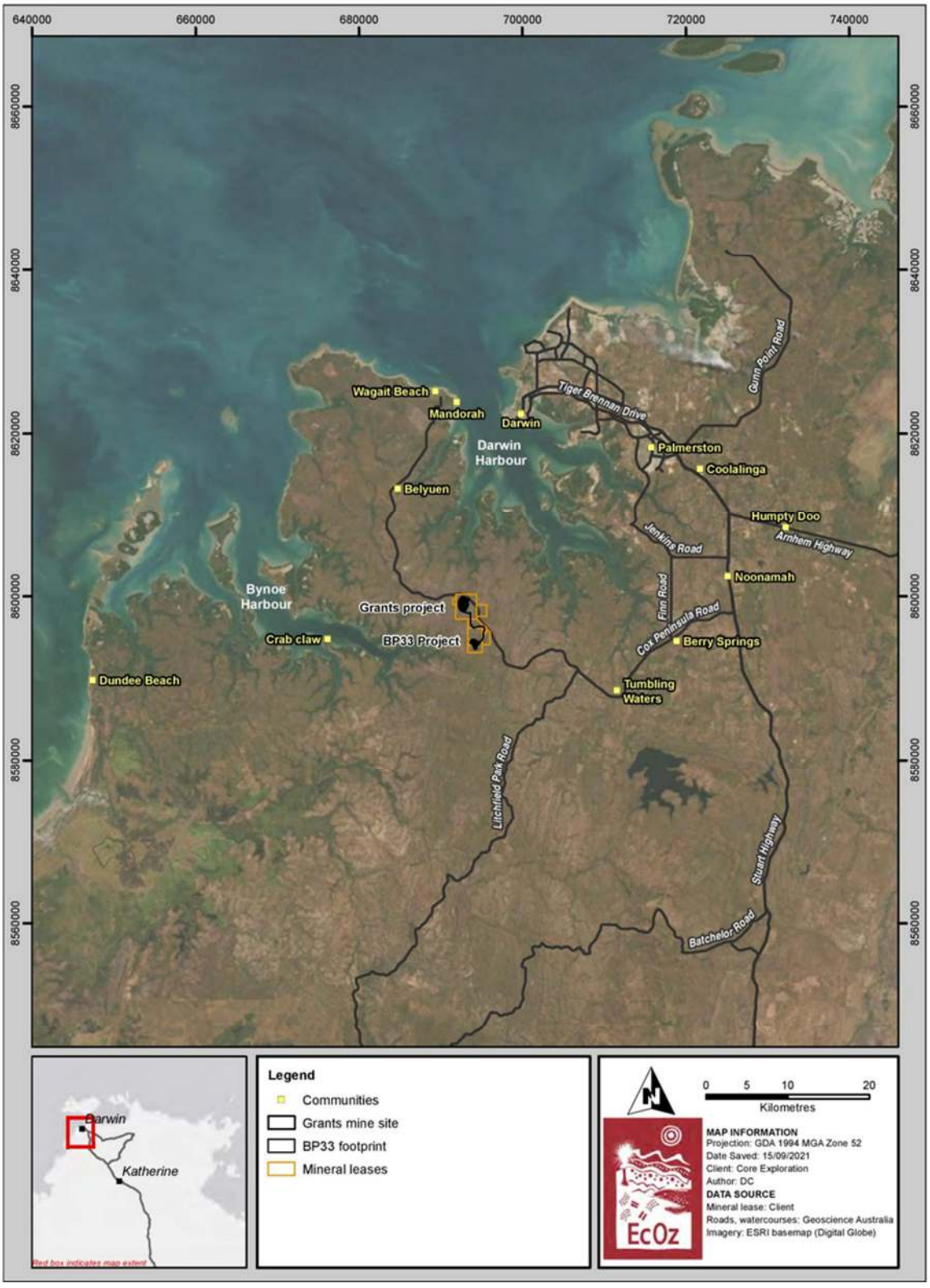

Figure 2-12: Social context map

Source: Finniss Lithium Project BP33 Underground Supplementary Environmental Report (November 2021)

3 ASSESSMENT AND PERMITTING HISTORY

Assessment and permitting for elements of the Finniss Lithium Project have, up until now, been done as separate assessments for each mine operations area.

The Grants open pit mining and associated processing plant was assessed by the NT EPA between 2018 and 2019, culminating in NT EPA Assessment Report 89 on 17 June 2019.

The BP33 underground mine was assessed by the NT EPA between 2020 and 2022, culminating in NT EPA Assessment Report 94 on 8 April 2022 and Ministerial approval (EP2020/001- 001) on 26 April 2022. The key components of the two project elements at the time each was assessed by the NT EPA are summarised in Table 3-1.

Table 3-1: Key project components – Grants (2019) and BP33 (2022) [Note 1]

Description	Grants (2019)	BP33 (2022)
Material quantities		
Ore mined	782,978 bank cubic metres(bcm) (2.03Mt)	1 Mt ore per year (2.09 million tonnes over life of project)
Waste mined	13,887,008 bcm (36.2 Mt over life of project)	1,085,000 bcm (2.29 Mt over life of project)
Product	Lithium concentrate	Spodumene (lithium bearing ore)
Duration of project	35 months	55 months (4 years 7 months) including 6 months of construction, 44 months operations and 5 months of rehabilitation.
Disturbance (Project footprint)	251 ha in total	100.9 ha in total
Pit depth	200m (pit depth)	Approximately 320 m below surface.
Mining method	Open pit drill and blast	Underground – drill and blast; sublevel open stopes with pillar support.
Operating hours	Operating hours: 24 hours, 7 days/week	Operating hours: 24 hours, 7 days/week
Transport		
Daily truck frequency	Product haulage: 10 quad road train loads to port each day.	Total of ~20 truck trips along haul route.
Transport route	Cox Peninsula Road, through to the Stuart Highway, along the Stuart Highway to Tiger Brennan Drive and then Berrimah Road, to the East Arm Port	Ore transported in trucks to Grants via a 7.5 km internal haul road.

Description	Grants (2019)	BP33 (2022)
Greenhouse gas emissions (life of project)		
Transport emissions	55,664 tCO_2-e	1,427 tCO_2-e
Stationary emissions	4,489 tCO_2-e	152,946 tCO_2-e
Land clearing	18,323 tCO_2-e	132,987 tCO_2-e Note 2
Purchased electricity (Scope 2)	--	180,983 t CO_2-e
Blasting	--	5,032 t CO_2-e
Petroleum oil combustion	--	163 t CO_2-e
Total estimated emissions (Scope 1 and Scope 2)	78,476 t CO_2-e	473,538 Note 2
Portion of NT annual emissions (2016)	~0.4%	Not specified
Water demand	2.018 ML/day Annual water use is about 737ML	2.62 ML per day for haul roads and underground dust suppression, and ablutions / facility operations.
Water sources:	Groundwater inflows to pit range from 1.6 ML/day to 2.6 ML/day Make-up water to be supplied from Observation Hill Dam (OHD) and Mine Site Dam	Water sourced from OHD and underground mine dewatering.
Water discharge requirements	Off-site discharge of water in excess of supply requirements in November to March each year of operations	Controlled release of excess water from MSD to ephemeral drainage line to the south of the mine site during the wet season Land irrigation over an area of approximately 20 ha may be required to manage excess water during BP33 construction phase Excess water pumped to the GLP pit void. Forecast up to 60 ML/month to 180 ML/month.

Note 1: Where necessary, units have been converted to provide consistent units for each mining operation. For example, water quantities originally expressed in kilolitres per day for Grants have been converted to megalitres per day for both projects.

Note 2: Estimates for greenhouse emissions in BP33 Appendix K appear to have been overestimated. The extent of vegetation clearing assumed in the greenhouse report in Appendix K is 651.9 ha, which is inconsistent with the EPA assessment report.

Details of the two separate NT EPA assessments and of subsequent approvals granted for each of the two mining operations are provided below.

3.1 Grants

3.1.1 Summary of key factors assessed

The NT EPA framed its assessment of the Grants Lithium Project around five key factors (Table 3-2).

Table 3-2: Factors assessed – Grants Lithium Project (NT EPA Assessment Report 89, 2019)

Factor assessed	Matters considered
Terrestrial flora and fauna	Potential direct and indirect impacts on the threatened Triggerplant *Stylidium ensatum* (listed as 'Endangered' under both the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the Territory Parks and Wildlife Conservation Act (TPWC Act)) and on *Typhonium praetermissum* (classified as 'Vulnerable' under the TPWC Act. Impacts from i) vegetation clearing and dam construction, ii) possible changes in surface water flows due to the establishment of bunds, iii) possible introduction and/or spread of weeds as a results of project activities and iv) modified fire regimes were assessed. EPA noted that while there was potential for some threatened fauna species to occur within the project development envelope, the activities proposed were unlikely to result in significant impacts to regional populations of any threatened fauna species.
Terrestrial environmental quality	The NT EPA considered impacts potentially arising from: • Erosion and/or loss of soil seedbank • Contamination of land by acid mine drainage • Contamination of land during storage or handling of hazardous substances • Unsuccessful mine rehabilitation (landform instability / erosion)
Inland water environmental quality	The NT EPA considered impacts potentially arising from: • Storage of waste rock and tailings (acidic, metalliferous or saline drainage) • Land clearing (increased erosion / sedimentation affecting surface waters downstream of operations area) • Water quality impacts arising from spillage / handling / storage of hazardous or mineralised materials • Long term changes in groundwater quality in the final pit lake Many of the implementation conditions recommended by the EPA (Recommendations 6 through 11, inclusive) addressed actions to minimise risks to inland water quality.
Hydrological processes	The NT EPA identified and considered potential project impacts on: • Groundwater levels and groundwater availability, as a result of groundwater abstraction from mine workings and the proposed water supply borefield • Groundwater levels, as a result of seepage from mine water storage(s) • Surface water flows, as a result of the establishment of infrastructure including water storage structures, a waste rock dump, flood diversion bunds and pipelines or other linear infrastructure.

Factor assessed	Matters considered
	The EPA noted that there was some uncertainty about hydrological impacts in both the short term and longer term due to uncertainties about mine water demand, ore processing methods and mine closure and rehabilitation design. Recommendations 3, 4 and 5 in EPA's assessment report addressed avoidance, management and monitoring of potential impacts on hydrological processes.
Social and economic factors	The NT EPA identified potential for both positive and negative impacts on social and economic impacts. These included: • opportunities for employment and increased economic activity • traffic delays, and congestion • road pavement degradation due to increased heavy traffic • reduced community amenity due to increase in noise and/or dust especially from increased traffic and road trains • constraints on public access and / or exposure to hazards following closure • constraints on future land use opportunities • public safety risks associated with dam failure causing downstream flooding • impacts to environmental values associated with water use, mine closure and rehabilitation In its assessment of traffic impacts, the EPA took into account the short term life of the Proposal (maximum of four years, while recognising that there could be impacts on road users including residents and tourists during construction or operations periods. A range of actions aimed at mitigating social impacts of project implementation are described in Recommendation 14 of the EPA assessment report.
Cultural surroundings	The NT EPA acknowledged that no Aboriginal heritage sites had been identified within the proposed project disturbance footprint but noted that one Declared Heritage Area (site 5) listed on the NT Heritage Register is present in the northwestern corner of tenement ML31726. The assessment by NT EPA recognised that access to the project area for customary activities by the Larrakia People and Belyuen residents would be constrained during project implementation. The EPA assessment noted that alterations to land or water as a result of project activities could also represent impacts on cultural values.

The assessment of the Grants Lithium Project in 2018/2019 did not assess greenhouse emissions as a key environmental factor. The NT EPA noted that the project proponent had explained that adoption of alternative (non-diesel) power options would be difficult to justify for a short term mining project. Nonetheless, the assessment report prepared by the NT EPA recommended that further assessment of power supply alternatives should be considered by the proponent to reduce the Proposal's greenhouse gas emissions to as low as reasonably practicable, with particular regard given to renewable sources.

3.1.2 Environmental authorisations (Grants)

A summary of environmental and related authorisations for mining operations at Grants is provided in Table 3-3. The various statutory approvals listed in Table 3-3 are supported and given effect through a range of management plans approved by the administering authorities. A list of management plans approved for the Grants operation is provided in **Error! Reference source not found.**.

Table 3-3: Summary of statutory authorisations – Grants Lithium Project

Regulated activity	Legislation	Statutory instrument	Granted / approved	Additional comment
Land access for the purposes of exploration or mining	*Mineral Titles Act*	Exploration licences and mineral leases as summarised in Table 3-4.	Refer Table 3-4	Most of the mining and ore processing activities proposed at the time the proposal was assessed lie within tenement ML31726. Some water supply infrastructure and roads lie on other tenements.
	Crown Lands Act 1992			All tenements required for the implementation of the Grants Lithium Project overlie Crown Land. The tenements do not overlie or adjoin freehold land or pastoral land.
	Aboriginal Land Rights (Northern Territory) Act 1976			The tenements do not intersect in whole or part freehold Aboriginal land recognised under the Aboriginal Land Rights Act
	Native Title Act 1993 (Cwth)			No Native Title claims have been lodged, registered or determined over the Grants tenement package.
Development and use of land	*Aboriginal Sacred Sites Act 1989*	AAPA certificate C2022-049		No Aboriginal Sacred Sites have been identified within the Grants development envelope. The Aboriginal Areas Protection Authority (AAPA) has granted a certificate (C2022-049), setting out conditions for protection of cultural and heritage values.
Mining and/or processing of lithium ore and establishment and use of associated infrastructure	*Environment Protection and Biodiversity Conservation Act 1999*	NA		The original Grants mining proposal did not trigger referral or assessment under the EPBC Act.
Mining and/or processing of lithium ore and establishment and use of associated infrastructure	*Environmental Assessment Act 1982 (now repealed)*	NT EPA report No 89		• The Grants project was assessed under the Environmental Assessment Act (now repealed) at the level of an Environmental Impact Statement (EIS). • The assessment was completed on 17 June 2019 (NT EPA Assessment Report 89) • Recommendations in the NT EPA report served as the basis for assessment and approval of a

Regulated activity	Legislation	Statutory instrument	Granted / approved	Additional comment
				mining management plan (MMP) under Mining Management Act.
Mining and / or processing of lithium ore and establishment and use of associated infrastructure	*Mining Management Act 2001 (repealed)* *Environmental Protection Act 2019* *Environment Protection Legislation Amendment Act 2023*	Mining Management Plan (MMP) Deemed mining licence 1021-01 *DML 1021-01)	1 April 2020. (variation approved 27 August 2021; amendment approved in November 2022)	The mining management plan serves as the basis for deemed mining licence 1021-01. Following cessation of operations in early 2024, Core Lithium notified the Minister for Mining on 30 April 2024 of its intention to suspend mining activities. A Care & Maintenance plan was lodged with the government on 31 May 2024 and remains in effect. A proposed amended MMP was submitted to the Department of Lands Planning and Environment in November 2025. If approved, the MMP will serve as the environmental framework for managing mining activities when mining recommences.
'Taking' or interference with threatened species	*Territory Parks and Wildlife Conservation Act 1976*			No permits to take have been required or sought to date.
Taking of surface water or groundwater	Water Act 1992 (Section 71B)	Surface Water Extraction Licence (SWEL) 8151018	4 November 2022	Licence authorises extraction of up to 620 ML per year of water from the existing Observation Hill Dam (on mineral lease ML32074). Licence does not allow mine dewatering or extraction of water from a surface watercourse.
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 Harbou	Water Act 1992 (Section 74)	WDL248	25 July 2022 (amended 18 July 2025)	The discharge licence does not specify a limit for the quantity of water to be discharged, providing water quality limits in the discharge water and receiving waters are met. The discharge licence does not authorise extraction of water. The current licence expires on 30 June 2030.

Regulated activity	Legislation	Statutory instrument	Granted / approved	Additional comment
Offsite disposal of mine wastes.	*Waste Management and Pollution Control Act 1998*			Statutory authorisations are held by the waste transporter and by the entity operating the waste disposal site.
Emission of greenhouse gases	*National Greenhouse and Energy Reporting Act 2007* (Cwth)			Core Lithium submits annual reports of its greenhouse emissions and energy production / consumption under Section 19 of the NGER Act. No reporting thresholds were triggered in the 2024-2025 reporting year.

Table 3-4: Mining tenure – Finness Lithium Project (Grants and BP33)

Tenement No Note 1	**Holder**	**Area** Note 2	**Purpose**	**Granted**	**Expiry date**
EL29698	Lithium Developments Pty Ltd	10 blocks	Exploration	15 Oct 2025 (renewal)	10 July 2027
EL30015	Lithium Developments Pty Ltd	6 blocks	Exploration	29 July 2024 (renewal) Note 3	3 Mar 2026 Note 3
EMP28651	Lithium Developments Pty Ltd	25 ha	Borrow pit	12 Oct 2023 (renewal)	12 Oct 2028
MLN16 Note 5	Lithium Developments Pty Ltd	194 ha	Mine infrastructure (access / haulage roads)	17 Apr 2013 Note 4	4 Mar 2026 Note 4
ML31726	Lithium Developments (Grants NT) Pty Ltd	768 ha	Grants mining / processing infrastructure, access and haulage tracks, pipeline easement	18 Jan 2019	17 Jan 2039
ML32074 Note 5	Lithium Developments (Grants NT) Pty Ltd	352.9 ha	Ancillary infrastructure (pipeline, access track, existing dam (Observation Hill))	12 Dec 2019	17 Jan 2039
ML32278	Lithium Developments (Grants NT) Pty Ltd	27.8 ha	Proposed dam site west of Grants	18 Mar 2021	17 Jan 2039
ML32346 Note 5	Lithium Developments (Grants NT) Pty Ltd	494.6 ha	BP33 pit and mine infrastructure, telecommunications infrastructure	13 Jan 2021	12 Jan 2046

Note 1: 'EL' means 'exploration licence', 'MLN' means 'mineral lease (northern)', 'ML' means 'mineral lease', 'EMP' means 'extractive mineral permit'.

Note 2: In the Northern Territory an exploration 'block' covers an area of approximately 3.2 km^2.

Note 3: A renewal application was lodged on 27 February 2026. If granted, the renewal will most likely extend tenure for 2 years.

Note 4: A renewal application was lodged on 27 February 2026. If granted, the renewal will most likely extend tenure for 15 years.

Note 5: These tenements are used for infrastructure used by mining activities under both the Grants and the BP33 projects.

3.2 BP33

3.2.1 Summary of key factors assessed

The NT EPA framed its assessment of the BP33 Lithium Project around five key factors (Table 3-5). In assessing the BP33 proposal, the NT EPA noted the interaction between activities at the Grants operations area and proposed mining at BP33, acknowledging that mining at BP33 would increase the duration of ore processing at Grants. The NT EPA limited its assessment of the BP33 proposal up to (but not beyond), activities including the transfer of ore from BP33 to Grants.

Table 3-5: Factors assessed – BP33 Lithium Project (NT EPA Assessment Report 94, 2022)

Factor assessed	Matters considered
Terrestrial environmental quality	• Potential for land contamination from chemical leaks or spills • Ineffective or unsuccessful mine rehabilitation
Terrestrial flora, fauna and ecosystems	• Potential for altered hydrology or spread of weeds to impact significant and/or sensitive vegetation types in wetland drainage systems and in riparian zones along ephemeral creeklines. • Potential direct (clearing) and indirect impacts on the annual herb *Stylidiium ensatum* (*Endangered – Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), Endangered - *Territory Parks and Wildlife Conservation Act 1976* (TPWC Act)) • Potential direct and indirect impacts on the perennial geophyte *T. praetermissum* (Vulnerable - TPWC Act). • Potential for groundwater drawdown to adversely affect the health of groundwater dependent vegetation, including - *Melaleuca* mid open forest over tussock grassland, and - *Corymbia* mid open woodland over tussock grassland. The NT EPA considered that there was uncertainty about the potential extent, magnitude and duration of impacts on groundwater dependent vegetation and advised that monitoring and management of impacts would be required. NT EPA noted that no threatened ecological communities are present in the project development envelope. EPA noted that while there was potential for up to ten threatened fauna species to occur within a 10 km radius of the project development envelope, the activities proposed were unlikely to result in significant impacts to regional populations of any threatened fauna species or their habitats.

Factor assessed	Matters considered
Hydrological processes	The NT EPA considered impacts potentially arising from: • Changes to surface water flows as a result of water take and/or release by the project • Flooding • Groundwater drawdown as a result of mine dewatering • Failure of the Observation Hill Dam No significant impacts were predicted on other water users and NT EPA generally considered that potential hydrological impacts could be adequately managed through statutory instruments under the Water Act 1992 via a Mining Management Plan. NT EPA noted that risks associated with the Observation Hill Dam are managed via statutory conditions imposed on the Grants Lithium Project.
Inland water environmental quality	The NT EPA considered impacts potentially affecting groundwater and downstream waterways that drain into Bynoe Harbour via the Charlotte River. • Storage of waste rock and tailings (acidic, metalliferous or saline drainage) • Discharge of stormwater or mine affected water. • Land clearing (increased erosion / sedimentation affecting surface waters downstream of operations area) • Water quality impacts arising from spillage / handling / storage of hazardous or mineralised materials NT EPA endorsed the development and implementation of site specific water quality guideline values based on local water quality reference data, but noted that at the time of its assessment there were insufficient representative data to develop meaningful guideline values for a number of parameters.
Community and economic factors	The NT EPA identified potential for both positive and negative impacts on social and economic impacts. These included: • opportunities for employment and increased economic activity • public safety risks arising from increased traffic • amenity impacts associated with road train movements • impacts to environmental values associated with water use, mine closure and rehabilitation.

The assessment by the NT EPA did not specifically comment on estimated greenhouse emissions arising from mining at BP33. Neither were Aboriginal cultural or heritage matters identified as key factors.

The NT EPA generally considered that the environmental risks of proposed mining activities at BP33 would be limited by the restricted scope and duration of mining and by the mine design, which included offsite processing of ore and backfilling of mine waste in underground voids.

3.2.2 Environmental authorisations

A summary of environmental and related authorisations for mining operations at BP33 is provided in Table 3-3. The various statutory approvals listed in Table 3-6 are supported and given effect through a range of management plans approved by the administering authorities.

A list of management plans approved for the BP33 operation is provided in **Error! Reference source not found.**.

Table 3-6: Summary of statutory authorisations – BP33 Project

Regulated activity	Legislation	Statutory instrument	Granted / approved	Additional comment
Land access for the purposes of exploration or mining	*Mineral Titles Act*	Exploration licences and mineral leases as summarised in Table 3-4.	Refer Table 3-4	
	Crown Lands Act 1992			All tenements required for the implementation of the BP33 Lithium Project overlie Vacant Crown Land. The tenements do not overlie or adjoin freehold land or pastoral land.
	Aboriginal Land Rights (Northern Territory) Act 1976			The tenements do not intersect in whole or part freehold Aboriginal land recognised under the Aboriginal Land Rights Act
	Native Title Act 1993 (Cwth)			No Native Title claims have been lodged, registered or determined over the Grants tenement package.
Development and use of land	*Aboriginal Sacred Sites Act 1989*	AAPA certificates C2019/077 and C2022-049		At the time of the initial assessment of BP33 by the NT EPA, the AAPA had issued Authority Certificate C2019/077, which covered part of the BP33 mine site. Two Aboriginal Sacred Sites have been identified within the BP33 development envelope, but none within the proposed disturbance footprint. A subsequent AAPA certificate was approved to protect these sites, the nearest of which is approximately 4.5 km northeast of BP33.

Regulated activity	Legislation	Statutory instrument	Granted / approved	Additional comment
Mining of lithium ore and establishment and use of associated infrastructure	*Environment Protection and Biodiversity Conservation Act 1999*	NA	--	The original BP33 proposal did not trigger referral or assessment under the EPBC Act. Although parts of the project development envelope had been mapped as potentially suitable habitat for the threatened trigger plant *Stylidium ensatum,* no plants were recorded during targeted surveys.
Mining of lithium ore and establishment and use of associated infrastructure		NT EPA report No 94 EP2020/001-001	26 April 2022	The BP33 project was assessed under the Environment Protection Act 2019 via a Supplementary Environment Report (SER) The assessment was completed on 8 April 2022 (NT EPA Assessment Report 94) Ministerial approval for the project was granted through a Statement of Reasons issued on 26 April 2022.
	Mining Management Act 2001 (repealed) *Environmental Protection Act 2019* *Environment Protection Legislation Amendment Act 2023*	Deemed mining licence (mining authorisation) 1138-01	20 April 2023 (Amendment applications submitted in May 2024 and September 2025)	A mining management plan submitted in 2022 served as the basis for deemed mining licence 1138-01.
'Taking' or interference with threatened species	*Territory Parks and Wildlife Conservation Act 1976*			No permits to take have been required or sought to date.

Regulated activity	Legislation	Statutory instrument	Granted / approved	Additional comment
Taking of surface water or groundwater	Water Act 1992 (Section 71B)	Surface Water Extraction Licence (SWEL) 8151018	4 November 2022 (revised and re-issued 28 April 2025)	Licence authorises extraction of up to 121 ML per year of water from the existing Observation Hill Dam (on mineral lease ML32074). Licence does not allow mine dewatering or extraction of water from a surface watercourse.
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 Harbou	*Water Act 1992* (Section 74)	WDL253	9 February 2024	Licence authorises the controlled discharge of treated, mine-influenced water from the BP33 Underground Mine, Mine Water Dam (MWD) Cell 1 into Drainage Line BP1 that feeds into the Charlotte River and then into Bynoe Harbour, via the authorised discharge point (DP1. The discharge licence does not specify a limit for the quantity of water to be discharged, providing water quality limits in the discharge water and receiving waters are met. The current licence expires on in February 2029.
Offsite disposal of mine wastes.	*Waste Management and Pollution Control Act 1998*			Statutory authorisations are held by the waste transporter and by the entity operating the waste disposal site.
Emission of greenhouse gases	*National Greenhouse and Energy Reporting Act 2007* (Cwth)			Core Lithium submits annual reports of its greenhouse emissions and energy production / consumption under Section 19 of the NGER Act. No reporting thresholds were triggered in the 2024-2025 reporting year.

4 CURRENT STATUS OF PROJECTS

4.1 Grants status

Mining commenced at Grants in March 2022 and processing of ore began in February 2023. Mining was suspended in January 2024 due to a softening of the lithium market. Processing of ore continued to mid-2024, after which the site was put under care and maintenance. As of May 2024, approximately 247 ha of ground disturbance had occurred at Grants (or approximately 97% of the 254 ha of disturbance approved under the project's mining management plan)[6].

Only limited activities have been undertaken at the site since June 2024. These include:

- Maintenance of sediment and erosion control structures
- Statutory monitoring and reporting required under the approved Care and Maintenance Plan

4.2 BP33

The BP33 site has been inactive since late 2024 and is currently managed under an approved Care and Maintenance Plan. Early mining works at BP33 started in August 2023. By late December 2024, the following works had been initiated and/or completed:

- Stage 1 of the box cut was completed
- Substantial progress on installation of tunnel arch footings
- Construction of site access and drainage infrastructure

As of late 2024, approximately 63 ha of land had been cleared within the BP33 development envelope.

4.3 Management systems

Environmental and social aspects of mining activities at Grants and BP33 are managed by implementing control measures developed through a project risk assessment and set out in documented plans and procedures. The management plans developed in support of mining and processing operations are:

- Care and maintenance plan
- Emergency response plan
- Social impact management plan
- Stakeholder management plan
- Journey management plan
- Dust management plan
- Water management plan
- Land and Soils Management Plan

[6] Disturbance areas as reported in the Grants revised Mining Management Plan, November 2025.

- Flora and Fauna, Weeds and Pest Management Plan
- Storage, Transport and Handling of Dangerous Goods
- Waste Rock and AMD Management Plan

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- Tailings Management Plan (OMS Manual)
- Mine Closure Plan and Rehabilitation Management Plan

Compliance with statutory requirements and adherence to approved management plans is assessed via internal and third-party reviews and auditing. The most recent independent compliance audit at BP33 was completed in June 2025 (SLR, 2025).

During the time that project operations are suspended, a modified management system has been in place, as described in the approved Care and Maintenance Plan.

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