



**COPPERSTRING 2.0**

**CopperString 2.0**

# **Land**

**Volume 2 Chapter 5**



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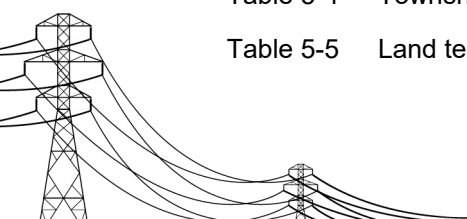
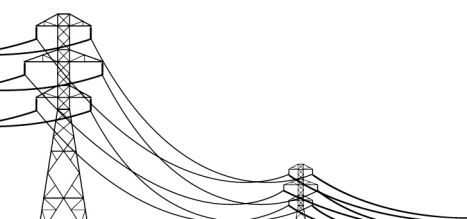


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## 5. Land

### 5.1 Introduction

#### 5.1.1 Project overview

The CopperString 2.0 Project (the Project) involves the construction and operation of approximately 1,060 km of extra high voltage overhead electricity transmission line that will extend from Mount Isa to the Powerlink transmission network, via a new connection point near Woodstock, south of Townsville.

The Project involves construction of seven new substations at Woodstock, Hughenden, Dajarra Road (Cloncurry), Mount Isa, Selwyn, Cannington Mine and Phosphate Hill Mine.

The CopperString transmission network is divided into the following eight sections as shown in Figure 5-1:

1. Woodstock Substation
2. Renewable Energy Hub
3. CopperString Core
4. Mount Isa Augmentation
5. Southern Connection
6. Cannington Connection
7. Phosphate Hill Connection
8. Kennedy Connection (option)

#### 5.1.2 Objectives

The objective of this chapter is to ensure the Project is designed and operated to:

- Minimise impacts on the environment and improve environmental outcomes
- Protect the environmental values of land including soils, subsoils, landforms and associated flora and fauna
- Contribute to community wellbeing
- Contribute to strong and balanced social, economic, cultural and environmental sustainability.

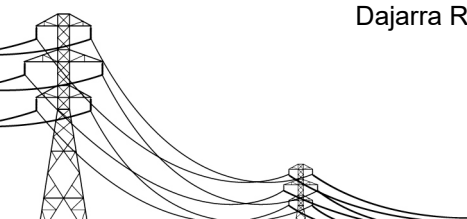
#### 5.1.3 Purpose of chapter

The purpose of this chapter is to describe the existing land use environment and potential land use impacts associated with the construction and operation of the Project and associated infrastructure. This chapter addresses the requirements in Sections 12.1 through to 12.10 of the Terms of Reference (ToR).

#### 5.1.4 Defined terms

The following are a list of defined terms utilised throughout this chapter.

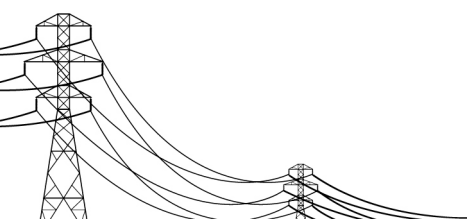
- ‘Corridor selection’ - means the baseline investigation corridor of the transmission line (a nominal 1,060 km long corridor). The corridor selection is 120 m wide from Woodstock to Dajarra Road, and 60 m wide from Dajarra Road to Mount Isa, Dajarra Road to Selwyn,

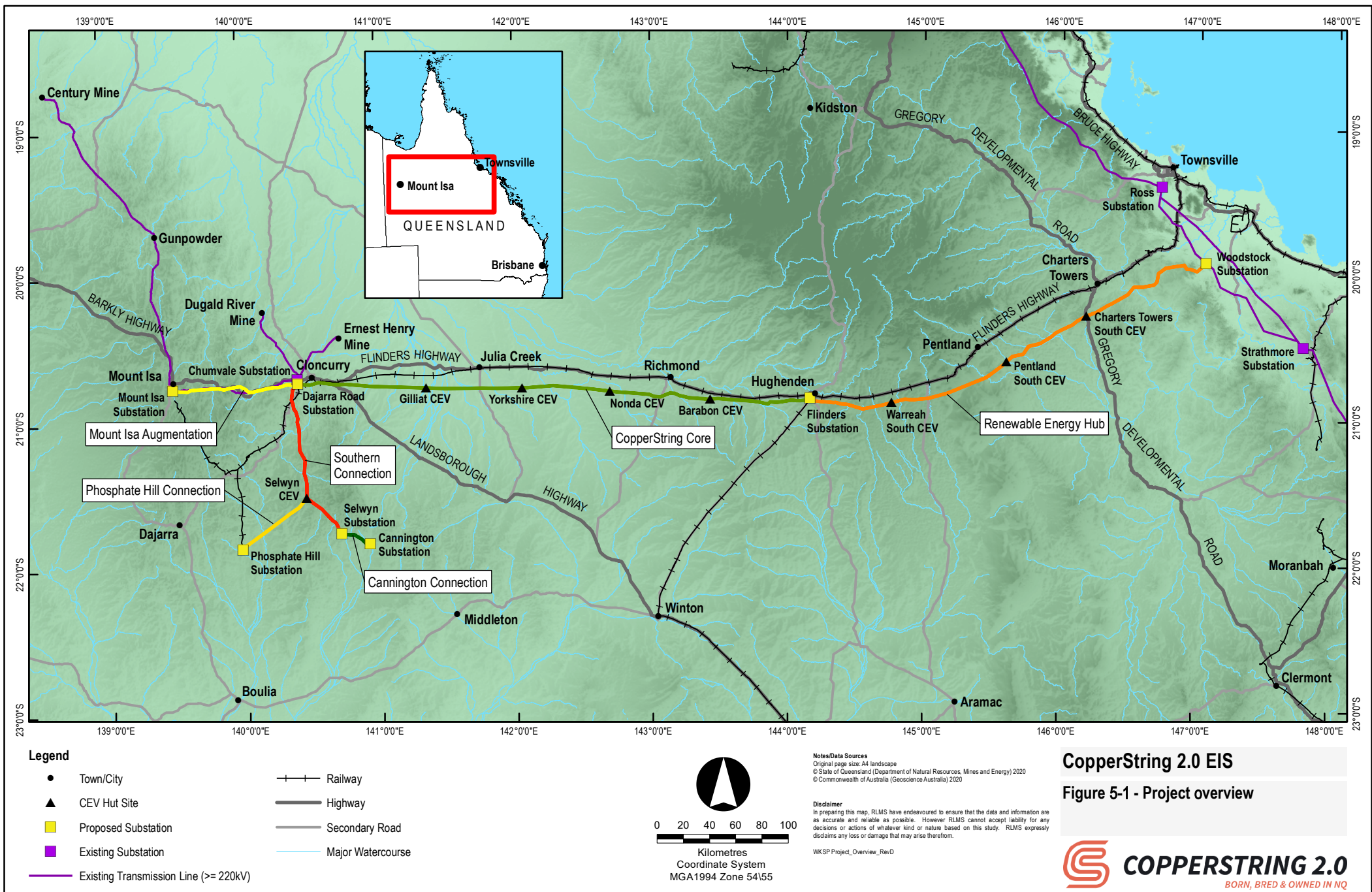




and Selwyn to Phosphate Hill and Cannington. The 4 km long section of the corridor selection from Dajarra Road Substation to Chumvale Substation is 60 m wide and a 3 km long section from Dajarra Road Substation to the Dugald River 220 kV overhead line is 80 m wide.

- 'Project area' - means the 120 m easement and associated infrastructure (including laydown areas, substations, CEV huts, access tracks, brake and winch sites and construction camps) and works referred to in the EIS Terms of Reference (ToR) (these include off-easement components).
- 'Study area' - as defined by individual technical studies in the methodology section or by default the 5 km wide study corridor defined in the Initial Advice Statement and referred to in the EIS ToR.





## 5.2 Methodology

### 5.2.1 Study area

For the purpose of this chapter, the study area generally aligns with the Project area, being the 120 m easement and associated infrastructure (including laydown areas, substations, CEV huts, access tracks, brake and winch sites and construction camps) with consideration to key features in the broader region.

### 5.2.2 Data sources

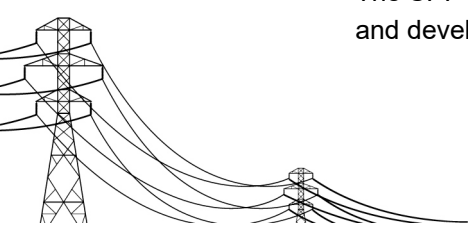
The following data sources were used in development of this chapter:

- Queensland Globe and GeoResGlobe mapping layers including land parcels, land use, infrastructure, land tenure, regional plan mapping, regional interests, mining and exploration activities and Native Title.
- Queensland Government Environmental Management Register and Contaminated Land Register (EMR/CLR)
- Australian Bureau of Statistics 2016 Census Data
- Department of Defence UXO Mapping
- State Planning Policy (2017)
- Relevant regional planning instruments including:
  - North West Regional Plan 2010-2031
  - North Queensland Regional Plan March 2020
- Relevant local planning instruments including:
  - Burdekin Shire IPA Planning Scheme
  - Charters Towers Regional Council Town Plan
  - Shire of Flinders Planning Scheme
  - Richmond Shire Council Planning Scheme
  - McKinlay Shire Planning Scheme
  - Cloncurry Shire Council Planning Scheme
  - City of Mount Isa Planning Scheme.
- State codes including:
  - State code 1 – Development in a state-controlled road environment
  - State code 6 – Protection of state transport networks
  - State code 16 – Native vegetation clearing
  - State code 22 – Environmentally relevant activities.
- CopperString 1.0 EIS Volume 2 Chapter 4 Land
- Volume 3 Appendix K Land use and tenure
- Volume 3 Appendix O Visual amenity

### 5.2.3 Legislative context and standards

- State Planning Policy 2017 (SPP)

The SPP is a single statement of planning principles and guidance for planning scheme and development assessment in Queensland. It defines the Queensland Government's



policies about matters of State interest in land use planning and development. These apply to the making or amending of a local planning instrument and also has application for certain types of development or developments in areas where the SPP has not yet been integrated into the relevant local planning scheme.

The SPP also applies to designating premises for infrastructure purposes. Accordingly, where the Minister for Planning proposes making or amending a designation, the Minister must have regard to the relevant provisions of the SPP as it relates to the proposed designation.

- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

The purpose of the EPBC Act is to provide a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. EPBC Act is relevant for Planning Schemes to integrate State interests.

- Queensland *Planning Act 2016* (Planning Act)

The purpose of the Planning Act is to establish an efficient, effective, transparent, integrated, coordinated, and accountable system of land use planning (planning), development assessment and related matters that facilitates the achievement of ecological sustainability.

- Queensland *Regional Planning Interests Act 2014* (RPI Act)

The RPI Act identifies and protects areas of Queensland that are of regional interest including living areas in regional communities, high-quality agricultural areas from dislocation, strategic cropping land and regionally important environmental areas. In doing this, the RPI Act seeks to manage the impact and support coexistence of resource activities and other regulated activities in areas of regional interest.

- Queensland *Native Title Act 1993* (NT Act)

The NT Act recognises the rights and interests of Indigenous people in respect of land on which they historically resided. Where a proposed development impacts on a parcel of land which is subject to a native title claim, and the impact will alter the existing rights and interests of Indigenous people in respect of that land, the proponent is required to enter into an Indigenous land use agreement (ILUA). The ILUA is between the proponent and the relevant Native Title holders or claimants about how land and waters in the area covered by the agreement will be used and managed in the future.

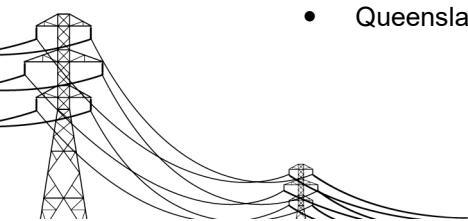
- Queensland *Aboriginal Cultural Heritage Act 2003* (ACH Act)

The ACH Act provides effective recognition, protection and conservation of Aboriginal cultural heritage. Under the ACH Act, a person who carried out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage (the 'cultural heritage duty of care'). The ACH Act is relevant for Planning Schemes to integrate State interests.

- Queensland *Torres Strait Islander Cultural Heritage Act 2003* (TSICH Act)

The TSICH Act provides effective recognition, protection and conservation of Torres Strait Islander cultural heritage. Under the TSICH Act, a person who carried out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage (the 'cultural heritage duty of care'). The TSICH Act is relevant for Planning Schemes to integrate State interests.

- Queensland *Stock Route Management Act 2002* (SRM Act)





The purpose of the SRM Act is to provide effective management for the stock route network. This is achieved by establishing principles and responsibilities for stock route management. Also constructing and maintaining travelling stock facilities and monitoring, surveying and controlling the movement of travelling stock.

- Relevant Planning Schemes:
  - Burdekin Shire IPA Planning Scheme
  - Charters Towers Regional Council Town Plan
  - Shire of Flinders Planning Scheme
  - Richmond Shire Council Planning Scheme
  - McKinlay Shire Planning Scheme
  - Cloncurry Shire Council Planning Scheme
  - City of Mount Isa Planning Scheme

- North West (NW) Regional Plan 2010-2031

The NW Regional Plan 2010-2031 provides a framework to manage growth and change land use and development in the region to 2031 for LGA areas west of Flinders, Richmond, McKinlay Cloncurry and Mount Isa.

- North Queensland (NQ) Regional Plan 2020

The NQ Regional Plan has been finalised and came into effect on 6 March 2020. The NQ Regional Plan is a 25-year strategic and statutory planning document that encompasses the LGA of Burdekin, Charters Towers, Hinchinbrook, Palm Island and Townsville.

- State Development Assessment Provisions Version 2.6 (SDAP)

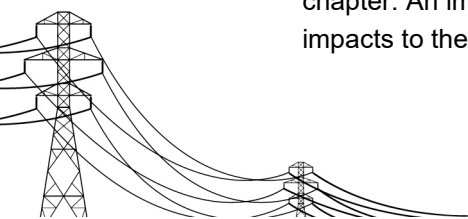
The SDAP Version 2.6, effective February 2020, sets out the matters of interest to the state for development assessment, where the Chief Executive administering the *Planning Act 2016*, (being the Director- General of Queensland Treasury), is responsible for assessing or deciding development applications.

#### 5.2.4 Assessment method

A desktop assessment was undertaken in order to define the existing environment associated with the Project with reference to Sections 12.1 through to 12.10 of the ToR. This included a review of the:

- Regional planning interests (priority agricultural areas and strategic environmental areas)
- Historical workings within and adjacent to the Project areas
- Sources of contaminated land
- Native Title rights and interests
- Land acquisition approach to secure tenure of the Project
- Infrastructure or access tracks associated with the Project which may have impacts on stock routes including reserves (i.e. for water, camping purposes)
- Visual impact on communities (townships and urban areas)
- Project construction phases, timing and location of construction laydown areas and workforce accommodation camps.

This is detailed in full in Volume 3 Appendix K Land use and tenure and summarised within this chapter. An impact assessment was subsequently undertaken in order to characterise potential impacts to the land environment and provide potential mitigation measures.



## 5.3 Existing environment

### 5.3.1 Land parcels

The Project traverses 139 land parcels, including parcels impacted by substations and CEV hut sites. Access tracks would traverse some additional land parcels south of the Flinders Highway in order to access the Project area. The impacted land parcels include private and public ownership are summarised in Table 5-1. A full list of lot on plans (excluding USL land parcels) is provided in Volume 3 Appendix F Real property descriptions of impacted land parcels.

**Table 5-1 Impacted land parcel**

Landholder	Number of Land Parcels
Freehold	34
Estate in unallocated State land	9
<b>Leasehold</b>	
Rolling term lease	37
Term lease	6
Freeholding lease	1
Estate in perpetuity	4
Perpetual	42
No term	5
Reserve for pasturage	1
<b>Total</b>	<b>139</b>

### 5.3.2 Existing and proposed land use

The predominant land uses on the impacted land parcels is agricultural production from relatively natural environment (e.g. cattle grazing). A summary of the primary land uses located within the Project area is detailed in Table 5-2 and illustrated in Figure 5-2.

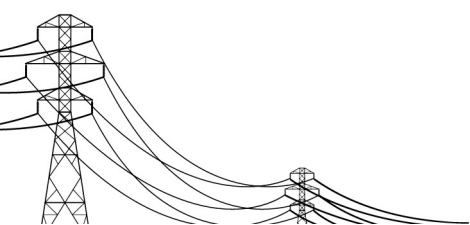
The regions traversed by the Project area are subject to numerous mining and exploration activities. These are further defined in Section 5.3.11.

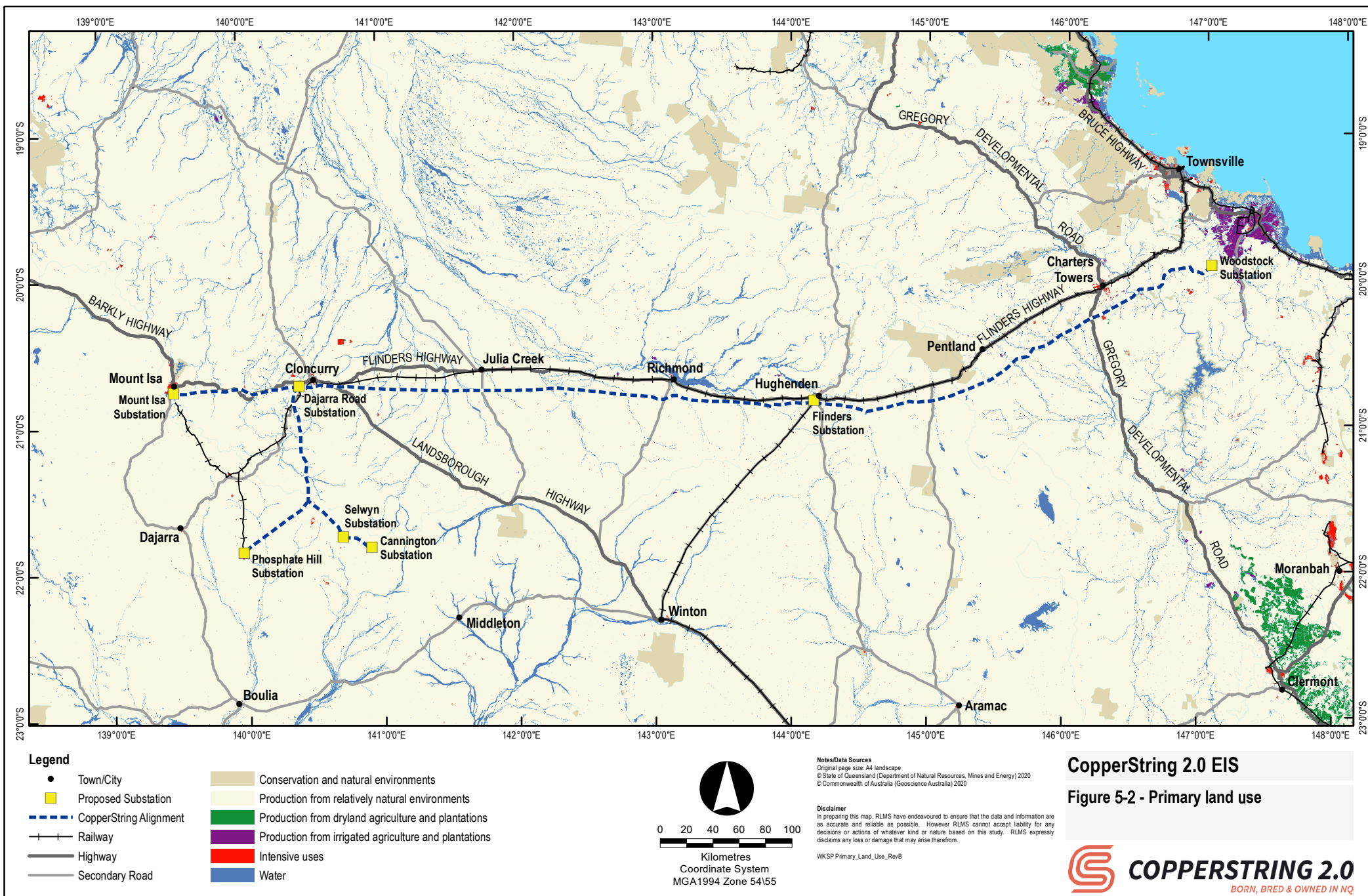
**Table 5-2 Primary land use in the Project area**

Land use	Project area* (km2)	Project area* (%)
Grazing on native and introduced grasses	65.263389	98.57
Conservation	0.013476	0.02
Intensive uses**	0.066457	0.10
Water	0.867387	1.31
<b>TOTAL</b>	<b>63.213</b>	<b>100</b>

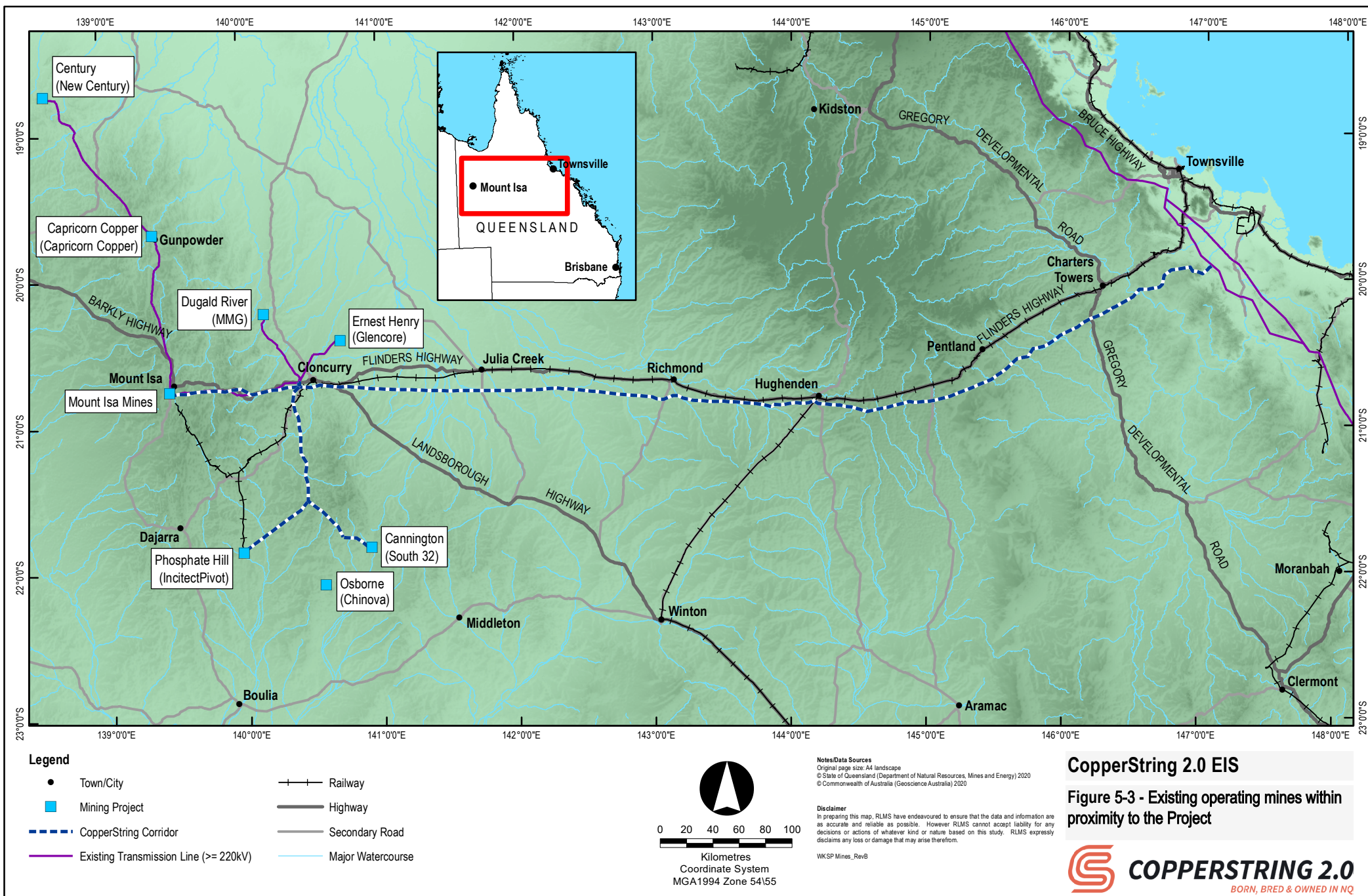
\* calculations are based on the 60 m wide easement, substations and CEV hut area

\*\* Intensive uses include areas of intensive animal production, manufacturing, industrial and residential uses.









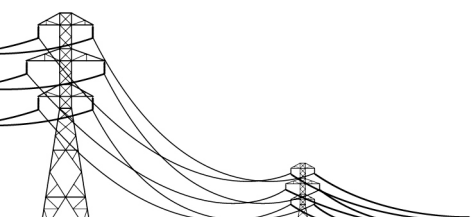


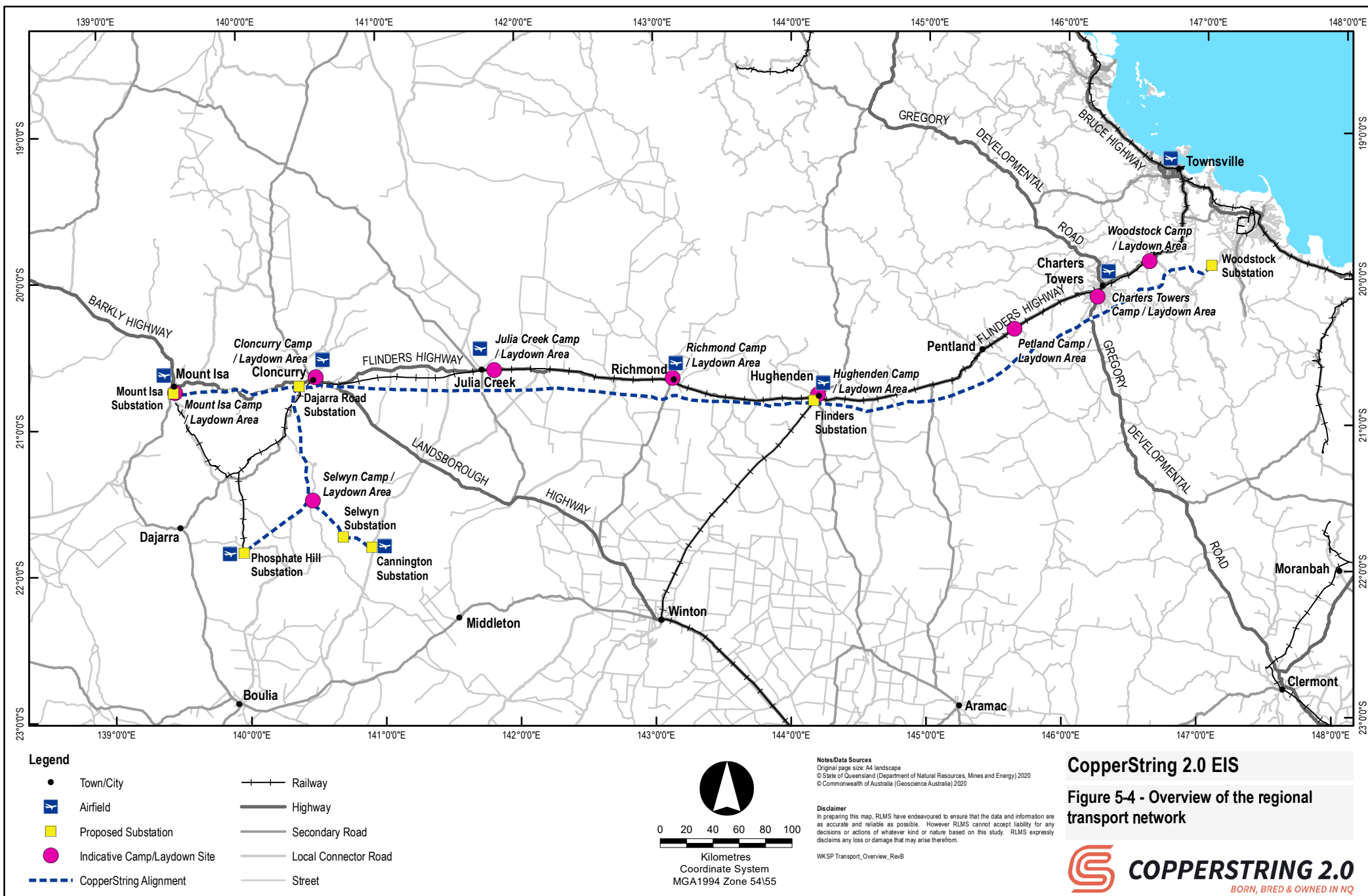
### 5.3.3 Existing infrastructure

A number of key service infrastructure crossings exist within the corridor selection including major and secondary sealed roads, minor sealed roads and unsealed roads, railway crossings and gas pipeline crossing. A summary of the key infrastructure crossings is detailed in Table 5-3 and illustrated in Figure 5-4. The recognised road names for sealed principal and secondary roads and unsealed secondary roads is described in Volume 3 Appendix G Intersecting road and rail crossings.

**Table 5-3 Key infrastructure crossings**

Infrastructure	Number of Crossings
<b>Sealed road crossings</b>	
State controlled road	14
Local government road	1
Private road	2
<b>Unsealed road crossings</b>	
State controlled road	1
Local government road	35
Private road	Not counted but expected to be 100
<b>Other</b>	
Railway crossing (including 3 crossing on dismantled lines)	6
Transmission and distribution line crossings	45
Gas pipeline crossings	1



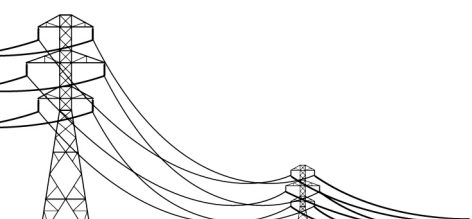


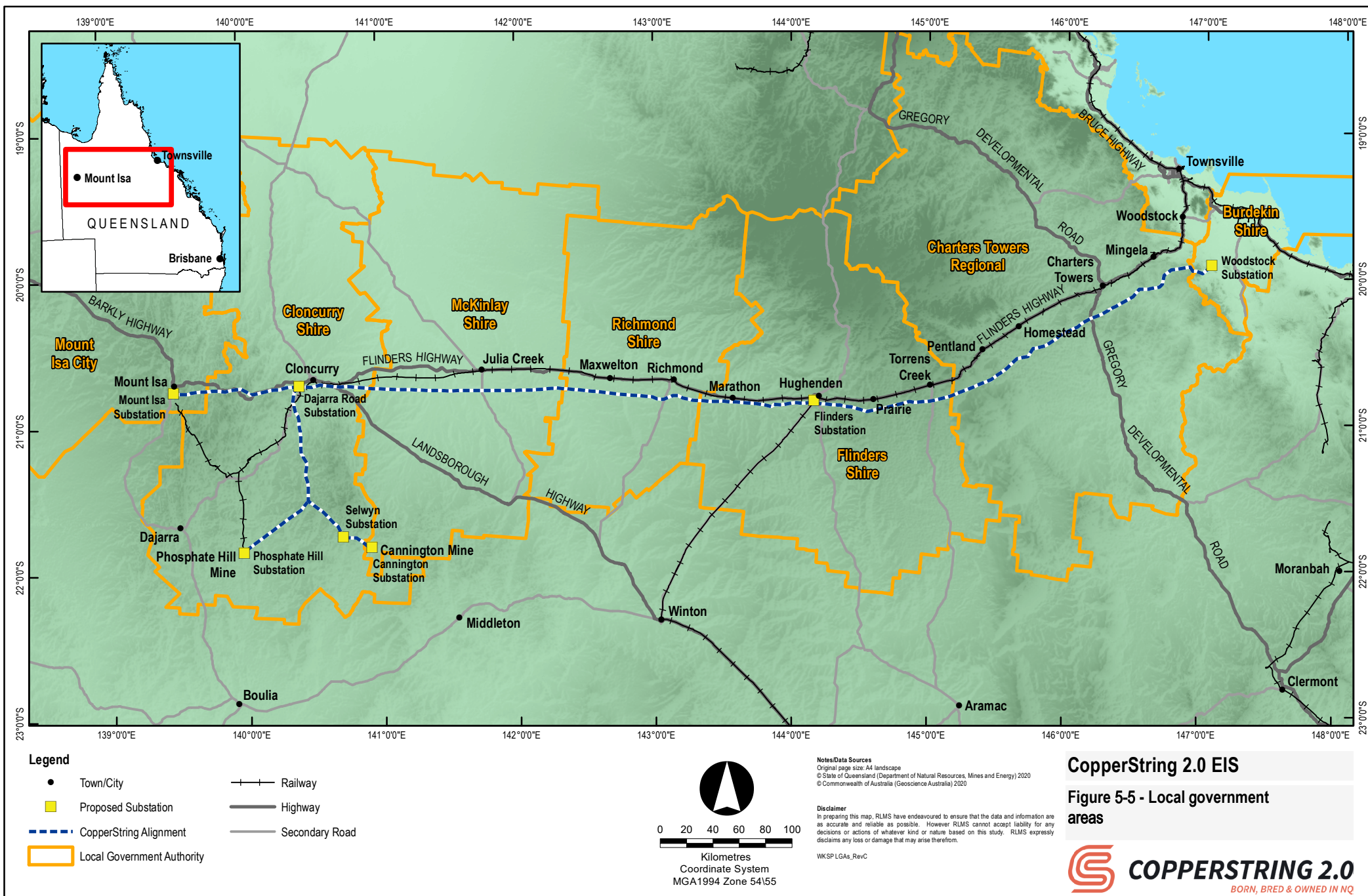
### 5.3.4 Townships and urban localities

A summary of townships and proximity to the corridor selection can be found in Table 5-4. The location of each of the township and local government area in proximity to the Project area is illustrated in Figure 5-5.

**Table 5-4 Townships along the Project corridor selection**

Township	LGA	Population	Comment
Woodstock	Townsville	239	A new substation would be built approximately 32 km south west at Woodstock, located within the Burdekin Shire Council LGA. The township of Woodstock is located within the Townsville City Council LGA.
Mingela	Charters Towers	20	The corridor selection is located approximately 23 km south of Mingela.
Charters Towers	Charters Towers	8,120	The corridor selection is located approximately 21 km south of Charters Towers.
Homestead	Charters Towers	49	The corridor selection is located approximately 23 km south of township.
Pentland	Charters Towers	306	The corridor selection is located approximately 24 km south of Pentland.
Torrens Creek	Flinders	70	The corridor selection is located approximately 8 km south of Torrens Creek.
Prairie	Flinders	143	The corridor selection is located approximately 8 km south of the township of Prairie.
Hughenden	Flinders	1,136	The corridor selection is located approximately 6 km south of the township of Hughenden.
Marathon	Flinders	-	The corridor selection is located approximately 3 km south of the township of Marathon.
Richmond	Richmond	648	The corridor selection is located approximately 14 km south of the township of Richmond.
Maxwelton	Richmond	22	The corridor selection is located approximately 11 km south of the township of Maxwelton.
Julia Creek	McKinlay	511	The corridor selection is located approximately 15 km south of the township of Julia Creek.
Cannington Mine	McKinlay	-	The Cannington Connection includes the Dajarra Road Substation to Cannington Substation at the Cannington Mine.
Phosphate Hill Mine	Cloncurry	-	The Phosphate Hill Connection includes the Dajarra Road Substation to Phosphate Hill Substation at the Phosphate Hill Mine. Phosphate Hill is considered a mining centre.
Cloncurry	Cloncurry	2,700	The corridor selection is located approximately 5 km south of the township of Cloncurry.
Mount Isa	Mount Isa	22,000	The Mount Isa Augmentation includes the Dajarra Road Substation to Mount Isa Substation, located in the special industry area on the southern outskirts of the city of Mount Isa. The corridor selection on the southern outskirts of the city is located largely on rural land.







### 5.3.5 Tenures

A summary of the existing land tenure along the Project area is detailed in Table 5-5 and illustrated in Figure 5-6.

**Table 5-5 Land tenure within the corridor selection**

Tenure	Parcels intersected	Project area* (km <sup>2</sup> )	Project area* (%)
Freehold	22	9.41	14.21
Lands Lease	99	54.67	82.57
Reserve	2	0.21	0.32
State Land	7	0.24	0.36
Road Parcel	86	1.6	2.42
Drainage	11	0.07	0.11
Easement	10	0.093	0.14
Covenant	10	0.86	1.30

\* calculations are based on the 60 m wide easement, substations and CEV hut area

The corridor selection also intersects several stock routes. The Queensland stock route network is primarily used for moving stock, emergency pasture and grazing by pastoralist and graziers. The Queensland stock route network comprises 72,000 km of roads, reserves and corridors on pastoral leases and unallocated State land. Table 5-6 summaries the stock routes intersected by the corridor selection area and Figure 5-7 illustrates the location of the stock routes.

**Table 5-6 Stock routes intersected by the corridor selection**

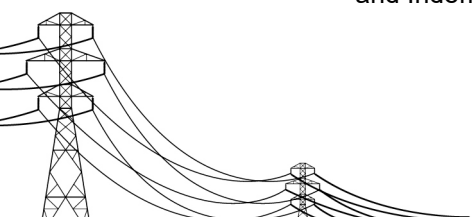
Stock Route Category	Stock Routes Intersected	Distance within Stock Route
Inactive route	0	NA
Primary route	1	1.62
Secondary route	3	1.98
Minor route	28	15.09

The primary route that is intersected by the corridor selection is within positioned within the Julia Creek Kynuna Road and is in an area bordering the road.

The development of the Project will require a number of easements to be registered on the title of lands required for the corridor to allow operation and management of the Project. Ancillary uses such as substations and communication huts containing CEVs may also require easements or another form of land tenure to allow operation and management of the Project.

The Department of Natural Resources, Mines and Energy (DNRME) have advised that they will provide in-principle approval for the construction of the transmission line prior to the registration of easements on State leasehold land (freehold land is separate and apart in that consent of the landowner only is required). The in-principle approval would be conditioned, and those conditions may include, but not be limited to:

- Obtaining the landholders' written consent (e.g. lessee, trustee, etc).
- Lodging applications to DNRME for easements over the required areas of land.
- Conducting cultural heritage assessments prior to any works being carried out.
- Undertaking native title assessments in accordance with the NT Act) prior to any works being carried out (section 24KA of the NT Act may require notification to the relevant native title parties prior to commencement of works).
- Providing DNRME with a copy of a Certificate of Currency of the Public Liability insurance and Indemnity.

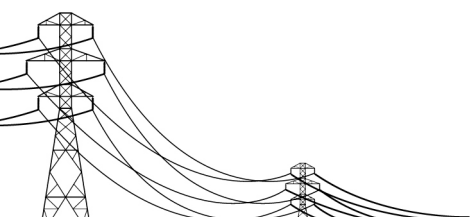


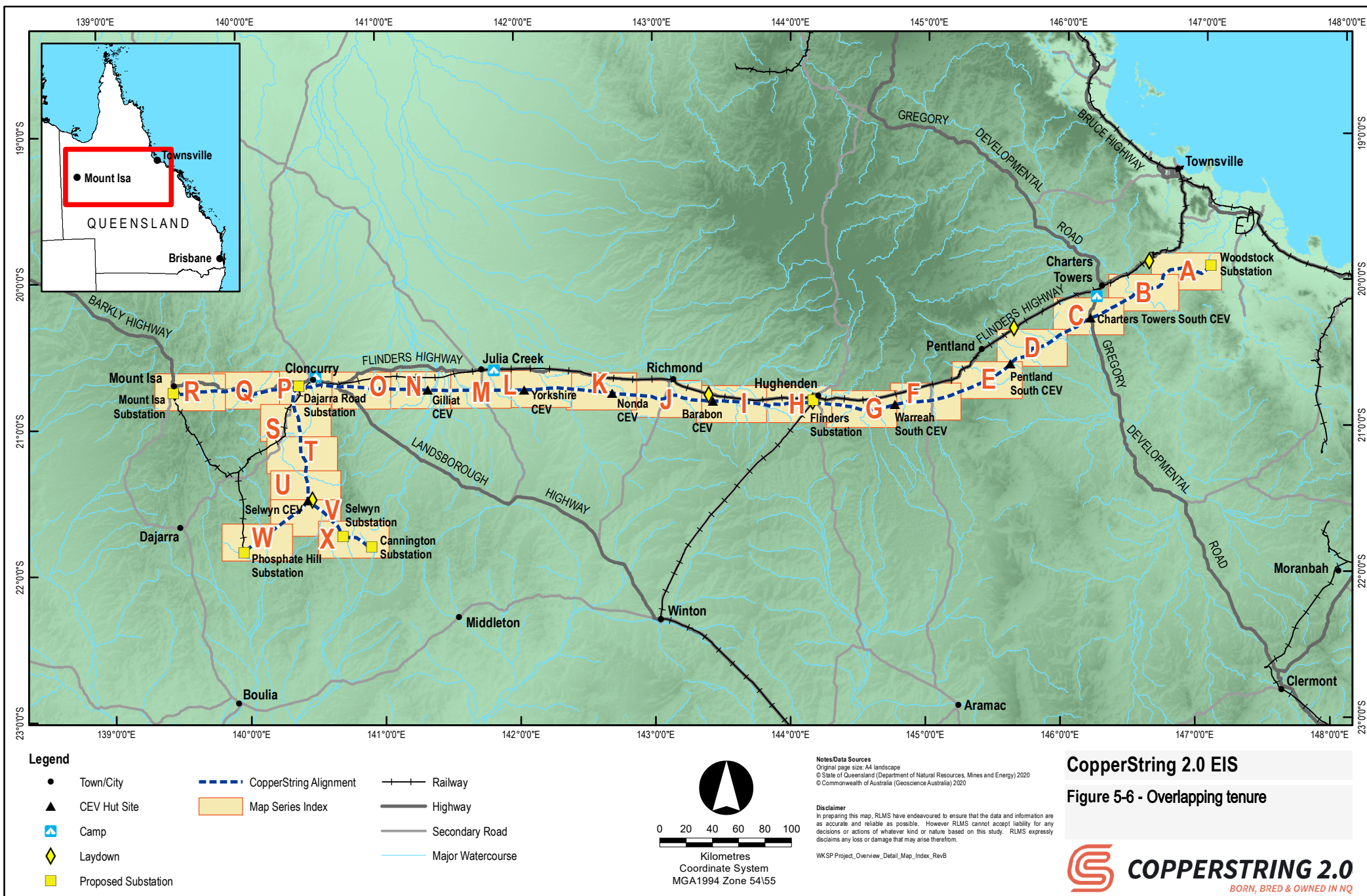


- Agreeing to comply with the requirements of the DNRME's offers for easement over the subject lands within the timeframes.

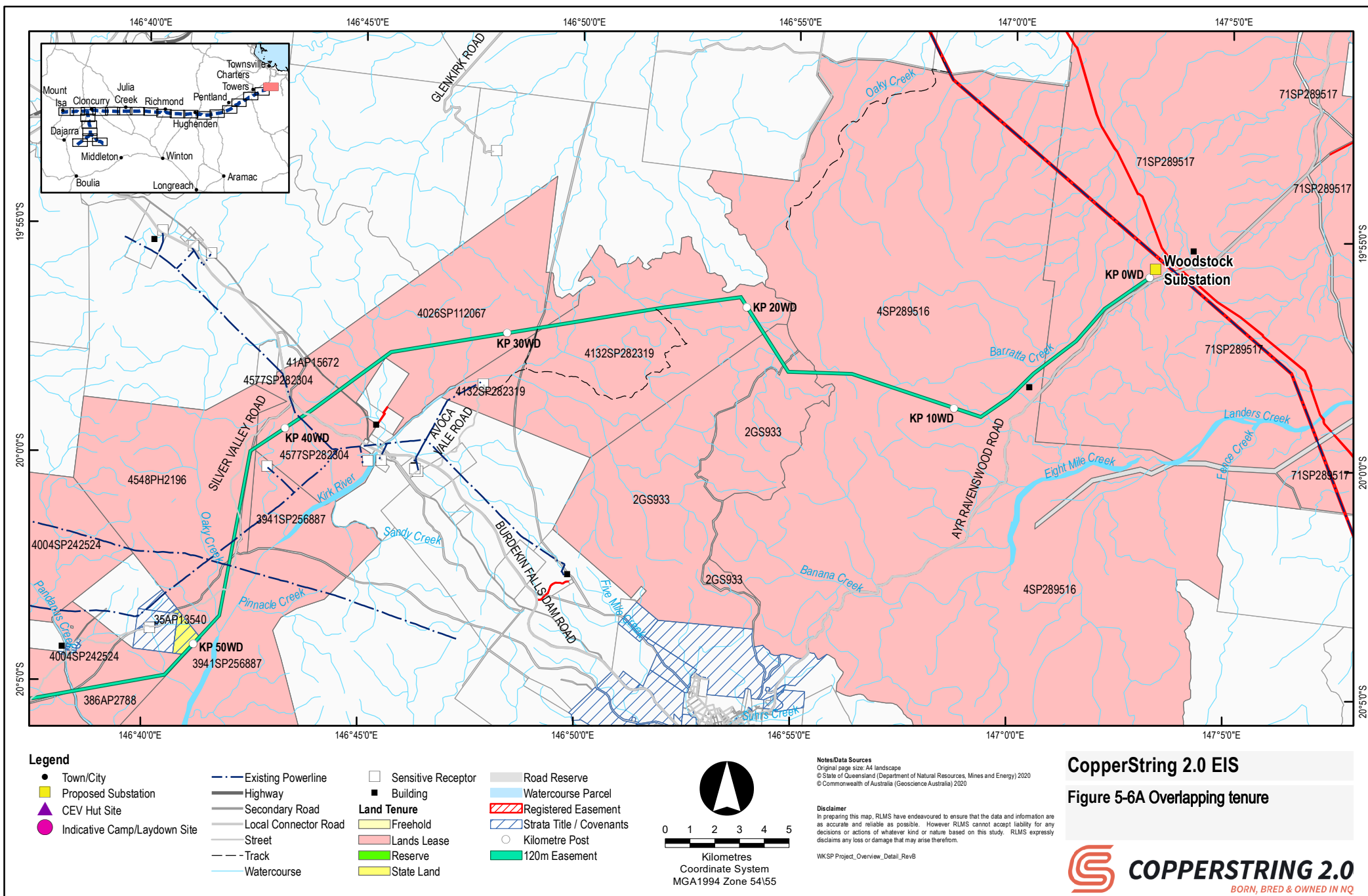
The Project is utilising Option Agreements for the purposes of acquiring the lands required for easement. The Option Agreements allow for access to lands for construction prior to the registration of any the easement and require CuString has the insurances required in accordance with the requirements of DNRME.

Preliminary native title assessments in accordance with the NT Act have been undertaken and the entirety of the Project will be subject to suppression of Native Title in accordance with Section 24KA of the NT Act.

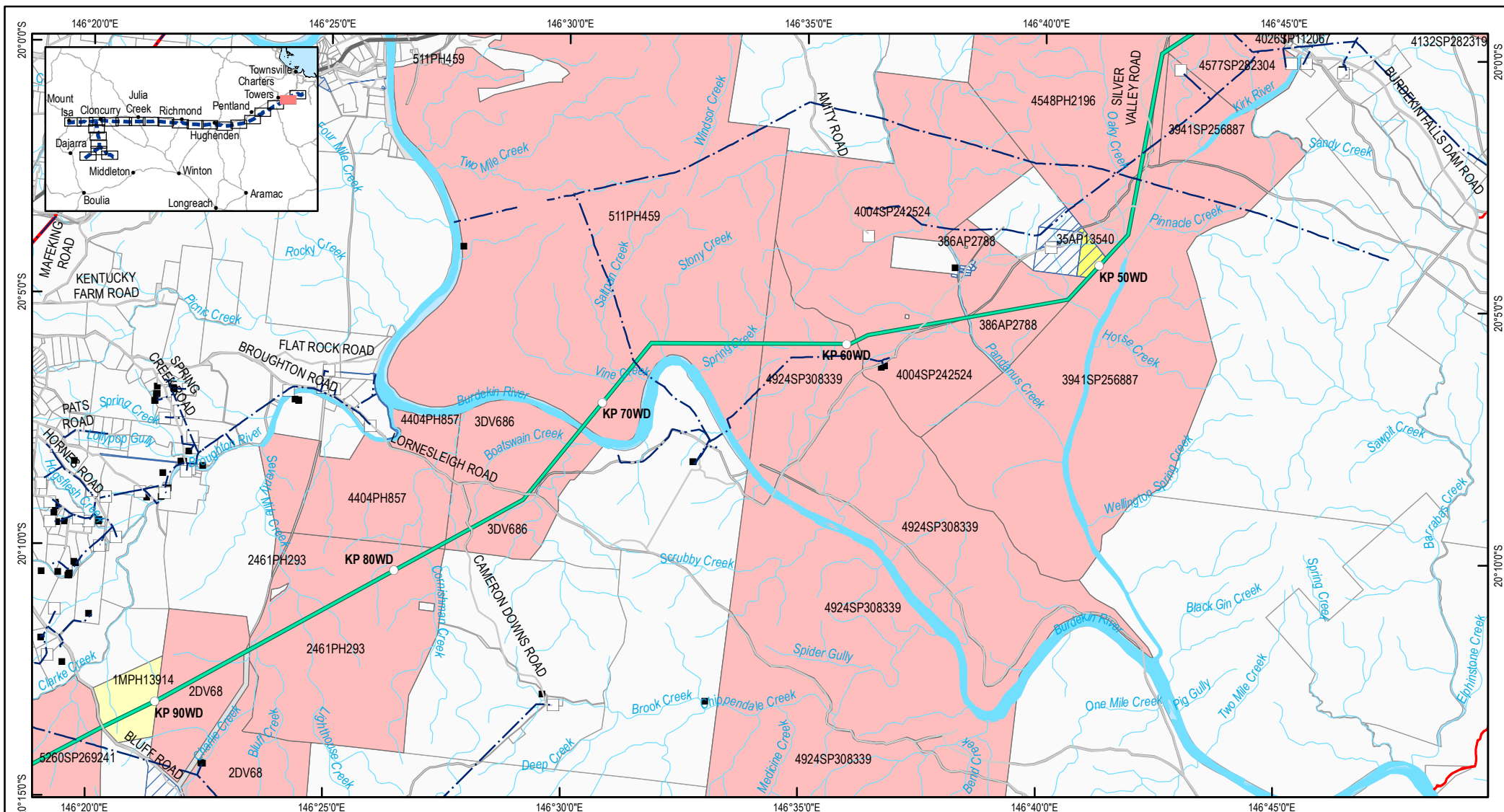












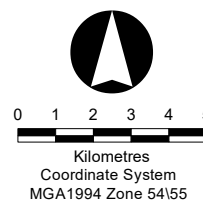
# Legend

- Town/City
- Proposed Substation
- ▲ CEV Hut Site
- Indicative Camp/Laydown Site

- Existing Powerline
- Highway
- Secondary Road
- Local Connector Road
- Street
- Track
- Watercourse

- Sensitive Receptor
- Building
- Land Tenure**
- Freehold
- Lands Lease
- Reserve
- State Land

- Road Reserve
- Watercourse Parcel
- Registered Easement
- Strata Title / Covenants
- Kilometre Post
- 120m Easement



**Notes/Data Sources**  
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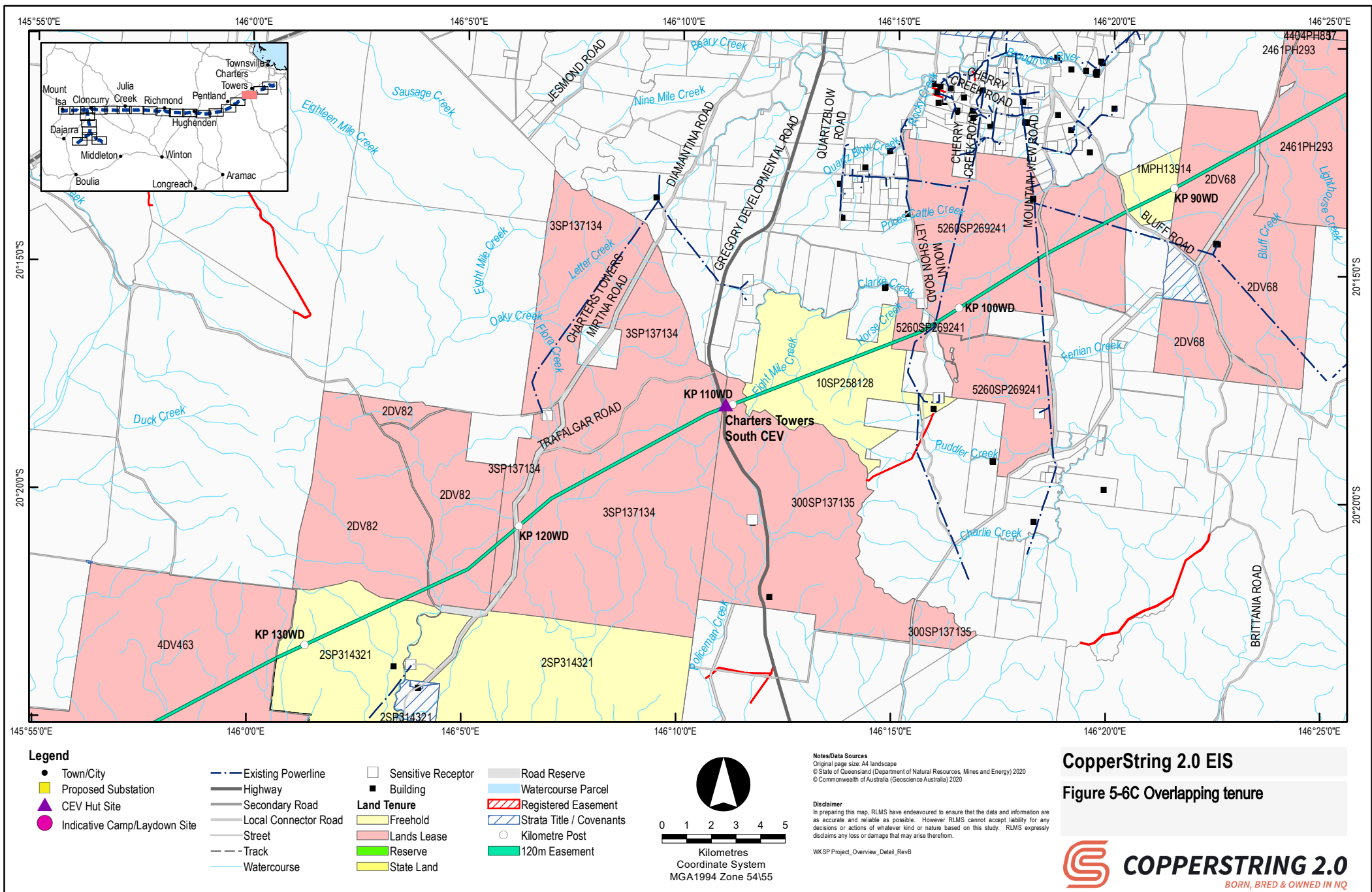
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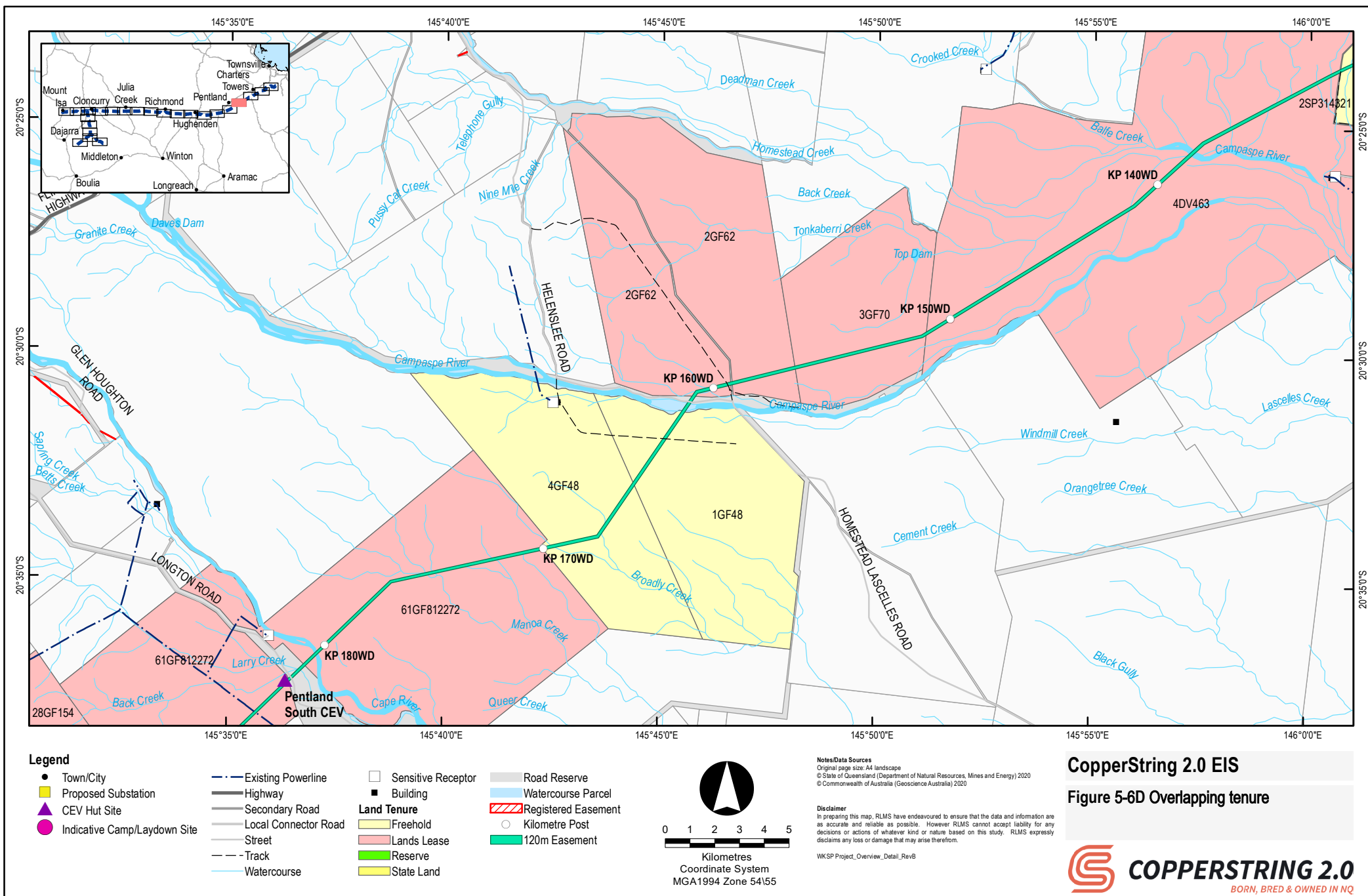
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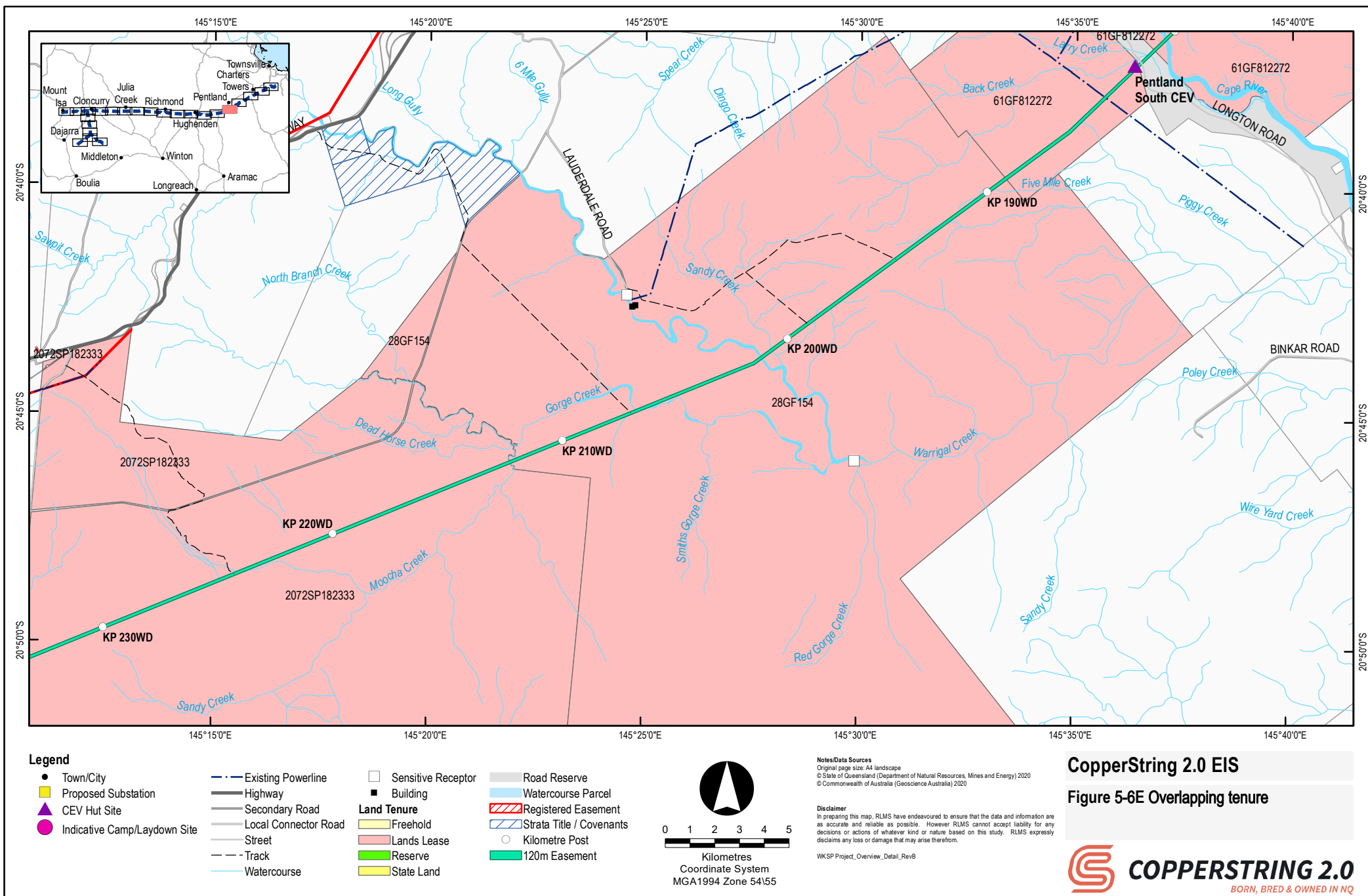
### Figure 5-6B Overlapping tenure

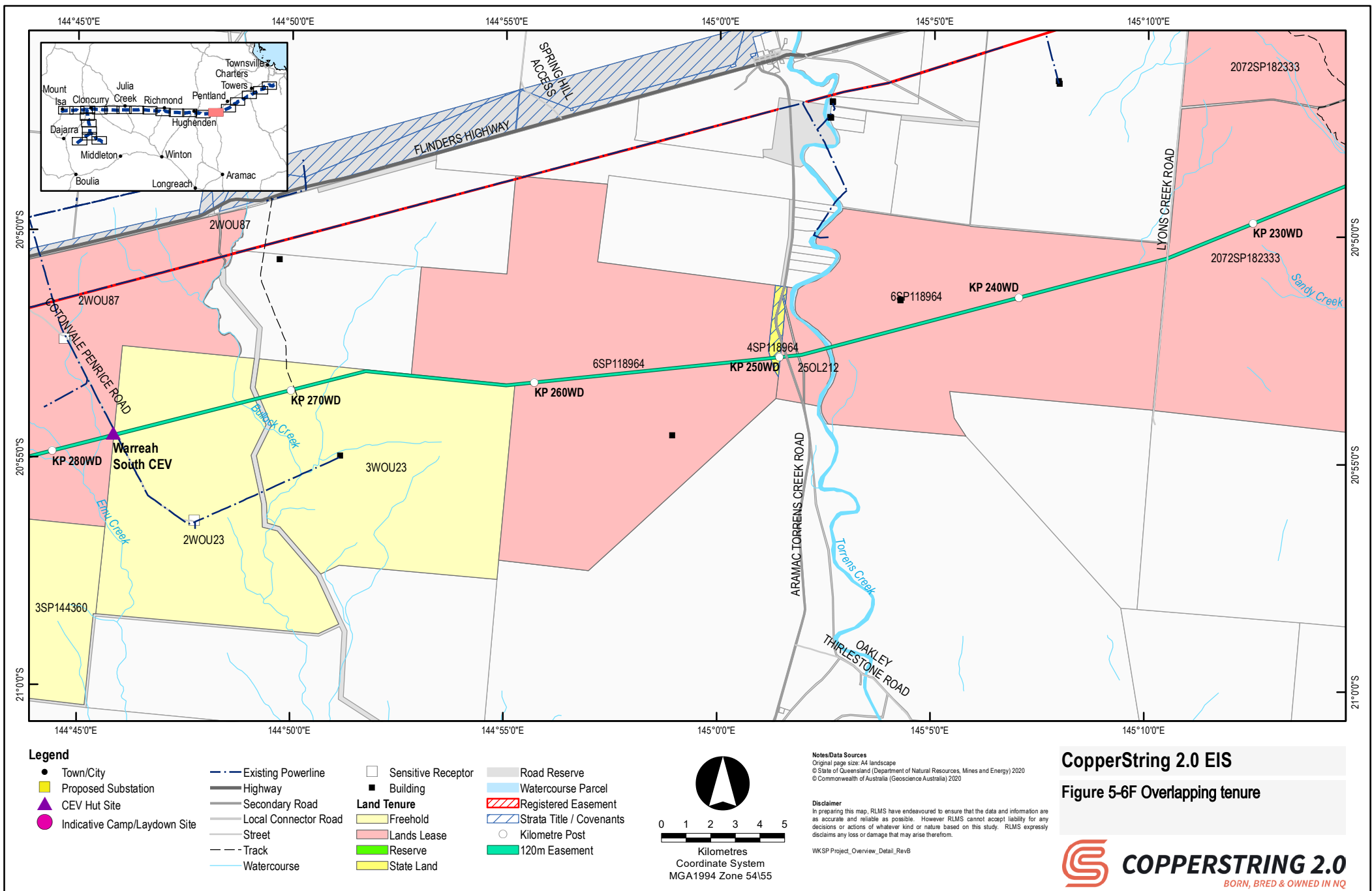
**COPPERSTRING 2.0**  
BORN, BRED & OWNED IN NQ

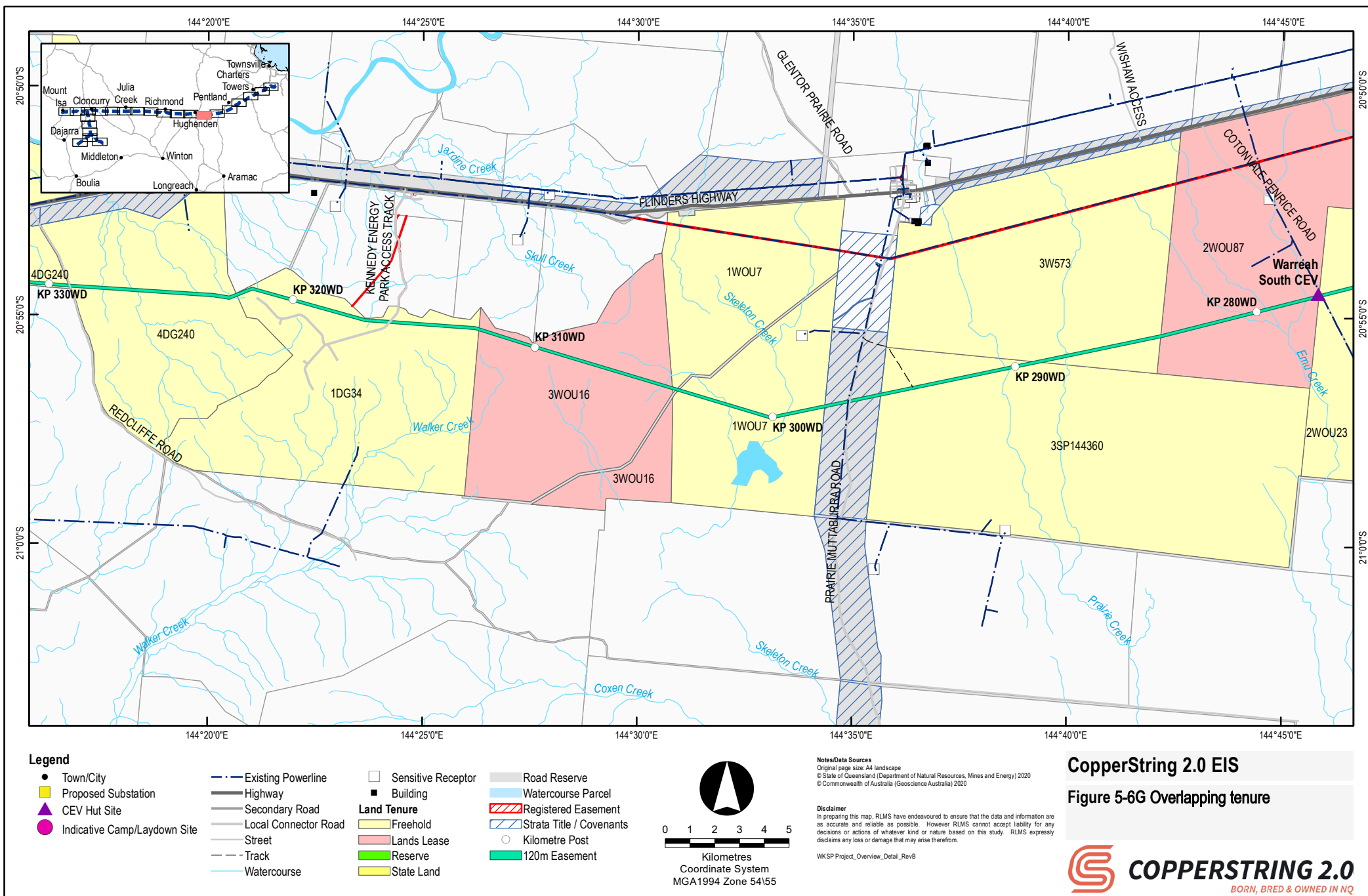




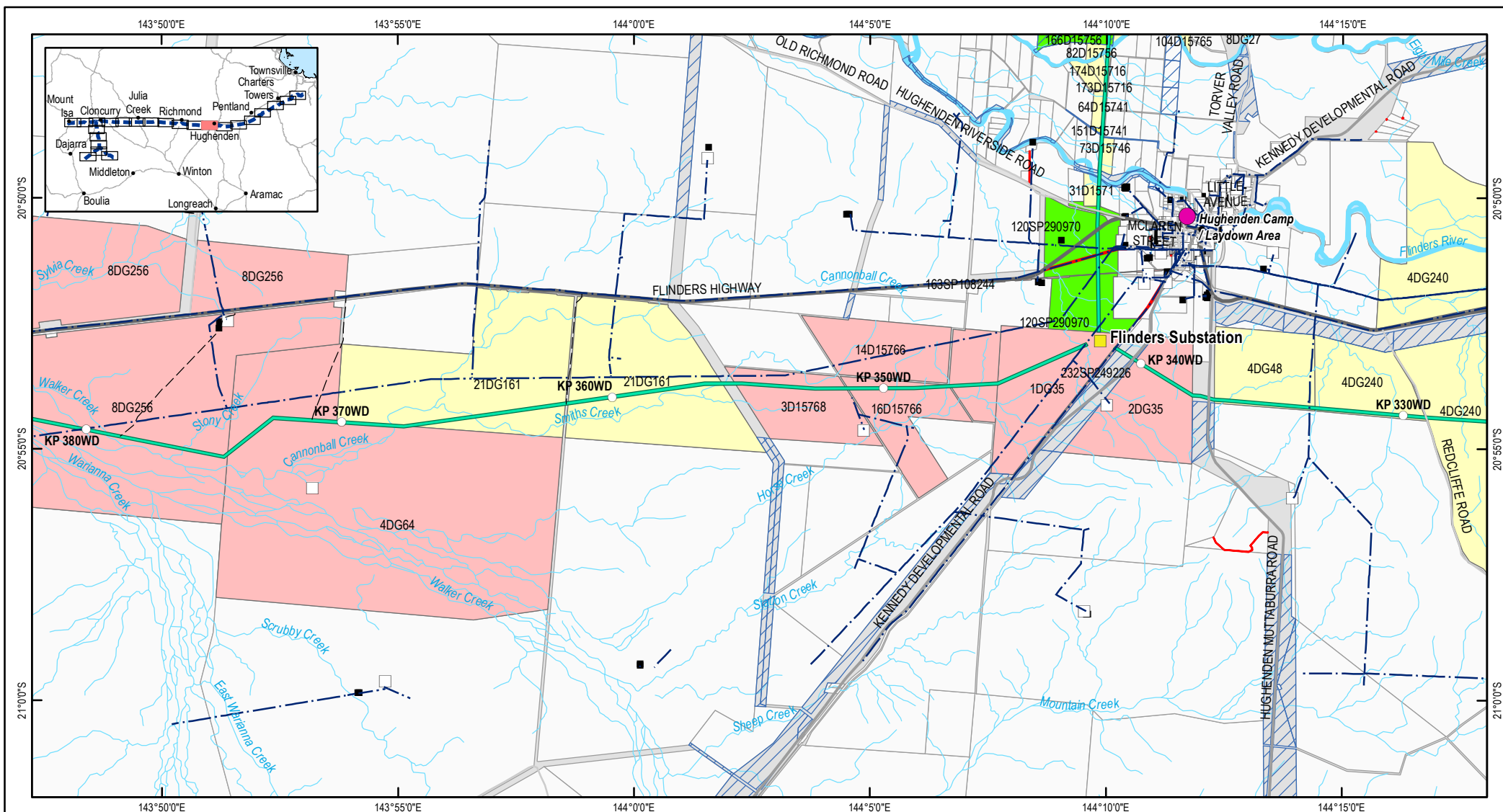












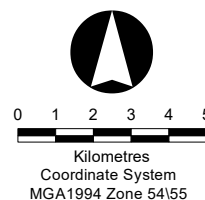
# Legend

- Town/City
- Proposed Substation
- ▲ CEV Hut Site
- Indicative Camp/Laydown Site

- Existing Powerline
- Highway
- Secondary Road
- Local Connector Road
- Street
- Track
- Watercourse

- Sensitive Receptor
- Building
- Land Tenure**
- Freehold
- Lands Lease
- Reserve
- State Land

- Road Reserve
- Watercourse Parcel
- Registered Easement
- Strata Title / Covenants
- Kilometre Post
- 120m Easement



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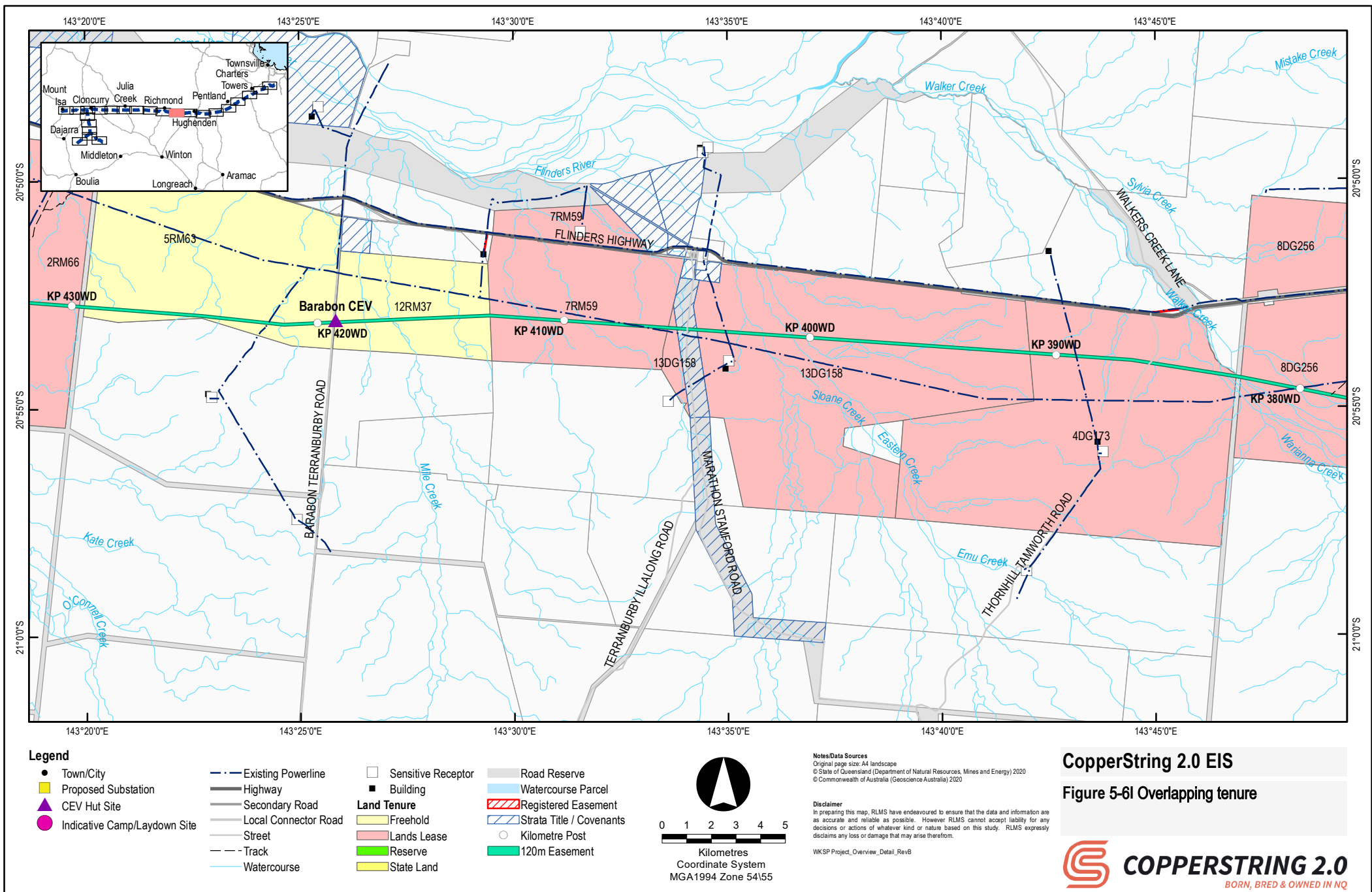
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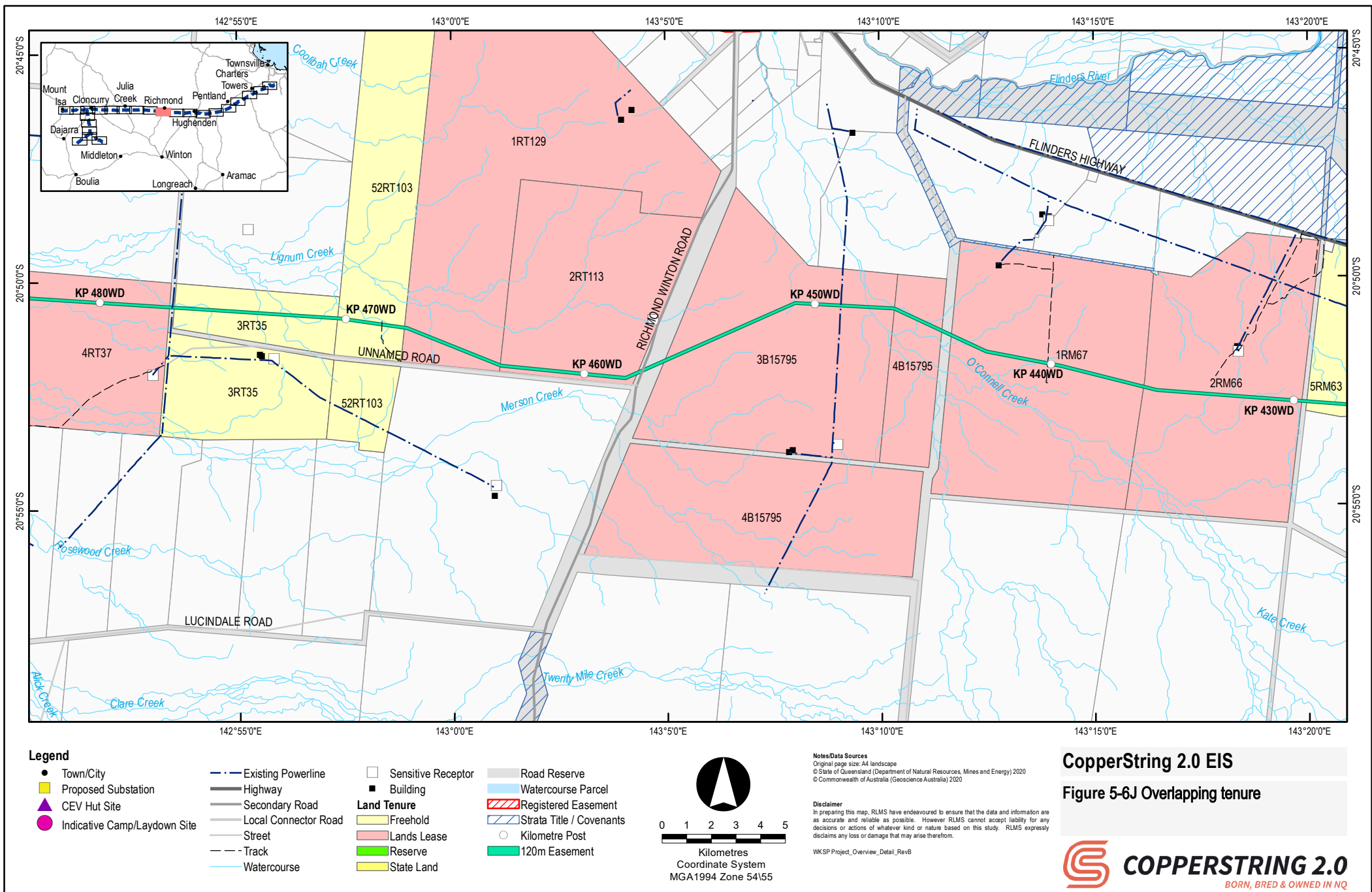
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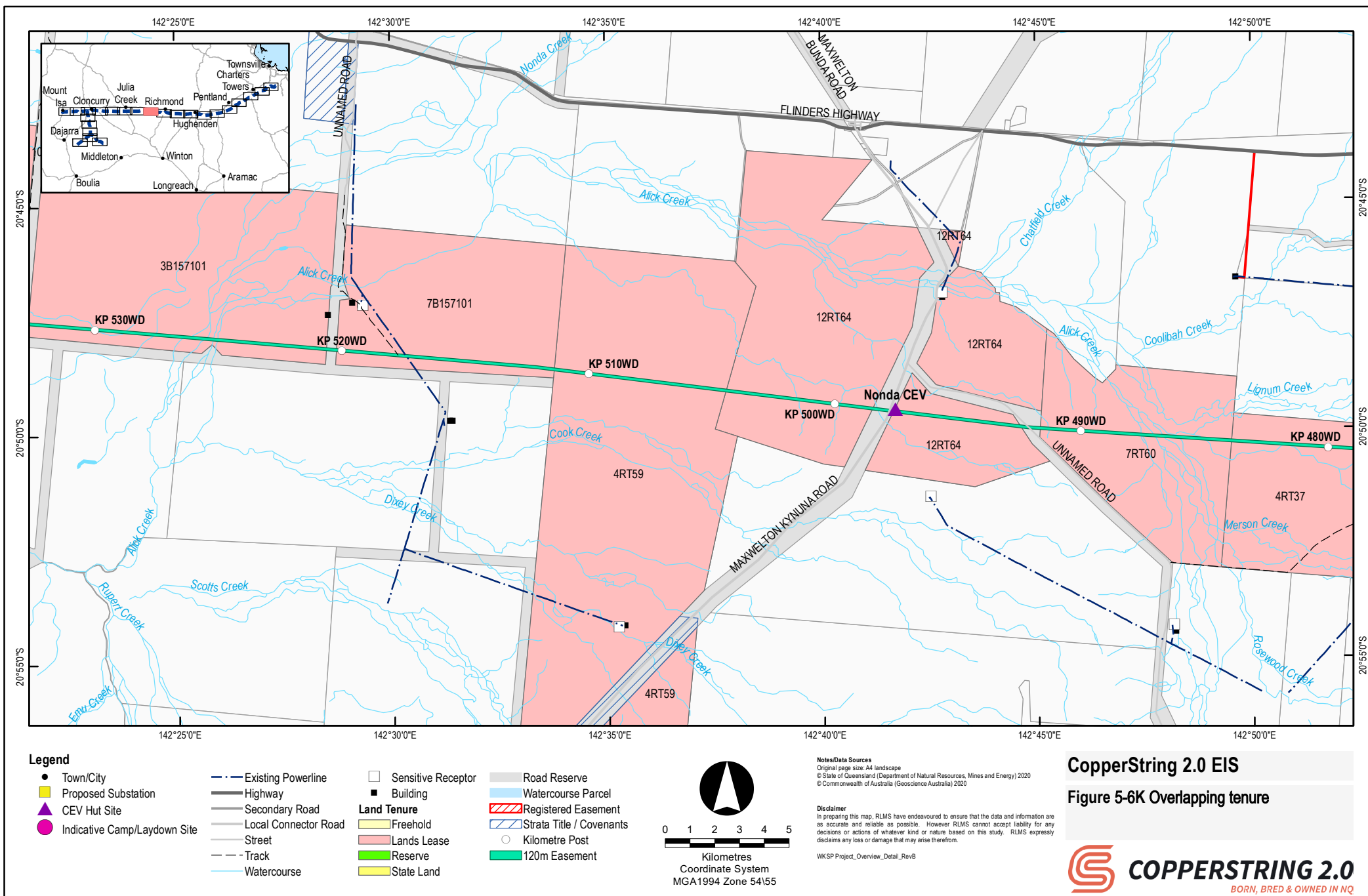
### Figure 5-6H Overlapping tenure

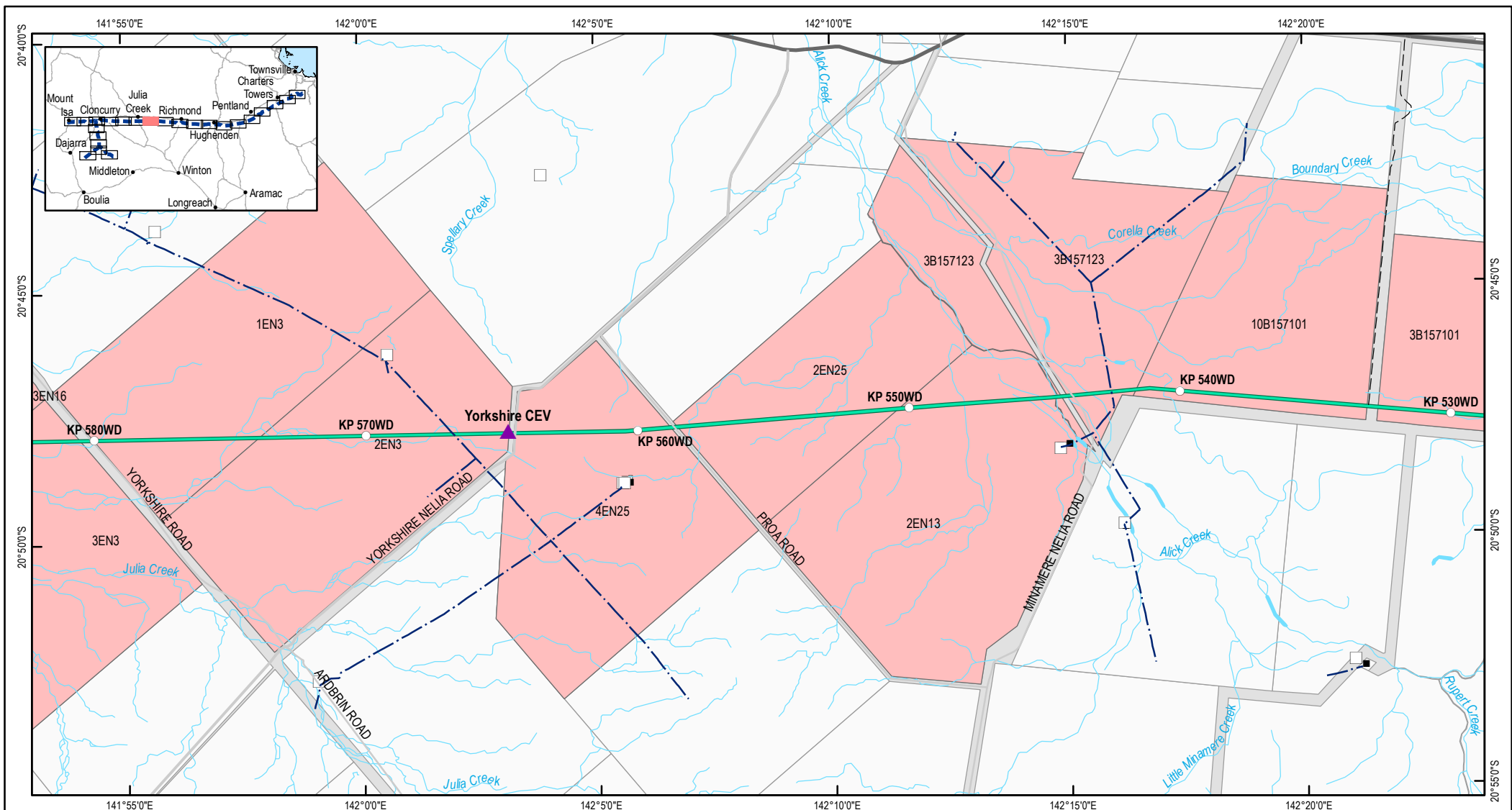












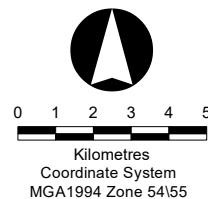
# Legend

- Town/City
- Proposed Substation
- ▲ CEV Hut Site
- Indicative Camp/Laydown Site

- Existing Powerline
- Highway
- Secondary Road
- Local Connector Road
- Street
- Track
- Watercourse

- Sensitive Receptor
- Building
- Land Tenure**
  - Freehold
  - Lands Lease
  - Reserve
  - State Land

- Road Reserve
- Watercourse Parcel
- Registered Easement
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- 120m Easement



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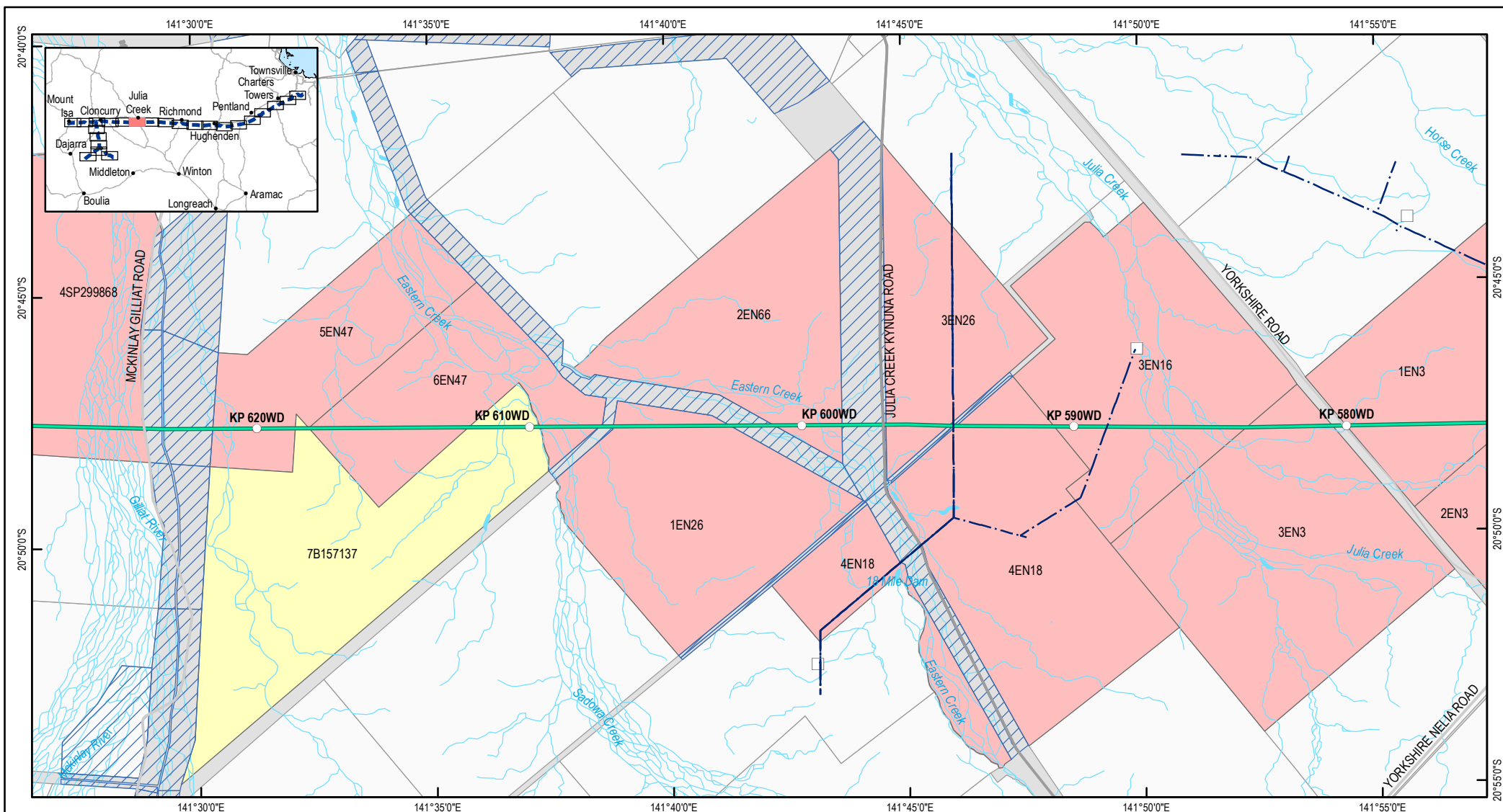
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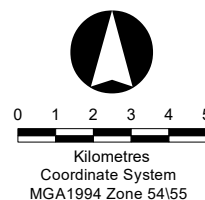
### Figure 5-6L Overlapping tenure





# Legend

- |                                |                        |                      |                            |
|--------------------------------|------------------------|----------------------|----------------------------|
| ● Town/City                    | — Existing Powerline   | □ Sensitive Receptor | — Road Reserve             |
| ■ Proposed Substation          | — Highway              | ■ Building           | — Watercourse Parcel       |
| ▲ CEV Hut Site                 | — Secondary Road       |                      | — Registered Easement      |
| ● Indicative Camp/Laydown Site | — Local Connector Road | <b>Land Tenure</b>   | — Strata Title / Covenants |
|                                | — Street               | □ Freehold           | ○ Kilometre Post           |
|                                | — Track                | ■ Lands Lease        | — 120m Easement            |
|                                | — Watercourse          | ■ Reserve            |                            |
|                                |                        | ■ State Land         |                            |



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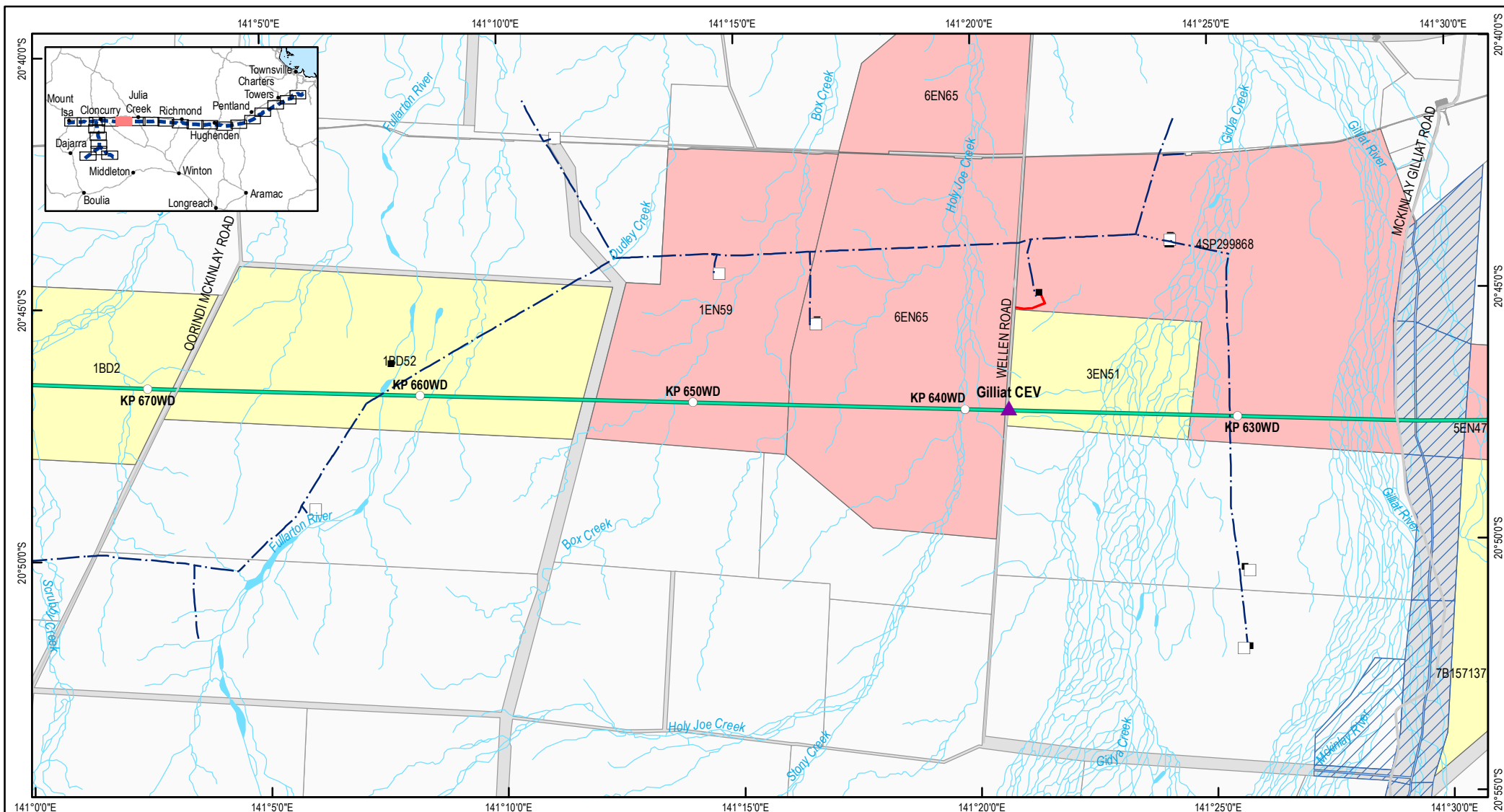
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### Figure 5-6M Overlapping tenure







# Legend

- Town/City
- Proposed Substation
- CEV Hut Site
- Indicative Camp/Laydown Site
- Existing Powerline
- Highway
- Secondary Road
- Local Connector Road
- Street
- Track
- Watercourse
- Sensitive Receptor
- Building
- Kilometre Post
- Road Reserve
- Registered Easement
- Strata Title / Covenants
- 120m Easement
- Freehold
- Lands Lease
- Reserve
- State Land



0 1 2 3 4 5  
Kilometres  
Coordinate System  
MGA1994 Zone 54I55

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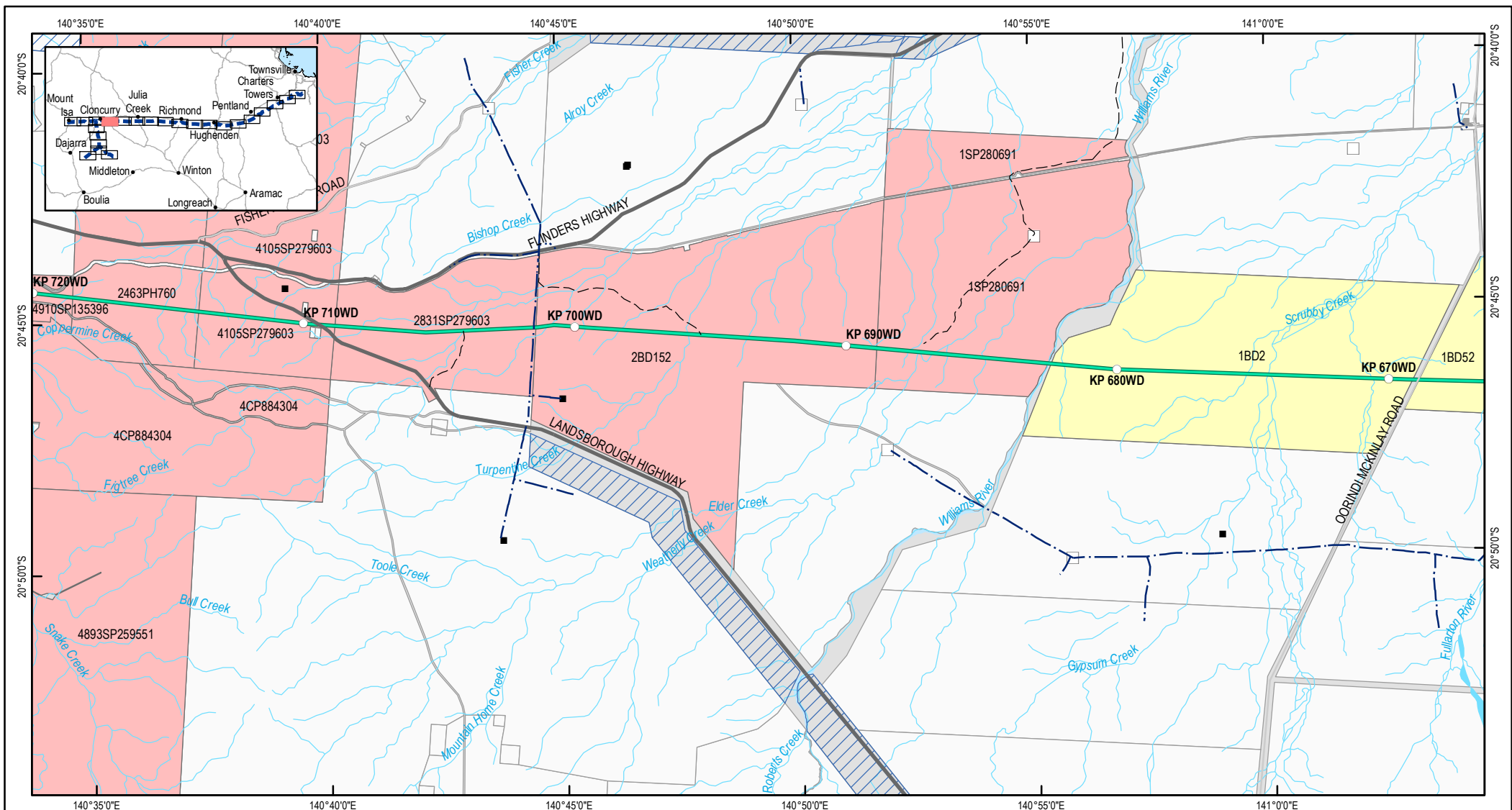
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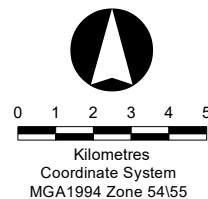
### Figure 5-6N Overlapping tenure

**COPPERSTRING 2.0**  
BORN, BRED & OWNED IN NQ



## Legend

- |                                |                          |                      |                            |
|--------------------------------|--------------------------|----------------------|----------------------------|
| ● Town/City                    | --- Existing Powerline   | □ Sensitive Receptor | ▨ Road Reserve             |
| ■ Proposed Substation          | --- Highway              | ■ Building           | ▨ Watercourse Parcel       |
| ▲ CEV Hut Site                 | --- Secondary Road       |                      | ▨ Registered Easement      |
| ● Indicative Camp/Laydown Site | --- Local Connector Road | <b>Land Tenure</b>   | ▨ Strata Title / Covenants |
|                                | --- Street               | ■ Freehold           | ○ Kilometre Post           |
|                                | --- Track                | ■ Lands Lease        | ▨ 120m Easement            |
|                                | --- Watercourse          | ■ Reserve            |                            |
|                                |                          | ■ State Land         |                            |



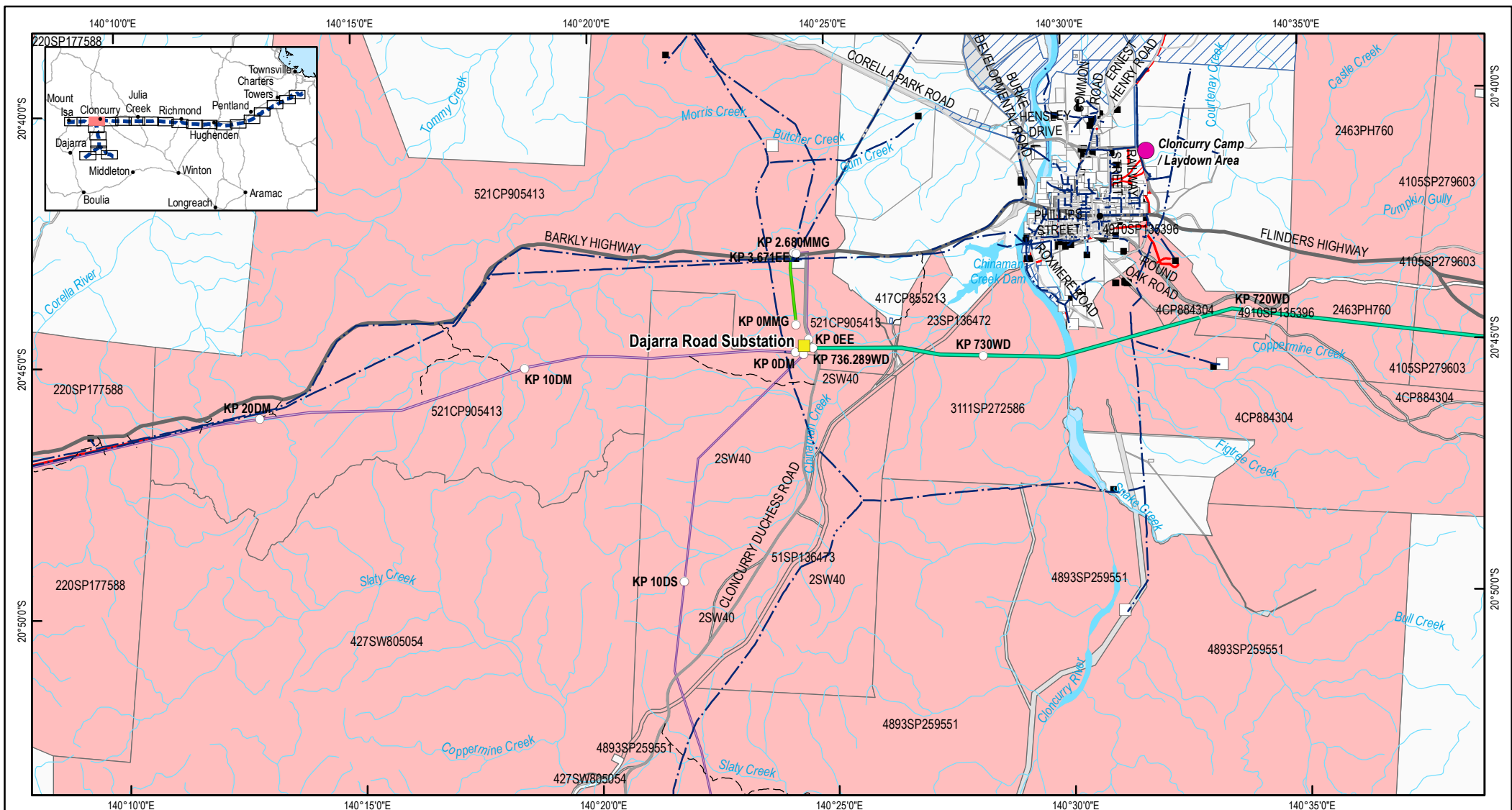
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## CopperString 2.0 EIS

### Figure 5-60 Overlapping tenure



#### Legend

- Town/City
- Proposed Substation
- ▲ CEV Hut Site
- Indicative Camp/Laydown Site
- Existing Powerline
- Highway
- Secondary Road
- Local Connector Road
- Street
- Track
- Watercourse
- Sensitive Receptor
- Building
- Land Tenure**
  - Freehold
  - Lands Lease
  - Reserve
  - State Land
- Road Reserve
- Watercourse Parcel
- Registered Easement
- Strata Title / Covenants
- Kilometre Post
- 60m Easement
- 80m Easement
- 120m Easement



0 1 2 3 4 5  
Kilometres  
Coordinate System  
MGA1994 Zone 54I55

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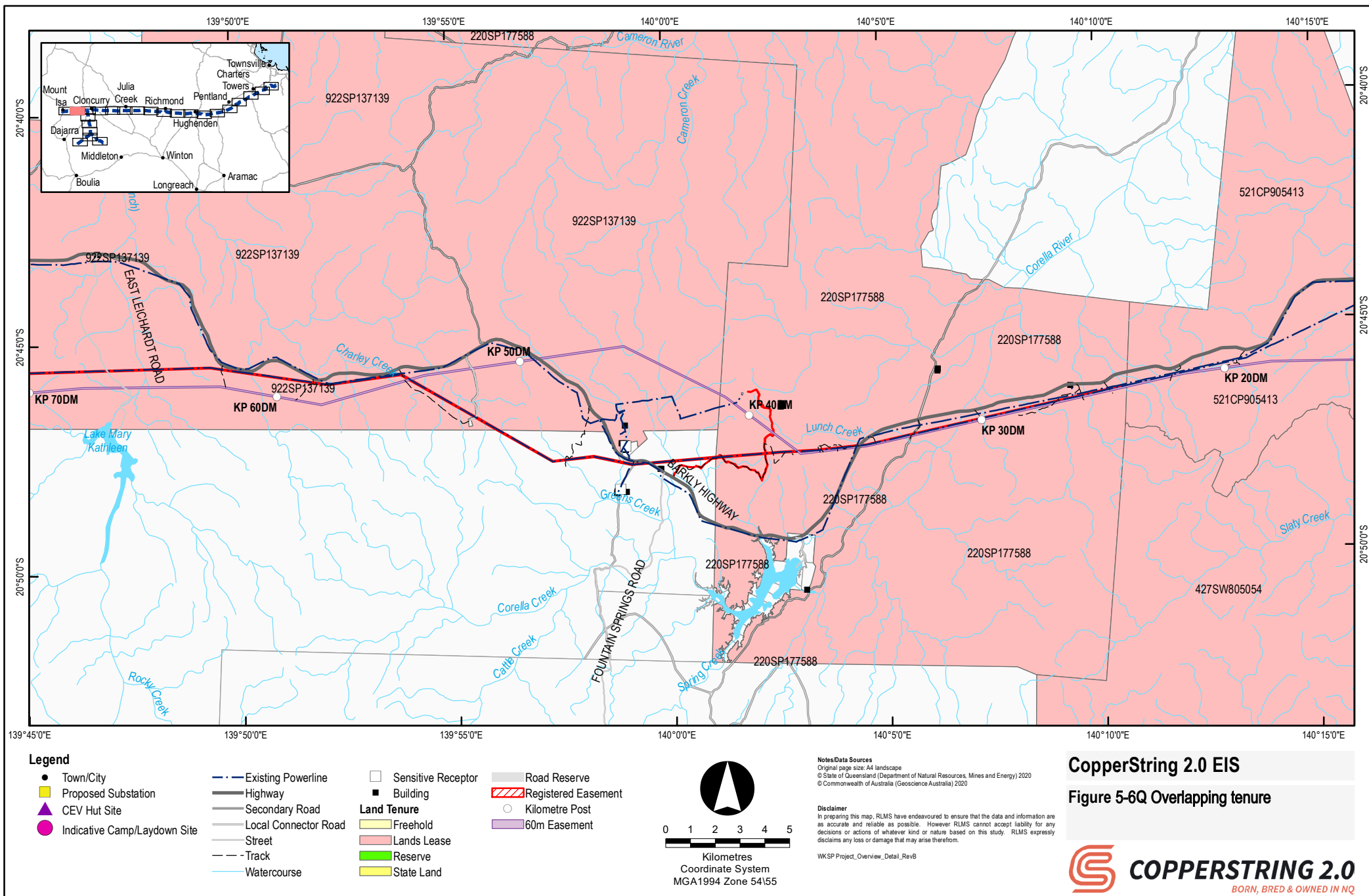
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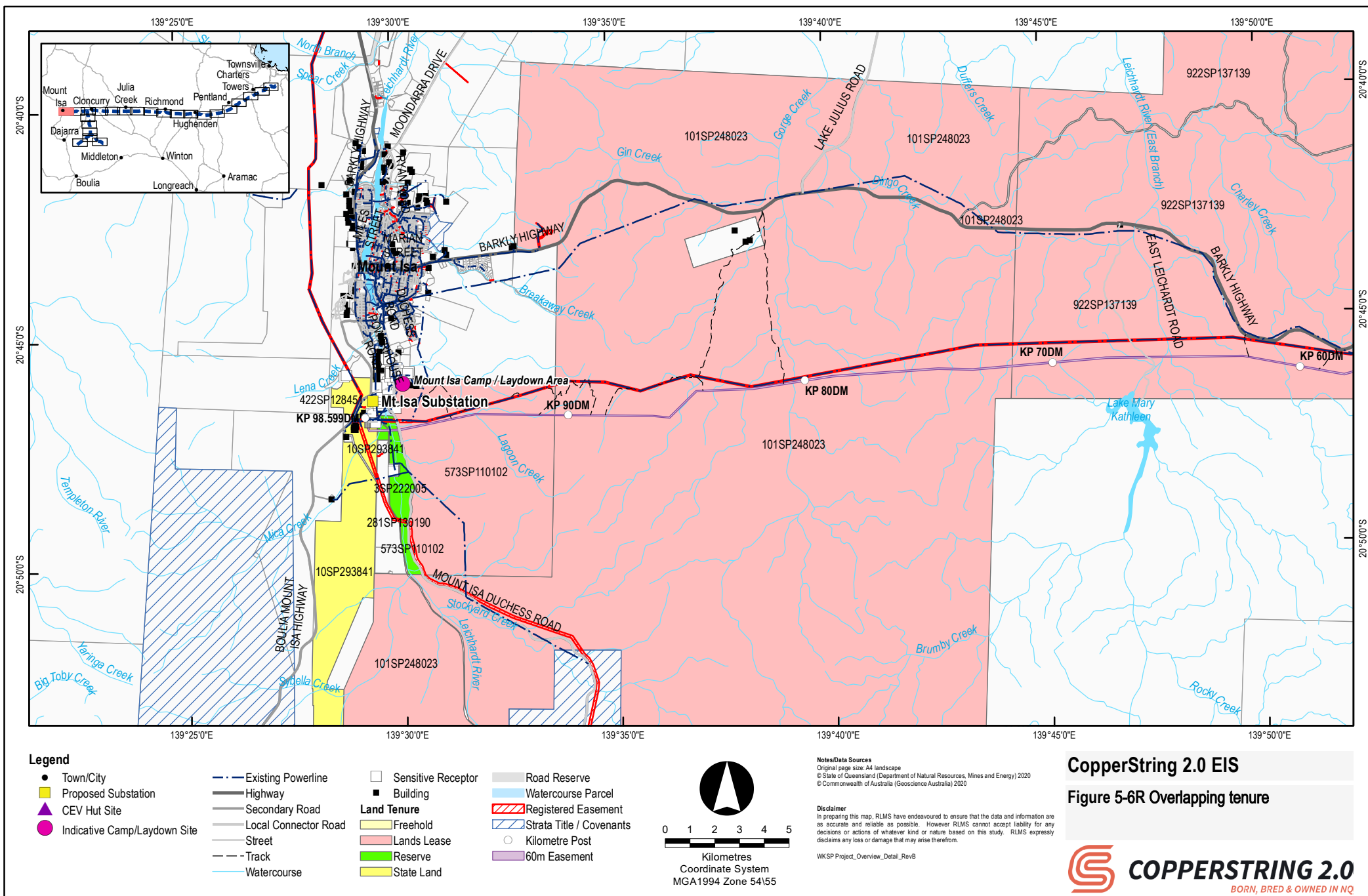
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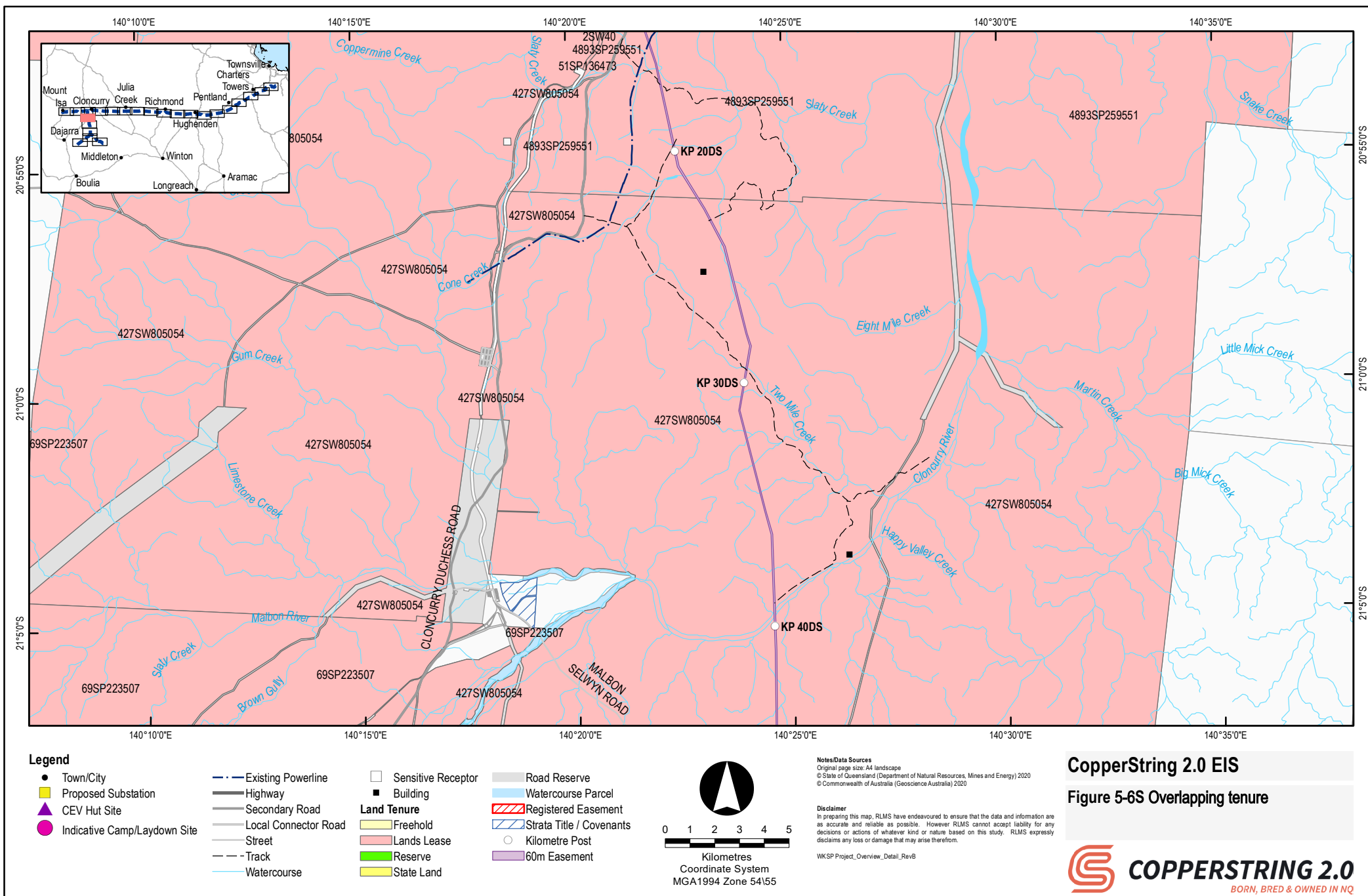
### Figure 5-6P Overlapping tenure

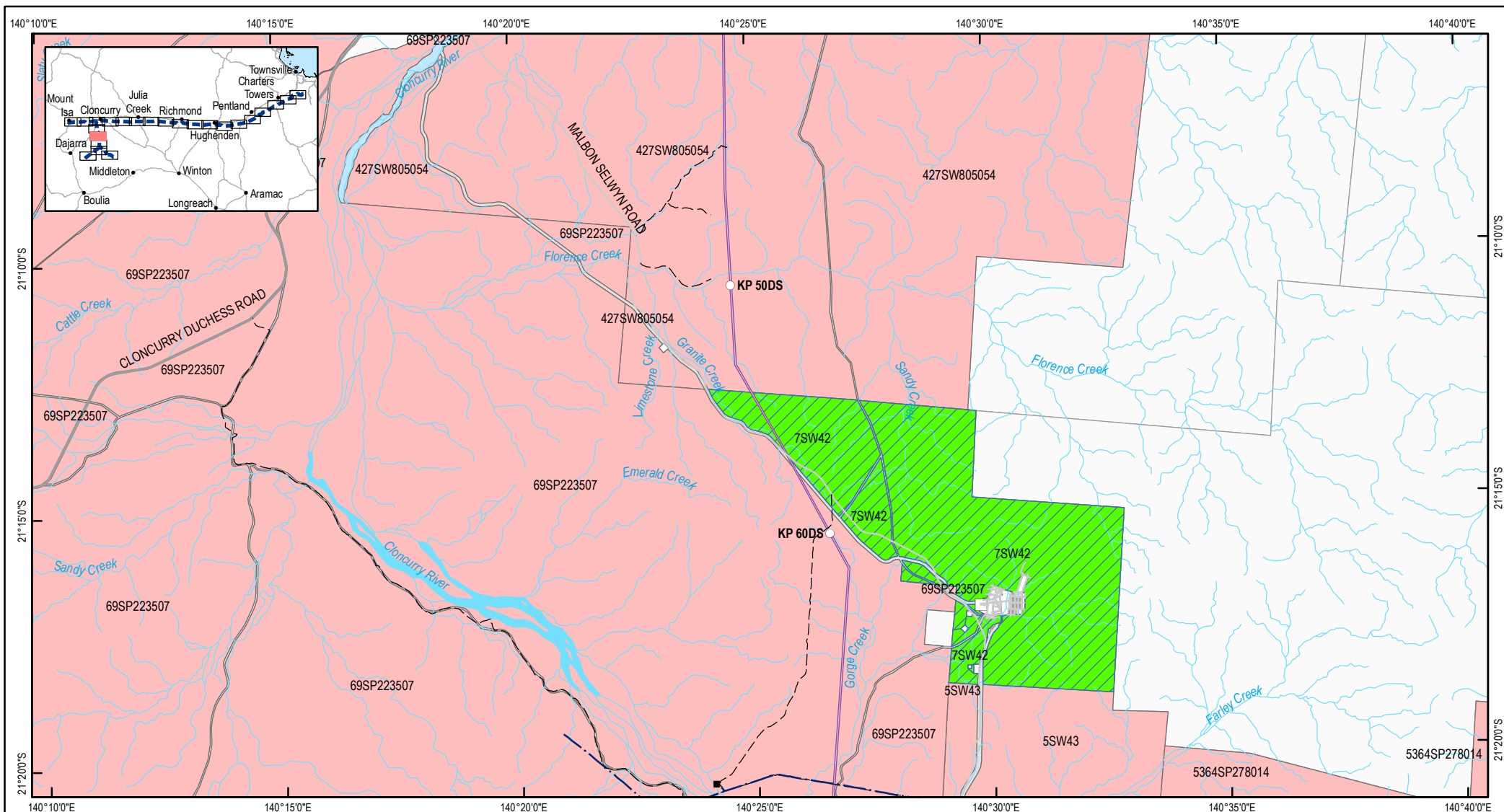
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BORN, BRED & OWNED IN NQ











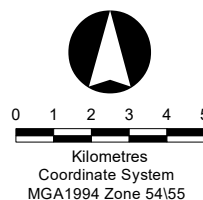
# Legend

- Town/City
- Proposed Substation
- ▲ CEV Hut Site
- Indicative Camp/Laydown Site

- Existing Powerline
- Highway
- Secondary Road
- Local Connector Road
- Street
- Track
- Watercourse

- Sensitive Receptor
- Building
- Land Tenure**
  - Freehold
  - Lands Lease
  - Reserve
  - State Land

- Road Reserve
- Watercourse Parcel
- Registered Easement
- Strata Title / Covenants
- Kilometre Post
- 60m Easement



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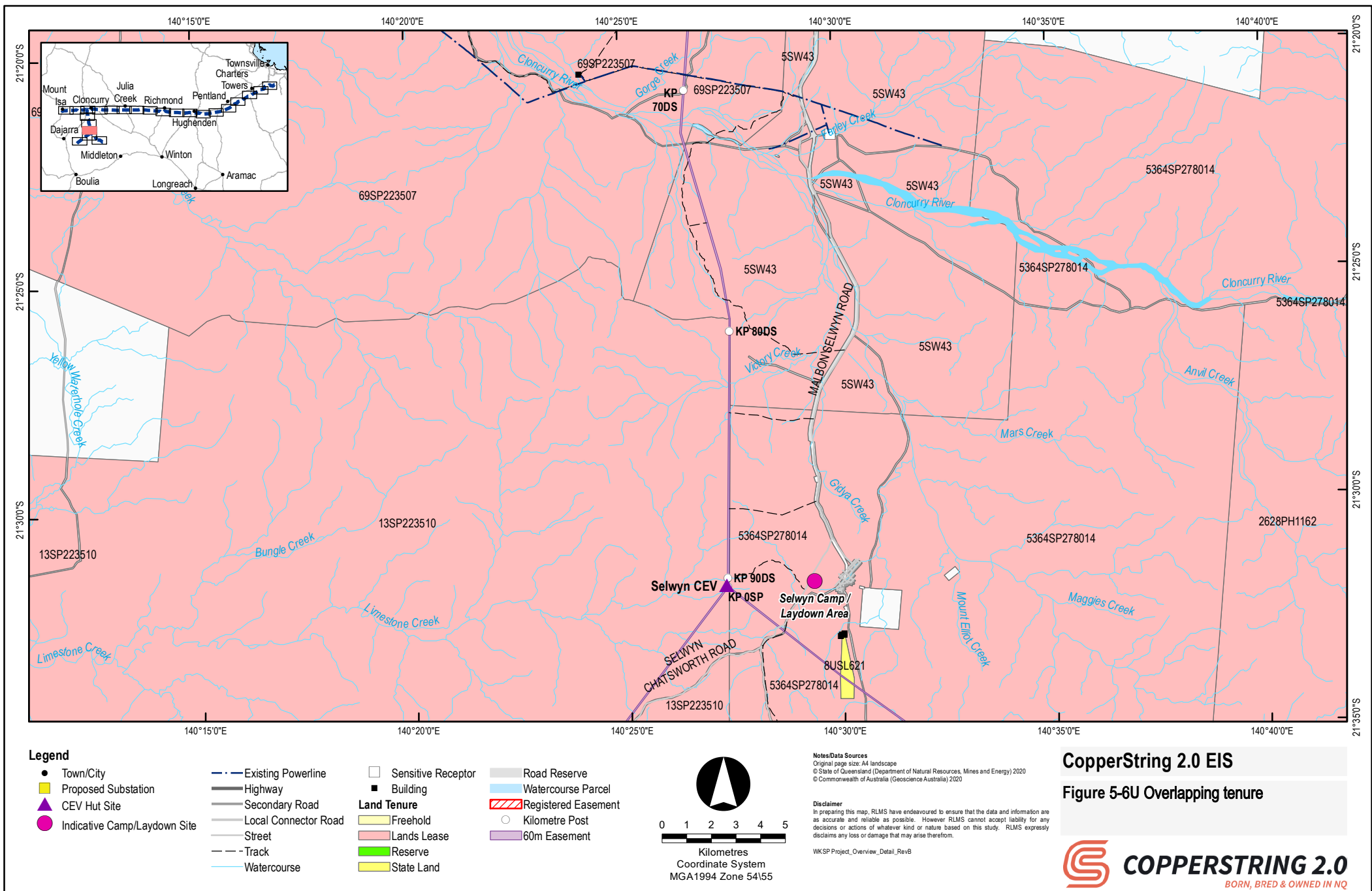
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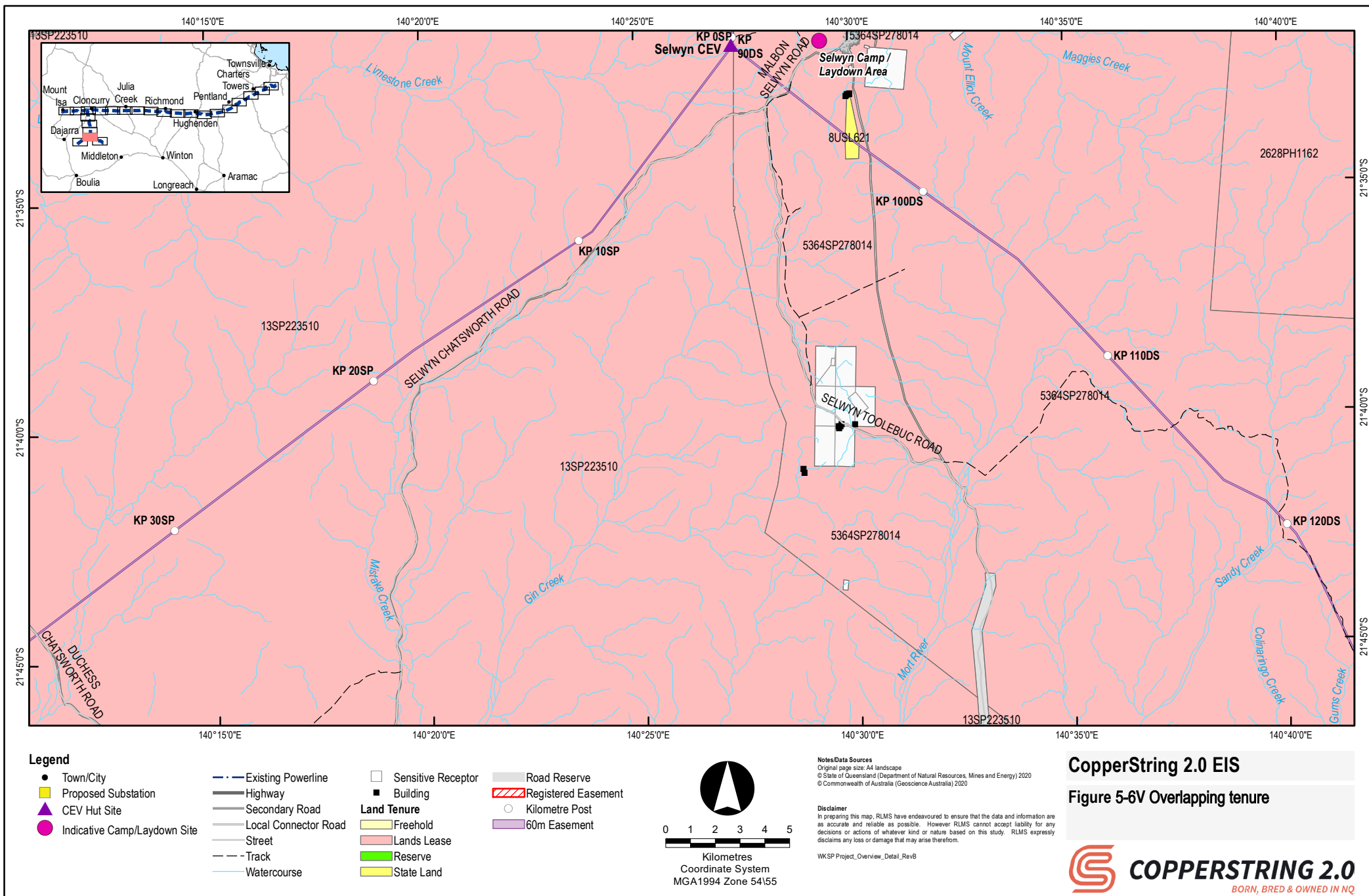
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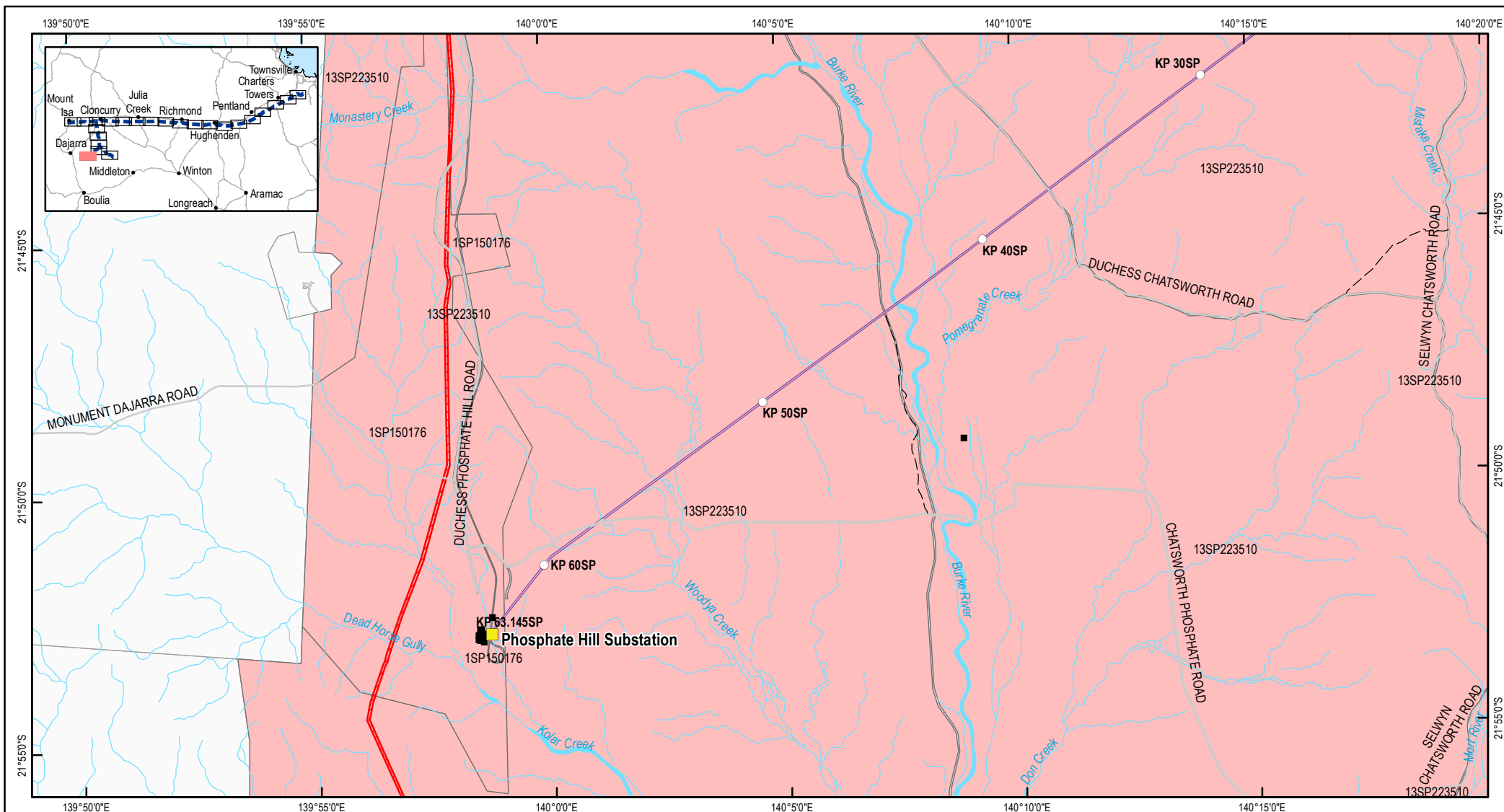
### Figure 5-6T Overlapping tenure





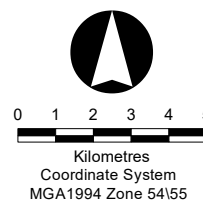






# Legend

- Town/City
- Proposed Substation
- ▲ CEV Hut Site
- Indicative Camp/Laydown Site
- Existing Powerline
- Highway
- Secondary Road
- Local Connector Road
- Street
- Track
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- Sensitive Receptor
- Building
- Land Tenure
  - Freehold
  - Lands Lease
  - Reserve
  - State Land
- Road Reserve
- Registered Easement
- Kilometre Post
- 60m Easement



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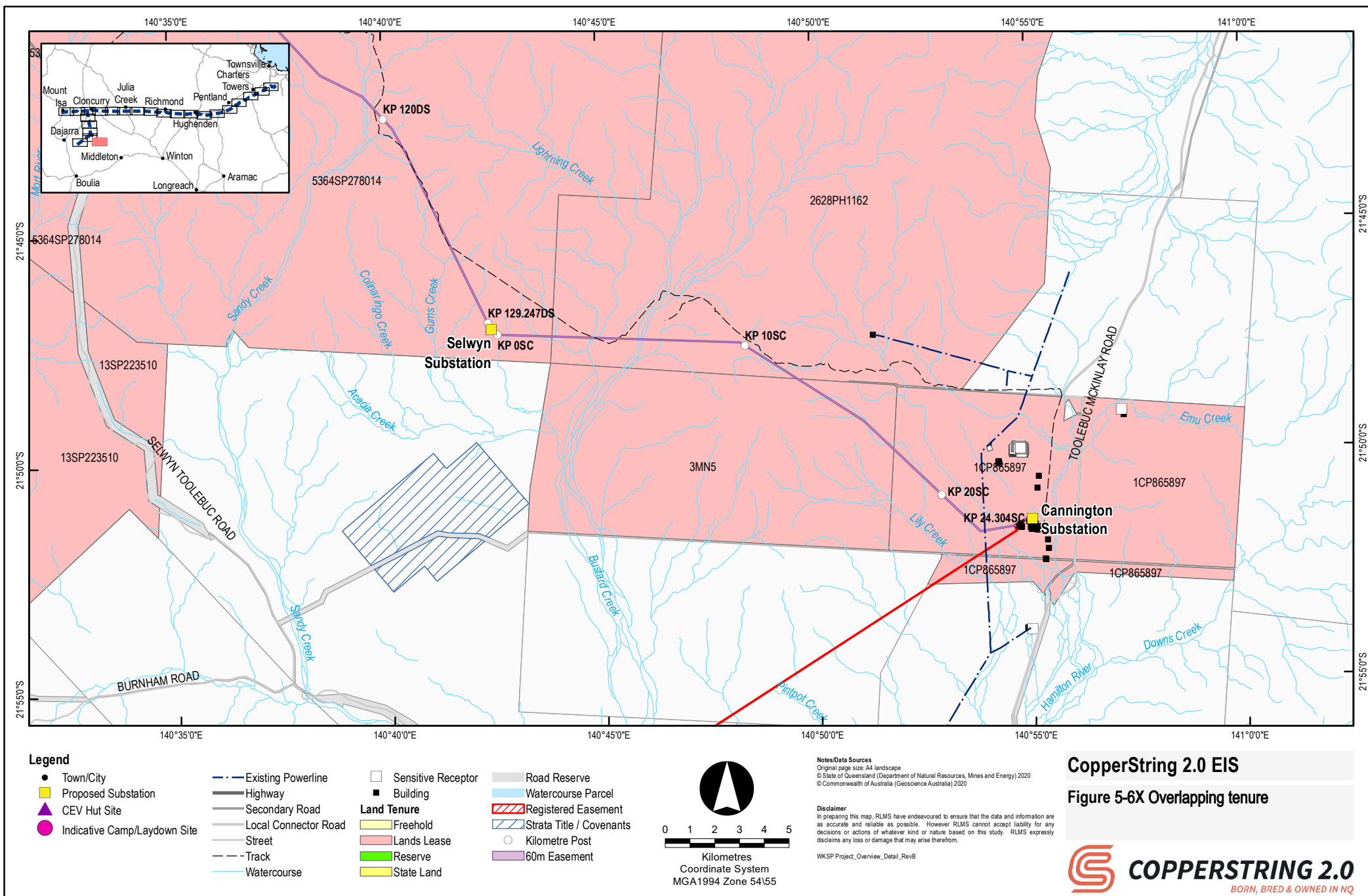
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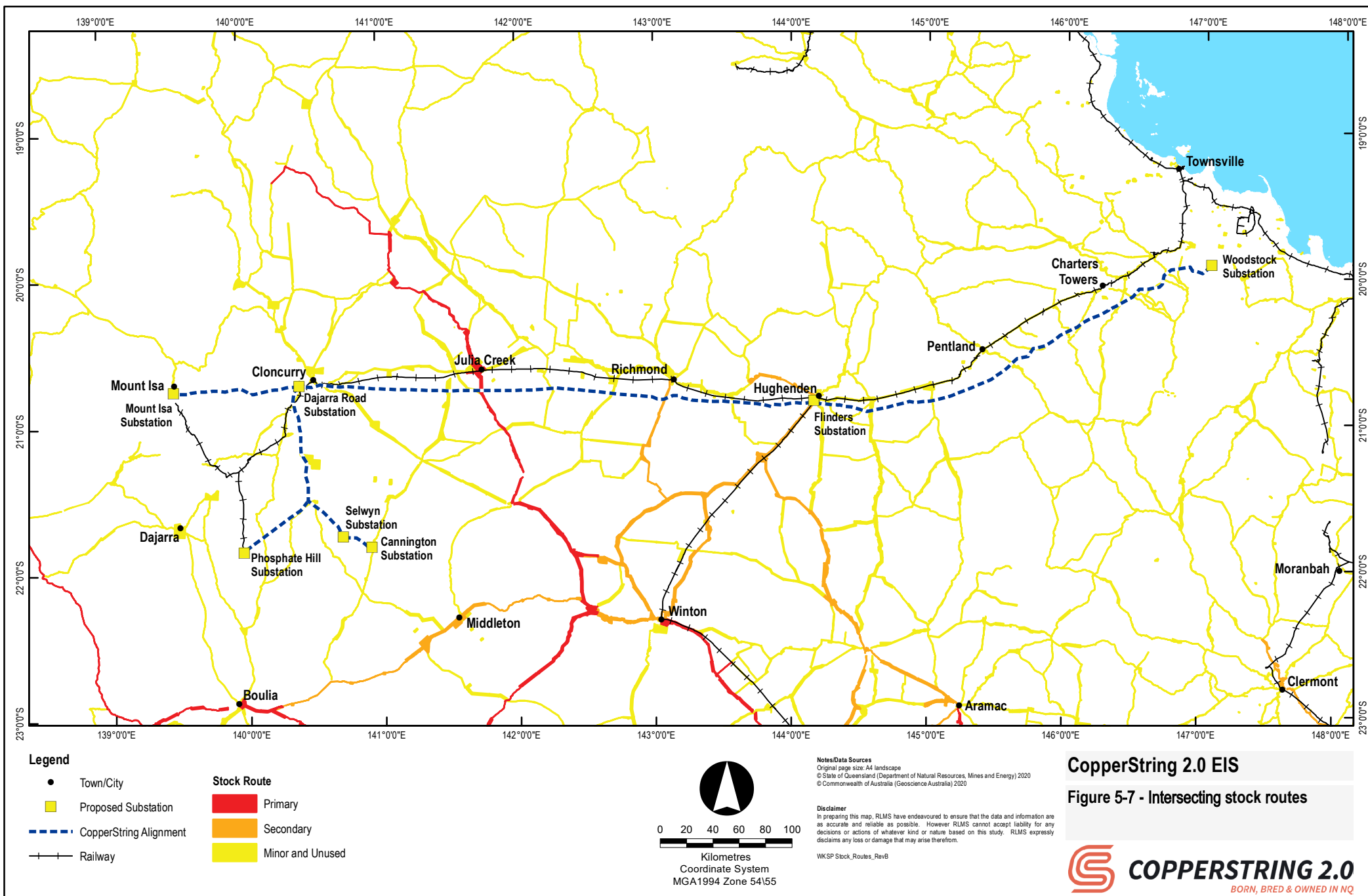
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### Figure 5-6W Overlapping tenure









### 5.3.6 State Planning Policy 2017

The current SPP commenced in July 2017 and is a single statement of planning principles and guidance for planning schemes and development assessment in Queensland. It defines the Queensland Government's policies about matters of State interest in land use planning and development. These apply to the making or amending of a local planning instrument, infrastructure designations where relevant and also has application for certain types of development or developments in areas where the SPP has not yet been integrated into the relevant local planning scheme.

The following State interests are considered applicable to the Project:

- Liveable communities and housing (liveable communities)
- Economic growth (extractive resources – Key Resource Areas)
- Environment and heritage (biodiversity, cultural heritage and water quality)
- Safety and resilience to hazards (natural hazards risk and resilience)
- Infrastructure (energy and water supply, infrastructure integration and transport infrastructure).

State interest requirements are detailed in full in Volume 1 Chapter 4 Legislation and approvals and Volume 3 Appendix K Land use and tenure. The following provides a brief summary of Project compliance.

#### Liveable communities

The Project will involve the establishment of construction camps to provide accommodation for non-resident workers during construction. The design and location of these camps should support Liveable communities State interest for the duration of Project construction. Where a construction camp is located within an existing township, the design and operation of the camps should allow for integration with local communities in consultation with local Council. This is discussed in further detail in Volume 2 Chapter 14 Social, Volume 3 Appendix Z Social impact assessment and Volume 3 Appendix O Visual amenity.

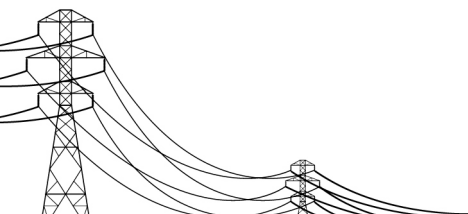
#### Economic growth

The State interest for Economic growth requires that extractive resources are considered in land use planning and ensure the protection of important extractive resources from incompatible land uses. The corridor selection does not traverse any key extractive resource areas (KRA). The closest KRA to the corridor selection is greater than 40 km from the corridor selection. This is discussed further in Section 5.3.11.

#### Environment and heritage

The Project has been designed to avoid and minimise impacts to biodiversity values inclusive of local, State and National matters of environmental significance. This has been primarily achieved through completion of intensive field survey programs and siting of Project infrastructure outside of these features as far as reasonably practicable. This is discussed in detail in Volume 2 Chapter 7 Flora and fauna and Volume 3 Appendix R Field development plan.

Indigenous cultural heritage sites and other cultural heritage features have been identified and will be managed through the avoidance of known sites and development of Cultural Heritage Management Plans (CHMPs) with relevant Aboriginal parties. This is discussed in detail in Volume 2 Chapter 15 Cultural heritage.



The Project traverses a number of important water features in central and northern Queensland providing aquatic and human use environmental values. The Project has given careful consideration of site constraints and placement of towers and associated infrastructure to avoid/minimise direct disturbance to water features. Construction phase controls will be best practice with commitments to mitigate potential impacts to water quality. This is discussed in detail in Volume 2 Chapter 9 Water resources and water quality.

### **Safety and resilience to hazards**

A hazard assessment has been completed for high-level identification and evaluation of relevant hazards and risks associated with the Project. The hazard assessment has considered key natural hazards applicable to the Project including but not limited to flooding, bushfires, wind, earthquakes, lightning and climate change. The inherent risk to people and property of the Project coupled with CuString's commitment to implementing Australian industry standard risk management practices, suggest that the overall risk to people and property is low in the broader electricity transmission industry context. This is discussed in further detail in Volume 2 Chapter 17 Hazards, health and safety and Volume 2 Chapter 9 Water resources and water quality.

### **Infrastructure**

The Project is a major electricity project that will connect the North West Power System (NWPS), and foundation customers at isolated mine sites along the Project route, to the state electricity grid. This will consequently provide benefits to the region through reliable and more competitively priced electricity. The Project will also facilitate development of the proposed North Queensland Clean Energy Hub, a Queensland Government initiative to develop strategic electricity transmission infrastructure to host renewable energy transmission from significant wind and solar resources in north Queensland.

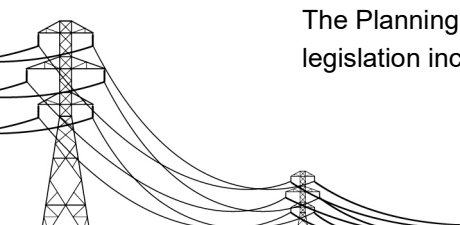
The Project will utilise existing transport networks for delivery of construction material and movement of people to and from work fronts. Primary transportation routes for delivery of equipment, materials and personnel are as follows:

- Flinders Highway
- Barkley Highway (that part located in Queensland)
- Gregory Developmental Road
- Hughenden Muttaborra Road
- Landsborough Highway
- Cloncurry to Dajarra Road.

A preliminary transport impact assessment has been completed for the Project and has made recommendations to mitigate impacts to State transport infrastructure and maintain its safety and efficiency. This will be further progressed during subsequent Project phases in consultation with the Department of Transport and Main Roads (DTMR). Further detail is provided in Volume 2 Chapter 13 Transport and Volume 3 Appendix X Transport impact assessment.

Other State interests as detailed in the SPP are not considered relevant to the corridor selection as the Project does not impact on these State interest or are not relevant to the Project area. For example, the corridor selection is not located in a coastal hazard area - erosion prone area; therefore does not require this State matter to be integrated into the Project or an assessment undertaken in accordance with the relevant assessment benchmarks contained in the SPP. Similarly, some local government airports are not considered Strategic Airports; therefore, an assessment in accordance with the provisions of the SPP is not required.

The Planning Schemes applicable to the Project have been prepared under various planning legislation including repealed legislation. Accordingly, the level of integration of State interests in



the Planning Schemes varies, refer to Table 5-7. Where a State interest has not been integrated into a local government's Planning Scheme, an assessment in compliance with the relevant provisions of the SPP is required. Volume 3 Appendix K Land use and tenure outlines the State interests' in greater detail and their integration into planning schemes.

**Table 5-7 State interest integration**

Planning Scheme	State Interests – State Planning Policy 2017				
	Liveable communities	Economic Growth	Environment & Heritage	Safety & Resilience	Infrastructure
Burdekin Shire IPA Planning Scheme	x	x	x	x	x
Draft Burdekin Shire Planning Scheme	✓	✓	✓	✓	✓
Charters Towers Regional Council Town Plan	✓	✓	✓*	✓	✓**
Shire of Flinders Planning Scheme	✓	✓	✓*	✓	✓**
Richmond Shire Council Planning Scheme	x	x	x	x	x
Draft Richmond Shire Planning Scheme	✓	✓	✓*	✓	✓**
McKinlay Shire Planning Scheme	✓	✓	✓*	✓	✓**
Cloncurry Shire Council Planning Scheme	✓	✓	✓***	✓	✓**
City of Mount Isa Planning Scheme	✓	✓	✓*	✓	✓**

\* excludes coastal environment - this state interest is not relevant to the local government area

\*\* excludes Strategic ports – this state interest is not relevant to the local government area

\*\*\* excludes cultural heritage – this state interest is not been integrated into the Planning Scheme

### 5.3.7 Regional Plans

Regional Plans provide the framework for the management of growth and development in a region to 2031. Regional plans can either be a:

- Statutory planning instrument which has been signed off by the Planning Minister and gives effect to the policies and direction of the regional plan; or
- Non-statutory planning instrument which has not been signed off by the Planning Minister.

There are two statutory regional plans applicable to the Project area:

- The NW Regional Plan 2010-2031 which includes the local government areas of Flinders, Richmond, McKinlay, Cloncurry and Mount Isa. The NW Regional Plan includes a number of provisions which support infrastructure development in the north west region including providing access to infrastructure, services and reliable energy supplies to support economic growth and create business opportunities.

- The NQ Regional Plan which includes the local government areas of Burdekin, Charters Towers, Hinchinbrook, Palm Island and Townsville. Whilst the focus of the NQ Regional Plan for energy networks is to concentrate and capitalise on renewable energy sources, the NQ Regional Plan acknowledges that economic opportunities within the region require an effective and resilient infrastructure network to link infrastructure to users.

Both regional plans have been signed off by the Planning Minister. The integration of the relevant regional interests as set out in the NW Regional Plan 2010-2031 and the NQ Regional Plan, is discussed in further detail in Volume 1 Chapter 4 Legislation and approvals.

The Project complies with the intent of both the NW Regional Plan and NQ Regional Plan. Further detail regarding compliance with these is provided in Volume 3 Appendix K Land use and tenure.

### 5.3.8 Relevant planning schemes

Development within an LGA is administered by a statutory instrument called a Planning Scheme. Planning Schemes are prepared by Council to guide development within the LGA for a minimum of 20-25 years into the future.

The corridor selection traverses seven LGAs. Volume 3 Appendix K Land use and tenure provides a summary of each Planning Scheme relevant to the Project including associated activities such as construction camps, roadworks and vehicle access and water supply. The corridor selection is located primarily on rural land across all seven LGAs (refer Table 5-7). Accordingly, there is a potential conflict with the Planning Schemes as the Project relates to the development of rural land. A detailed assessment of the applicable requirements under Planning Schemes is provided in Volume 1 Chapter 4 Legislation and approvals.

Burdekin Shire Council and Richmond Shire Council are currently preparing new Planning Schemes in accordance with the provisions of the Planning Act. The progress of these will continue to be monitored to ensure that the EIS is accurate and reflects the current Planning Scheme at that time.

### 5.3.9 State Development Assessment Provisions

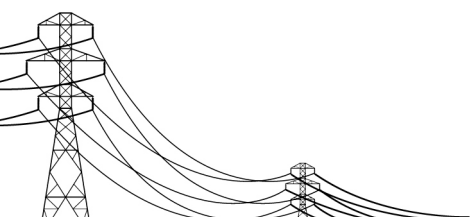
The SDAP Version 2.6 (effective February 2020) sets out the matters of interest to the State for development assessment, where the Chief Executive administering the Planning Act, (being the Director- General of Queensland Treasury), is responsible for assessing or deciding development applications. The SDAP is prescribed in the *Planning Regulations 2017* (Planning Regulation).

The SDAP identifies the following matters of State interests potentially applicable to the Project:

- Native vegetation clearing
- State transport network functionality
- Environmentally relevant activities (ERA).

Development approvals required for the Project which involve the above matters would require assessment against the corresponding modules of the SDAP. The following State codes are applicable:

- State code 1 – Development in a state-controlled road environment
- State code 6 – Protection of state transport networks
- State code 16 – Native vegetation clearing





- State code 22 – Environmentally relevant activities. Assessment against State code 22 is not considered relevant to the Project if ERAs are not triggered for the Project.

Volume 3 Appendix K Land use and tenure provides a summary of each SDAP and outlines the Project relevance and consistency. A detailed assessment of the Project against the State codes is provided in Volume 3 Appendix N SDAP assessment.

### 5.3.10 Regional Planning Interests

The RPI Act was drafted to protect areas of regional interest from the impacts of resource activities or regulated activities. The RPI Act identifies each of the following as an area of regional interest:

- Priority agricultural areas
- Priority living areas
- Strategic cropping areas
- Strategic environmental areas.

Where a resource activity or regulated activity is likely to impact on regional interests, a Regional Interests Development Approval is required. The application is assessed by the Department of State Development, Tourism and Innovation (DSDTI), with assessment undertaken in accordance with the relevant Regional Plan and criteria identified in the RPI Act.

Regional interests are not impacted by the corridor selection. A regional interest development approval will not be required under the RPI Act.

### 5.3.11 Mining and exploration

The corridor selection encompasses numerous mining and exploration activities including:

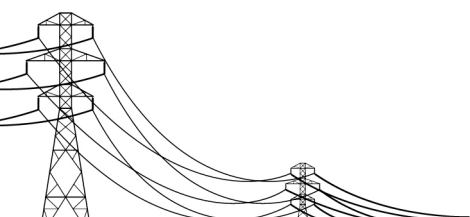
- Petroleum activities
- Exploration permits and applications for exploration permits
- Mineral development licences and applications for mineral development licences
- Mining leases and applications for mining leases
- Economic resources (extractive resources)
- Active, disused and abandoned workings.

#### Petroleum pipeline infrastructure

There are five petroleum pipelines located within the vicinity of the corridor selection at both the eastern and western extents. There are three additional pipelines near substations or just outside the corridor selection, these are located in Mount Isa, Phosphate Hill and Cannington areas as illustrated on Figure 5-8.

#### Exploration permits and applications

The corridor selection traverses a number of coal (EPC), geothermal (EPG), mineral (EPM) and petroleum (ATP) exploration permit and application areas between the Burdekin Shire and Mount Isa as illustrated on Figure 5-9. Currently there are eight granted EPC, two granted ATP exploration permits and two EPG applications. There are 75 EPM granted exploration permits and four applications.



### Mining leases

The corridor selection traverses seven mining lease areas and one mining lease application area.

### Economic resources (extractive resources)

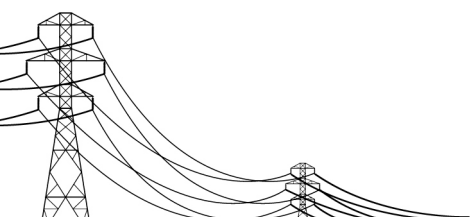
A number of key resource areas (KRAs) and major operating extractive industries are located within proximity to the corridor selection as summarised in Table 5-8 and shown on Figure 5-10. Quarry resources managed by the Department of Agriculture and Fisheries (Forest Products Unit) under the *Forestry Act 1959*, including areas subject to sales permit, areas where a sales permit is proposed to be issued, and identified potential quarry resources are also shown on Figure 5-10.

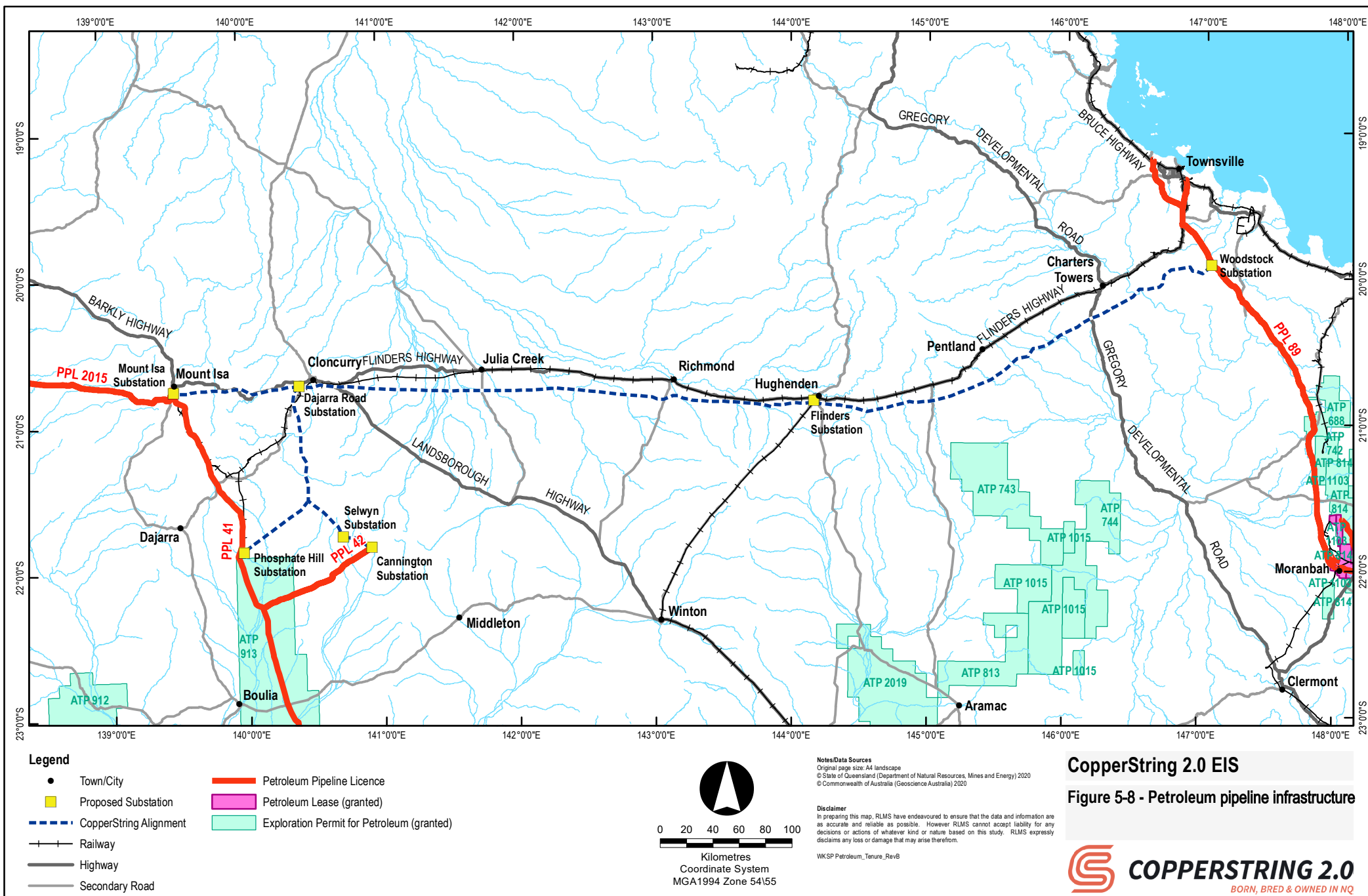
**Table 5-8 Key resource area(s)**

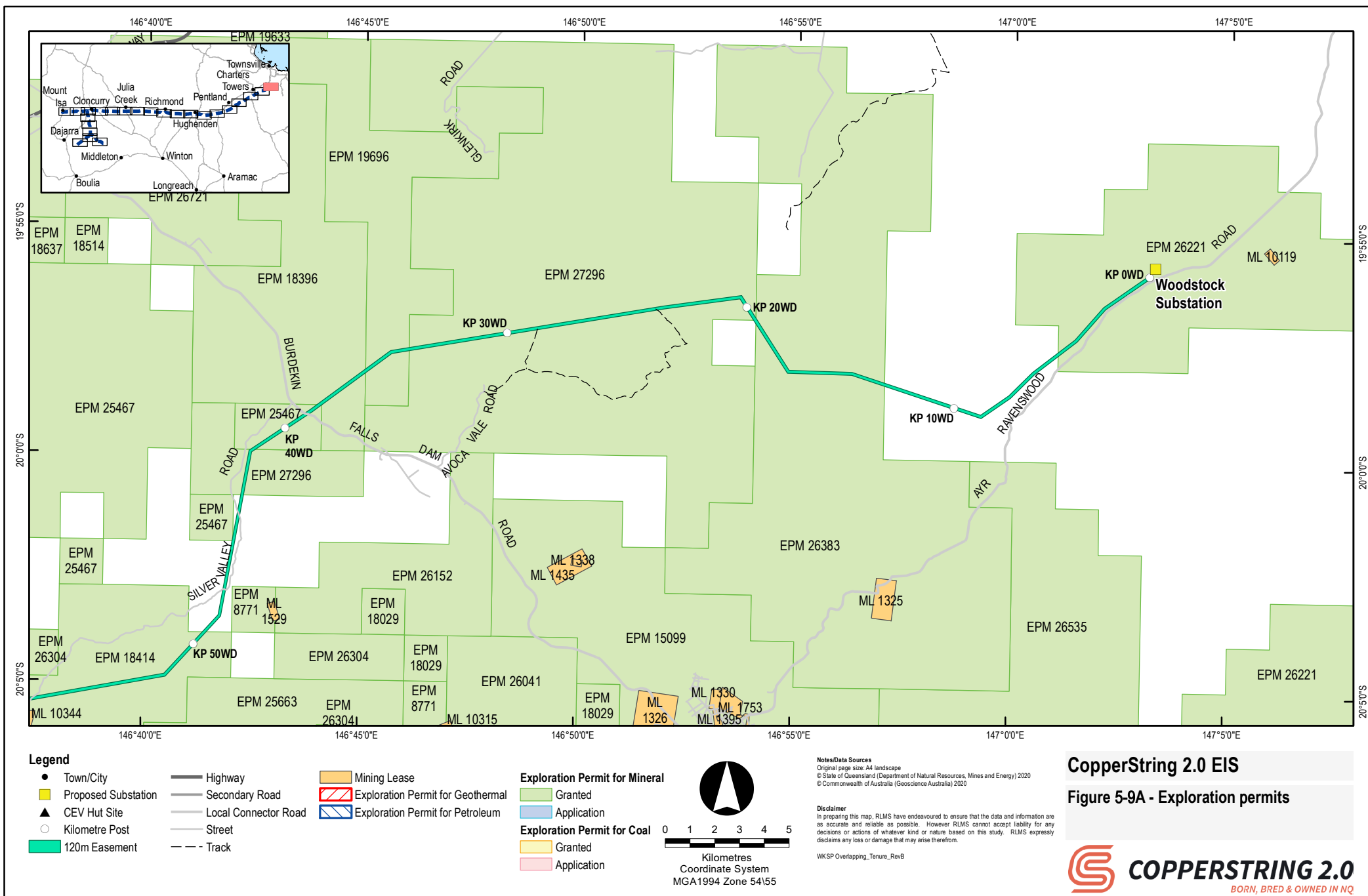
Name	Number	Type
Jardine Bluff	137	Hardrock
Castlereagh	111	Hardrock
The Rocks	28	Hardrock

### Disused and abandoned workings

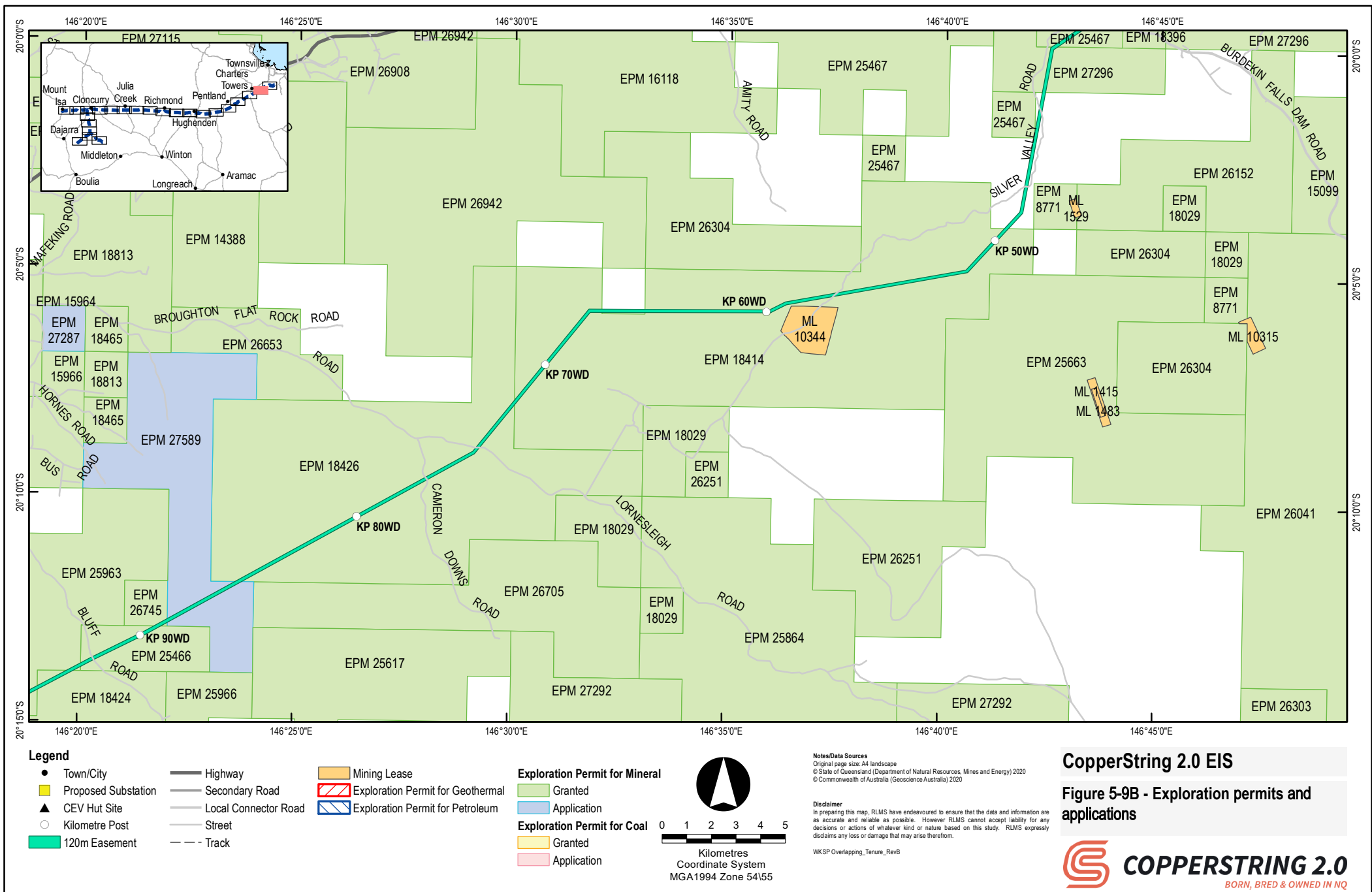
A number of disused and abandoned workings are located in the vicinity of the corridor selection. These are primarily concentrated around Charters Towers, Pentland, Cloncurry and Mount Isa (refer Figure 5-11).

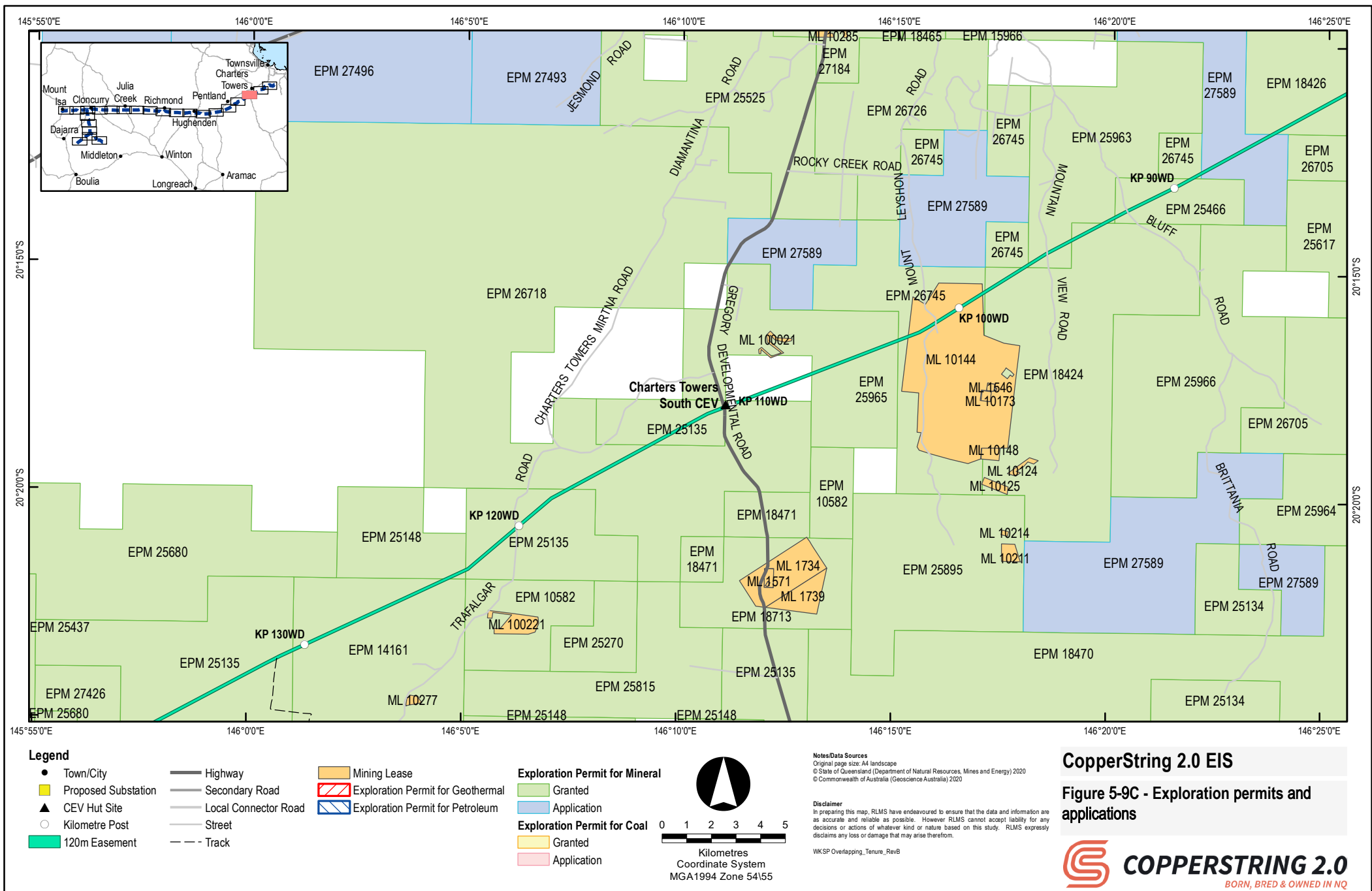


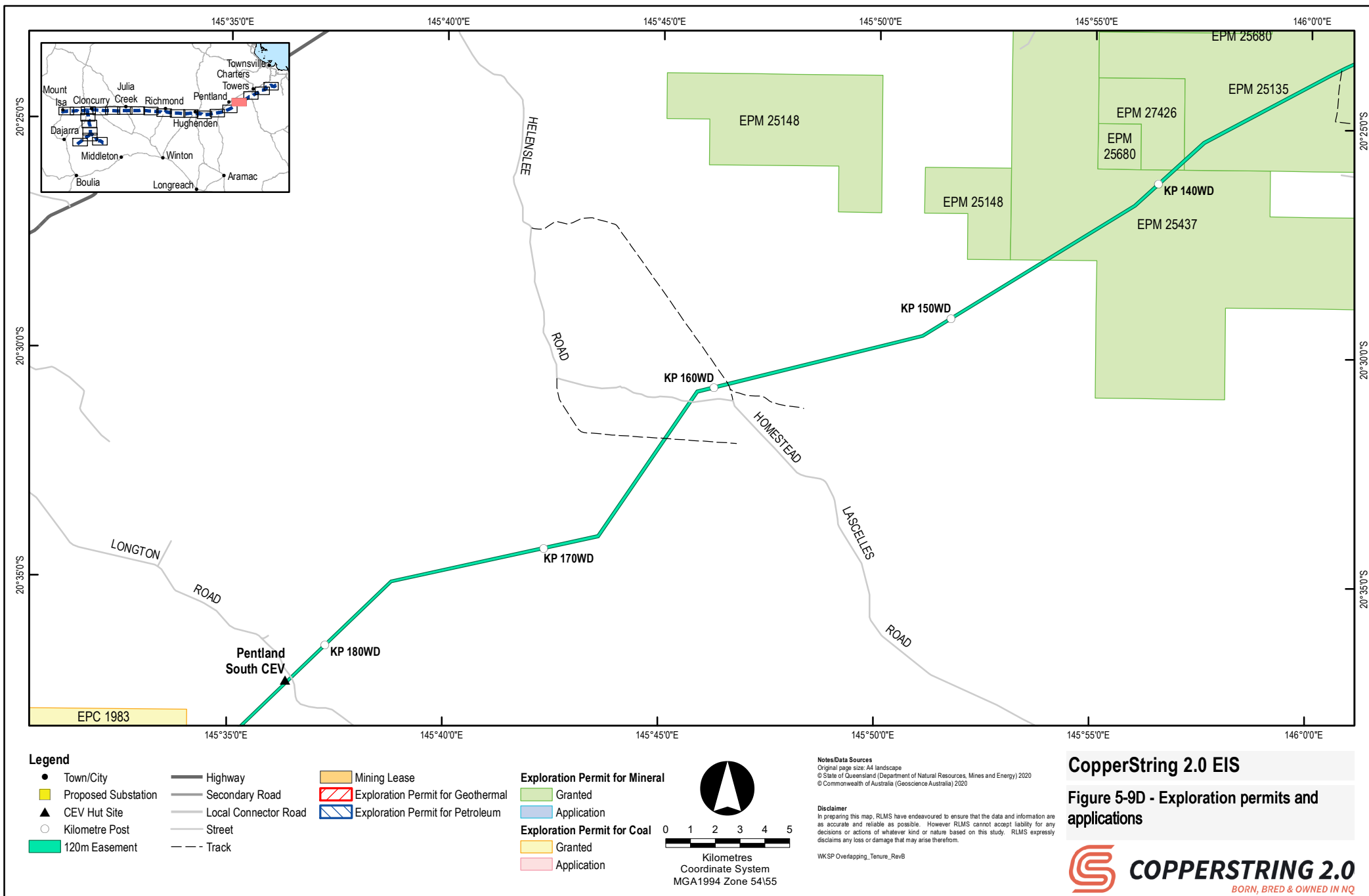


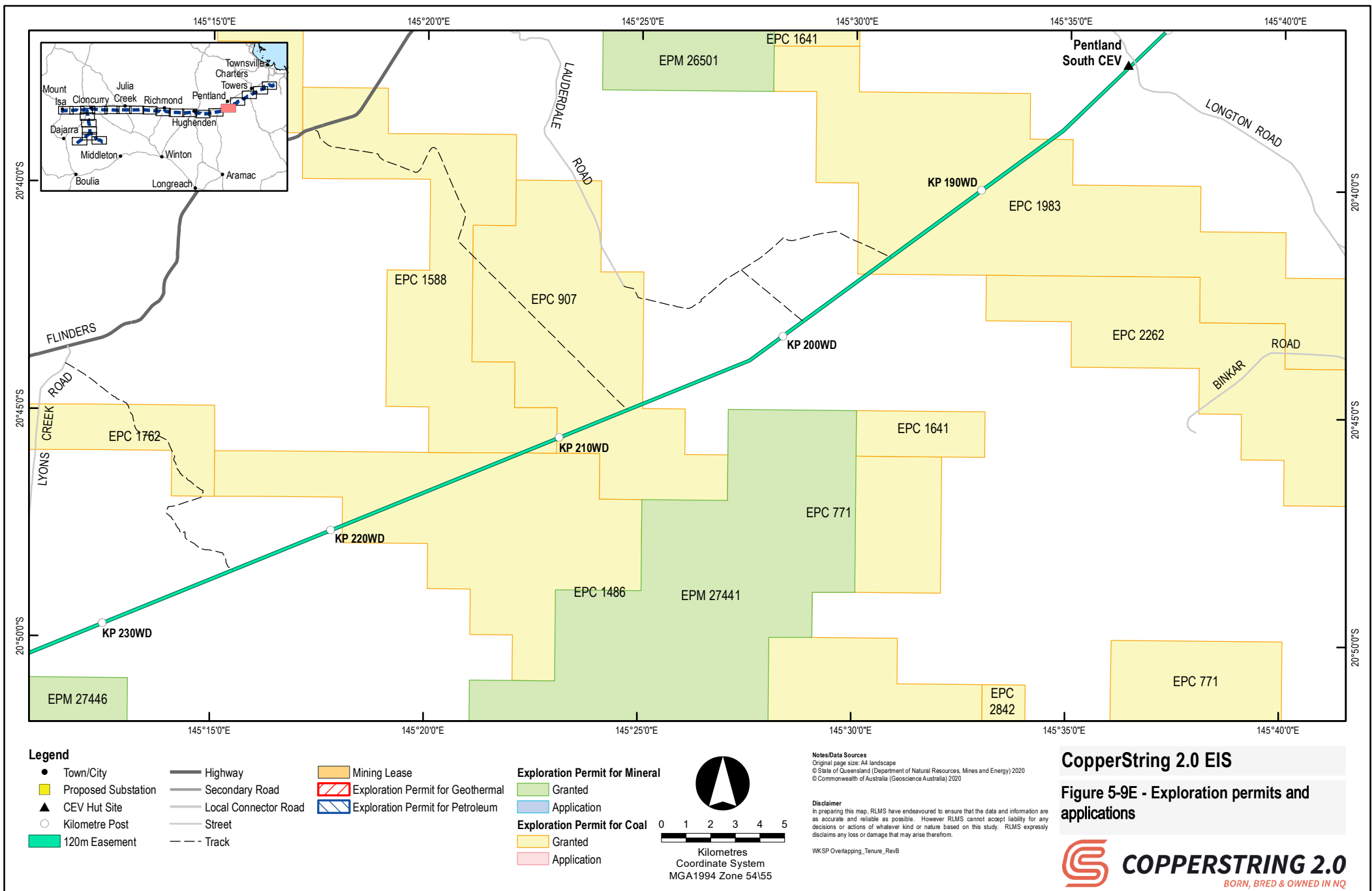




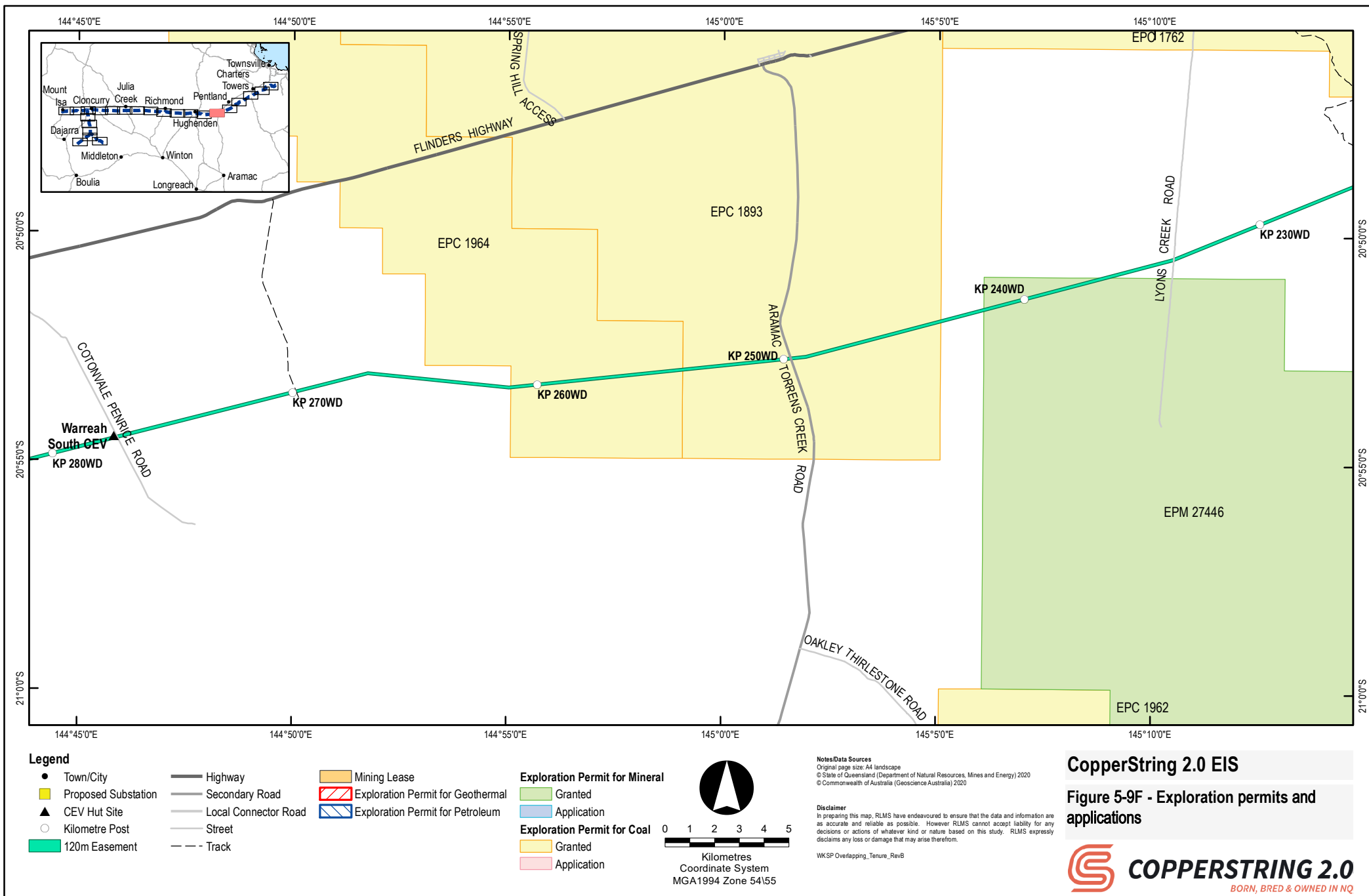


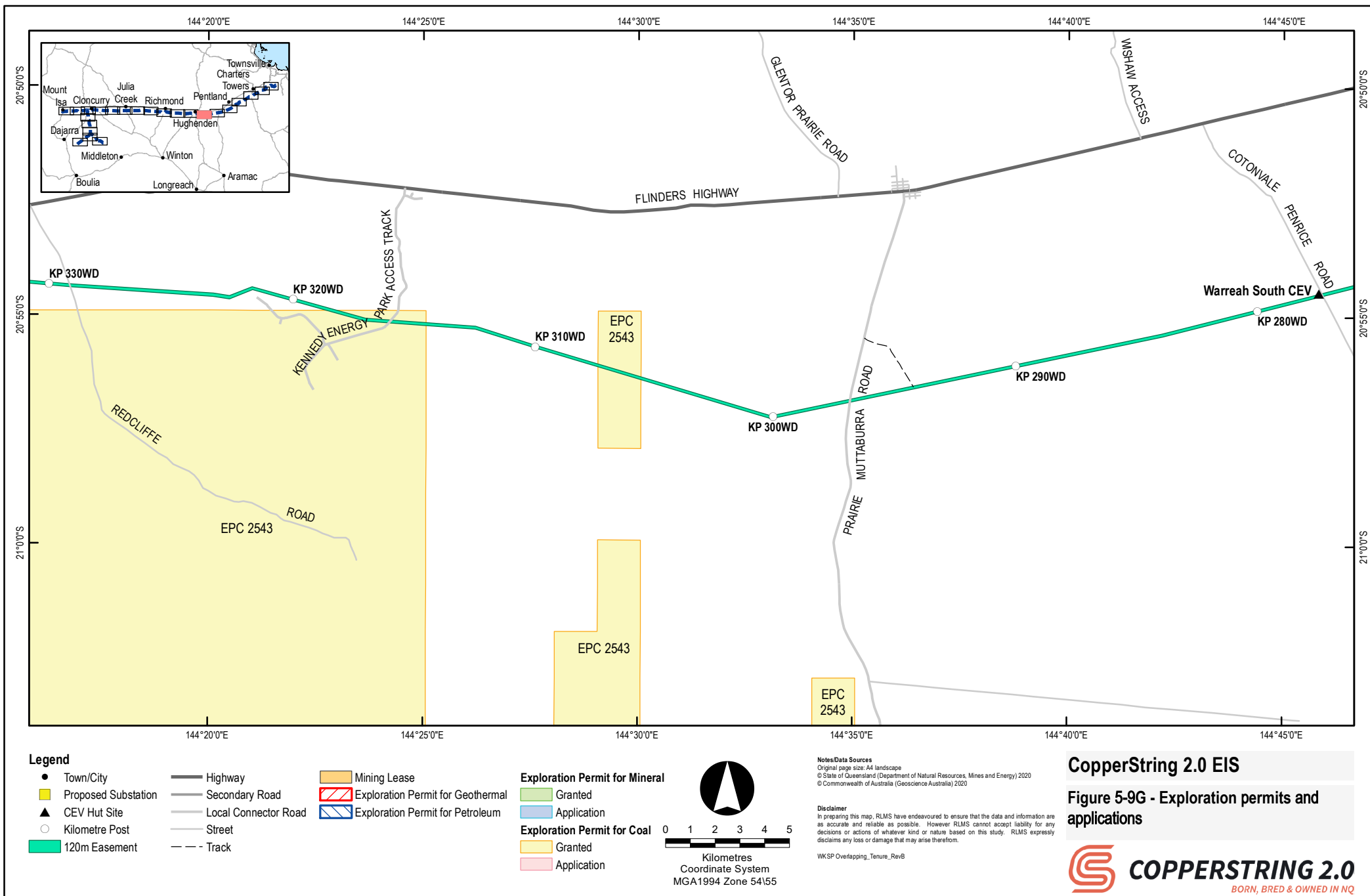


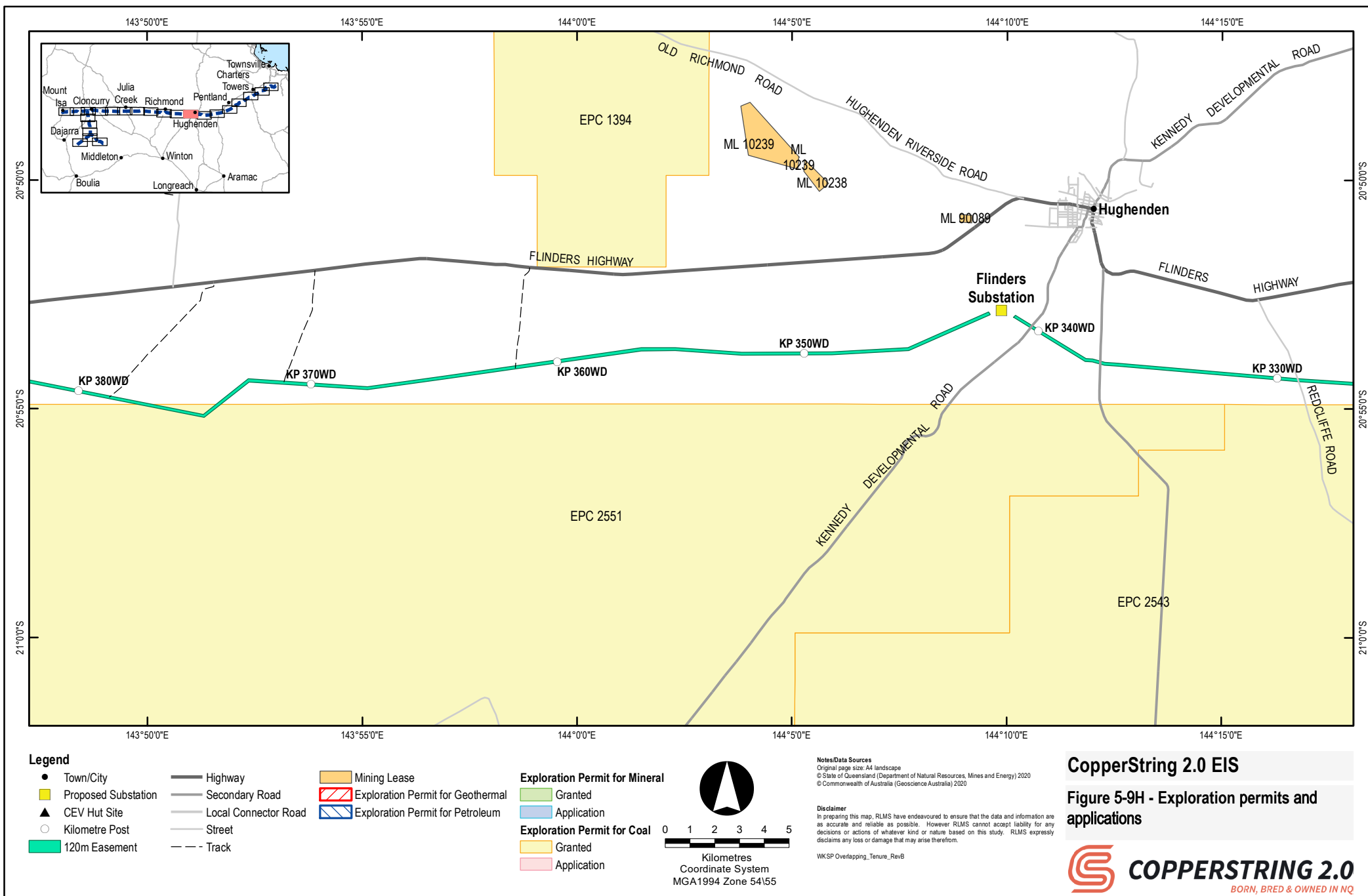


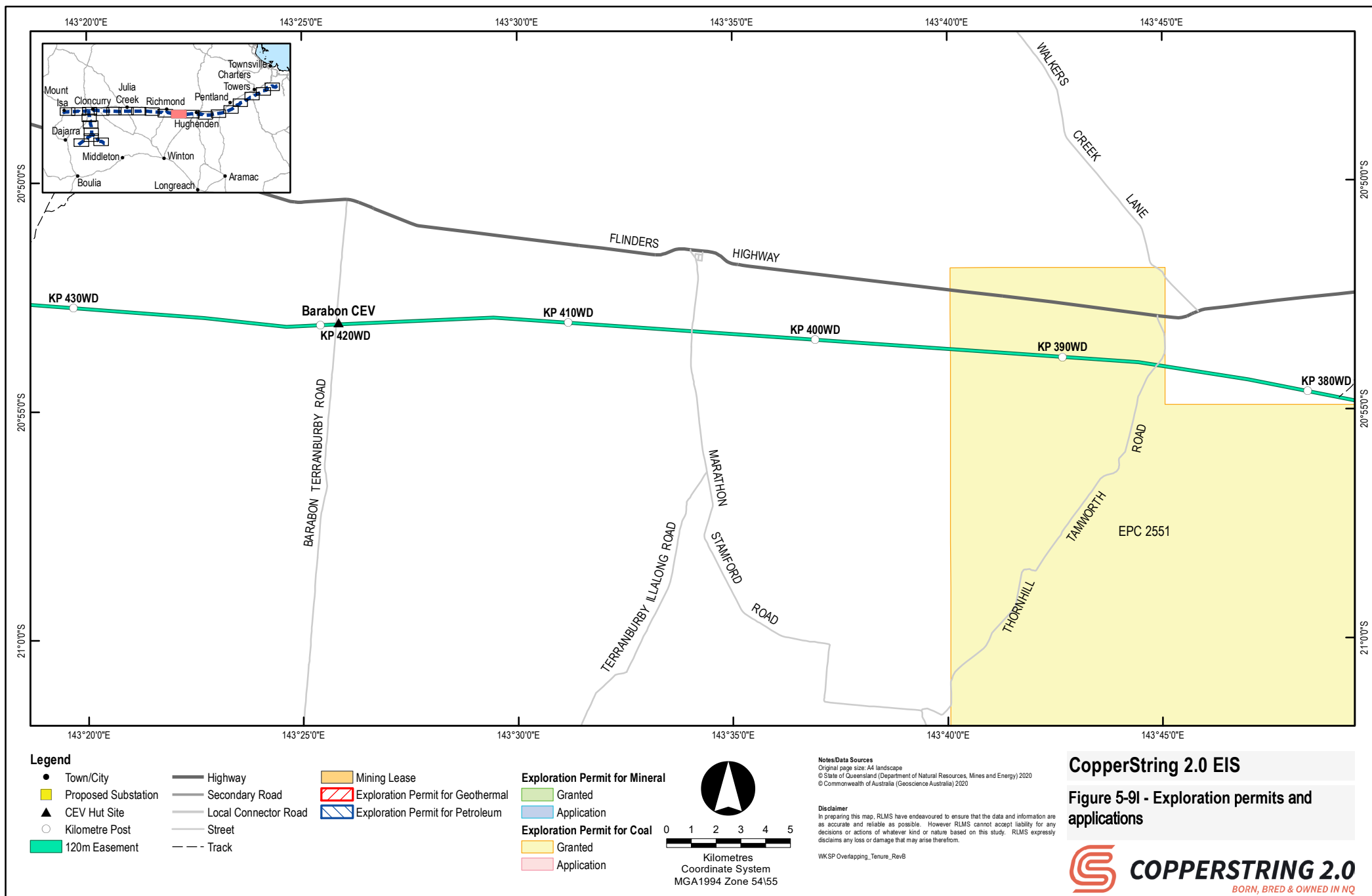




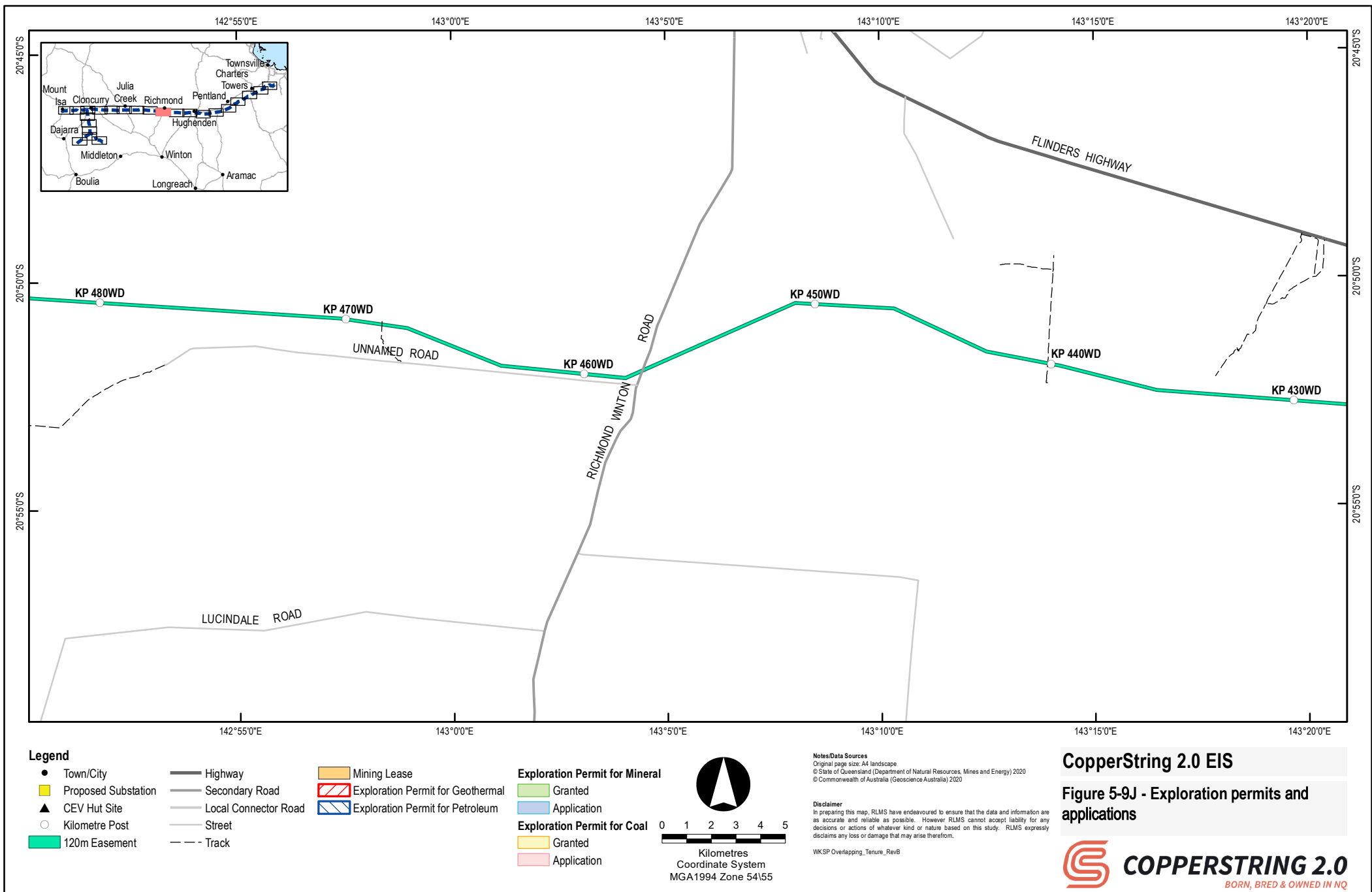


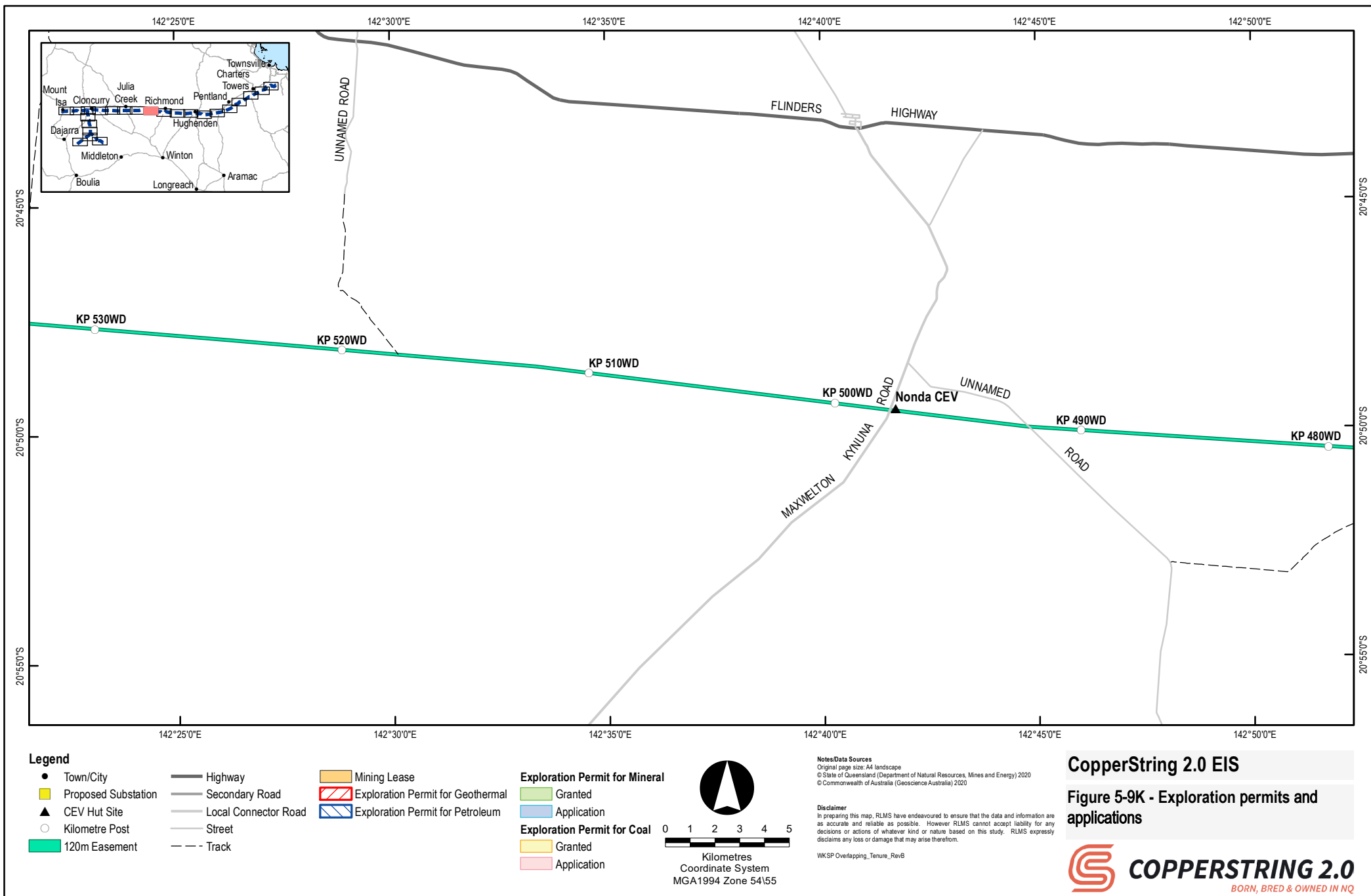


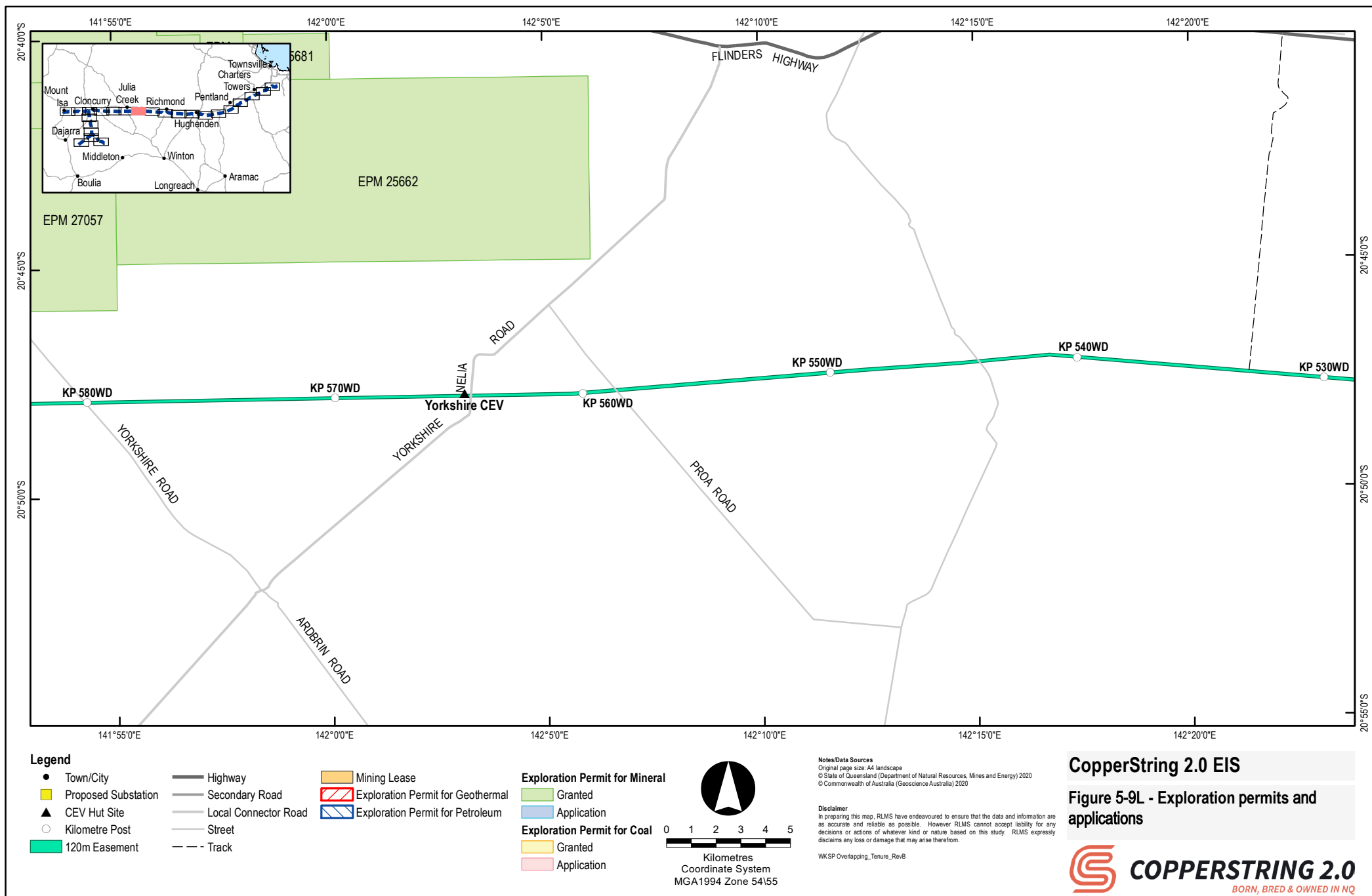


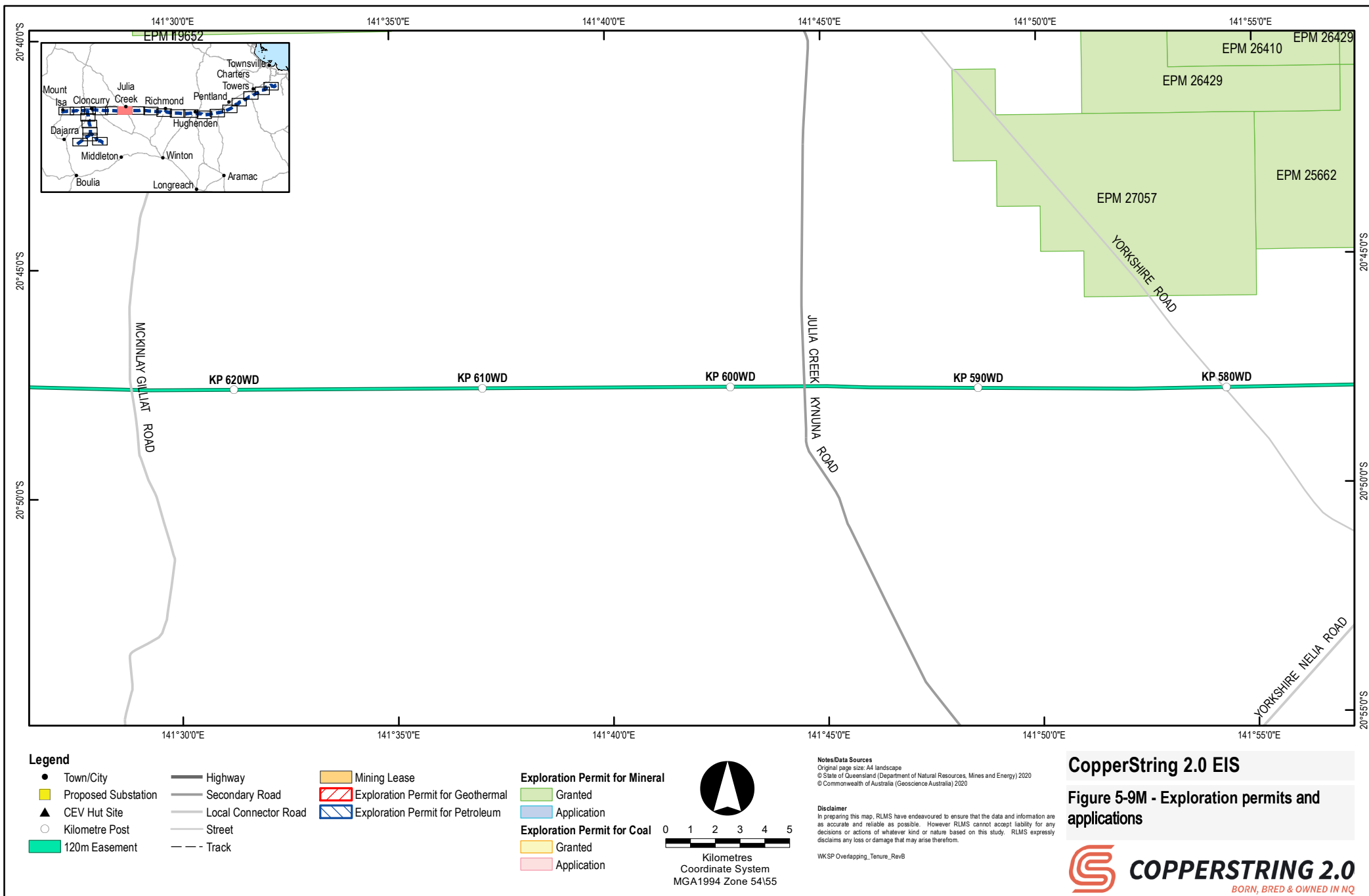




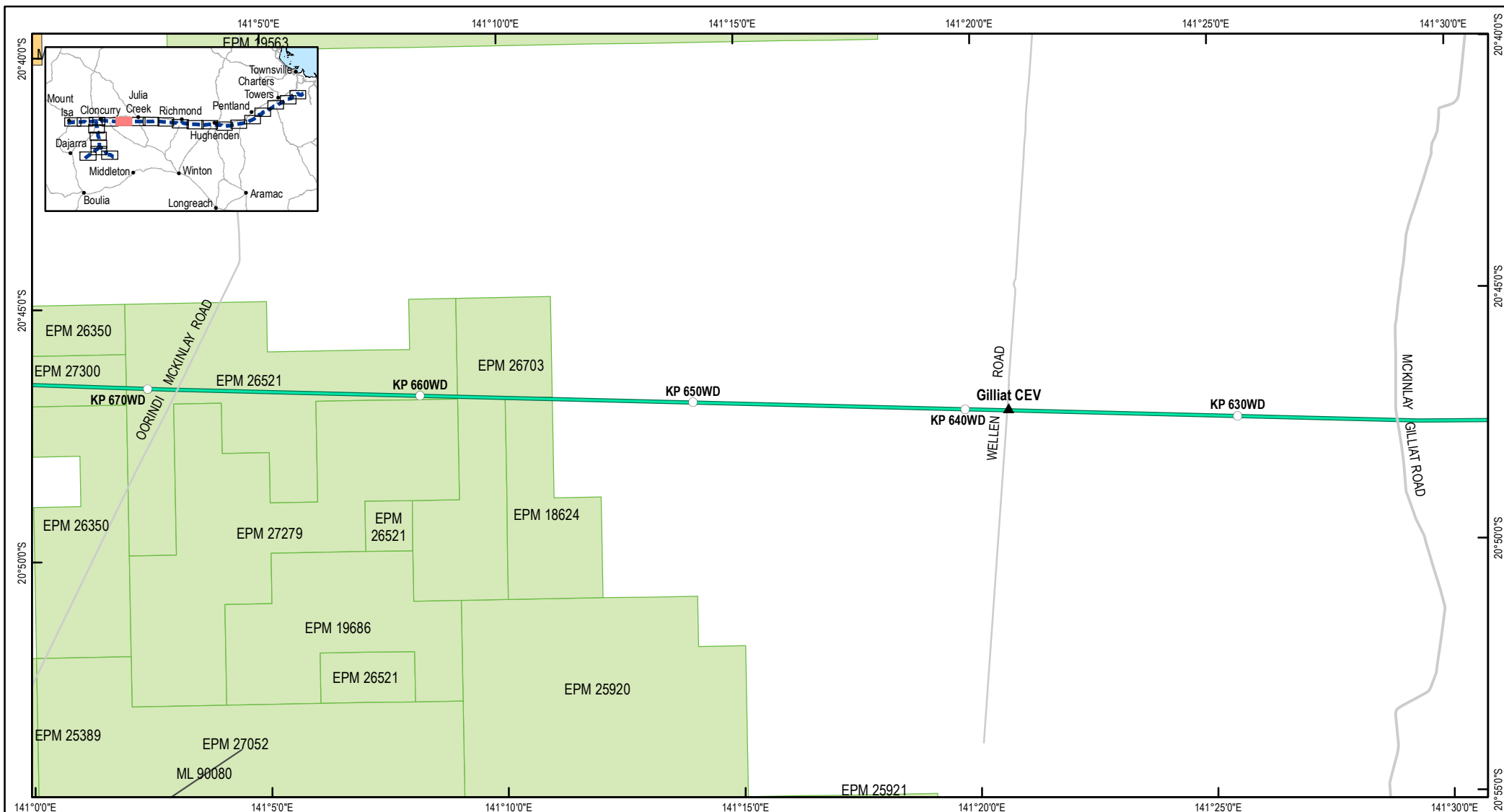












# Legend

- Town/City
- Proposed Substation
- ▲ CEV Hut Site
- Kilometre Post
- 120m Easement
- Highway
- Secondary Road
- Local Connector Road
- Street
- — — Track
- Mining Lease
- Exploration Permit for Geothermal
- Exploration Permit for Petroleum

## Exploration Permit for Mineral

- Granted
- Application

## Exploration Permit for Coal

- Granted
- Application



0 1 2 3 4 5

Kilometres  
Coordinate System  
MGA1994 Zone 54I55

### Notes/Data Sources

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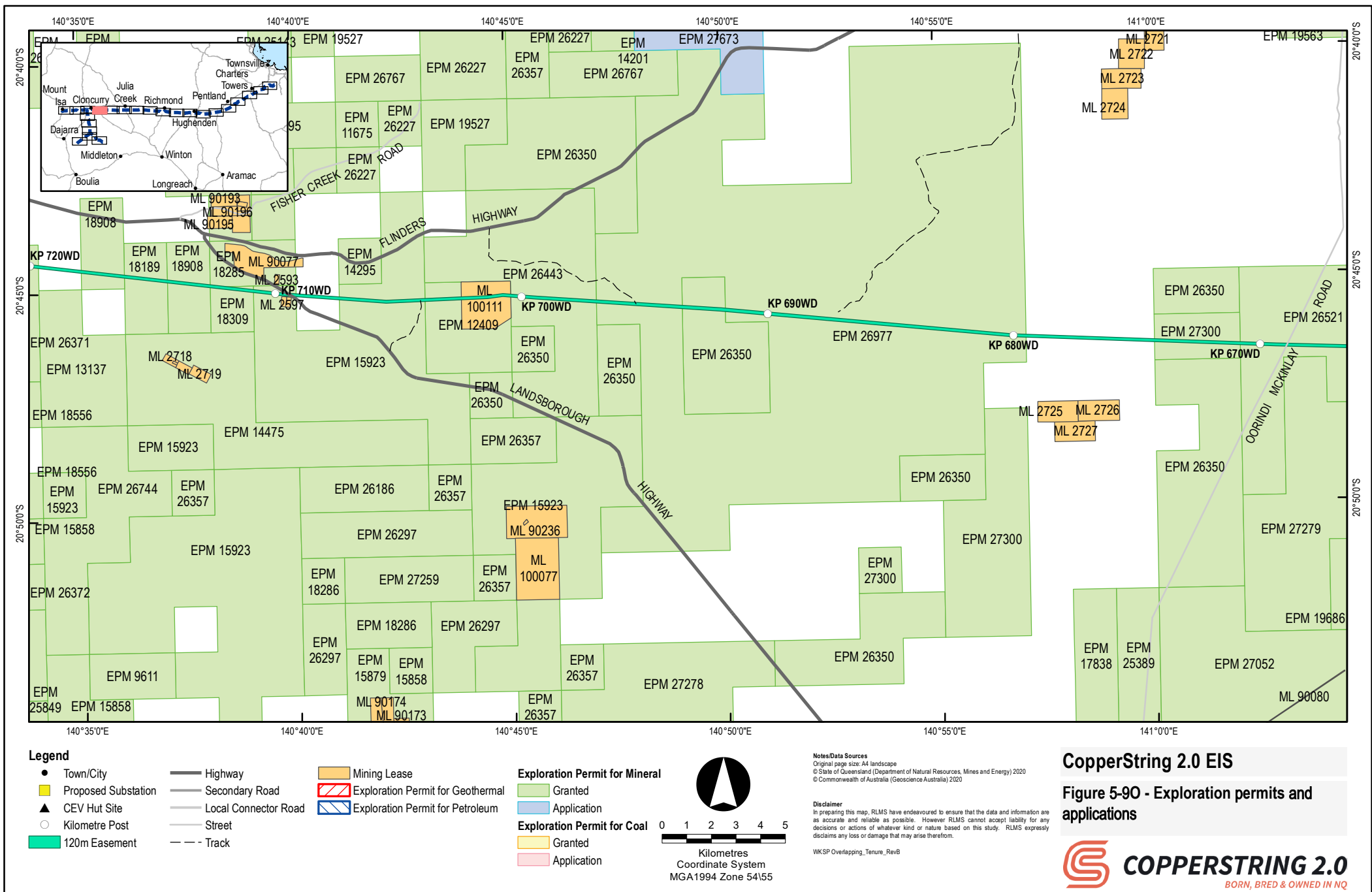
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that may arise therefrom.

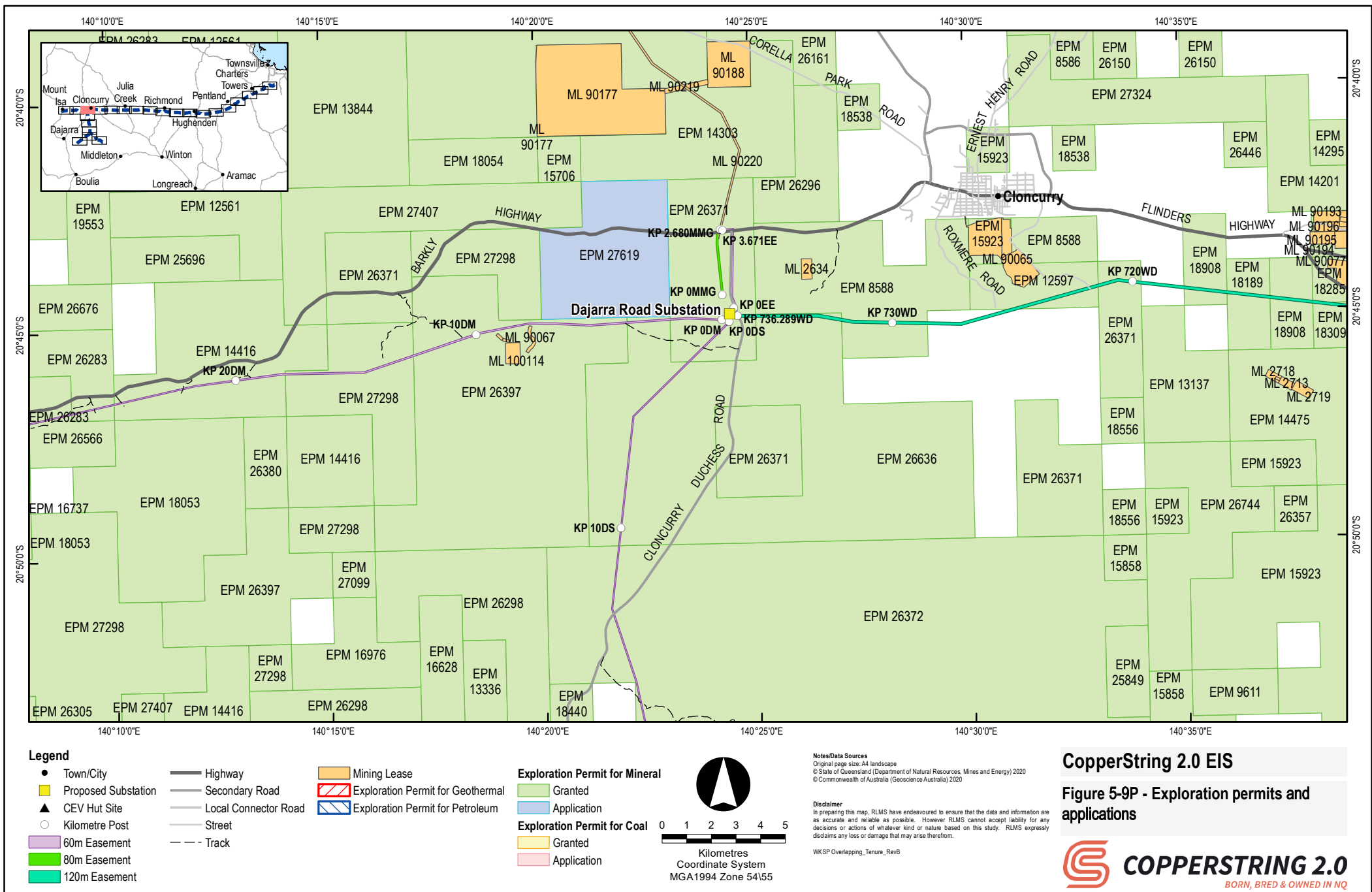
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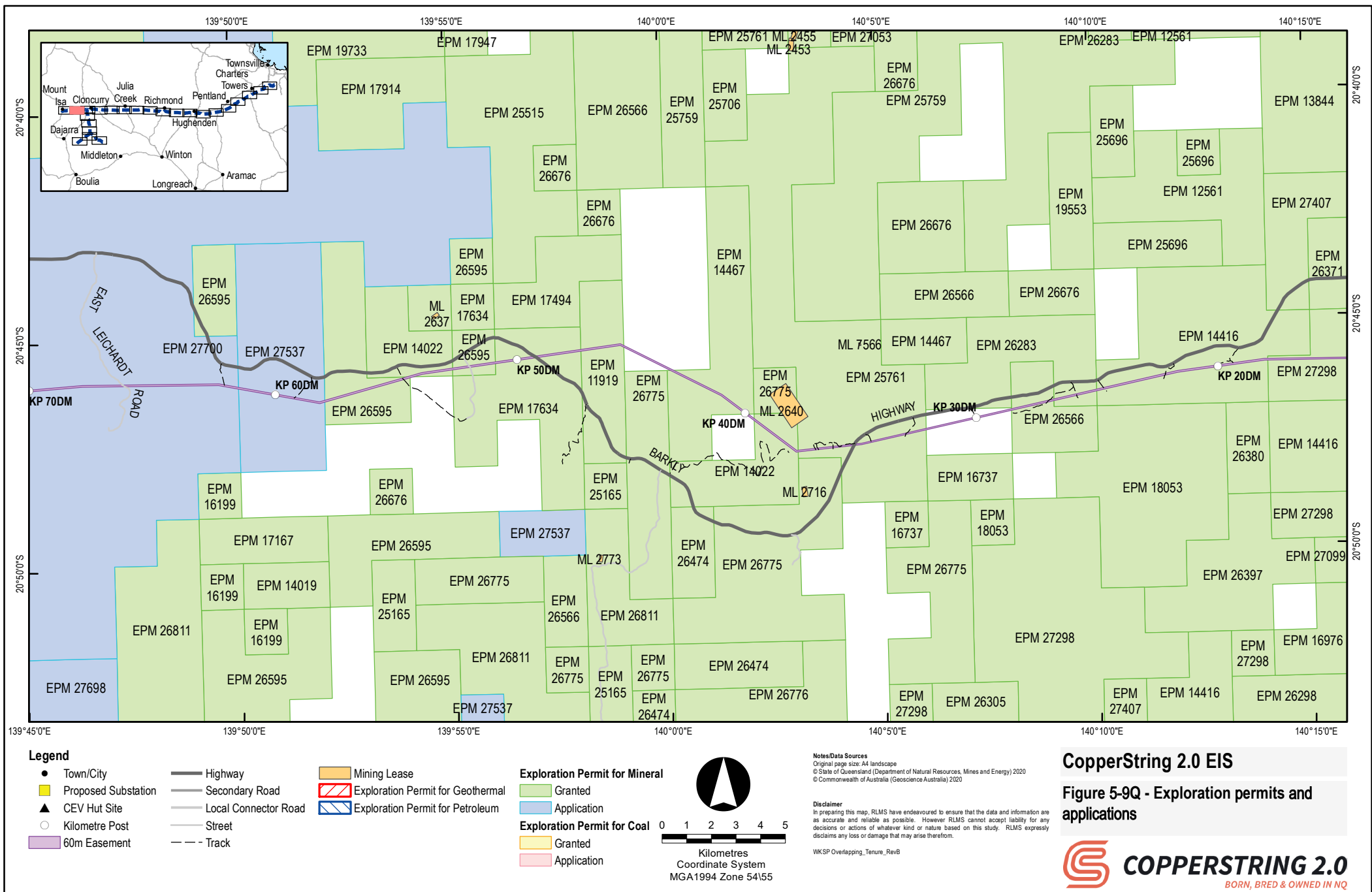
## CopperString 2.0 EIS

### Figure 5-9N - Exploration permits and applications

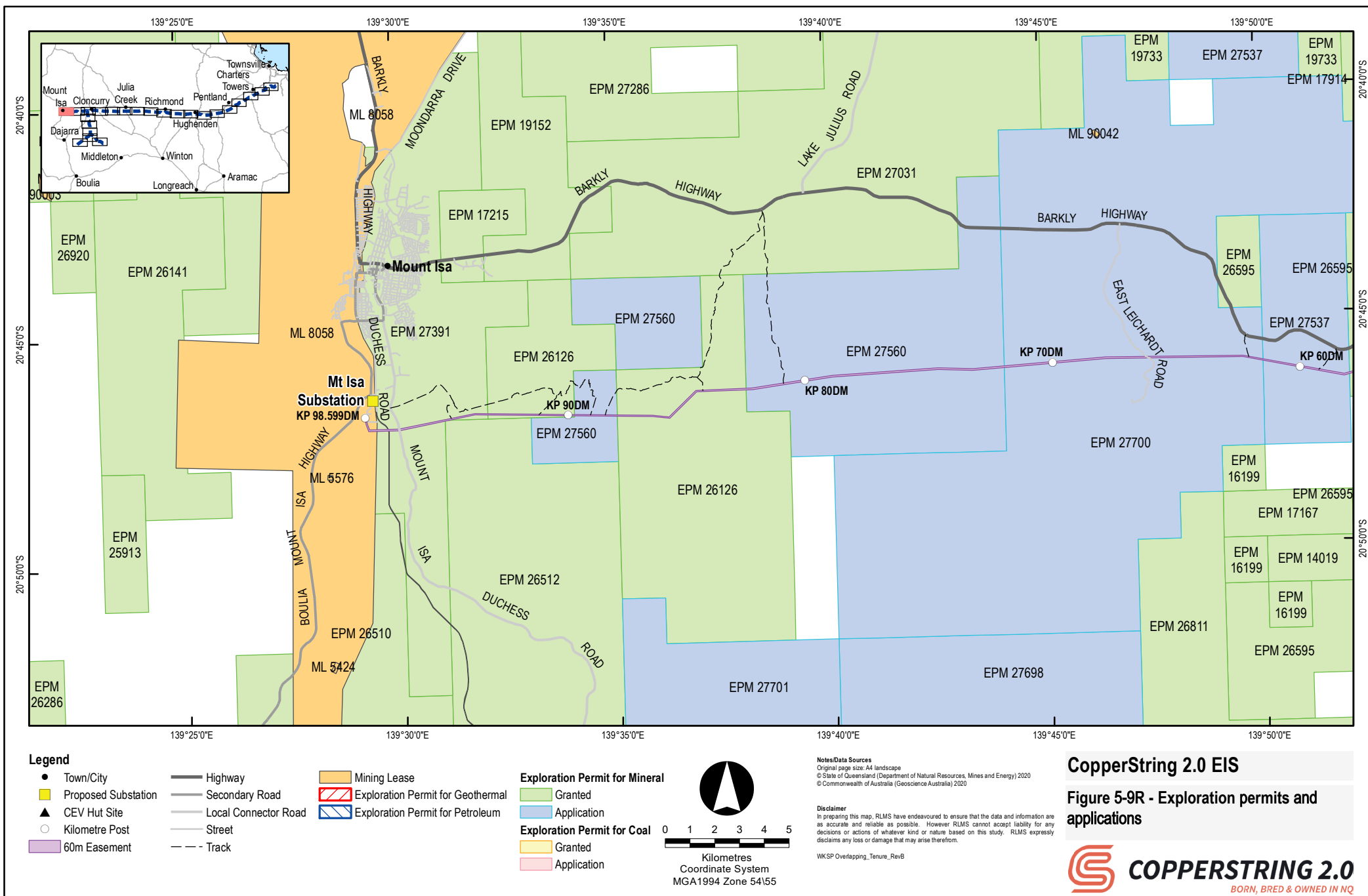


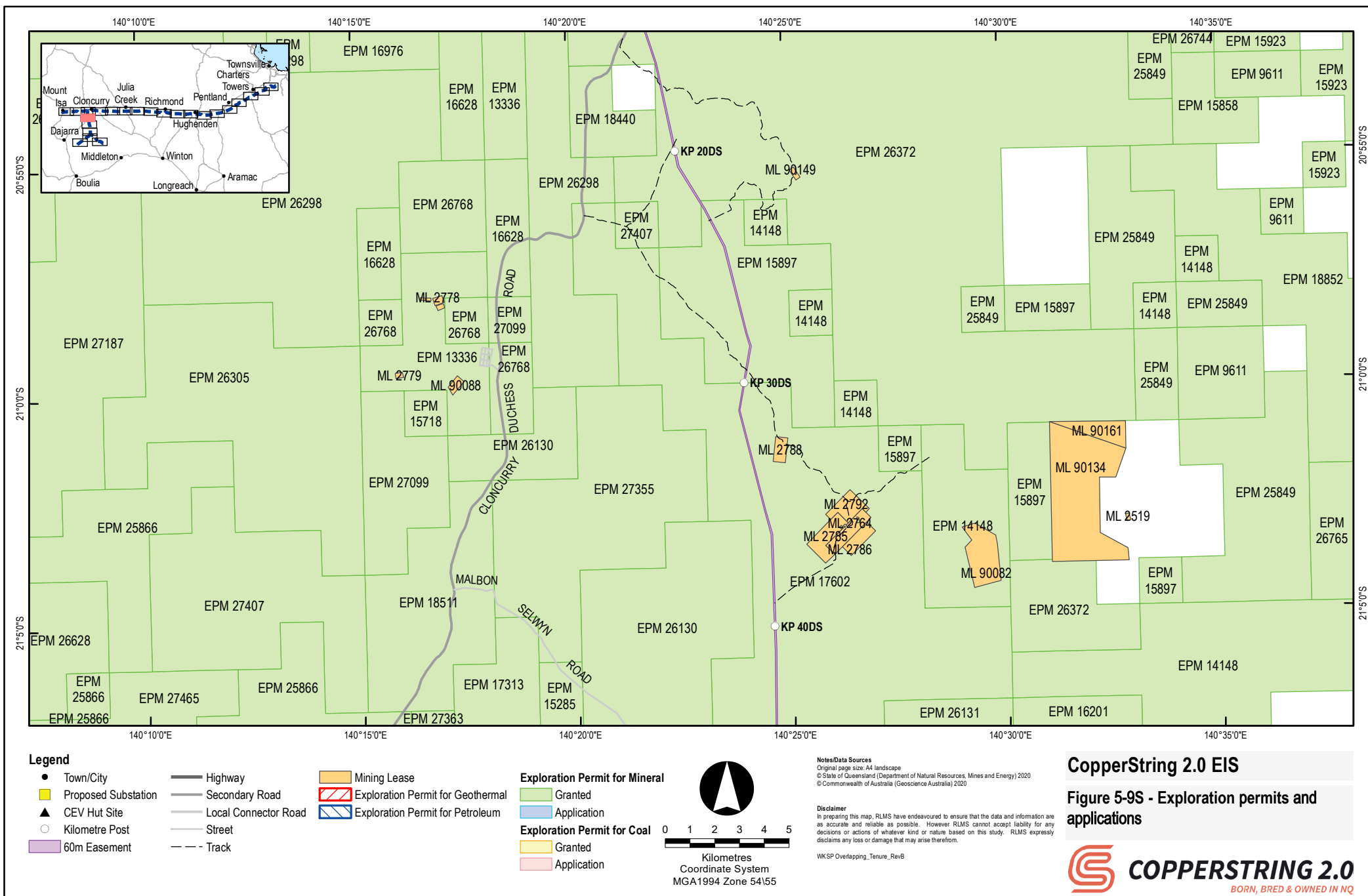


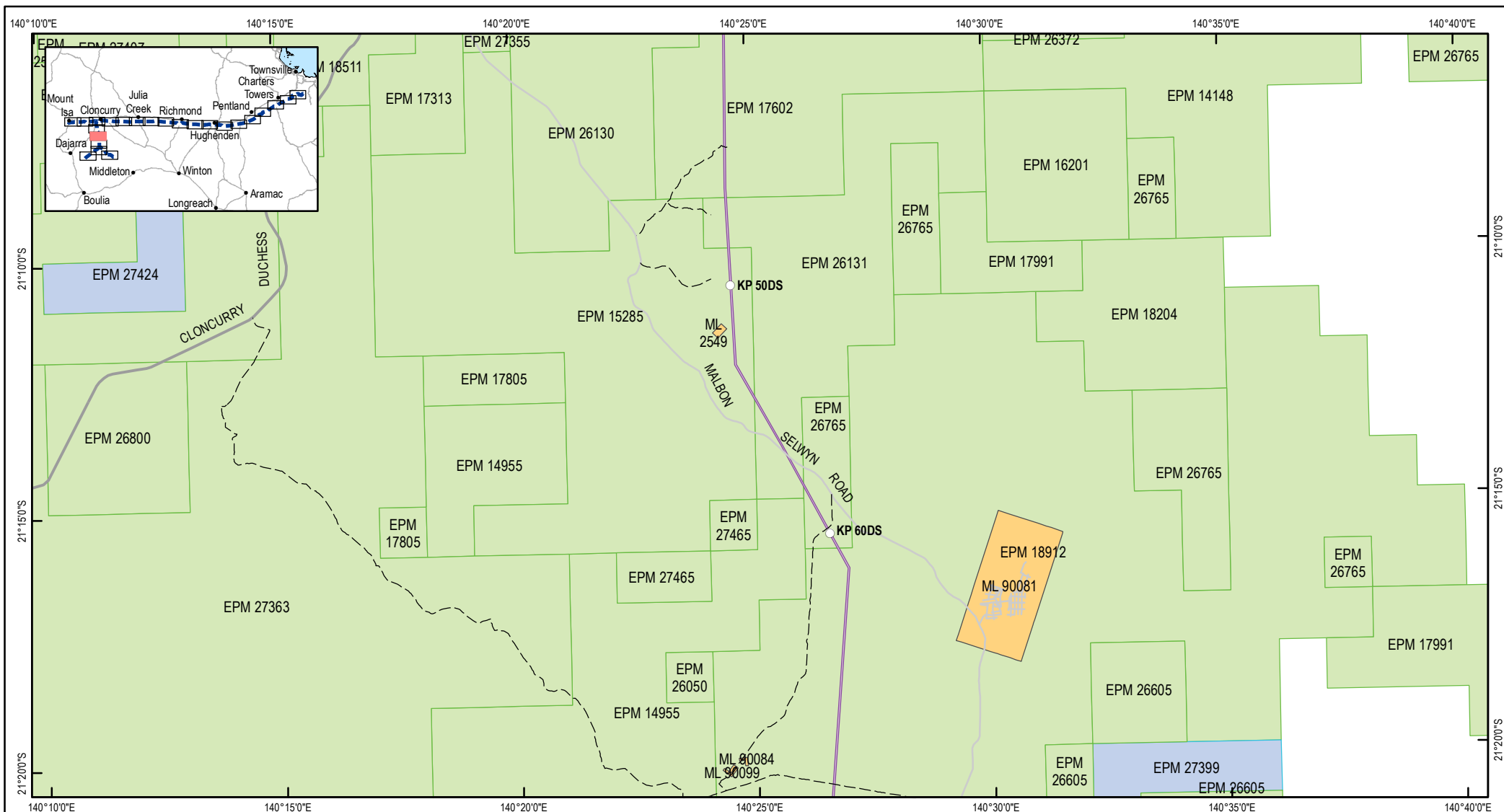












# Legend

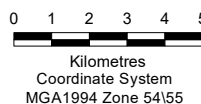
- Town/City
- Proposed Substation
- ▲ CEV Hut Site
- Kilometre Post
- ▬ 60m Easement
- ▬ Highway
- ▬ Secondary Road
- ▬ Local Connector Road
- ▬ Street
- ▬ Track
- Mining Lease
- ▨ Exploration Permit for Geothermal
- ▨ Exploration Permit for Petroleum

## Exploration Permit for Mineral

- Granted
- Application

## Exploration Permit for Coal

- Granted
- Application



### Notes/Data Sources

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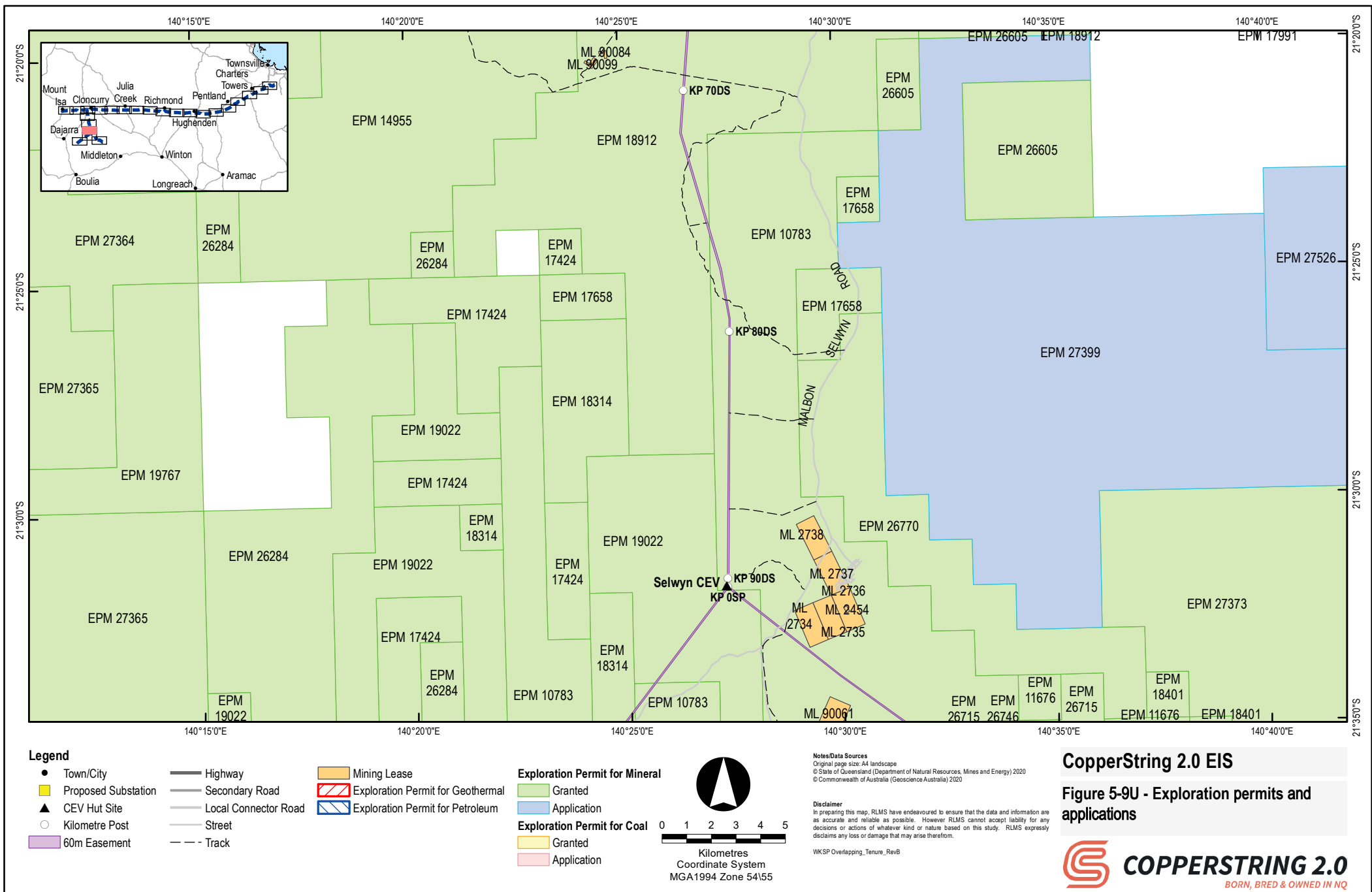
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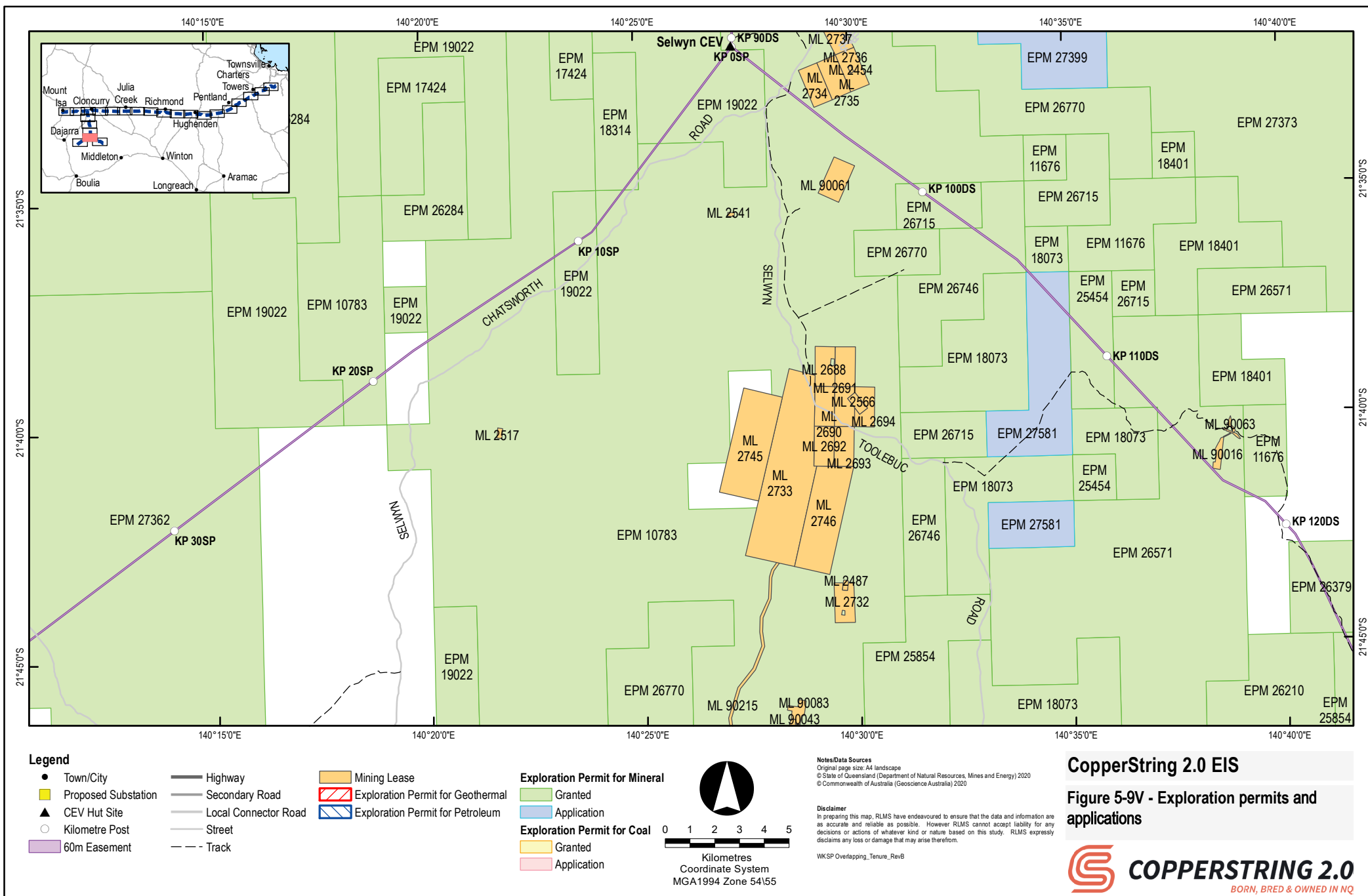
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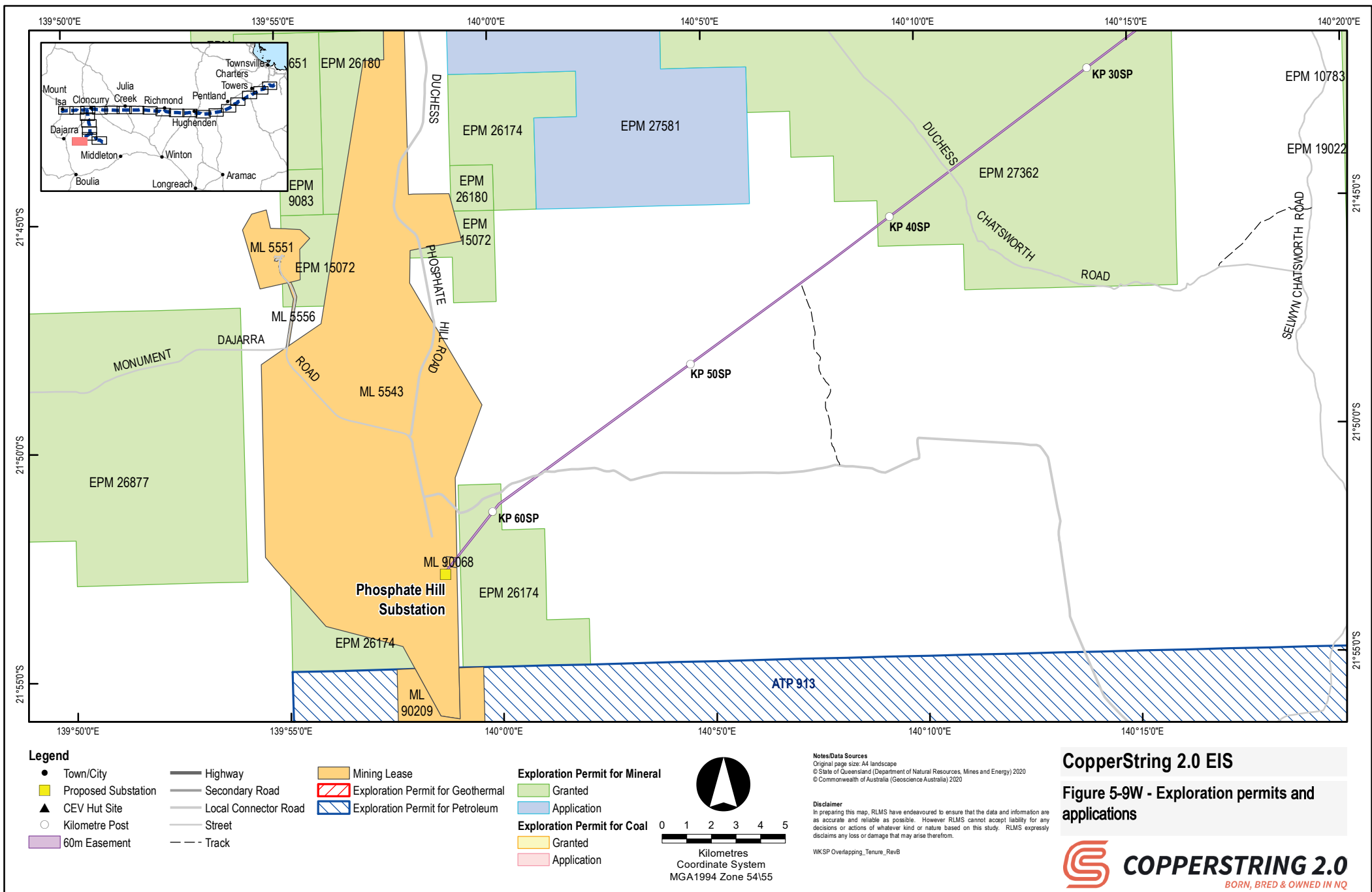
### Figure 5-9T - Exploration permits and applications

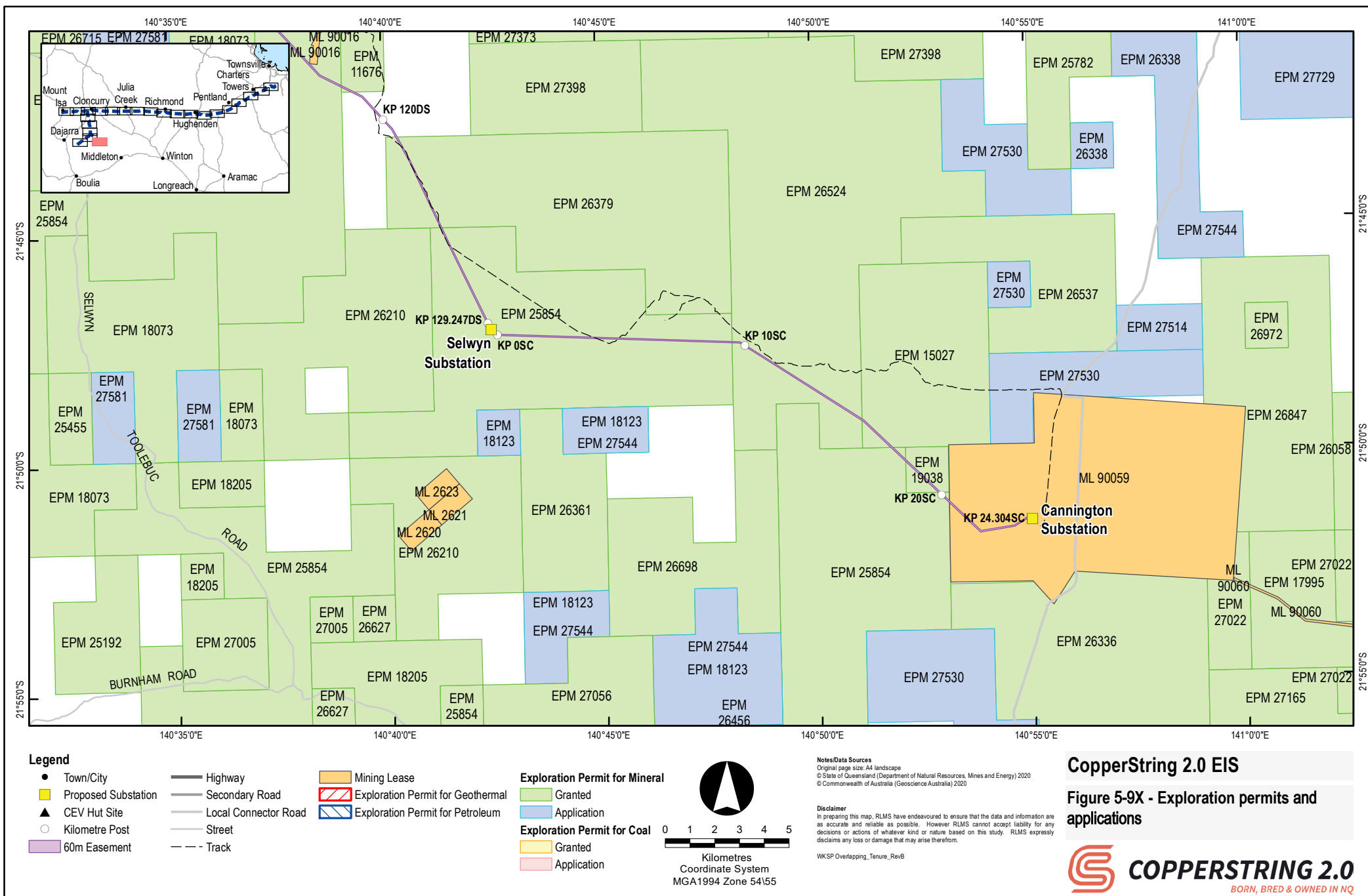


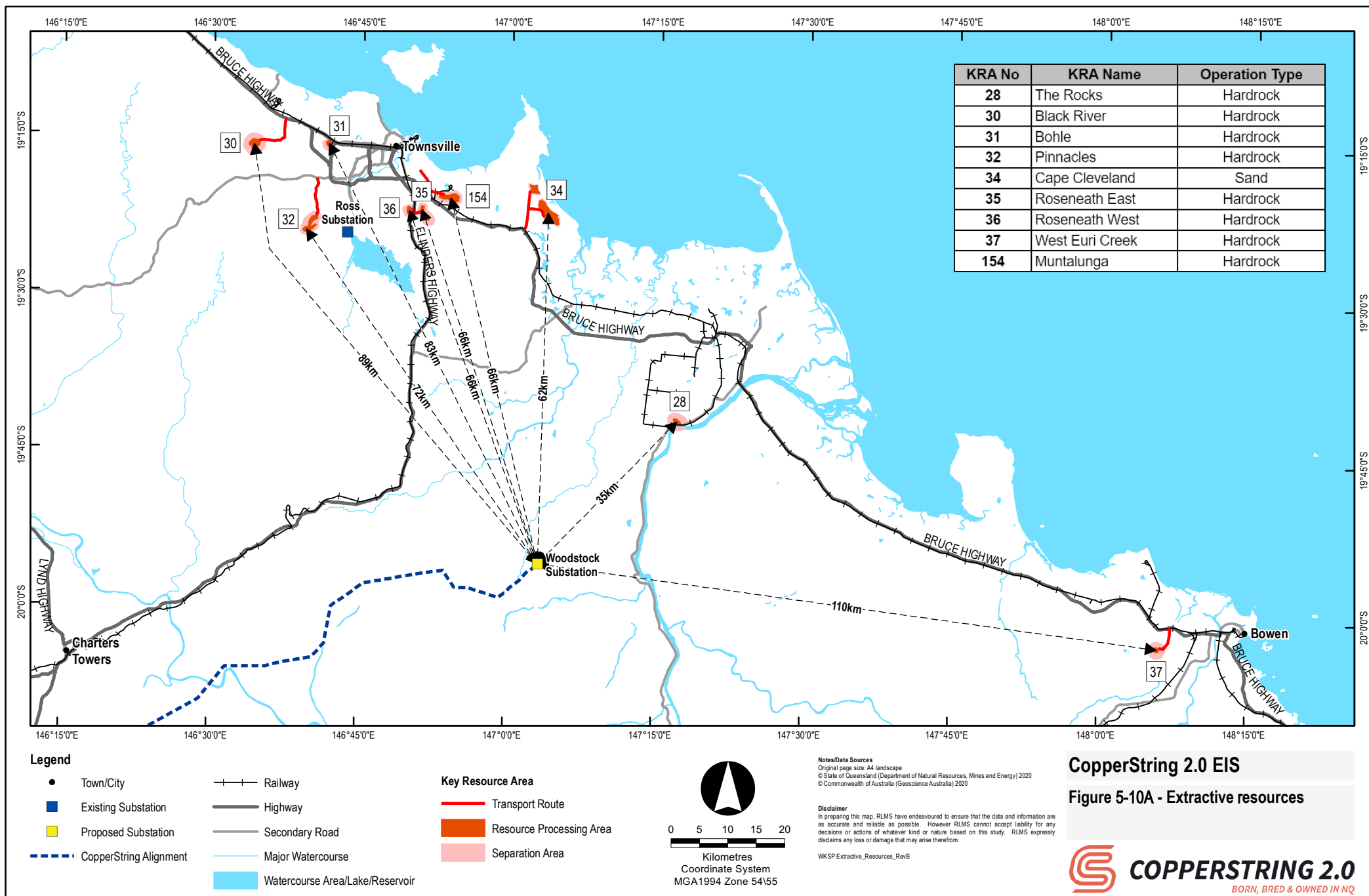




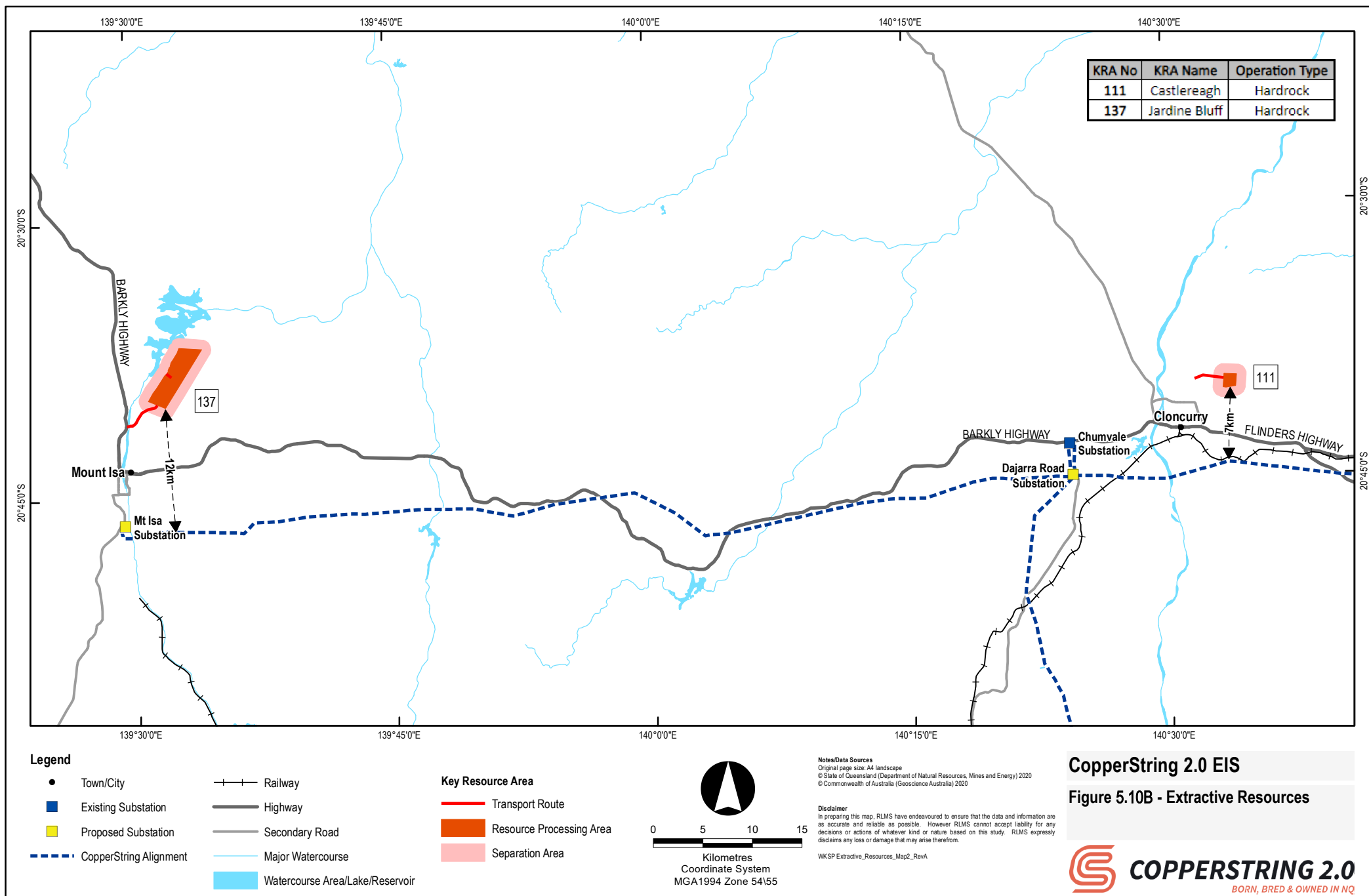


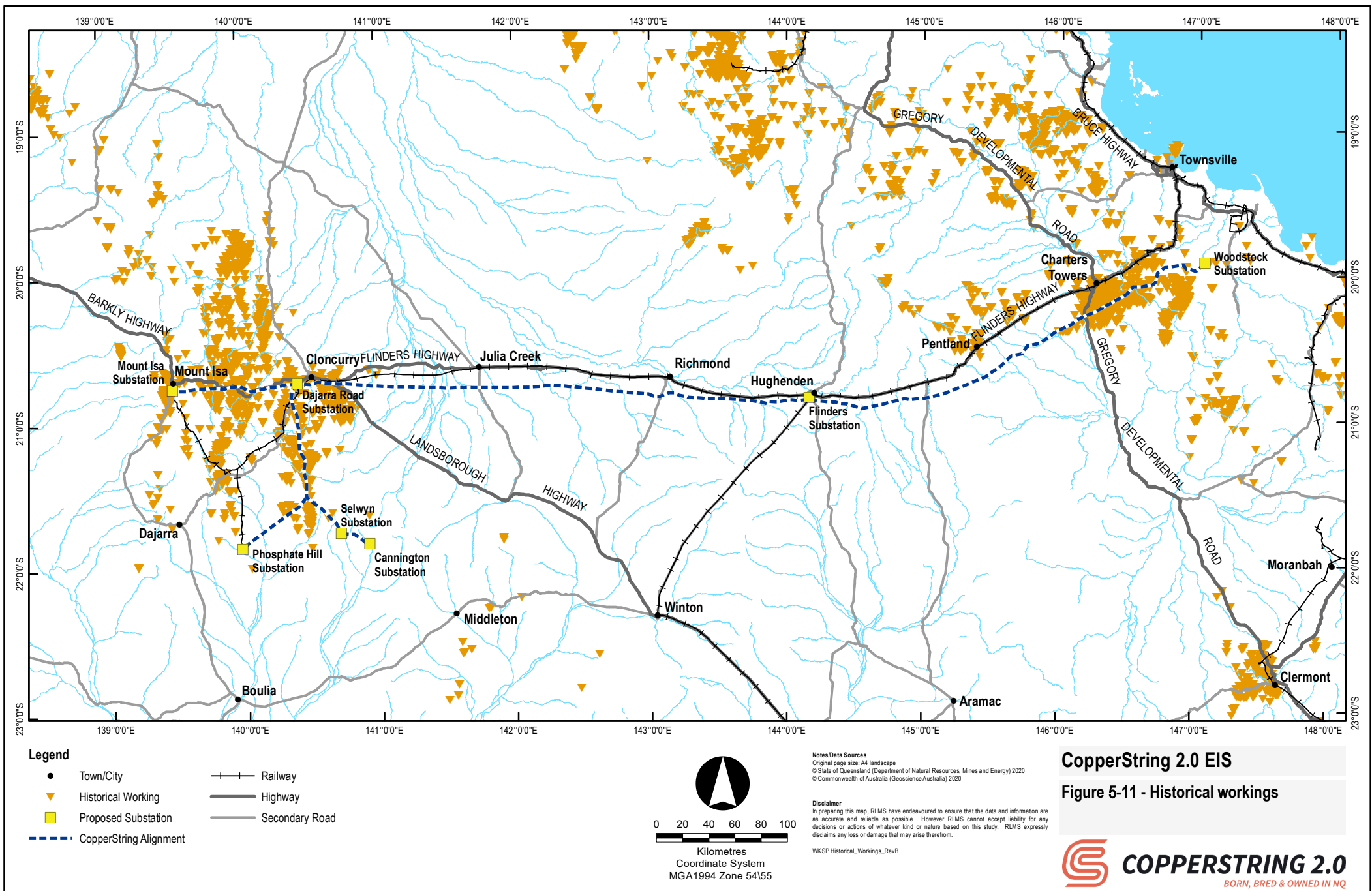












### 5.3.12 Contaminated land and UXO

#### Contaminated land

A review of properties within the Project area found none listed on the CLR. Seventeen (17) properties are listed on the EMR due to notifiable activities that have the potential to cause land contamination. These are detailed in Table 5-9 and shown on Figure 5-12.

The existing land use along the corridor selection is generally grazing native vegetation with few properties used for mining activities. Grazing activities are generally not expected to cause contamination however, some pastoral development may have operated livestock dip or spray race which have the potential to contaminate the land.

During the detailed survey of the easement and associated temporary construction sites, inspection for signs of contamination would be undertaken on properties listed on the EMR or where discussion with landholders indicated potential contamination on properties not listed on the EMR.

**Table 5-9 Properties identified on the EMR**

Lot / Plan	Notifiable activity	Traversed alignment
Lot 4026 on SP112067	Livestock dip or Spray race	KP 29-38WD
Lot 4548 on PH2196	Livestock dip or Spray race	KP 41-46WD
Lot 4004 on SP242524	Explosives production or storage Landfill Mine wastes Petroleum product or oil storage	KP 55-60WD
Lot 4924 on SP308339	Livestock dip or Spray race	KP 59-63WD
Lot 300 on SP137135	Chemical Manufacture or Formulation	KP 109-111WD
Lot 4 on DV463	Livestock dip or Spray race	KP 131-151WD
Lot 61 on GF812272	Livestock dip or Spray race	KP 170-181WD
Lot 28 on GF154	Livestock dip or Spray race	KP 189-213WD
Lot 1 on BD2	Livestock dip or Spray race	KP 669-683WD
Lot 23 on SP136472	Hazardous contaminant	KP 732WD- 733WD
Lot 922 on SP137139	Gun, pistol or rifle range	KP 41-49DM
Lot 69 on SP223507	Mine wastes	KP 57-70DS
Lot 13 on SP223510 (formerly Lot 13 on SP150177)	Engine reconditioning works Landfill Petroleum product or oil storage Mine wastes	KP 80-90DS KP 0-62SP
Lot 1 on SP150176	Chemical storage Fertiliser manufacture Landfill Mine wastes Petroleum product or oil storage	KP 63-63.38SP
Lot 5364 on SP278014 (formerly Lot 5364 on PH1891)	Mineral processing Chemical storage Engine reconditioning works Landfill Petroleum product or oil storage Mine wastes Explosives production or storage	KP 91-129.247DS KP 0-2SC
Lot 10 on SP258128	Landfill	KP 103–109WD

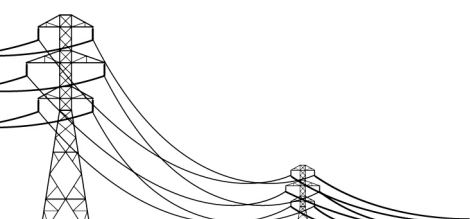
Lot / Plan	Notifiable activity	Traversed alignment
Lot 101 on SP248023	Gun, pistol or rifle range	KP 72–90DM

### Unexploded ordnance

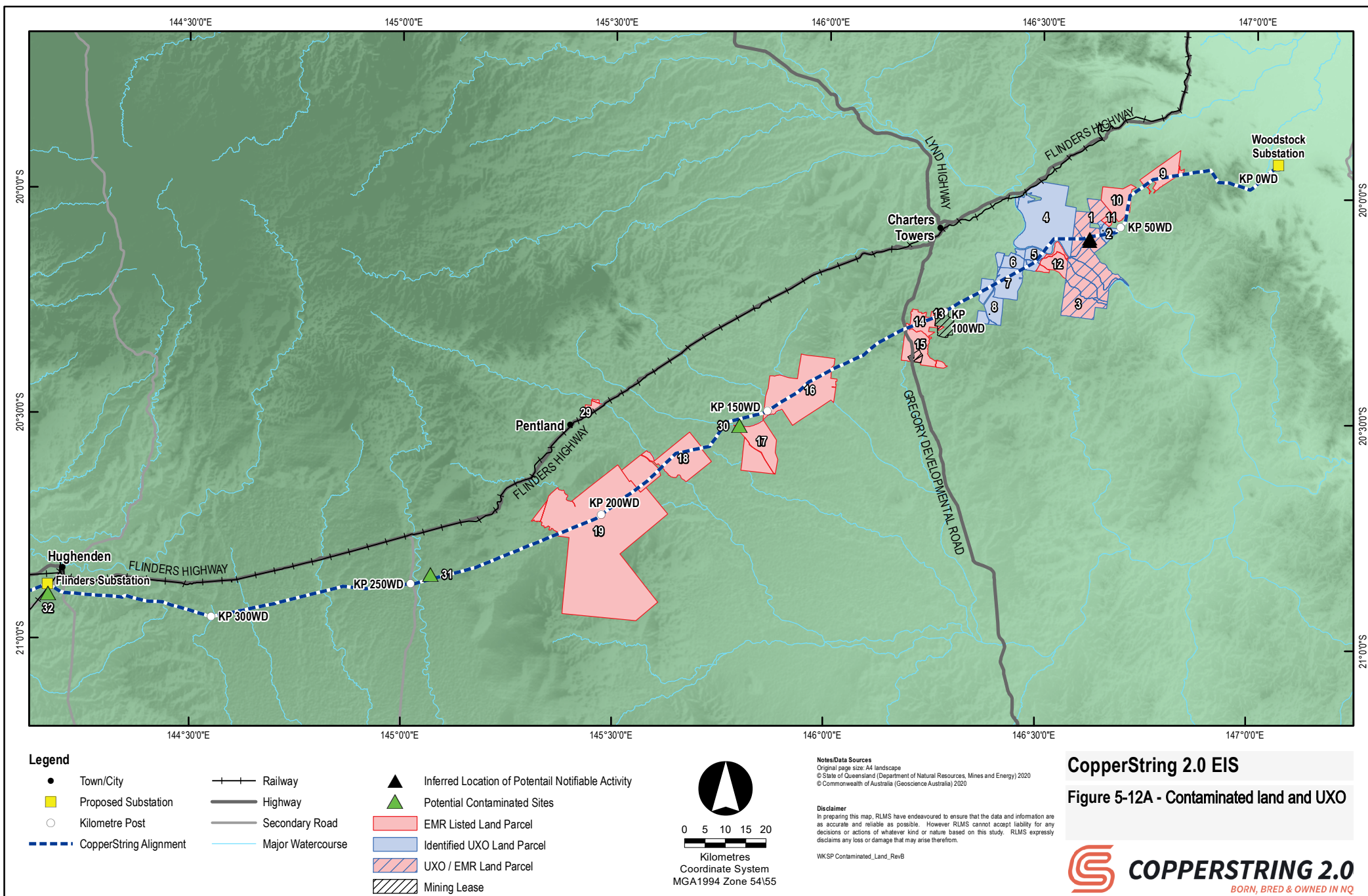
Unexploded ordnance (UXO) is ammunition such as artillery shells, mortar bombs and grenades that did not explode when used. It is a potential safety risk because it may detonate, if disturbed. It may also release chemicals that pose a risk to human health and the environment. In Queensland, it is mostly found on land formerly used by Australian and Allied Defence Forces for the live firing of explosive ordnance, particularly during World War II. Department of Defence UXO mapping identifies seven properties that may have UXO as detailed in Table 5-10 and illustrated on Figure 5-12.

**Table 5-10 Properties identified in UXO search**

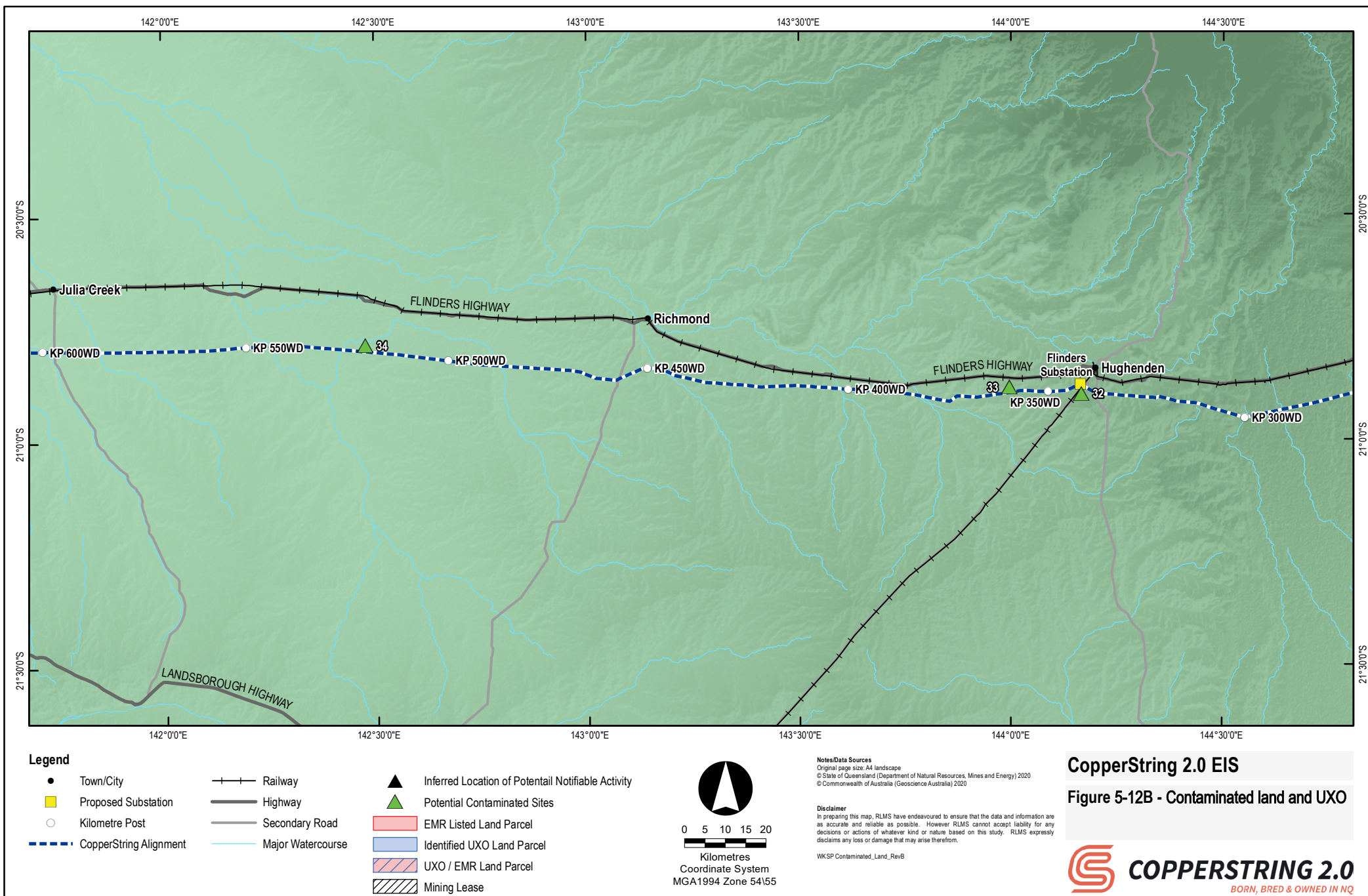
Lot / Plan	UXO category	Traversed alignment
Lot 4004 on SP242524	Slight occurrence	KP 55-60WD
	Substantial occurrence	KP 55-60WD
Lot 386 on AP2788	Slight occurrence	KP 51-55WD
Lot 4924 on SP308339	Slight occurrence	KP 59-63WD
Lot 511 on PH459	Slight occurrence	KP 58-71WD
	Slight occurrence	
	Other	
Lot 3 on DV686	Other	KP 71-78WD
Lot 4404 on PH857	Other	KP 78WD
Lot 2461 on PH293	Other	KP 78-86WD



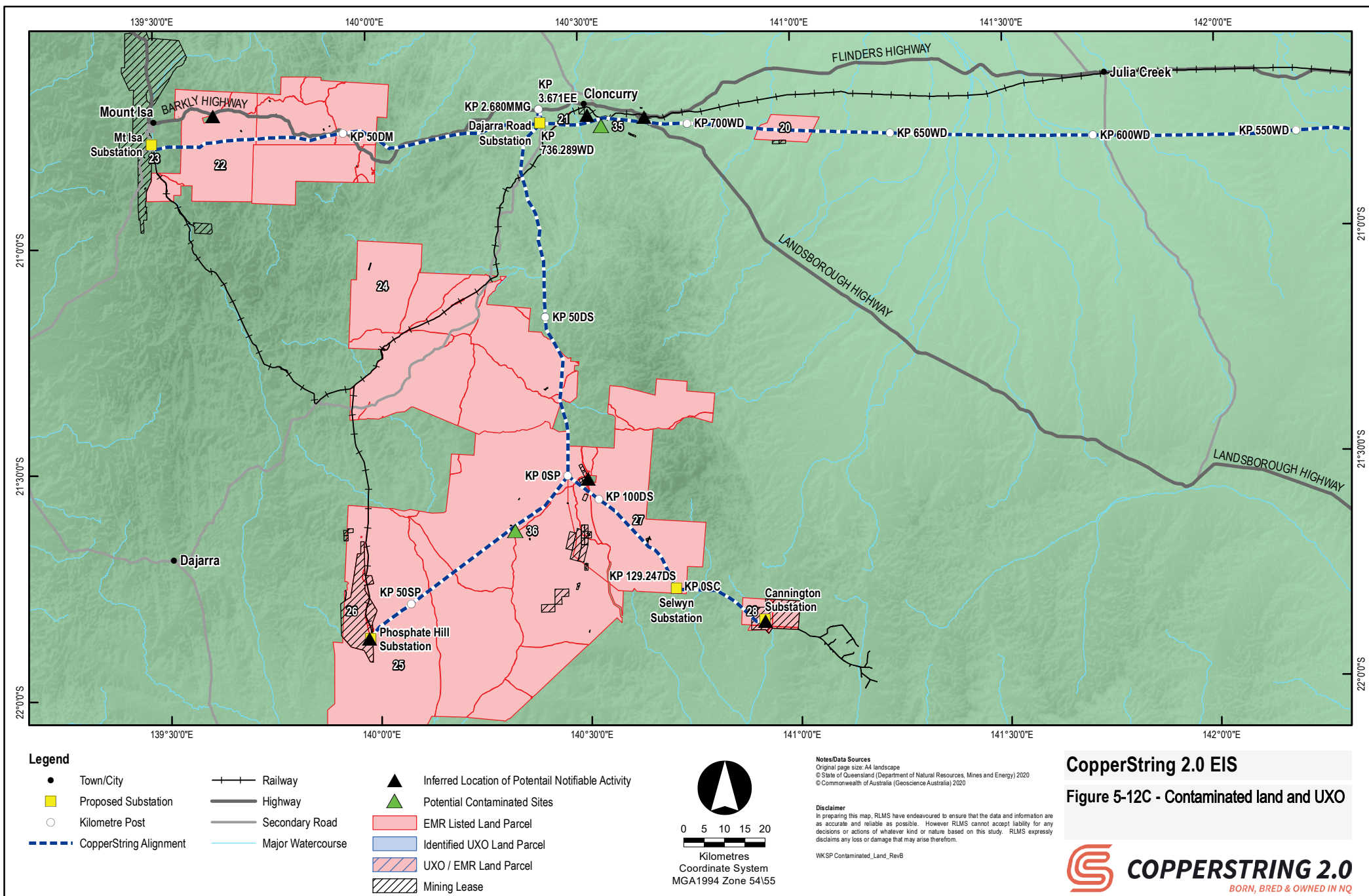












### 5.3.13 Native title

The corridor selection intersects a number of active and determined registered native title claims. Claim groups and status are listed in Table 5-11 and shown on Figure 5-13.

**Table 5-11 Native Title claims**

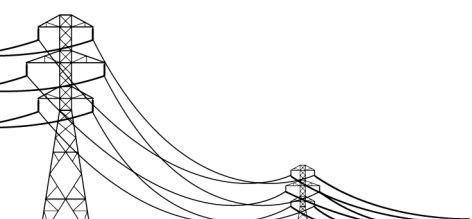
Aboriginal Party	Native Title Party Status
Birriah People	Determined native title exists.
Jangga People #2	Native Title Claimant – accepted for registration and registered 22 November 2019.
Yirendali People Core Country Claim	Determined native title does not exist.
Wanamara People Core Country Claim	Previous Native Title Claimant – claim discontinued 09 April 2010.
Mitakoodi People #3	Dismissed 4 January 2010
Mitakoodi People #5	Native Title Claimant – claim accepted for registration 21 February 2020.
Kalkadoon People #4	Determined native title exists in parts of the determination area.
Yulluna People	Determined native title exists in parts of the determination area.

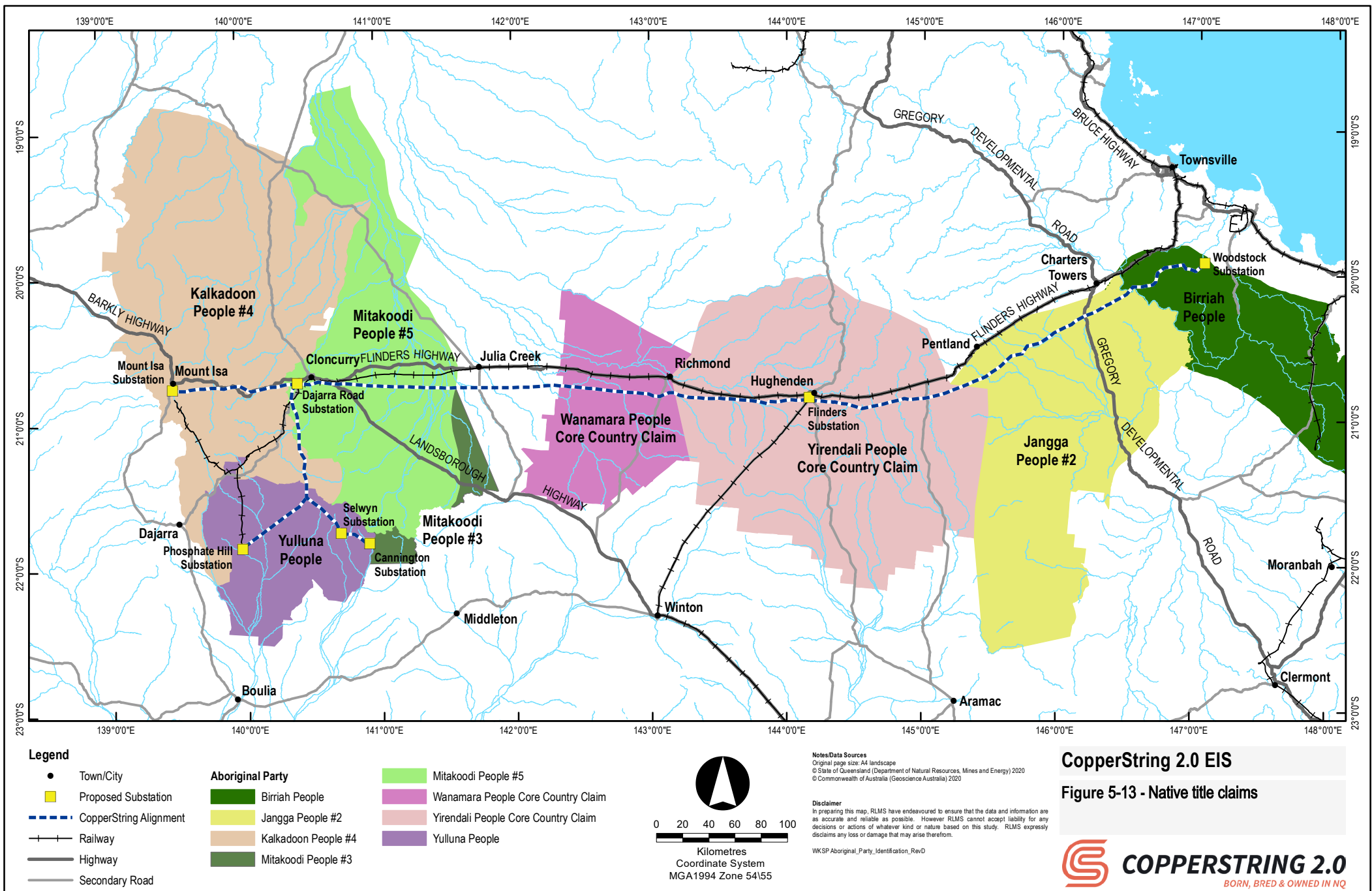
Native title has been extinguished in relation to freehold grants and perpetual leases along the corridor selection. Consequently, no native title compliance is required in relation to any project activities carried out within the boundaries of freehold land and perpetual leases. Similarly, where native title has been extinguished such declared road or public construction works, no native title compliance is required with respect to Project activities.

Native title has not been extinguished on some leasehold land. Consequently, given the primary tenure of the corridor selection is leasehold land, native title in relation to any Project activity on such land would be required.

As a result of minor changes to the Project during the preparation of the EIS, the corridor selection now intersects a small part (approximately 500 m) of the Mitakoodi #3 claim area. The Mitakoodi #3 native title claim (QC2003/004 QUD6004/2003) was dismissed in 2010 however, as the last standing claim, the Mitakoodi People have Aboriginal party status as a cultural heritage party of the area under the ACH Act.

A Cultural Heritage Management Plan (CHMP) is being prepared for the Project. Further consultation will be undertaken with the representative of the Mitakoodi People with respect to the Mitakoodi #3 claim area requirements of the CHMP.







### 5.3.14 Visual viewpoints

Volume 3 Appendix O Visual amenity provides a detailed overview of key viewpoints and potential impacts associated with the Project. The following provides a brief summary of key findings.

The visual viewpoints along the corridor selection between Woodstock and Mount Isa traverse a large range of visual landscapes including:

- Townships with historical buildings
- Existing electricity substations and power lines
- Rail yards and railway lines
- Rural cattle grazing and pastures
- Mountainous regions
- Eucalypt canopy
- Mid-story acacia scrub
- Grasslands
- Undulating hills and rocky outcrops
- Large termite mounds and red soils.

Overall, the Project area includes several important historic and cultural tourist routes. Visual sensitivity refers to the nature and duration of views. The visual sensitivity of viewpoints along these routes is increased due to the greater number of likely viewers and the greater emphasis that travellers, tourists, recreational users and local residents have on landscape appreciation. Key viewpoints and visual sensitivity are summarised in Table 5-12.

There are a number of significant townships, smaller urban localities and numerous private properties within the Project area that may have a direct view of the Project infrastructure including transmission towers, CEV huts and substations. Generally, view from townships and local roads would range from low to minimal sensitivity due to the spatial separation. Views from townships are summarised in Table 5-13.

**Table 5-12 Sensitivity of key viewpoints**

Location	Visual Sensitivity
Flinders Highway, Woodstock to Cloncurry	Low
Landsborough (Matilda) Highway, Winton to Cloncurry	Low
White Mountains National Park	Moderate
Barkly Highway (Mount Isa Riversleigh Byway), Cloncurry to Mount Isa	Moderate
Inlander Travel Train, Townsville to Mount Isa	Low
Kennedy Developmental Road (Dinosaur Way) Hughenden to Winton	Low
Richmond Winton Road (Marine Fossil Byway)	Low
Mount Walker	Low
Chinaman's Creek Dam Reserve	Moderate
Burke and Wills Memorial	Low

**Table 5-13 Views from townships**

Township	Distance to corridor selection	Visual Sensitivity
Charters Towers	~ 18 km to the southeast	Negligible
Pentland	~ 22 km to the southeast	Negligible
Hughenden	~ 5-6 km to the south	Low



Township	Distance to corridor selection	Visual Sensitivity
Richmond	~ 14 to the south	Negligible
Julia Creek	~ 15 km to the south	Negligible
Cloncurry	~ 5 km to the south	Negligible
Mount Isa	~ 5 km to the south	Low

A view from a township with a Negligible impact is determined by the distance to the corridor selection and intervening views such as vegetation. A view from a township with a Low impact is determined by the distance from the corridor and the visual context of the surrounds. For example, the corridor selection is located approximately 5-6 km south of Hughenden. While there may be some visibility of the corridor selection from Hughenden, the visual context of converging railway tracks, solar farm and other urban development in the locale reduces the visual sensitivity of the area and increases the capacity to absorb the Project without changes to the views.

### 5.3.15 Project infrastructure and activities

Volume 1 Chapter 2 Project Description highlights typical construction and operational phase infrastructure and activities associated with the Project. Indicative layouts and siting plans for temporary and operational phase infrastructure is provided in Volume 3 Appendix I Indicative Infrastructure Layout and Cross-section Drawings and Volume 3 Appendix H Tower Siting Plans. In addition to these, the following provides an overview of key activities as they relate to identified land use values.

#### Transmission towers

Transmission towers will be designed to maintain a clearance of the transmission line above local terrain in compliance with Queensland legislation. Nominal transmission tower heights and distances between transmission towers vary from 49 to 81 metres. Transmission tower heights will vary from location to location depending on the topography of each specific location.

The concept transmission tower sites have been selected after careful consideration of all physical constraints such as sensitive environmental areas, rock/soil types, significant waterways / watercourse infrastructure crossings, existing land use and amenity. The transmission towers will be sited to make the best use of available terrain providing both sound foundations whilst minimising impacts to the environment and adjacent land uses.

#### Substations

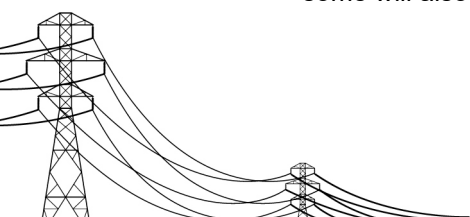
New substations will be required at Woodstock, Hughenden, Dajarra Road (Cloncurry), Mount Isa, Selwyn, Cannington and Phosphate Hill. Substations are required to perform switching, transform voltage, control stability through reactive and system strength support, and to connect to the customer or Powerlink systems.

#### CEV Huts

Optical Ground Wire (OPGW) repeater stations will be required at sites along the transmission network. Repeater stations will be located at a spacing of 80 to 120 km, close to the transmission line. The main component of the repeater stations will be a hut housing the Controlled Environmental Vault (CEV).

#### Construction camps

Temporary construction camps will house most of the construction workforce. The Project corridor selection will be segmented into eight or more construction zones, each serviced by a central camp and project office. All zones will support transmission line construction activities; some will also support substation construction activities.



Where possible, the construction camps will be located near major towns of the region, to make best use of existing services, including water supply, electricity, sewage, and air transport. The temporary construction camps will be designed to provide a high level of accommodation to industry standards and will comply with all relevant legislation and regulations, including the required building codes, occupational health and safety guidelines and local planning laws. Potential camp locations are currently being investigated in consultation with local authorities and communities to ensure minimal impacts to host communities during the construction phase.

### Laydowns

There will be one or more laydown/delivery areas for each of the construction zones along the transmission lines and one for each substation site. The laydown/delivery areas will be operational only during construction activities. Laydown areas will be along the transmission line construction route or adjacent to the rail sidings or the highway.

In some construction zones these facilities will be co-located with workforce accommodation and batch plants. Typical laydowns where located with camps provide for designated storages for various hazardous and nonhazardous substances as well as designated refuelling and washdown areas such that potential contaminating activities and substances are appropriately contained and to prevent unauthorised release to the environment.

Each site will have a construction site office to coordinate local construction activities, lunchrooms, ablutions, and workshops. The buildings are likely to be in the form of demountable huts. Electricity requirements will be provided by diesel powered generators if connection to the Ergon Energy network is not feasible.

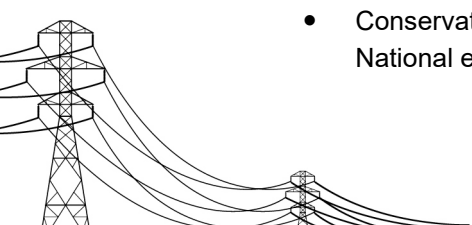
### Batch plants

Concrete batching plants will be required for the supply of concrete for foundations during the preparation and construction phases of the Project. The preferred hierarchy for the development of batching plants required for the Project is to use existing facilities, construct new batch plants adjacent to existing facilities (i.e. co-location) and construction of a new mobile batching plant adjacent to the regional construction zone areas.

### 5.3.16 Recommendations

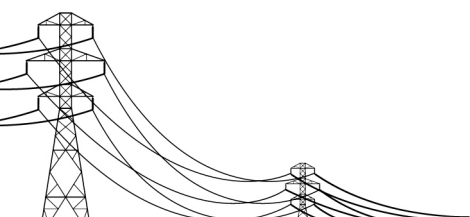
The following key recommendations are made to avoid/minimise/mitigate impacts to existing and proposed land uses in the Project area.

- Separation distances to sensitive land uses should be maintained to ensure amenity to visitors and local residents is not adversely impacted.
- For the duration of Project design and construction ongoing community engagement and consultation with stakeholders should be undertaken to provide information on infrastructure siting and construction phase activities and how they may be affected and vice versa.
- Rural land fragmentation should be avoided as far as practicable to mitigate disruptions to agricultural production. Consultation with landholders should be ongoing through detailed design, construction and operation to ensure that the needs of landholders are met, and the impact on their operations is minimised.
- Exploration and mining land should be avoided as far as practicable to mitigate disruptions to current and future mining operations. Consultation with mine operators should be ongoing through detailed design, construction and operation to ensure that the needs of mine operators are met, and the impact on their operations is minimised.
- Conservation and other areas of high biodiversity value (i.e. areas of local, State and National environmental significance) should be avoided as far as practicable to minimise



impacts on the environment and improve Project environmental outcomes. Where these cannot be avoided, appropriate design, construction and operational phase management controls should be implemented.

- Stock route networks should be avoided as far as practicable to mitigate disruptions to stock movements, emergency agistment and grazing and associated native flora and fauna, remnant vegetation and Indigenous and non-Indigenous cultural heritage values. Where these cannot be avoided, appropriate design, construction and operational phase management controls should be implemented.
- Existing and future infrastructure corridors should be avoided as far as practicable to mitigate disruptions to safety and efficiency of the networks. Where these cannot be avoided, appropriate design, construction and operational phase management controls should be implemented. Consultation with relevant stakeholders should be ongoing through detailed design, construction and operation to ensure that the needs of owner/operators of existing and future infrastructure are met, and the impact on their operations and to the relying communities is minimised.
- State, regional and local planning instruments should be reviewed for Project consistency with desired land use planning and environmental outcomes. Relevant State, regional and local planning and environmental approvals should be obtained for all permanent and temporary Project infrastructure where applicable.
- Indigenous cultural heritage sites and other cultural heritage features that have been identified should be avoided to mitigate impacts to cultural values. CHMPs should be developed in consultation with relevant Aboriginal parties to identify and manage incidental finds during the Project's construction phase.
- Disused and abandoned workings should be avoided to mitigate risk to Project personnel and property. Where these are in proximity to Project infrastructure or construction activities, appropriate controls should be implemented to ensure they are identified and avoided.
- Sites on the EMR and identified as potentially containing UXO should be avoided as far as practicable to mitigate risk to Project personnel and property and disturbance and management of contaminated materials. Where these cannot be avoided, appropriate design and construction phase controls should be implemented. Consultation with relevant stakeholders e.g. landholders and Defence should be ongoing through detailed design and construction to assist in further identification and delineation of potentially contaminated land and UXO site. Where contaminated land or UXO is identified these shall be managed in accordance with relevant legal requirements.
- In-principle approval for the construction of the Project prior to registration of easements on State leasehold land should be obtained from DNRME. In-principle approval should be appropriately conditioned with consideration to landholder consent, cultural heritage and native title assessments and insurance requirements.
- The height of towers should be minimised as far as practicable with consideration to other physical constraints (e.g. vegetation, infrastructure, etc) to mitigate impacts to visual amenity. Towers and other infrastructure should be located as far as practicable from sensitive viewpoints (e.g. sensitive roadways or viewing locations). Where this cannot be achieved, vegetative screening to substations and maintenance areas should be considered.





## 5.4 Impact assessment and mitigation measures

### 5.4.1 Planning and design response

The follow outlines high-level planning and design measures that will be adopted in response to recommendations made in section 5.3.16 to avoid/mitigate/minimise impacts on land uses from Project infrastructure and activities. Further detailed impact and mitigation assessment is provided in section 5.4.11.

It should be noted that Volume 3 Appendix D Corridor selection report and Volume 3 Appendix C Public consultation report are the primary mechanisms that have considered feasible alternatives of the Project's configuration and alignment, including individual elements such as associated infrastructure and access routes. These have considered environmental, social and economic impacts of various configurations and outline how the preferred corridor was selected.

In addition to these, drawings showing indicative placement of transmission towers are included in Volume 3 Appendix H Tower siting plans. The concept transmission tower sites have been selected after careful consideration of all physical constraints such as sensitive environmental areas, rock/soil types, significant waterways / watercourse infrastructure crossings, existing land use and amenity. The transmission towers will be sited to make the best use of available terrain providing both sound foundations whilst minimising impacts to the environment and adjacent land uses.

Volume 3 Appendix R Field development plan provides further guidance to the design and field preparation teams regarding areas for avoidance or limited disturbance. Four environmental constraint classes with graduated levels of Environmental sensitivity (environmental constraint classes) have been developed. Three of the constraints describe conservation and other areas of high biodiversity value. These are specifically addressed in Volume 2 Chapter 7 Flora and fauna and Volume 2 Chapter 18 Matters of national environmental significance. Environmental Constraint B includes contaminated sites and UXO and areas of cultural significance that are relevant to this Chapter. The protocols for managing environmental constraint Class B sites are as follows:

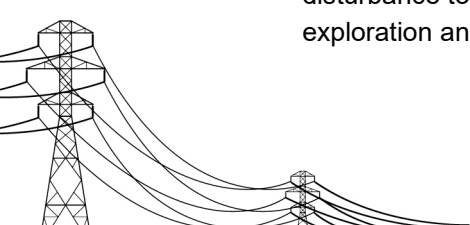
- Avoid
- Minimise
- Mitigate
- Post construction surveys
- Remediation.

### 5.4.2 Land uses

There is not expected to be any significant changes to land uses as a result of the Project or associated activities. Project infrastructure which may impact on land use includes:

- Temporary construction camps, laydown and batch plants
- Access tracks for construction, operation and maintenance
- Permanent substations and CEV huts
- Transmission line tower infrastructure.

Impacts associated with these can generally be addressed and subsequently avoided or minimised during the detailed design phase of the Project. Impacts to land uses include disturbance to existing landholders, sensitive land uses, general rural agricultural production, exploration and mining operations, existing and future infrastructure corridors.



Some disruption would occur to existing land uses during Project construction. However, activities such as construction camps, laydown and delivery areas are temporary and will be removed from the landscape.

The primary method for reducing potential impacts to these is to avoid areas that may present a conflict with landholders current and future land uses. This will require ongoing engagement and consultation with landholders and stakeholders to exchange information on Project infrastructure design and siting and construction phase activities and understanding how land use conflicts can be managed.

This has already begun, with several major changes to the corridor selection being made with details outlined in Volume 3 Appendix D Corridor selection report. One example of this was realigning the corridor selection to avoid the Kennedy Wind Farm.

#### **5.4.3 State, regional and local planning interests**

Volume 1 Chapter 4 Legislation and approvals provides a description of legislation, policies, statutory plans and how they are applicable to the planning, construction or operational stages of the Project. It also includes an assessment of State, regional and local government planning policies and schemes applicable to the Project and register identifying post-EIS permits and approvals including the regulatory authorities, legislative triggers or exemptions, self-assessment or code requirements with reference to the various components of the Project.

The Project is considered to be compatible with the provisions of the SPP and Regional Plans advancing sustainable growth in the regions. An assessment of each SDAP Code has been provided in Volume 3, Appendix N SDAP Assessment Report and is considered to comply with the desired outcomes.

Regional interests (i.e. priority agricultural area, a priority living area, strategic cropping area or strategic environmental area) are not impacted by the corridor selection. A regional interest development approval will not be required under the RPI Act.

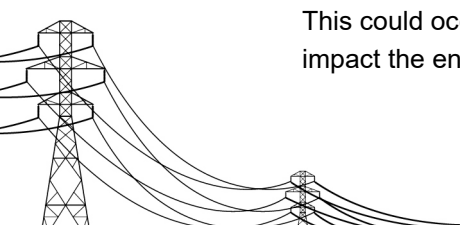
#### **5.4.4 Disused and abandoned workings**

Disused and abandoned workings are primarily concentrated around Charters Towers, Pentland, Cloncurry and Mount Isa. These will be avoided in detailed design through further refinement of transmission towers siting. However, unidentified disused or abandoned workings may become apparent during the construction phase. Disused or abandoned workings would be a threat to the safety of personnel and potential source of land contamination.

#### **5.4.5 Contaminated land**

A review of properties within the Project area found none listed on the CLR. Seventeen (17) properties are listed on the EMR due to notifiable activities that have the potential to cause land contamination. Activities such as livestock dips, fuel storage and landfills have the potential to result in land contamination. These will be avoided in detailed design by further refinement of transmission towers siting through discussion with landholders to further delineate known sites and identify potential contamination on properties not listed on the EMR. Where these cannot be avoided, soil investigations shall be undertaken to confirm contamination status and further inform Project design or management requirements (i.e. removal and disposal). If contaminated land is identified, soils shall be disposed of by a licensed waste contractor (refer Volume 2 Chapter 12 Waste management) or otherwise remediated based on findings of the soil investigation.

There is the potential that construction and operational activities may result in contamination. This could occur through leaks and spills of fuels or other hazardous substances, which could impact the environment and future land uses. Further detail regarding design response and



management controls associated with potentially contaminating activities such as accidental spills/release of contaminants, operation of sewage treatment plants is provided in Volume 2 Chapter 9 Water resources and water quality, Volume 2 Chapter 17 Hazards, health and safety and Volume 3 Appendix Q Framework and environmental management plan.

Generally, where Project activities have potentially resulted in widespread land contamination, soil investigations will be undertaken to confirm contamination status of the land and any remediation action required. These will be completed by suitable qualified and experienced persons in accordance with contemporary guidelines and standards.

#### **5.4.6 UXO**

Department of Defence UXO mapping identified seven properties that may have UXO. These will be avoided in detailed design through further refinement of transmission towers siting and consultation with relevant stakeholders including the Department of Defence. Where it is identified that there is a risk of encountering UXO further investigations will be undertaken in consultation with qualified UXO investigation and remediation contractors or consultants to confirm UXO status and further inform Project design or management requirements.

#### **5.4.7 Native title**

Native title has been extinguished in relation to freehold grants and perpetual leases along the corridor selection. Consequently, no native title compliance is required in relation to any project activities carried out within the boundaries of freehold land and perpetual leases. Similarly, where native title has been extinguished such declared road or public construction works, no native title compliance is required with respect to Project activities.

Native title has not been extinguished on some leasehold land. Consequently, given the primary tenure of the corridor selection is leasehold land, native title in relation to any Project activity on such land would be required.

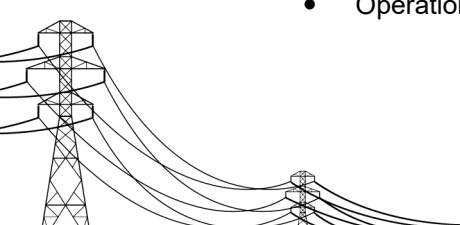
The Project is utilising Option Agreements for the purposes of acquiring the lands required for easement. The Option Agreements allow for access to lands for construction prior to the registration of any the easement and require CuString has the insurances required in accordance with the requirements of DNRME.

Preliminary native title assessments in accordance with the NT Act have been undertaken and the entirety of the Project will be subject to suppression of Native Title in accordance with Section 24KA of the NT Act.

#### **5.4.8 Land acquisition**

The process of securing and managing land tenure for the Project life cycle falls into eight distinct steps. Specific negotiations shall apply at each step. Land agents shall maintain the relationship with landholders throughout each step. The Land Tenure steps include:

- Route selection and landholder agreement on alignment
- Access and approval conditions
- Valuation and easement purchase price
- Agreement for easement including terms and conditions to attach to the land
- Construction
- Rehabilitation of construction disturbances
- Operation



Mining tenures would be managed similarly to landholders through notification of the Project and the crossing of the proposed easement on the individual tenement. Adjustment of the corridor to avoid sterilisation of a commercial mineral resource would be considered through negotiation with the tenement holder and DNRME.

Further details are provided in Volume 3 Appendix E Land acquisition protocol.

#### **5.4.9 Stock routes**

There is only one primary and several secondary/minor stock routes that would be intersected by the corridor selection. The primary route is positioned within the Julia Creek Kynuna Road and is located in an area bordering the road. Stock routes are not allowed to be fenced or blocked as stated in the SRM Act. To avoid interfering with the connectivity of stock routes Project infrastructure including temporary facilities such as laydown areas and construction camps shall not be placed within the interesting stock routes.

#### **5.4.10 Visual viewpoints**

Volume 3 Appendix O Visual amenity summarises potential impacts associated with the Project to key viewpoints as being negligible to low.

There are few mitigation techniques that can reduce the visual impacts of this Project due to the size of the towers, length of the Project and character of the infrastructure. Furthermore, the location of the corridor selection has already anticipated visual amenity in Volume 3 Appendix D Corridor selection report.

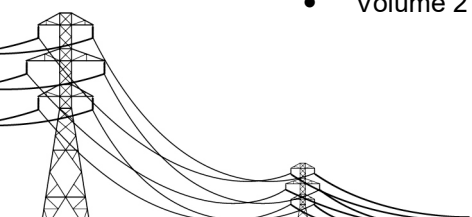
Currently, the corridor selection minimises the number of intersections with other infrastructure, which would require the use of taller towers, and has avoided towns along the alignment by running a distance to the south of the Flinders Highway. The corridor selection has been modified since the final corridor from 2010, to minimise intersections with current farm infrastructure, conservation and other areas of high biodiversity value (e.g. mapped 'of concern' ecosystems) and cultural heritage sites and other cultural heritage features (refer Volume 2 Chapter 15 Cultural heritage).

Subject to other technical design considerations described in section 5.4.1), there is some limited scope to consider the placement of towers at critical locations, as well as some vegetative screening to substations. This will be further considered during the detailed design phase of the Project.

#### **5.4.11 Summary of mitigation measures**

Table 5-14 summarises mitigation and management measures proposed to manage potential impacts to land uses across all Project phases. Refer to Appendix Q Framework and environmental management plan for additional monitoring responsibilities and requirements for each Project phase. Primary planning and design response controls described in 5.4.1 through 5.4.10 that will avoid/mitigate/minimise impacts to land are also summarised here. Reference should also be made to mitigation and management measures outlined in the following which are not repeated within this chapter:

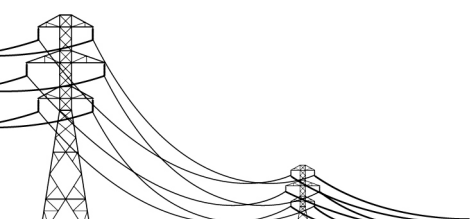
- Volume 2 Chapter 12 Waste management
- Volume 2 Chapter 13 Transport
- Volume 2 Chapter 14 Social
- Volume 2 Chapter 15 Cultural heritage
- Volume 2 Chapter 17 Hazards, health and safety.



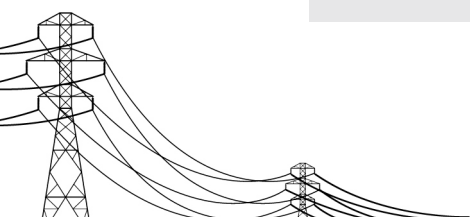


**Table 5-14 Summary mitigation and management measures**

Timing	Mitigation and Management Measures
Planning and design	Where possible, the construction camps will be located near major towns of the region, to make best use of existing services. Potential camp locations will be further investigated in consultation with local authorities and communities to ensure minimal impacts to host communities during the construction phase.
	The transmission towers will be sited to make the best use of available terrain providing both sound foundations whilst minimising impacts to the environment and adjacent land uses
	Project infrastructure and activities will avoid areas that may present a conflict with landholders current and future land uses.
	There will be ongoing engagement and consultation with landholders and stakeholders to exchange information on Project infrastructure design and siting to investigate how land use conflicts can be managed.
	Disturbance to potentially contaminated land will be avoided through discussion with landholders to further delineate known sites and identify potential contamination on properties not listed on the EMR. Site Project infrastructure and activities will be located away from potentially contaminated land.
	Where potentially contaminated land cannot be avoided, soil investigations shall be undertaken to confirm contamination status and further inform Project design or management requirements (i.e. removal and disposal).
	If contaminated land is identified, disturbed soils shall be disposed of by a licensed waste contractor (refer Volume 2 Chapter 12 Waste management) or otherwise remediated based on findings of the soil investigation.
	Further consultation with landholders and other stakeholders such as the Department of Defence will be undertaken to further define UXO risk.
	Where it is identified that there is a risk of encountering UXO further investigations will be undertaken in consultation with qualified UXO investigation and remediation contractors or consultants to confirm UXO status and further inform Project design or management requirements.
	In-principle approval for the construction of the Project prior to registration of easements on State leasehold land will be sought from DNRME. In-principle approval should be appropriately conditioned with consideration to landholder consent, cultural heritage and native title assessments and insurance requirements.
	Landholder agreements will be secured and managed in accordance with Volume 3 Appendix E Land acquisition protocol.
	Project infrastructure including temporary facilities such as laydown areas and construction camps will not be placed where they interfere with the operation of stock routes.
	Transformer installations will be designed with oil containment bunds and oil interception systems to minimise the risk of an oil spill escaping into the environment.
	Biodegradable oils may be used where technically feasible to mitigate significant environmental risk. This will be further investigated during the detailed design phase.
	Transformers and other equipment will be designed where possible to eliminate the requirement for fire water deluge systems. Where technically feasible, fire resistant transformer oil will be used to prevent the escalation of transformer faults into fire. Gaseous fire suppression will be considered during the safety in design risk assessment processes and only installed if warranted. This will be further investigated during the detailed design phase.



Timing	Mitigation and Management Measures
	<p>Mitigation and management measures detailed in Volume 3 Appendix O Visual amenity will be reviewed and considered in detailed design including:</p> <ul style="list-style-type: none"> <li>Locating towers so that they are at the maximum distance from sensitive viewpoints, so that they are viewed against a more visually absorptive background or so that intervening landform will block views</li> <li>Vegetation screening at views from Flinders Highway and Cloncurry Dajarra Road to substations.</li> </ul>
Construction and operations	<p>There will be ongoing engagement and consultation with landholders and stakeholders to exchange information on Project construction activities to investigate how land use conflicts can be managed. Information to be provided will include:</p> <ul style="list-style-type: none"> <li>Identification of activities</li> <li>Identification of timeframes</li> </ul>
	<p>Safety management systems to respond to incidental finds of disused and abandoned mines will be developed generally including:</p> <ul style="list-style-type: none"> <li>Stop work</li> <li>Isolate and prevent personnel from entering area</li> <li>Report to Supervisor and abandon mines at DNRME</li> </ul>
	<p>Safety management systems to respond to incidental finds of UXO will be developed generally including:</p> <ul style="list-style-type: none"> <li>Stop work</li> <li>Isolate and prevent personnel from entering area</li> <li>Contact POLICE they will arrange for military experts to attend and dispose of it</li> </ul>
	<p>Rehabilitation will occur progressively as detailed within in Volume 3 Appendix T Concept Rehabilitation Plan to ensure construction areas are closed and returned to the desired land use.</p>
	<p>Bulk hazardous material storage will be at designated laydowns and will be in accordance with current Australian Standards and industry codes of practice</p>
	<p>Laydowns will include designated refuelling and washdown areas such that potential contaminating activities and substances are appropriately contained and to prevent unauthorised release to the environment. General wash bay design criteria are provided in Volume 3 Appendix U Concept Biosecurity Plan.</p>
	<p>Day to day fuels, chemicals, wastes and other potentially environmentally hazardous substances will be provided with appropriate containment /bundling</p>
	<p>Mobile refuelling will take place away from watercourses and waterways. Spill kits will be available during refuelling. Portable bunds for refuelling will be used in the field.</p>
	<p>Plant and equipment will be regularly inspected and checked for oil leaks in accordance with daily, weekly, monthly inspection checklists (as applicable).</p>
	<p>Plant and equipment will be regularly maintained in accordance with manufacturers specifications.</p>
	<p>Emergency response protocols and procedures for implementation in the event of a contaminant spill or leak will be developed. Personnel will be appropriately trained in their implementation and use of associated equipment.</p>
	<p>Where Project activities have resulted in widespread land contamination, soil investigations will be undertaken to confirm contamination status of the land and any remediation action required. These will be completed by suitable qualified and experienced persons in accordance with contemporary guidelines and standards</p>

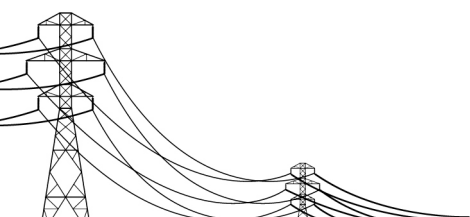


Timing	Mitigation and Management Measures
Operations	Vegetation will be managed to ensure adequate clearances to transmission lines is provided in accordance with contemporary industry standards. Low growing vegetation that poses no threat to the reliability and safety of the transmission line will not be removed except to provide maintenance access or to reduce the potential for bushfire by removing fuel build up.

Table 5-15 summarises potential impacts to land uses including unmitigated and mitigated risk ratings.

**Table 5-15 Summary of potential impacts and risk mitigation**

Activities	Associated Potential Impacts	Unmitigated Risk Rating	Mitigated Risk Rating
Construction and Operations	Conflict with sensitive uses e.g. temporary camps and laydowns	Moderate	Low
	Disturbance to landholder practices or infrastructure such as stock yards, buildings	Moderate	Low
	Interruption to landholder activities (restricted access during construction)	Moderate	Low
	Rural land fragmentation	Low	Low
	Disturbance to exploration and mining operations	Moderate	Low
	Disturbance to stock routes including stock movements, emergency agistment and grazing and associated native flora and fauna, remnant vegetation and Indigenous and non-Indigenous cultural heritage values	Moderate	Low
	Disturbance to safety and efficiency of the current and future infrastructure corridors	Moderate	Low
	Disturbance to State, regional and local planning interests	Low	Low
	Disturbance to disused and abandoned workings including threat to safety, damage to property and potential source of contamination	Moderate	Low
	Disturbance to contaminated land i.e. livestock dips or spray race operations, wastes, landfill sites, chemical manufacture, mineral processing, fertiliser manufacture	Moderate	Low
	Spread of contaminants including to offsite properties or other sensitive land uses.	Moderate	Low
	Leaks and spills of fuels or other environmentally hazardous substances (e.g. concrete wash water), which could impact the environment and future land use.	Moderate	Low
	Disturbance to UXO including threat to safety, damage to property and potential source of contamination	High	Low
	Disturbance to Indigenous cultural heritage sites and other cultural heritage features	Moderate	Low
	Conflict with Native Title claims	Moderate	Low
	Disturbance to the visual landscape and visual amenity.	Low	Low



## 5.5 Conclusion

The Project traverses predominantly rural land uses generally being agricultural production from relatively natural environment (e.g. cattle grazing) with individual land parcels being a mix of freehold and leasehold land. A range of other land uses are present in the Project area including road, rail, gas and other electrical infrastructure in addition to exploration and mining activities.

These activities underpin the State, regional and local land use planning instruments that apply to the land which also encourage sustainable development that protects the biodiversity values of the region.

The Project area is subject to a number of constraints associated with historical and current land use practices such as potentially contaminated land and UXO.

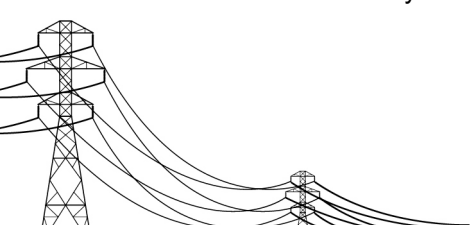
Indigenous cultural heritage sites and other cultural heritage features have been identified in the Project area associated with the various Aboriginal parties that occur within the corridor selection. Parts of the Project area are also subject to native title claims from these Aboriginal parties.

The visual landscape of the Project area reflects the various land uses present. The Project area includes several important historic and cultural tourist routes. Visual sensitivity of viewpoints along these routes is increased due to the greater number of likely viewers and the greater emphasis that travellers, tourists, recreational users and local residents have on landscape appreciation.

While the Project is a major infrastructure project, the construction methodology is not technically complex, and the sequence of tasks is repetitive for both the transmission line and substation construction processes. The majority of impacts relating to land have potential to occur during the construction phase of the Project. Operations and maintenance activities will generally be limited to vegetation management, access track maintenance and life cycle replacement.

Commitments to manage potential impacts to land use can be generally summarised as follows:

- Separation distances to sensitive land uses will be maintained to ensure amenity to visitors and local residents is not adversely impacted.
- There will be ongoing engagement and consultation with landholders and stakeholders to exchange information on Project infrastructure design and construction to investigate how land use conflicts can be managed.
- Rural land fragmentation and disturbance to landholder practices will be avoided as far as practicable to mitigate disruptions to agricultural production.
- Exploration and mining land will be avoided as far as practicable to mitigate disruptions to current and future mining operations.
- Project infrastructure including temporary facilities such as laydown areas and construction camps will not be placed where they interfere with the operation of stock routes.
- Disused and abandoned workings will be avoided to mitigate risk to Project personnel and property.
- Disturbance to potentially contaminated land will be avoided through discussion with landholders to further delineate known sites and identify potential contamination on properties not listed on the EMR. Site Project infrastructure and activities will be located away from potentially contaminated land.



- Where it is identified that there is a risk of encountering UXO further investigations will be undertaken in consultation with qualified UXO investigation and remediation contractors or consultants to confirm UXO status and further inform Project design or management requirements.
- In-principle approval for the construction of the Project prior to registration of easements on State leasehold land will be sought from DNRME. In-principle approval should be appropriately conditioned with consideration to landholder consent, cultural heritage and native title assessments and insurance requirements.
- Landholder agreements will be secured and managed in accordance with Volume 3 Appendix E Land acquisition protocol.
- Mitigation and management measures detailed in Volume 3 Appendix O Visual amenity will be reviewed and considered in detailed design including tower heights, tower placement and vegetation screening for substations.

Planning and design response measures will provide the greatest benefit to Project impact mitigation. These will require further refinement through further consultation with landholders and other key stakeholders including Council, State Government departments.

Construction phase controls will be best practice with key commitments addressing identified impacts listed herein. These will require further consideration and refinement by the Construction Contractor following completion of detailed design phase. Key reference documentation in this regard includes:

- Volume 2 Chapter 12 Waste management
- Volume 2 Chapter 13 Transport
- Volume 2 Chapter 14 Social
- Volume 2 Chapter 15 Cultural heritage
- Volume 2 Chapter 17 Hazards, health and safety.

Based on the risk assessment completed within this chapter, it is expected that potential impacts of the construction and operation of the Project will be minimal, provided that the recommended mitigation measures are implemented during all phases of the Project.

