CopperString 2.0

Land use and tenure

Volume 3 Appendix K

Table of contents

1. Introduction 1
   - 1.1 Background information 1
   - 1.2 Purpose of this report 1
   - 1.3 Statement of limitations 1
2. Approach and Methodology 3
   - 2.1 Defined terms 3
   - 2.2 Data sources 3
   - 2.3 Legislative context and standards 4
   - 2.4 Assessment method 5
3. Project overview 7
4. Existing environment 10
   - 4.1 Land parcels 10
   - 4.2 Existing and proposed land uses 10
   - 4.3 Existing infrastructure 14
   - 4.4 Townships and urban localities 17
   - 4.5 Tenures 22
   - 4.6 State Planning Policy 2017 50
   - 4.7 Regional Plans 55
   - 4.8 Relevant planning schemes 57
   - 4.9 State Development Assessment Provisions 65
   - 4.10 Design factors 66
   - 4.11 Regional Planning Interests Act 2014 66
   - 4.12 Mining and exploration activities 68
   - 4.13 Contaminated land and UXO 102
   - 4.14 Native Title 110
5. Recommendations 112

Table index

Table 4-1 Impacted land parcel 10

Table 4-2 Primary land use in the Project area 11

Table 4-3 Key infrastructure crossings 14

Table 4-4 Rail crossings 15

Table 4-5 Land tenure within the corridor selection 22

Table 4-6 Stock routes intersected by the corridor selection 22

Table 4-7 State interest integration 55

Table 4-8 Planning Scheme provisions for MCU for corridor selection 59
Table 4-9 Planning scheme provisions for MCU for ancillary uses 61
Table 4-10 Planning scheme provisions for operational work 63
Table 4-11 State development assessment provisions 65
Table 4-12 Regional interests 67
Table 4-13 Petroleum pipeline infrastructure 68
Table 4-14 Additional pipeline infrastructure 69
Table 4-15 Exploration permits and applications (EPC) 71
Table 4-16 Exploration permits and applications (EPG) 71
Table 4-17 Exploration permits and applications (EPM) 71
Table 4-18 Exploration permits and application (ATP) 73
Table 4-19 Mining leases and applications 99
Table 4-20 Key resource area(s) 99
Table 4-21 Properties identified on the EMR 102
Table 4-22 Properties identified on UXO search 105
Table 4-23 Native Title claims 110

Figure index

Figure 3-1 Project overview 9
Figure 4-1 Primary land uses 12
Figure 4-2 Existing operating mines within proximity to the Project 13
Figure 4-3 Overview of regional transport network 16
Figure 4-4 Local Government Areas 21
Figure 4-5 Overlapping tenure 48
Figure 4-6 Intersecting stock routes 49
Figure 4-7 Petroleum pipeline infrastructure 70
Figure 4-8 Exploration permits and applications 74
Figure 4-9 Extractive resources 100
Figure 4-10 Historical workings 101
Figure 4-11 Contaminated land and UXO 107
Figure 4-12 Native title claims 111

1. Introduction

1.1 Background information

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 connect the North West Power System (NWPS) and foundation customers at isolated mine sites along the Project route to the State electricity grid.

The Project includes the development of the transmission line, substations, laydown areas, construction camps, communication huts, access tracks and some equipment storage locations. The Project involves construction of seven new substations near Woodstock, Hughenden, Dajarra Road (Cloncurry), Mount Isa, Selwyn, Cannington Mine and Phosphate Hill Mine.

The CopperString corridor selection which includes the transmission network is divided into the following eight sections as shown on Figure 3-1:

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).

1.2 Purpose of this report

The purpose of this report is to describe the existing environment as a supporting technical document to the EIS Land Chapter addressing the Section 12 Land of the Terms of Reference (ToR), generally defined as follows:

- Existing environment
- Land use and tenure
- Local and regional planning provisions
- State planning provisions
- Design factors influencing the Project.

1.3 Statement of limitations

This report has been prepared by GHD for CuString Pty Ltd and may only be used and relied on by CuString Pty Ltd for the purpose agreed between GHD and the CuString Pty Ltd as set out in section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than CuString Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by CuString Pty Ltd and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2. Approach and Methodology

2.1 Defined terms

2.1.1 Corridor selection

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 Connection to Dugald River Substation is 80 m wide.

2.1.2 Project area

The 120 m or 60 m wide 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 ToR (these include off-easement components).

2.1.3 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.

2.2 Data sources

The following data sources were used as part of this technical report:

- 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.

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 local government areas (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 administrating the *Planning Act 2016*, (being the Director- General of Queensland Treasury), is responsible for assessing or deciding development applications.

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.

An impact assessment was subsequently undertaken in order to characterise potential impacts to the land environment and provide potential mitigation measures. This is detailed in full in Volume 2 Chapter 5 Land.

3. Project overview

The Project involves the construction and operation of approximately 1,060 km of extra high voltage overhead electricity transmission line that would connect the North West Power System (NWPS), and foundation customers at isolated mine sites along the transmission alignment, to the state electricity grid, allowing them to participate in the National Electricity Market. The Project would also pass through the southern extent of the North Queensland Clean Energy Hub, a renewable energy zone containing 'A' class wind and solar resources. A major substation would be constructed east of Hughenden to facilitate market access to renewable energy from this resource.

The Project ToR provides for connection options for electricity consumers and generators. Implementation of any options would be a variation or an independent Project.

The CopperString transmission network is divided into the following eight sections:

- Woodstock Substation

  The Woodstock Substation would connect the CopperString transmission network to the existing 275 kV Powerlink transmission network and would transform voltage between 275 kV and 330 kV.

- Renewable Energy Hub

  The first 342 km of the Project from the Woodstock Substation, consisting of a double circuit 330 kV transmission line and the Flinders Substation (south west of Hughenden), to which it connects, forms the Renewable Energy Hub.

- CopperString Core

  Moving further westward, the next 395 km of the Project, consisting of a double circuit 330 kV transmission line and the Dajarra Road Substation to which it connects, forms the CopperString Core. The CopperString Core connects the eastern-most point of the NWPS 220 kV network, at Cloncurry, to the Flinders Substation.

  The Dajarra Road Substation would transform between 220 kV and 330 kV the voltage to the NWPS transmission voltage for connections to the Ergon Chumvale Substation, Dugald River Mine, Ernest Henry Mine and the Southern Connection.

- Mount Isa Augmentation

  The Mount Isa Augmentation would upgrade and supplement the transfer capacity between the Chumvale Substation and the Mica Creek Complex at Mount Isa. The Mount Isa Augmentation would consist of a new substation south of Mount Isa, near the Mica Creek complex, with a double circuit 220 kV transmission line connection from the Dajarra Road Substation.

- Southern Connection

  The Southern Connection would consist of the Selwyn Substation and double circuit 220 kV transmission line connection to the Dajarra Road Substation. The Southern Connection would enable connection of the southern mines, such as Cannington Mine, Mount Dore Mine and Phosphate Hill Mine that are presently not connected to the NWPS. The Selwyn Substation would include distribution equipment to connect the Mount Dore Mine.

- Cannington Connection

The Cannington Connection would consist of the Cannington Substation and a single circuit 220 kV transmission line connection from the Selwyn Substation. The Cannington Substation would include distribution equipment to connect the Cannington Mine.

- Phosphate Hill Connection

  The Phosphate Hill Connection would consist of the Phosphate Hill Substation and a single circuit 220 kV transmission line connection from the Selwyn Substation. The Cannington Substation would include distribution equipment to connect the Phosphate Hill Mine.

- Kennedy Connection (option)

  The Kennedy Connection option would be a twin circuit 330 kV transmission line connection to the proposed Kennedy Wind Farm (Phase 2 of the Kennedy Energy Park), approximately 80 km north of Hughenden, to the Flinders Substation.

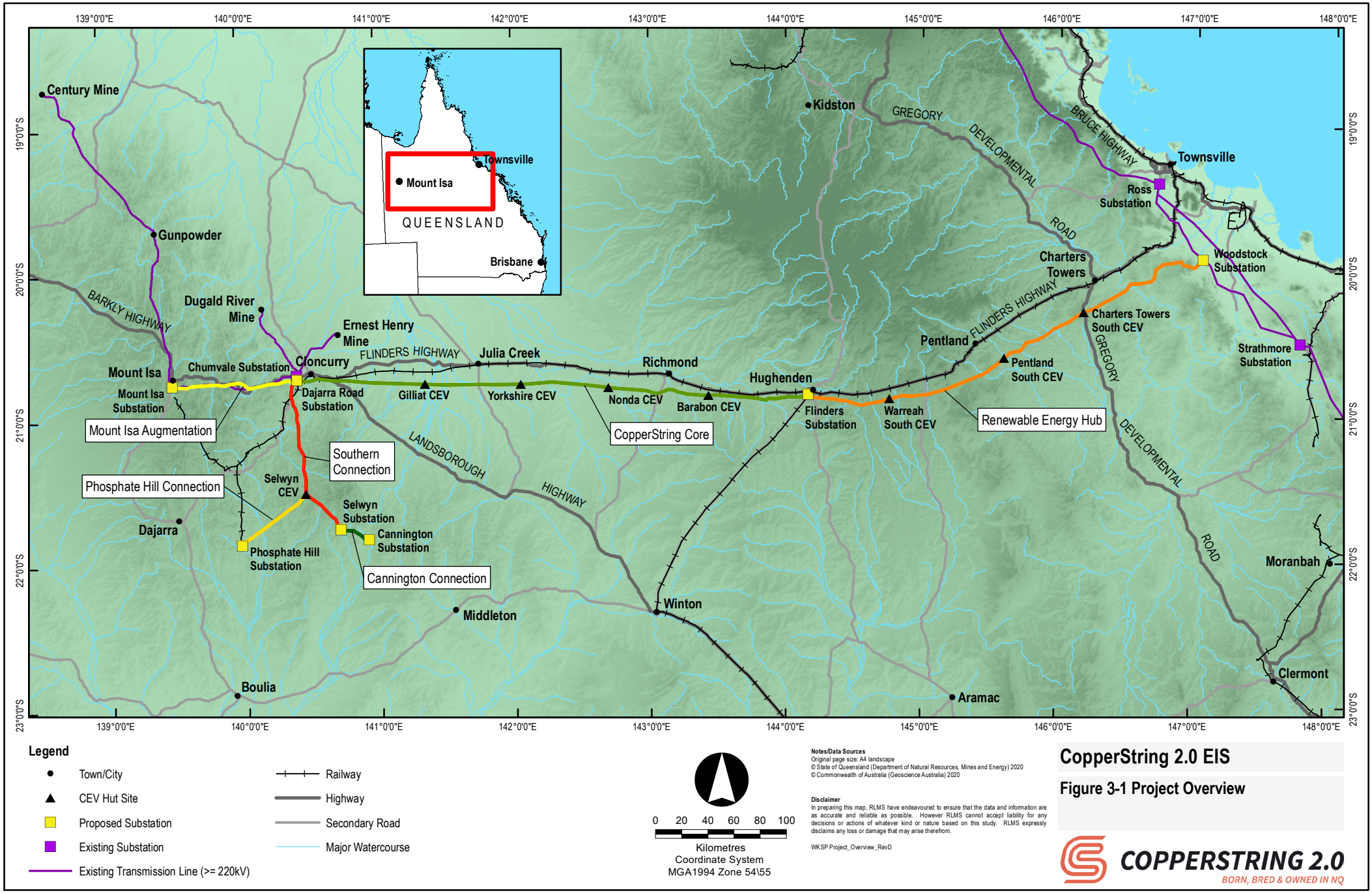
The Project would utilise conventional alternating current (AC) and would comply with all relevant aspects of the National Electricity Rules (NER), including those required for system security, positively impacting the quality and reliability of supply.

Project infrastructure also includes laydown areas, substations, CEV huts, access tracks, brake and winch sites and construction camps. CEV hut locations include Barabon, Charters Towers South, Gilliat, Nonda, Pentland South, Selwyn, Warreah South and Yorkshire.

Substation locations include Cannington, Dajarra Road, Flinders, Mount Isa, Phosphate Hill, Selwyn and Woodstock. The Project area is located within seven (7) LGA. These LGAs include:

- Burdekin Shire Council
- Charters Towers Regional Council
- Flinders Shire Council
- Richmond Shire Council
- McKinlay Shire Council
- Cloncurry Shire Council
- Mount Isa City Council

The CopperString 2.0 Project area including the corridor selection is shown in Figure 3-1.



Legend

- Town/City
- CEV Hut Site
- Proposed Substation
- Existing Substation
- Existing Transmission Line (>= 220kV)
- Railway
- Highway
- Secondary Road
- Major Watercourse

0 20 40 60 80 100

Kilometres

Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

Disclaimer
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.

WKSP Project_Overview_RevD

CopperString 2.0 EIS

Figure 3-1 Project Overview

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4. Existing environment

4.1 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 are summarised in Table 4-1. 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 4-1 Impacted land parcel

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

4.2 Existing and proposed land uses

North-west Queensland and the area centred particularly around Mount Isa and Cloncurry is one of the world's richest mining regions. The area known as the North West Minerals Province (NWMP) extends from the Northern Territory border west of Mount Isa up to the Gulf of Carpentaria and contains some of the world's richest deposits of copper, silver and zinc.

The Queensland Government's Strategic Blueprint for Queensland's North West Minerals Province (2017) identifies a number of strategic priorities and supporting goals for the region including diversifying the regional economy and creating employment opportunities. Key actions associated with Strategic Blueprint includes completing an infrastructure audit for physical infrastructure (energy) to clarify the barriers to development. The CopperString 2.0 Project is seen as beneficial to the development of the NWMP.

Land located within the Project area is predominantly used for agricultural production from relatively natural environments. 98.68% of the land impact by the corridor selection and associated activities is comprised of production and natural environments. Cattle production and grazing is the primary land use. Other land uses include conservation and natural environments, with approximately 0.01% impacted by the corridor selection and associated activities.

The natural environments surrounding Mount Isa and Cloncurry are rich in mineral deposits and currently support a number of operational mines including:

- Century
- Mount Gordon
- Mount Isa Mines
- Ernest Henry

- Eloise
- Cannington
- Osbourne.

A summary of the primary land uses located within the Project area is detailed in Table 4-2 and illustrated in Figure 4-1. An illustration of the larger existing operating mines in the NWMP is detailed on Figure 4-2, further mining projects along the corridor selection are discussed in section 4.12.

Table 4-2 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
TOTAL	**66.213**	**100**

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

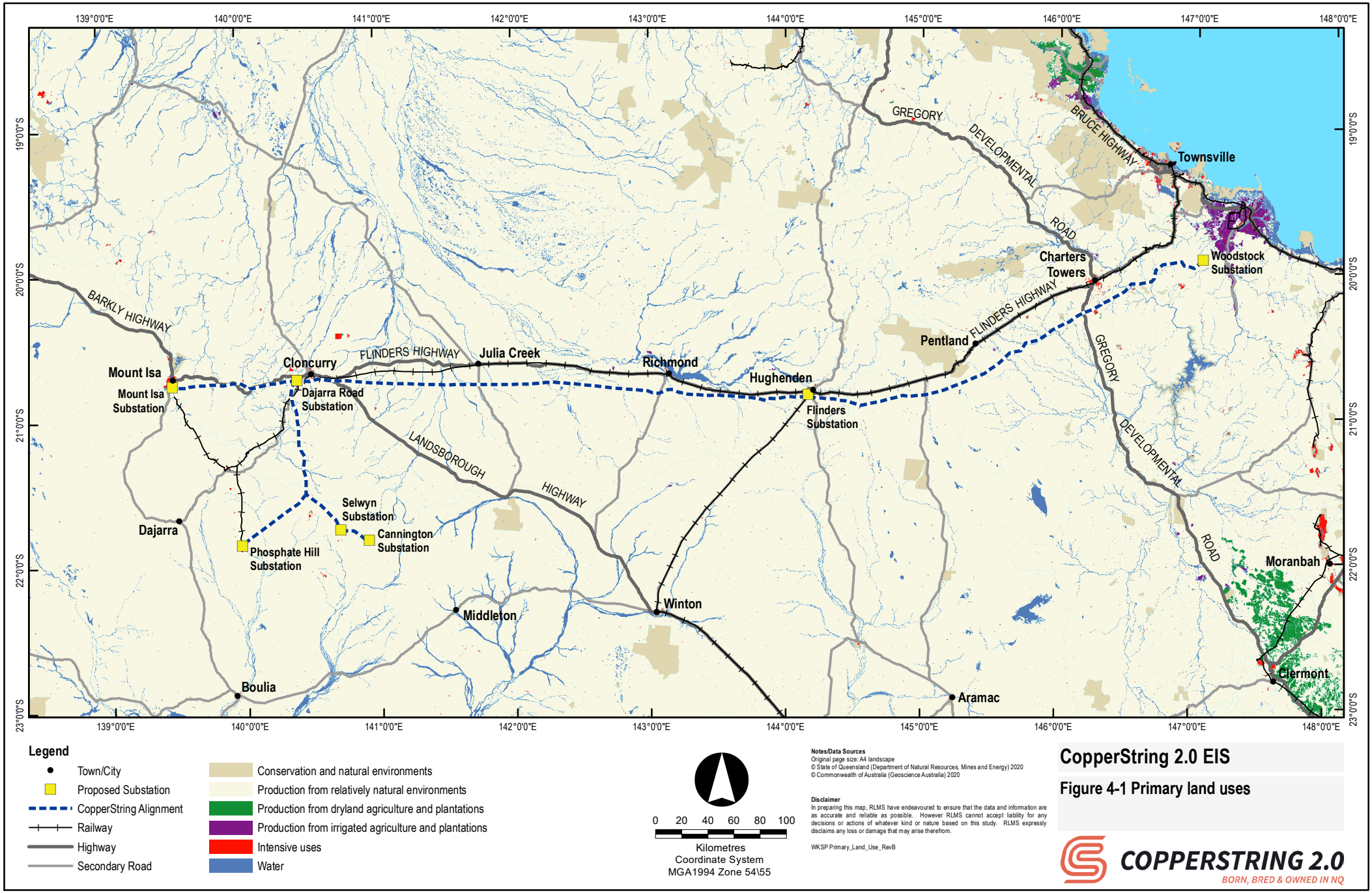
** Intensive uses include areas of intensive animal production, manufacturing, industrial and residential uses.

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

- Temporary construction camps
- Temporary laydown areas and delivery areas
- Access tracks for construction
- Permanent substations and CEV huts
- Transmission line infrastructure.

It is expected that some disruption would occur to existing land uses during the Project construction. However, activities such as construction camps, laydown and delivery areas are temporary and would only be required during construction. These activities would cease once construction has been completed and are removed from the landscape.

Project construction would involve a permanent land use that would require an easement across multiple parcels for ongoing operation and maintenance. Once construction is complete, activities associated with the transmission network would occur within the easement. Such activities may include ongoing vegetation clearing and transmission line maintenance. However, these permanent uses are not expected to impact the wider landscape and would be limited to disturbance within the easement.



Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

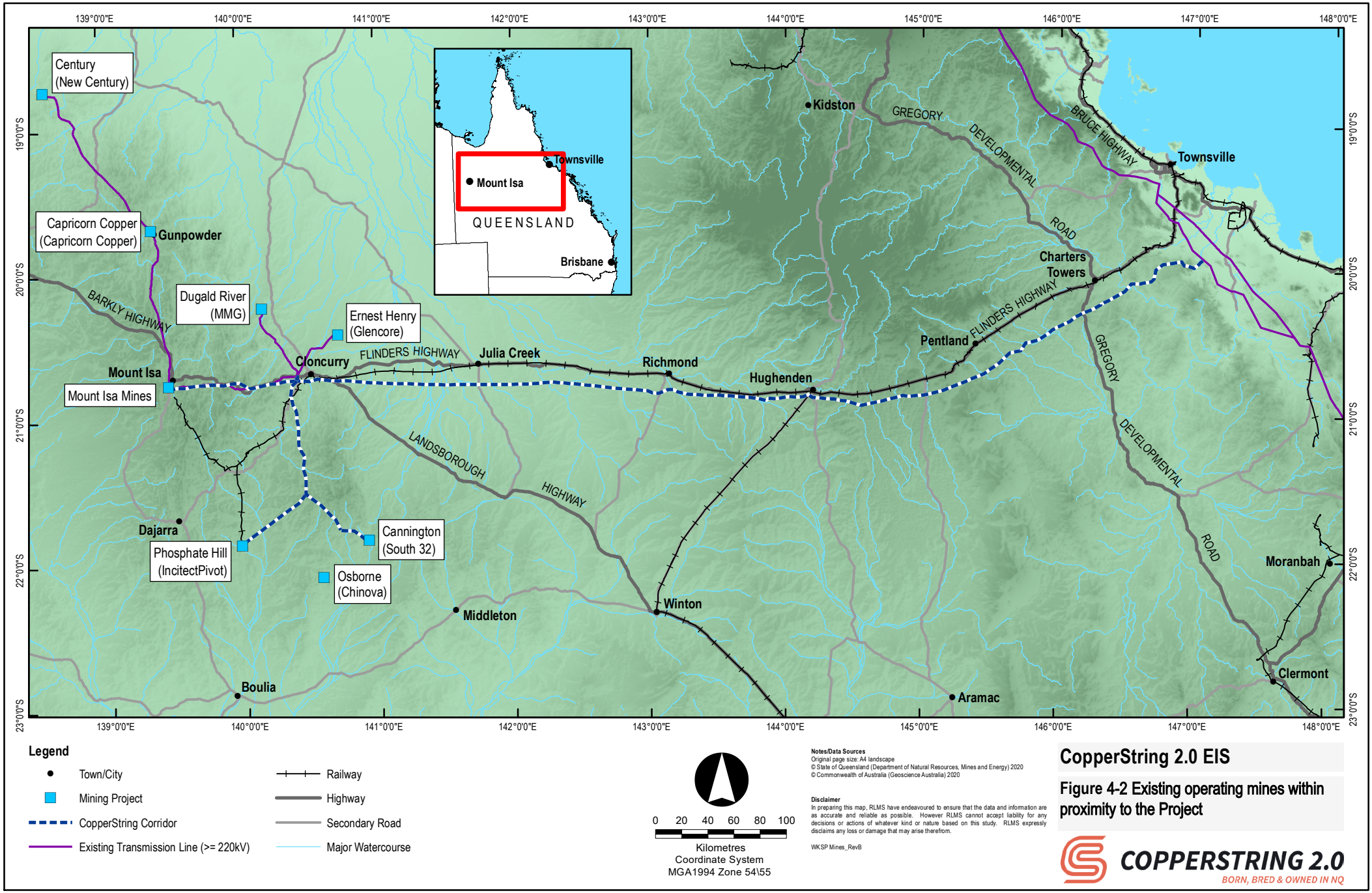
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Primary_Land_Use_RevB

CopperString 2.0 EIS

Figure 4-1 Primary land uses

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


139°0'0"E
140°0'0"E
141°0'0"E
142°0'0"E
143°0'0"E
144°0'0"E
145°0'0"E
146°0'0"E
147°0'0"E
148°0'0"E
19°0'0"S
20°0'0"S
21°0'0"S
22°0'0"S
23°0'0"S
Century (New Century)
Capricorn Copper (Capricorn Copper)
Gunpowder
Dugald River (MMG)
Ernest Henry (Glencore)
Mount Isa
Mount Isa Mines
Cloncurry
Julia Creek
Richmond
Hughenden
Kidston
Townsville
Charters Towers
Pentland
Dajarra
Phosphate Hill (IncitectPivot)
Cannington (South 32)
Osborne (Chinova)
Middleton
Winton
Boulia
Aramac
Moranbah
Clermont
BARKLY HIGHWAY
FLINDERS HIGHWAY
LANDSBOROUGH HIGHWAY
GREGORY DEVELOPMENTAL ROAD
BRUCE HIGHWAY
QUEENSLAND
Townsville
Mount Isa
Brisbane
Legend
Town/City
Mining Project
CopperString Corridor
Existing Transmission Line (>= 220kV)
Railway
Highway
Secondary Road
Major Watercourse
0 20 40 60 80 100
Kilometres
Coordinate System
MGA1994 Zone 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Mines_RevB
CopperString 2.0 EIS
Figure 4-2 Existing operating mines within proximity to the Project
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4.3 Existing infrastructure

A number of key service infrastructure crossings are impacted by the corridor selection including major and secondary sealed roads, minor sealed roads and unsealed roads, railway crossings and gas pipeline crossings (refer section 4.12.1). A summary of the key infrastructure crossings is detailed in Table 4-3 and illustrated in Figure 4-3.

Table 4-3 Key infrastructure crossings

Infrastructure	Number of Crossings
Sealed road crossings	
State controlled road	14
Local government road	1
Private road	2
Unsealed road crossings	
State controlled road	1
Local government road	35
Private road	Not counted but expected to be 100
Other	
Railway crossing (including 3 crossing on dismantled lines)	3
Transmission and distribution line crossings	44
Gas pipeline crossings	1

4.3.1 Roads

The Flinders Highway is the major arterial road traversing the Project area, connecting Townsville in the east to Mount Isa in the west. The Barkley Highway, west of Mount Isa, connects Mount Isa to the Northern Territory.

Both the Flinders Highway and the Barkley Highway (that part located in Queensland) are State controlled roads managed by the Department of Transport and Main Roads (DTMR). Access to the corridor selection would primarily rely on access from both the Flinders and Barkley Highways as well as a number of other principal State controlled roads and local government roads within the Project area.

The types of roads and their formations have been summarised in Table 4-3. The Principal roads identified in Table 4-3 are State controlled road and are sealed roads. From Woodstock to Mount Isa, the corridor selection runs parallel to and south of the Flinders and Barkley Highways. It also crosses a number of secondary roads including:

- Gregory Developmental Road
- Hughenden Muttaburra Road
- Landsborough Highway
- Cloncurry to Dajarra Road

Other tracks which may be utilised for access to the corridor selection are located on private properties. There are 48 private tracks in total. The use of these tracks has been confirmed through consultation with landholders.

The recognised road names for sealed principal and secondary roads and unsealed secondary roads is included at Volume 3 Appendix G Intersecting road and rail infrastructure crossings.

4.3.2 Rail

The Great Northern Railway (Mount Isa line system) is over 1,000 km in length, extending from Stuart (near Townsville) to Mount Isa. The Mount Isa line also includes the Phosphate Hill branch. The Mount Isa line is the critical rail line between the NWMP and the Port of Townsville, where the western minerals and bulk products are exported.

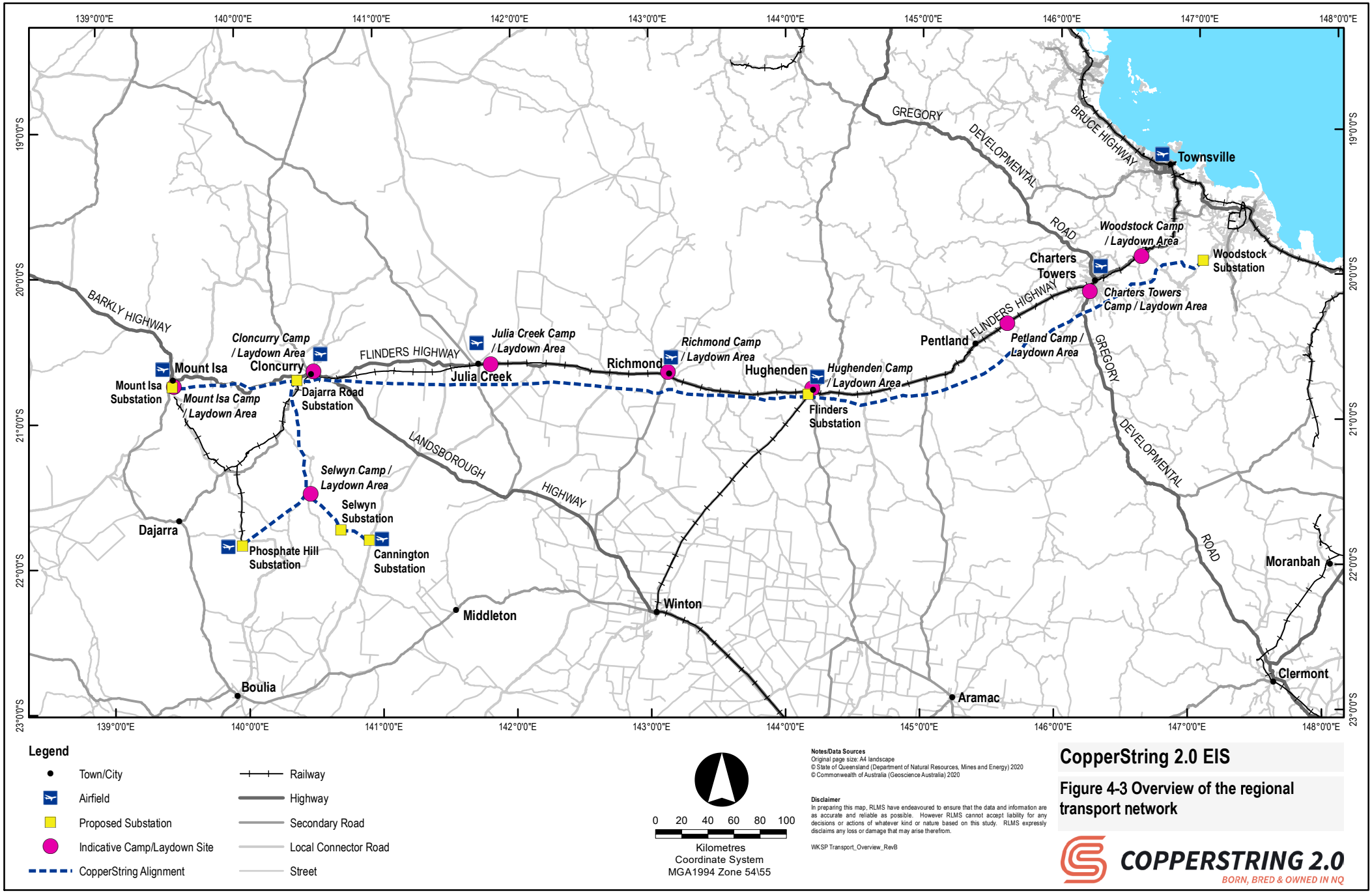
A total of six railway crossings are traversed by the corridor selection. These are summarised in Table 4-4. Three of these crossings are located on dismantled lines.

Table 4-4 Rail crossings

Line Name	Route Name	Section Name	Owner
Dajarra Road to Cannington	Mount Isa Line	Cloncurry to Mount Isa	Queensland Rail
Dajarra Road to Cannington (inactive)	Selwyn Branch	Malbon to Selwyn	Department of Natural Resources and Mines
Woodstock to Dajarra Road	Mount Isa Line	Cloncurry to Mount Isa	Queensland Rail
Woodstock to Dajarra Road (inactive)	Winton Branch	Hughenden to Winton	Department of Transport and Main Roads
Woodstock to Dajarra Road (inactive)	Ravenswood Branch	Mingela to Ravenswood	Department of Natural Resources and Mines
Dajarra Road to Mount Isa	Mount Isa Line	Cloncurry to Mount Isa	Queensland Rail

4.3.3 Electricity infrastructure

The corridor selection crosses a number of other transmission and distribution easements between Woodstock and Mount Isa. A total of 44 crossings (including SWER crossing) occur within the corridor selection. These transmission easements are all operational and under the control of Energy Queensland (Ergon).



Legend

- Town/City
- Airfield
- Proposed Substation
- Indicative Camp/Laydown Site
- CopperString Alignment
- Railway
- Highway
- Secondary Road
- Local Connector Road
- Street

0 20 40 60 80 100
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape

Disclaimer
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.

WKSP Transport_Overview_RevB

CopperString 2.0 EIS

Figure 4-3 Overview of the regional transport network

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4.4 Townships and urban localities

The main towns between Townsville and Mount Isa are Charters Towers, Hughenden, Richmond, Julia Creek and Cloncurry. The larger centres of Cloncurry and Charters Towers serve as administrative centres and service centres for the surrounding grazing industry. Mount Isa, population of approximately 32,500 (2016 Census) is the commercial, administrative and industrial centre for north west Queensland. Mining and smelting are the main industrial activities.

The location of each of the townships and local government areas in proximity to the Project area is illustrated on Figure 4-4.

4.4.1 Woodstock

Woodstock is a rural town in the Townsville City Council LGA, with a population of approximately 239 people (2016 census). The Project would commence at a new substation approximately 32 km south west at Woodstock located within the Burdekin Shire Council LGA.

4.4.2 Mingela

Mingela is a very small township located within the Charters Towers Regional Council (CTRC) LGA, 48 km east of Charters Towers. The township has a population of approximately 20 people (2016 census) and was previously the railway junction between Ravenswood and Charters Towers during the 1869 gold rush.

The corridor selection is located approximately 23 km south of Mingela.

4.4.3 Charters Towers

Charters Towers is the main service centre for the CTRC LGA. The city is located 135 km west of Townsville on the Flinders Highway. Charters Towers is historically associated with the gold rush of the 1880s and at its height was a thriving city with a population of 25,000.

Today Charters Towers is a city with a rich and diverse history that also serves as an educational centre for students from all over North-west Queensland (Source: Charters Towers Regional Council).

Beef farming and production is the major economic activity in the region. Tourism, mining and education are also predominant industries. The town also serves as a major service and administration centre for the surrounding area.

The population of Charters Towers is 8,120 (2016 census).

The corridor selection is located approximately 21 km south of Charters Towers.

4.4.4 Homestead

Homestead is a small township located within the CTRC LGA, 73 km west of Charters Towers. The area north of Homestead was mined for gold from 1883 for the next 50 years.

The township has an estimated population of 49 (2016 census).

The corridor selection is located approximately 23 km south of township.

4.4.5 Pentland

Pentland is a small rural township located within the CTRC LGA, 140 km east of Hughenden and 106 km west of Charters Towers. The small town includes numerous historical and natural attractions within the immediate surrounds.

The township has an estimated population of 306 people (2016 Census).

The corridor selection is located approximately 24 km south of Pentland.

4.4.6 Torrens Creek

Torrens Creek is a small rural township located within the Flinders Shire Council (FSC) LGA, 88 km east of Hughenden and 159 km west of Charters Towers. The township has a long history associated with the delivery of mail and became the supply centre for the district in the late 1800s.

Infrastructure in the township includes the Torrens Creek Hotel, Torrens Creek golf course and scattered houses and cottages. Torrens Creek is located directly to the east of the township. The 2016 census puts the population of Torrens Creek at 70.

The corridor selection is located approximately 8 km south of Torrens Creek.

Torrens Creek is considered a community activity centre.

4.4.7 Prairie

Prairie is also located within the FSC LGA on the Flinders Highway. The township includes a café/ post office and the Prairie Hotel. The population of Prairie is 143 (2016 census).

The corridor selection is located approximately 8 km south of the township of Prairie.

Prairie is considered a community activity centre.

4.4.8 Hughenden

Hughenden is located on banks of the Flinders River, within the FSC LGA. Hughenden, located 382 km west of Townsville. The Flinders Shire is predominantly a grazing area, with the township of Hughenden being the main business centre for the Shire (Source: Flinders Shire Council). The population of Hughenden is 1,136 (2016 census).

The corridor selection is located approximately 6 km south of the township of Hughenden.

Hughenden is considered a district rural activity centre.

4.4.9 Marathon

The tiny settlement of Marathon is located within the FSC LGA, approximately halfway between Richmond and Hughenden. The settlement never developed; however, the Flinders Highway was constructed to deviate around the few structures that form Marathon.

The corridor selection is located approximately 3 km south of the township of Marathon.

4.4.10 Richmond

The township of Richmond is located within the Richmond Shire Council (RSC) LGA, halfway between Townsville and Mt Isa.

Richmond functions as the service centre for the surrounding pastoral community and is considered a major rural activity centre. The township is best known for its marine fossil discoveries dating back 120 million years. The population of Richmond is 648 (Source: 2016 Census).

The corridor selection is located approximately 14 km south of the township of Richmond.

4.4.11 Maxwelton

The town of Maxwelton is located in the RSC LGA, 48 km west of Richmond and approximately 100 km east of Julia Creek. The township includes a railway siding, camping / rest area and a few remaining railway cottages. The population of Maxwelton is 22 (2016 Census).

The corridor selection is located approximately 11 km south of the township of Maxwelton.

Maxwelton is considered a community activity centre.

4.4.12 Julia Creek

Julia Creek is located within the McKinlay Shire Council (MSC) LGA, and is the central town of the shire. The township is located 646 km west of Townsville and has a population of 511 people (2016 Census).

The township and surrounds has a long history of beef cattle farming dating back to the early 1900s.

The corridor selection is located approximately 15 km south of the township of Julia Creek.

Julia Creek is considered a district rural activity centre.

4.4.13 Cannington Mine

The Cannington Mine is located within the MSC LGA approximately 190 km south of Cloncurry and about 310 km south east of Mount Isa. Cannington Mine is the worlds largest single producer of silver and has been in operation since 1997.

The Cannington Connection includes the Dajarra Road Substation to Cannington Substation at the Cannington Mine.

Cannington is considered a mining centre.

4.4.14 Phosphate Hill Mine

The Phosphate Hill mine is located within the Cloncurry Shire Council LGA and is approximately 170 km south of Cloncurry and 955 km from Townsville. The mine is owned and operated by Incitec Pivot Limited.

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.

4.4.15 Cloncurry

Cloncurry is located 120 km east of Mount Isa and some 783 km west of Townsville on the Barkley Highway.

Cloncurry is a rural town with a population of approximately 2,700 people. The Cloncurry LGA derives its income from the mining and pastoral industries. (Source: Cloncurry Shire Council).

The corridor selection is located approximately 5 km south of the township of Cloncurry.

Cloncurry is considered a major rural activity centre.

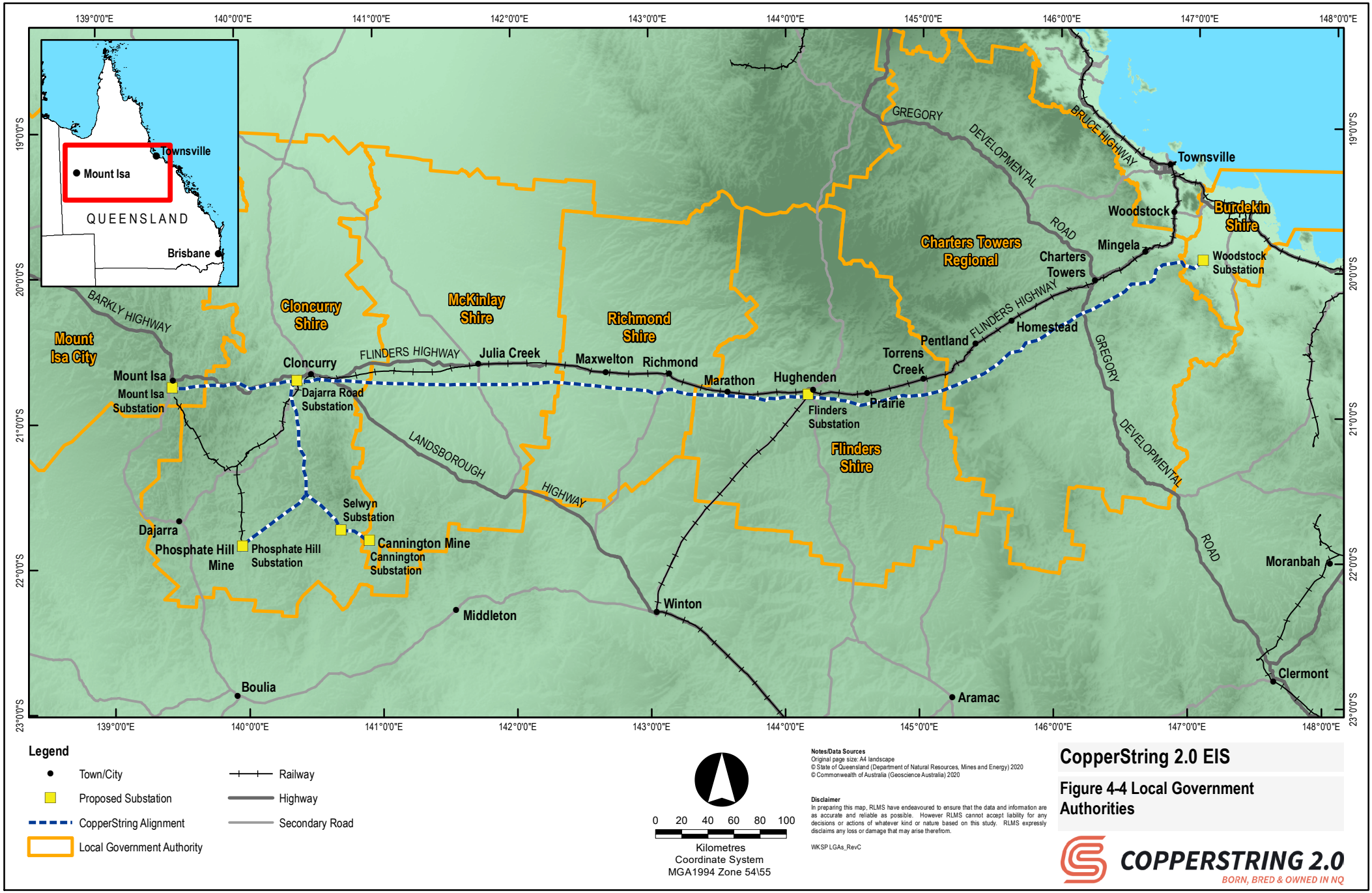
4.4.16 Mount Isa

Mount Isa is situated on the banks of the Leichhardt River 904 km from Townsville and is the traditional lands of the Kalkadoon people. With a population of approximately 22,000, Mount Isa is the administrative, commercial and industrial centre of North West Queensland.

The Mount Isa City Council LGA shares a boundary with the Northern Territory to the west and includes the township of Camooweal. Mount Isa has a long and productive mining history and is considered a top ten producer of some of the world's most in-demand minerals (Source: Mount Isa City Council).

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.

Mount Isa is considered the major regional activity centre for the north-west region.



Legend

- Town/City
- Proposed Substation
- CopperString Alignment
- Local Government Authority
- Railway
- Highway
- Secondary Road

0 20 40 60 80 100

Kilometres

Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

Disclaimer
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.

WKSP LGAs_RevC

CopperString 2.0 EIS

Figure 4-4 Local Government Authorities

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4.5 Tenures

A summary of the existing land tenure within the Project area is detailed in Table 4-5 and illustrated in Figure 4-5.

Table 4-5 Land tenure within the corridor selection

Tenure	Parcels Intersected	Project area* (km2)	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 a number of 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 4-6 summaries the stock routes intersected by the corridor selection area and Figure 4-6 illustrates the location of the stock routes.

Table 4-6 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	1.91
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 corridor selection would require a number of easements to be registered on the title of land to allow for the initial construction and subsequent operation and management. Ancillary uses such as substations and communication huts containing CEVs may also require easements or another form of land tenure to allow construction and subsequent operation and management.

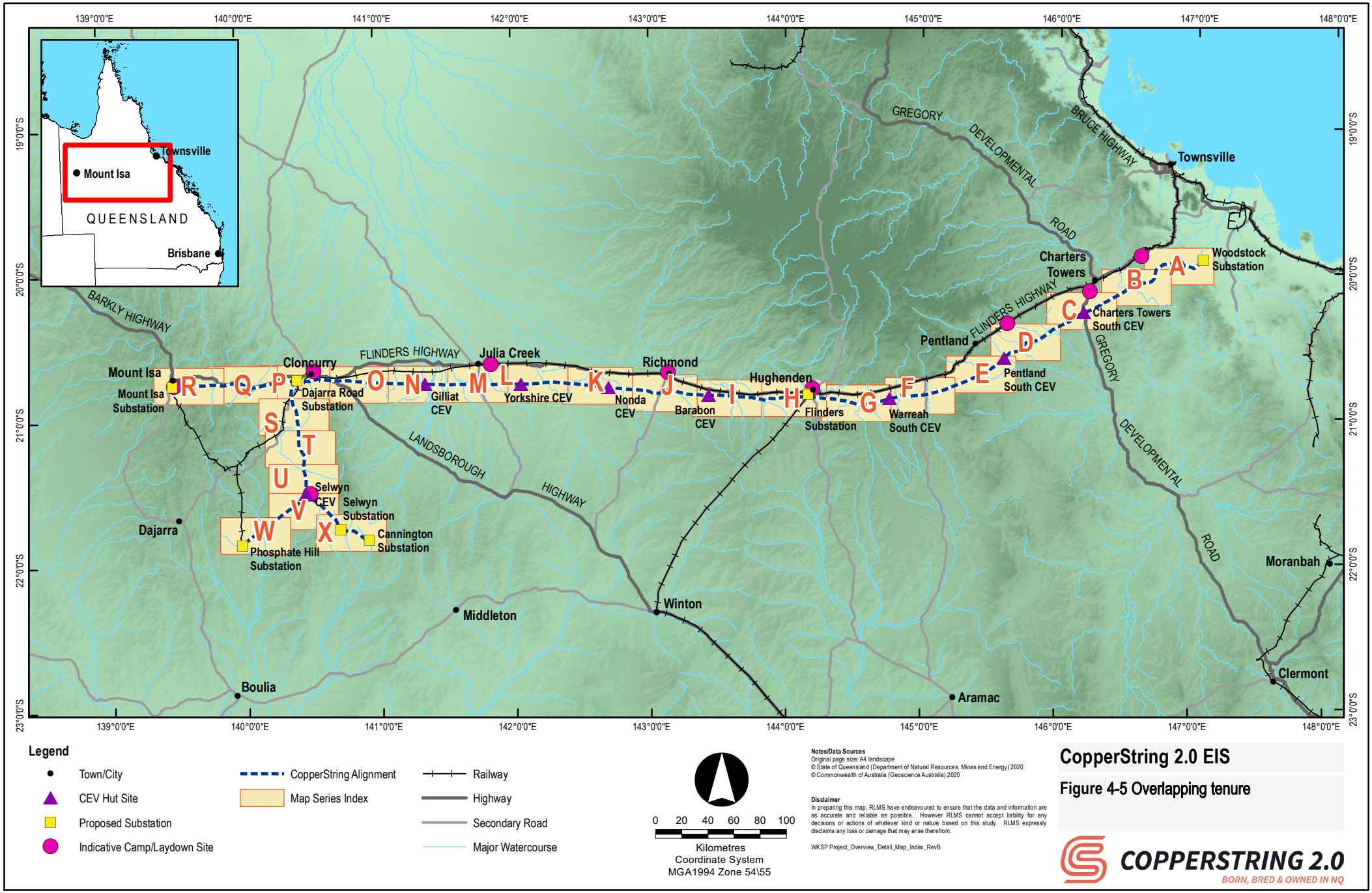
The Department of Natural Resources, Mines and Energy (DNRME) have advised that they will provide in-principle approval for the construction of the transmission line prior to the registration of easements on State leasehold land (freehold land is separate and apart in that consent of the landowner only 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
- CEV Hut Site
- Proposed Substation
- Indicative Camp/Laydown Site
- CopperString Alignment
- Map Series Index
- Railway
- Highway
- Secondary Road
- Major Watercourse

0 20 40 60 80 100

Kilometres

Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

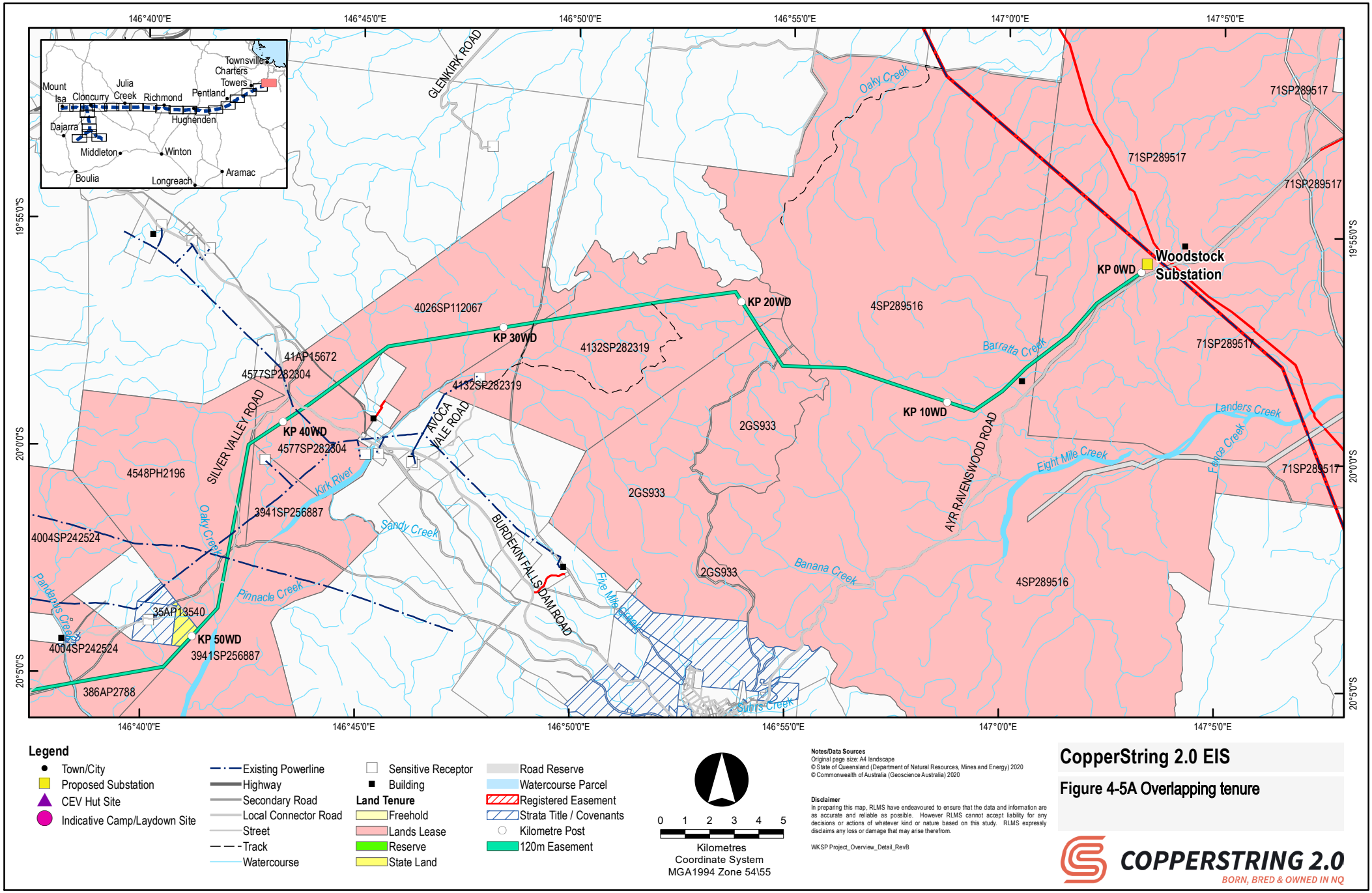
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_Map_Index_RevB

CopperString 2.0 EIS

Figure 4-5 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

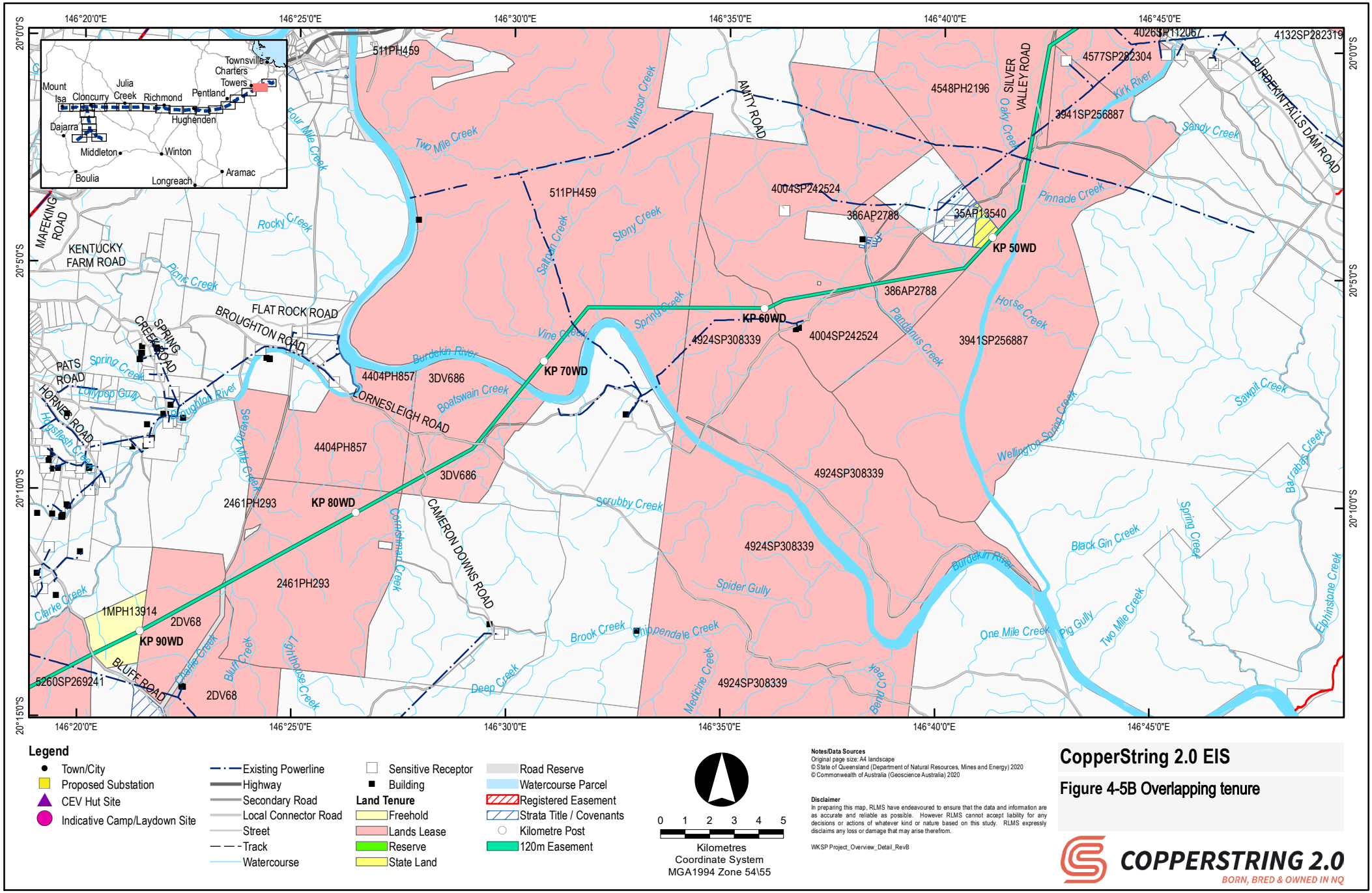
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

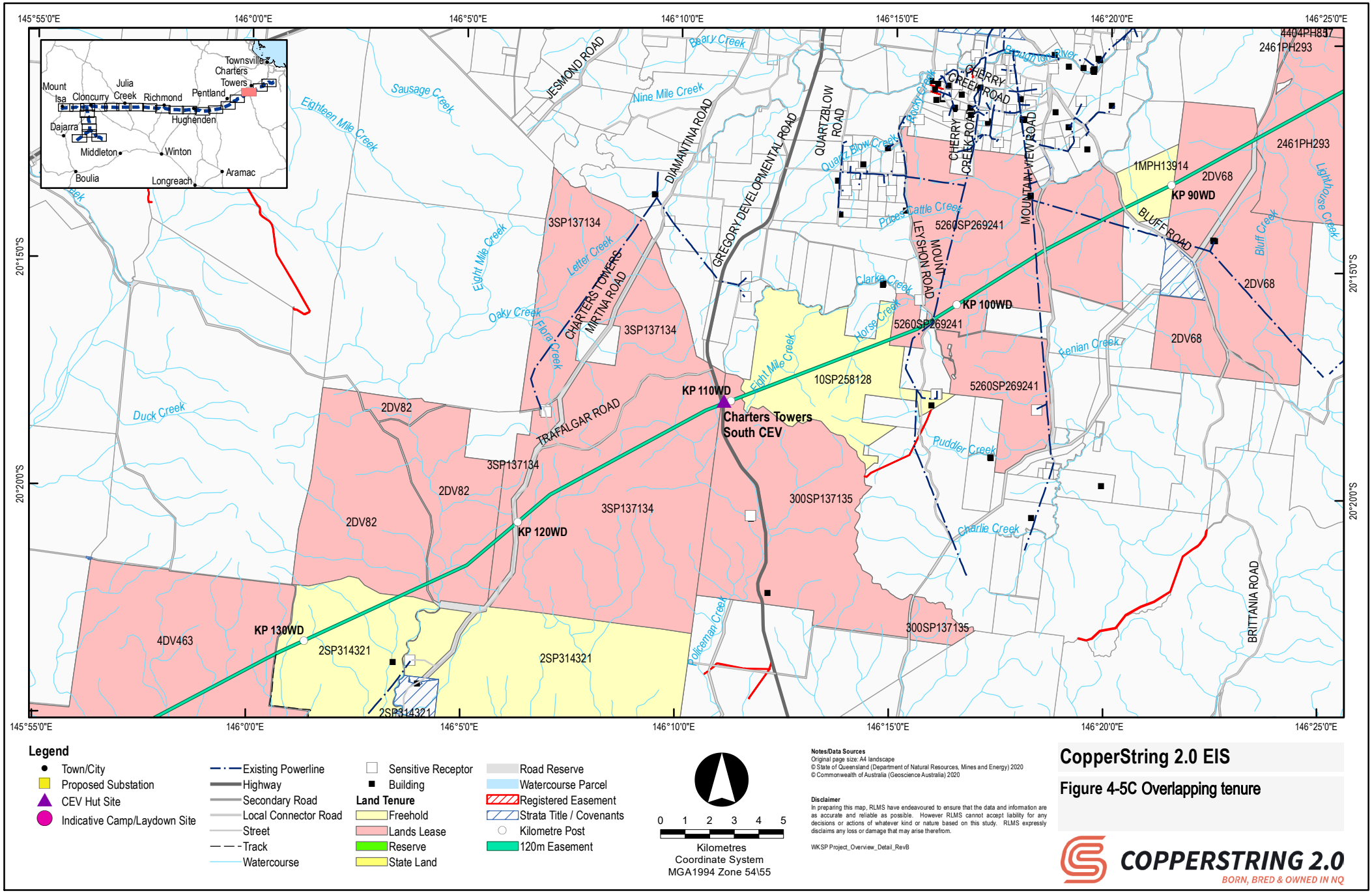
WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5A Overlapping tenure

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


146°20'0"E
146°25'0"E
146°30'0"E
146°35'0"E
146°40'0"E
146°45'0"E
20°0'0"S
20°5'0"S
20°10'0"S
20°15'0"S
Townsville
Charters Towers
Mount Isa
Julia Creek
Cloncurry
Richmond
Pentland
Hughenden
Dajarra
Middleton
Winton
Boulia
Longreach
Aramac
511PH459
4548PH2196
4577SP282304
4026SP112067
4132SP282319
3941SP256887
4004SP242524
386AP2788
35AP13540
4924SP308339
4404PH857
3DV686
2461PH293
1MPH13914
2DV68
5260SP269241
KP 50WD
KP 60WD
KP 70WD
KP 80WD
KP 90WD
SILVER VALLEY ROAD
AMITY ROAD
BURDEKIN FALLS DAM ROAD
MAFEKING ROAD
KENTUCKY FARM ROAD
FLAT ROCK ROAD
BROUGHTON ROAD
SPRING CREEK ROAD
PATS ROAD
HORNET ROAD
LORNESLEIGH ROAD
CAMERON DOWNS ROAD
BLUFF ROAD
Four Mile Creek
Two Mile Creek
Windsor Creek
Rocky Creek
Picnic Creek
Saltern Creek
Stony Creek
Pinnacle Creek
Kirk River
Sandy Creek
Spring Creek
Vine Creek
Burdekin River
Boatswain Creek
Pandanus Creek
Horse Creek
Sawpit Creek
Barrabas Creek
Wellington Spring Creek
Scrubby Creek
Black Gin Creek
Spider Gully
Brook Creek
Chippendale Creek
Medicine Creek
Deep Creek
Lighthouse Creek
Bluff Creek
Charlie Creek
Clarke Creek
Highflesh Creek
Lollypop Gully
Broughton River
Christmas Creek
Elphinstone Creek
Pig Gully
One Mile Creek
Two Mile Creek
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
0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Project_Overview_Detail_RevB
CopperString 2.0 EIS
Figure 4-5B 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

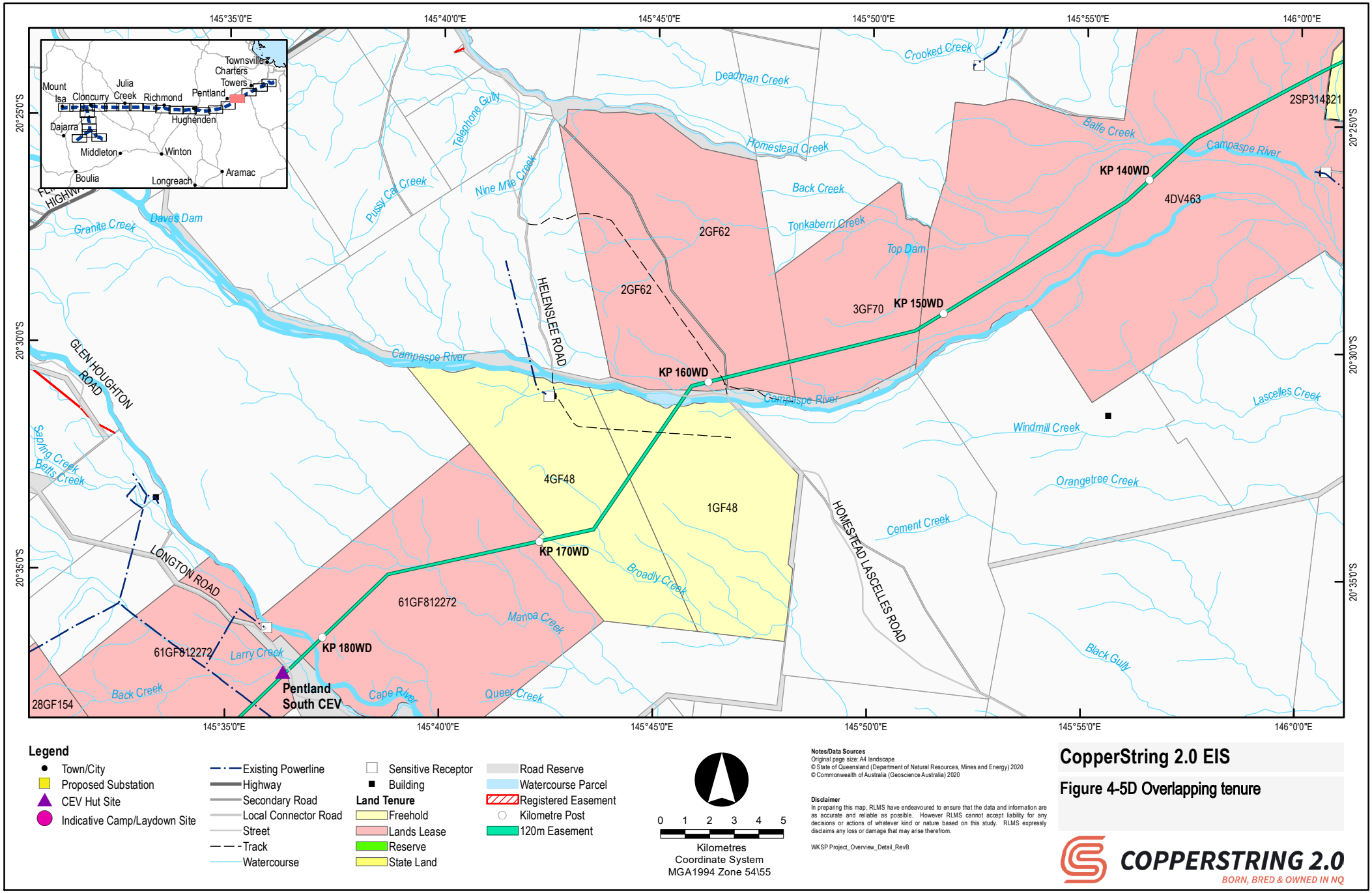
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5C 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
- Kilometre Post
- 120m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

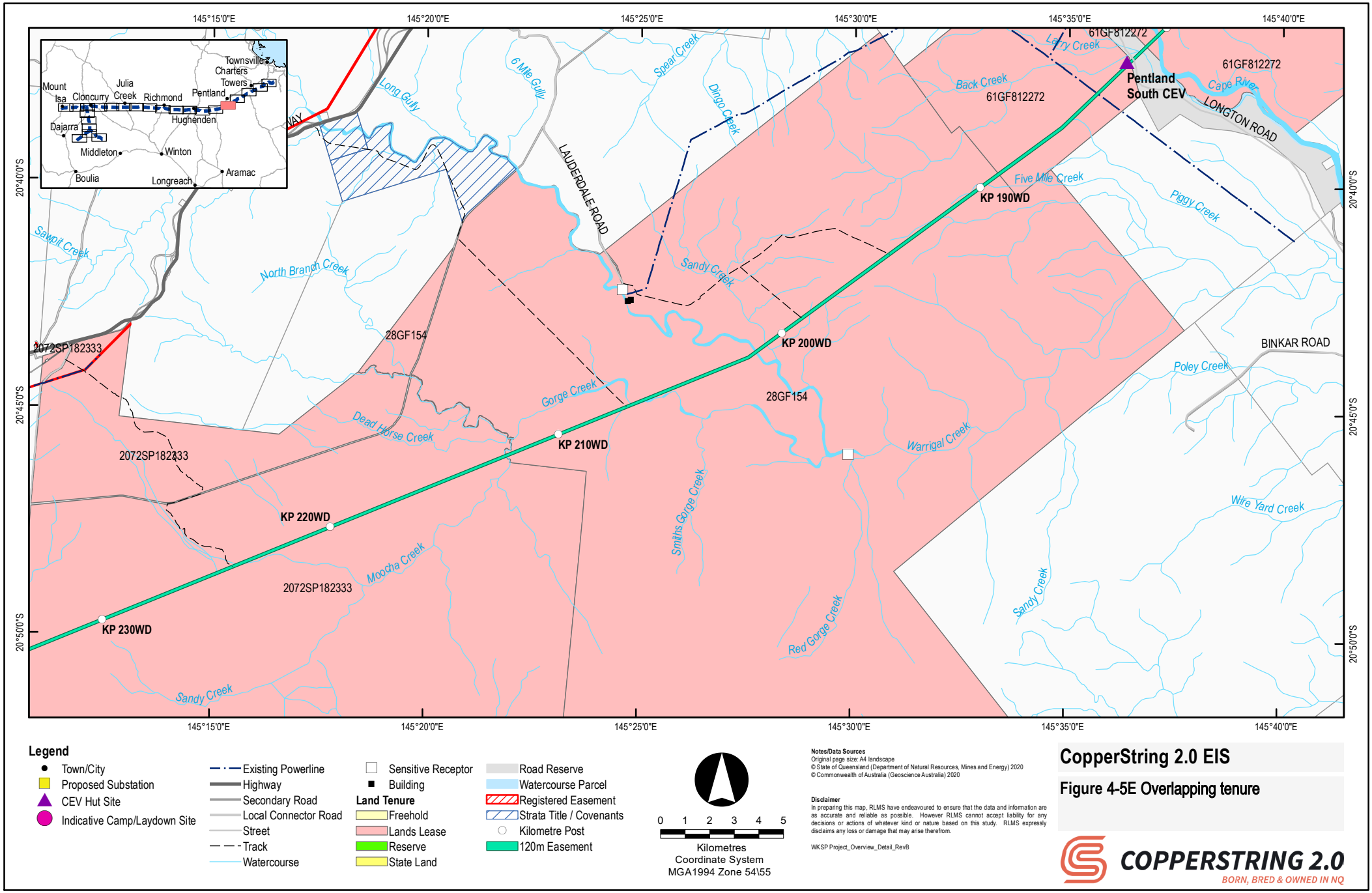
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5D 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

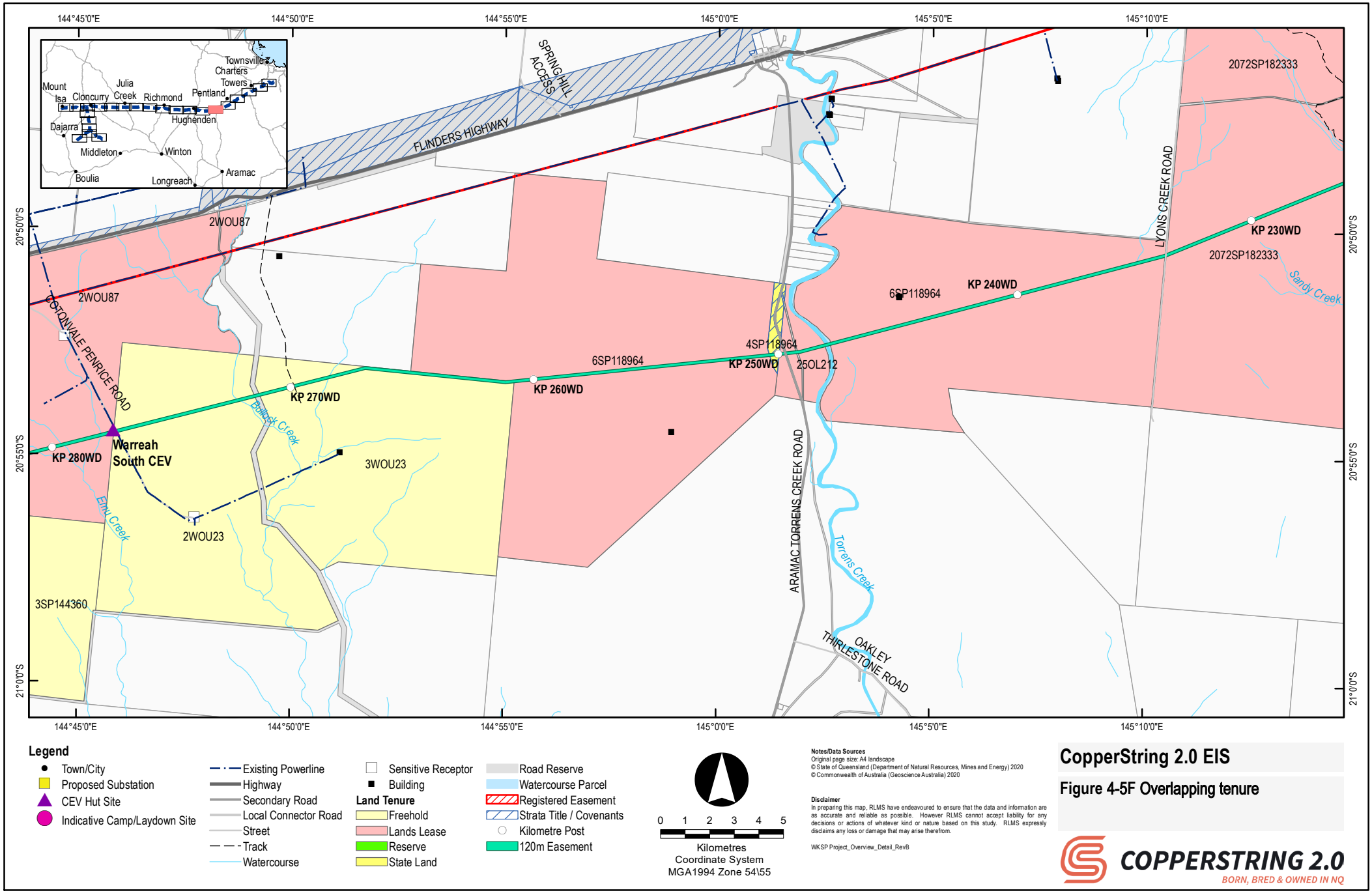
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5E 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

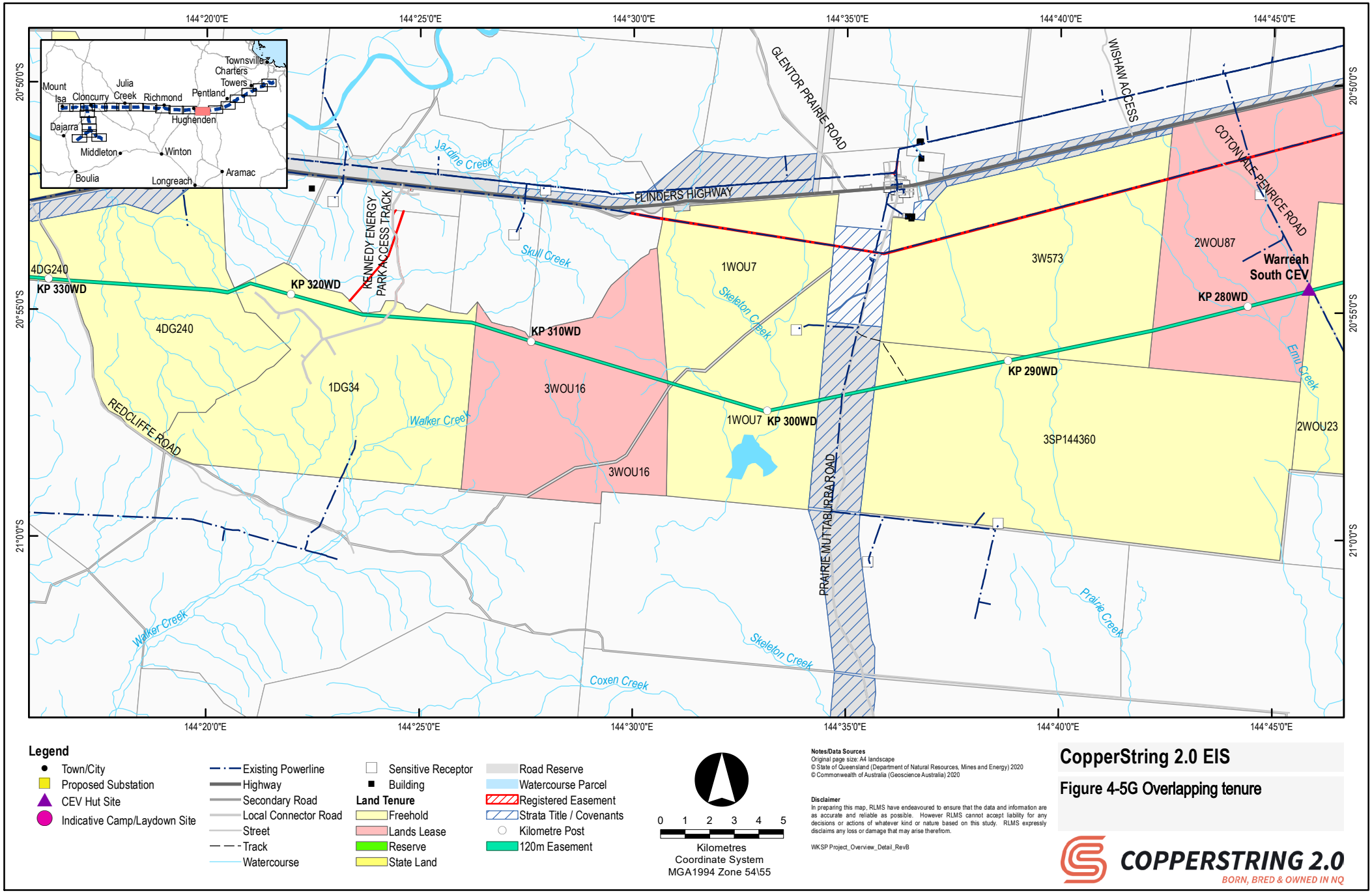
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5F 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

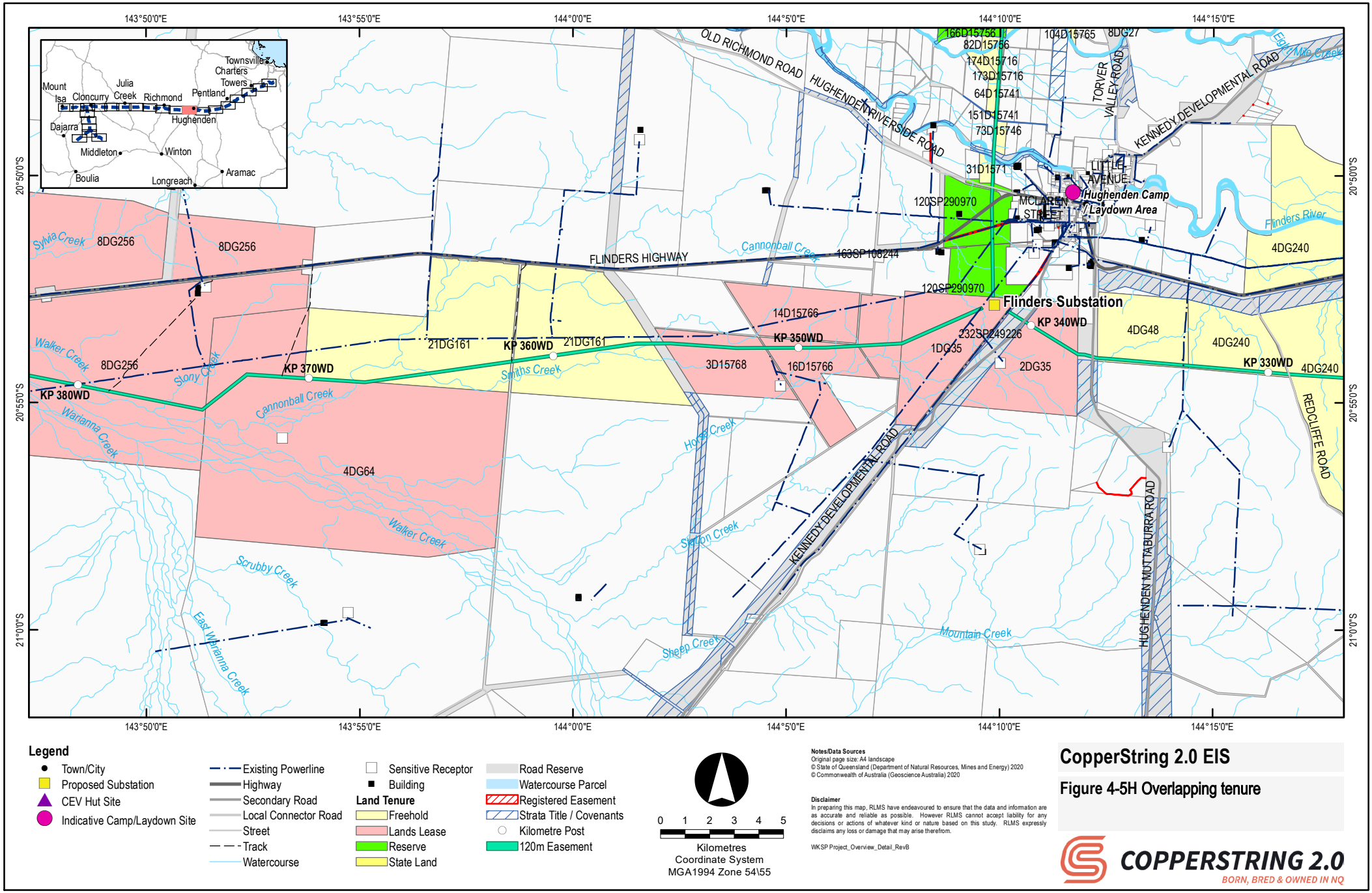
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5G 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

0 1 2 3 4 5

Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

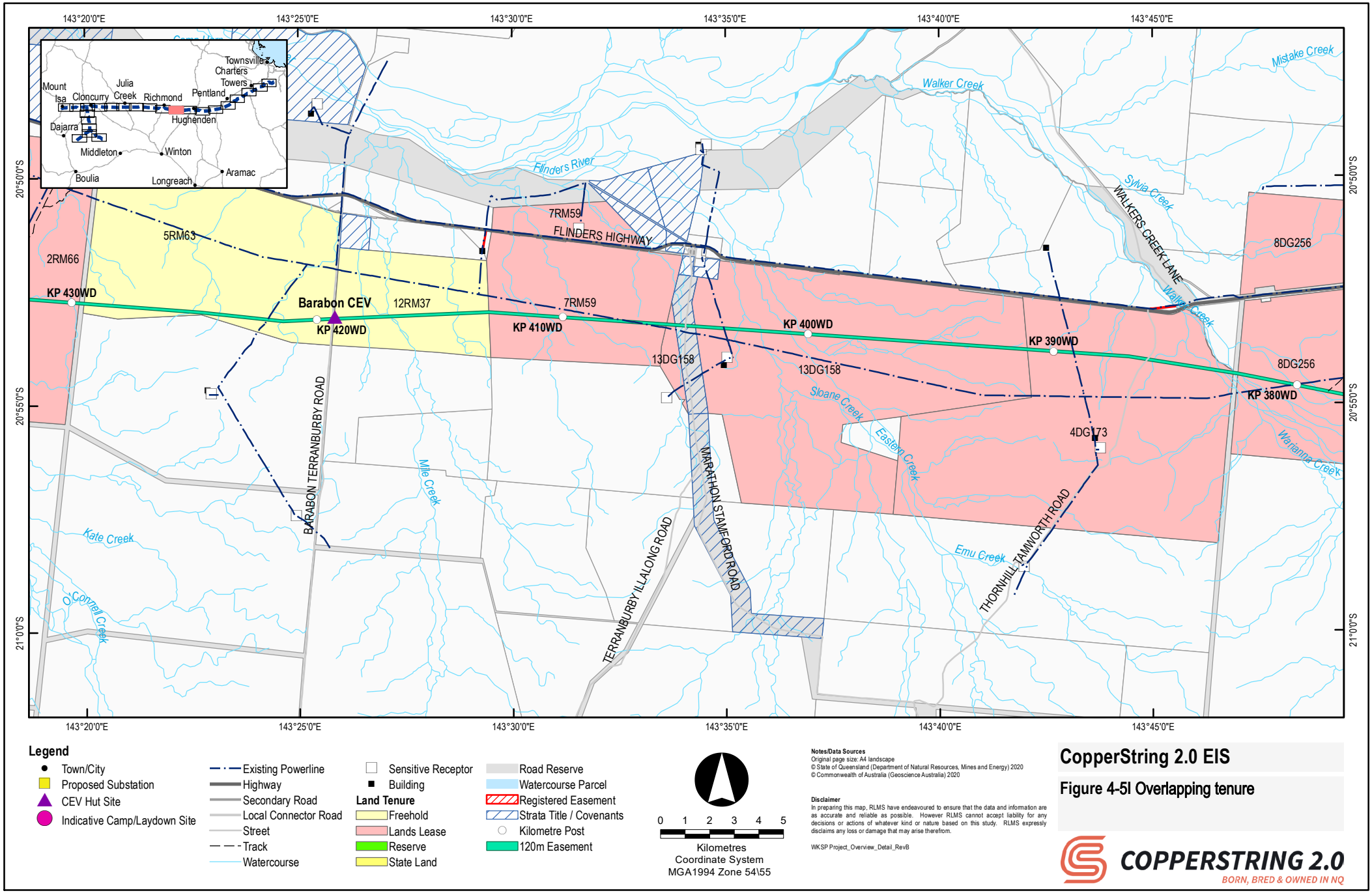
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5H 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

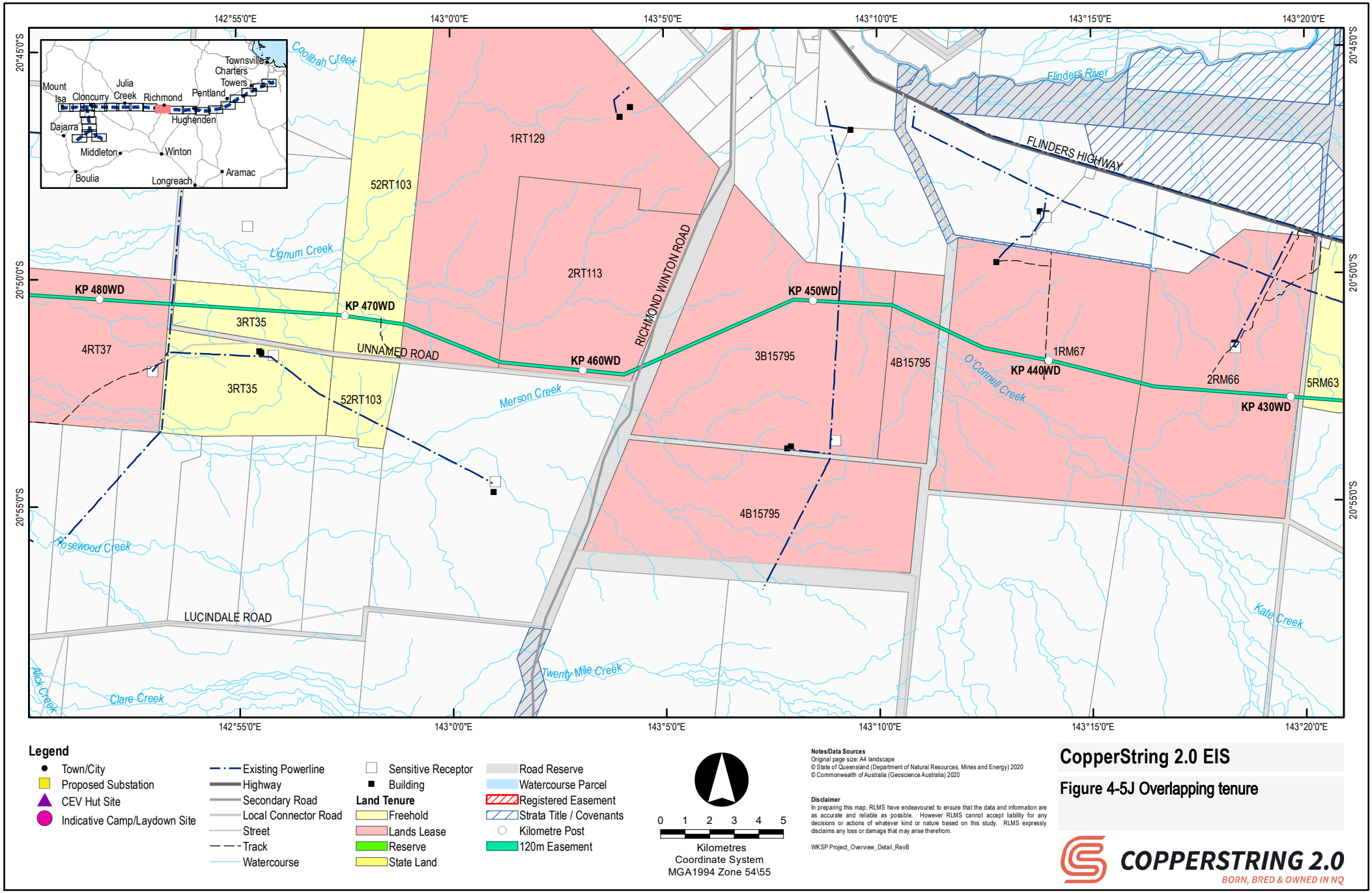
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5l 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

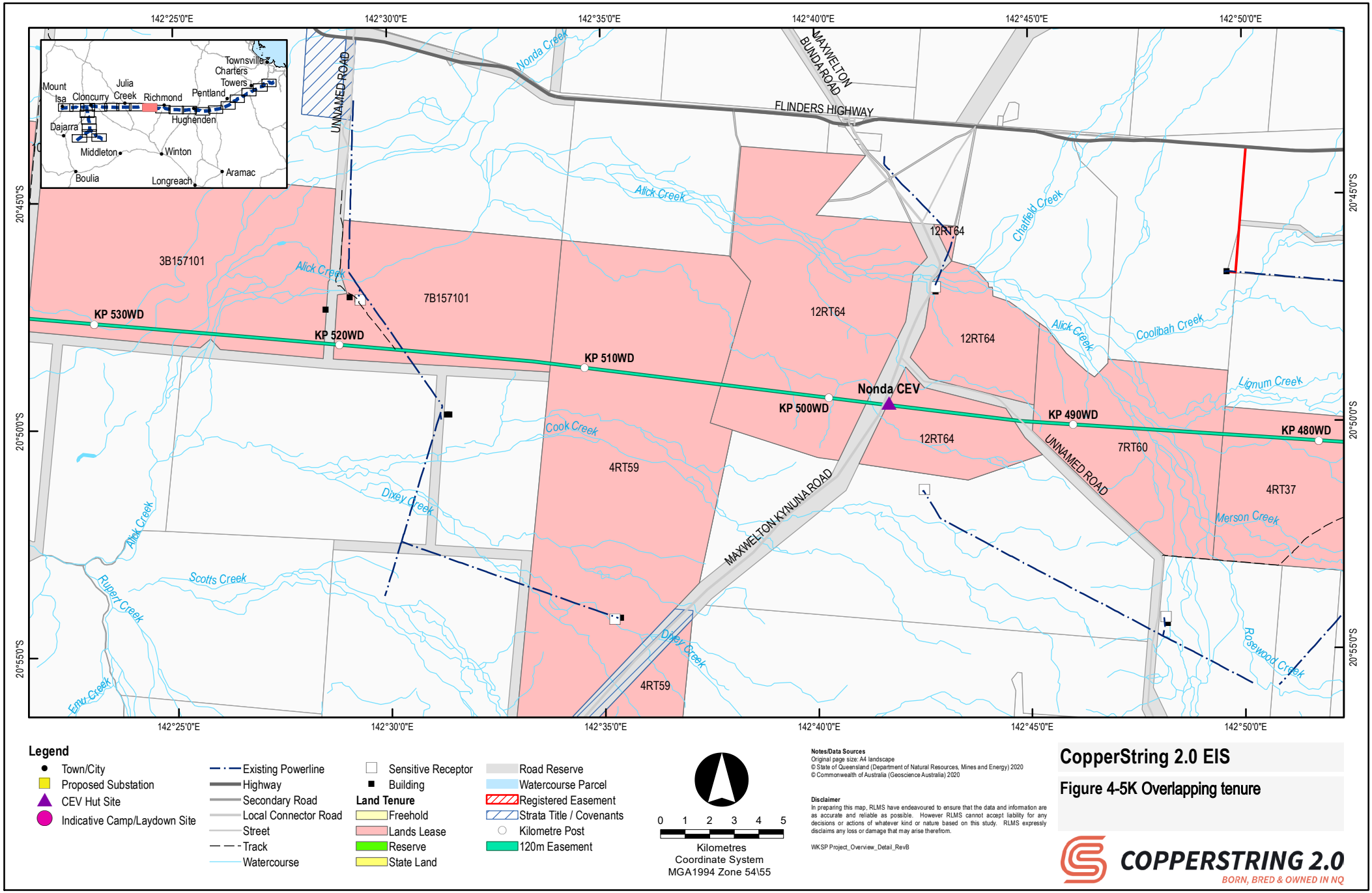
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5J 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

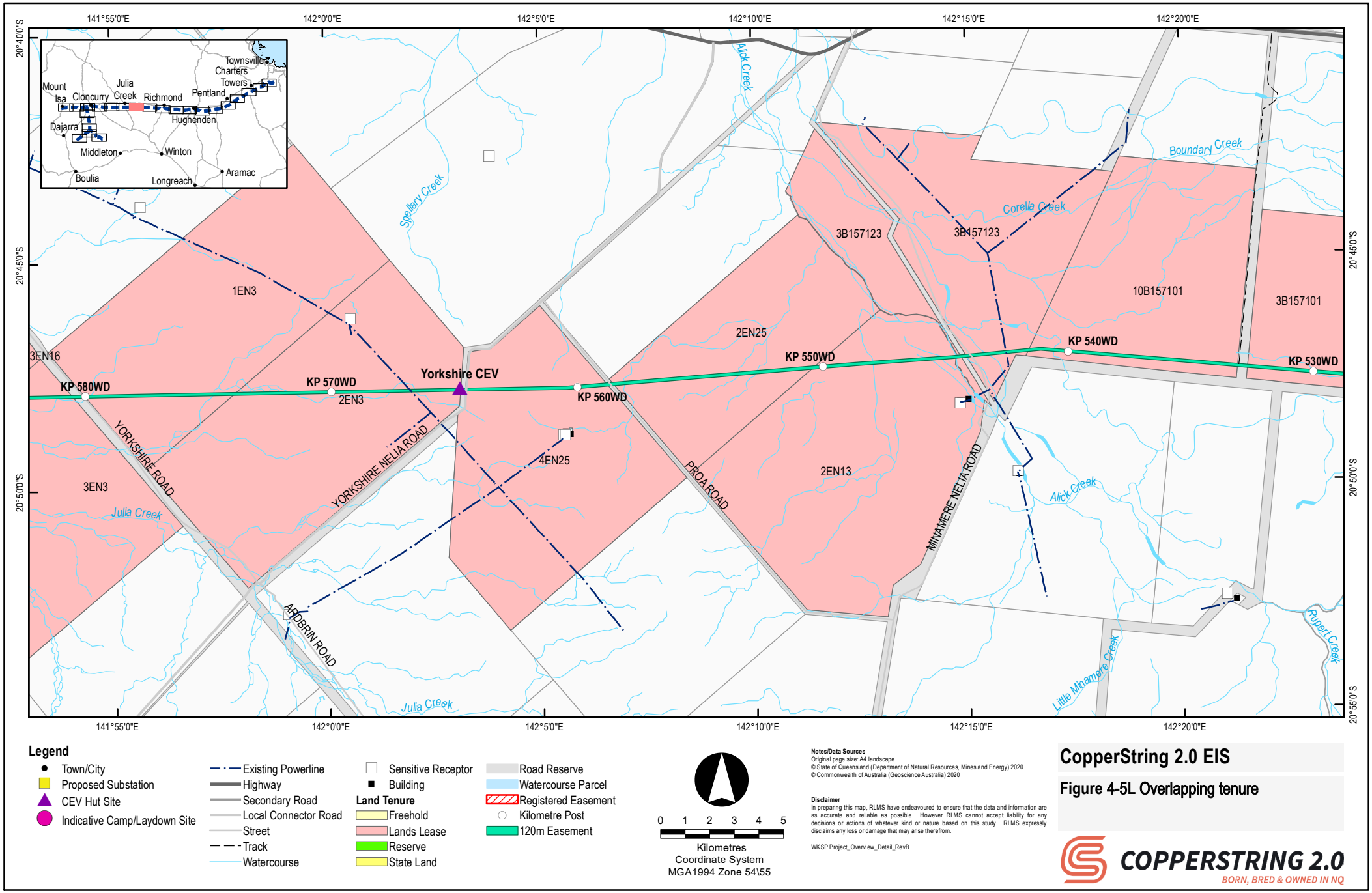
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5K 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
- Kilometre Post
- 120m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

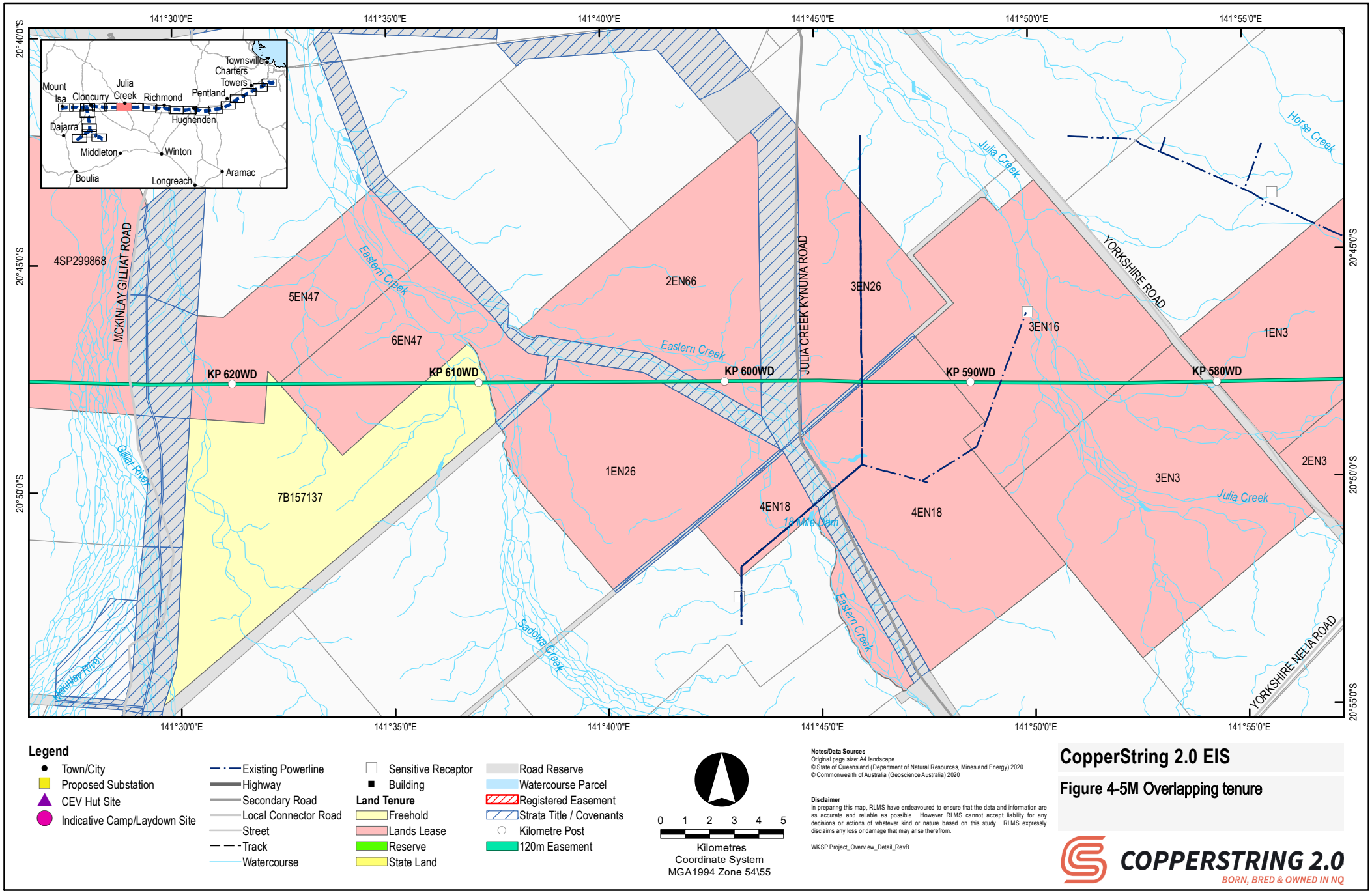
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5L 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

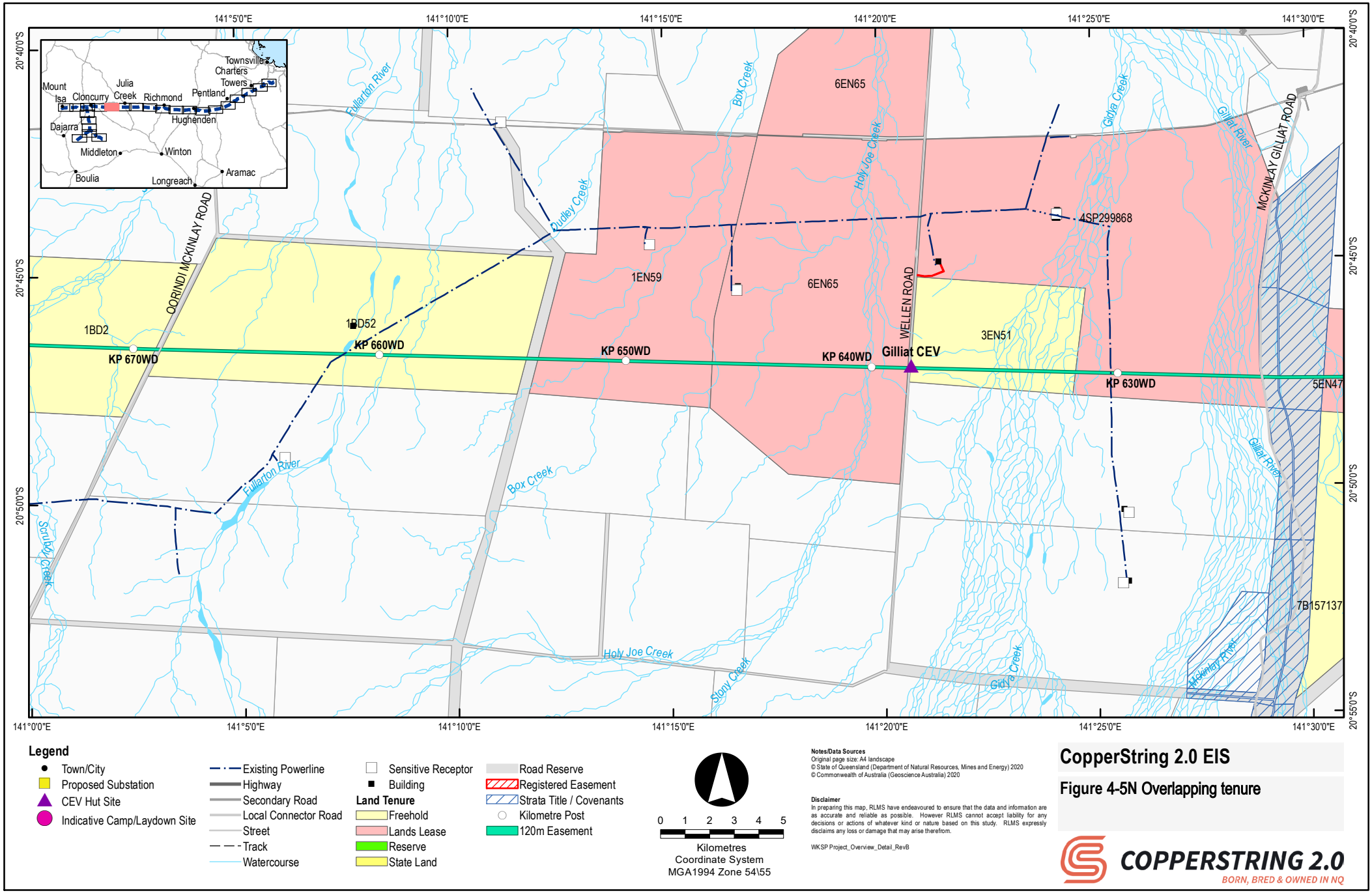
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5M 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
- Registered Easement
- Strata Title / Covenants
- Kilometre Post
- 120m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

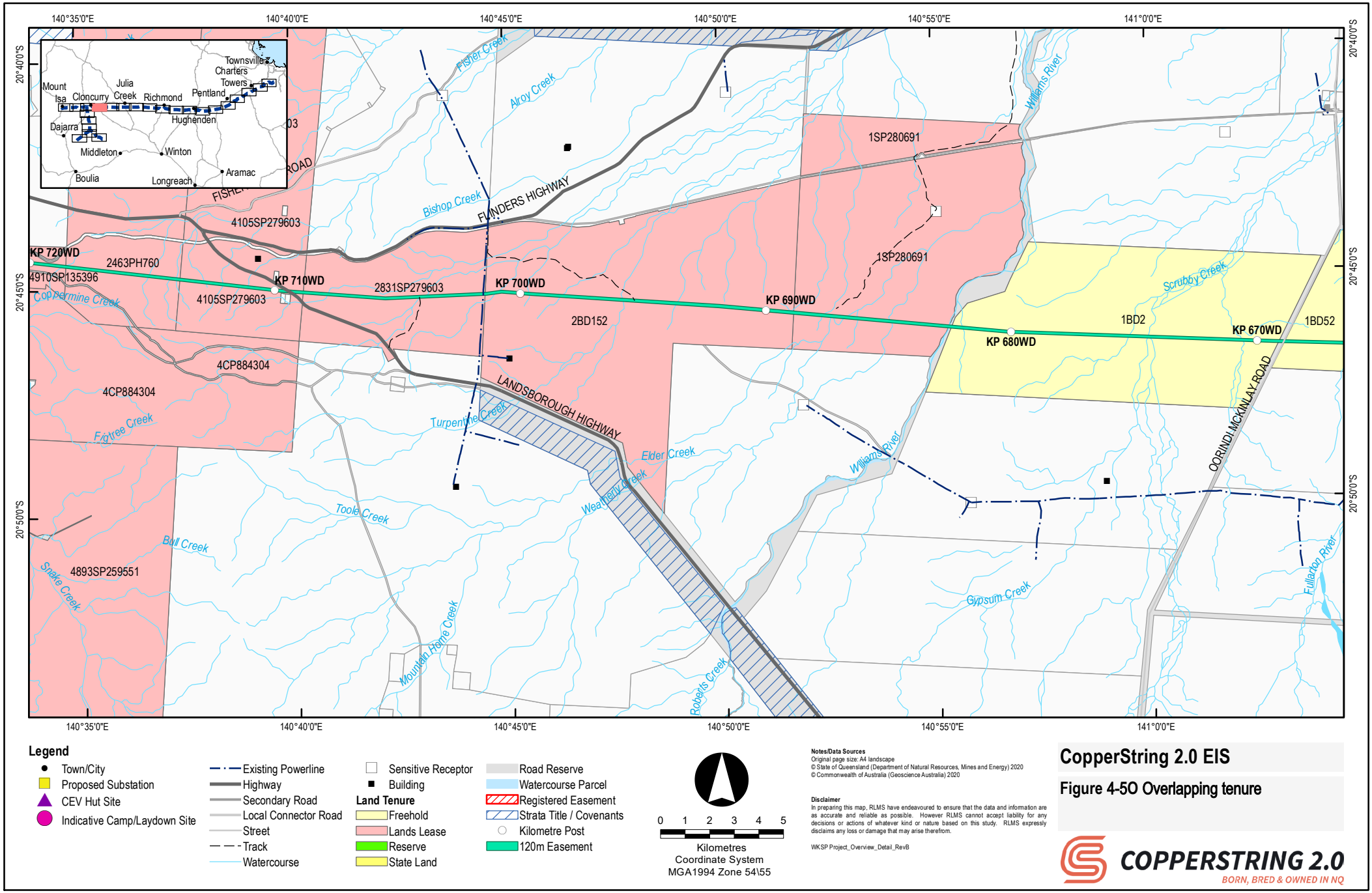
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5N 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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

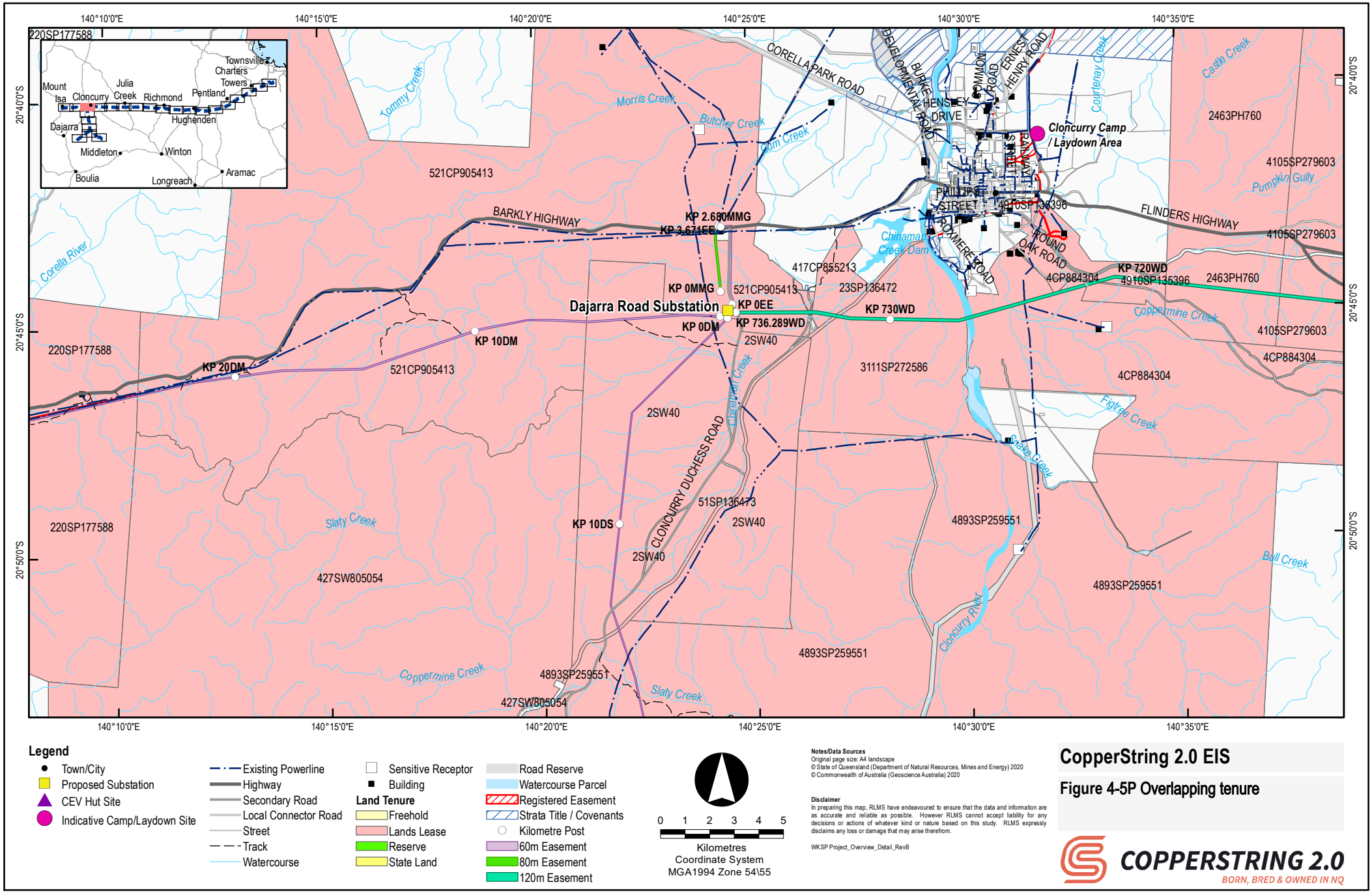
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-50 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
- 60m Easement
- 80m Easement
- 120m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

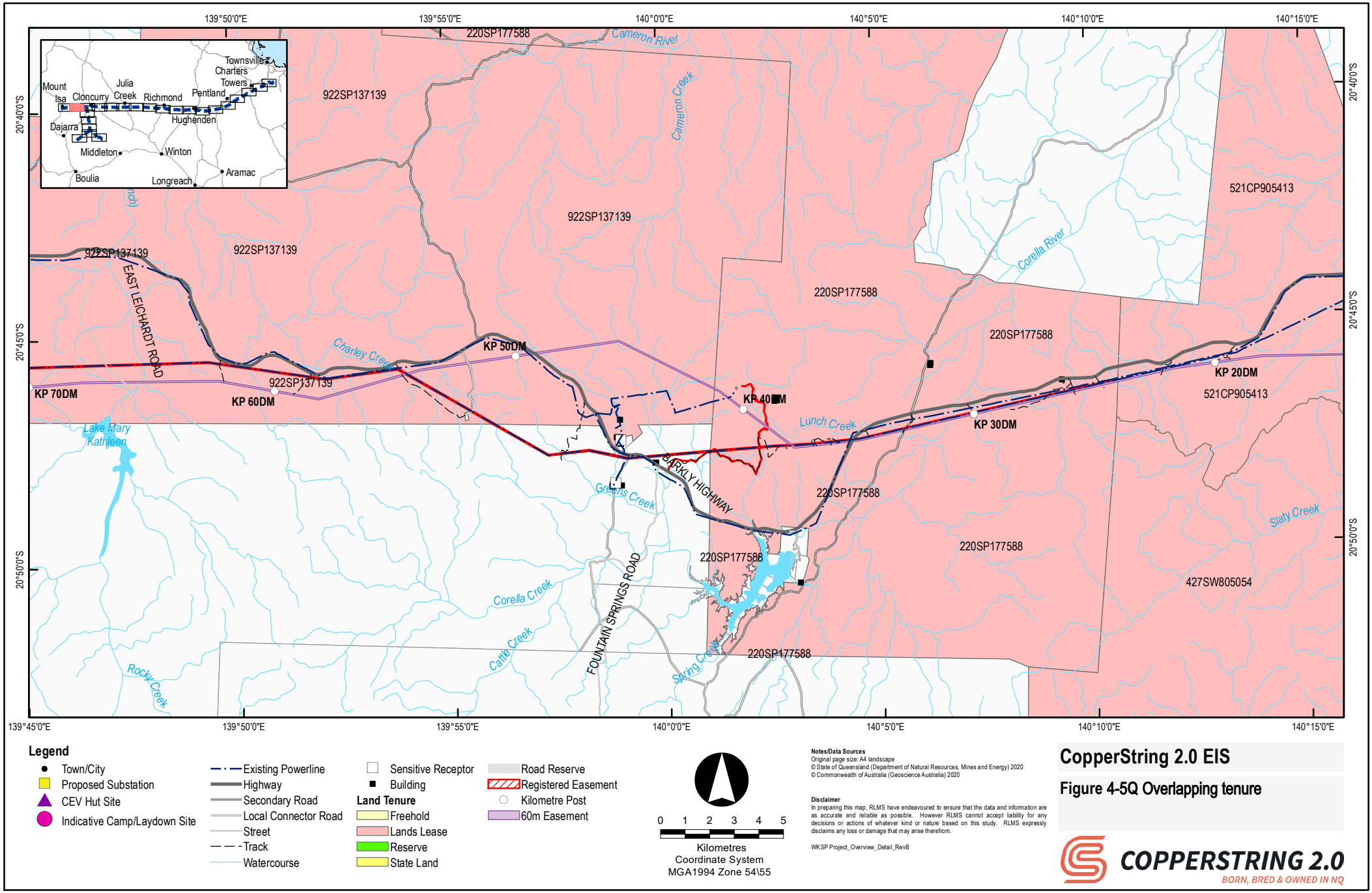
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5P 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
- Registered Easement
- Kilometre Post
- 60m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

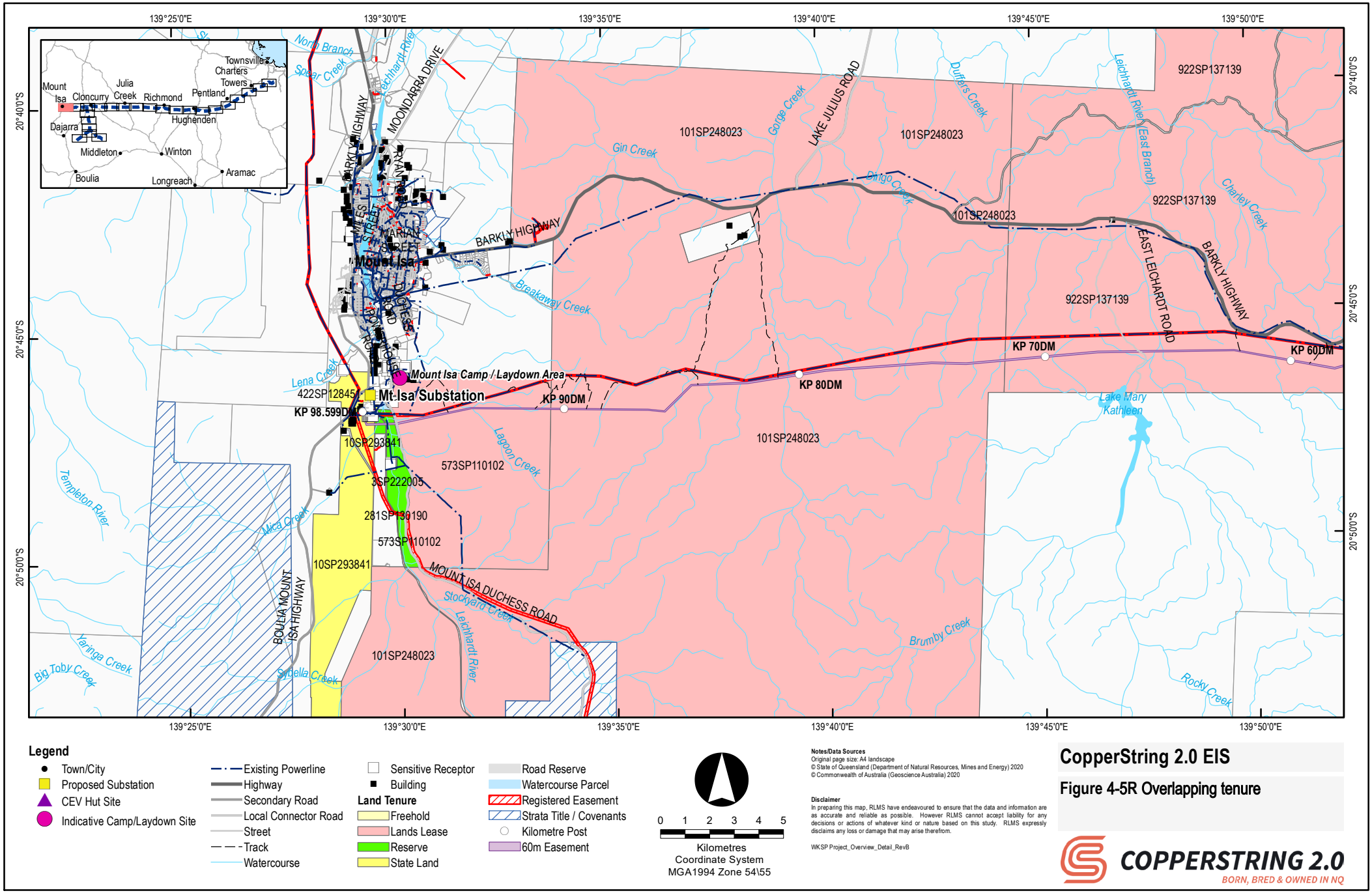
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5Q 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
- 60m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

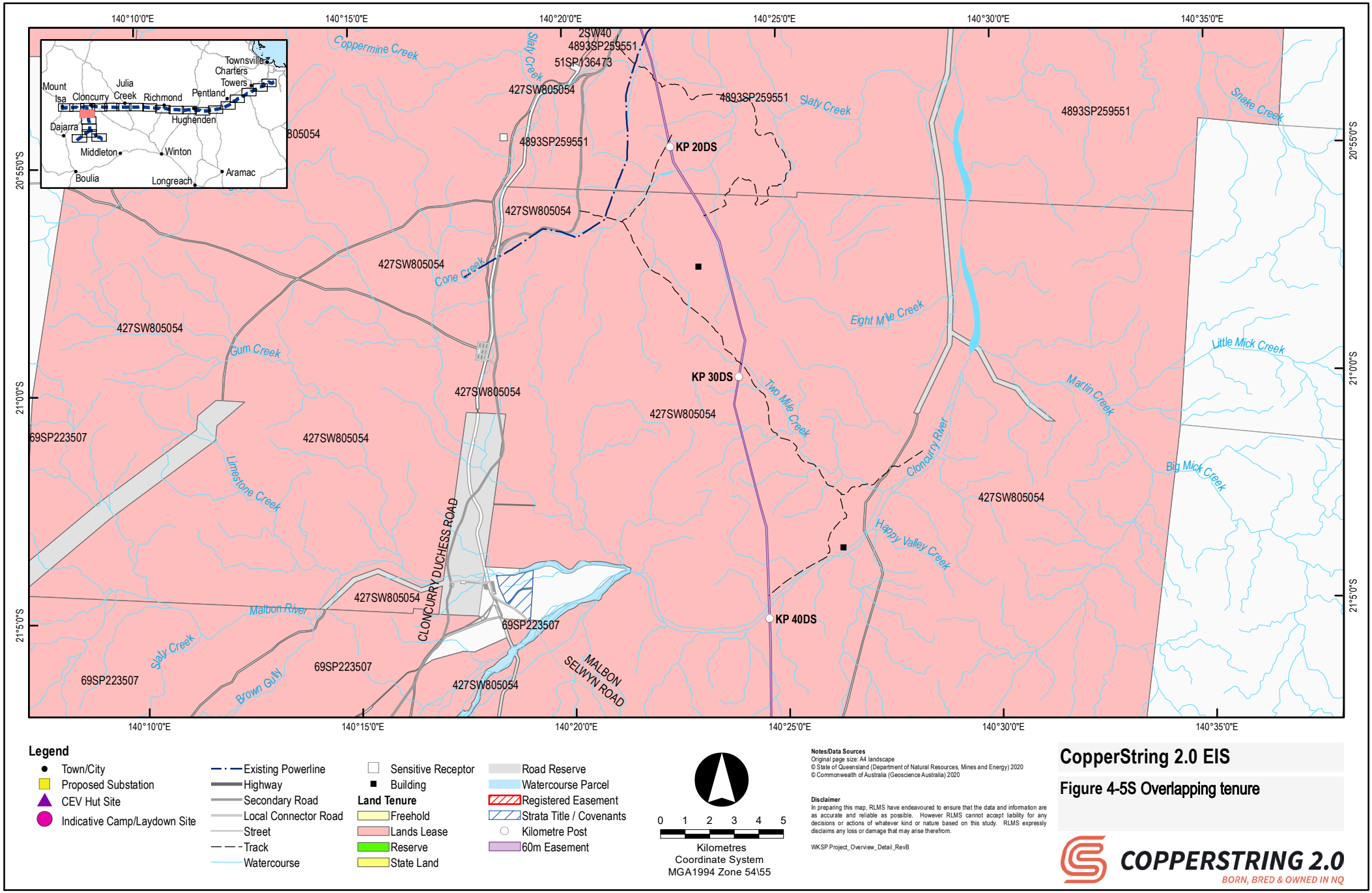
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5R 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
- 60m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

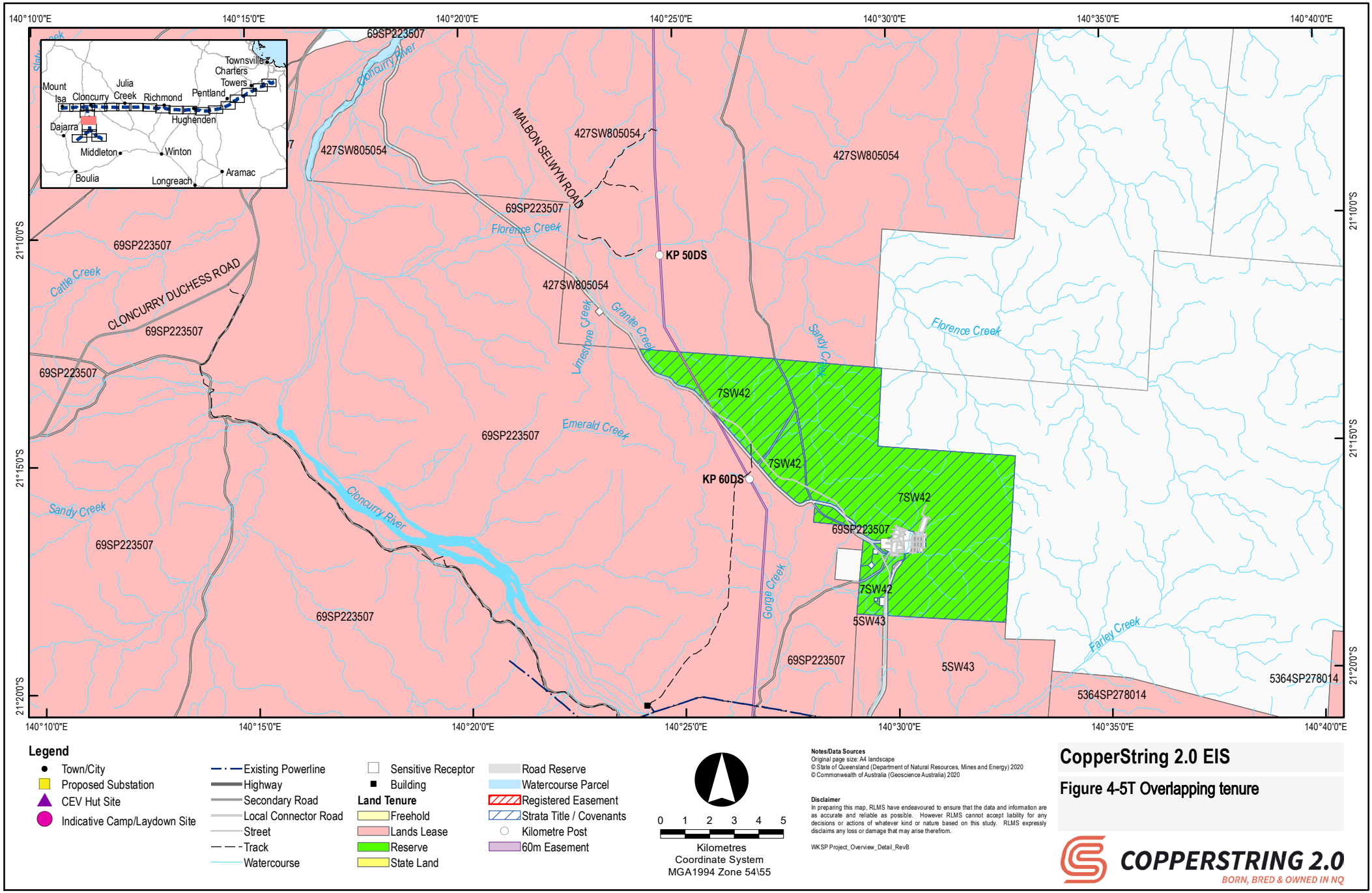
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5S 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
- 60m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

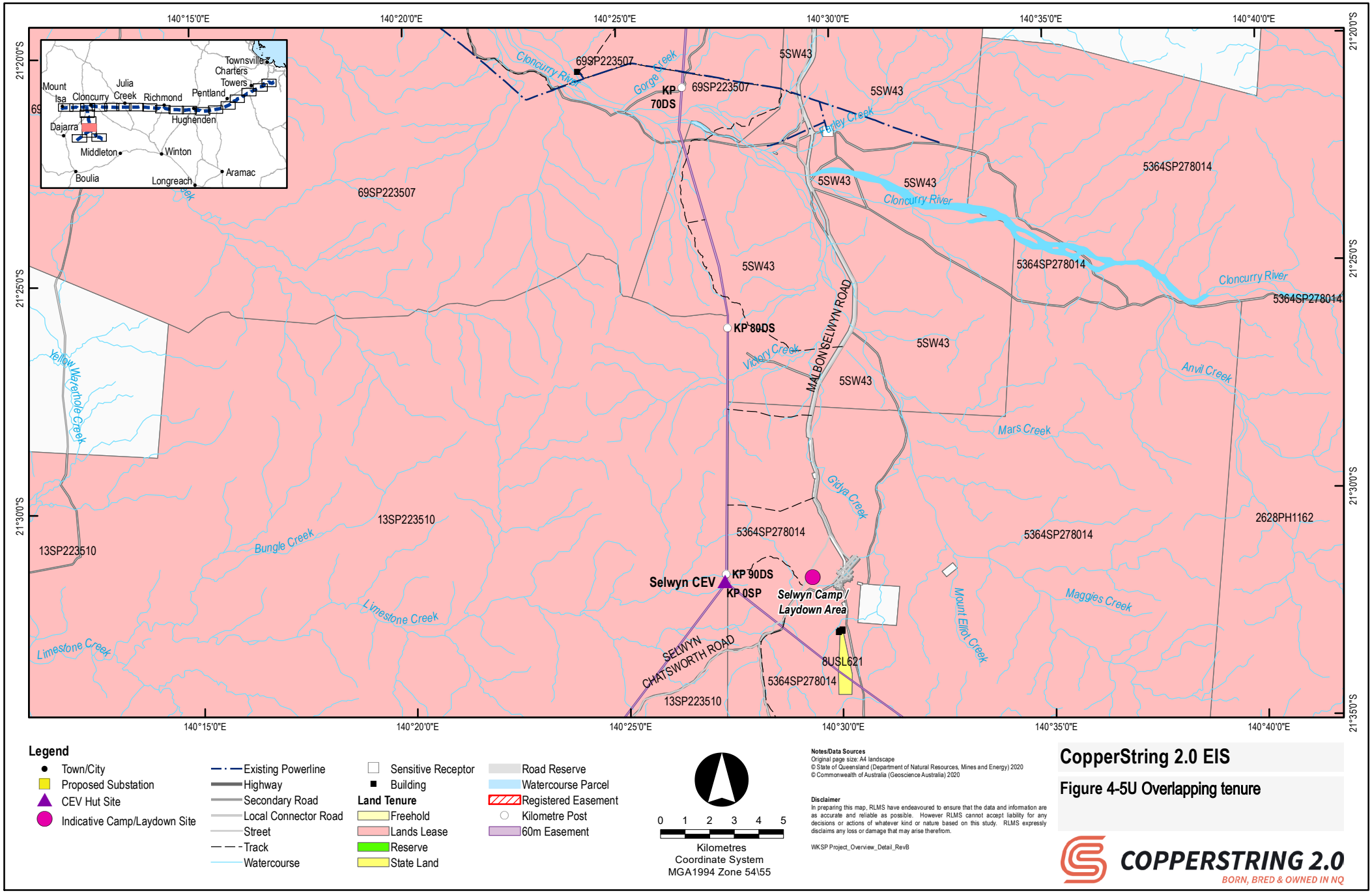
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5T 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
- Kilometre Post
- 60m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

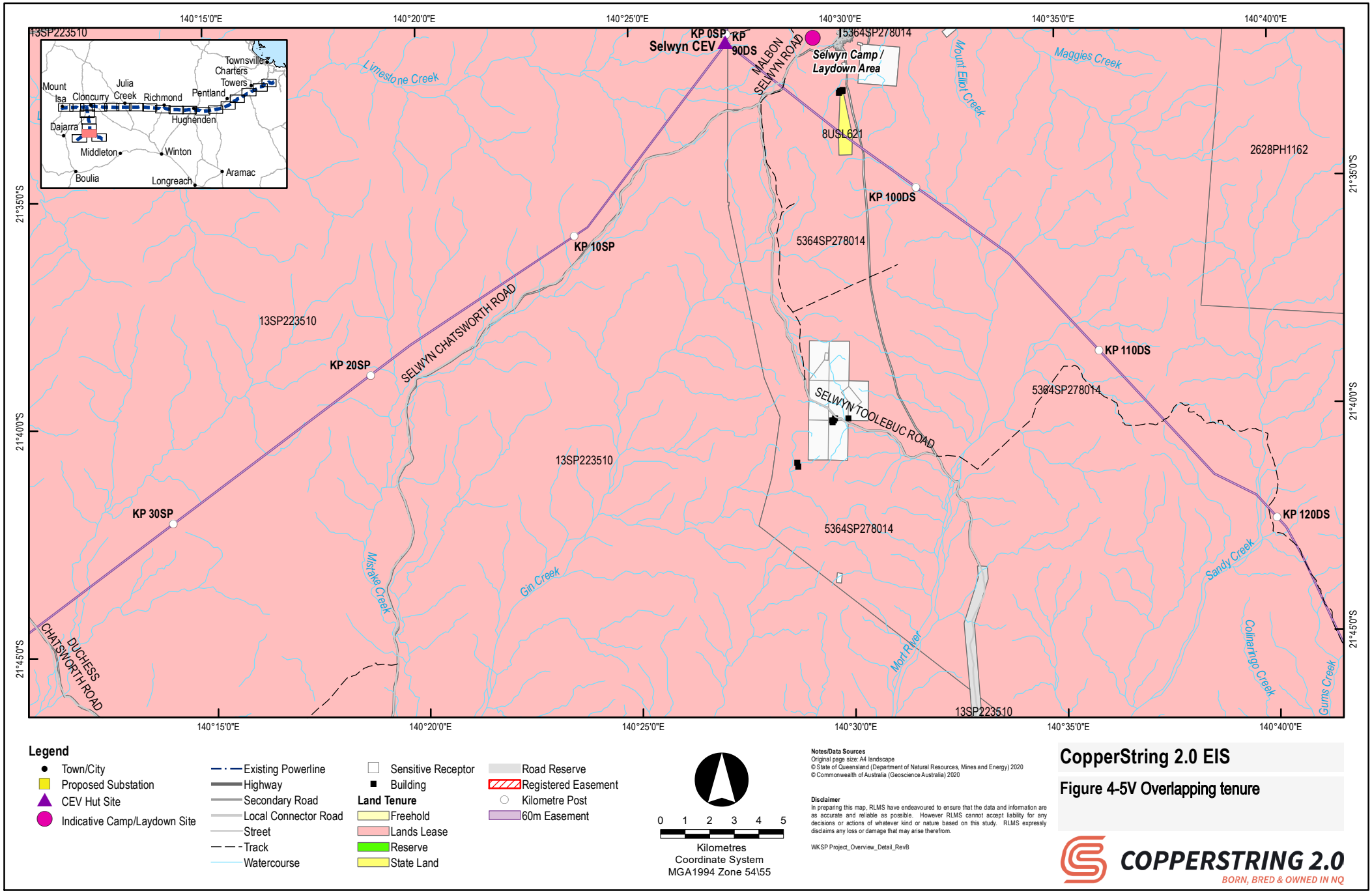
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5U 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
- Registered Easement
- Kilometre Post
- 60m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

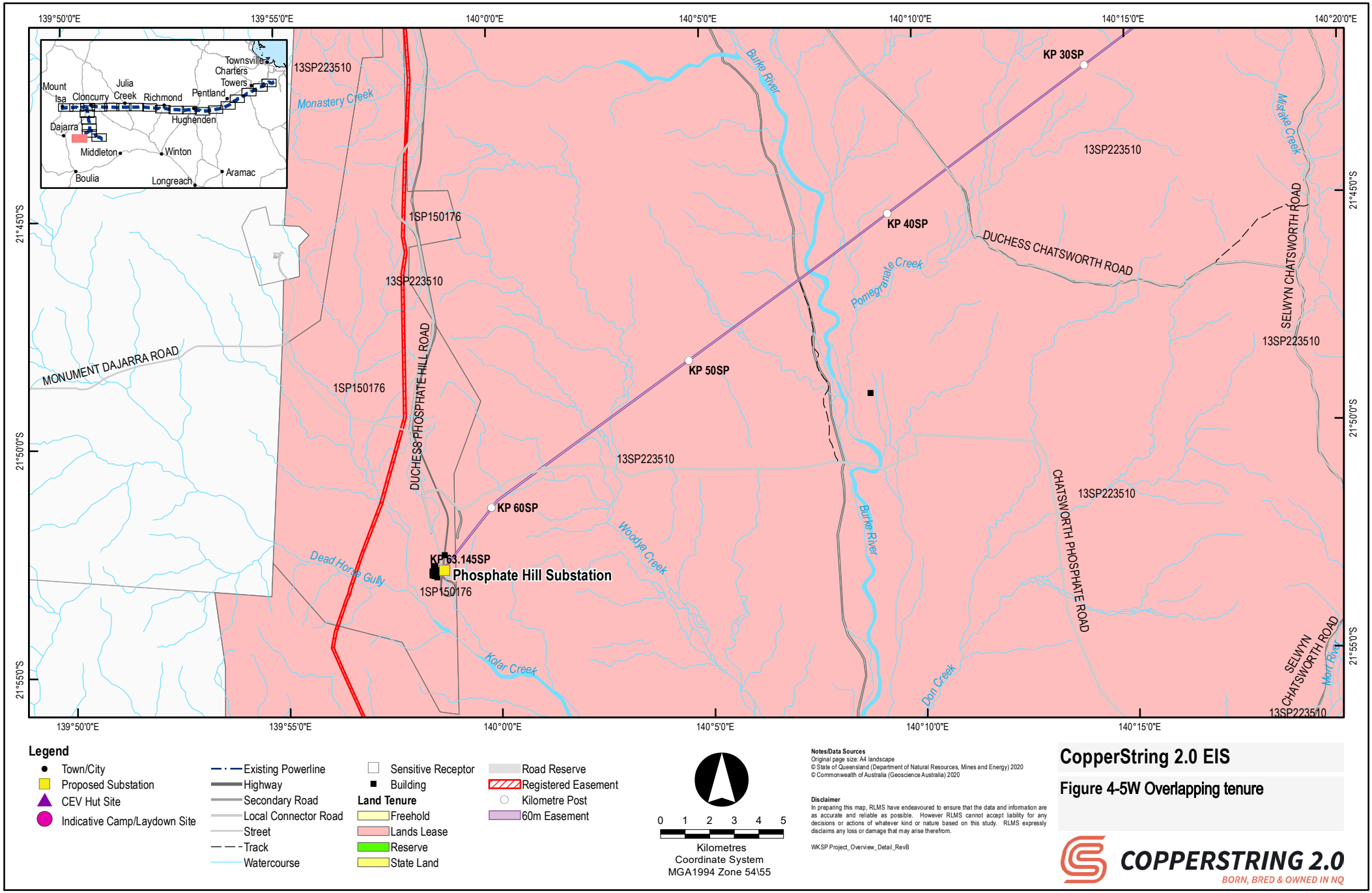
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5V 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
- Registered Easement
- Kilometre Post
- 60m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

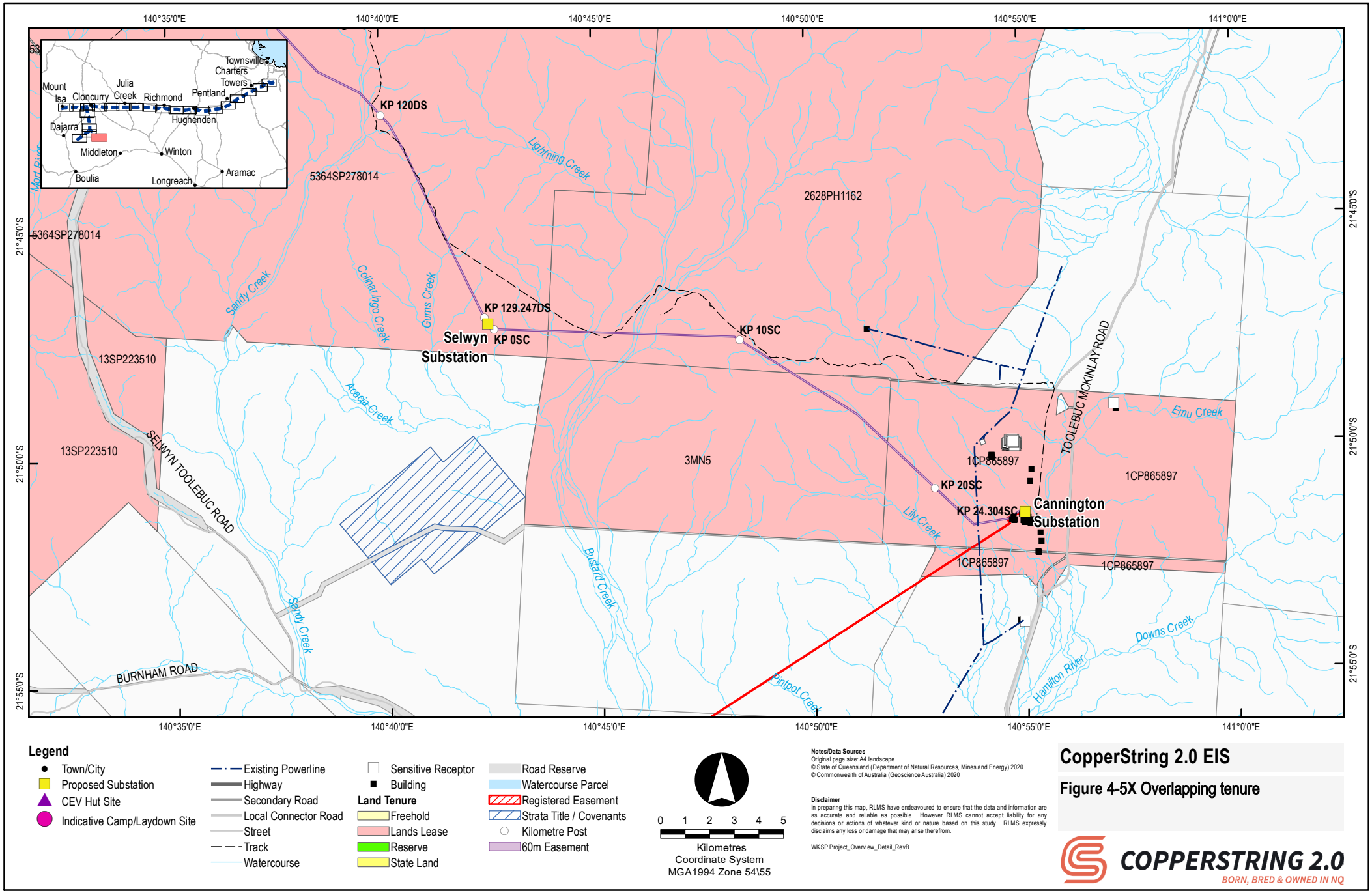
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5W 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
- 60m Easement

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

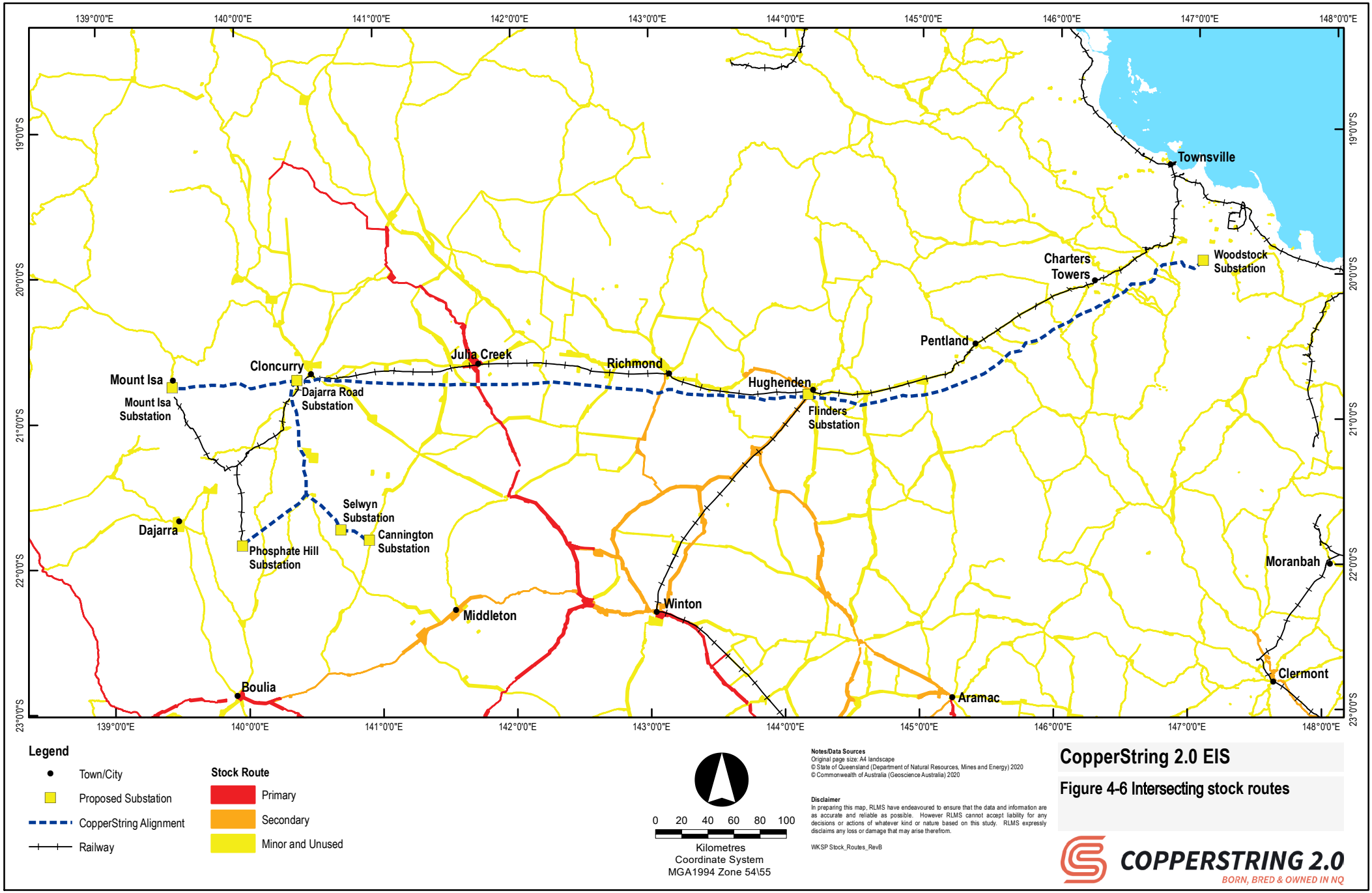
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Project_Overview_Detail_RevB

CopperString 2.0 EIS

Figure 4-5X Overlapping tenure

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


139°0'0"E
140°0'0"E
141°0'0"E
142°0'0"E
143°0'0"E
144°0'0"E
145°0'0"E
146°0'0"E
147°0'0"E
148°0'0"E
19°0'0"S
20°0'0"S
21°0'0"S
22°0'0"S
23°0'0"S
Townsville
Charters Towers
Woodstock Substation
Pentland
Julia Creek
Richmond
Cloncurry
Mount Isa
Mount Isa Substation
Dajarra Road Substation
Hughenden
Flinders Substation
Selwyn Substation
Cannington Substation
Dajarra
Phosphate Hill Substation
Middleton
Winton
Moranbah
Clermont
Boulia
Aramac
Legend
Town/City
Proposed Substation
CopperString Alignment
Railway
Stock Route
Primary
Secondary
Minor and Unused
0 20 40 60 80 100
Kilometres
Coordinate System
MGA1994 Zone 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Stock_Routes_RevB
CopperString 2.0 EIS
Figure 4-6 Intersecting stock routes
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4.6 State Planning Policy 2017

The current State Planning Policy (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 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, infrastructure integration and transport infrastructure).

4.6.1 Liveable communities

The State interest for Liveable communities requires that our communities are vibrant, prosperous, diverse, inclusive, accessible, attractive, healthy and safe.

The SPP requires liveable, well-designed and serviced communities are delivered to support wellbeing and enhance quality of life.

- The Planning Schemes are required to integrate the State interest by ensuring:
- High quality urban design and place making outcomes are facilitated and promoted
- Vibrant places and spaces, and diverse communities that meet lifestyle needs are facilitated
- Development is designed to value and nurture local landscapes, maintain or enhance cultural landscapes, maintain or enhance opportunities for public access and use of the natural environment
- Communities are connected to infrastructure and services.

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 loc 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.

4.6.2 Economic growth

The State interest for Economic growth (extractive resources) 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 is KRA to the corridor section is greater than 40 km from the corridor selection.

4.6.3 Environment and heritage

The State interest for Environment and heritage requires that the State's environment and heritage values are protected through sustainable planning for current and future generations. The SPP requires the following with respect to:

- Biodiversity – matters of environmental significance are valued protected and the health and resilience of biodiversity is maintained or enhanced to support ecological processes.

The Planning Schemes are required to integrate the State interest by ensuring:

- Development is located in areas to avoid significant impacts on matters of national environmental significance and considers the requirements of the EPBC Act.
- Matters of state environmental significance are identified and development is located in areas that avoids adverse impacts; where adverse impacts cannot be avoided, they are minimised.
- Matters of local environmental significance are identified and development is located in areas that avoid adverse impacts; where adverse impacts cannot be avoided, they are minimised.
- Ecological processes and connectivity is maintained or enhanced by avoiding fragmentation of matters of environmental significance.
- The cultural heritage significance of heritage places and heritage areas, including places of Aboriginal and Torres Strait Islander cultural heritage, is conserved for the benefit of the community and future generations.

The Planning Schemes are required to integrate the State interest by ensuring:

- Matters of Aboriginal cultural heritage and Torres Strait Islander cultural heritage are appropriately conserved and considered to support the requirements of the ACH Act and the TSICH Act.
- Adverse impacts on the cultural heritage significance of world heritage properties and national heritage places heritage places prescribed under the EPBC Act are avoided.
- Adverse impacts on the cultural heritage significance of state heritage places are avoided.
- Local heritage places and local heritage areas important to the history of the local government area are identified, including a statement of the local cultural heritage significance of the place or area.

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 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 CHMPs with relevant Aboriginal parties. This is discussed in detail in Volume 2 Chapter 15 Cultural heritage.

The SPP requires the following with respect to:

- Water quality – the environmental values and quality of Queensland waters are protected and enhanced.

The Planning Schemes are required to integrate the State interest by ensuring:

- Development facilitates the protection or enhancement of environmental values and the achievement of water quality objectives for Queensland waters.
- Development is located, designed, constructed and operated to avoid or minimise adverse impacts on environmental values of receiving waters arising from:
- Altered stormwater quality and hydrology
- Wastewater (other than contaminated stormwater and sewage)
- The creation or expansion of non-tidal artificial waterways
- The release and mobilisation of nutrients and sediments.
- The construction phase development achieves the applicable stormwater management design objectives in the SPP
- At the post-construction phase, development:
  - Achieves the applicable stormwater management design objectives on site as identified in the SPP.
  - Achieves an alternative locally appropriate solution off-site that achieves an equivalent or improved water quality outcome to the relevant stormwater management design objectives in the SPP.
- Development in water resource catchments and water supply buffer areas avoids potential adverse impacts on surface water and groundwater to protect drinking water supply environmental values.

4.6.4 Safety and resilience to hazards

The State interest for Safety and resilience to hazards requires planning and resilience to hazards to ensure the continued wellbeing of people, property and infrastructure.

The SPP requires the following with respect to:

- Natural hazards, risk and resilience – the risks associated with natural hazards, including the projected impacts of climate change, are avoided or mitigated to protect people and property and enhance the community's resilience to natural hazards.

The Planning Schemes are required to integrate the State interest by ensuring:

- Natural areas are identified including:
  - Bushfire prone areas
  - Flood hazard areas
  - Landslide hazard areas
  - Storm tide inundation areas
  - Erosion prone areas
- Fit for purpose risk assessment is undertaken to identify and achieve an acceptable or tolerable level for personal safety and property in natural hazard areas
- Development in bushfire and flood prone natural hazard areas:
  - Avoids the natural hazard area
  - Where it is not possible to avid the natural hazard area, development mitigates the risks to people and property to an acceptable to tolerable level
- Development in natural hazard areas:
  - Supports, and does not hinder disaster management capacity and capabilities

  - Directly, indirectly and cumulatively avoids an increase in the exposure or severity of the natural hazard and the potential for damage on the site or to other properties
  - Avoids risks to public safety and the environment from the location of storage of hazardous materials and the release of these materials as a result of a natural hazard
  - Maintains or enhances the protective function of landforms and vegetation that can mitigate the risks associated with the natural hazard
- Community infrastructure is located and designed to maintain the required level of functionality during and immediately after a natural hazard event.

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.

4.6.5 Infrastructure

The State interest for Infrastructure requires successful planning of infrastructure to drive the economy and provide essential service to the community. The SPP requires the following with respect to energy and water supply:

- Energy and water supply – the timely, safe, affordable and reliable provision and operation of electricity.

The Planning Schemes are required to integrate the state interest by ensuring:

- Existing and approved future major electricity infrastructure locations and corridors (including easement and electricity substations) are protected from development that would compromise the corridor integrity and the efficient delivery and functioning of the infrastructure.
- Major electricity infrastructure and electricity substations, are protected from encroachments by sensitive land uses where practicable.
- Development of major electricity infrastructure avoids or otherwise minimises adverse impacts on surrounding land uses and the natural environment.

The SPP requires the following with respect to:

- Infrastructure integration – the benefits of past and ongoing investment infrastructure are maximised through integrated land use planning.

The Planning Schemes are required to integrate the State interest by ensuring:

- The outcomes of significant infrastructure plans and initiatives by all levels of government are considered and reflected, where relevant.
- Development achieves a high level of integration with infrastructure planning to:
  - Promote the most efficient effective and flexible use of existing and planned infrastructure
  - Realise multiple economic, social and environmental benefits from infrastructure investment
  - Ensure consideration of future infrastructure needed to support infill and greenfield growth areas

  - Optimise the location of future infrastructure within communities to provide greater access to facilities and services and enable productivity improvements.
- Development occurs:
  - In areas currently serviced by state and/or local infrastructure and associated services; or
  - In a logical and orderly location, form and sequence to enable the cost effective delivery of state and local infrastructure to service development.
- Existing and planned infrastructure is protected from development that would compromise the ability of infrastructure and associated services to operate safely and efficiently.

The SPP requires the following with respect to:

- Transport infrastructure – the safe and efficient movement of people and goods is enabled, and land use patterns that encourage sustainable transport are supported.

The Planning Schemes are required to integrate the State interest by ensuring:

- Transport infrastructure and existing and future transport corridors are reflected and supported through compatible land uses.
- Development is located in areas currently serviced by transport infrastructure, and where this cannot be achieved, development is facilitated in a logical and orderly location, form and sequence to enable cost-effective delivery of new transport infrastructure to service development.
- Development achieves a high level of integration with transport infrastructure and supports public passenger transport and active transport as attractive alternatives to private transport.
- Development is located and designed to mitigate adverse impacts on development from environmental emissions generated by transport infrastructure.
- A road hierarchy is identified that reflects the role of each category of road and effectively manages all types of traffic.
- The safety and efficiency of existing and future state transport infrastructure, corridors and networks is not adversely affected by development.

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 Muttaburra Road
- Landsborough Highway

- Cloncurry to Dajarra Road

The Project will not affect the safety and efficiency of State transport infrastructure. Volume 2 Chapter 13 Transport provides further details regarding the characteristics of the transport network and corridors.

Other State interests as detailed in the SPP are not considered relevant to the corridor selection because the Project does not impact on these State matters or are not considered relevant to the Project. 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.

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 according to the relevant legislation under which the Planning Scheme was prepared. The following Table 4-7 identifies the level of integration of State interests in each of the Planning Scheme along the corridor selection.

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.

Table 4-7 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	×	×	×	×	×
Draft Burdekin Shire Planning Scheme	✓	✓	✓	✓	✓
Charters Towers Regional Council Town Plan	✓	✓	✓*	✓	✓**
Shire of Flinders Planning Scheme	✓	✓	✓*	✓	✓**
Richmond Shire Council Planning Scheme	×	×	×	×	×
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

4.7 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 as detailed below. Both regional plans have been signed off by the Planning Minister.

4.7.1 North West Regional Plan

The NW Regional Plan provides a framework to manage growth and change land use and development in the region to 2031, and applies to the following local government planning areas:

- Flinders Shire Council
- Richmond Shire Council
- McKinlay Shire Council
- Cloncurry Shire Council
- Mount Isa City Council.

The NW Regional Plan includes a number of provisions which support infrastructure development in the north-west region. They are:

- Part C – providing infrastructure and services. The NW Regional Plan supports improved access to work places, essential services and recreation and encourages stronger connections throughout the region to improve liveability of regional communities. Water and energy are recognised as limiting factors to future regional development.
- Part E – 6. Infrastructure chapter recognises that in order to support economic growth and create business opportunities in the north-west region, access to reliable energy supplies at an affordable rates is necessary. The NW Regional Plan includes the following energy objectives applicable to the Project to support reliable and cost effective energy infrastructure:
  - 6.2.A – explore options for energy supply that will deliver competitively priced and secure power to the region for industrial and broader community use
  - 6.2.C – Encourage network augmentation and lowest cost expansion alternatives, to support development of isolated commercial operations
  - 6.2.D – Investigate means for determining Projected infrastructure demands taking into account the mining industry.

In addition to the above energy objectives, the NW Regional Plan also identifies the following land use policies for the provision of reliable energy infrastructure:

- Identify, preserve and acquire sites, corridors and buffers for future energy infrastructure
- Ensure energy infrastructure agencies address long-term regional energy needs
- Address land-use, land access, noise and visual impacts that have the potential to hinder renewable energy developments.

The Project complies with the intent of the NW Regional Plan. Further discussion about the integration of the relevant regional interests as set out in the NW Regional Plan 2010-2031 and the NQ Regional Plan is detailed in Volume 1 Chapter 4 Legislation and approvals.

4.7.2 North Queensland Regional Plan

The NQ Regional Plan (Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP), 2020) 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 local government areas of Burdekin, Charters Towers, Hinchinbrook, Palm Island and Townsville.

The NQ Regional Plan includes four (4) goals for building a regional vision for North Queensland. These goals include:

- Goal 1 – A leading economy in regional Australia
- Goal 2 – A rich and healthy environment
- Goal 3 – Liveable, sustainable and resilient communities that promote living in the tropics
- Goal 4 – A safe, connected and efficient North Queensland.

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.

Goal 4 of the NQ Regional Plan – A safe, connected and efficient North Queensland is about connection to efficient energy sources. This goal states that the growth of the region is dependent on efficient, reliable and resilient infrastructure and transport networks. Significant networks for North Queensland include road, rail, seaports, airports, digital communication, energy, waste and water. The Project complies with Goal 4 of the NQ Regional Plan.

The integration of relevant regional interests as set out in the NW Regional Plan 2010-2031 and the NQ Regional Plan, March 2020, is discussed further in Volume 1 Chapter 4 Legislation and approvals.

4.8 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. Seven Planning Schemes are relevant to the Project area as detailed below.

The corridor selection traverses seven LGAs. The following provides a summary of each of the Planning Scheme provisions relevant to the Project including associated activities including temporary construction camps, temporary laydown and delivery areas, roadworks and vehicle access and water supply.

The corridor selection is located primarily on rural zoned land across all seven LGAs. Accordingly, there is a potential conflict with the each of the Planning Schemes as the Project relates to the development of rural land. In assessing the EIS, the Coordinator General will consider whether the benefits of the Project and the impacts on rural land use provide sufficient merit and grounds to justify the Project, despite conflicts with the Planning Schemes.

A summary of the relevant Planning Scheme provisions for a Material Change of Use for the corridor selection are detailed in the following Table 4-8.

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

Table 4-9 provides a summary of the relevant Planning Scheme provisions for ancillary uses such as construction camps. Table 4-10 provides a summary of the relevant Planning Scheme provisions for Operational Work associated with the corridor selection. A detailed assessment of the applicable requirements under Planning Schemes is provided in Volume 1 Chapter 4 Legislation and approvals.

Figure 4-1 illustrates the intersecting land uses within each LGA for the corridor selection.

Table 4-8 Planning Scheme provisions for MCU for corridor selection

Local authority	Date adopted	Relevant legislation	State interests	Project elements	Land use definition	Zone / Planning area	Level of assessment	Relevant DEOs**** / Strategic framework / Codes
Burdekin Shire Council	4 March 2011	Repealed *Integrated Planning Act 1997*	No	Corridor selection	Undefined use	Rural Planning Area	Impact assessable	• All DEOs • Rural zone code • Overlay codes
Draft Burdekin Shire Planning Scheme	2020	*Planning Act 2016*	Yes	Corridor selection	Major electricity infrastructure	Rural zone	Code assessable if undertaken by public sector entity, other Impact assessable	• Strategic framework • Rural zone code • Overlay codes • Development works code
Charters Towers Regional Town Plan	10 February 2020	*Planning Act 2016*	Yes* **	Corridor selection	Major electricity infrastructure	Rural zone	Impact assessable	• Strategic framework • Rural zone code • Overlay codes • Development works code
Shire of Flinders Planning Scheme	28 February 2018	Repealed *Sustainable Planning Act 2009* and has been amended for alignment with the *Planning Act 2016*	Yes* **	Corridor selection	Major electricity infrastructure	Rural zone	Impact assessable	• Strategic framework • Rural zone code • Overlay codes • Industry and infrastructure activities code
Planning Scheme for Shire of Richmond	30 September 2005	Repealed Integrated *Planning Act 1997*	No	Corridor selection	Public utility	Rural zone	Impact assessable	• DEOs • Rural zone code • Shire wide codes
Draft Richmond	2020	*Planning Act 2016*	Yes* **	Corridor selection	Major electricity infrastructure	Rural zone	Accepted development	• Rural zone code • Overlay codes

Local authority	Date adopted	Relevant legislation	State interests	Project elements	Land use definition	Zone / Planning area	Level of assessment	Relevant DEOs**** / Strategic framework / Codes
Shire Planning Scheme					Substation		subject to requirements	• Infrastructure, Services and works code • Parking and access code
McKinlay Shire Planning Scheme	26 April 2016	*Planning Act 2016*	Yes* **	Corridor selection	Major electricity infrastructure	Rural zone	Code assessable	• Rural zone code • General development code
Cloncurry Shire Planning Scheme	15 February 2016	Repealed *Sustainable Planning Act 2009* and amended for alignment with the *Planning Act 2016*	Yes ** ***	Corridor selection	Major electricity infrastructure	Rural zone	Impact assessable	• Strategic framework • Rural zone code • Overlay codes
City of Mount Isa Planning Scheme 2020	9 March 2020	Repealed *Sustainable Planning Act 2009* and amended for alignment with the *Planning Act 2016*	Yes * **	Corridor selection	Major electricity infrastructure	Rural zone	Impact assessable	• Strategic framework • Rural zone • Overlay codes

*excludes coastal environment – this State interest is not relevant to the LGA
**excludes Strategic ports – this State interest is not relevant to the LGA
***excludes cultural heritage – this State interest has not been integrated in to the Planning Scheme
****DEO – Desired Environmental Outcome

Table 4-9 Planning scheme provisions for MCU for ancillary uses

Local authority	Date adopted	Relevant legislation	State interests	Project elements	Land use definition	Zone / Planning area	Level of assessment	Relevant DEOs / Strategic framework / Codes
Burdekin Shire Council	4 March 2011	Repealed *Integrated Planning Act 1997*	No	Construction camps	Accommodation building	Rural zone	Impact assessable	• DEOs • Rural zone code • Overlay codes
Draft Burdekin Shire Planning Scheme	2020	*Planning Act 2016*	Yes	Construction camps	Non-resident workforce accommodation	Rural zone	Impact assessment	• Strategic framework • Rural zone code • Overlay codes • Development works code
Charters Towers Regional Council	10 February 2020	*Planning Act 2016*	Yes* **	Construction camps	Non-resident workforce accommodation	Rural zone	Impact assessable	• Strategic framework • Rural zone code • Overlay codes • Develop works code
Shire of Flinders Planning Scheme	28 February 2018	Repealed *Sustainable Planning Act 2009* and has been amended for alignment with the *Planning Act 2016*	Yes* **	Construction camps	Non-resident workforce accommodation	Rural zone	Impact assessable	• Strategic framework • Rural zone code • Overlay codes • Industry and infrastructure activities code
Planning Scheme for Shire of Richmond	30 September 2005	Repealed *Integrated Planning Act 1997*	No	Construction camps	Accommodation building	Rural zone	Impact assessable	• DEOs • Rural zone code • Shire wide codes
Draft Richmond	2020	*Planning Act 2016*	Yes* **	Construction camps	Non-resident workforce accommodation	Rural zone	Code assessable	• Rural zone code • Overlay codes

Local authority	Date adopted	Relevant legislation	State interests	Project elements	Land use definition	Zone / Planning area	Level of assessment	Relevant DEOs / Strategic framework / Codes
Shire Planning Scheme								• Infrastructure, services and works code • Parking and access code
McKinlay Shire Planning Scheme	26 April 2016	*Planning Act 2016*	Yes* **	Construction camps	Non-resident workforce accommodation	Rural zone	Impact assessable	• Rural zone code • General development codes • Non-resident workforce accommodation code
Cloncurry Shire Planning Scheme	15 February 2016	Repealed *Sustainable Planning Act 2009* and amended for alignment with the *Planning Act 2016*	Yes ** ***	Construction camps (temporary) & based on length of time at location	Non-resident workforce accommodation	Rural zone	Accepted development otherwise Impact assessable	• Strategic framework • Rural zone code • Overlay codes • Non-resident workforce accommodation code
City of Mount Isa Planning Scheme 2020	9 March 2020	Repealed *Sustainable Planning Act 2009* and amended for alignment with the *Planning Act 2016*	Yes * **	Construction camps	Non-resident workforce accommodation	Rural zone	Accepted development subject to requirements	• Residential activities code • Landscaping code • Parking and access and loading code • Engineering works code • Excavation and filling code

Table 4-10 Planning scheme provisions for operational work

Local authority	Date adopted	Relevant legislation	Project elements	Zone / Planning area	Level of assessment	Relevant DEOs / Strategic framework / Codes
Burdekin Shire Council	4 March 2011	Repealed *Integrated Planning Act 1997*	Excavation & filling All other Operational Works	Rural zone	Exempt development	
Draft Burdekin Shire Planning Scheme	2020	*Planning Act 2016*	Filling & excavation	Rural zone	Impact assessable	• Overlay codes • Development works code
			Any other operational works	Rural zone	Accepted development	
Charters Towers Regional Council	10 February 2020	*Planning Act 2016*	Excavation & filling	Rural zone	Accepted development subject to requirements	
			All other Operational Works		Code assessable	
Shire of Flinders Planning Scheme	28 February 2018	Repealed *Sustainable Planning Act 2009* and has been amended for alignment with the *Planning Act 2016*	Excavation & filling	Rural zone	Code Assessable	• Operational works code • Flood hazard overlay code
			All other Operational works		Accepted development	
Planning Scheme for Shire of Richmond	30 September 2005	Repealed *Integrated Planning Act 1997*	All Operational works	Rural zone	Exempt development	
Draft Richmond Shire Planning Scheme	2020	*Planning Act 2016*	Operational work – for an MCU	Rural zone	Code assessable	• Rural zone code • Infrastructure, services and works code

Local authority	Date adopted	Relevant legislation	Project elements	Zone / Planning area	Level of assessment	Relevant DEOs / Strategic framework / Codes
			Filling & excavation	Rural zone	Accepted development subject to requirements	• Rural zone code • Infrastructure, services and works code • Flood hazard overlay code
McKinlay Shire Planning Scheme	26 April 2016	*Planning Act 2016*	Excavation & filling Vegetation clearing	Rural zone	Code assessable	• Operational works code
Cloncurry Shire Planning Scheme	15 February 2016	Repealed *Sustainable Planning Act 2009* and amended for alignment with the *Planning Act 2016*	Earthworks	Rural zone	Accepted development in certain circumstances, otherwise Code assessable	• Earthworks code • Integrated water cycle management code • Operational works and services code
			All other Operational works		Accepted development subject to requirements, otherwise Code assessable	
City of Mount Isa Planning Scheme 2020	9 March 2020	Repealed *Sustainable Planning Act 2009* and amended for alignment with the *Planning Act 2016*	Filling or excavation	Rural zone	Code assessable within Flood hazard overlay, Bulk water corridor, 25 m of high pressure gas pipeline	• Excavation and filling code • Flood hazard overlay code
			Operational works on existing LGA road		Accepted development	

4.9 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 administrating 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 interest potentially applicable to the Project:

- Native vegetation clearing
- State transport network functionality
- Environmentally relevant activities

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 2 – Development in a railway 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.

Table 4-11 below 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.

Table 4-11 State development assessment provisions

State code	Purpose and outcomes	Relevance to the Project
1 – Development in a State-controlled road environment	The purpose of this code is to protect state-controlled roads, future state-controlled road and other infrastructure in state-controlled roads from adverse impacts of development.	The Project would need to ensure the assessment criteria in this module are appropriately addressed particularly in relation to the protection of existing and future state transport infrastructure.
2 – Development in a railway environment	The purpose of the code is to protect railways, future railways and other infrastructure in a railway corridor from adverse impacts of development. The purpose of this code is also to protect the safety of people using, and living and working near, railways	The Project would need to ensure the assessment criteria in this module are appropriately addressed particularly in relation to the protected of existing and future railway corridors.
6 – Protection of state transport networks	The purpose of this code is to protect state transport infrastructure, public passenger transport infrastructure and public passenger services from adverse impacts of development, maintain operational performance of the transport network and ensure development enables safe and	The Project would need to ensure the assessment criteria in this module are appropriately addressed. Particularly in relation to the safety, function and operational efficiency of the state road network.

State code	Purpose and outcomes	Relevance to the Project
	convenient access to pubic passenger transport.	
16 – Native vegetation clearing	The purpose of this code is to ensure that development avoids impacts on clearing, or where avoidance is not reasonably possible, minimises and mitigates impacts.	The proposed transmission line may involve native vegetation clearing.
22 – Environmentally relevant activities	The purpose of this code is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development).	Assessment against State code 22 is not considered relevant to the Project if ERAs are not triggered for the Project.

4.10 Design factors

Design factors which influenced the selection of the Project area are considered as part of a Volume 3 Appendix D Corridor selection report. Design responses to corridor selection are categorised as minor or major changes. Major realignment changes have been made to avoid the areas such as the Kennedy Wind Farm, previously mined sites at the Burdekin River and ecologically important areas. Minor changes include:

- Technical realignments
  - Avoid running parallel with waterways
  - Avoid flood zones
  - Avoid airfields
  - Reflect agreements made with the Project end point with Ergon Energy
- Environmental and cultural heritage
  - Avoid known protected flora
  - Avoid known of concern vegetation
  - Avoid areas of essential habitat
  - Avoid known cultural heritage
- Landholder
  - Avoid property infrastructure (cattle yards, laneways, helicopter mustering areas, water bores and resource area).

4.11 Regional Planning Interests Act 2014

The RPI Act was drafted to protect areas of regional interest from the impacts of resource activities or a 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

A priority agricultural area is an area identified on relevant mapping and includes 1 or more areas used for priority agricultural land use and may include other features such as significant water sources.

A priority living area is an area identified on relevant mapping and includes existing settled areas of a city, town or other community. A priority living area also includes other areas necessary or desirable to accommodate future growth of existing settled areas or act as a buffer between existing and future settled areas and resource activities.

A strategic cropping area includes land identified on relevant mapping that is likely to be highly suitable for cropping due to soil, climate and landscape characteristics.

A strategic environmental area is an area identified on relevant mapping and includes one or more environmental attributes.

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 assessment identified in the regional planning interests legislation.

The DNRME has developed regional planning interest mapping which identifies areas throughout Queensland that includes regional interests. The Department's GeoResGlobe, an on-line interactive mapping system, also includes information about regional interests in a layer associated with constrained land. The Queensland Government's Spatial Catalogue (QSpatial) includes datasets which identify regional planning interests throughout Queensland.

Regional interests are not impacted by the corridor selection. A regional interest development approval will not be required under the RPI Act. Table 4-12 provides a summary with respect to the Project and regional interests.

Table 4-12 Regional interests

Regional interest	Mapping source	Relationship to Project
Priority agricultural areas (PAA)	NW Regional Plan	The NW Regional Plan does not include PAA.
	NQ Regional Plan	The NQ Regional Plan identifies a PAA on the northern side of the Flinders Highway at Balfes Creek. This area is well clear of the corridor selection.
	QSpatial	QSpatial does not identify PAA within the Project area.
	GeoResGlobe	The interactive mapping does not identify PAA within the corridor selection.
Priority living areas (PLA)	NW Regional Plan	The NW Regional Plan does not include PLA.
	NQ Regional Plan	The NQ Regional Plan includes Charters Towers and Pentland as PLA.
	QSpatial	QSpatial does not identify PLA within the corridor selection.
	GeoResGlobe	The interactive mapping does not identify PLA along the corridor selection.
Strategic cropping areas (SCA)	NW Regional Plan	The NW Regional Plan does not include SCA within the corridor selection.
	NQ Regional Plan	The NQ Regional Plan does not include SCA within the corridor selection.

Regional interest	Mapping source	Relationship to Project
	Strategic cropping land zone map (DNRME)	The Strategic cropping land zone map does not identify strategic cropping land zones within the corridor selection.
	GeoResGlobe	The interactive mapping does not identify SCA within the corridor selection.
Strategic environmental areas (SEA)	NW Regional Plan	The NW Regional Plan does not include SEA within the corridor selection.
	NQ Regional Plan	The NQ Regional Plan does not include any SEA within corridor selection.
	QSpatial	QSpatial does not identify SEA within the corridor selection.
	GeoResGlobe	The interactive mapping does not identify SEA within the corridor selection.

The NQ Regional Plan identifies two localities as being Priority living areas (PLA); however, the Project area is not located in the vicinity of these PLAs and therefore does not impact on these PLAs.

4.12 Mining and exploration activities

The corridor selection area 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.

4.12.1 Petroleum pipeline infrastructure

The corridor selection is located in proximity to a number of petroleum infrastructure pipelines, at the western end of the corridor selection area at Mount Isa and the eastern end of the corridor selection area in the Burdekin Shire. The location of the petroleum pipelines in the vicinity of the corridor selection area are summarised in Table 4-13 and illustrated in Figure 4-7.

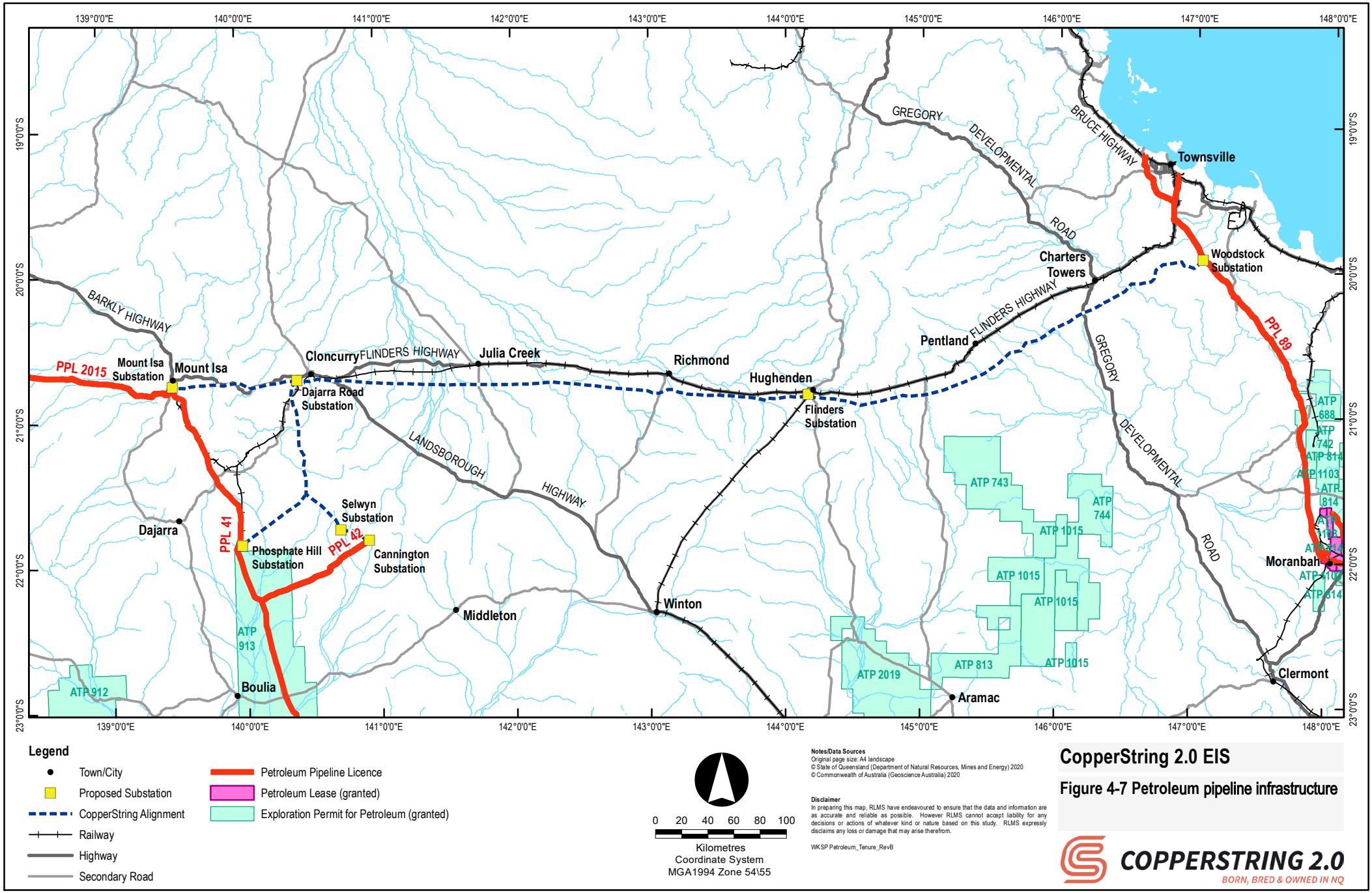
Table 4-13 Petroleum pipeline infrastructure

Pipeline	Owner/Operator	License
Northern Gas Pipeline Project	Jemena Northern Gas Pipeline Pty Ltd	PPL 2015
Ballera Gas Centre to Mount Isa	Roverton Pty Ltd	PPL 41
Mount Isa Meter Station to Mica Creek Power Station	CS Energy Mica Creek Pty Ltd	PPL 49
Mica Creek to Mount Isa Mines Mining Operations	Roverton Pty Ltd	PPL 51
Moranbah to Townsville	North Queensland Pipeline No 1 Pty Ltd	PPL 89

Additional pipelines located near substations or outside the corridor selection are summarised in Table 4-14 and illustrated in Figure 4-7.

Table 4-14 Additional pipeline infrastructure

Pipeline	Owner/Operator	License
Ballera Gas Centre to Mount Isa	Roverton Pty Ltd	PPL 41
Ballera Gas Centre to Mount Isa PPL 41 to Phosphate Hill Fertilizer Plant	Southern Cross Fertilizers Pty Ltd	PPL 54
Ballera Gas Centre to Mount Isa Pipeline PPL 41 to Cannington	APT Pipelines (QLD) Pty Limited	PPL42


139°0'0"E
140°0'0"E
141°0'0"E
142°0'0"E
143°0'0"E
144°0'0"E
145°0'0"E
146°0'0"E
147°0'0"E
148°0'0"E
19°0'0"S
20°0'0"S
21°0'0"S
22°0'0"S
23°0'0"S
PPL 2015
Mount Isa Substation
Mount Isa
BARKLY HIGHWAY
Cloncurry
FLINDERS HIGHWAY
Julia Creek
Richmond
Hughenden
Flinders Substation
Dajarra Road Substation
LANDSBOROUGH HIGHWAY
Dajarra
PPL 41
Phosphate Hill Substation
PPL 42
Selwyn Substation
Cannington Substation
Middleton
Winton
Boulia
ATP 913
ATP 912
ATP 743
ATP 744
ATP 1015
ATP 2019
ATP 813
Aramac
GREGORY DEVELOPMENTAL ROAD
BRUCE HIGHWAY
Townsville
Charters Towers
Pentland
FLINDERS HIGHWAY
Woodstock Substation
PPL 89
GREGORY DEVELOPMENTAL ROAD
ATP 688
ATP 742
ATP 814
ATP 1103
Moranbah
Clermont
Legend
Town/City
Proposed Substation
CopperString Alignment
Railway
Highway
Secondary Road
Petroleum Pipeline Licence
Petroleum Lease (granted)
Exploration Permit for Petroleum (granted)
0 20 40 60 80 100
Kilometres
Coordinate System
MGA1994 Zone 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Petroleum_Tenure_RevB
CopperString 2.0 EIS
Figure 4-7 Petroleum pipeline infrastructure
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4.12.2 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. Table 4-15 through Table 4-18 summaries the exploration permits and applications for EPC, EPG, EPM and ATP respectively. Figure 4-8 illustrates the location of the exploration permits in relation to the corridor selection area.

Table 4-15 Exploration permits and applications (EPC)

Owner/Operator	Permit Number	Status
Vale Australia Galilee Pty Ltd	EPC 907	Granted
Matilda Coal Pty Ltd	EPC 1486	Granted
Glencore Coal Projects Pty Ltd	EPC 1588	Granted
Orion Mining Pty Ltd	EPC 1893	Granted
Orion Mining Pty Ltd	EPC 1964	Granted
Scorpion Energy Pty Ltd	EPC 1983	Granted
New Emerald Coal Pty Ltd	EPC 2543	Granted
New Emerald Coal Pty Ltd	EPC 2551	Granted

Table 4-16 Exploration permits and applications (EPG)

Owner/Operator	Permit Number	Status
Peak Services Pty Ltd	EPG 103	Application
Peak Services Pty Ltd	EPG 110	Application

Table 4-17 Exploration permits and applications (EPM)

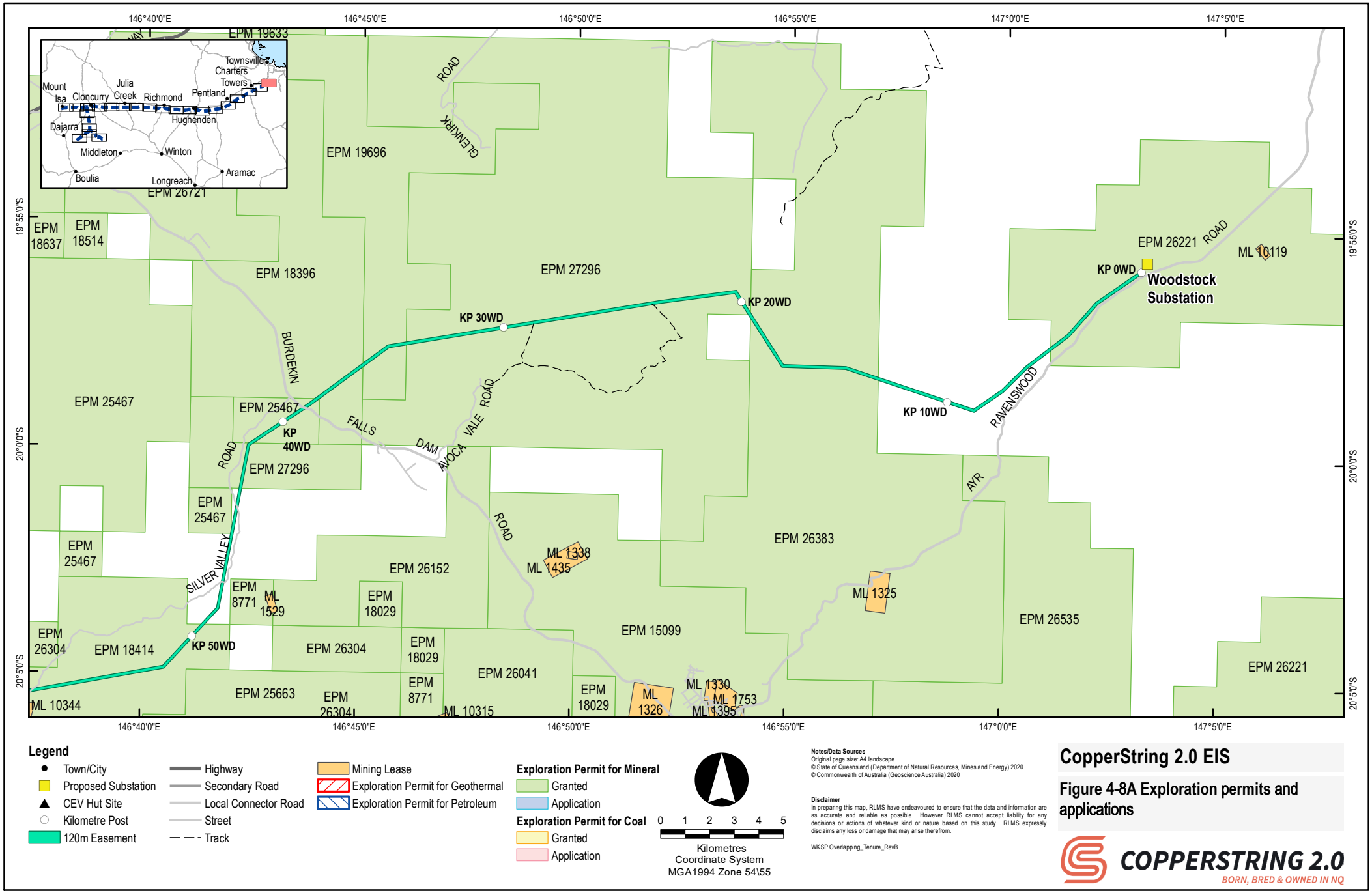
Owner/Operator	Permit Number	Status
Mulga Minerals Pty Ltd	EPM 14467	Granted
Mt Dockerell Mining Pty Ltd	EPM 11919	Granted
Round Oak Minerals Pty Limited	EPM 12409	Granted
Mount Isa Mines Limited	EPM 12597	Granted
Round Oak Minerals Pty Limited	EPM 13137	Granted
Mulga Minerals Pty Ltd	EPM 14022	Granted
Cromarty Resources Pty Ltd	EPM 14161	Granted
Sierra Line Pty Ltd	EPM 15897	Granted
Exco Resources (Qld) Pty Ltd	EPM 15923	Granted
Iron Ridge – Black Fort Pty Ltd	EPM 17602	Granted
Volga Elderberry Pty Ltd	EPM 18189	Granted
Malachite Resources Limited	EPM 18908	Granted
Chinova Resources Cloncurry Mines Pty Ltd	EPM 18912	Granted
South32 Cannington Proprietary Limited	EPM 19038	Granted
Pacific Consulting Services Pty Ltd	EPM 18285	Granted
Pacific Consulting Services Pty Ltd	EPM 18309	Granted
Chinova Resources Cloncurry Mines Pty Ltd	EPM 18214	Granted
Wishbone Gold Pty Ltd	EPM 18396	Granted
Denjim Pty Ltd	EPM 18414	Granted
Minotaur Operations Pty Ltd	EPM 18624	Granted
Chinova Resources Cloncurry Mines Pty Ltd	EPM 18635	Granted
Activex Limited	EPM 25454	Granted
Activex Limited	EPM 25467	Granted
Activex Limited	EPM 25466	Granted

Owner/Operator	Permit Number	Status
Auctus Resources Pty Ltd	EPM 25148	Granted
Roseby Copper (South) Pty Ltd	EPM 25761	Granted
Sandfire Resources NL	EPM 25854	Granted
Queensland Mining Corporation Limited	EPM 26131	Granted
Chinova Resources Cloncurry Mines Pty Ltd	EPM 26174	Granted
Ukalunda Pty Ltd	EPM 26304	Granted
Future Mines Pty Ltd	EPM 26350	Granted
Exco Resources Limited	EPM 26371	Granted
Cobalt X Pty Ltd	EPM 26379	Granted
Mt McNamarra Pty Limited	EPM 26372	Granted
Red Fox Resources Pty Ltd	EPM 26397	Granted
Roseby Copper (South) Pty Ltd	EPM 26383	Granted
Minotaur Operations Pty Ltd	EPM 26443	Granted
Mount Isa Mines Limited	EPM 26566	Granted
Heavy Metal Exploration Pty Ltd	EPM 26571	Granted
Black Rock Minerals Pty Ltd	EPM 26595	Granted
Jorge Resources Pty Ltd	EPM 26521	Granted
Heavy Metal Exploration Pty Ltd	EPM 26524	Granted
QEM Limited	EPM 26746	Granted
CGM Lithium Pty Ltd	EPM 26745	Granted
Mount Isa Mines Limited	EPM 26759	Granted
Kabiri Resources Pty Ltd	EPM 26765	Granted
Minotaur Operations Pty Ltd	EPM 27057	Granted
Heavy Metal Exploration Pty Ltd	EPM 26919	Granted
Cromarty Resources Pty Ltd	EPM 26977	Application
Capricornia VTI Pty Ltd	EPM 26986	Application
CGM Lithium Pty Ltd	EPM 26703	Granted
Chinova Resources Cloncurry Mines Pty Ltd	EPM 26715	Granted
Chinova Resources Cloncurry Mines Pty Ltd	EPM 26718	Granted
Activex Pty Ltd	EPM 26850	Granted
Activex Pty Ltd	EPM 26860	Granted
Roseby Copper (South) Pty Ltd	EPM 10783	Granted
Isa Brightlands Pty Ltd	EPM 11676	Granted
Auctus Resources Pty Ltd	EPM 18424	Granted
Mulga Minerals Pty Ltd	EPM 18426	Granted
Black Rock Minerals Pty Ltd	EPM 26283	Granted
Activex Pty Ltd	EPM 14416	Granted
Chinova Resources Cloncurry Mines Pty Ltd	EPM 25437	Granted
Exco Resources Limited	EPM 16512	Granted
Wishbone Gold Pty Ltd	EPM 15027	Granted
Pinnacle Gold Pty Ltd	EPM 15285	Granted
Pinnacle Gold Pty Ltd	EPM 19022	Granted
Teck Australia Pty Ltd	EPM 16737	Granted
CST Minerals Exploration Pty Ltd	EPM 19696	Granted
Mount Isa Mines Limited	EPM 25963	Granted
Activex Limited	EPM 25965	Granted
Auctus Resources Pty Ltd	EPM 26636	Granted
Mulga Minerals Pty Ltd	EPM 17634	Granted

Owner/Operator	Permit Number	Status
Kronos Gold LLC	EPM 8588	Granted
Future Mines Pty Ltd	EPM 18073	Granted
Future Mines Pty Ltd	EPM 25135	Granted
Mulga Minerals Pty Ltd	EPM 26126	Granted
Kronos Gold LLC	EPM 27296	Application
Future Mines Pty Ltd	EPM 27298	Granted
Future Mines Pty Ltd	EPM 27300	Application

Table 4-18 Exploration permits and application (ATP)

Owner/Operator	Permit Number	Status
Hedges Gas Pty Ltd	ATP 914	Granted
Hedges Gas Pty Ltd	ATP 915	Granted



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 54\55

Notes/Data Sources
Original page size: A4 landscape

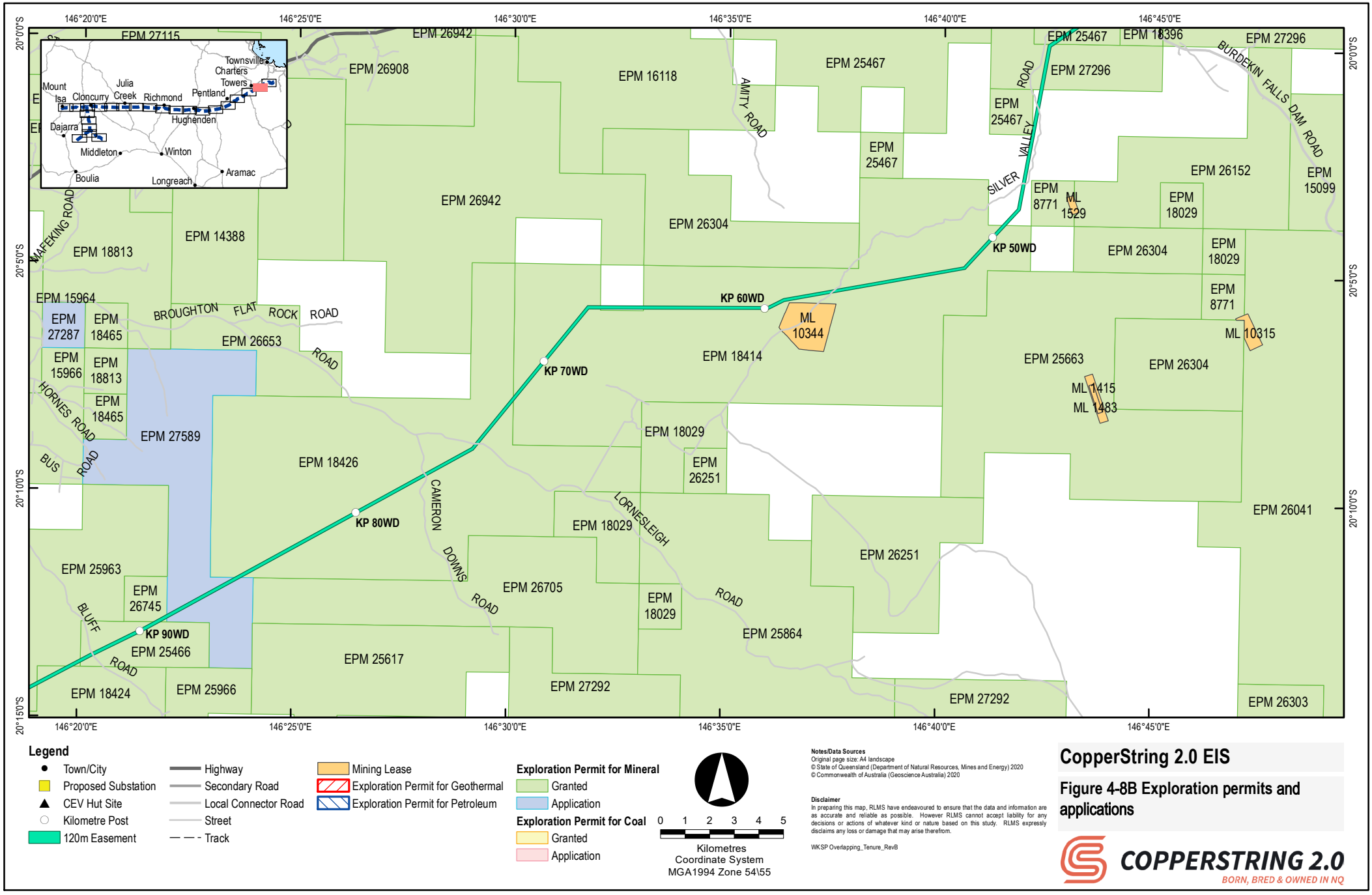
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8A Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape

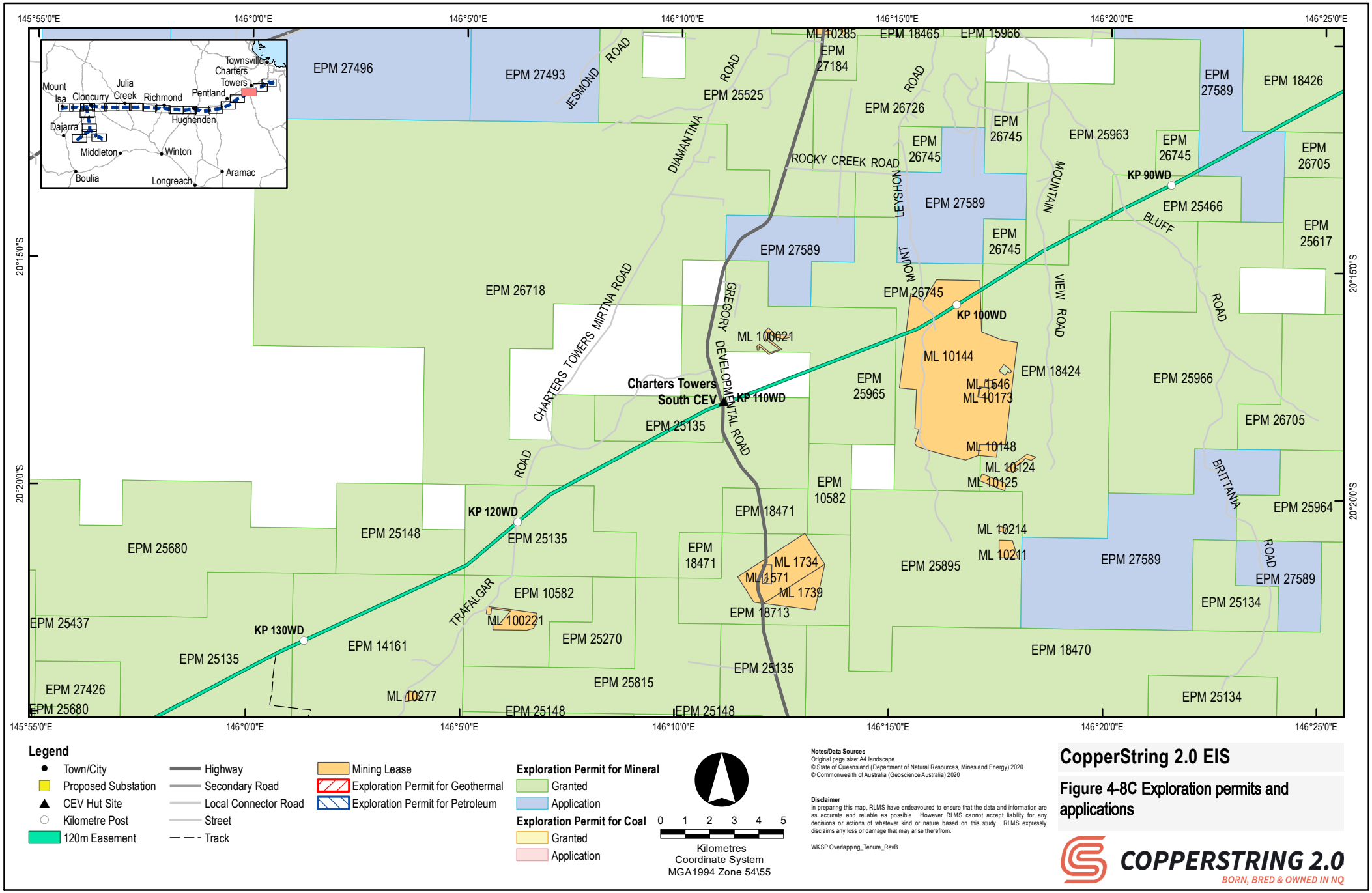
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8B Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

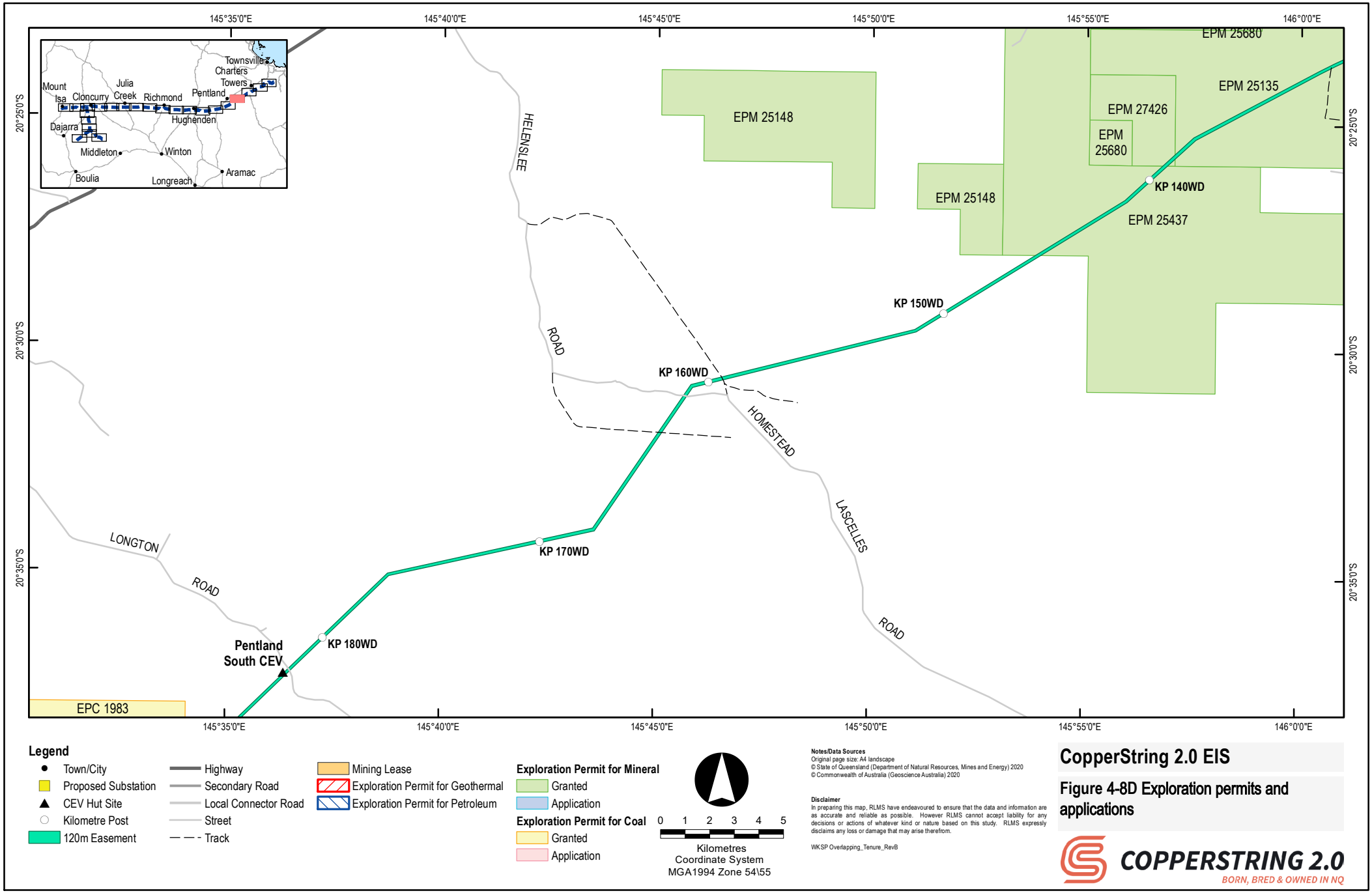
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8C Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

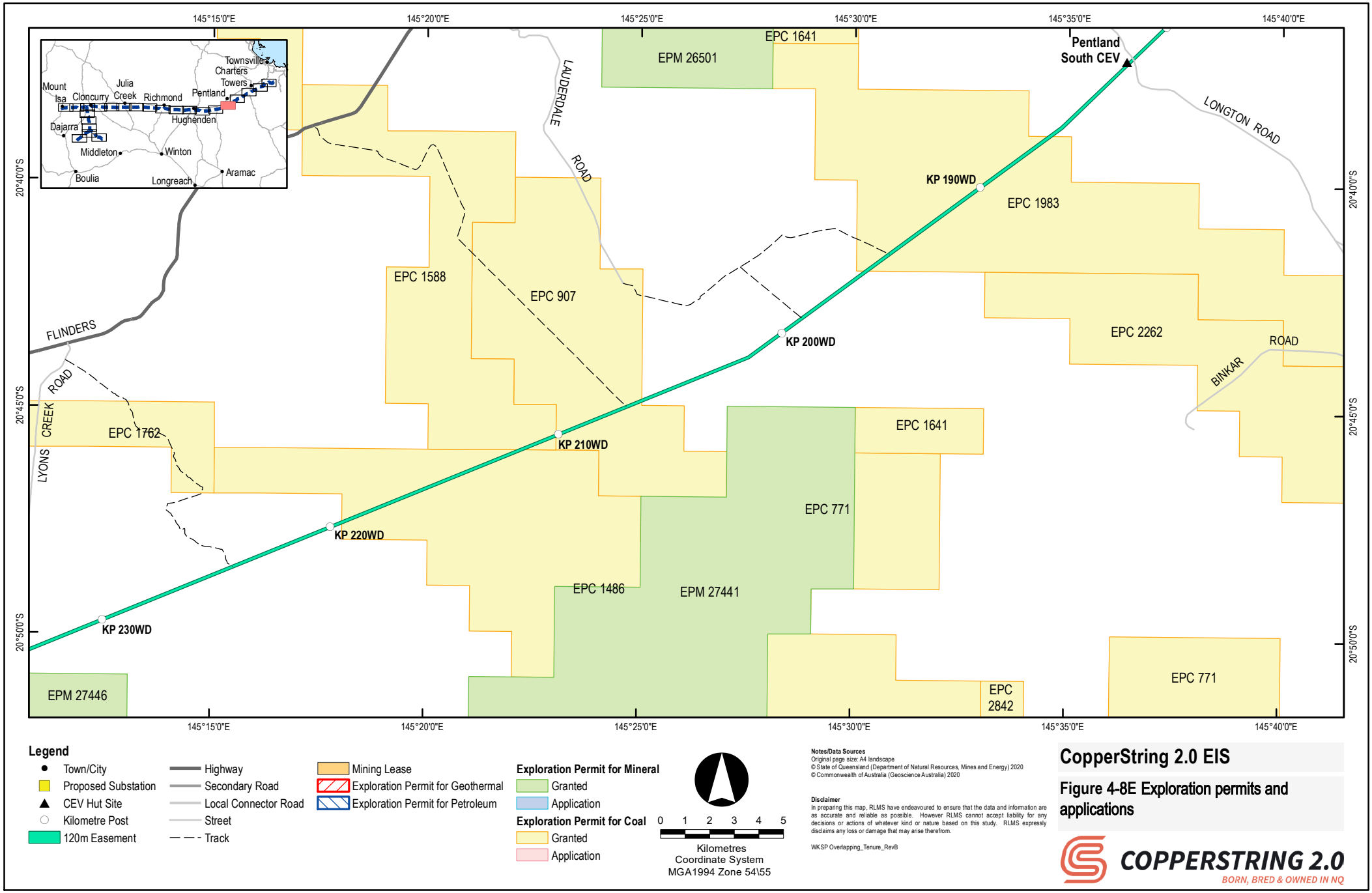
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8D Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

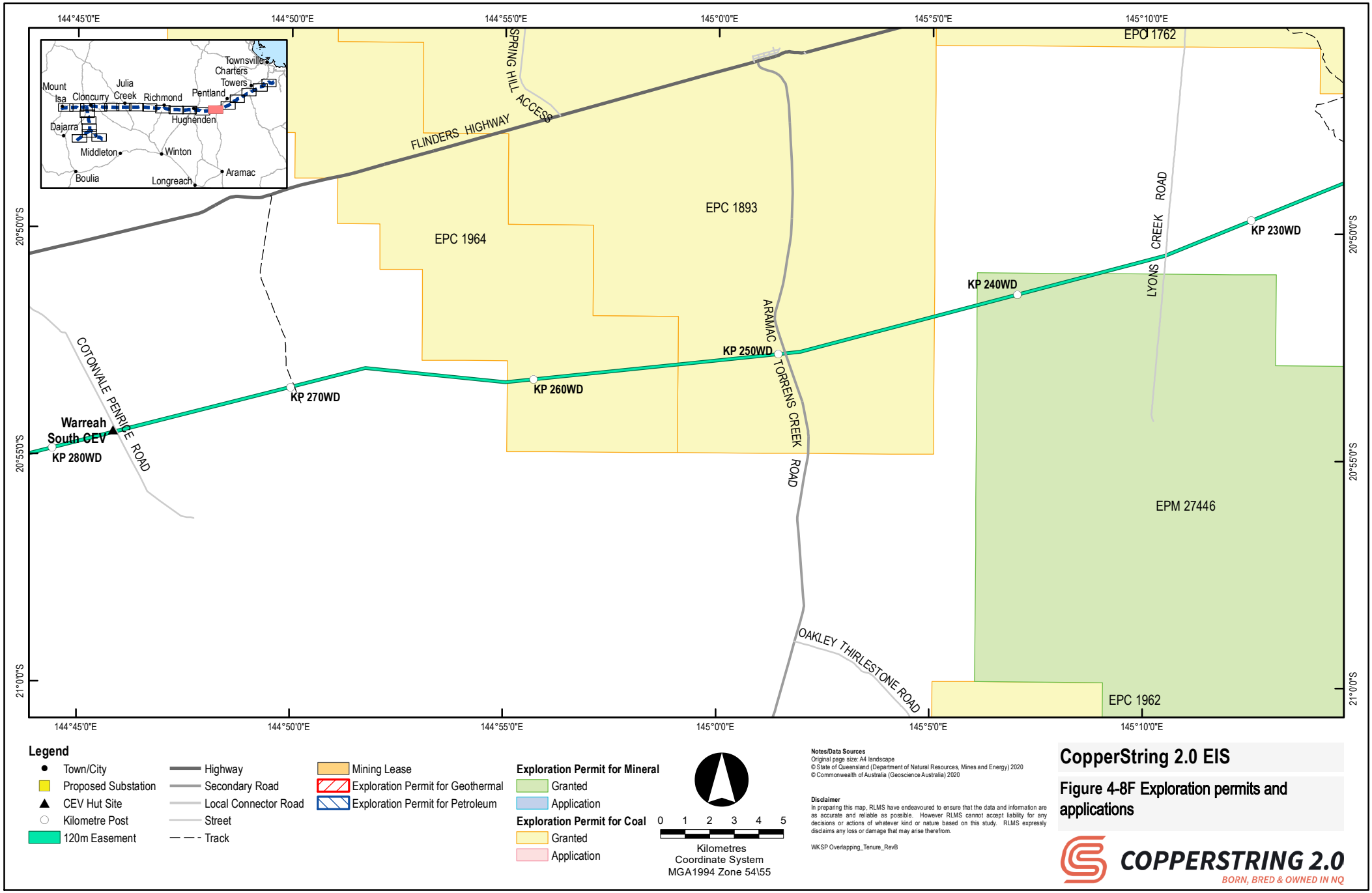
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8E Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

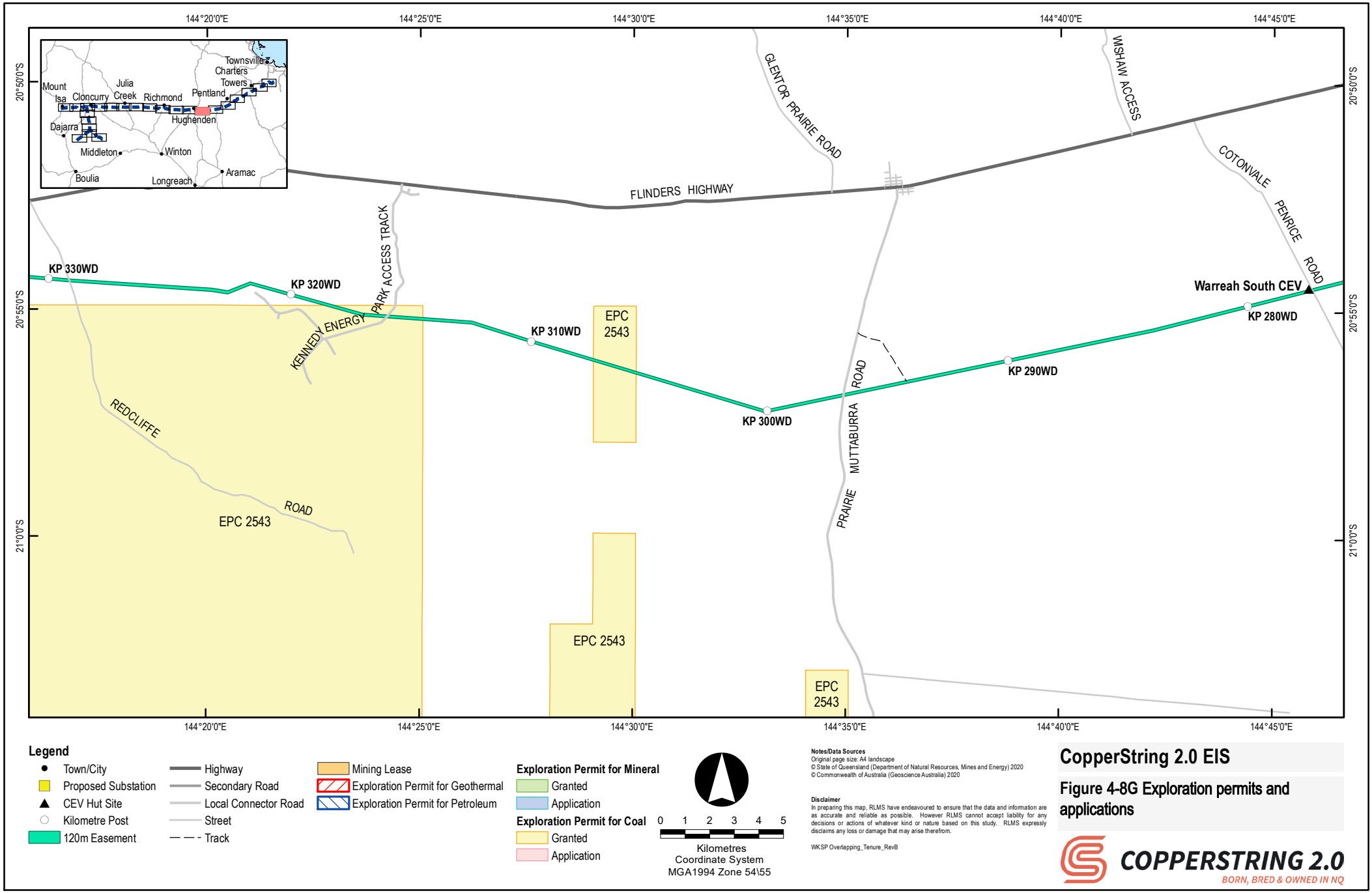
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

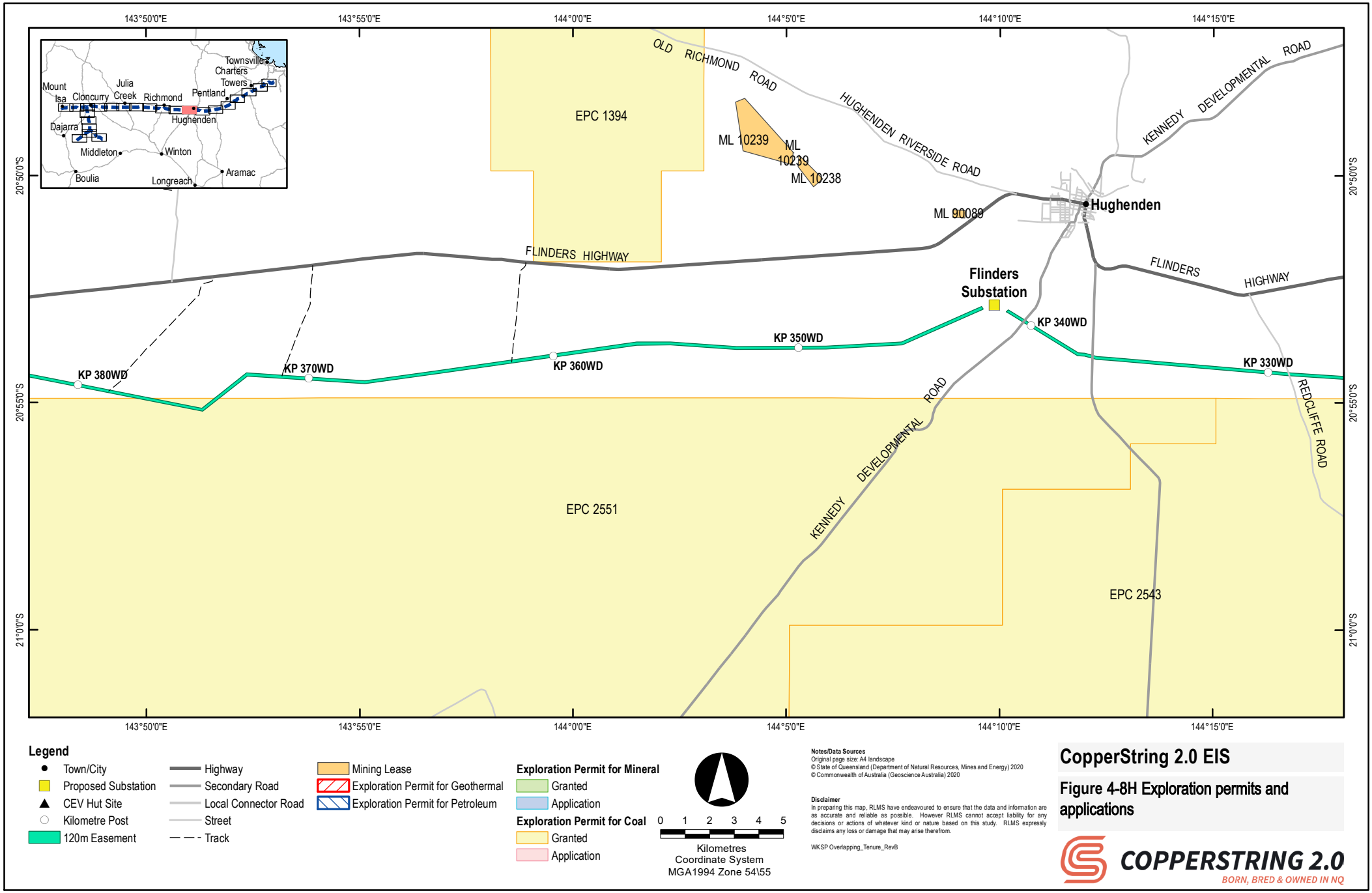
WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8F Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


144°20'0"E
144°25'0"E
144°30'0"E
144°35'0"E
144°40'0"E
144°45'0"E
20°50'0"S
20°55'0"S
21°0'0"S
Townsville
Charters Towers
Mount Isa
Cloncurry
Julia Creek
Richmond
Pentland
Hughenden
Dajarra
Middleton
Winton
Boulia
Longreach
Aramac
FLINDERS HIGHWAY
GLENTOR PRAIRIE ROAD
WSHAW ACCESS
COTONVALE
PENRICE ROAD
PARK ACCESS TRACK
KENNEDY ENERGY
KP 330WD
KP 320WD
KP 310WD
KP 300WD
KP 290WD
KP 280WD
Warreah South CEV
EPC 2543
EPC 2543
EPC 2543
EPC 2543
REDCLIFFE ROAD
MUTTABURRA PRAIRIE ROAD
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 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Overlapping_Tenure_RevB
CopperString 2.0 EIS
Figure 4-8G Exploration permits and applications
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

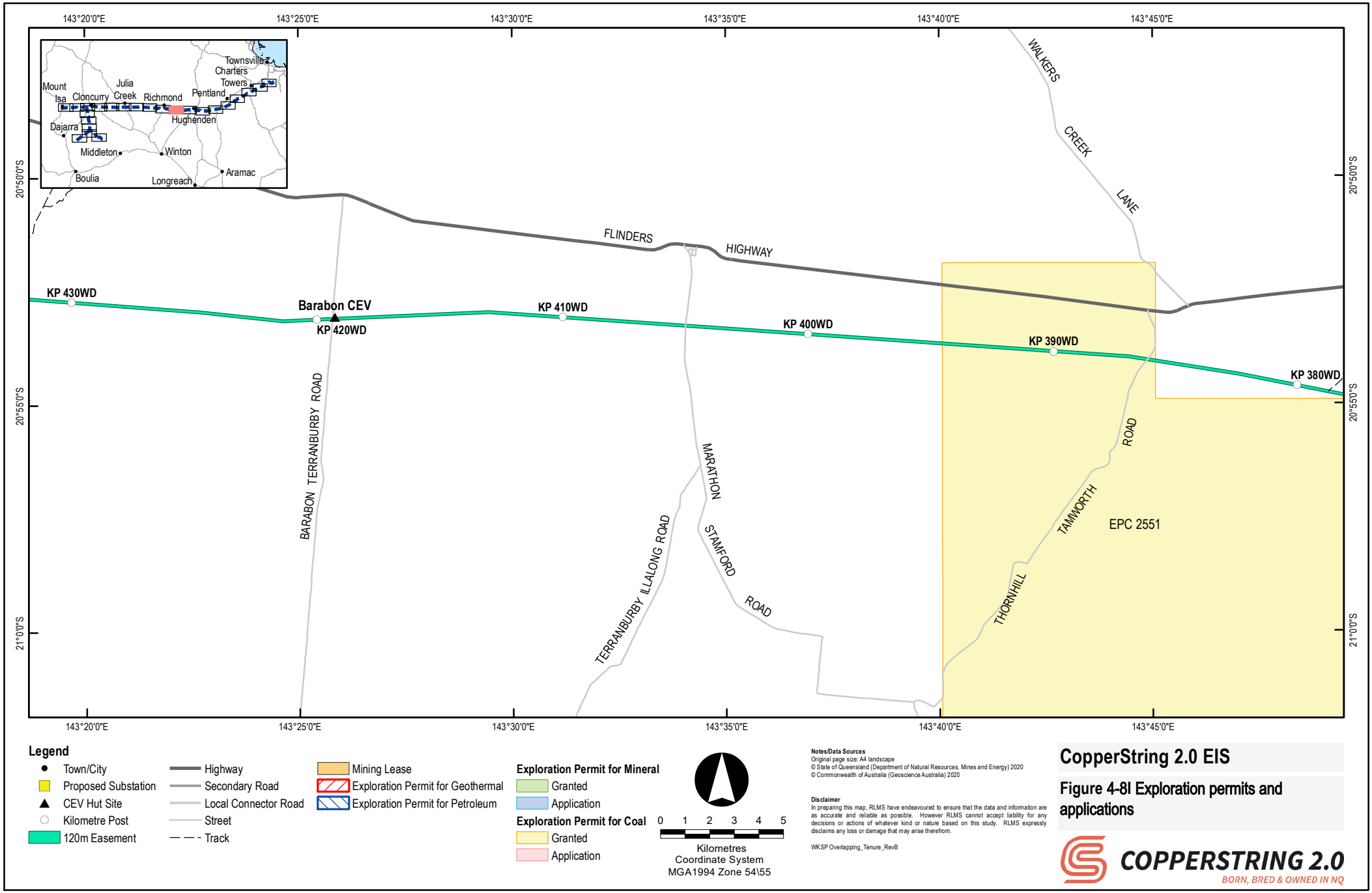
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8H Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape

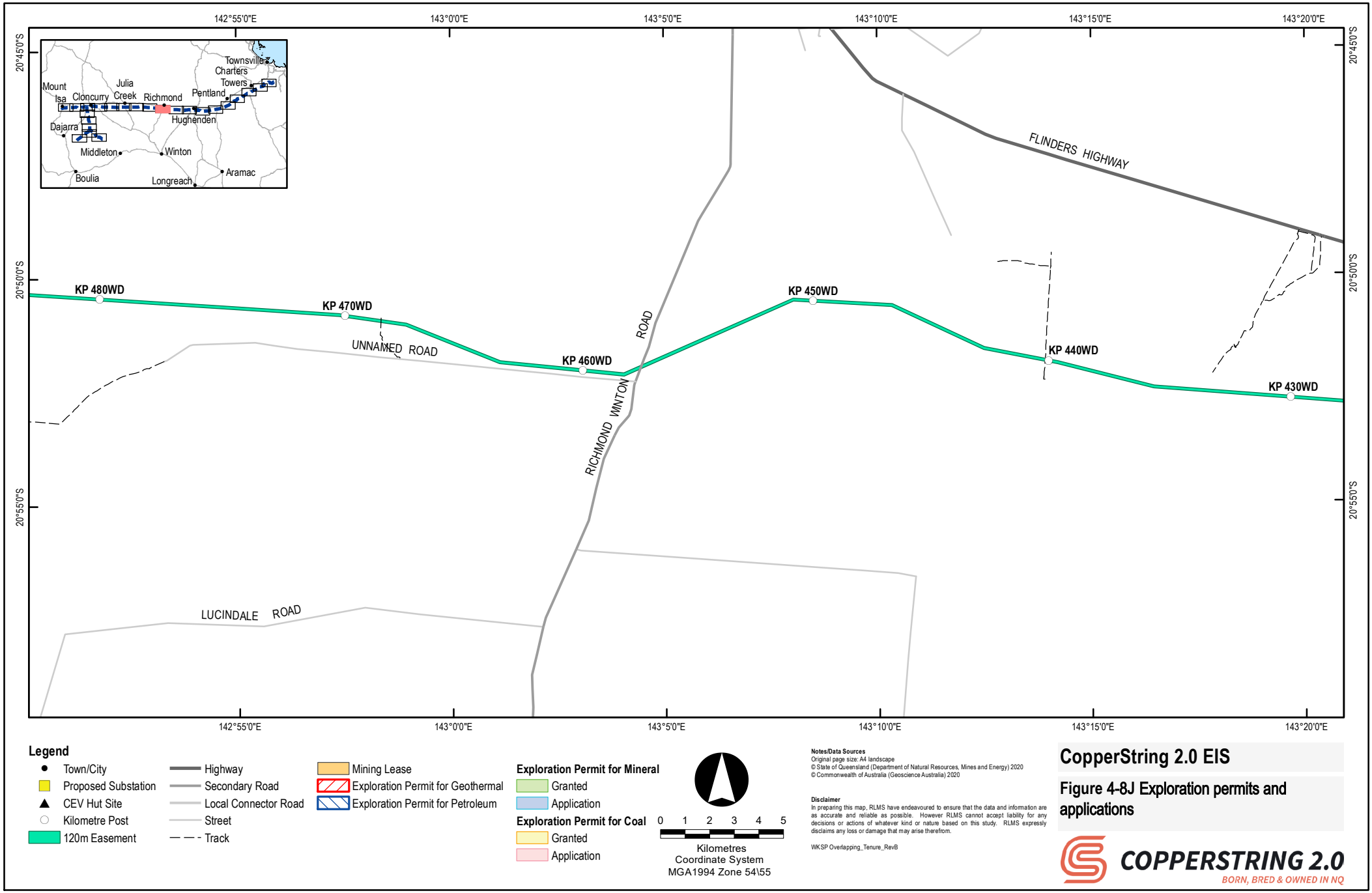
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

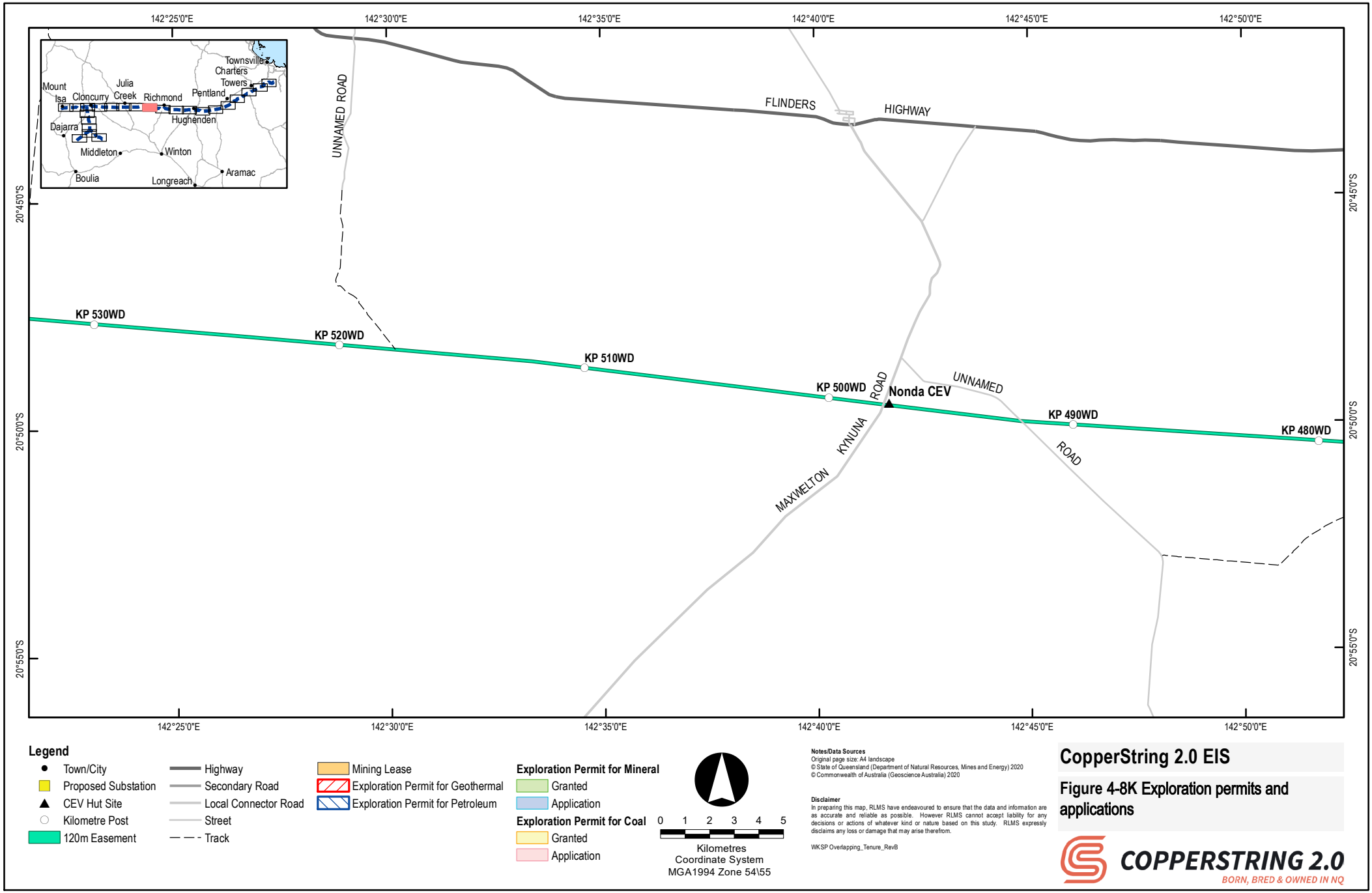
WKSP Overlapping_Tenure_RevB

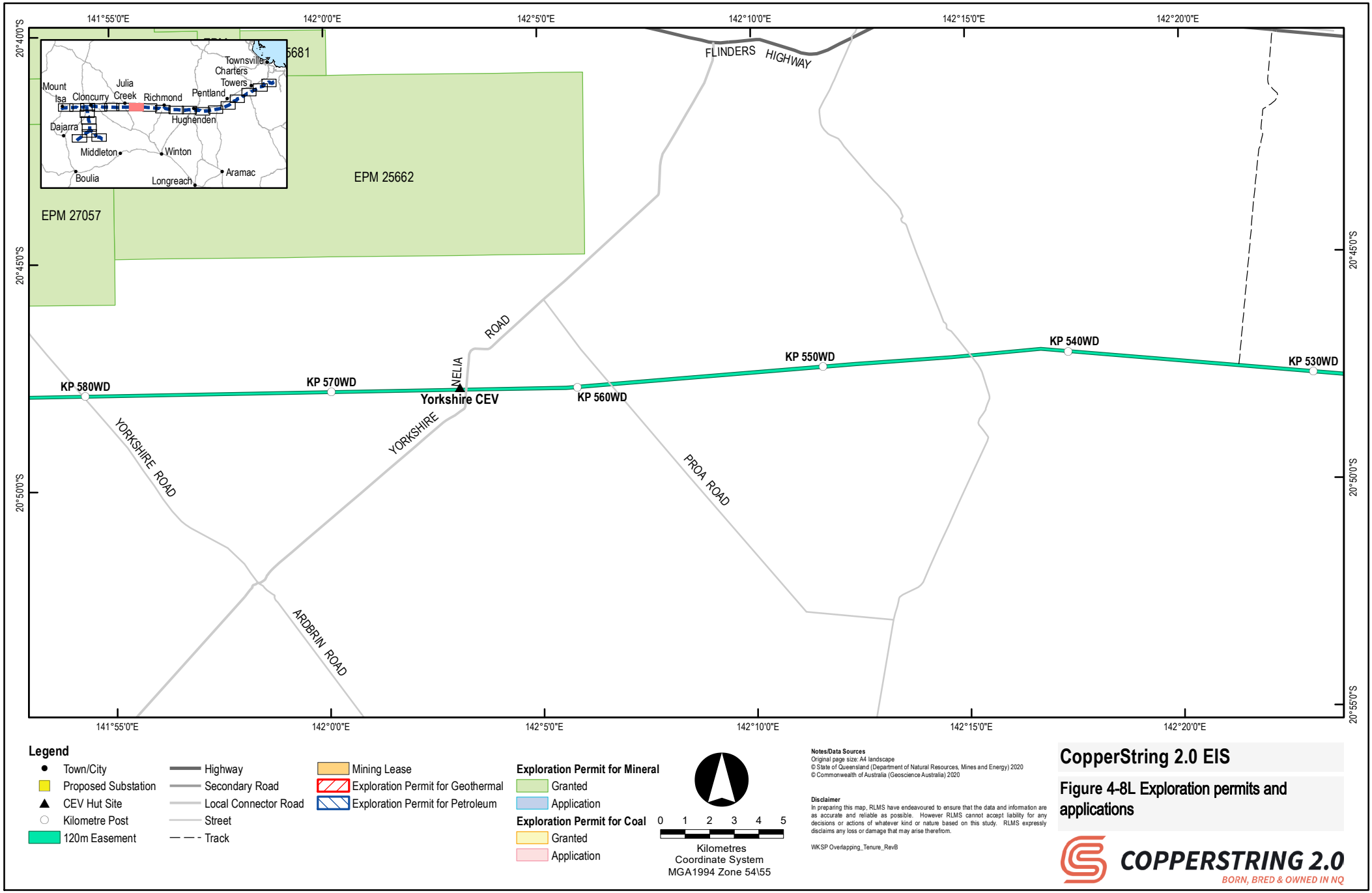
CopperString 2.0 EIS

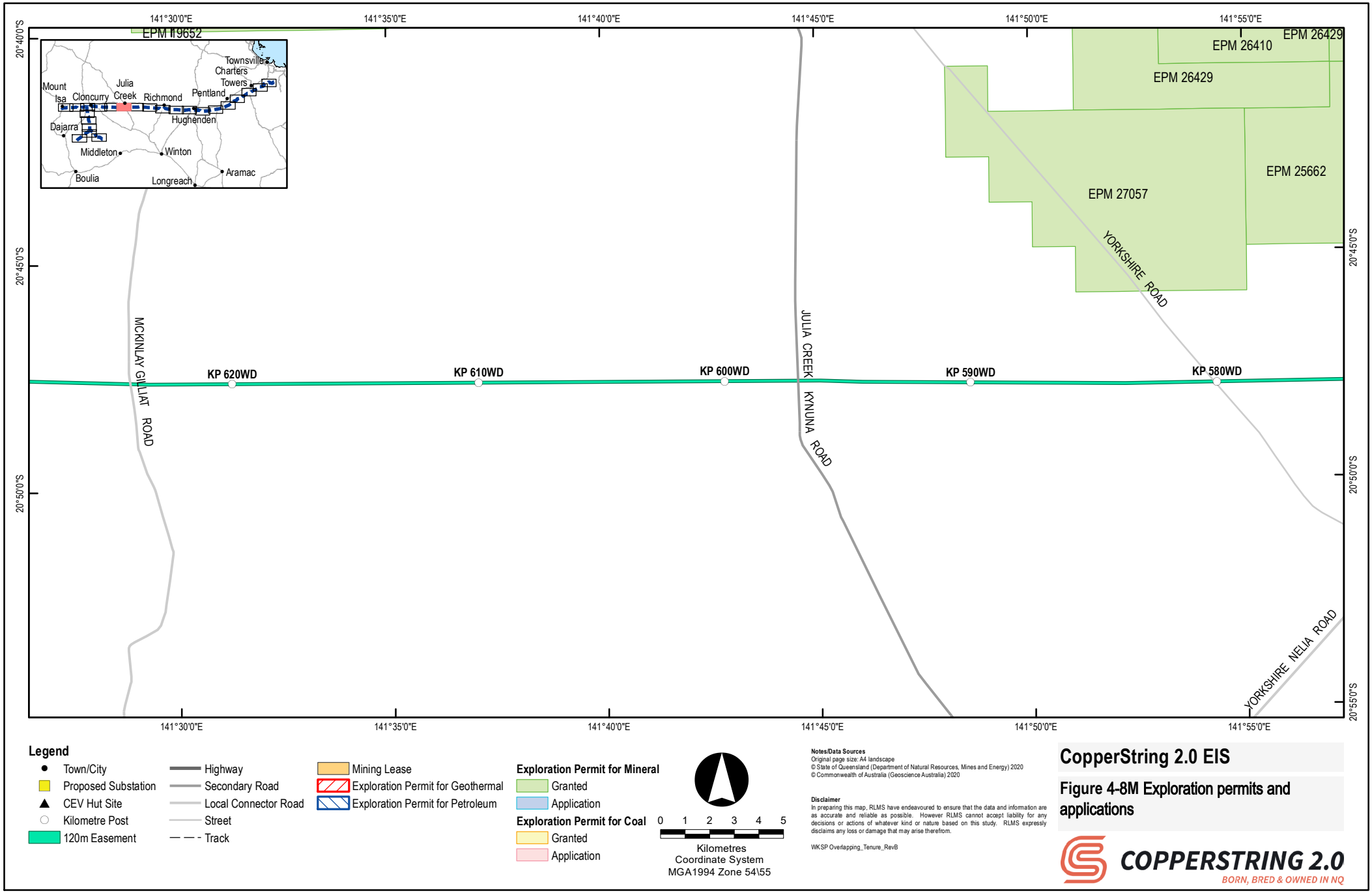
Figure 4-8l Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


142°55'0"E
143°0'0"E
143°5'0"E
143°10'0"E
143°15'0"E
143°20'0"E
20°45'0"S
20°50'0"S
20°55'0"S
Townsville
Charters Towers
Mount Isa
Cloncurry
Julia Creek
Richmond
Pentland
Hughenden
Dajarra
Middleton
Winton
Boulia
Longreach
Aramac
KP 480WD
KP 470WD
KP 460WD
KP 450WD
KP 440WD
KP 430WD
FLINDERS HIGHWAY
UNNAMED ROAD
RICHMOND WINTON ROAD
LUCINDALE ROAD
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 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Overlapping_Tenure_RevB
CopperString 2.0 EIS
Figure 4-8J Exploration permits and applications
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


142°25'0"E
142°30'0"E
142°35'0"E
142°40'0"E
142°45'0"E
142°50'0"E
20°45'0"S
20°50'0"S
20°55'0"S
Townsville
Charters Towers
Mount Isa
Julia Creek
Cloncurry
Richmond
Pentland
Hughenden
Dajarra
Middleton
Winton
Boulia
Longreach
Aramac
UNNAMED ROAD
FLINDERS HIGHWAY
KP 530WD
KP 520WD
KP 510WD
KP 500WD
KP 490WD
KP 480WD
Nonda CEV
KYNUNA ROAD
MAXWELTON ROAD
UNNAMED ROAD
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 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Overlapping_Tenure_RevB
CopperString 2.0 EIS
Figure 4-8K Exploration permits and applications
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


141°55'0"E
142°0'0"E
142°5'0"E
142°10'0"E
142°15'0"E
142°20'0"E
20°40'0"S
20°45'0"S
20°50'0"S
20°55'0"S
FLINDERS HIGHWAY
EPM 25662
EPM 27057
Townsville
Charters Towers
Mount Isa
Cloncurry
Julia Creek
Richmond
Pentland
Hughenden
Dajarra
Middleton
Winton
Boulia
Longreach
Aramac
KP 580WD
KP 570WD
KP 560WD
KP 550WD
KP 540WD
KP 530WD
Yorkshire CEV
ROAD
NELIA
YORKSHIRE
YORKSHIRE ROAD
PROA ROAD
ARDBRIN ROAD
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 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Overlapping_Tenure_RevB
CopperString 2.0 EIS
Figure 4-8L Exploration permits and applications
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

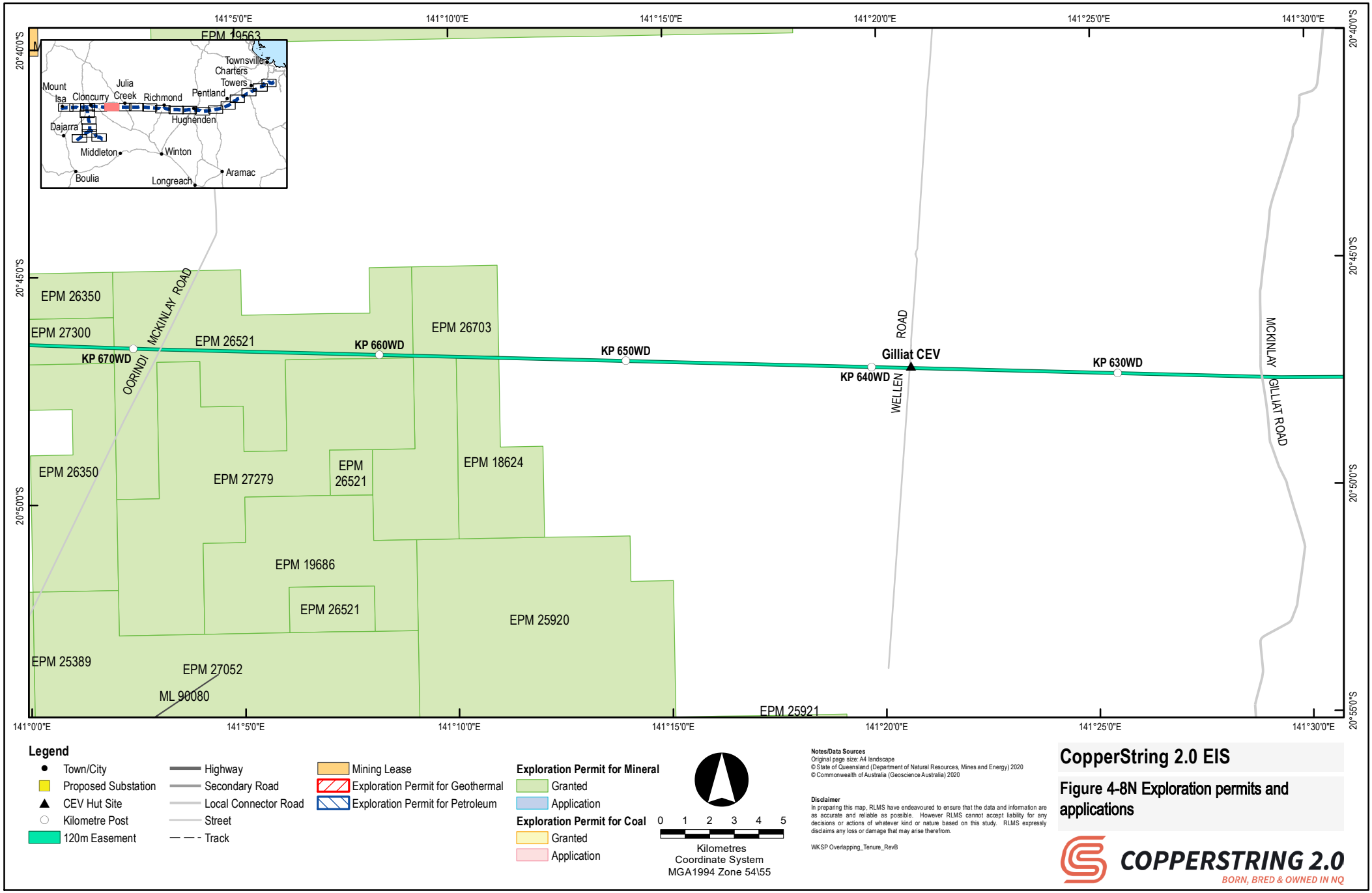
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8M Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

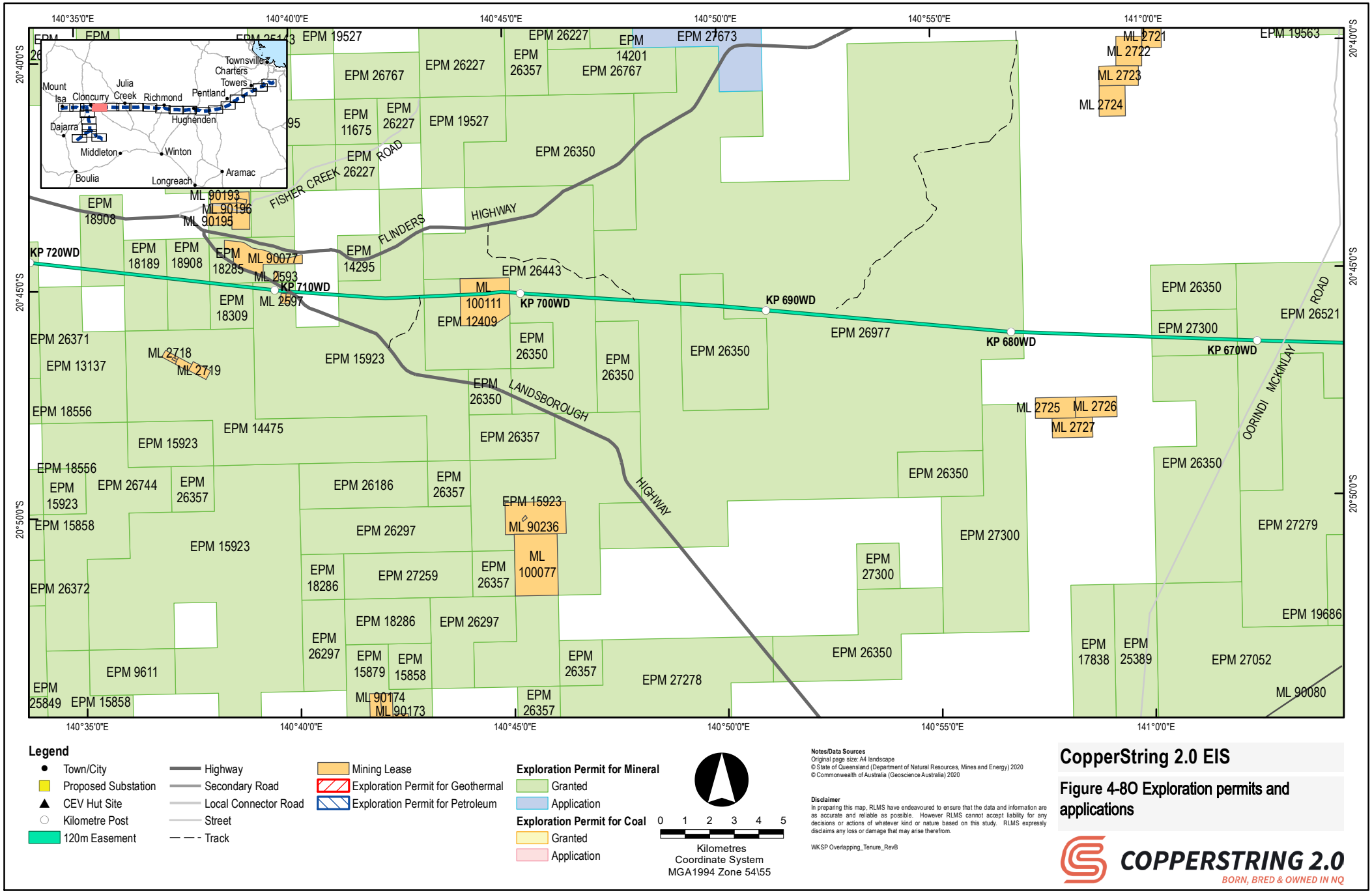
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

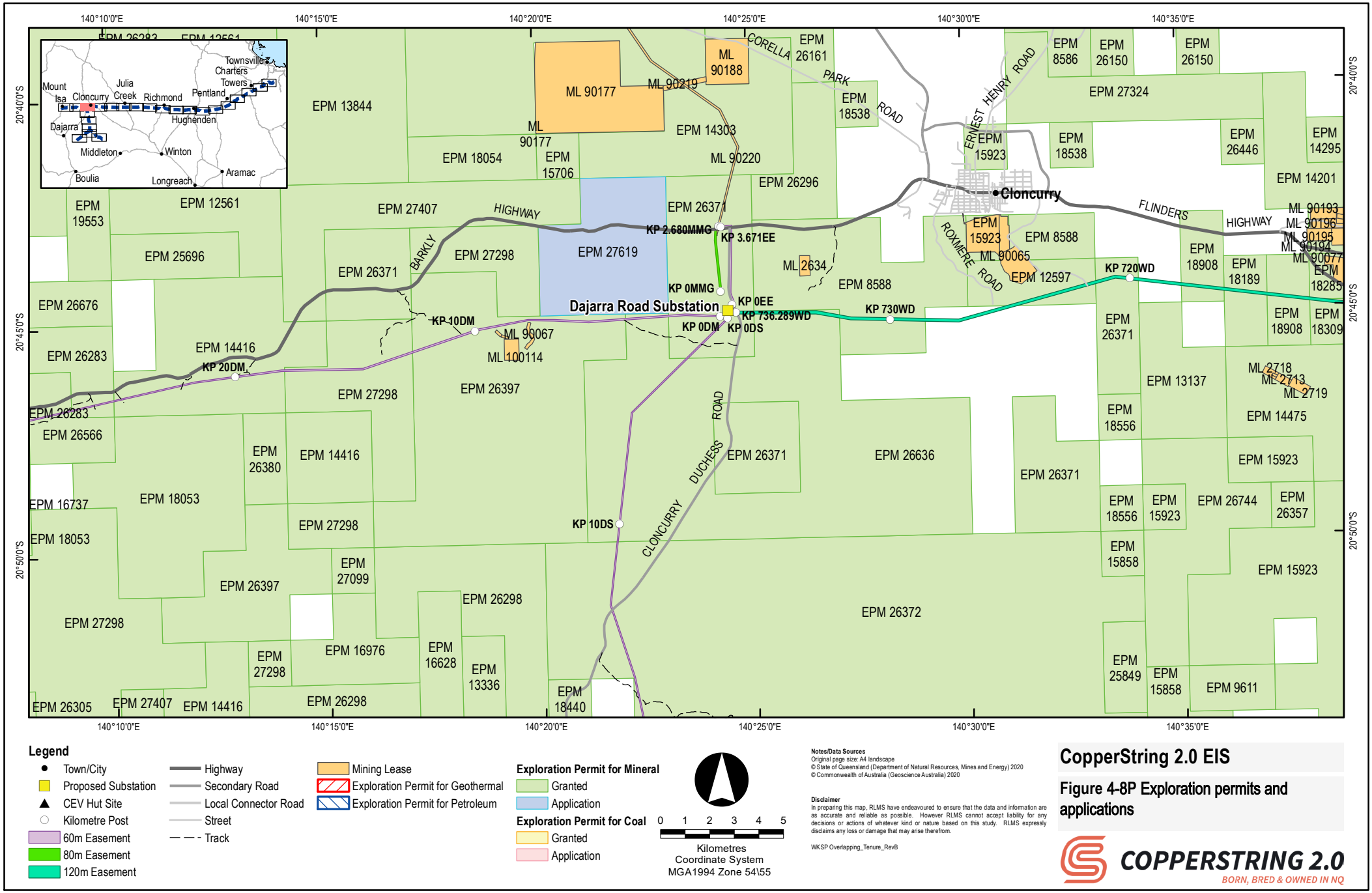
WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8N Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


140°35'0"E
140°40'0"E
140°45'0"E
140°50'0"E
140°55'0"E
141°0'0"E
20°40'0"S
20°45'0"S
20°50'0"S
Townsville
Charters Towers
Mount Isa
Cloncurry
Julia Creek
Richmond
Pentland
Hughenden
Dajarra
Middleton
Winton
Boulia
Longreach
Aramac
FISHER CREEK ROAD
FLINDERS HIGHWAY
LANDSBOROUGH HIGHWAY
OORINDI MCKINLAY ROAD
KP 720WD
KP 710WD
KP 700WD
KP 690WD
KP 680WD
KP 670WD
EPM 19527
EPM 26227
EPM 27673
EPM 14201
EPM 26767
EPM 11675
EPM 19563
ML 2721
ML 2722
ML 2723
ML 2724
EPM 26350
EPM 18908
ML 90193
ML 90196
ML 90195
EPM 18189
EPM 18285
ML 90077
ML 2593
ML 2597
EPM 14295
EPM 26443
ML 100111
EPM 12409
EPM 18309
EPM 26977
EPM 26521
EPM 27300
EPM 26371
EPM 13137
ML 2718
ML 2719
EPM 15923
EPM 18556
EPM 14475
EPM 26357
ML 2725
ML 2726
ML 2727
EPM 26744
EPM 26186
EPM 15858
EPM 26297
EPM 27279
EPM 26372
EPM 27259
EPM 18286
ML 100077
EPM 27300
EPM 19686
EPM 9611
EPM 27278
EPM 17838
EPM 25389
EPM 27052
EPM 25849
ML 90174
ML 90173
ML 90236
ML 90080
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 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Overlapping_Tenure_RevB
CopperString 2.0 EIS
Figure 4-80 Exploration permits and applications
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



Legend

- Town/City
- Proposed Substation
- CEV Hut Site
- Kilometre Post
- 60m Easement
- 80m Easement
- 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 54\55

Notes/Data Sources
Original page size: A4 landscape

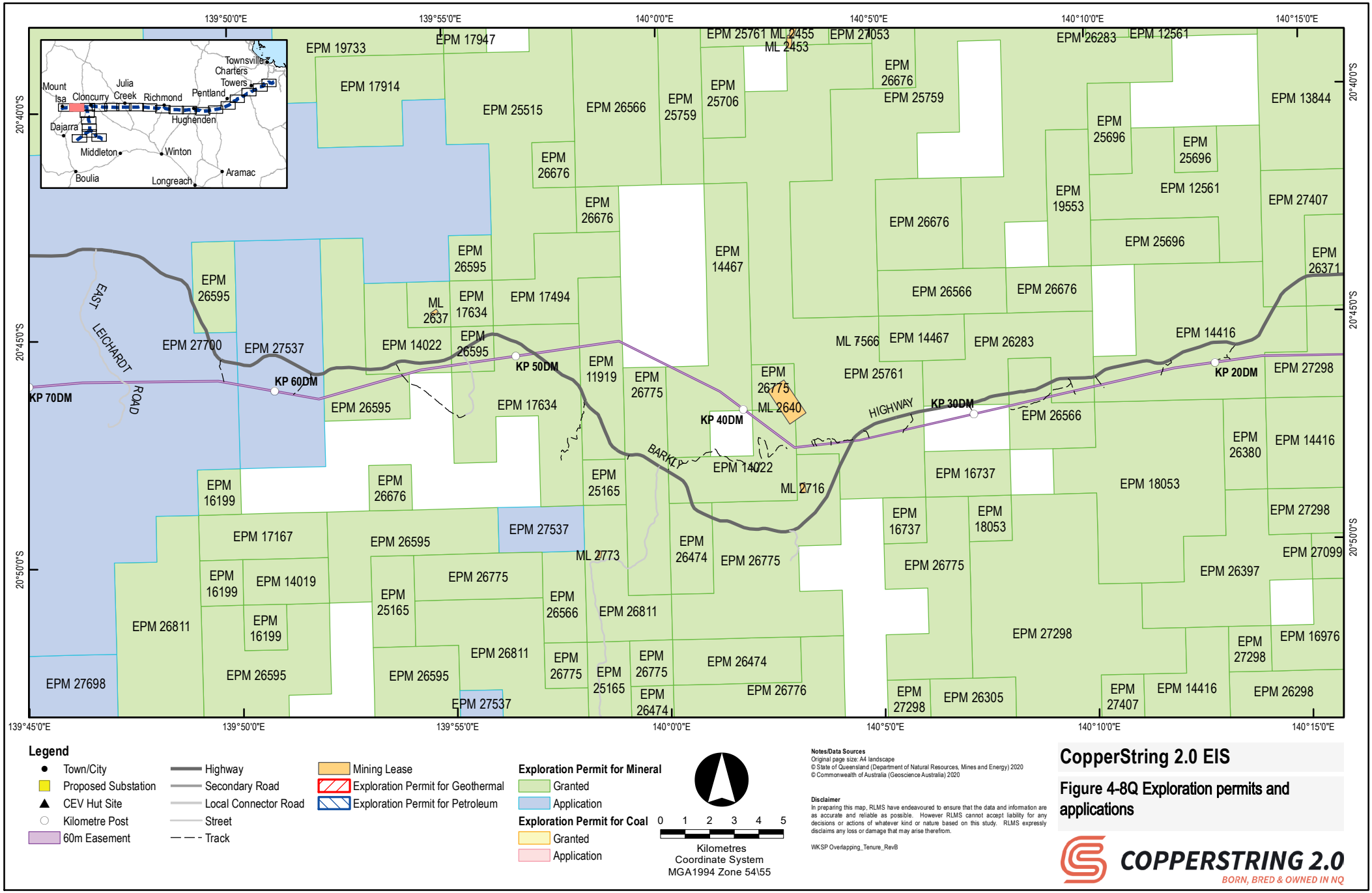
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8P Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

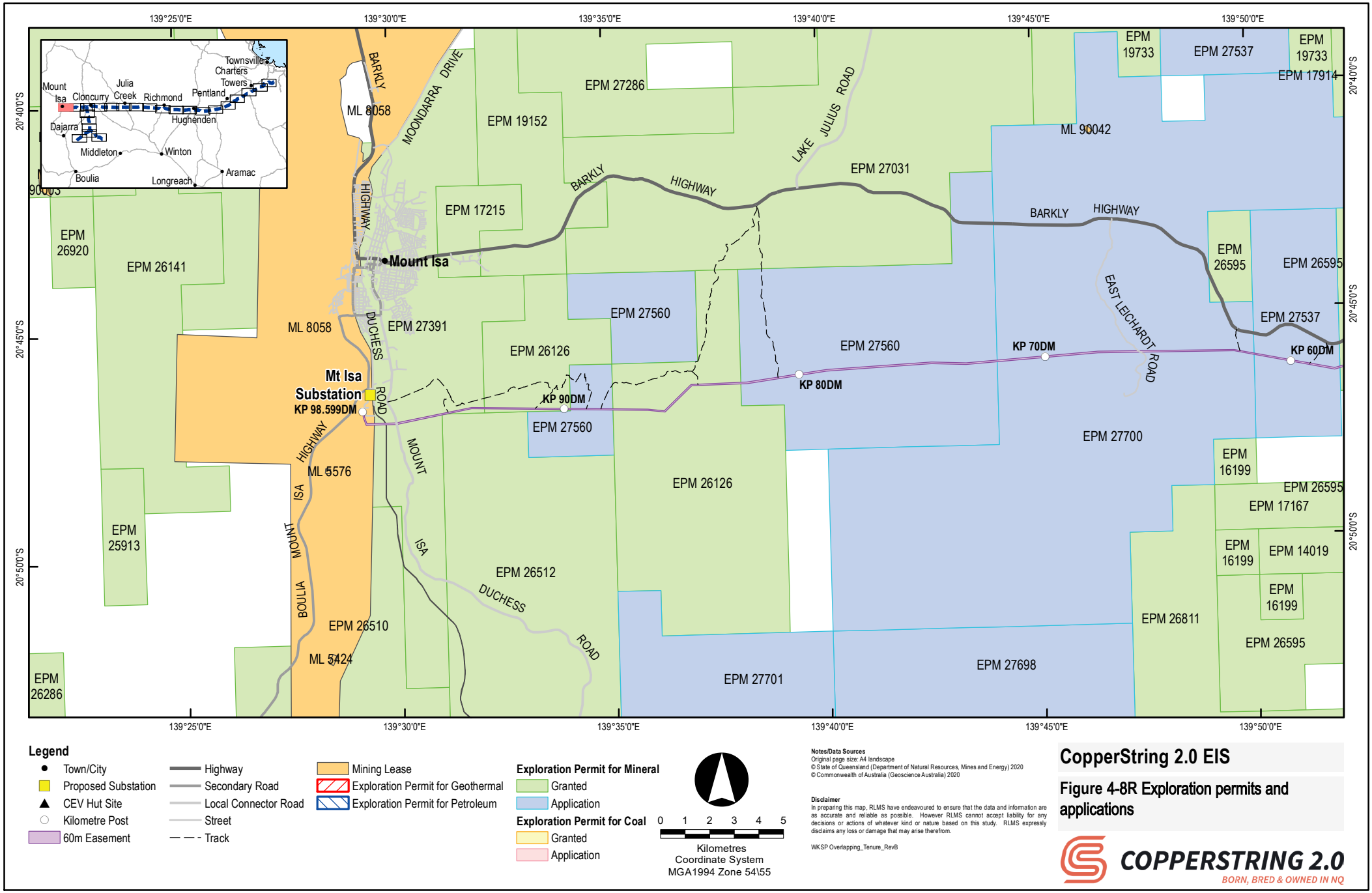
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8Q Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape

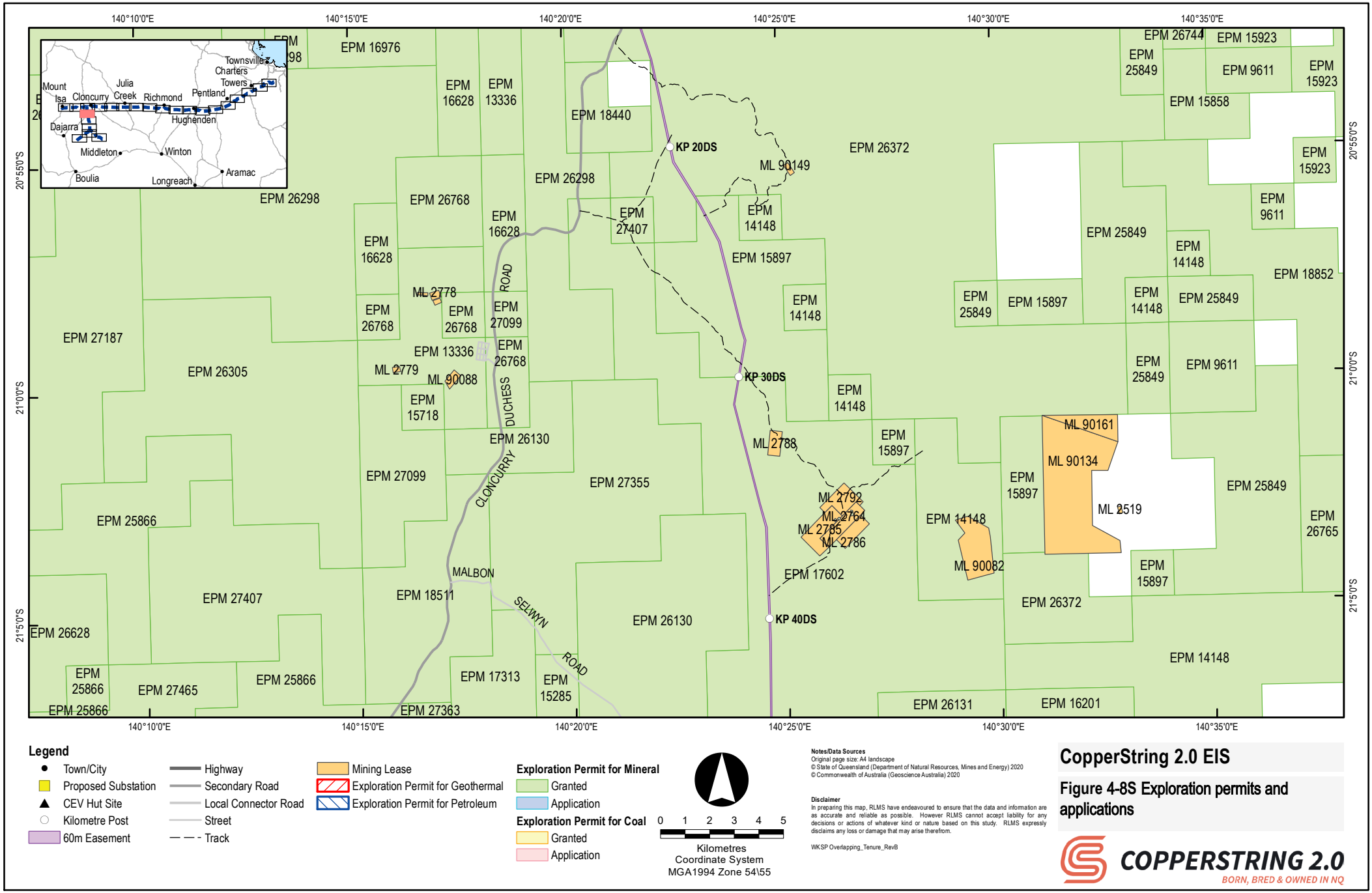
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8R Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

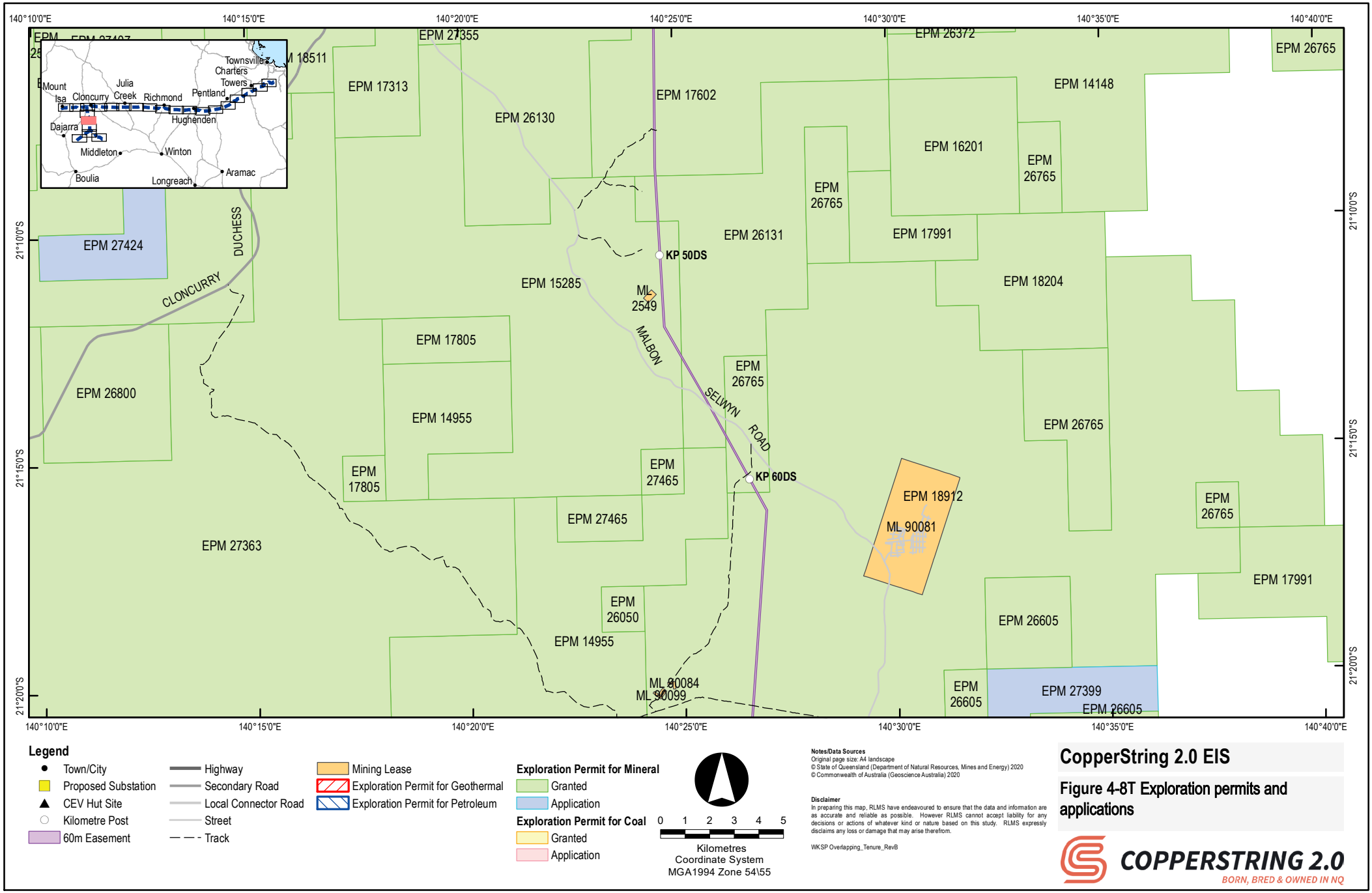
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8S Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

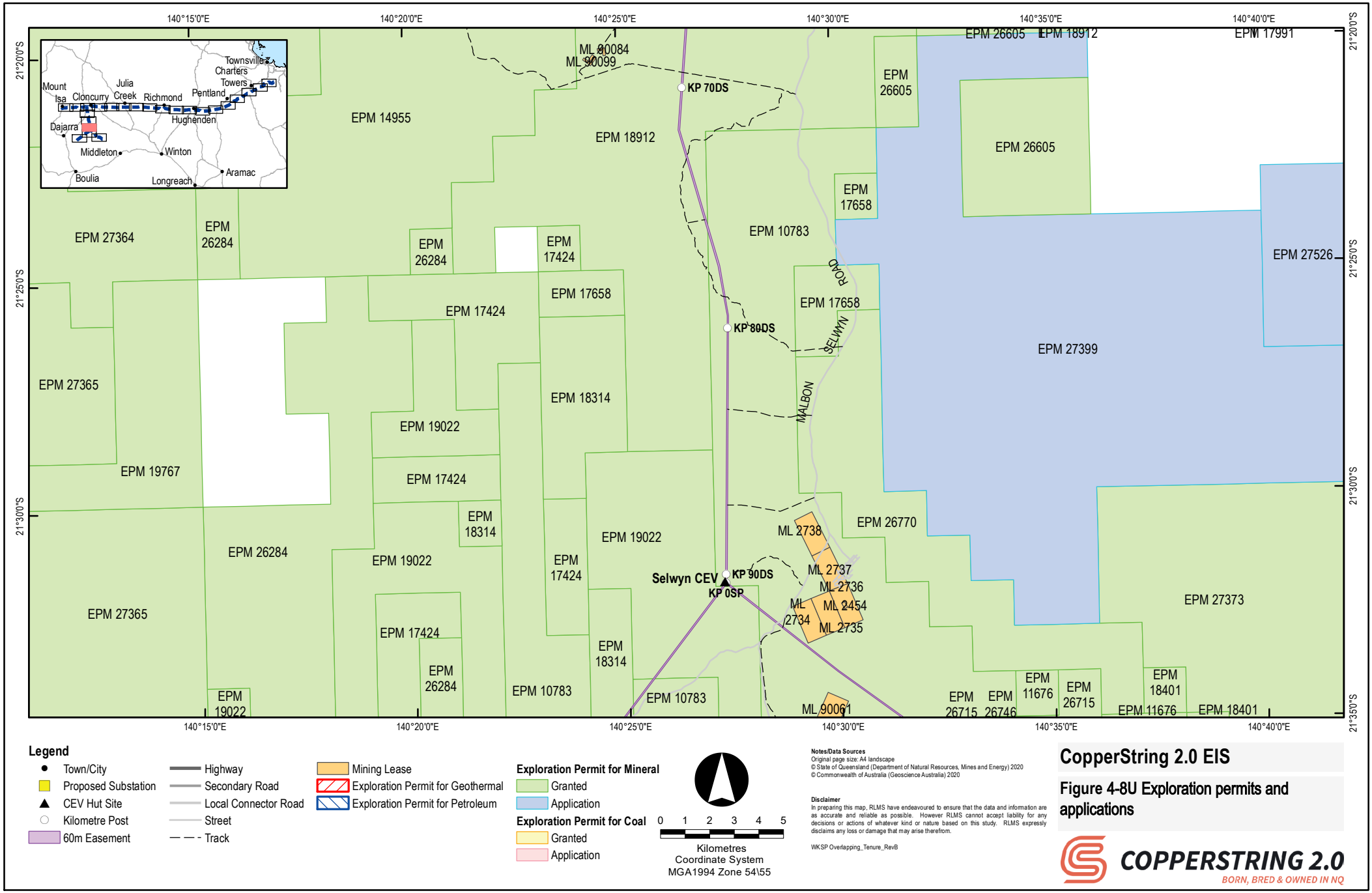
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8T Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

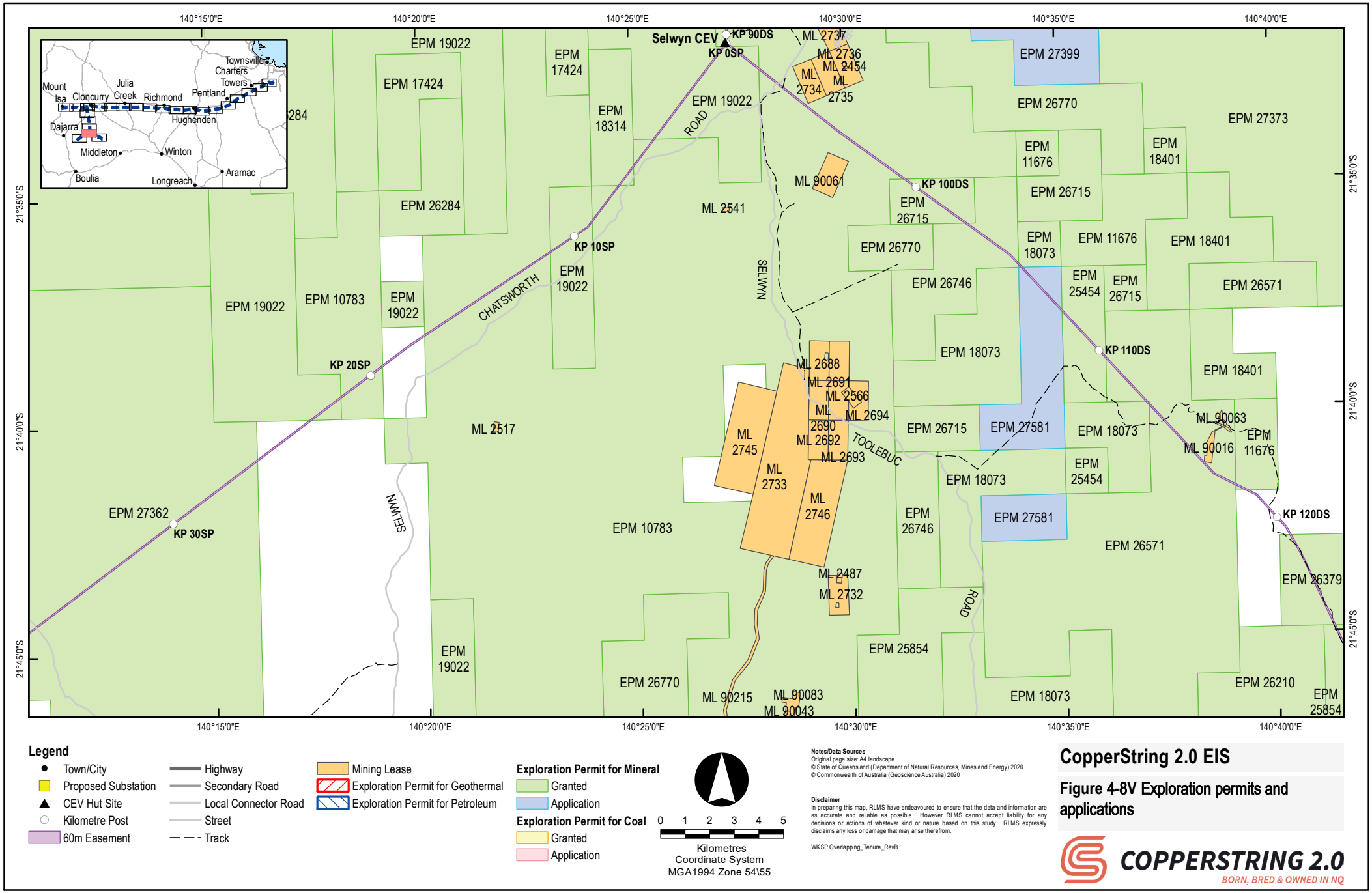
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8U Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

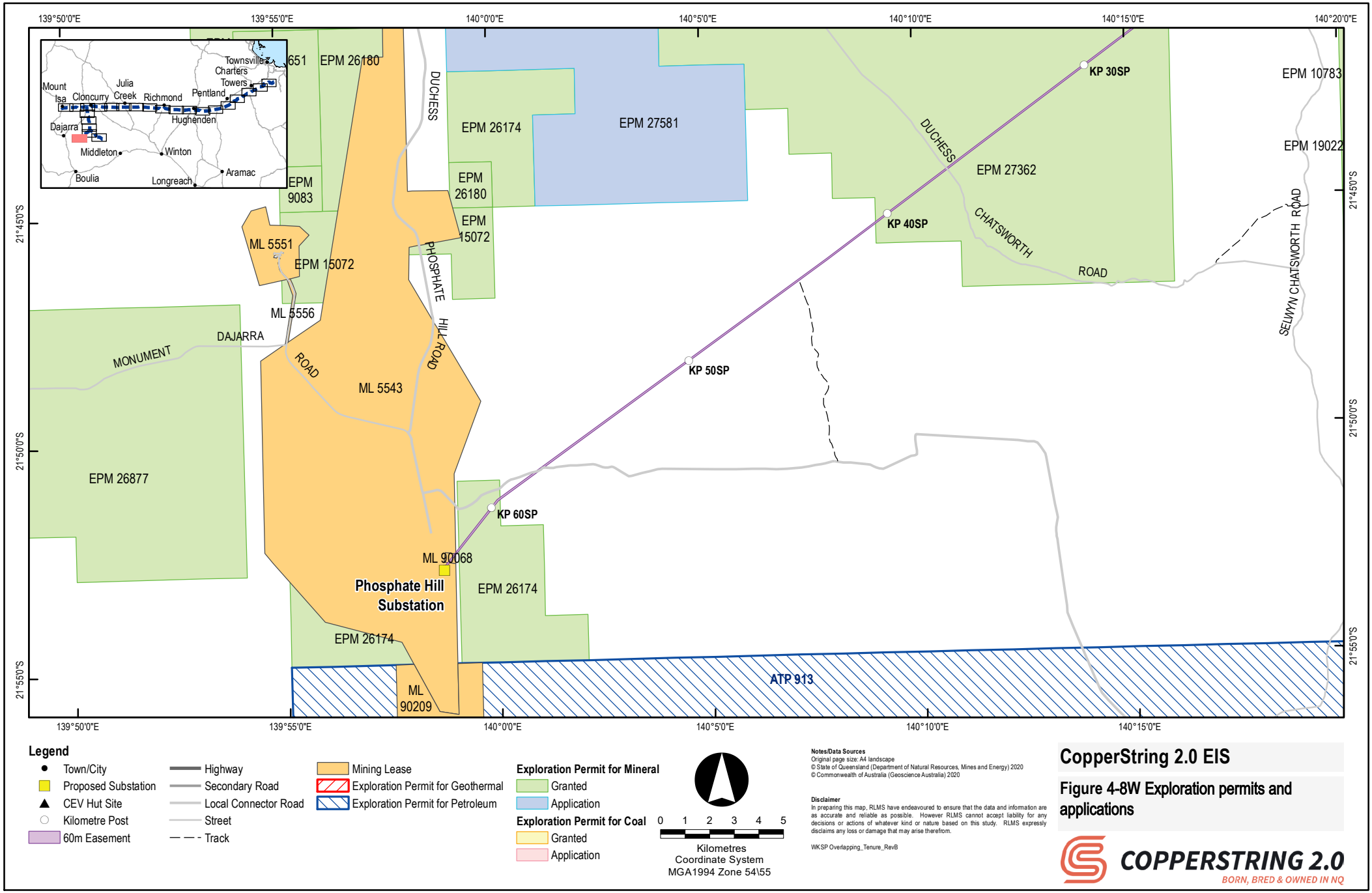
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

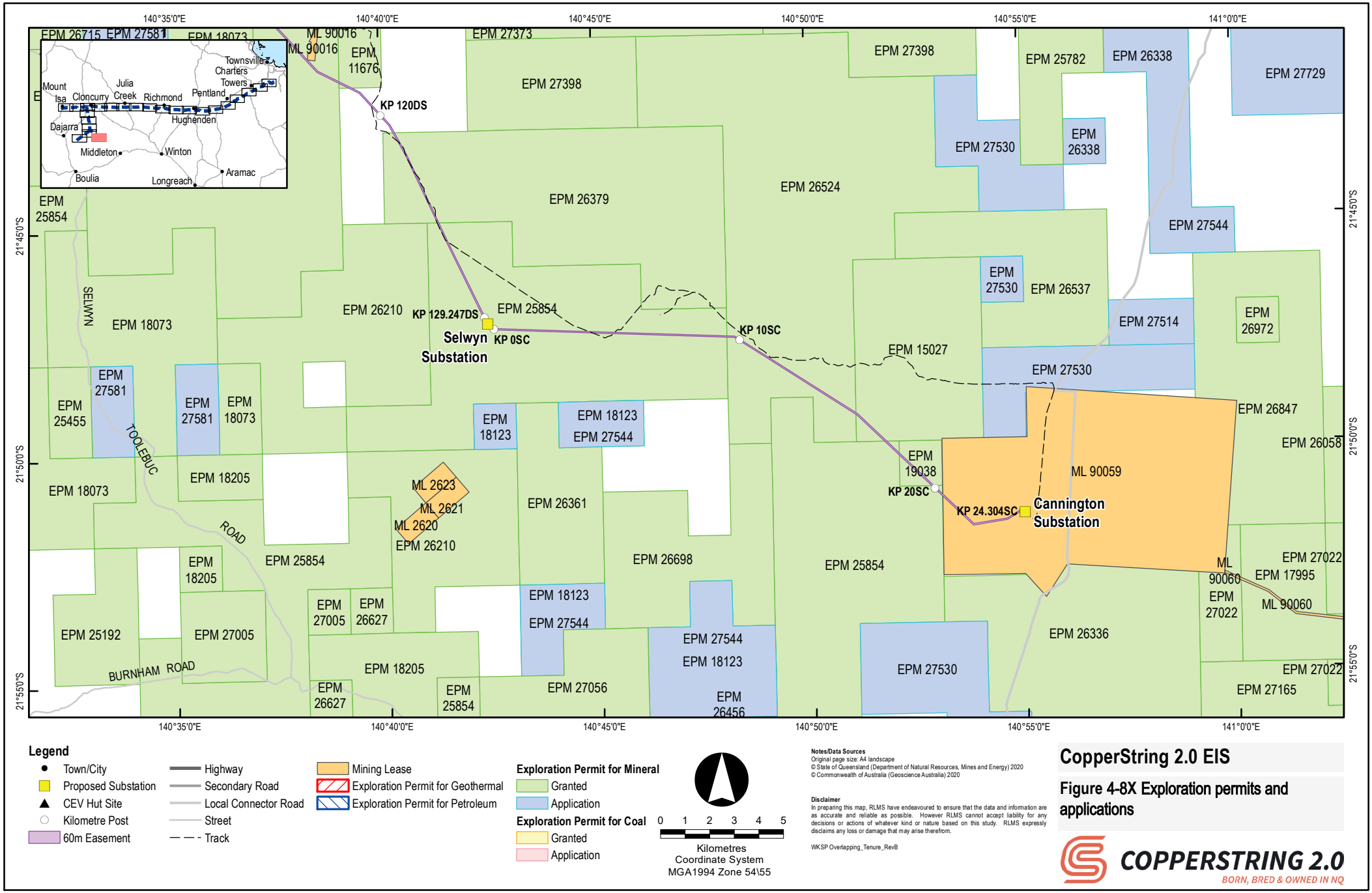
WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8V Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


139°50'0"E
139°55'0"E
140°0'0"E
140°5'0"E
140°10'0"E
140°15'0"E
140°20'0"E
21°45'0"S
21°50'0"S
21°55'0"S
Townsville
Charters Towers
Mount Isa
Cloncurry
Julia Creek
Richmond
Pentland
Hughenden
Dajarra
Middleton
Winton
Boulia
Longreach
Aramac
EPM 26180
EPM 26174
EPM 27581
EPM 10783
EPM 19022
EPM 27362
EPM 9083
EPM 26180
EPM 15072
ML 5551
EPM 15072
ML 5556
ML 5543
EPM 26877
EPM 26174
EPM 26174
ML 90068
ML 90209
Phosphate Hill Substation
ATP 913
KP 30SP
KP 40SP
KP 50SP
KP 60SP
DUCHESS
PHOSPHATE HILL ROAD
DAJARRA ROAD
MONUMENT
CHATSWORTH ROAD
SELWYN CHATSWORTH ROAD
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
0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Overlapping_Tenure_RevB
CopperString 2.0 EIS
Figure 4-8W Exploration permits and applications
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



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

0 1 2 3 4 5
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

Disclaimer
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.

WKSP Overlapping_Tenure_RevB

CopperString 2.0 EIS

Figure 4-8X Exploration permits and applications

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4.12.3 Mining Leases

The corridor selection also traverses a number of granted mining lease areas and mining lease application areas. Table 4-19 summaries the mining leases and application for mining leases. Figure 4-8 illustrates the granted mining lease areas and mining lease application areas across the corridor selection.

Table 4-19 Mining leases and applications

Owner/Operator	Permit number	Status
Mount Isa Mines Limited	ML 8058	Granted
Patterson Campbell Lloyd	ML 90016	Granted
MMG Dugald River Pty Ltd	ML 90220	Granted
South32 Cannington Proprietary Limited	ML 90059	Granted
Southern Cross Fertilisers Pty Ltd	ML 5543	Granted
Newmont Landco Pty Ltd	ML 10144	Granted
Exco Resources (Qld) Pty Ltd	ML 100111	Application
Chinova Resources Osborne Pty Ltd	ML 90068	Granted

4.12.4 Economic resources (extractive resources)

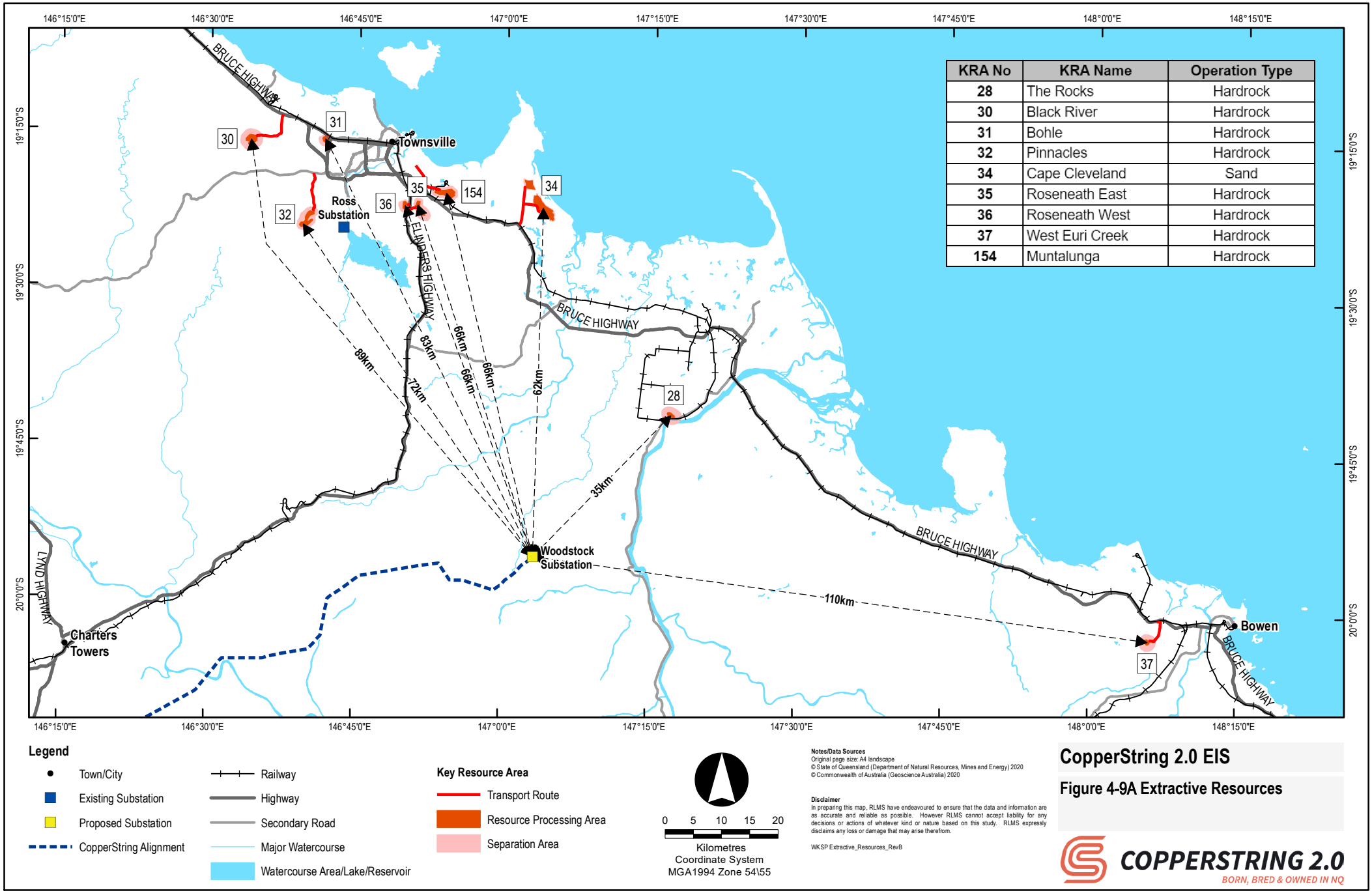
A number of key resource areas (KRAs) and major operating extractive industries are located within proximity to the corridor selection as summarised in Table 4-20 and shown on Figure 4-9. Quarry resources managed by the Department of Agriculture and Fisheries (Forest Products Unit) under the *Forestry 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 4 9.

Table 4-20 Key resource area(s)

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

4.12.5 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 4-10).



KRA No	KRA Name	Operation Type
28	The Rocks	Hardrock
30	Black River	Hardrock
31	Bohle	Hardrock
32	Pinnacles	Hardrock
34	Cape Cleveland	Sand
35	Roseneath East	Hardrock
36	Roseneath West	Hardrock
37	West Euri Creek	Hardrock
154	Muntalunga	Hardrock

Legend

- Town/City
- Existing Substation
- Proposed Substation
- CopperString Alignment
- Railway
- Highway
- Secondary Road
- Major Watercourse
- Watercourse Area/Lake/Reservoir

Key Resource Area

- Transport Route
- Resource Processing Area
- Separation Area

0 5 10 15 20
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

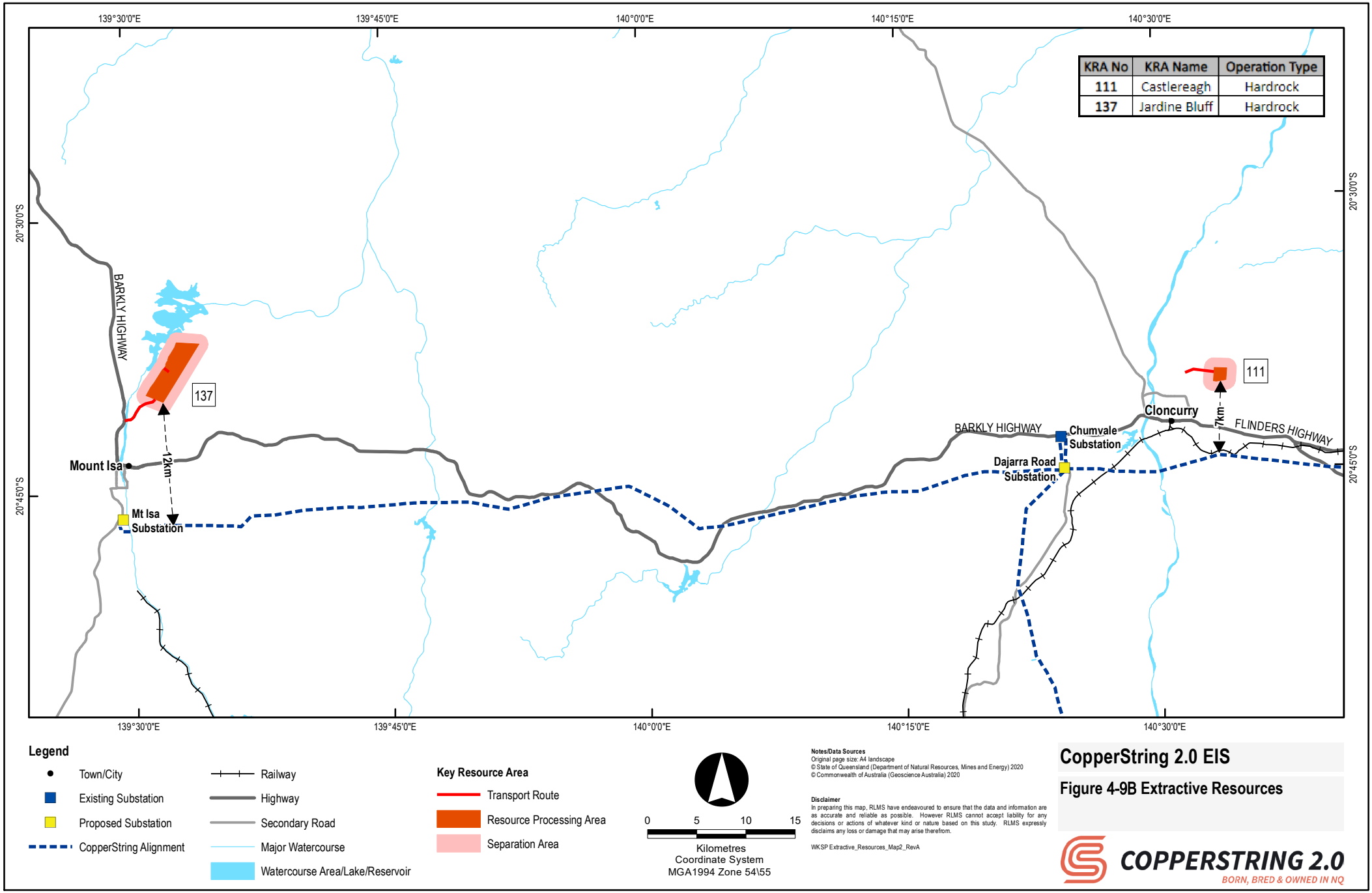
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

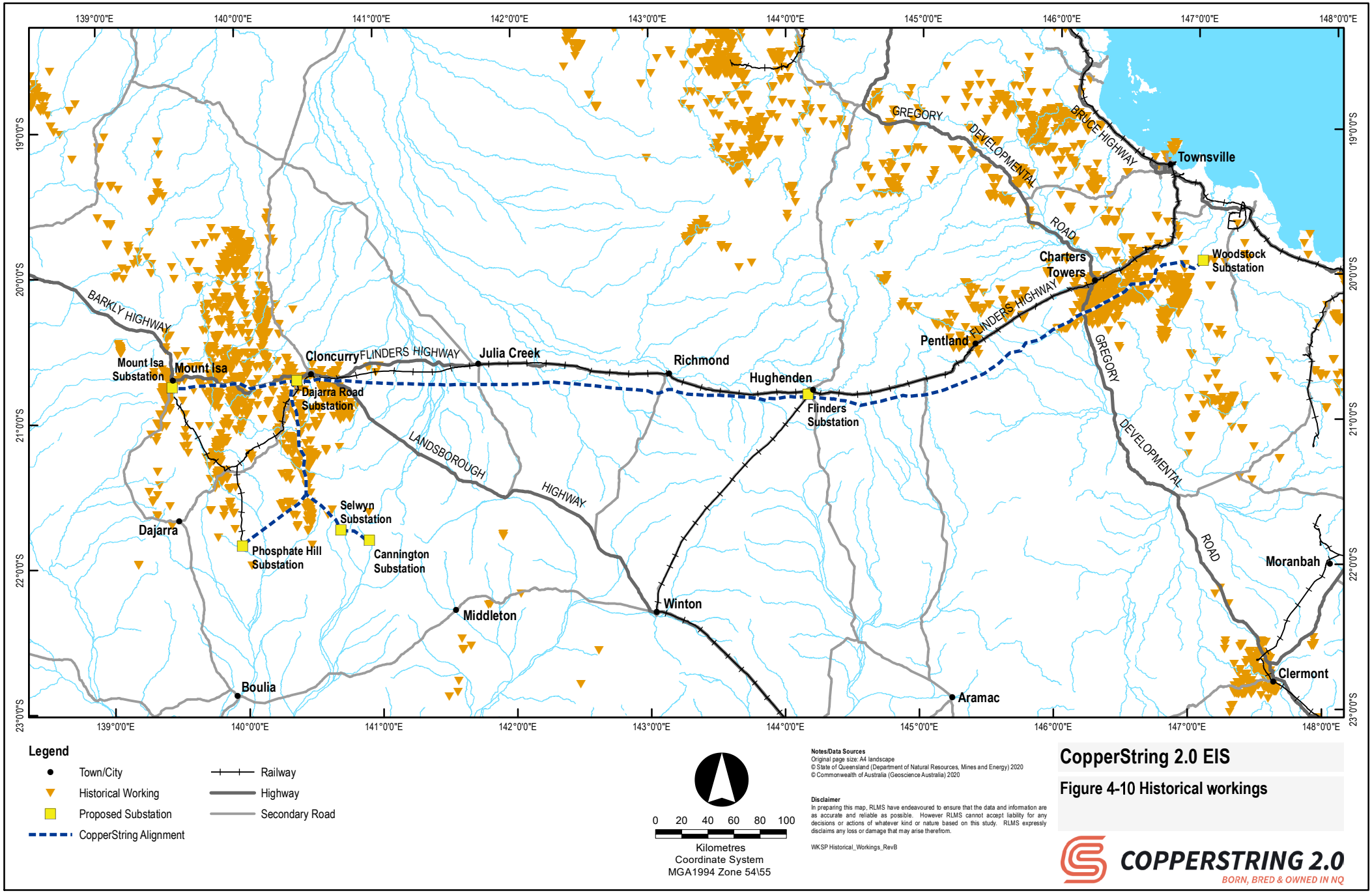
WKSP Extractive_Resources_RevB

CopperString 2.0 EIS

Figure 4-9A Extractive Resources

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


139°30'0"E
139°45'0"E
140°0'0"E
140°15'0"E
140°30'0"E
20°30'0"S
20°45'0"S
KRA No | KRA Name | Operation Type
111 | Castlereagh | Hardrock
137 | Jardine Bluff | Hardrock
BARKLY HIGHWAY
137
12km
Mount Isa
Mt Isa Substation
BARKLY HIGHWAY
Chumvale Substation
Dajarra Road Substation
Cloncurry
7km
111
FLINDERS HIGHWAY
Legend
Town/City
Existing Substation
Proposed Substation
CopperString Alignment
Railway
Highway
Secondary Road
Major Watercourse
Watercourse Area/Lake/Reservoir
Key Resource Area
Transport Route
Resource Processing Area
Separation Area
0 5 10 15
Kilometres
Coordinate System
MGA1994 Zone 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Extractive_Resources_Map2_RevA
CopperString 2.0 EIS
Figure 4-9B Extractive Resources
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020

Disclaimer
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.

WKSP Historical_Workings_RevB

CopperString 2.0 EIS

Figure 4-10 Historical workings

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4.13 Contaminated land and UXO

4.13.1 Contaminated land

Contaminated land refers to an area that contains hazardous substances that may pose a risk to human health or the environment. A desktop review has been undertaken to determine if any of the properties within the corridor selection have the potential to contain contamination sources.

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.

A review of properties within the corridor selection found that no properties were listed on the CLR. Seventeen (17) properties are listed on the EMR due to notifiable activities that have the potential to cause land contamination (such as livestock dips, fuel storage and landfills). These are detailed in Table 4-21 and illustrated on Figure 4-11. 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 4-21 Properties identified on the EMR

Lot / Plan	Notifiable activity	Description	Traversed alignment
Lot 4026 on SP112067	Livestock dip or Spray race	Satellite imagery confirms the corridor selection is not in proximity to the existing stock yards or buildings. Livestock dip or spray race are likely to be located with stock yards or buildings.	KP 29-38WD
Lot 4548 on PH2196	Livestock dip or Spray race	Satellite imagery confirms the corridor selection is not in proximity to the existing stock yards or buildings. Livestock dip or spray race are likely to be located with stock yards or buildings.	KP 41-46WD
Lot 4004 on SP242524	Explosives production or storage Landfill Mine wastes Petroleum product or oil storage	Previous EIS confirmed Notifiable Activities were associated with the previously operated open-cut Robinson Crusoe Mine (abandoned areas still evident on satellite imagery) Mining lease present approximately 100 m south of the corridor selection. ML 10344 has been granted to Denjim Pty Ltd, which expires November 2029.	KP 55-60WD
Lot 4924 on SP308339	Livestock dip or Spray race	Satellite imagery confirms the corridor selection is not in proximity to the existing stock yards or buildings.	KP 59-63WD

Lot / Plan	Notifiable activity	Description	Traversed alignment
		Livestock dip or spray race are likely to be located with stock yards or buildings.	
Lot 300 on SP137135	Chemical Manufacture or Formulation	Notifiable activity is associated with the open-cut Thalanga Copper Mine (under ML 1571 and 1734), more than 6 km south of the corridor selection.	KP 109-111WD
Lot 4 on DV463	Livestock dip or Spray race	Satellite imagery confirms the corridor selection is not in proximity to the existing stock yards or buildings. Livestock dip or spray race are likely to be located with stock yards or buildings, located approximately 1.7 km south of the corridor selection.	KP 131-151WD
Lot 61 on GF812272	Livestock dip or Spray race	Satellite imagery confirms alignment location is not in proximity to the existing stock yards or buildings. Livestock dip or spray race are likely to be located with stock yards or buildings, located approximately 1.8 km north west of the corridor selection.	KP 170-181WD
Lot 28 on GF154	Livestock dip or Spray race	Satellite imagery confirms alignment location is not in proximity to the existing stock yards or buildings. Livestock dip or spray race are likely to be located with stock yards or buildings, located approximately 4 km north and/or 5 km south of corridor selection.	KP 189-213WD
Lot 1 on BD2	Livestock dip or Spray race	Satellite imagery confirms the corridor selection is not in proximity to the existing stock yards or buildings. Livestock dip or spray race are likely to be located with stock yards or buildings.	KP 669-683WD
Lot 23 on SP136472	Hazardous contaminant	Contamination may be associated with rail operations No earthworks are proposed in rail easements. The corridor selection would span over the rail easement and as such would have minimal risk.	KP 732WD-733WD
Lot 922 on SP137139	Gun, pistol or rifle range	Identified through landholder consultation	KP 41-49DM

Lot / Plan	Notifiable activity	Description	Traversed alignment
Lot 69 on SP223507	Mine wastes	Mining leases present within the property. The alignment does not traverse any mining lease. The closest mining lease is approximately 3.2 km to the west.	KP 57-70DS
Lot 13 on SP223510 (formerly Lot 13 on SP150177)	Engine reconditioning works Landfill Petroleum product or oil storage Mine wastes	Mining leases present within the property The corridor selection does not traverse any mining lease but is adjacent to Phosphate Hill Mine (under ML 5543, operated by Incitec Pivot Limited). Consultation with Incitec Pivot Limited occurred during the corridor selection and the Project would not impact on any existing mining infrastructure where contamination is likely to occur.	KP 80-90DS KP 0-62SP
Lot 1 on SP150176	Chemical storage Fertiliser manufacture Landfill Mine wastes Petroleum product or oil storage	The property is dominated by Phosphate Hill Mine (operated by Incitec Pivot Limited), which have activities that can be associated to the identified notifiable activities. Consultation with Incitec Pivot Limited occurred during the Project substation and corridor selection and the Project would not impact on any existing mining infrastructure where contamination is likely to occur.	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	Mining leases present within the property. Three (ML2734, 2735 and 2736) of which are traversed by the corridor selection. These mining leases are owned by Chinova Resources Cloncurry Mines Pty Ltd. Consultation with Chinova Resources Cloncurry Mines Pty Ltd. occurred during the corridor selection and the Project would not impact on any existing mining infrastructure where contamination is likely to occur.	KP 91-129.247DS KP 0-2SC

Lot / Plan	Notifiable activity	Description	Traversed alignment
Lot 10 on SP258128	Landfill	Landfill likely to be associated with the previous open-cut Mt Leyshon Mine (ML 10144) operated by Leyshon Resources Pty Ltd and Newmont Australia Ltd.	KP 103–109WD
Lot 101 on SP248023	Gun, pistol or rifle range	Site identified through landholder consultation and satellite imagery.	KP 72–90DM

4.13.2 Unexploded Ordnance (UXO)

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.

UXO is considered a contaminant under Section 11 of the *Environmental Protection Act 994* (EP Act). Defence keeps a record of sites with potential residual UXO and categorises them using the following criteria:

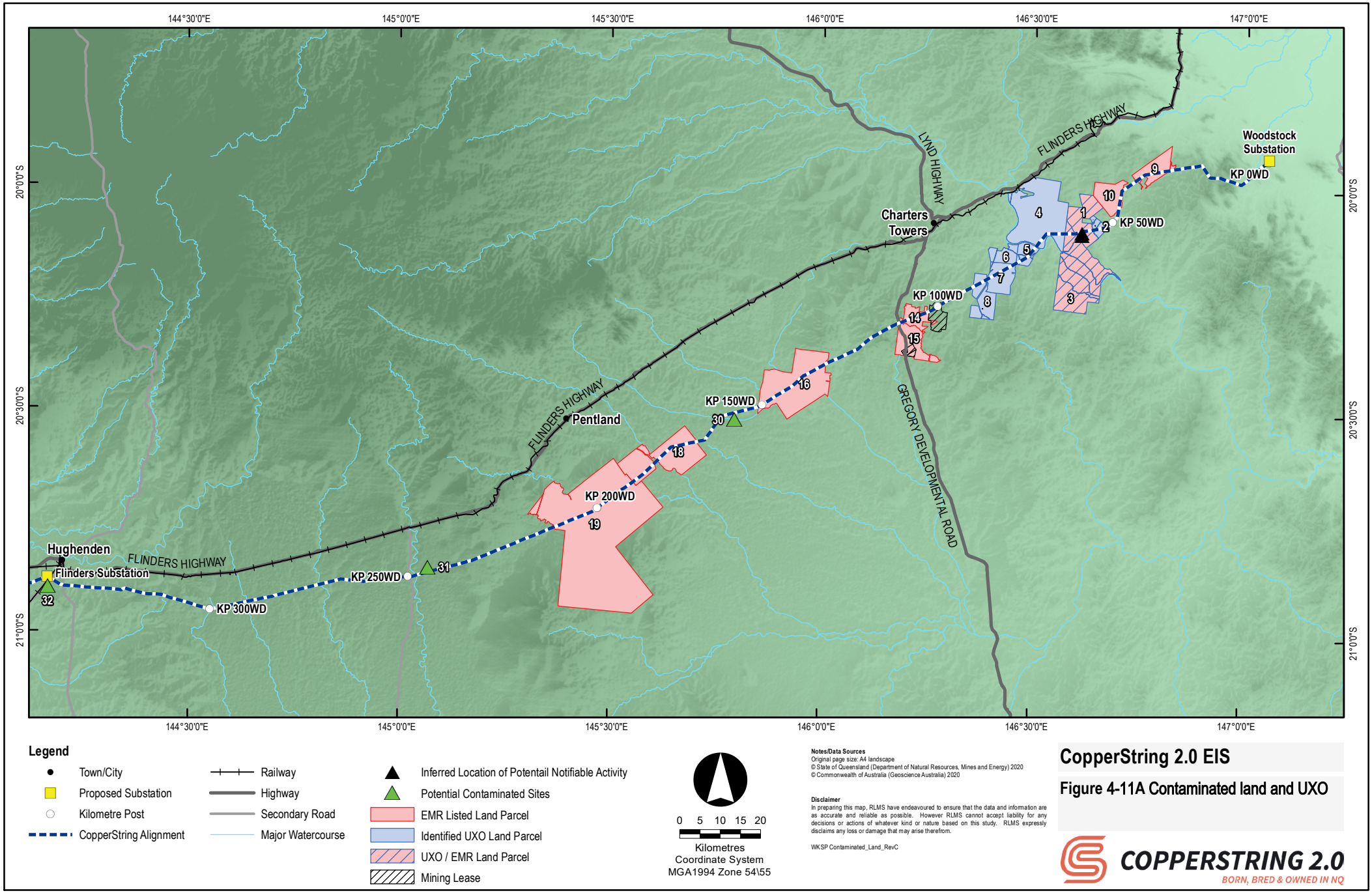
- Substantial — have a history of numerous UXO finds or heavy residual fragmentation.
- Slight — have a confirmed history of military activities that have resulted in residual UXO but Defence considers it inappropriate to assess as substantial.
- Other — Defence records confirm that the area was used for military training but do not confirm that the site was used for live firing and it is the opinion of Defence that it would be inappropriate to assess the site as either slight or substantial.

Department of Defence UXO mapping reveals seven properties that may have UXO. The outcome of this review is summarised in Table 4-22 and Figure 4-11.

Table 4-22 Properties identified on UXO search

Lot / Plan	UXO category	Description	Traversed alignment
Lot 4004 on SP242524	Slight occurrence	Impacted by Heathfield West / Birthday Hills (504) - Heavily used Range. Mustard gas fired by the Australian Field Experimental Station	KP 55-60WD
	Substantial occurrence	Heathfield West / Birthday Hill Substantial 1 (707) - Heavily used Range. Mustard gas fired by the Australian Field Experimental Station	KP 55-60WD
Lot 386 on AP2788	Slight occurrence	Impacted by Heathfield West / Birthday Hills (504) - Heavily used Range. Mustard gas fired by the Australian Field Experimental Station	KP 51-55WD
Lot 4924 on SP308339	Slight occurrence	Impacted by Heathfield West / Birthday Hills (504) - Heavily used Range. Mustard gas fired by the Australian Field Experimental Station	KP 59-63WD
Lot 511 on PH459	Slight occurrence	Heathfield West / Birthday Hills (504) - Heavily used Range. Mustard gas fired by the Australian Field Experimental Station	KP 58-71WD

Lot / Plan	UXO category	Description	Traversed alignment
	Slight occurrence Other	Macrossan (531) (Defence Controlled Area) - Grenades, Mortar and Artillery. Impacted by Broughton (452) - Training Area	
Lot 3 on DV686	Other	Impacted by Broughton (452) - Training Area	KP 71-78WD
Lot 4404 on PH857	Other	Impacted by Broughton (452) - Training Area	KP 78WD
Lot 2461 on PH293	Other	Impacted by Broughton (452) - Training Area	KP 78-86WD



Legend

- Town/City
- Proposed Substation
- Kilometre Post
- CopperString Alignment
- Railway
- Highway
- Secondary Road
- Major Watercourse
- Inferred Location of Potentail Notifiable Activity
- Potential Contaminated Sites
- EMR Listed Land Parcel
- Identified UXO Land Parcel
- UXO / EMR Land Parcel
- Mining Lease

0 5 10 15 20
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape

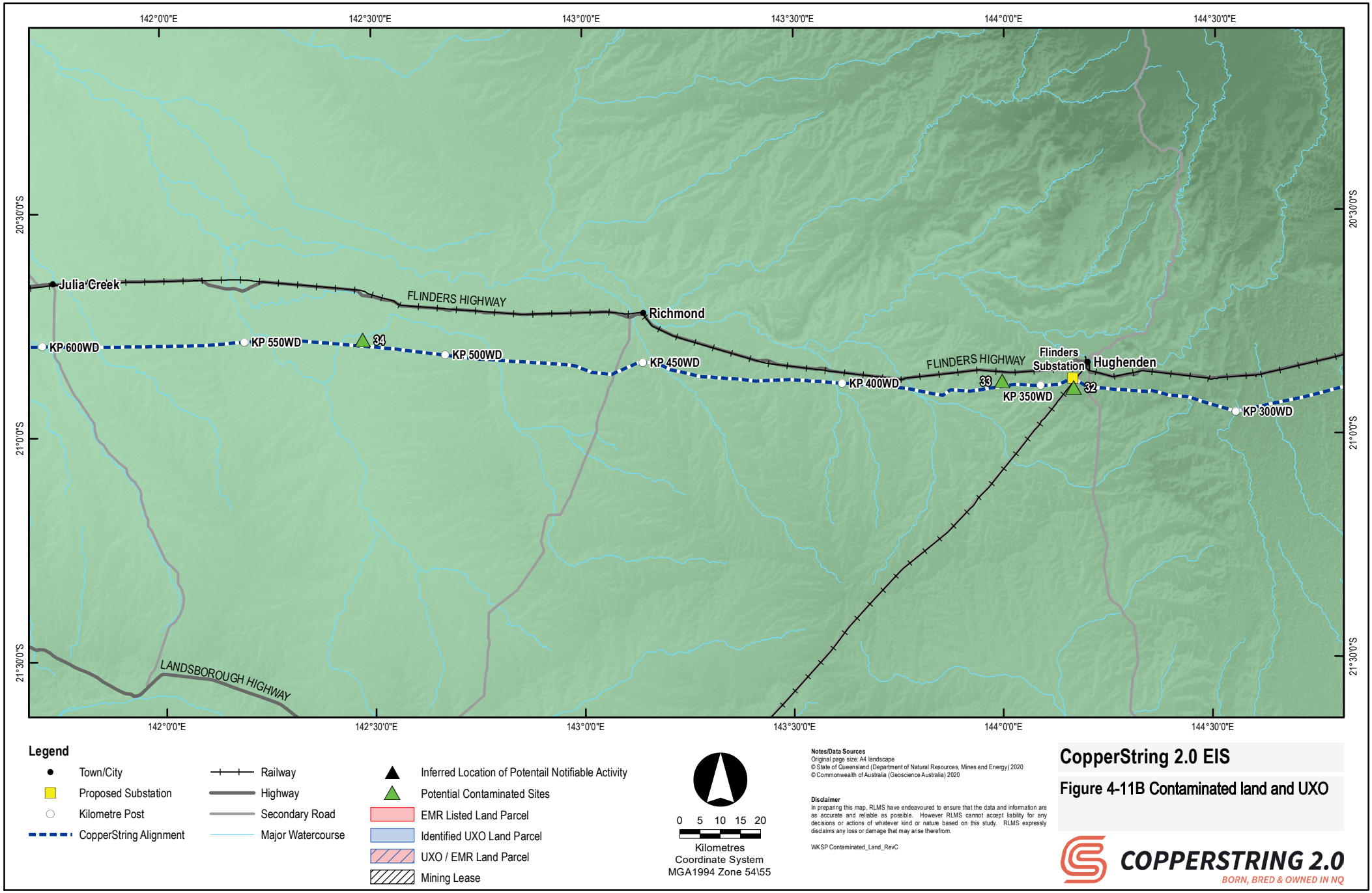
Disclaimer
In preparing this map, RLMS have endeavoured to ensure that the data and information are as accurate and reliable as possible. However RLMS cannot accept liability for any decisions or actions of whatever kind or nature based on this study. RLMS expressly disclaims any loss or damage that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

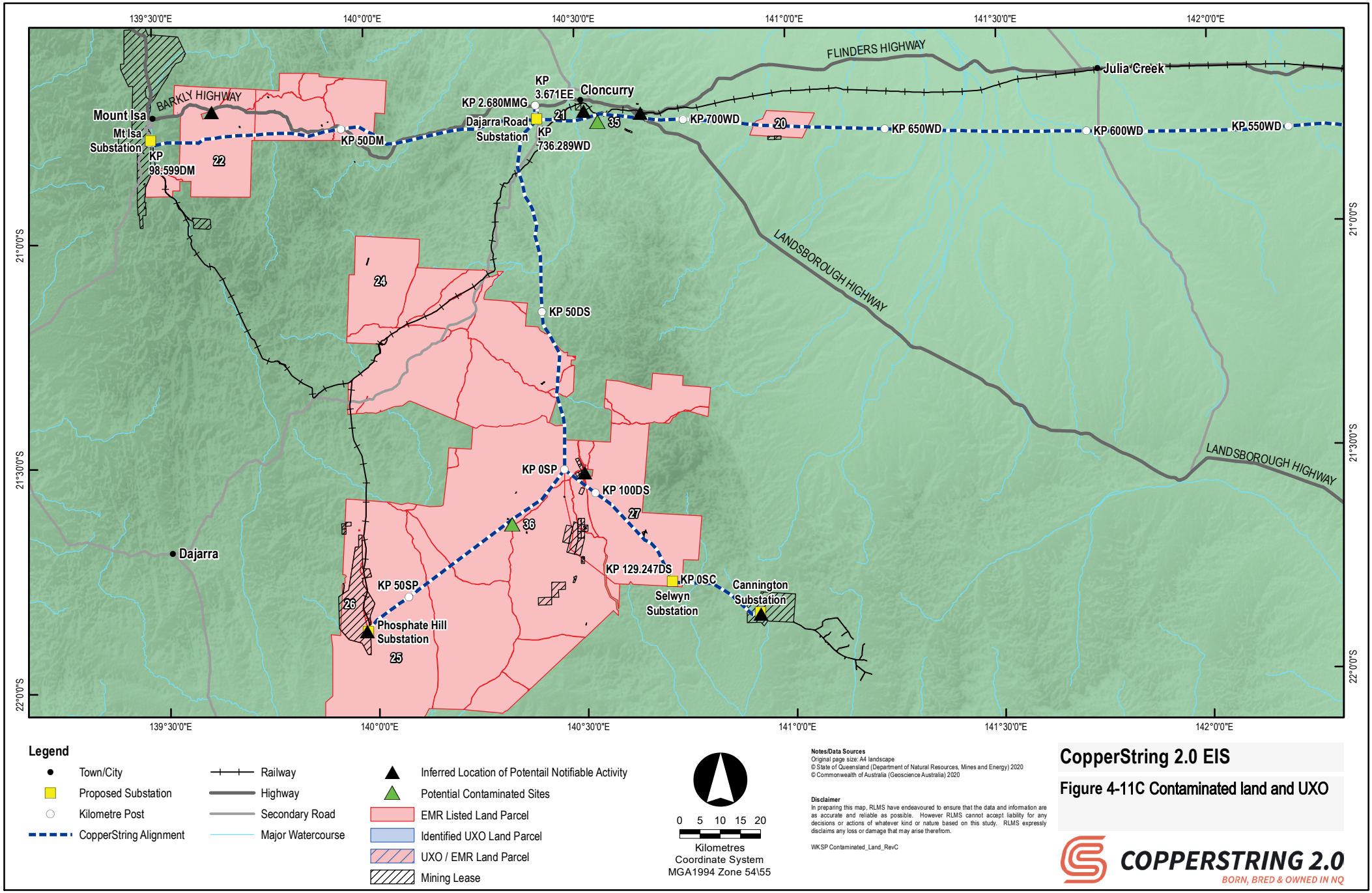
WKSP Contaminated_Land_RevC

CopperString 2.0 EIS

Figure 4-11A Contaminated land and UXO

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ


142°0'0"E
142°30'0"E
143°0'0"E
143°30'0"E
144°0'0"E
144°30'0"E
20°30'0"S
21°0'0"S
21°30'0"S
Julia Creek
FLINDERS HIGHWAY
Richmond
KP 600WD
KP 550WD
34
KP 500WD
KP 450WD
KP 400WD
33
KP 350WD
Flinders Substation
Hughenden
32
KP 300WD
LANDSBOROUGH HIGHWAY
Legend
Town/City
Proposed Substation
Kilometre Post
CopperString Alignment
Railway
Highway
Secondary Road
Major Watercourse
Inferred Location of Potentail Notifiable Activity
Potential Contaminated Sites
EMR Listed Land Parcel
Identified UXO Land Parcel
UXO / EMR Land Parcel
Mining Lease
0 5 10 15 20
Kilometres
Coordinate System
MGA1994 Zone 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Contaminated_Land_RevC
CopperString 2.0 EIS
Figure 4-11B Contaminated land and UXO
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ



Legend

- Town/City
- Proposed Substation
- Kilometre Post
- CopperString Alignment
- Railway
- Highway
- Secondary Road
- Major Watercourse
- Inferred Location of Potentail Notifiable Activity
- Potential Contaminated Sites
- EMR Listed Land Parcel
- Identified UXO Land Parcel
- UXO / EMR Land Parcel
- Mining Lease

0 5 10 15 20
Kilometres
Coordinate System
MGA1994 Zone 54\55

Notes/Data Sources
Original page size: A4 landscape

Disclaimer
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.

WKSP Contaminated_Land_RevC

CopperString 2.0 EIS

Figure 4-11C Contaminated land and UXO

COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

4.14 Native Title

Native title claim groups are listed in Table 4-23 and native title claim boundaries are detailed on Figure 4-12.

Table 4-23 Native Title claims

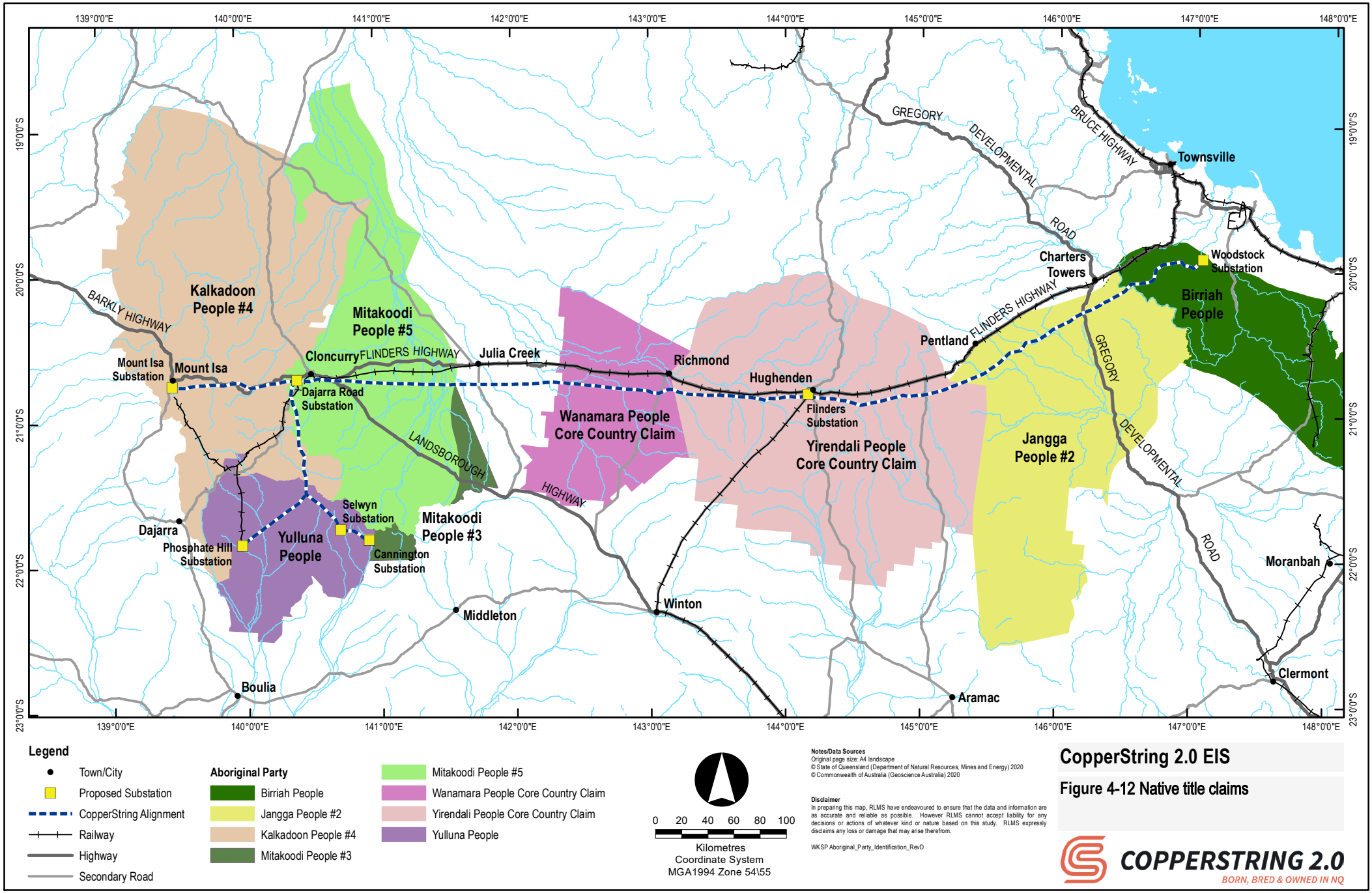
Aboriginal Party	Tribunal File No.	Federal Ct No.	Native Title Party Status
Birriah People	QCD2016/001	QUD6244/1998	Determined native title exists.
Jangga People #2	QCD2012/00	QUD6230/1998	Native Title Claimant – accepted for registration and registered 22 November 2019.
Yirendali People Core Country Claim	QCD2017/002	QUD495/2006	Determined native title does not exist.
Wanamara People Core Country Claim	QC2006/018	QUD460/2006	Previous Native Title Claimant – claim discontinued 09 April 2010.
Mitakoodi People #5	QC2003/004	QUD6004/2003	Dismissed 4 January 2010
Mitakoodi People #5	QC2015/009	QUD556/2015	Native Title Claimant – claim accepted for registration 21 February 2020.
Kalkadoon People #4	QC2010/004	QUD579/2005	Determined native title exists in parts of the determination area.
Yulluna People	QC2010/001	QUD189/2010	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 compliance in relation to any Project activity on these lands 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.


139°0'0"E
140°0'0"E
141°0'0"E
142°0'0"E
143°0'0"E
144°0'0"E
145°0'0"E
146°0'0"E
147°0'0"E
148°0'0"E
19°0'0"S
20°0'0"S
21°0'0"S
22°0'0"S
23°0'0"S
Kalkadoon People #4
Mitakoodi People #5
Wanamara People Core Country Claim
Yirendali People Core Country Claim
Jangga People #2
Birriah People
Yulluna People
Mitakoodi People #3
BARKLY HIGHWAY
FLINDERS HIGHWAY
LANDSBOROUGH HIGHWAY
GREGORY DEVELOPMENTAL ROAD
BRUCE HIGHWAY
Mount Isa Substation
Mount Isa
Cloncurry
Julia Creek
Richmond
Hughenden
Pentland
Charters Towers
Townsville
Woodstock Substation
Dajarra Road Substation
Flinders Substation
Selwyn Substation
Cannington Substation
Phosphate Hill Substation
Dajarra
Middleton
Winton
Boulia
Aramac
Moranbah
Clermont
Legend
Town/City
Proposed Substation
CopperString Alignment
Railway
Highway
Secondary Road
Aboriginal Party
Birriah People
Jangga People #2
Kalkadoon People #4
Mitakoodi People #3
Mitakoodi People #5
Wanamara People Core Country Claim
Yirendali People Core Country Claim
Yulluna People
0 20 40 60 80 100
Kilometres
Coordinate System
MGA1994 Zone 54\55
Notes/Data Sources
Original page size: A4 landscape
© State of Queensland (Department of Natural Resources, Mines and Energy) 2020
© Commonwealth of Australia (Geoscience Australia) 2020
Disclaimer
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.
WKSP Aboriginal_Party_Identification_RevD
CopperString 2.0 EIS
Figure 4-12 Native title claims
COPPERSTRING 2.0
BORN, BRED & OWNED IN NQ

5. Recommendations

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 reviewed and assessed 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.

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.

GHD

71 Stanley Street
Townsville
T: 61 7 4720 0400 F: 61 7 4772 6514 E: tsvmail@ghd.com

GHDDocId/Document1

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
A	E. Campbell	K. Kerr	KK*	P. Bradley	PB*	20/07/20
0	E. Campbell	K. Kerr	KK*	P. Bradley	PB*	19/11/20

* Electronic Approval on File.

www.ghd.com