



 **COPPERSTRING 2.0**

The CopperString 2.0 logo features a stylized, red 'S' shape that resembles a string or a path, positioned to the left of the text 'COPPERSTRING 2.0'.

CopperString 2.0

# Infrastructure designation and planning

Volume 3 Appendix M

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# 1. Infrastructure designation and planning

## 1.1 Introduction

### 1.1.1 Existing Environment

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 transmission alignment, to the state electricity grid, allowing them to participate in the National Electricity Market. The project will 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 will be constructed south-west of Hughenden to facilitate market access to renewable energy from this resource.

The Project traverses a large, linear area and is expected to directly impact 130 land parcels, including parcels impacted by substations and CEV hut sites and additional land parcels impacted by the construction of access tracks. The predominant land uses on the impacted land parcels is rural grazing and cattle breeding.

The project Terms of Reference (ToR) provides for connection options for electricity consumers and generators. Implementation of any options will be a variation or an independent project.

The Project is divided into the following eight sections:

1. Woodstock Substation

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

2. Renewable Energy Hub

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

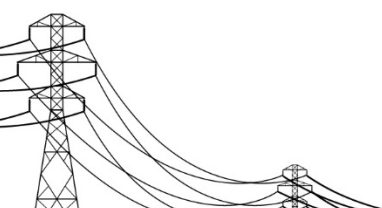
3. CopperString Core

Moving further westward, the next 395 km of the Project, consisting of a dual 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 bulk supply substation of the NWPS 220 kV network, at Cloncurry, to the Flinders Substation.

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

4. Mount Isa Augmentation

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



#### 5. Southern Connection

The Southern Connection will consist of a dual circuit 220 kV transmission line connecting the Dajarra Road Substation to the Selwyn Substation. The Southern Connection will 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 will include distribution equipment to connect the Mount Dore Mine.

#### 6. Cannington Connection

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

#### 7. Phosphate Hill Connection

The Phosphate Hill Connection will consist of the Phosphate Hill Substation and a single circuit 220 kV transmission line that connects to the Southern Connection at a point between KP90DS and KP91DS. The Phosphate Hill Substation will include distribution equipment to connect the Phosphate Hill Mine.

#### 8. Kennedy Connection (option)

The Kennedy Connection option will be a dual 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. As stated above, the proposed Kennedy Connection has not been assessed as part of this EIS.

The project will utilise conventional alternating current (AC) and will 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.

The Project was declared a “coordinated project” under the provisions of the *State Development and Public Works Organisation Act 1971* (SDPWO Act) on the 26 April 2019 and a “controlled action” under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on the 14 May 2019. The Project will be assessed under the bilateral agreement between the Commonwealth and the State via the Environmental Impact Statement (EIS) process. The ToR approved by the Coordinator-General under section 30 of the SDPWO Act were released on 4 September 2019 and set out the matters to be addressed in the Environmental Impact Statement (EIS). GHD Pty Ltd (GHD) has been engaged by CuString Pty Ltd (CuString) to assist in preparation of the EIS and supporting technical reports.

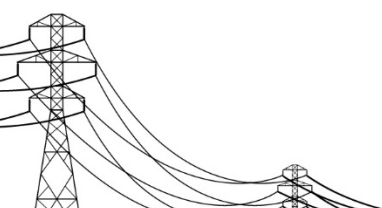
### **1.1.2 Purpose of this report**

The purpose of this report is to provide an overview of the Infrastructure Designation process as it relates to the Project and provide cross-reference to the relevant chapters in the EIS.

### **1.1.3 Assumptions**

The following assumptions were made in the development of this report:

- Details provided through public domain information is correct and reflects the Infrastructure Designation (ID) process at the time of preparation of this report.



#### **1.1.4 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 11.1.2 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.

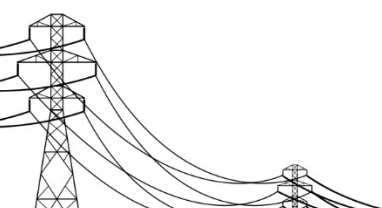
The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

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.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.



## 1.2 Infrastructure Designation

### 1.2.1 Infrastructure designation process

A list of infrastructure which may be designated for community supporting infrastructure is set out in Schedule 5 of the *Planning Regulations 2017* (Planning Regulation).

The *Planning Act 2016* (Planning Act) describes the way in which a designation can be undertaken. Part 5 of the Planning Act prescribes that the Minister, before designating land for community supporting infrastructure, must be satisfied that –

- a. the infrastructure will satisfy statutory requirements, or budgetary requirements, for the supply of the infrastructure; or
- b. there is or will be a need for the efficient and timely supply of the infrastructure.

Part 5, section 35(2) of the Planning Act also describes the requirements which may be included in a designation including:

- a. *works for the infrastructure (the height, shape, bulk, landscaping, or location of works, for example);*
- b. *the use of premises, for example –*
  - i. *vehicular and pedestrian access to, and circulation on premises; and*
  - ii. *operating times for the use; and*
  - iii. *ancillary uses*
- c. *lessening the impact of works or use (environmental management procedures for example).*

The designation should also have regard to the local State planning instrument, despite the designation not being assessable against the local planning instrument. Further, the designation should also have regard to the State planning framework, in accordance with Schedule 2 of the Planning Act. In this regard, the designation should provide an assessment in compliance with the State Planning Policy.

The environmental aspects of the designation should also be considered such that the Minister is satisfied that an adequate environmental assessment has been carried out in relation to the development that is subject to the designation. These environmental aspects must have regard to:

- local and State planning instruments, policies and benchmarks that relate the premises;
- properly made submissions submitted as part of the consultation process; and
- written submission of any local government.

An assessment of the environmental impacts and proposed mitigation and management of these impacts must also be considered. This may include natural and physical resources, and short and long term effects on the environment and community from construction and operational phases of the proposal. These matters may include:

- traffic, transport and infrastructure
- environmental values including flora and fauna
- soils and geology
- cultural heritage values including indigenous and non-indigenous
- social and amenity impacts and health and safety
- natural resources and hazards.

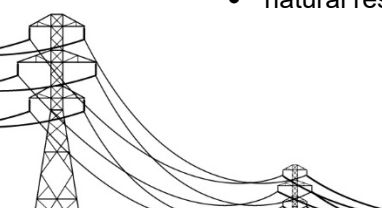


Table 1-1 of this report provides a cross-reference between the criteria for an Infrastructure Designation and relevant chapters of the CopperString EIS.

### **1.2.2 Intent of the infrastructure designation**

Due to the considerable length of the corridor selection and the number of local government areas traversed by the Project, part of the CuString approvals strategy is to seek an ID under the provisions of the Planning Act. This is the most efficient pathway to obtain the necessary land use planning approvals within the seven local government areas.

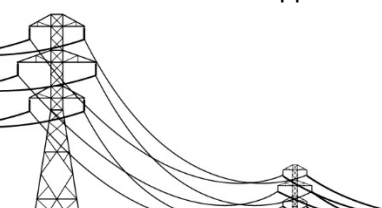
### **1.2.3 Pre-lodgement Consultation**

CuString Pty Ltd has met with the statutory planning team from Department of Treasury to discuss the Infrastructure Designation process. It is anticipated that CuString will submit a request that the Project be considered for ministerial infrastructure designation to the Minister once following the public notification of the draft EIS and all consultation responses made by agencies and other stakeholders have been received. The request will seek the Ministers' approval for the Project to be assessed under a streamlined approach. The streamlined ID process provides greater flexibility and will simplify the Tier 2 approval requirements subject to the availability of adequate design and construction related information, particularly ancillary works and temporary works.

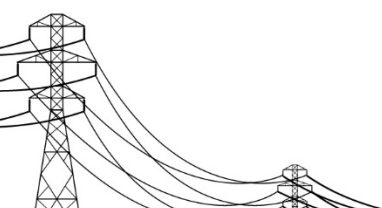
### **1.2.4 ID Process**

A 'streamlined' ID process is available to the CopperString Project which would mean the following:

- Information included in the EIS can be utilized for the ID Planning Report.
- High level site design (indicative or conceptual level) for specific infrastructure (such as camps or laydown areas) as well as general arrangement drawings / sketches for the Transmission Line, substations and CEVs will be an acceptable level of detail provided the project is constructed "Generally in Accordance" with these drawings and the disturbance areas shown on them are representative of the project construction works.
- The assessment duration might be a shorter timeframe than the existing ID process.
- The ID process would start with the notice to the Minister requesting the project or portions (stages) of the project be considered for designations.
- The Planning Minister would then endorse the Infrastructure Design of the project allowing the process to commence.
- Public Notification and community engagement undertaken as part of the EIS will also be considered and may also be deemed adequate to fulfil the public notification requirements of the ID process.
- The Minister would still require consultation with local councils and all impacted property owners which would include notification letters and consultation.
- The ID would not be approved by the Minister until after the EIS has been approved by the Coordinator General so that the CG's recommendations can be considered in the ID process and if necessary in the ID conditions package.
- The ID can only be issued over lots where easement Option Agreements are in place.
- The ID may be staged to allow approval of sections, when all required information is available, and within areas where there are executed Option Agreements.
- Subsequent amendments to the approved ID can be lodged at any time after the first ID has been approved.



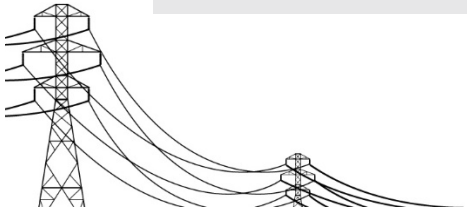
- The ID amendment process is very similar to the original ID assessment process and will trigger an assessment of the change (inclusion of new elements or removal or aspects no longer required) and will require public notification and consultation by the Minister with local government and impacted or adjoining property owners.
- Temporary construction works including camps and lay down areas can be included in the ID (this would require a legal agreement (lease or option agreement) with the land owner) and removed (as an amendment) for the ID once no longer necessary, thus removing the planning burden from the affected parcel (lot).
- No application fees are applicable to the lodgement of an ID.
- No Infrastructure Charges are levied against IDs.
- No third-party appeal rights are applicable to the ID decision (which can apply on Impact assessable development applications).
- The ID last typically for six years before it lapses.



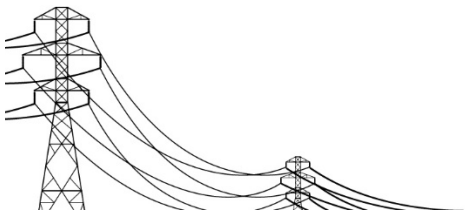


**Table 1-1 Cross reference table**

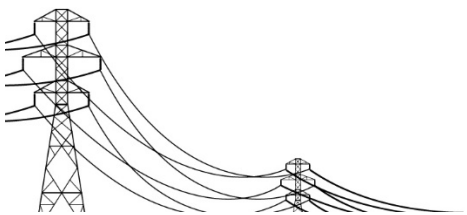
| Infrastructure Designation<br>(Environmental Assessment) | Cross reference to CopperString 2.0 EIS |  |  |
|--|---|--|--|
|  | Volume                                  | Chapter / Appendix Number                                      | Section  |
| <b>Executive Summary</b>                                 |   |  |  |
| Infrastructure proposal                                  | Volume 1                                | Chapter 2 Project Description                                  | Section 2.11 Infrastructure requirements                 |
| <b>Legislative Context</b>                               |   |  |  |
| <i>Planning Act 2016</i>                                 | Volume 1                                | Chapter 4 Legislation and Approvals                            | Section 4.1.7 Overarching state legislation and policies |
| <b>Site Information</b>                                  |   |  |  |
| Property details and ownership                           | Volume 2                                | Chapter 5 Land   | Section 5.3.1 Land parcels                               |
|  | Volume 3                                | Appendix F Real property descriptions of impacted land parcels |  |
| Surrounding land uses                                    | Volume 3                                | Appendix K Land use and tenure                                 | Section 4.2 Existing and proposed land uses              |
| Easement and encumbrances                                | Volume 2                                | Chapter 5 Land   | Section 5.3 Existing environment                         |
| Topography   | Volume 2                                | Chapter 6 Geology and soils                                    | Section 6.3 Existing environment                         |
| <b>Infrastructure Characteristics</b>                    |   |  |  |
| Transport network  | Volume 2                                | Chapter 13 Transport   | Section 13.3 Existing environment                        |
| Infrastructure requirements                              | Volume 1                                | Chapter 2 Project description                                  | Section 2.11 Infrastructure requirements                 |



| Infrastructure Designation<br>(Environmental Assessment) | Cross reference to CopperString 2.0 EIS |  |  |
|--|---|--|--|
|  | Volume                                  | Chapter / Appendix Number                          | Section  |
| <b>Designation Proposal</b>                              |   |  |  |
| Description under the Planning Regulations 2017          | Volume 3                                | Appendix M Infrastructure designation and planning | Section 1.2.1 Infrastructure designation process   |
| Intent of designation                                    | Volume 3                                | Appendix M Infrastructure designation and planning | Section 1.2.2 Intent of the infrastructure designation   |
| Proposal description and details                         | Volume 1                                | Chapter 2 Project description                      | Section 2.1.2 Project description  |
| Project history  | Volume 1                                | Chapter 2 Project description                      | Section 2.1.3 Project history  |
| <b>Local and State Planning Provisions</b>               |   |  |  |
| Local planning framework                                 | Volume 3                                | Appendix K Land use and tenure                     | Section 4.6 State Planning Policy 2017   |
| Planning scheme provisions                               | Volume 3                                | Appendix K Land use and tenure                     | Section 4.8 Relevant planning schemes  |
| Use definition   | Volume 3                                | Appendix K Land use and tenure                     | Section 4.8 Relevant planning schemes<br>Section 4.2 Existing and proposed land uses                 |
| Zoning   | Volume 3                                | Appendix K Land use and tenure                     | Table 1-8, Table 1-9, and Table 1-10 for local zoning<br><br>Table 1-2 for regional zoning interests |



| Infrastructure Designation<br>(Environmental Assessment) | Cross reference to CopperString 2.0 EIS |                                       |  |
|--|---|---------------------------------------|--|
|  | Volume                                  | Chapter / Appendix Number             | Section  |
| <b>State Planning Framework</b>                          |   |                                       |  |
| State Planning Policy                                    | Volume 3                                | Appendix K Land use and tenure        | Section 4.6 State Planning Policy 2017   |
| Regional planning  | Volume 3                                | Appendix K Land use and tenure        | Section 4.7 Regional plans   |
| <b>Environmental Assessment</b>                          |   |                                       |  |
| Flora and fauna  | Volume 2                                | Chapter 7 Flora and Fauna             | Sections 7.2-7.7   |
| Soils and geology  | Volume 2                                | Chapter 6 Geology and soils           | Section 6.3.2 Geology<br>Section 6.3.3 Landform features<br>Section 6.3.4 Soils<br>Section 6.4 Impact assessment and mitigation measures |
| Heritage   | Volume 2                                | Chapter 15 Cultural heritage          | Sections 15.2-15.5   |
| Native title   | Volume 2                                | Chapter 5 Land                        | Section 5.3.13 Native title  |
| Hazards  | Volume 2                                | Chapter 17 Hazards, health and safety | Sections 17.2-17.6   |
| Noise and vibration                                      | Volume 2                                | Chapter 11 Noise and vibration        | Sections 11.2-11.6   |
| Air quality  | Volume 2                                | Chapter 10 Air and greenhouse gas     | Sections 10.2-10.6   |
| Visual amenity   | Volume 3                                | Appendix O Visual amenity             |  |



| Infrastructure Designation<br>(Environmental Assessment) | Cross reference to CopperString 2.0 EIS |  |   |
|--|---|--|---|
|  | Volume                                  | Chapter / Appendix Number                  | Section   |
| Construction impacts                                     | Volume 2                                | Chapter 2 Project description              | Section 2.1.13 Construction Activities                |
| <b>Consultation</b>                                      |   |  |   |
| Stakeholders   | Volume 2                                | Chapter 14 Social                          | Section 14.2.5 Stakeholder consultation               |
| Community engagement plan                                | Volume 3                                | Appendix Z Social impact assessment        | Section 8.4 Community and stakeholder engagement plan |
| Initial consultation                                     | Volume 3                                | Appendix C Public consultation report      |   |
| <b>Conclusion</b>  |   |  |   |
| Conclusion   | Volume 2                                | Chapter 22 Conclusions and recommendations |   |

