

# HumeLink Environmental Impact Statement

## EIS Guide

AUGUST 2023

### What is the HumeLink project and why is it needed?

HumeLink is one of Australia's largest energy infrastructure projects connecting renewable energy sources to the grid, increasing availability and market competition and helping to put downward pressure on energy prices in Australia.

The project will consist of 360 kilometres of 500 kV overhead transmission lines connecting substations at Wagga Wagga, Bannaby and Maragle.

HumeLink is critical to bringing more affordable, reliable and renewable energy to the grid and is a priority project for the Australian Energy Market Operator (AEMO) and the Commonwealth and NSW Governments. HumeLink is subject to the approval of the Australian Energy Regulator.

To view HumeLink's interactive route map go to <https://www.transgrid.com.au/projects-innovation/humelink>.

## The Environmental Regulatory Process

As a Critical State Significant Infrastructure (CSSI) project, the HumeLink project must go through a comprehensive Commonwealth and State environmental assessment process. This acknowledges that CSSI projects are large and complex, and can have major economic, environmental, and social impacts. It also ensures the community has the opportunity to have their say on the HumeLink project before any final decision is made.

### Commonwealth and State government approval required

The *NSW Environmental Planning and Assessment Act 1979* (EP&A Act) and *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) form the statutory framework for environmental assessment and planning approval in NSW. As part of the planning approval process for HumeLink, the project is required to prepare an Environmental Impact Statement (EIS). The purpose of the EIS is to identify and assess the potential environmental, economic, and social impacts of the project to help government agencies, relevant authorities, community and stakeholders make an informed decision or provide an informed submission on the merits of the project.

Under a bilateral agreement between the State and Commonwealth, the EIS will satisfy the assessment requirement of both levels of government for HumeLink. The Australian Department of Climate Change, Energy, the Environment and Water (DCCEEW) will examine potential impacts of the project for Matters of National Environmental Significance (MNES).

### The bilateral agreement

The bilateral agreement was established to strengthen cooperation between the Commonwealth and NSW Governments and reduce duplication during certain environmental impact assessment processes. This approach is standard practice for major infrastructure projects which are declared CSSI.

The HumeLink EIS will be assessed by the NSW Government and then sent to the Commonwealth Government for assessment.

# The approval pathway

The EIS:

- details the specialist studies carried out to determine the potential impacts of the project including environmental, economic and social considerations
- sets out proposed management measures to avoid or minimise those impacts
- summarises engagement undertaken
- helps government agencies, relevant authorities, community and stakeholders make an informed submission on the merits of the project.

The first step in the regulatory process required a preliminary assessment of HumeLink’s potential

environmental impacts. This Scoping Report was submitted to the DPE in February 2022, and the DPE subsequently issued the project’s Secretary’s Environmental Assessment Requirements (SEARs). The SEARs set out the matters that must be investigated as part of the EIS and provided the basis of the requirements, including the specialist studies that must be conducted to inform the EIS.

A total of 19 specialist studies were required to identify potential impacts from the HumeLink project, and to propose measures to avoid or mitigate those impacts. A summary of each specialist study is provided on pages 4–7.

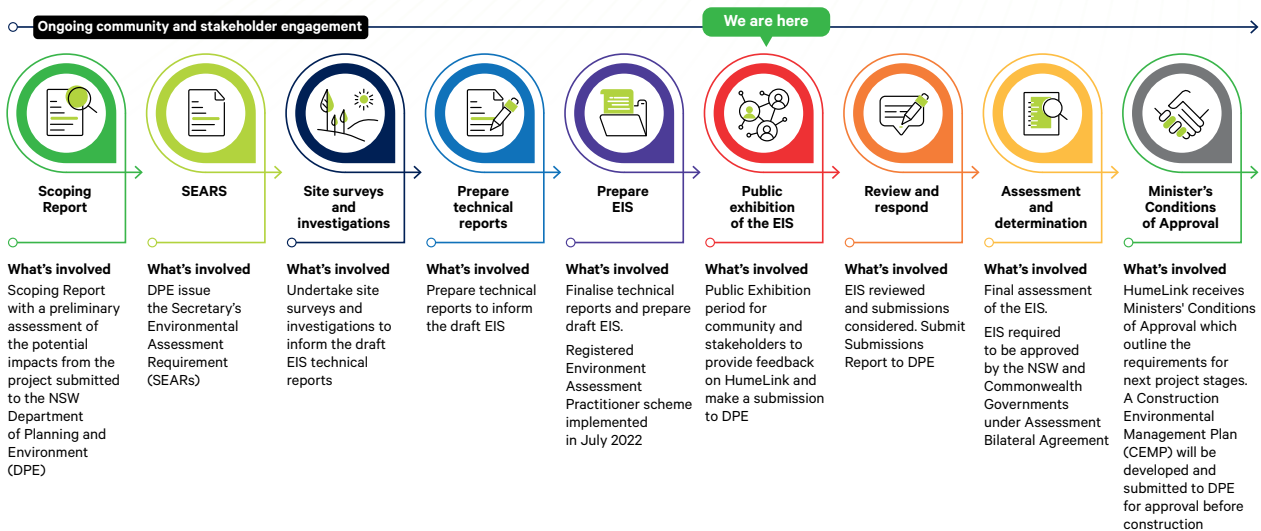
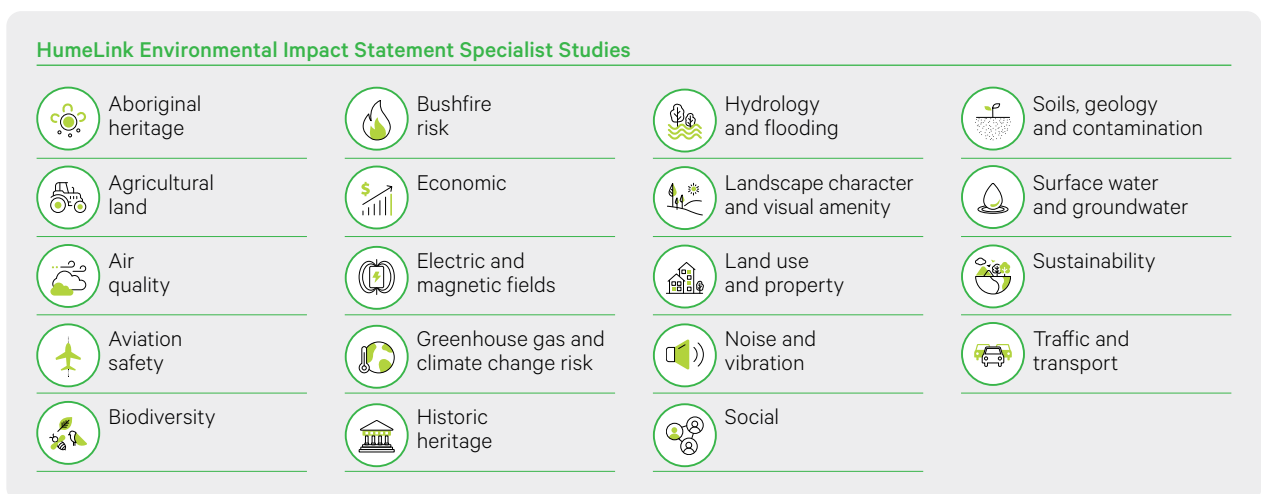


Figure 1: HumeLink EIS Planning Pathway.



Pictured: HumeLink Environmental Impact Statement Specialist Studies.

## Public exhibition

The EIS exhibition period provides the community an opportunity to read the EIS document, seek clarification and provide feedback directly to the DPE.

The EIS exhibition process is run by the DPE and submissions are made directly to the Department during the exhibition period. The DPE determines the time period that the EIS must be placed on public exhibition.

During the EIS exhibition period you will be able to provide feedback on the EIS directly to the DPE. The collective sentiment of the submissions received are used to guide the final determination, as well as any approval conditions for the project.

**View the EIS and specialist studies online via the DPE Major Projects Planning Portal or in-person at selected council libraries.**

## Project determination / approval

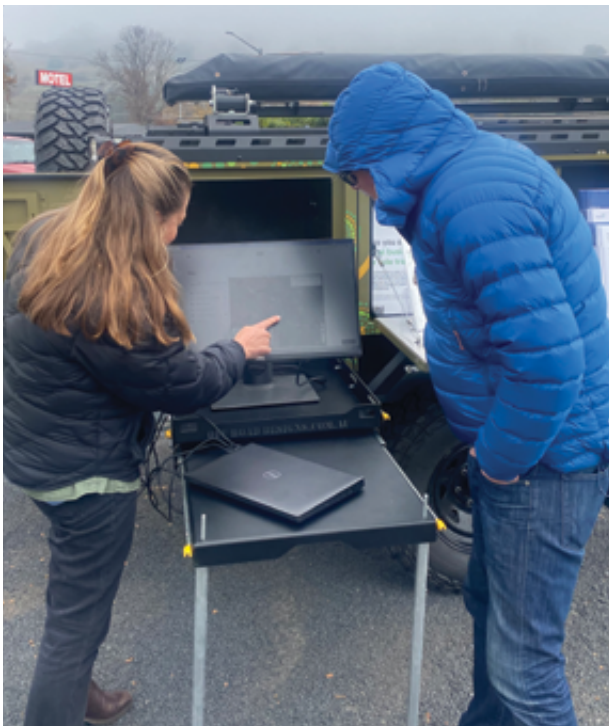
At the conclusion of the exhibition period, all submissions will be posted on the DPE's website. A summary report with responses will be developed by Transgrid and posted on the DPE's website for public viewing.

Following this, a final assessment of the EIS including feedback will be undertaken by the DPE and a determination made. If approval is granted, a report outlining Conditions of Approval for the next stage of the project will be given by the NSW Minister for Planning and Public Spaces.

## Next steps (pending NSW Government approval)

Once the Minister has made a decision, the Australian Department of Climate Change, Energy, the Environment and Water (DCCEEW) reviews the determination and makes a decision about whether to approve the proposal along with any conditions of approval.

Subject to the NSW and Commonwealth Government planning approvals, construction of HumeLink would commence in late 2024 and be completed by mid 2026.



**Pictured:** HumeLink project team at recent community information sessions.

# EIS specialist studies

The HumeLink EIS is informed by specialist studies that identify the potential impacts to the environment and communities and propose measures to avoid or mitigate those impacts. Impacts are considered at construction and operation.

If you would like to find out more on specialist studies, such as, what was assessed, what the study told us and the proposed management measures for each study you can find this information within our fact sheets. For an in-depth review, full specialist reports are available online via the digital EIS and in person during the public exhibition period.

An overview of each specialist study and links to where you can find more information is provided below.

[View all specialist study fact sheets on the HumeLink website](#)



## Aboriginal heritage

Transgrid acknowledges Wiradjuri, Ngarigo, Wolgalu and Ngunnawal peoples as the Traditional Custodians of the Country where the HumeLink project corridor traverses.

The Aboriginal Cultural Heritage Assessment Report (ACHAR) assessed potential impacts on Aboriginal heritage within the study area and provided mitigation strategies to address these impacts.

In addition to the ACHAR, a Cultural Values Assessment (CVA) report was undertaken. The CVA sought to further understand the potential impacts to Aboriginal cultural values, with a particular focus on intangible cultural values.

*Additional information can be found in Chapter 9 of the EIS and [Aboriginal Heritage](#) fact sheet.*



## Agricultural land

The Agricultural Impact Assessment assessed the potential impacts on agricultural operations, livestock and machinery movements, crop production activities, and irrigation and biosecurity risks from the construction and operation of the project.

Construction and operation stages of the project will have similar impacts on agricultural land. Construction impacts will be generally temporary, while operational impacts will be permanent. Mitigation measures to minimise agricultural impacts include the development and implementation of Property Management Plans (PMPs) for directly impacted landowners.

*Additional information can be found in Chapter 11 of the EIS and [Agricultural Impact Assessment](#) fact sheet.*



## Air quality

The Air Quality Impact Assessment assessed potential impacts on air quality during construction and operation. Measures to reduce these impacts were also considered.

*Additional information can be found in Chapter 21 of the EIS and [Air Quality](#) fact sheet.*



## Aviation safety

The Aviation Safety Assessment was undertaken to determine potential aviation impacts that may occur as a result of the project and provide mitigation strategies to address them.

*Additional information can be found in Chapter 19 of the EIS and [Aviation safety](#) fact sheet.*



## Biodiversity

The Biodiversity Impact Assessment evaluated the potential impacts to biodiversity from construction and operation. The identified biodiversity impacts have been categorised into direct impacts including land that would be temporarily or permanently cleared for construction, operation and maintenance, and indirect impacts which are areas impacted by noise, dust, light or the potential transport of weeds.

During detailed design and construction planning, biodiversity impacts will be avoided where practicable with priority given to avoiding recorded threatened species and their habitat.

*Additional information can be found in Chapter 8 of the EIS and [Biodiversity](#) fact sheet.*



## Economic

The Economic Impact Assessment evaluated the potential economic impacts and benefits of the project. The assessment included proposed mitigation measures to minimise identified impacts and capitalise on benefits and opportunities.

*Additional information can be found in Chapter 12 of the EIS and [Economic Impact Assessment](#) fact sheet.*



## Electronic and magnetic fields

An EMF study was undertaken as part of the HumeLink concept design development. The EMF study involved assessing the anticipated EMF levels for the proposed transmission line and substations against the relevant criteria for magnetic and electric fields.

*Additional information can be found in Chapter 19 of the EIS and [Electric and Magnetic Fields](#) fact sheet.*



## Greenhouse gas and climate change risk

The assessment evaluated potential impacts from greenhouse gas (GHG) emissions during construction and operation of the project.

*Additional information can be found in Chapter 22 of the EIS and [Greenhouse Gas Assessment](#) fact sheet.*



## Non-Aboriginal heritage

The Historic Heritage Impact Assessment was completed to evaluate the project's potential impact on non-Aboriginal heritage.

*Additional information can be found in Chapter 10 of the EIS and [Non-Aboriginal Heritage Impact Assessment](#) fact sheet.*



## Hydrology and flooding

The Hydrology and Flooding Impact Assessment considered relevant state legislation, policies, and guidelines, assessed potential impacts on hydrology and flooding and proposed mitigation and management measures that may reduce potential impacts.

*Additional information can be found in Chapter 18 of the EIS and [Hydrology and Flooding Impact Assessment](#) fact sheet.*



## Landscape character and visual amenity

The Landscape Character and Visual Impact Assessment (LCVIA) evaluated potential changes to visual amenity as a result of the project's construction and operation.

This assessment includes evaluating the potential visual impacts of the project on surrounding residences, scenic or significant vistas, night lighting, air traffic and road corridors in the public domain. The assessment includes proposed mitigation measures that may reduce potential impacts.

*Additional information can be found in Chapter 14 of the EIS and [Landscape Character and Visual Impact Assessment \(LCVIA\)](#) fact sheet.*



**Example of a photomontage:** View from Snowy Mountains Highway.



## Land use and property

The Land Use and Property Impact Assessment evaluated the potential impacts on land use and property from the construction and operation of the project. The assessment also included proposed measures to manage and mitigate identified impacts.

*Additional information can be found in Chapter 11 of the EIS and [Land Use and Property Impact Assessment](#) fact sheet.*



## Noise and vibration

The Noise and Vibration Impact Assessment was undertaken to assess possible impacts from noise and vibration during the project's construction and operation.

The assessment includes measuring noise levels in different areas before construction starts to establish background noise level, and analysing activities that are likely to generate noise and vibration during construction and operation. Where the work is expected to be much louder than the background noise the team considers ways to reduce the impact of this noise and vibration.

*Additional information can be found in Chapter 15 of the EIS and [Noise and Vibration Impact Assessment](#) fact sheet.*



## Social

The Social Impact Assessment (SIA) evaluated the potential social impacts of the project during construction and operation. Impacts assessed included potential changes to way of life, community, accessibility, culture, health and wellbeing. Potential social impacts were grouped into the categories identified in the SIA Guideline.

Management and mitigation measures to minimise the identified impacts were also proposed, including the commitment to continue work with local landowners to address potential negative social impacts. Individual Property Management Plans (PMPs) will also be developed during the property acquisition and compensation process.

*Additional information can be found in Chapter 13 of the EIS and [Social Impact Assessment](#) fact sheet.*



## Soils, geology and contamination

A Soils, Geology and Contamination Impact Assessment was undertaken to identify past and present activities that have the potential to cause soil contamination.

*Additional information can be found in Chapter 16 of the EIS and [Soils, Contamination and Geology Assessment](#) fact sheet.*



**Pictured:** Land use throughout the project footprint is predominantly for grazing, cropping and horticultural enterprises.



**Pictured:** Example of a 500 kV transmission tower.



## Surface water and groundwater

The Surface Water and Groundwater Quality Impact Assessment included a desktop review and field investigations to understand surface water and groundwater conditions within and surrounding the project footprint.

*Additional information can be found in Chapter 17 of the EIS and [Surface Water and Groundwater Impact Assessment](#) fact sheet.*



## Traffic and Transport

The Traffic and Transport Impact Assessment was undertaken to evaluate the potential traffic impacts during construction and operation. The assessment includes an overview of the existing transport network impacted by the project, the traffic likely to be generated by construction and operation, the expected impacts on the transport network and how we propose to manage these impacts.

During project construction and operation, traffic impacts, such as planned movements of construction traffic, will be regularly communicated with the relevant road and rail authorities, community and motorists, landowners and project stakeholders.

*Additional information can be found in Chapter 20 of the EIS and [Traffic and Transport Impact Assessment](#) fact sheet.*



## Bushfire

Transgrid commissioned a Bushfire Risk Assessment Report (BRAR) to identify and assess potential bushfire risks during construction and operation of HumeLink.

The BRAR identified and assessed the risk from bushfires to assets within the project footprint. Sections of the proposed transmission lines will be located in areas considered as Bush Fire Prone Land.

This assessment included:

- identifying specific bushfire survey areas
- carrying out a desktop assessment of bushfire risks to the project
- undertaking field investigations to assess existing vegetation, slope and access to bushfire survey areas
- assessing bushfire survey areas against the performance criteria
- identifying mitigation measures to be implemented during construction and operation to avoid or minimise bushfire risk.

*Additional information on can be found in Chapter 19 of the EIS and [Bushfire Risk Assessment](#) fact sheet.*

Additional studies detailed in the EIS include:

- Sustainability (Chapter 24)
- Waste (Chapter 23)
- Cumulative impacts (Chapter 25).



**Pictured:** A transformer being transported.

# How to make a submission

Local community members, councils, stakeholders, community groups and organisations are encouraged to view the EIS during the public exhibition period and to have their say by making a submission.

Once you have reviewed the EIS materials you will be able to provide feedback on the EIS directly to the DPE. Submissions can be made individually or as a group.

There are a range of ways you can have your say, including options to provide submissions both online or in hard copy. However, it is important to note the EIS exhibition process is run by the DPE and submissions must be sent directly to the Department during the exhibition period.

Submissions can be made online via the [NSW DPE Major Projects Planning Portal](https://www.planningportal.nsw.gov.au/major-projects) or provided directly to the DPE via Australia Post. Figure 2 outlines the EIS submission process.

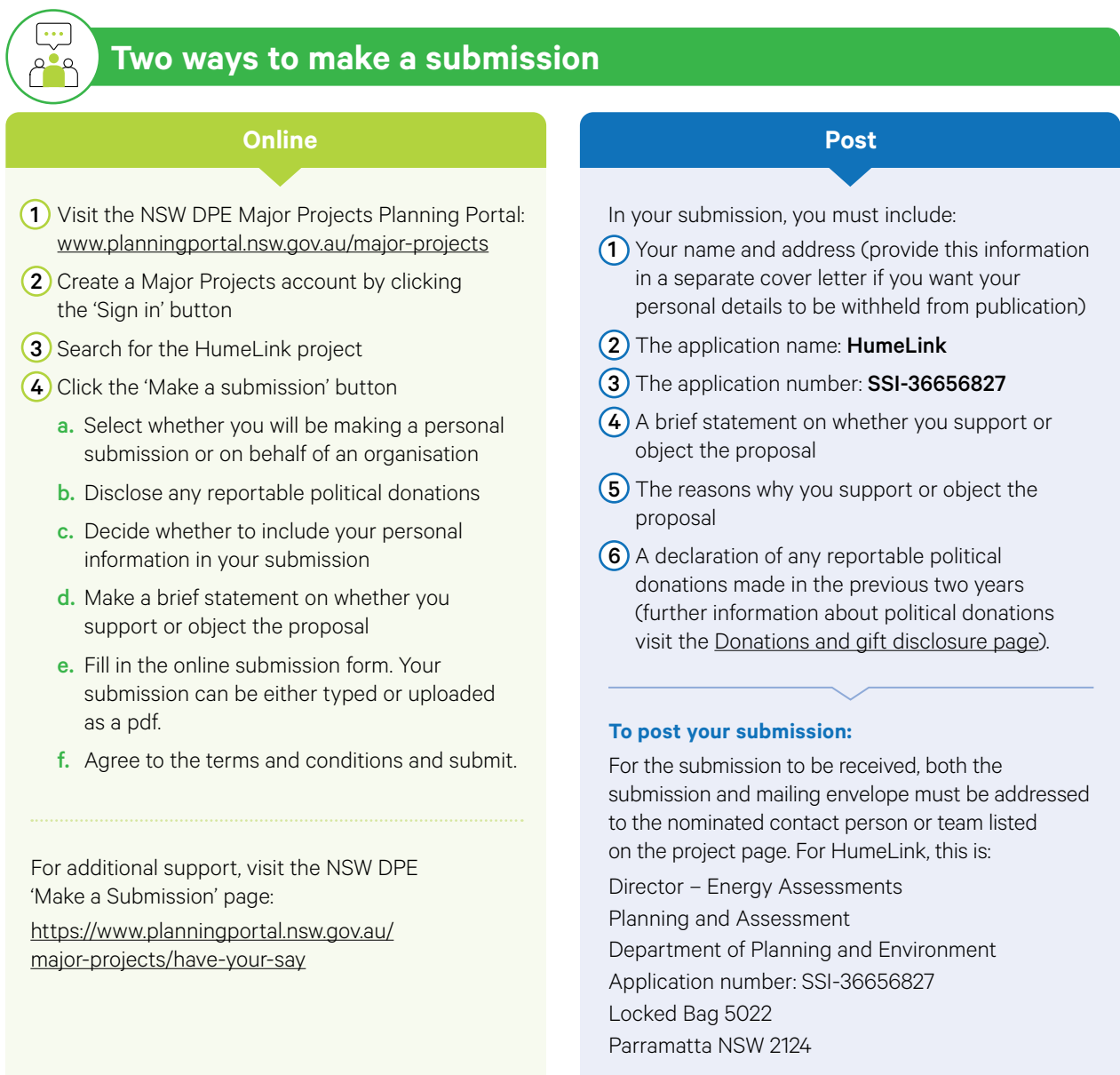


Figure 2: EIS Submission Process.



# Considerations when making a submission

As the EIS exhibition process is managed by the DPE, the HumeLink project team is unable to provide assistance with developing, writing or lodging submissions. To assist you to make a valid and informed submission on the project during the exhibition period please refer to our Submission Guide (Figure 3), which contains writing tips, submission criteria and guidelines for lodgement.

Submissions must be received by the DPE before close of the exhibition period. If you need any support on how to make a submission, visit the Make a Submission page on the DPE website [www.planningportal.nsw.gov.au/major-projects/have-your-say](http://www.planningportal.nsw.gov.au/major-projects/have-your-say) or call DPE on 02 8217 2022.

### Writing tips

-  A submission can be written in bullet points or full sentences
-  A submission can be written in plain-English and does not require technical expertise

### Submission criteria

-  A submission on the HumeLink project must include the Application number SSI-36656827
-  A group submission signed by one person is considered a single submission
-  A submission must include your full name and address. You can request to have your name withheld
-  Where relevant, provide reasons and/or supporting information for any conclusions made in the submission
-  A submission must be signed
-  If there is new information that should be considered, provide supporting documents
-  A submission must include a statement on whether you support, object, or are providing comments on the issues raised in the EIS
-  An effective submission considers the purpose of environmental impact assessment and refers to a relevant issue or key matter in the EIS
-  Submissions can be made by an individual or a group

### Lodging a submission

-  Submissions must be sent directly to the DPE. Transgrid cannot receive or send submissions to the DPE on behalf of submitters
-  An online submission requires an account to be created on the NSW Major Projects Planning Portal
-  Submissions must be received before midnight on the last day of the exhibition period
-  Online submissions must be made via the NSW Major Projects Planning Portal. Follow the step by step instructions on their website: [www.planning.nsw.gov.au/have-your-say](http://www.planning.nsw.gov.au/have-your-say)

Figure 3: EIS Submission Guide.

# EIS supporting resources

During the exhibition period a range of HumeLink project resources will be available for you to view. You can access these at scheduled online and in person events. All resources are also accessible in digital format for access at a time convenient to you. Figure 4 explains the different types of information available and where this information can be found, and provides guidance on the content of each suite of resources.

If you can't find the information you are looking for, reach out to our project team by phone on 1800 317 367 or email [humelink@transgrid.com.au](mailto:humelink@transgrid.com.au)

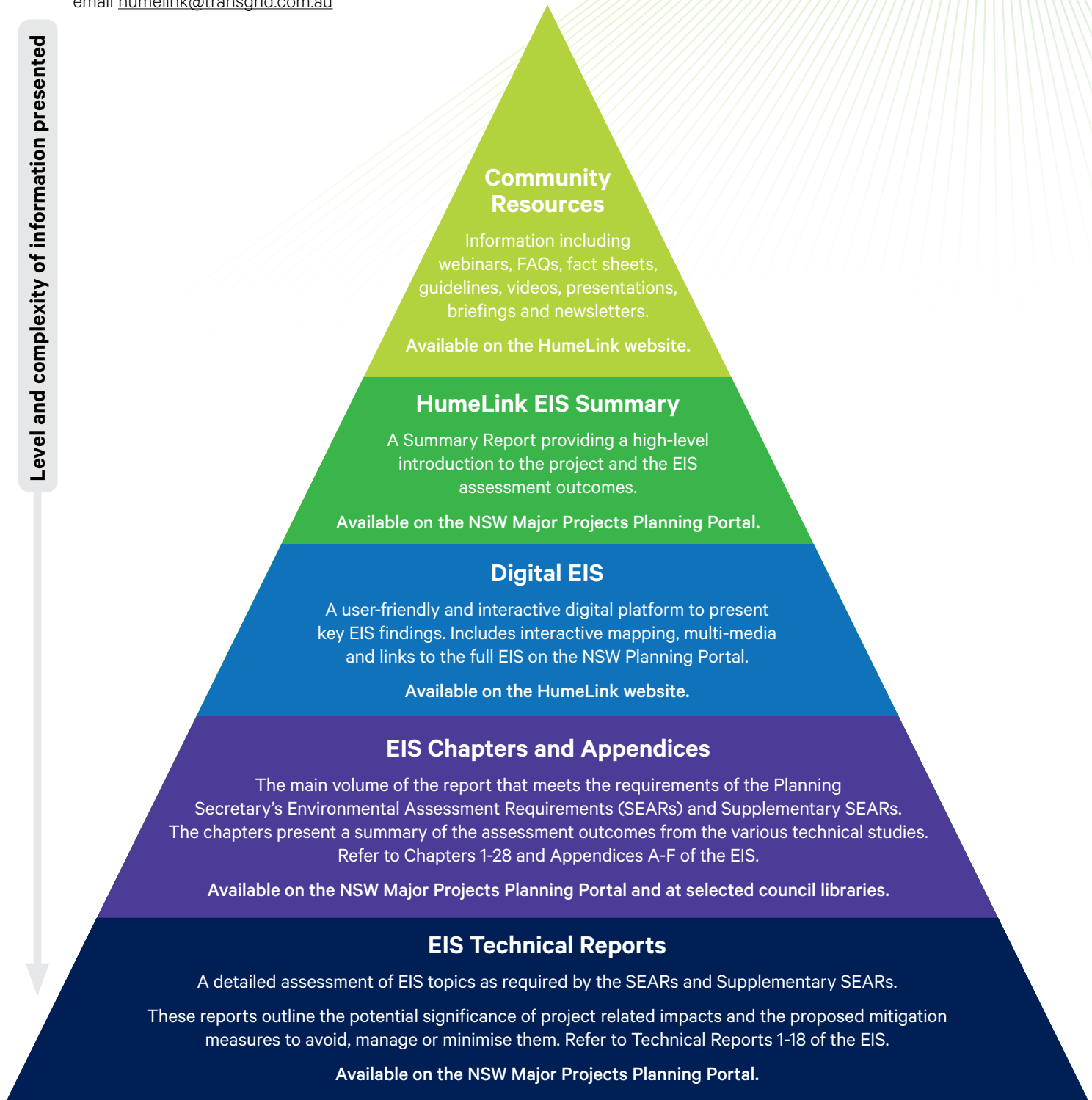


Figure 4: EIS information resources.

# Construction

Subject to the NSW and Commonwealth Government planning approvals, construction of HumeLink will be completed over a two-year period.

Preparation, assembly, erection, stringing and restoration will be done in parts (Figure 5). Each part may take up to a week to build, dependent on the topography and tower type.

## How are transmission towers constructed?

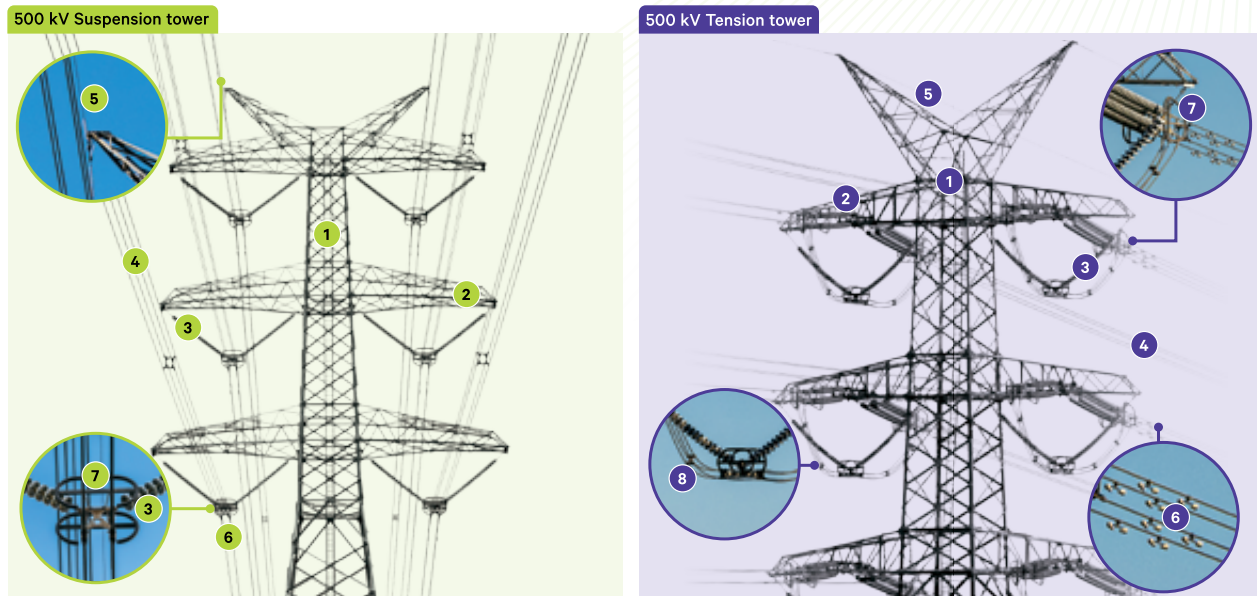


Figure 5: Transmission line construction process.

# Transmission line infrastructure

HumeLink will comprise approximately 850 freestanding steel lattice transmission towers that will support 360 kilometres of dual circuit 500 kV transmission lines (Figure 6). While the design of the towers will vary depending on the terrain, towers will typically range from 50 to 76 metres (maximum) in height. The distance, or span, between the towers will be approximately 300 to 600 metres.

## What makes up a transmission tower?



- 1 Tower body** is the main central structure that connects to the foundations.
- 2 Cross arms** also known as wings, are the sections that extend outward from the main body and hold the conductors.
- 3 Insulators** connect the conductors to the cross arms. They stop the electricity from finding a path to ground, and prevent any movement from the conductors.
- 4 Transmission conductors** (also known as cables or wires) provide the channel the electricity flows through.
- 5 Earth wires** do not transmit electricity, but instead protect the line against lightning.
- 6 Vibration dampers** prevent damage to transmission lines and reduce the effects of vibration caused by wind and earth wires.
- 7 Corona rings** also known as 'grading rings' help provide a smooth surface around sharp edges, such as bolts and connection pins, and help reduce noise.
- 8 Jumpers** are unique to tension towers and connect one side of the line to the other to maintain electrical continuity.

Figure 6: 500 kV transmission tower design features.

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## Connect with us

Transgrid is committed to working with landowners and communities through the development of HumeLink. Please connect with us for more information.



1800 317 367 (free call)  
[humelink@transgrid.com.au](mailto:humelink@transgrid.com.au)  
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