

# Chapter 14

## Visual Amenity

## 14.0 Visual Amenity

A landscape and visual assessment was undertaken for the Project, and is provided in Appendix G Visual Amenity Technical Report. This chapter presents a summary of this assessment.

### 14.1 Existing Environment

#### 14.1.1 Methodology

There are no established, measurable thresholds of significance that exist for landscape or visual impacts. The significance of impact is therefore determined by considering the sensitivity of the landscape or visual receptor and the magnitude of change expected because of the proposed development. In accordance with the Guidance Note for Landscape and Visual Assessment (AILA, 2018) the following is defined.

- Sensitivity is defined as the capacity of a landscape or receptor to change without losing valued attributes.
- Magnitude is defined as the extent of change that will be experienced by receptors. This change can be adverse or beneficial. Factors that could be considered in assessing magnitude are: the proportion of the view/landscape affected; extent of the area over which the change occurs; the size and scale of the change; the rate and duration of the change; the level of contrast and compatibility.

#### 14.1.2 Settlement and infrastructure

The Project area lies in a predominantly rural area comprising isolated farmsteads, rural rangelands used predominantly for cattle grazing, and areas of forested and natural landscapes. The area around the corridor is sparsely settled.

The 'Great Inland Way' from Sydney to Cairns which passes along and through Conjuboy (via The Gregory Highway and Kennedy Developmental Road) is nominated and promoted as a Tourist Drive ('Great Queensland Drives') by the Outback Queensland Tourism Association (OQTA).

#### 14.1.3 Landform, hydrology and rural land use

Landform within the Project area and wider landscape is varied. In the east lies the elevated Seaview Range. The Mount Fox crater (810 m AHD) forms a prominent landmark at the eastern end of the Project area. Travelling westwards, the transmission line Draft Alignment passes north of Mount Claro, south of Mount Jimmy (579 m AHD), then crosses the Pelican Range near Ironstone Mountain (636 m AHD) east of Greenvale. From here the topography is less pronounced – typically at around 470 m AHD. It then crosses the Great Dividing Range in the centre of the Project area close to Conjuboy, where it passes to the south of Mount Esk (726 m AHD). The route continues westwards south of Ironstone Knobs (656 m AHD) with both Draft Alignment A and Draft Alignment B terminating near Kidston, close to Paddys Knob (608 m AHD).

The main watercourse in the east of the Project area is the Burdekin River. Two significant tributaries join the Burdekin - Gray Creek located near Greenvale and Douglas Creek in the east near Mount Fox. In the centre of the Project area the main river is the Einasleigh River which converges with Lee McKinnons Creek near Conjuboy. The western part of the Draft Alignment crosses the Copperfield River close to Kidston.

Existing land use within and adjacent to the Project area is predominantly rural, characterised by grazing properties for livestock production (predominantly beef cattle). Queensland Globe identifies predominantly low pasture production (less than 1500 kg/ha) across the Project area with localised areas of medium and high pasture production (up to 3500 kg/ha) associated with the Burdekin River valley.

#### 14.1.4 Landscape character types

Four basic existing and emerging landscape character types (LCT) have been identified within the Project area.

- Type A: Transitional Landscape (LCT A)  
This landscape lies in the west of the Project area. It comprises a large area associated with the Kidston Renewable Energy Hub.
- Type B: Rural River Valleys and Plains (LCT B)  
This landscape type applies to a network of watercourses that traverse the whole of the Project area at regular intervals.
- Type C: Rural Rangelands (LCT C)  
This landscape type occurs across most of the Project area typically occupying the land lying between the Rural River Valleys and Plains (LCT B) and the more undulating and elevated wooded and forested landscape (of LCT D).
- Type D: Forested and Wooded Uplands (LCT D)  
This landscape lies in distinct areas across the Project area defined by elevated topography, steeper slopes and the presence of woodlands and forests.

#### 14.1.5 Visual receptors

There are currently very few residents living in this rural area. Viewers (visual receptors) who may experience views of the Project are likely to include the following.

- Residents including those living in rural settlements (such as the nearby rural village of Greenvale) and those living on rural properties in the farmland surrounding the Project area (including houses, homesteads and cottages) as well as 'weekender' properties such as at the old tin mine off Lava Plains – Mt Fox Road.
- People working in the countryside including farmers.
- Recreational users walking in the landscape including those visiting Girringun National Park (Mount Fox section).
- Recreational users using the local river systems for kayaking/canoeing, noting that many rivers are only navigable during the wet season.
- Tourists passing through the Project area by vehicle, including 'The 'Great Inland Way' tourist drive, which passes through Greenvale (as described previously).
- Travellers using major and minor roads within the Project area.

Based on these visual receptors, ten representative viewpoints were assessed in detail to provide an indication of the potential visual impact of the Project:

- Viewpoint (VP) 1: Mount Fox, Girringun National Park looking southeast
- VP 2: Mount Fox Settlement, looking south-west
- VP 3: View from Kangaroo Hills Road near Lava Plains Road, looking south
- VP 4: View from Greenvale settlement, looking northeast
- VP 5: View from Gregory Developmental Road, looking north
- VP 6: View from Gregory Developmental Road, looking northwest
- VP 7: View from Gregory Developmental Road, looking southeast
- VP 8: View from Kennedy Developmental Road, looking south
- VP 9: View from Kennedy Developmental Road, looking northeast
- VP 10: View from Kennedy Developmental Road, looking south-west.

## 14.2 Potential Impacts

### 14.2.1 Landscape amenity

An evaluation of the overall potential impacts on landscape amenity was based on the sensitivity of the existing landscape to change and the magnitude of change that is likely to occur (Table 14-1). The assessment determined that the Project would not have a significant impact on any of the landscape character types in the area.

**Table 14-1 Landscape assessment summary**

Landscape Character Type	Sensitivity	Magnitude	Significance
Type A: Transitional Landscape	Negligible	Low	Minor to negligible (Not Significant)
Type B: Rural River Valleys and Plains	Low	Low	Minor (Not Significant)
Type C: Rural Rangelands	Low	Low	Minor (Not Significant)
Type D: Forested and Wooded Uplands	Medium	Low	Minor to moderate (Not Significant)

### 14.2.2 Visual amenity

The likely visual impact of the transmission line anticipated during the operation of the Project was assessed for each viewpoint (Table 14-2). Construction visual impacts were considered to be temporary and, therefore, considered to be of lower significance.

The potential impact of the Mount Fox and Copperfield River substations on visual amenity were also considered. However, these are located in remote locations accessible only via unsealed roads used by few people. There is only one residential property lying close to the Mount Fox substation, which is over 1.4 km away with intervening woodland. Similarly, the Copperfield River substation is located around 4.7 km from the nearest residence so is not expected to have a significant impact on visual amenity.

**Table 14-2 Visual impact assessment summary**

Viewpoint	Sensitivity	Magnitude	Significance
VP 1: Mount Fox, Girringun National Park looking southeast	High	Medium	Moderate to Major (Significant)
VP 2: Mount Fox Settlement, looking southwest	Medium	Negligible	Minor (Not Significant)
VP 3: View from Kangaroo Hills Road near Lava Plains Road, looking south	Low	Medium	Minor to Moderate (Not Significant)
VP 4: View from Greenvale settlement, looking northeast	Medium	No Impact	No Impact (Not Significant)
VP 5: View from Gregory Developmental Road, looking north	Low	Negligible	Negligible to Minor (Not Significant)
VP 6: View from Gregory Developmental Road, looking northwest	Low	Medium	Moderate (Not Significant)
VP 7: View from Gregory Developmental	Low	Negligible	Negligible

Viewpoint	Sensitivity	Magnitude	Significance
Road, looking southeast			(Not Significant)
VP 8: View from Kennedy Developmental Road, looking south	Medium	No Impact	No Impact (Not Significant)
VP 9: View from Kennedy Developmental Road, looking northeast	Low	Low	Minor (Not Significant)
VP 10: View from Kennedy Developmental Road, looking south-west	Low	Medium	Minor to Moderate (Not Significant)

The visual impact assessment identified one potentially significant impact at VP1. The high sensitivity of the viewpoint was allocated due to the high sensitivity of viewers (e.g. tourists, visitors and nearby residents) and its classification as National Park. The assessment concluded that the structures will form a visible but not defining element of the view. There would be a noticeable change due to the close proximity of this scenic viewpoint to the proposed transmission line. However, whilst the structures will be evident, it was determined that they will not change the fundamental visual character of the landscape and will 'blend' with the existing view to a considerable extent introducing another simple and repetitive element into this large-scale landscape.

### 14.3 Mitigation and Management Measures

During the corridor selection process, the visual impact on the surrounding visual receptors were considered. The preliminary alignment in the Corridor Selection Report was positioned as far as practicable away from visual receptors and took advantage of screening by existing vegetation and topography where possible (Powerlink, 2017). However, due to the size of typical structures, which, at around 50 m, are taller than mature trees, it is not possible to fully 'screen' or 'hide' the transmission structures or associated infrastructure within the landscape. The measures outlined in Table 14-3 could assist in providing a more harmonious appearance to the Project overall, particularly when viewed from sensitive viewing locations or in relation to those views experienced from residential properties lying close to the Project.

Table 14-3 Description of measures to minimise landscape and visual effects

Mitigation Category	Measure
Facilities siting and design – detailed design	<ul style="list-style-type: none"> <li>• Transmission towers will generally be located at least 450 m apart over generally flat terrain, except where longer spans are required to avoid particular areas (such as cropping land or important vegetation). Through the detailed design phase, transmission towers are to be located to minimise tree and other vegetation removal where practicable. It is acknowledged that there will be more flexibility in the detailed siting of suspension towers (i.e. towers where the line is travelling in a straight line) whereas tension structures (i.e. angle structures) are relatively fixed.</li> <li>• To the greatest extent possible, seek to avoid tower placement in locations that are potentially visually prominent from residences and public viewing points on local roads, including the 'Great Inland Way' Tourist Drive.</li> <li>• Consider increases to tower heights to permit retention of any identified visually important vegetation communities and/or to span identified watercourses.</li> <li>• Site structures carefully where they cross river corridors, in particular aim to minimise disturbance of existing visually-significant vegetation through these zones to the greatest extent possible.</li> <li>• The natural line of the landscape will be used wherever practicable to reduce visibility and assist integration of the Project infrastructure.</li> </ul>
Landscape strategy to hide/screen the substation and other elements	<ul style="list-style-type: none"> <li>• During the detailed design of the Project, landscape elements (landform, vegetation, hard elements as appropriate) that will interrupt sightlines from sensitive vantage points may be considered where a significant visual impact is identified; and particularly where nearby residences are likely to be affected (following consultation with landowners).</li> <li>• Attention is to be given to the design of towers that lie immediately adjacent to the 'Great Inland Way' Tourist Route.</li> <li>• Retain existing vegetation, where possible, around the corridor or associated with roads and properties near the corridor to the greatest extent compatible with safety.</li> </ul>
Construction management and rehabilitation	<ul style="list-style-type: none"> <li>• A construction environmental management plan will be developed that includes measures that seek to manage vegetation, dust, waste and other elements that have the potential to impact landscape and/or visual amenity (Appendix I Environmental Management Plans).</li> </ul>