14 VISUAL AMENITY

Chapter 13 describes the existing landscape features, panoramas and views throughout the Pipeline Component of the Queensland Curtis LNG (QCLNG) Project that have, or could be expected to have, value or significance to the community, whether locally, regionally, state-wide, nationally or internationally.

A detailed assessment of the impact to visual amenity was conducted and is provided in *Appendix 4.5*. This chapter provides a summary of these findings.

14.1 PROJECT ENVIRONMENTAL OBJECTIVE

The Project's environmental objective for visual amenity is to preserve the visual amenity of the landscape as far as practicable.

14.2 METHODOLOGY

A four-step process was used to assess the potential visual impacts of the Pipeline Component:

1. describe the visual characteristics of the pipelines
2. define the viewshed pertinent to assessing landscape and visual impact
3. identify the landscape units within the viewshed
4. assess the landscape and visual impacts from publically accessible viewpoints.

The visual impact of a development is defined as a function of the magnitude of change to a landscape unit's existing character and the sensitivity of the observer at each viewpoint. The magnitude of change is influenced by:

- location of the proposed development in the view
- compatibility of the development with the surrounding landscape
- duration of impacts in the construction and operation phases
- scale of the development
- reversibility of the change
- potential blockage of view.

The sensitivity or quality of the viewpoint is influenced by:

- the distance to the development
- the number of observers present to see the development (i.e. whether the viewpoint has one observer or many observers)
- whether the observer has a permanent or temporary view of the magnitude of change (i.e. from a living-room window or a passing car)
- whether the observer has alternative views in other directions.

Bearing in mind these parameters, the environmental significance was determined using the impact assessment methodology as described in *Volume 1, Chapter 3.*

14.3 VISUAL CHARACTERISTICS OF THE PIPELINES

The key visual characteristics of the pipelines fall into two categories:

- temporary changes associated with construction
- long-term changes associated with vegetation removal and the presence of above-ground infrastructure (refer to *Volume 2, Chapter 12).*

The construction stage has the potential for a high level of visual impact, due to the removal of vegetation and the presence of construction equipment and infrastructure.

For pipeline corridors (i.e. the Right-of-Way (RoW)), the visual impact associated with construction may also be more apparent from elevated viewing locations or across open areas with little or no intervening vegetation. This is because elevated viewing locations may be able to see longer sections of the RoW and the screening effect of vegetation is less apparent than when viewed from flatter or vegetated areas.

The location of the RoW will be more obvious where existing vegetation is removed prior to rehabilitation of the easement. The impact will diminish as rehabilitation works take effect. The RoW will always be more obvious in forested areas due to the loss of tall vegetation. Intersections with roads are normally less visible due to short interaction with the road easement.

14.4 DEFINITION OF THE VIEWSHED

The majority of the pipelines will be underground with only scraper stations, meter stations, mainline valves (MLVs) and marker posts being the key above-ground elements. When the in-line compressor is required on the Export Pipeline this will be the largest aboveground facility. However, the location for such a facility is yet to be determined. The potential visual impacts of a compressor unit of this size (i.e. similar to a field compression station (FCS)) have been assessed in the Gas Field section in *Volume 3, Chapter 15* and have not been reassessed in this chapter.

Therefore, there are limited above-ground components associated with the pipelines to which a potential viewshed can be assigned.

Due to the presence of vehicles, trucks and earthmoving equipment, the RoW may be visible during the construction phase. This will be a temporary visual impact on the landscape. However, there will also be a visual impact associated with the removal of existing vegetation in some areas of the proposed RoW.

For these reasons a nominal viewshed of 500 m to either side of the RoW was assigned to the pipeline construction stage. The assessment found that the visual impact of an in-line compressor station was unlikely to be greater than 1 km from its location and a suitable viewshed for assessment of 500 m could be reasonably applied to the RoW.

As discussed in *Volume 2, Chapter 12,* and *Volume 4, Chapter 3* the majority of the pipeline routes will be constructed through flat-to-gently undulating landscapes. There are short sections that are influenced by the Great Dividing Range in the south and the Calliope Range in the north.

The route selection process has endeavoured to avoid vegetation as far as practicable but the various routes intersect a number of forested patches as discussed in *Volume 4, Chapter 7*.

14.5 LANDSCAPE UNITS

Landscape units are based on areas with similar visual characteristics in terms of topography, geological features, soil, vegetation and land use. Landscape units used in the assessment were:

- Landscape Unit 1 (flat farmland) – the most common present within the pipeline routes
- Landscape Unit 2 (hilly farmland) – this unit is confined to those limited areas adjacent to the ranges
- Landscape Unit 3 (forested areas) – these occur primarily in state forests, parks and reserves
- Landscape Unit 4 (rural townships) – of which there is none within the Pipeline viewshed
- Landscape Unit 5 (Mangroves) – which only occur adjacent to The Narrows in the northern end of the Export Pipeline.

14.6 ASSESSMENT OF THE LANDSCAPE AND VISUAL IMPACTS

A field review of a number of locations within the viewshed was conducted to identify any impacts from the pipeline activities. Full details of this review are provided in *Appendix 4.5, Section 6.*

The assessment took into account the sensitivity of the various landscape units in relation to pipeline activities. Landscape sensitivity can be defined as the ability of a landscape to absorb visual change, and its visual influence thereof on the viewers.

While change is an integral part of any landscape, development and infrastructure are significantly different to the natural processes that occur in a landscape. The sensitivity of viewers to change in the previously described landscape units will depend upon a number of factors, such as location, the rarity of a particular landscape and the scenic qualities of a particular

landscape.

The majority of the area around the pipeline routes has been highly modified by agricultural and grazing activities and has a low sensitivity to pipeline construction activities. Areas with the potential for medium-to-high sensitivity to visual changes are forested and mangrove areas.

The assessment found that the major visual impact from the pipelines will be during construction due to the visual changes associated with vegetation clearing and transport movements occurring in the area. The only visual impacts during operation will be from scraper stations, meter stations, MLVs and marker posts. These latter items must be at distances such that they can be seen one from the other for safety requirements under Australian Standard 2885.

The impacts were assessed for their visual impact and it was determined that:

- The pipelines will be located in a landscape that has been extensively modified since European habitation. The landscape units in the viewshed are well represented across this area. Agricultural activity, associated structures and other signs of human intervention have also created a landscape that can absorb other changes.
- There will be no visual impact on townships and minimal visibility of the project from other settlements or residential dwellings in the area.
- The majority of the parks and reserves are covered by vegetation. Views from within these areas are limited to within these parks. The only visual impact will occur where pipelines or other proposed infrastructure is located adjacent to existing roads and tracks near or within these areas.
- There is minimal visibility from major roads. The Moonie, Warrego and Leichhardt Highways to the south as well as the Dawson and Bruce Highways to the north are the major roads within the region. Although there will be views from these highways, the overall impact is expected to be negligible due to the predominantly low landscape sensitivity and limited viewing opportunities afforded by topography and vegetation.
- There will be a visual impact on people using the minor roads within the locality. These run along and over proposed pipelines at various locations. Visibility from these minor roads, which have far fewer users than the highways and main roads, is sometimes restricted by roadside vegetation. It is considered that the visual impact will be minor-to-negligible from these locations partly as the viewer numbers are low, but also because this rural landscape can absorb further change.

The assessment found that overall there is a negligible impact on visual amenity for the areas within the viewshed associated with the development of the pipelines.

14.7 MITIGATION MEASURES

Landscape techniques cannot mitigate the visual impacts associated with the construction phase of the pipelines. However, construction management practices will maintain construction areas to the minimum required.

Because of the minimal visual impact to the surrounding landscape, it is considered that the proposed pipelines and above-ground components can be easily accommodated into the surrounding landscape. Where there are sensitive views, site landscaping, or revegetation and screen planting will reduce the visual impact of these locations.

It has been recommended that larger structures such as in-line compressor stations, if required, should:

- not be located in areas where views to the surrounding landscape do not already contain constructed elements. These elements include, but are not limited to, fences, stock-feeding equipment, water tanks, buildings, sheds and driveways. This will be taken into account when siting any future compressor stations
- be installed so that, the site layout and location allow for a landscape buffer to be extended to the perimeter of the sites
- be constructed of coloured materials or coatings darker than the surrounding grass and vegetation.

14.8 CONCLUSION

A visual amenity review was conducted to determine the impact of the Pipeline Component of the Queensland Curtis LNG (QCLNG) Project's impact on the regions it traverses. As Project infrastructure is generally low in height and scattered widely across a vegetated landscape, visual amenity is not expected to be impacted significantly.

A summary of the impacts associated with visual amenity outlined in this chapter is provided in *Table 4.14.1.*

Table 4.14.1 Summary of Impacts for Visual Amenity

Impact assessment criteria	Assessment outcome
Impact assessment	Negative
Impact type	Direct
Impact duration	Long term
Impact extent	Local
Impact likelihood	Unlikely

Overall assessment of impact significance: negligible, due to the low profile of the limited number of above-ground structures required for the Pipeline Component.