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5.1 INTRODUCTION

This chapter provides an assessment of the potential visual effects associated with the construction and operation of the rail component of the Project. This chapter discusses on and off-site visual amenity issues relating to the visibility of the rail alignment and operational activities such as transport movement that may have significant visual impacts. The assessment describes possible approaches to be taken by Waratah Coal to reduce visual impact issues, and provides management and mitigation measures that aim to protect the visual landscape character. The outcomes summarised in this chapter are part of an overall technical report which is provided in Volume 5, Appendix 8.

5.2 VISUAL LANDSCAPE CHARACTER

5.2.1 REGIONAL CONTEXT

The rail alignment passes through a range of landscape and vegetation types embracing the Capricorn Uplands (KP470 to KP175), the Dry Tropical Uplands (KP175 to KP48) and the Whitsunday Coast (KP48 to KP5). This 468km journey, has been divided in to these three sections to define the topographic and land use changes that occur between the mine and APSDA.

5.2.2 CAPRICORN UPLANDS – KP470 TO KP175

Capricorn Uplands region is mostly flat to low undulating grasslands, woodlands and forests. Limited mining activities occur in this region combined with various levels of grazing. Also present are several national parks, reserves and refuges.

In this section the corridor passes through predominantly rural land with flat to gently undulating topography. Due to the topography the rail will be visible to the largest geographical area but also the least inhabited area.

Cudmore National Park and the Narrien Range National Park are situated north of the proposed mine, and to the west and east of this section of rail. Both national park's lack formal visitor accommodation infrastructure and are noted as having limited visitor access.

Gregory Development Road (KP285), and Suttor Development Road (KP202), occur in this region and will be intersected by this project component. These roads are understood to be predominantly used by locals, tourists, and mine workers

Although the least inhabited area of the study, there are two homesteads within close proximity to the alignment and numerous properties within and just outside of the 2.5 km "mid-ground" boundary from the rail alignment. These homesteads, being of 'Surbiton' (Homestead 11), and 'Mirabilla' (Homestead 18), are within 1.5km and are only affected by the rail component of this project.

The small town of Mt Coolon (population 75) is located near to KP200 (9.2 km north west) and experiences almost no visual impact. This town has a long history with Gold mining and is part of the "Bowen Coalface Towns" along with Collinsville and Scottsville, which was recently listed by the Queensland Heritage Council with an aim to conserve it as a living museum and tourist attraction. The three towns are collectively marketed as a tourist experience.

5.2.3 DRY TROPICAL UPLANDS – KP175 TO KP48

The Dry Tropical Uplands region features undulating to mountainous grasslands and sparse forests. This basalt gorge country has a rural landscape character with mining interests within the area. This bioregion consists of a series of ranges, plateau, valleys, contains nature reserves and eight national parks.

As the rail alignment passes through both mountainous sites and nature reserves, it becomes open to views and potentially negative visual impacts from these sites. However, as many of the nature reserves are National or State Parks dedicated to fauna / flora protection they have limited visitation, reducing the magnitude of any visual impact.

The Bowen Developmental Road (KP168) occurs in this region and will experience visual impact through its intersection by this project component. This road is understood to be used by locals, tourists, and mine workers, and is in the process of being upgraded for greater use.

As the rail continues north, it passes the regional town of Collinsville (Population 2063) located approximately 12.0 km east at KP81, and the small mining town of Scottsville approximately 9 km south east of KP85 near Collinsville. The Bowen Consolidated Colliery mine is located between these towns and the proposed project component and was recently listed by the Queensland Heritage Council with an aim to conserve it as a living museum and tourist attraction.

There are 23 known homesteads in this region, but only one which will have a high visual impact from the alignment. The 'Homestead near to McGregor Peak' (Homestead 60) is nestled at the base of McGregor Peak, and would share its valley with the rail alignment, which would be situated approximately 300m west.

5.2.4 WHITSUNDAY COAST – KP48 TO KP5

The Whitsunday Coast region has a wet coastal landscape with forested hills, mountains and scenic offshore islands. This region possesses extensive natural areas with coastal towns and tourist developments.

The rail curves around Mt Roundback, before crossing the Bruce Highway and turning south east to the coal terminal component which is bisected by the North Coast Rail. In this area the rail will be seen by the greatest number of people especially from the Bruce Highway and North Coast Rail.

The Bruce Highway (KP5) is the main transport route between Brisbane to the north. It is used by tourists, locals and many transportation industries. The rail project component will intersect the Bruce Highway just north of the proposed Coal Terminal site.

This final section of rail has three homesteads, being the 'Homestead near to Mt Mackenzie' (Homestead 61), 'Salsbury Plains' (Homestead 45), and the 'Caley Valley' (Homestead 48), which will be visually effected by the rail alignment. Both 'Salsbury Plains' (Homestead 45), and 'Caley Valley' (Homestead 48) are located within the Abbot Point State Development Area with, 'Salsbury Plains' situated just off the proposed rail loop. The 'Homestead near to Mt Mackenzie' is located approximately 10km from the peak of Mount Mackenzie and within the 1.5km 'foreground' of the proposed rail alignment.

5.3 VISUAL IMPACTS

This section describes the possible visual landscape changes within the vicinity of the rail as a result of the project, and the potential impacts.

5.3.1 VIEW SHED

The visual sensitivity was calculated to highlight the areas around the rail alignment that can be seen from the corridor. View points were made along the alignment at a height of 5.1 m (combined locomotive and rail profile), looking to a level 1.6 m, (average eye-height), above the topography for every 1 km along the 470 km rail line. These view points were raised to 9m at the four grade-separated road crossings occurring at the Bruce Highway, Bowen Development Road, Suttor Development Road, and Gregory Development Road to account for the expected level of the bridge deck and vehicles.

View shed models were then created for each of the points and aggregated to give a total combined impression of the view shed. This assessment allowed areas to be categorised from high to incidental visual impact from the number of viewpoints seen along the alignment length, this translates as the amount of alignment that can be seen from the surrounding landscape. The viewing distance was limited to a distance of 50 km for the purposes of the study being the extent of the study corridor.

Due to the length of the rail and flat to undulating topography, making allowance for the curvature of the earth was considered. In assessing the view shed maps this data adjustment was not used, as it was found to incorrectly account for the existing topography and view heights.

5.2.4: Vista from Bruce Highway driving towards Bowen (and APSDA) with the small rise of Mount Carew left of the highway, image by Tract Consultants, 2011.

5.3.2 VISUAL SENSITIVITY

The rail component possesses the narrowest corridor of visual sensitivity. The majority of the alignment is expected to be visually insignificant as the rail for the majority of the time will be a low profile line that follows the topography with occasional vertical elements being signals, level crossings, road over-passes and bridges. These features are not expected to be highly visible and therefore have only a significant impact for those developments close to the line.

In the view shed models the following distances were used:

- Near-ground: locations within 0.5 km of the corridor;
- Foreground: locations between 0.5 km and 1.5 km from the corridor;
- Mid-ground: locations between 1.5 km and 2.5 km from the corridor;
- Background: locations between 2.5 km and 5 km from corridor; and
- Context: locations between 5 km and 50 km from corridor.

5.3.3 VISUAL IMPACT

The duration or size of a feature affects the visual sensitivity and perception of the viewer to the visual impact. In this case the feature most visible would be the rail where exposure could range from a single point of visibility, to spanning the whole visual field. The rail view shed for each point has been combined to yield the visual impact (Refer **Figure 1**, or **Volume 5, Appendix 8, Plan SA004-SA010** for larger plans). The number of points visible has also been considered in compiling the visual impact plan with the resulting impact being a combination of distance and quantity of points seen. As a maximum, the highest number of points along the rail that can be seen from any location along the corridor is 96 KP's representing 96 km of exposure. The magnitude of sensitivity although expressed as a single unit may be via multiple sightings.

The presence of trains will significantly increase the visual impact as a train will pass any point at a maximum frequency of 1 train every 22 minutes. Unless the observer is within the near to mid-ground of the rail component when a train passes there will be minimal visual impact, and the impact of this movement is deemed as low. With the increase in frequency to the 400Mtpa limit, trains will become a more permanent presence in the areas closest to the alignment due to the expansion to duel tracks, and resulting in the potential for more than one train to be seen at any one time.

Although the rail and train structures are the main project feature of this section, the landscape clearing necessary during construction is expected to be 100m which reduces during operation to 60-80m. This poses the greatest impact to the visual landscape.

5.3.4 VISUAL IMPACT ASSESSMENT

The rail alignment is 468 km in length and has considerable lengths visible to the landscape while avoiding most areas of development, residential and tourist facilities. It can be seen in the visual assessment modeling that the rail component of this project appears to follow a line of 'least resistance' through the landscape, weaving around the many hills, mountains and ranges along its route. Due to this alignment it is concluded that there will be minimal visual impact in its working state. Depending on the mitigation measures and strategies undertaken, the initial building phase of the rail could pose the most obvious visual impact.

The presence of the sensitive receptors of National Parks, Nature Reserves, Biological Research land and potential look-out points would suggest a detrimental visual impact along this route. However, as many of the nature reserves and National Parks are aimed at fauna/flora protection and access is limited, the visual exposure and therefore impact, is low to incidental.

It is expected that the major transport routes in the region, being the Bruce Highway and North Coast rail line will allow the rail alignment to be seen by the greatest number of people. The positioning of the rail loop and transfer facility between the Bruce Highway and North Coast Rail Line increases the impact to both these major transport routes. The high traffic speeds (100km/h) and low nature of the surrounding landscape could allow the rail-line to become part of the Highway / North Coast Rail experience. With sensitive handling such as community consultation, artworks, landscape treatments and thorough understanding of expectations for all users (tourists, locals, regional commuters and miners) this crossing has the potential to contribute character to the local area. Without sensitive handling, this crossing could become a negative impact on the visual landscape.

The Gregory, Suttor and Bowen Development Roads, which all cross the rail on over-passes, are deemed to have moderate visual impact, as the low to undulating topography would not be able to mask these features from surrounding views. Similar significant visual impacts will occur at the numerous road crossings, all of which are assumed as signalised level crossings. These points by necessity are required to be visible for safety but will heighten the visual impact of the rail line to road users.

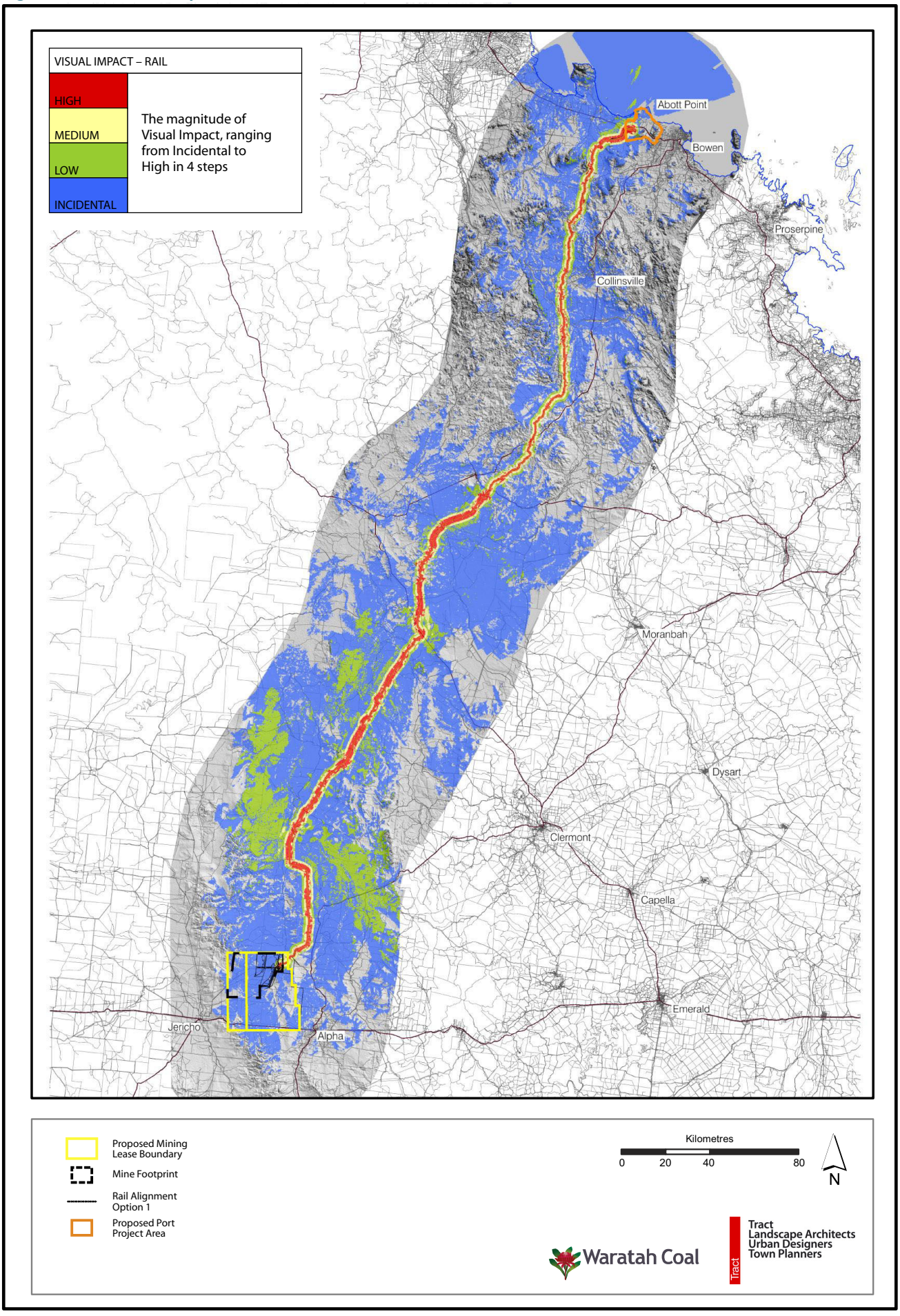
Some of the visual receptor towns along the rail have a visual character which is of significant historic and continuing association with the mining industry. The regional towns of Collinsville, Scottsville and Mt Coolon have all been recently added to the Queensland heritage register to be preserved as living museums as tourist attractions. Although the rail will have a low visual impact on these sites, they have been preserved for their mining character, and the living infrastructure of the rail could blend into the existing environments of these places.

Of the various homesteads found along the 470 km alignment, 22 will experience visual impact of low to high severity: Six of these, such as: 'Surbiton' (Homestead 11), 'Mirabilla' (Homestead 18), 'Salsbury Plains' (Homestead 45), the 'Homestead near to McGregor Peak' (Homestead 60), the 'Homestead near to Mt Mackenzie' (Homestead 61) and 'Caley Valley' (Homestead 48) will experience significantly high visual disruption (Refer Volume 5, Appendix 8, Plan SA004 and SA010). The various other homesteads found in the surrounding region are located in areas indicated as having incidental or no view of the rail. Although these properties will not be visually affected by the rail alignment, it is expected that many of these residents will experience the rail alignment as they move through their daily routine.

Trains will run 24 hours a day, 6 days a week, so lighting along the rail length and the guiding lights at the front of trains and lighting at level crossing sites, will pose a significant visual impact to this landscape during the evening and night. The potential for this component of the project to blend into its surrounds during the day is great; however, the lighting of the train at night would create a high impact to any point in the landscape.

In the short term (approximately three years), the visual impact of the temporary workers camps could prove significant. These sites are expected to occur at 100 km intervals along the rail, and accommodate 1,500 workers. Without clear mitigation measures, these camps could create a high visual impact on the visual character of the landscape for an extended period of time. These camps also pose a high impact with the night-lighting solutions used. Through the use of well-designed lighting and / or minimal ground lighting, these camps could have incidental impacts in the visual environment.

Figure 1. Rail visual impact assessment



5.4 MITIGATION AND MANAGEMENT

The management measures to be implemented for the rail alignment include:

- Where project effects topography, disruption needs to be minimal and where possible (rail camps) returned to the pre-existing at end of the project part to maintain visual character. Existing vegetation needs to be maintained where possible and added to in areas where visual buffering has been identified as needed;
- Planting buffers should be established and maintained prior to project component being built as standard practice over the entire development. In situations where visual receptors are found during construction, mitigation measures should be investigated for that place and buffered immediately. Buffer vegetation should be made-up of species mixes endemic to the site which have natural screening form. In situations where species do not have a natural screening form, massed planting of many species should be implemented. Due to the breadth of the potential impact, buffering will be most effective outside the corridor at the visual receptor points, such as homesteads;
- Grade separated crossings should include planting on batters to reduce the impact by buffering the height and creating a vegetated region at these crossings. The section of the Claremont Alpha Road which is parallel to the rail should have a vegetation buffer up to 1km wide on the rail side to reduce the impact and blend with existing vegetation corridors in the area;
- The rail alignment should be designed to cross the numerous level crossings of the minor roads at right angles and not aligned parallel to roads on approach;
- Vehicle wash-downs at rail camps should continue as standard practice to enter the rail alignment site to ensure weed species do not move across vegetation areas;
- The working rail corridor should be limited to the 80m (or less), and any clearing outside this width in development should be re-vegetated with existing plant species. Rail work camps should be located on existing cleared land, or quickly re-vegetated when no longer required;
- Access roads to project components should follow existing routes and revegetate road edges to maintain local area's character. All rail work camps should be located along existing roads;
- Best practice re-vegetation techniques need to be used to ensure the return of the visual landscape character in areas needing to be cleared;
- Site lighting for the rail and workers camps should be designed by a lighting expert to ensure that surrounding areas do not experience light pollution from the project components. Lighting should be task specific, include screening where possible, and kept to the minimum;
- Colour should be used on mine facilities to best blend into the horizon and existing landscape character. Non-reflective materials should be used in infrastructure to reduce glare impact;
- The beautification of the road over rail bridge for the Bruce Highway should be investigated to reduce the impact from community perceptions about this development; and
- Where all other mitigation measures fail to alleviate the visual impact, homesteads identified as having high visual exposure should be relocated to a less sensitive location further from the rail.

5.5 CONCLUSION

The 468 km length of the rail alignment will result in the perception of having a major visual impact on the landscape. However, this component of the project will for the majority, have low visual impact in the existing landscape due to its considerable length avoiding most areas of development. All areas close to the rail alignment (<1.5 km) will experience medium to high visual impact that would be difficult to buffer although for the majority of the length is sparsely populated limiting observers.

Sensitive receptors such as National Parks, Nature Reserves, and Biological Research land and look-out points were found to be restricted for visitation or at such a distance from the rail alignment that the impact was rendered insignificant.

Major transportation routes, such as the Bruce Highway and North Coast Rail will expose the rail alignment to the greatest number of people. These places, due to fast movement of the highway/rail traffic and visual dominance of the port project component, will have a lesser visual impact from the rail project component. The crossing under the Bruce Highway will also be less apparent if the alignment crosses at close to 90° angle. In locating the train loop between the North Coast Rail

line and Bruce Highway the visual impact in this area is increased and hard to buffer, and so creates high impact. Other roads existing along the rail alignment would have a moderate to high visual impact, although could be visually buffered to reduce detrimental views, providing that level crossing sight lines are guaranteed.

There is not expected to be any permanent lighting along the extent of the rail corridor, except for the lighting at the level crossing points, which would pose a low impact, and of the train lights which would prove a significant impact at visual receptors that have views overlooking the track.

It was found that the impacted towns of Collinsville, Scottsville and Mt Coolon, being historic mining towns would not be adversely affected by this project component and were considered to have a low to incidental impact.

Of the six homesteads found to be highly impacted by this project component, each would be severely affected, with the rail stretching across the entirety of their visual horizon, and in some cases, being just on the doorstep. Due to their proximity to the project, any buffering for these homesteads would be very difficult to implement. The further twenty homestead effected (Refer **Volume 5, Appendix 8, Table SA050**) with medium to low visual impact should be able to be visually buffered from the rail component. It should be noted that as this project is implemented, the potential for more homesteads found within the visual field is high.

The visual impact of the temporary workers camps could prove significant; however as these locations are undefined and are moveable; the actual impact cannot be assessed. To reduce visual impact for the long term these sites would need to be located in existing cleared areas, along existing roads and given strict site limits to ensure existing vegetation and geology remains visually intact.

5.6 COMMITMENTS

Waratah Coal commits to undertaking actions that will reduce potential impacts through a proactive rather than reactive approach to the visual landscape character and perceived visual amenity. Waratah Coal commits to the implementation of the following management measures:

- Topography changes will be minimal to maintain visual landscape character and existing vegetation will be maintained where possible. Endemic plant species mixes will be used to provide buffering and will be established pre-construction and maintained during project development to ensure effective screening by the commencement of operations;
- The most highly impacted of the homesteads will be buffered by extensive planting/mounding or both with consultation with their owners;
- Grade separated crossings will include planting on batters to create vegetated regions at these crossings. The Clermont Alpha Road will gain a 1km vegetation buffer between road and rail to maintain the visual landscape character of the area;
- The rail alignment will be designed to cross level crossings of minor roads at right angles and not be aligned parallel to roads on approach;
- Vehicle wash-downs at rail camps should continue as standard practice to enter the rail alignment site to ensure weed species do not move across vegetation areas;
- Vehicle wash-downs will continue as standard practice and wash-downs will be located at strategic points along the rail alignment and at all entry points from construction camps;
- The working rail corridor will be limited to the 80m (or less), and any clearing outside this width during development will be re-vegetated using 'best-practice' re-vegetation techniques. Rail work camps will be located along existing roads, and placed on existing cleared land, or in areas where quick re-vegetation may occur;
- Once a rail-camp is finished in an area, that area will be returned to the pre-use landscape character, or the naturally occurring local vegetation character;
- Site lighting for the rail and workers camps will be designed by a lighting expert to minimise light pollution and strict light-use management regimes shall be abided by all workers at these places;

- Colour and style of existing built form will be investigated and used in rail camps to best blend into the landscape character. Non-reflective materials will be used to reduce glare;
- The establishment of an interactive coal centre at APSDA / the beautification of the road over rail bridge for the Bruce Highway should be investigated to reduce the impact from community perceptions about this development; and
- Where all other mitigation measures fail to alleviate the visual impact, a separation of 1.5km between the rail and homesteads will be created by realignment of the rail or the relocation of the homesteads to areas of low to incidental impact.

5.7 ASSESSMENT METHOD DISCLAIMER

5.7.1 DESKTOP ASSESSMENT

The initial step in the assessment of visual quality was undertaken as a desktop study of the area. This included detailed assessment of aerial imagery and site photographs combined with topographic mapping data, which was then checked with a combined aerial and ground based observations under taken in early June 2011. This remote research based approach has been critical to the visual assessment of the study area and served to identify potentially sensitive visual receptors (or focal points) including:

- Gregory Development Road;
- The Bruce Highway;
- Collinsville and Scottsville; and
- Mt Coolon

This visual assessment of the site's character resulted from the analysis of electronic data, street directories, digital terrain models, preliminary electronic survey and site observations. This combination of research was intellectually analysed against a virtual 3Dimensional landscape (created using the Mapinfo computer program) to provide an accurate base for this assessment.

5.7.2 VIEW SHED MODEL

To establish a relevant base for this assessment a 3Dimensional model of the landscape was combined with elevated points representing the rail alignment set every kilometer along the route. This comprehensive site model was then analysed with MapInfo to create a series of view sheds for the rail at 1km intervals.

Each of the view shed models were calculated through an inferred 'see and be seen' methodology effectively reverting the observed to be the observer by calculating vistas from the project components. The elevation of the view point (project component) used was specific for each of the components based on an understanding of the specific machinery, stockpile or structure height, the observer was based on the elevation of the topography with an additional height of 1.6 m to represent the average eye level of the observer.

The view shed of the works was calculated by combining the individual view sheds for each of the project components to create visual assessment plans.

5.7.3 VISUAL CONSIDERATIONS

5.7.3.1 View Distance

The distance an observer/visual receptor is away from a project component, changes the visual impact due to that persons perception of distance. This is a result of the relative size and proportion of the observable field of view that the project component fills; this proportion increases the closer the observer is to the project.

The assessment corridor (50km from the project centre line) was divided into five distance zones representing near-ground, foreground, middle-ground, background and context views. These five zones were integrated with the view shed calculations, allowing observer distance to influence the visual impact assessment. This was then applied to the view shed modeling.

Effects of the curvature of the Earth on visual distance were not calculated into this visual assessment mapping. It should be noted that this factor influences views over 7km across flat land and sea.

5.7.3.1: View of Abbot Point Port facilities from Cape Upstart, this image provides an example of the effects of curvature of the earth and horizon line. The observer (camera) is at sea level with the port facility over 7km away, resulting in the base of the object not being visible.

5.7.3.2 Visual Sensitivity

Visual Sensitivity is a combination of factors that affect how a site may be impacted by a view to a project component. This sensitivity combines the nature of the view source (visual receptor) with the character of the landscape between the receptor and the project component (source) and the ability for the view to accommodate change (absorption capacity).

5.7.3.3 Landscape Receptors

Landscape receptor sensitivity is a measure of the direct or indirect effects that the project may have on a landscape locality or place. Receptors and places could include physical elements, landscape features and cultural sites, combined with the nature of the activity undertaken at each of these locations and the number and concentration of people influenced.

5.7.3.4 Visual Landscape Condition

Landscape condition is a measure of the physical status of a landscape area. This measure is directly in line with people's perception of the landscape, rather than the direct visual impact or ecological values. The landscapes around the project being so diverse would be perceived differently by different people and communities depending on perception.

5.7.3.5 Visual Absorption Capability

Visual absorbency is a measure of the area's ability to accommodate changes while maintaining the existing landscape character. An area with high visual absorption would have mixed land patterning or previous 'like' development.

5.7.3.6 Visual Landscape Perceptions

Visual Landscape Perception is the psychology of seeing and attaching value or meaning to a landscape. Community perceptions associated with Landscape Character differ depending on values and association with that landscape. As this project does not include pragmatic research relating to community perceptions, generalised public preferences were used from the South East Queensland Regional Plan 2005–2026, Implementation Guideline No. 8 (2007).

5.7.4 VISUAL IMPACT

Visual impact refers to the extent which a landscape can change without unacceptable adverse effects on its visual character or scenic quality. For the purposes of this impact assessment, visual impact is defined as a combination of the distance of the visual receptor to the proposed new works, the nature of the visual receptor and the impact the works may have on the existing landscape.

Visual Impact is the sum of = Visual Distance (VD) + Visual Receptor (VR) + Visual Assessment (VA)

5.7.4.1 Distance Relationship of Visual Receptor to Impact (VD)

Distance zones indicate the spatial relationship between site facilities and community receptors. Distance is a measure of the visual intensity of the impact, the degree of detailed information and the experience a viewer is likely to receive. The following visual impact assessment measures have been adopted in this study:

Near-ground:

- dramatic visual change to the immediate landscape and landform characteristics;
- structures likely to be a dominant visual feature in whole field of view;
- clear visibility of detail of the form, infrastructure, size of corridor and vehicle movement;
- visual recognition of infrastructure; and
- colours, surface textures and other landscape features are discernible to a detailed level.

Foreground:

- dominant visual change to the landscape and landform characteristics;
- structure likely to be a dominant visual feature;
- clear appreciation of the form and size of works and vehicle movement;
- visual recognition of infrastructure; and
- landform, vegetation, colours, surface textures and other landscape features are discernible to a detailed level.

Mid-ground:

- obvious or dominant visual change to the landscape and landform characteristics;
- structure is a moderate to significant element within the view and may or may not be a dominant feature;
- infrastructure is generally not evident;
- views are more likely to be broken by foreground features; and
- landform characteristics and the relationship between landscape features are clearly discernible.

Background:

- minor visual change to the landscape and landform characteristics;
- landform and vegetation silhouettes, overall form and scale is more visually prominent than individual landform features or surface characteristics;
- visual impact is partly dependant on weather, colour contrasts, light conditions; and
- low recognition of form and detail, including vehicle movement.

Context:

- almost no visual change to the landscape and landform characteristics;
- landform and vegetation silhouettes, overall form and scale is more visually prominent than individual landform features or surface characteristics;
- visual impact is highly dependent on weather, colour contrasts, light conditions; and
- almost no recognition of form and detail.

5.7.4.2 Nature of Visual Receptor (VR)

The sensitivity of the visual receptor to an impact is directly related to the nature of the receptor. Visual receptors have been separated into high, medium or low sensitivity and are listed below.

High Level Sensitivity:

- designated state level parks, scenic reserves and major recreation trails;
- highways and major tourist routes;
- tourist facilities;
- town centres;
- residential properties (not rural); and
- rural residential properties that are sited to take advantage of existing landscape views.

Moderate Level Sensitivity:

- large volume regional link roads;
- secondary roads and recreational driving routes;
- major landscape dependant outdoor recreation facilities, i.e. golf courses; and
- rural residential properties.

Low Level Sensitivity:

- local rural roads;
- farming properties; and
- industrial land uses.

5.7.4.3 Visual Assessment (VA)

The process of swapping the observer for the observed. This is done to allow the view shed modeling to project views from the project component to the surrounding area, therefore identifying sites and areas that can see the project component.