16.1 Introduction

The visual impact assessment involved an evaluation of the existing visual character of the landscape in the vicinity of the SEFE site, and an assessment of the potential visual impact that may result from the construction of the Power Plant on the site. The full report is presented in **Appendix J**. The primary objective of the assessment was to determine the likely visual impact of the proposed Power Plant on people living and working in, or travelling through, surrounding areas.

16.2 Methodology

A desktop study was undertaken by reference to 1:25,000 topographic maps as well as aerial photographs of the site and surrounding area. The topographic maps and aerial photographs were also used to identify potential view locations that could be assessed and verified during fieldwork.

A field inspection was undertaken to:

- determine the potential extent of visibility of the Power Plant site; and
- determine the locations from which the Power Plant site could be visible.

A visual impact assessment was undertaken taking into account:

- the potential visibility of the Power Plant site;
- potential view locations; and
- analysis of visibility.

Measures to minimise potential visual impacts were identified where appropriate.

16.3 Existing Environment

16.3.1 Site Context

The proposed Power Plant would be located on the site of the existing waste burner which would be demolished and removed. The Power Plant would occupy a generally central location within the SEFE site, to the east of the main woodchip stockpiles.

The surrounding landscape is characterised and defined by the industrial nature of the SEFE facility including large scale built developments and activities associated with the timber milling industry. A number of constructed elements contribute to the local visual character, including:

- hard and soft woodchip stockpiles;
- milling facilities;
- storage structures;
- loading wharf and gantry structures; and
- lighting.

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Urban development south of Eden is generally low density and not visually prominent due to screening by surrounding undulating landform or trees. Built development beyond the immediate vicinity of the SEFE site is limited, but includes the navy wharf.

16.3.2 Landform

A series of photographs were taken during the course of the fieldwork to illustrate existing views from a number of indicative locations beyond the SEFE site. A number of view locations were inspected and assessed as part of the visual assessment process. The panoramic photographs are illustrated in Figures 4 to 7 within the Visual Assessment Report (**Appendix J**).

Topography is a key influence on the extent to which the proposed Power Plant may be visible from surrounding areas. Topography surrounding the site inclusive of ridgelines and high visual vantage points within the broader area surrounding Twofold Bay is illustrated in **Figure 16-1**.

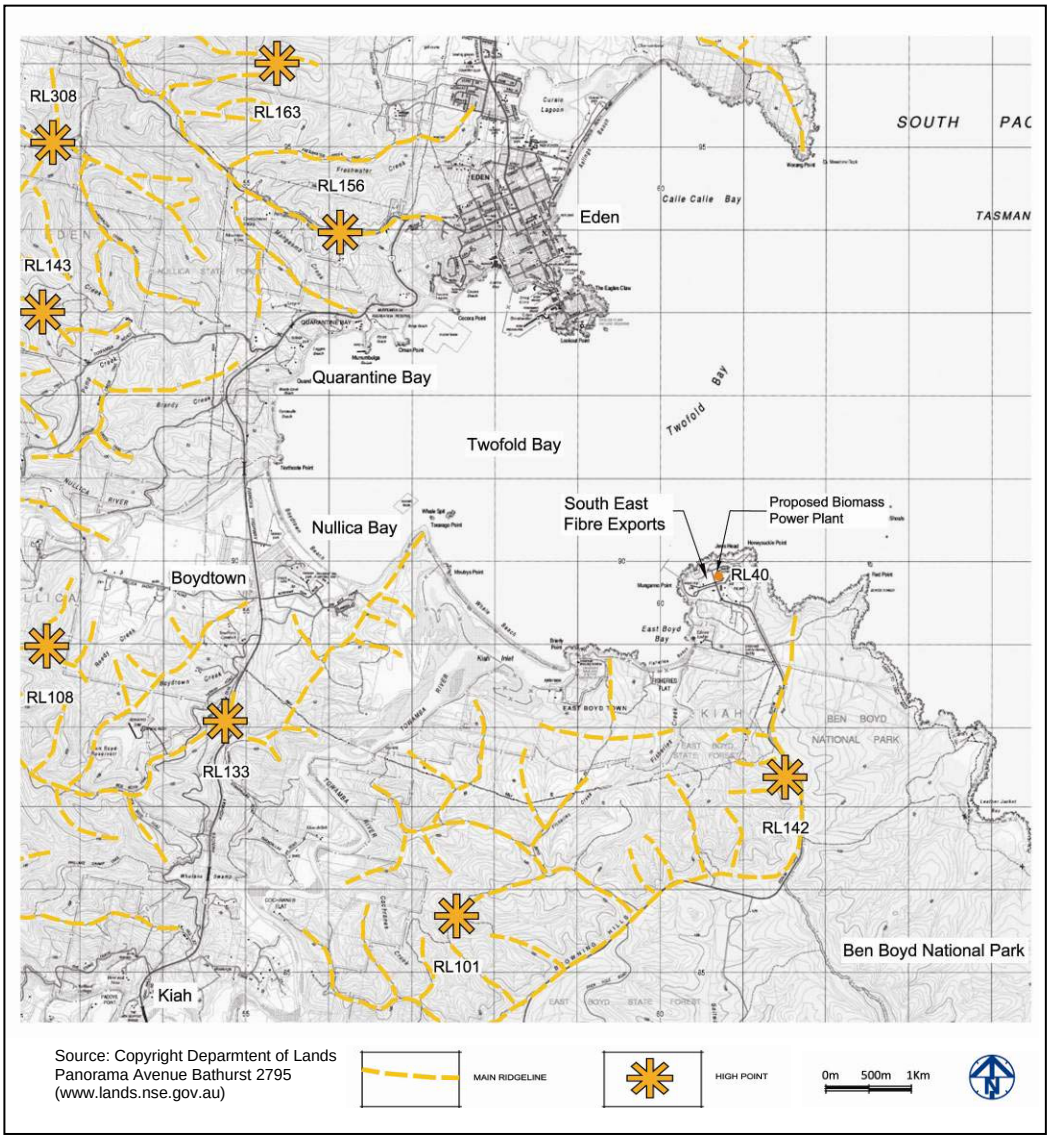

Figure 16-1 Topography of the SEFE Site in Relation to Surrounding Areas

There is a relatively high level of scenic quality associated with the far south coast of New South Wales and the landscape within, and surrounding, Twofold Bay. This largely results from the visual contrast between landscape elements that define the edge of the Bay with the open expanse of water across the bay and ocean beyond. The visual contrast results from a combination of:

- visually prominent headlands which are generally covered by forest vegetation;
- exposed rock faces formed by erosion of major ridgelines extending to the edge of the bay;
- strong variation in landform adjoining the bay;
- light coloured sandy beaches alternating with the headlands and contrasting in colour with the dark tones of vegetation on the adjoining slopes and ridges;
- visually prominent residential development confined to the township of Eden located on the north side of the bay; and
- generally low density residential development adjoining the southern and western edges of the bay, with a small number of tourist facilities associated with sandy beaches.

The landscape character of Twofold Bay is characterised by a high level of visual diversity and a generally naturalistic appearance that is contrasted by the urban character of Eden and low density developments fringing the bay, and the industrial character of the SEFE facility.

16.4 Assessment of Potential Impacts

16.4.1 Visibility of the Power Plant

The potential visual impact of the Power Plant would result primarily from two factors:

- The level of visibility or extent to which the Power Plant structures would be visible from surrounding areas.
- The degree of visual contrast between Power Plant structures and the capability of the surrounding landscape to visually accommodate them.

The key visual elements of the Power Plant are:

- a boiler house around 30 m in length, 16 m in width and 23 m in height;
- a turbine house around 40 m in length, 20 m in width and 8 m in height; and
- an exhaust stack around 35 m high and 1.6 m in diameter.

A number of the ancillary structures would be located within the proximity of the main turbine and generator housing, but are unlikely to form visually prominent elements within the existing landscape.

The cross section illustrated in **Figure 16-2** provides an indicative comparison between the bulk and form of the existing burner and the main structures associated with the proposed Power Plant. The cross section demonstrates that there is likely to be an overall reduction in physical height, although the length of the Power Plant will exceed the dimensions of the existing burner.

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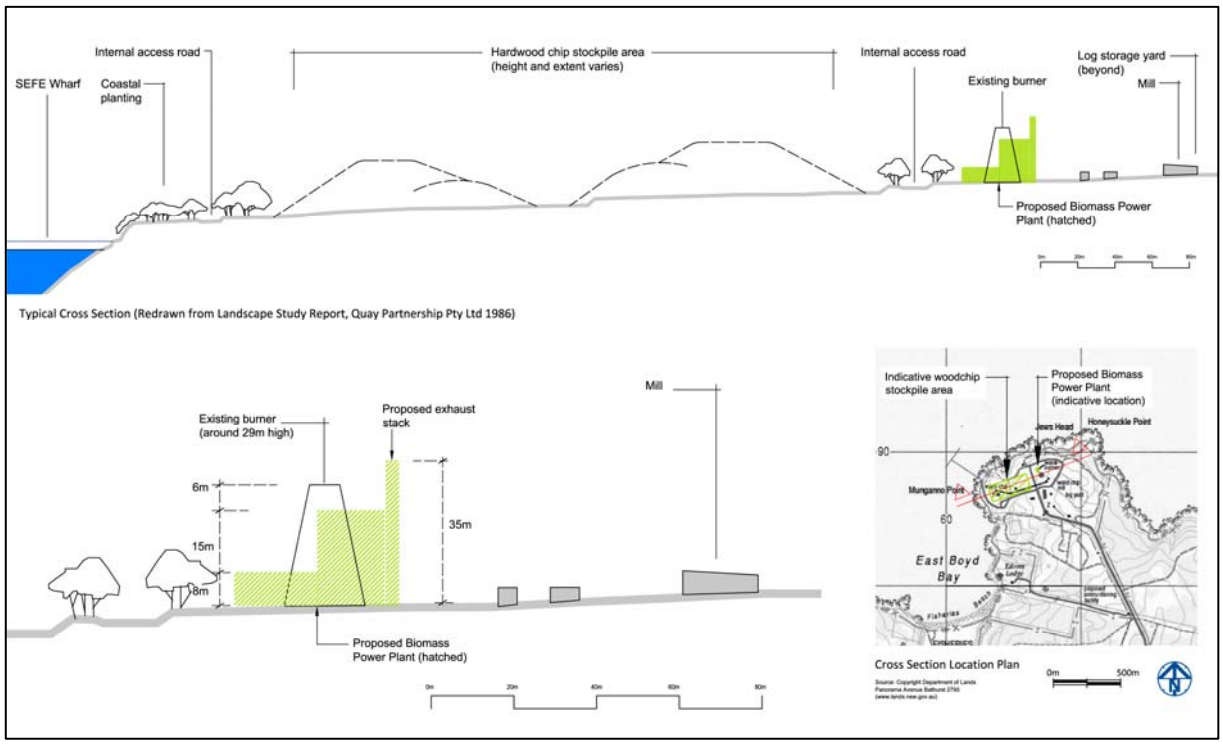

Figure 16-2 Comparison of Existing Burner and Proposed Power Plant

A photomontage of the proposed Power Plant superimposed on an aerial view of the site is provided in **Figure 16-3**.

Figure 16-3 Aerial View of the SEFE Site Showing Layout of the Power Plant

Overall the physical characteristics of the landscape surrounding the Power Plant site are generally robust and consistent, and are unlikely to be affected by the development. The degree to which the existing landscape may accommodate (or visually absorb) the Power Plant is likely to be relatively high given the existing industrial nature of the SEFE site and the influence of dense timbered areas to form the backdrop from a number of the surrounding view locations.

Figure 16-4 illustrates the existing view of the SEFE site from Lookout Point and Aslings Beach at Eden. Additional photomontages showing the view towards the SEFE site from various viewpoints are presented in the Visual Impact Assessment (**Appendix J**, Figures 4 to 7).

The potential visual impact from particular view locations is strongly dependant on the level of visibility from that location, which in turn is dependent on a number of criteria, including the relative number and type of viewers, the period of the view, view distance and context of the view.

16.4.2 Visibility Matrix

The overall visual impact of a proposed development (assessed as having a Low, Medium or High visibility rating) is determined by a combination of factors including:

- the category of situation from which people may view the Power Plant (examples of viewer categories include residents and motorists);
- the visual sensitivity of view categories surrounding the Power Plant;
- the potential number of people with a view toward the Power Plant from any one view location;
- the distance between the view location and the Power Plant; and
- the duration of time a person may view the Power Plant from any view location.

A total of 14 potential receptor locations were identified and considered as part of the visual assessment process (**Table 16-1**). The locations of these receptors in relation to the proposed Power Plant are illustrated in **Figure 16-5**.

Table 16-1 Receptor Locations Assessed

View Location	Category of Viewer
R1 – Worang Point, Ben Boyd National Park	Visitor
R2 - Aslings Beach	Visitor
R3 - Eden	Residents, pedestrians or motorists
R4 – Eagles Claw Lookout	Residents, pedestrians, motorists or visitors
R5 - Snug Cove and Wharf	Visitors and commercial facilities
R6	Residents
R7 - Twofold Bay Yacht Club and Quarantine Bay	Visitors
R8 – Discovery Holiday Park	Visitors or campers
R9 – Princes Highway	Motorists and visitors
R10 – Twofold Bay Beach Resort	Visitors or campers
R11 – Seahorse Inn and Boydtown Beach	Visitors or resident staff
R12 - Davidson Whaling Station (Historic Site)	Visitors
R13 – Edrom Lodge	Visitors or resident staff
R14 – Twofold Bay	Commercial or recreational water activities

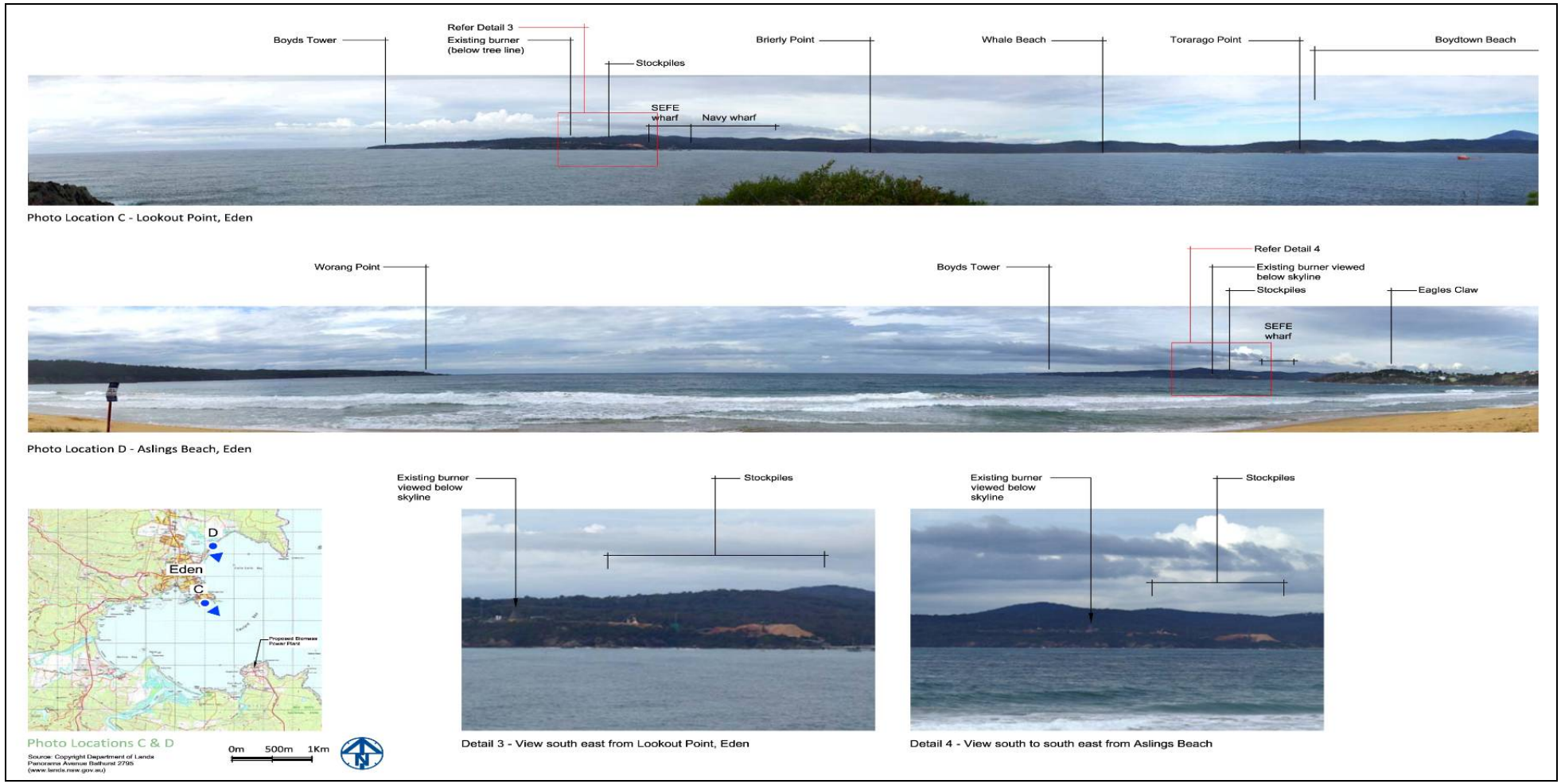

Figure 16-4 View of SEFE Site from Across Twofold Bay

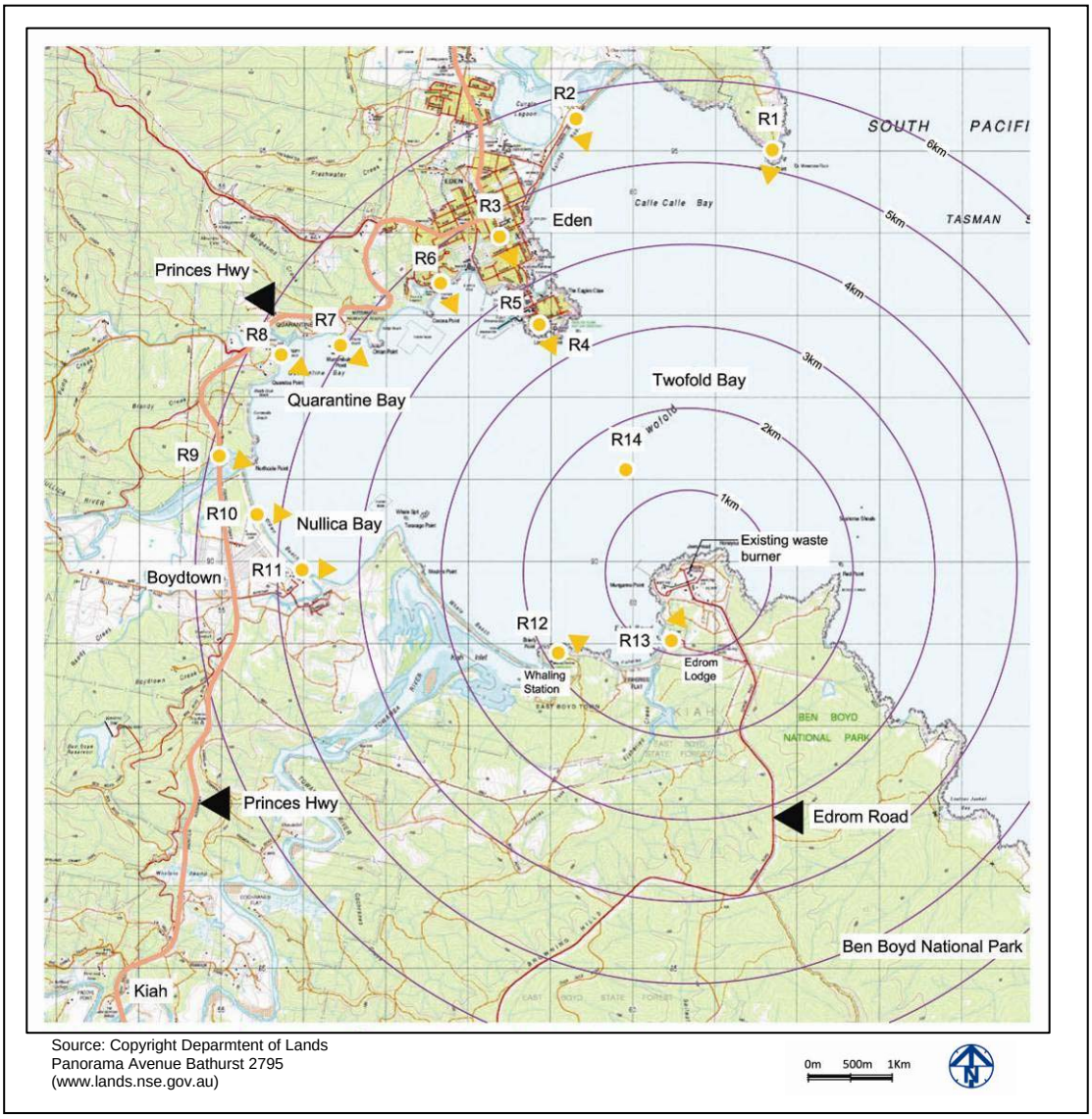

Figure 16-5 Receptor Locations

16.4.3 Summary of Visibility Assessment

A visibility criteria matrix is used as a guide to determine a visibility rating for potential visual receptor locations. A visual impact rating for each view location has been assessed and determined against the criteria outlined in **Table 16-2**.

14 view locations were identified and considered as part of the visual assessment process. The assessment matrix is presented within the Visual Assessment (**Appendix J**, Table 4). In summary:

- 4 of the 14 view locations have been determined to have a **NIL** visibility rating;
- 10 of the 14 view locations have been determined to have a **LOW** visibility rating;
- none of the view locations had a **MODERATE** or **HIGH** visibility rating.

Table 16-2 View Location Assessment Criteria

Criteria	Definition
Number of Viewers	
High	>1000 people per day
Moderate	500 - 1000 people per day
Low	250 - 500 people per day
Very Low	<250 people per day
Period of View	
Long term	> 2 hours
Moderate term	30 - 120 minutes
Short term	10 – 30 minutes
Very Short Term	< 10 minutes

Criteria	Definition
View Distance	
Distant	>4 km
Long	2 km – 4 km
Medium	1 km – 2 km
Short	500 m – 1 km
Very short	<500 m

16.5 Mitigation Measures

While the overall visual impact of the Power Plant has been assessed as low, the following mitigation measures would potentially help to further minimise the level of visual impact (**Table 16-3**).

The mitigation measures generally involve reducing the extent of visual contrast between the visible portions of the Power Plant structures and the surrounding landscape.

Table 16-3 Mitigation Measures

Mitigation Measure	Project Stage		
	Pre construction	Construction	Operations
Materials used in the construction of the Power Plant would be generally dark in tone and where possible non reflective.		✓	
Lighting would avoid direct line of sight to distant view locations.			✓
The top of the stack would not have lighting.			✓
Large floodlights will only be used for emergency lighting.			✓
Security lighting would not spill onto neighbouring areas. This would be achieved through the use of down lights and motion sensor lighting.			✓