

SECTION 19
Scenic Amenity



19.0 Scenic Amenity

19.1 Introduction

The landscape and visual values of the Project area and surrounds are discussed in Chapter B.17 (Scenic Amenity) of the Port Expansion Project (PEP) Environmental Impact Statement (EIS).

Townsville is located within the low lying coastal plain of the Ross River and Bohle River, and the landscape in and around Townsville includes several prominent rugged outcrops of granite rock, notably Castle Hill, Mount Louisa, Mount Stuart, and Mount Cook at Magnetic Island. The 'visual landscape character' (TCC, 2005) of these outcrops, including the ridges, steep slopes and stands of natural vegetation are unique city landmarks or focal points, which provide a distinctive skyline to the city. Castle Hill and Mount Stuart are both recognised as areas of high scenic amenity (DCILGPS, 2000).

The city has evolved in close association with the Port of Townsville (established in 1864 for the export of agricultural products from the hinterland), located at the mouth of the Ross River and separated from the city centre and recreational activities, such as the marina and entertainment centre by Ross Creek.

The city is located between two wetland landscapes (Townsville Town Common National Park to the north and Bowling Green National Park to the south) and in close proximity to Magnetic Island. These areas provide a distinctive natural backdrop to the city and are valuable recreational assets enjoyed by residents and both domestic and international tourists.

This section provides information to address submissions received in response to the PEP EIS relevant to scenic amenity. Key matters raised on the EIS include:

- adequacy of the scenic amenity impact assessment
- consideration of coal export not reflected in the visual impact assessment
- no data in regard to View 10, Nelly Bay on Magnetic Island
- impacts on the aesthetic values of the Great Barrier Reef World Heritage Area
- impacts and mitigation measures for increased levels of lighting.

19.2 Response to Submissions

19.2.1 Adequacy of the Scenic Amenity Impact Assessment

Four respondents raised the methodology adopted for the scenic amenity impact assessment, including the omission of data or reference to specific reports from the scenic amenity impact assessment.

Aspects of the selected methodology that were questioned by respondents are discussed below in section 19.2.4. In relation to the omission of reference to other reports relevant to the scenic baseline. It is acknowledged that the additional background documents identified by respondents were either not referred to or not published at the time of undertaking the EIS assessment include Townsville City Council's, *Townsville Scenic Amenity Study* (GHD, 2011) and various documents regarding the aesthetic values of the Great Barrier Reef, including *Defining the Aesthetic Values of the Great Barrier Reef* (Context Pty Ltd, 2013). Documents relating to aesthetic values of the Great Barrier Reef prepared for Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) (now Department of the Environment (DoE)) are considered in Section 19.2.4.

The *Townsville Scenic Amenity Final Report* (GHD, 2011) was prepared to inform the *Townsville City Plan 2014* (TCC, 2014). This work was unavailable at the time of undertaking the field assessment for the EIS. This document has since been reviewed to determine its relevance, identifying if further assessment is required or whether it influences the conclusions of the scenic amenity assessment presented in Chapter B.17 (Scenic Amenity) of the EIS.

The methodology for the *Townsville Scenic Amenity Study* is based upon the *South East Queensland Regional Plan, Implementation Guideline No. 8* (Queensland Government, 2007), which determines amenity on the basis of visual exposure (i.e. "a measure of the extent to which a place in the landscape is seen from public viewing locations") and scenic preference (i.e. "the rating of the community's liking for scenery of open space compared to areas occupied by built structures, measured using photographs. It includes people's visual response as well as other sensory and emotional responses."). Scenic preference ratings are defined between 0 (least preferred) and 10 (most preferred).

The Port is assessed as having a scenic preference rating of 3 in Table 2 of the report (Scenic Preference Ratings) (GHD, 2011). Figure 1 of the report maps Scenic Preference Values. This shows the Port has lower scenic preference values whilst Castle Hill and most of Magnetic Island are highly preferred. Figure 2 of the report identifies a number of significant viewpoints in the region. These include Castle Hill, The Strand, Mount Stuart, Cape Pallarenda, Nelly Bay, Horseshoe Bay, the Picnic Bay Jetty and viewpoints along the ferry route to Magnetic Island. No significant viewpoints are identified around Cleveland Bay. These vantage points are consistent with those

assessed in the viewpoints selected to illustrate potential impacts of the PEP. Figure 3 in the report illustrates the composite scenic amenity values. An extract of the composite scenic amenity values in the vicinity of the Project area is reproduced as Figure 19.1 (source: (GHD, 2011), p.13).

This figure illustrates that the majority of the mainland landscape around Townsville is assessed as being of moderate scenic amenity (typically around a value of 5). Pockets of higher scenic amenity of between 8 and 10 relate to areas such as Mount Stuart, Castle Hill and Magnetic Island. Lower scenic amenity values (2) are associated with land in the vicinity of the Port.

Table 5 of the report identifies the key 'Coastal Landscape issues'; noting that '*scenic management of harbour and port areas*' is a key management issue for Regional Cities (defined as the landscape that "*focuses on Queensland's major coastal urban centres. These centres are typically located on a major river and include Cairns and Townsville*").

The study recommends protection of high value scenic landscapes (typically a rating of 6 or above) and some defined management areas. Within these zones it is recommended that a visual impact assessment is prepared for proposed development projects. The Port does not fall within these defined areas.

A stakeholder consultation exercise informed the study and the study notes the importance of the scenic amenity of Townsville as '*a key gateway for tourists to the Great Barrier Reef*'. Table 16 of the report examines opportunities to improve the scenic amenity in the Townsville Region identifying "*Improve the visual outlook of the industrial areas around the Port as they are very prominent from the Strand*" as a potential outcome. During the consultation, The Great Barrier Reef Marine Park Authority noted that "*Townsville is a "gateway" for minor tourism activities, however is a significant "gateway" for recreational activities, with high boat ownership, particularly accessing the inshore areas. Therefore, the scenic value of Townsville from the ocean looking inland is extremely high. Mountain ridgelines and the perception of "undisturbed coastline" e.g. treed foreshore with no visible rooflines would have high value*".

The Port is also recognised to be extremely visible from The Strand and is considered as unattractive by a respondent during consultation activities for the study.

The findings of the *Townsville Scenic Amenity Study* (GHD, 2011) are consistent with the baseline information and assessment presented in Chapter B.17 (Scenic Amenity) of the EIS. The key views assessed in the EIS are also consistent with the significant viewpoints considered in the study; no additional significant viewpoints are identified. The high scenic value of Magnetic Island (Viewpoint 10) (refer Table B.17.14 of the EIS) and vantage points such as Castle Hill (Viewpoint 3) (refer Table B.17.7 of the EIS) and Mount Stuart (Viewpoint 4) (refer Table B.17.8 of the EIS) are addressed in the EIS assessment. The relatively lower scenic amenity value of port activities is also acknowledged through the scenic amenity assessment and mitigation measures identified in Chapter B.17.5 of the EIS.

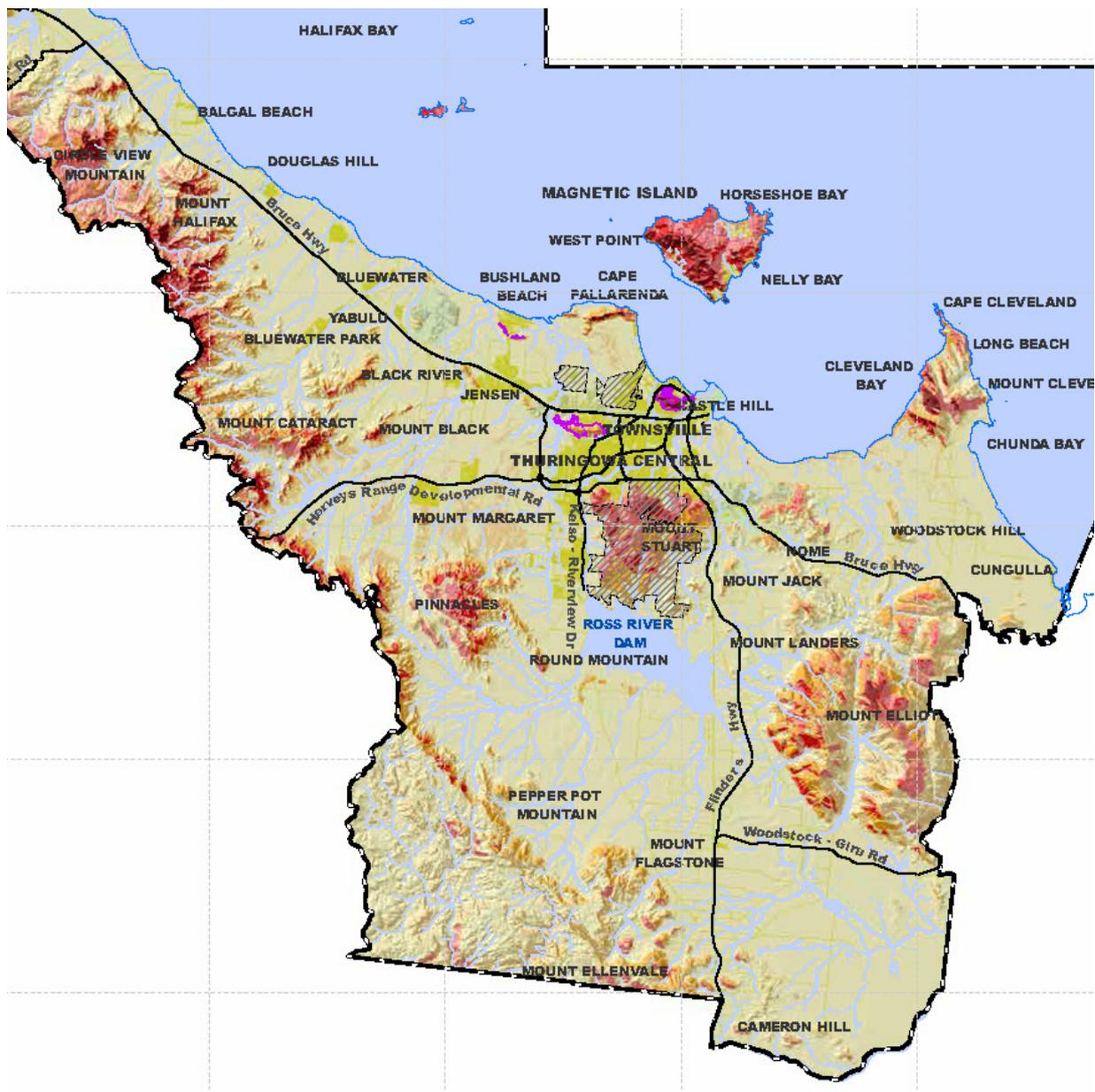


Figure 19.1 Extract of Townsville Scenic Amenity Assessment Scenic Amenity Values (GHD, 2011)

19.2.2 Consideration of particulates from increased export from the Port

The Alliance to Save Hinchinbrook Inc raised that an increase in black and dark-brown particulates is not reflected in the visual impact assessment.

The Project and subsequent impact assessment, focuses on altering the land and sea footprint of the Port to enable the Port to sustain long-term viability of the communities in North Queensland, and as such do not focus on the specific individual cargoes that may be handled in the future.

Whilst the Port presently does not handle coal cargoes, future trade conditions may deem the handling of some coal desirable from a trade perspective. The Port is not a dedicated coal port and the rationale for the Project is not underpinned by future coal exports.

The basis of the impact assessment is described in Section B.17.1.3 of the EIS. This section nominates the key visible infrastructure anticipated comprising a new breakwater, reclamation area (now approximately 150 ha to accommodate dredged material (refer Section 19.3.2 of the AEIS)) and infrastructure such as rail, roads and navigation aids. The cargo operations behind the wharf would be determined on a case-by-case basis by tenants for each berth and would be subject to separate assessments once the certainty of need and form are confirmed.

It is expected that above-wharf facilities for port users in the PEP could include storage sheds, conveyors, shiploaders/unloaders, material facilities, administration and amenities buildings, tank farms and pipelines. An

indicative configuration was considered in the impact assessment for the operational phase comprising conveyors, storage, loading and unloading of cargo.

19.2.3 Viewpoint 10, Nelly Bay on Magnetic Island

Townsville City Council noted that the summary of impact information for Viewpoint 10 – Nelly Bay, Magnetic Island was not provided in Table B.17.18 of the EIS. The omission of the summary of Viewpoint 10 – Nelly Bay was an oversight and has been corrected in the revised assessment (refer Table 19.7 in Section 19.3.4.1.3 of the AEIS).

19.2.4 Impacts on aesthetic values of the Great Barrier Reef World Heritage Area

Four submissions questioned the adequacy of the EIS to meet Australia's obligations under the World Heritage Convention. The submissions consider that the scenic amenity tool has been misused as a surrogate for assessing world heritage aesthetics. One of these submissions states that scenic amenity policy has "no relevance" to protection of aesthetic value of GBRWHA. It notes that scenic amenity assessment is not the determinant of desired scenic condition. This matter is addressed below in Section 19.2.4.2 with regards to the Project impacts on aesthetic values of the Great Barrier Reef World Heritage Area.

19.2.4.1 Response regarding the assessment technique

Section 5.2.1 of the PEP Terms of Reference (ToR) (Appendix A1 of the EIS) sets out the requirements for the scenic amenity and lighting impact assessment, whilst Section 5.5 (i), (vi) EIS Guidelines (Appendix A2 of the EIS) specifies the inclusion of "*simulated viewfields of the proposal showing its visual impact from the adjacent coastline, nearby inhabited islands and the Great Barrier Reef World Heritage Area*".

Chapter B.17 (Scenic Amenity) presents the findings of this assessment. There is no reference to the combined assessment of aesthetic values. The methodology used in the EIS acknowledges the absence of nationally recognised methodologies for visual assessment and subsequently, addressed visual values in accordance with the widely adopted national, *Draft National Wind Farm Development Guidelines* (EPHC, 2010) and international guidelines for Landscape and Visual Impact Assessment (LI & IEMA, 2002) which is consistent with the subsequent edition (LI & IEMA, 2013); (SNH & CA, 2006).

The ToR also refers to the 2001 methodology set out in the Queensland Coastal Plan: State Planning Policy for Coastal Protection Guideline Annex 3—*Determining scenic preference in the coastal zone* (DEHP, 2011). The specific requirements of the 2011 Queensland Coastal Plan have been incorporated into a wider more comprehensive assessment of scenic amenity impacts. An *Obtrusive Light Study* (AECOM, 2012a) (Appendix S2 of the EIS) was also undertaken to assess lighting impacts of the Project as per the ToR. The approaches used in the EIS and AEIS are consistent with that adopted in other EIS studies for coastal development elsewhere in Queensland. Lighting impacts on migratory waders are assessed in Appendix L2 (Potential Effects of Light on Migratory Waders (AECOM, 2012)).

The submissions dispute the technique for being simplistic and 'relativistic' i.e. because it compares the change in the relative apparent areas of elements in the selected viewpoints, which are already influenced by port development. This is the approach consistently adopted internationally in scenic amenity assessment (Landscape and Visual Impact Assessment) and responds directly to the requirements of the ToR (Section 5.2.1). This comparative approach is typically used or recommended in most methodologies endorsed at the time of undertaking the assessment by the Queensland government (including the *Queensland Coastal Plan* (DEHP, 2011) and other documents such as *South East Queensland Regional Plan Implementation Guideline Number 8 Scenic Amenity* (DI, 2007)). Whilst acknowledging the matter could result in incremental erosion of visual values over a wider area, this approach is considered appropriate for the AEIS and would result in identification of the most significant scenic amenity impacts. This approach would, for example, result in scenic amenity impacts of greater significance being identified where development affected a pristine previously undeveloped area. It also identifies that there are adverse visual impacts associated with expansion of the existing port on particular views, therefore, does not infer that all ports are equal, i.e. "A port and a larger, busier port are both ports but this does not mean there is no difference in character and aesthetic appeal or repugnance", which was the matter raised in one submission.

It is evident that scenic amenity values need to be considered in conjunction with other aspects and in relation to wider consideration of aesthetic impacts (refer Section 19.2.4.2). For example, the economic assessment (Chapter B.19 (Economic Environment) of the EIS) concludes that port development is not feasible elsewhere and would be inconsistent with the *Queensland Ports Strategy* (DSDIP, 2014a) that states necessary development will be concentrated in the existing priority ports (including Townsville) and no new ports will be developed. Arguably, if port development is necessary, the visual (and wider aesthetic) values of the GBRWHA would be less compromised by developing an existing port where visual values are already diminished than expanding into pristine environment elsewhere, which is consistent with the PEP.

19.2.4.2 Response to requirement for broader consideration of aesthetic values

Understanding of World Heritage and National Heritage Values of the area are included in Section B.17.2 of the EIS and are assessed through the inclusion of specific viewpoints documented in Section B.17.4 of the EIS.

Components that contribute to aesthetic values are addressed throughout the EIS (Sections B.6.3.2.1, B6.4.14, B.23.2, and B.24).

Since the writing of the EIS, the report titled, *Defining the aesthetic values of the Great Barrier Reef*, was published by the then Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) (now Department of the Environment) (Context Pty Ltd, 2013). The report considers the aesthetic values of the GBRWHA, however, it currently has no legal status in relation to the assessment of impacts and acknowledges that further work is required to define an appropriate methodology.

Consideration of the implications of this report to the assessment of aesthetic values is described below.

The report, *Defining the Aesthetic Values of the Great Barrier Reef* (Context Pty Ltd, 2013), evaluates aesthetic values in relation to the World Heritage system, defines aesthetic values based on a range of sources including tourist literature and community perceptions, and suggests a preliminary sensitivity impact assessment method for the aesthetic values identified.

The report acknowledges that there are:

'no systematic methodologies for, or approaches to, the assessment of aesthetic importance or natural beauty in the World Heritage system'...

and, consequently

'...the aesthetic values are almost always limited to visual aspects...' (p. viii).

The report considers that aesthetic values should be more broadly defined and evaluated and adopts the following definition based on the Comprehensive Regional Assessment of National Estate values (O'Brien & Ramsay, 1991):

"Aesthetic value is the response derived from the experience of the environment or particular natural and cultural attributes within it. This response can be to either visual or non-visual elements and can embrace emotional response, sense of place, sound, smell and any other factors that have a strong impact on human thought, feeling and attitudes" (emphasis as per the report p.33)

An assessment method is put forward based on attributes, elements, character, visual aspects, risk assessment, vulnerability assessment and sensitivity. Environmental attribute (typology) is based on main groups including: coral reefs, islands, open water, inshore lagoon and coastal and estuarine ecosystems. Key experiential attributes include: sense of beauty, naturalness, tranquillity, solitude, remoteness, discovery and spiritual dimension.

The recommended approach for assessing impact entails the following stages.

1. Identifying the activity using the comprehensive strategic assessment list.
2. Identifying the impacts (or threats) resulting from the activity using the comprehensive strategic assessment list.
3. Calculating risk based on the GBR outlook report approach (likelihood and consequences).
4. Determining the nature of the impact based on the project team judgement.
5. Determining sensitivity by identifying attributes affected, sensitivity (using sensitivity tables) based on environmental attribute and experiential attribute based on sensitivity statements: GBRMPA and project team.
6. Combining risk/exposure and sensitivity to define impact level based on project team judgement.

A number of Retrospective Statements of Outstanding Universal Value were identified through the study and are summarised in Appendix 2 of the report as follows.

Table 19.1 Retrospective Statements of Outstanding Universal Value (Appendix 2, *Defining the aesthetic values of the Great Barrier Reef* (Context Pty Ltd, 2013)).

Ref #	Statement of Outstanding Universal Value	Attributes
(vii) Contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance		
1	The Great Barrier Reef is of superlative natural beauty above and below the water, and provides some of the most spectacular scenery on earth.	See 1.2, 1.3, 1.4, and 1.7 in this table
1.1	It is one of a few living structures visible from space, appearing as a complex string of reefal structures along Australia's northeast coast.	Coral reefs (whole of system)
1.2	From the air, the cast mosaic patterns of reefs, islands and coral cays produce and unparalleled aerial panorama of seascapes comprising diverse shapes and sizes.	Aerial scenery
1.3	The Whitsunday Islands provide a magnificent vista of green vegetated islands and white sandy beaches spread over azure waters.	Whitsunday Islands scenery
1.4	This contrasts with the vast mangrove forests in Hinchinbrook Channel, or the rugged vegetated mountains and lush rainforest gullies periodically cloud-covered on Hinchinbrook Island.	Hinchinbrook channel mangroves Hinchinbrook Island morphology

Ref #	Statement of Outstanding Universal Value	Attributes
		Hinchinbrook Island vegetation
1.5	On many of the cays there are spectacular and globally important breeding colonies of seabirds and marine turtles and Raine Island is the world's largest green turtle breeding area.	Seabird breeding colonies Turtle breeding colonies Raine Island green turtle breeding area
1.6	On some continental islands, large aggregations of over-wintering butterflies periodically occur.	Overwintering butterfly aggregations
1.7	Beneath the ocean surface, there is an abundance and diversity of shapes, sizes and colours: for example spectacular coral assemblages of hard and soft corals, and thousands of species of reef fish provide a myriad of brilliant colours, shapes and sizes.	Reef fish diversity Coral diversity, health and structure Water clarity Overall marine species diversity and abundance
1.8	The internationally renowned Cod Hole is one of many significant tourist attractions.	Potato cod (site specific) Cod Hole dive site
1.9	Other superlative natural phenomena include the annual coral spawning, migrating whales, nesting turtles, and significant spawning aggregations of many fish species.	Whales Coral spawning Turtle rookeries Fish aggregations

The report identifies a number of 'extended descriptions' that are set out in Section 4.4.3 of the report. These refine the detail of the Retrospective Statements of Outstanding Universal Value (OUV) outlined in Table 19.1.

Sensitivity statements are defined for both the environmental and experiential attributes described above (Table 5.3 and 5.4 of the report). Sensitivity and impact assessment are considered for a wide range of activities including, of relevance to the current assessment, the following activities:

- shipping
- industrial development (including ports).

The assessment for shipping includes the following description:

"Shipping refers to the movement and anchoring of large vessels within the GBR... Shipping is also closely associated with ports and industry; these are considered separately below. Shipping movements through the GBR are reported to be gradually increasing, in response to industrial and mining development (GBRMPA 2009: 75). While the potential for shipping to have a major impact, especially through groundings and oil or chemical spills, most ships travel safely through the GBR and incidents are relatively few. Other potential impacts include introduction of species for elsewhere, although to date this is mainly in port areas (GBRMPA 2009: 76). These impacts can be grouped based on the nature of the impact. Some will impact on environmental attributes, some on experiential attributes, and some on both. The actual impacts will depend on the location and amount of the activity. For example, the location will determine which environmental and experiential attributes are present and may be affected, and the amount of the activity may cause an increase in the sensitivity (as indicated in Tables 5.3 and 5.4)."

Shipping is concluded to have the following risk:

"... the overall Risk for the Activity of Shipping is Medium, and the potential extent of impacts varies in scale from Local to Regional, but is primarily Local. Shipping may result in a range of mainly indirect impacts on a range of the environmental attributes – habitats and species – which together reflect a significant array of aesthetic values. The experiential attributes of beauty and naturalness would be equally impacted. The experiential attributes of tranquillity, solitude and remoteness would be impacted by the presence of ships, especially through noise, lights at night, the number of ships present at any one time and the overall daily number of ships present or in transit."

The assessment for industrial development (including Ports) includes the following description:

"Ports and the associated shipping activities are an important activity in the GBR, with 10 major trading ports, 3500 ships and 9700 voyages in 2007; increasing ship movements is being driven by industrial and mining activity (GBRMPA 2009: 75). The impacts of port development and use include construction impacts, loss and fragmentation of coastal habitats, dredging and seabed disturbance, changes in coastal processes and water movements. Generally these impacts are localised (GBRMPA 2009: 76)".

Industrial Development (including Ports) is concluded to have the following risk:

“... the overall Risk for the Activity of Industrial Development (including ports) appears to be similar to Urban Development – that is High for coastal and in-shore ecosystems, but probably Medium for the balance of the GBR. The potential extent of impacts varies in scale from Local to Regional. The experiential attributes of beauty and naturalness appear to be the most impacted, along with tranquillity, solitude and remoteness in some locations and as a result of some activities... Given the relationship between ports and shipping, it should be noted that the experiential attributes of tranquillity, solitude and remoteness are likely to be impacted by the presence of ships, especially through noise, lights at night, the number of ships present at any one time and the overall daily number of ships present or in transit.”.

Overall the potential impact of these activities is concluded to be as shown in Table 19.2:

Table 19.2 Overall potential impact of activities on aesthetic values

Activity	Risk	Scale	Sensitivity (Experiential)	Potential Impact
Shipping	Medium	Local	Low-Medium	Medium
Industrial development	High	Local	Very High	High-Very High

The report defines a number of ‘special places’ in the Great Barrier Reef. The area around Townsville does not feature within this assessment although Magnetic Island is noted, including aspects such as dugongs, whales, the view to Magnetic Island, crystal clear bays surrounded by boulders, relaxation, sense of ‘home’ close to mainland and “Awesome boating, cruising, landscape, fishing”. The report notes that:

“The ‘crystal clear waters’ and ‘relaxation’ of Magnetic Island was also noted in the GBRMPA workshop exercise but this probably reflects its position close to Townsville, GBRMPA’s base” (p.114).

Whilst a potential method for the detailed assessment of aesthetic values in projects based on the Retrospective Statements of Outstanding Universal Value has been suggested this has not yet been sufficiently refined and the report concludes that it:

“provides a valuable resource that can be drawn on in various ways including ... Providing the basis on which a ‘how to’ manual for the assessment of aesthetic values in the World Heritage system and more generally (e.g. in the assessment of National Heritage nominations) could be developed through refining the methodology, including assessment of values, conceptual mapping and assessment of sensitivity and impacts concluded that the report provides a valuable resource formally adopted”.

In the absence of a formally adopted methodology for the assessment of aesthetic values, the current assessment concludes that impacts on the environmental and experiential attributes identified by the study and explored above in relation to the context of Townsville are largely addressed by the component studies of the EIS as provided in Table 19.3 of the AEIS.

Table 19.3 Assessment of EIS Studies with relevance to aesthetic characteristics of the GBRWHA

Attribute	Relevant EIS Assessment
Environmental attributes	
coral reefs	Marine ecology the underwater visual impacts on the reef can be inferred (refer Chapter B.6 (Marine Ecology)).
islands	Terrestrial ecology and scenic amenity (the detailed visual impacts on terrestrial habitats can be inferred; more general impacts are considered in Chapter B.17 (Scenic Amenity, including specific viewpoint assessment)).
open water / inshore lagoon	Marine water (refer chapters B.4 (Marine Water)), marine sediment (refer Chapter B.5 (Marine Sediment)), marine ecology (refer Chapter B.6 (Marine Ecology)) and scenic amenity (refer Chapter B.17 (Scenic Amenity), including in relation to shipping. A new viewpoint assessment numbered 14 (The Forts Lookout, Magnetic Island) is provided in Table 19.6 and Table 19.7.
	Marine ecology visual impacts on the reef can be inferred (refer Chapter B.6 (Marine Ecology)).
coastal and estuarine ecosystems	Marine and terrestrial ecology visual impactson the reef can be inferred (refer chapters B.6 (Marine Ecology) and B.7 (Terrestrial Ecology), respectively).
Experiential attributes	
beauty	Scenic amenity – Chapter B.17 (Scenic Amenity) considers visual sensitivity based on attributes including the character of the viewpoint and the number of viewers which are reflective of the beauty and interest of the view.
naturalness	Scenic amenity (including scenic preference assessment based on former State Planning Policy 3/11: Coastal Protection, which measures the change in preferred attributes).
tranquillity	Acoustic assessment is addressed in Chapter B.10 (Noise and Vibration).

Attribute	Relevant EIS Assessment
solitude	Not applicable due to the existing urban context of the port.
remoteness	Not applicable due to the existing urban context of the port.
discovery	Social impact assessment (including community issues) is addressed in Chapter B.13 (Social).
spiritual dimension	Social impact assessment (including community issues) is addressed in Chapter B.13 (Social).

The matters raised in the Retrospective Statements of OUV are discussed in the relevant section of the EIS and summarised in Table 19.4.

Table 19.4 Assessment of EIS studies with relevance to outstanding universal values of the GBRWHA

Ref #	Statement of Outstanding Universal Value	Relevant EIS Assessment
(vii) Contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance		
1	The GBR is of superlative natural beauty above and below the water, and provides some of the most spectacular scenery on earth.	Above water impacts – refer Chapter B.17 (Scenic Amenity). Below water impacts – refer chapters B.4 (Marine Water), B.5 (Marine Sediment Quality) and B.6 (Marine Ecology) (consequent scenic impacts on divers can be inferred). The ambient turbidity around the eastern side of magnetic Island is typically around 5 NTU (around 70- 85 cm visibility) refer Section 6 (Marine Water Quality).
1.1	It is one of a few living structures visible from space, appearing as a complex string of reefal structures along Australia's northeast coast.	N/A – the scale of the proposed development would not impact on this Outstanding Universal Value.
1.2	From the air, the cast mosaic patterns of reefs, islands and coral cays produce and unparalleled aerial panorama of seascapes comprising diverse shapes and sizes.	Views from the air are considered in the Scenic Amenity Assessment (noting the scale of the proposed development would not impact on this Outstanding Universal Value).
1.3	The Whitsunday Islands provide a magnificent vista of green vegetated islands and white sandy beaches spread over azure waters.	N/A – does not apply to this geographical location.
1.4	This contrasts with the vast mangrove forests in Hinchinbrook Channel, or the rugged vegetated mountains and lush rainforest gullies periodically cloud-covered on Hinchinbrook Island.	N/A – does not apply to this geographical location.
1.5	On many of the cays there are spectacular and globally important breeding colonies of seabirds and marine turtles and Raine Island is the world's largest green turtle breeding area.	Refer chapters B.7 (Terrestrial Ecology) and B.6 (Marine Ecology).
1.6	On some continental islands, large aggregations of over-wintering butterflies periodically occur.	Refer Chapter B.7 (Terrestrial Ecology).
1.7	Beneath the ocean surface, there is an abundance and diversity of shapes, sizes and colours: for example spectacular coral assemblages of hard and soft corals, and thousands of species of reef fish provide a myriad of brilliant colours, shapes and sizes.	Refer Chapter B.6 (Marine Ecology) (consequent scenic impacts on divers can be inferred).
1.8	The internationally renowned Cod Hole is one of many significant tourist attractions.	N/A – does not apply to this geographical location.
1.9	Other superlative natural phenomena include the annual coral spawning, migrating whales, nesting turtles, and significant spawning aggregations of many fish species.	Below water – refer Chapter B.6 (Marine Ecology) (consequent scenic impacts on divers can be inferred).

In conclusion, the report, *Defining the Aesthetic Values of the Great Barrier Reef* (Context Pty Ltd, 2013), provides a useful baseline of the aesthetic values of the barrier reef and provides some initial guidance on the future development of an integrated methodology to assess the potential impacts of a proposal against those values. The scenic amenity assessment, undertaken in line with the Project ToR, provides assessment of those matters relevant to visibility and scenic amenity of the GBRWHA through the selection and assessment of representative viewpoints including key scenic vantage points.

19.2.5 Impacts and mitigations measures for increased levels of lighting

Three submissions noted that the additional night lighting will be visible and dominate the coast skyline diminishing the natural aesthetics.

In order to understand the likely impacts of lighting associated with the Project, a night-time site survey had been completed for the viewing points to input the scenic amenity assessment presented in Chapter B.17 (Scenic Amenity) of the EIS. An Obtrusive Lighting Study (AECOM, 2012a) has also been undertaken and is included in Appendix S2 of the EIS. It concludes that there would be a minor-moderate magnitude of impact resulting in a medium risk level with appropriate mitigation "will not cause a considerable impact on the surrounding environment".

Mitigation measures discussed in Section B17.5 remain relevant. These include measures to manage lighting during construction and operations and in particular lighting design to reduce light spill from the Project are incorporated in the Environmental Management Plans (Part C of the EIS).

19.3 Revised Environmental Impact Assessment

19.3.1 Legislation and policy

There have been no significant changes to legislation since the preparation of the EIS. The two principal pieces of guiding legislation for the purposes of scenic amenity assessment are the *Environment Protection and Biodiversity Conservation Act 1999* and *Great Barrier Reef Marine Park Act 1975*, which remain current. Additional work has been undertaken to explore the values of the Barrier Reef as described above. This includes the Great Barrier Reef Region Strategic Assessment (DSEWPaC, 2014), as well as the Defining the Aesthetic Values of the Great Barrier Reef (Context Pty Ltd, 2013) (refer Section 19.2.4.2). In addition DSWPaC have produced the Interim Guidelines on the Outstanding Universal Value of the Great Barrier Reef World Heritage Area – for Proponents of Actions (DSEWPaC, 2013).

Other changes include the repeal of the Queensland Coastal Plan (DEHP, 2011), which was applicable at the time the EIS was prepared, and adoption of the Townsville City Plan (TCC, 2014) by Townsville City Council. These documents were raised in submissions on the EIS and are discussed below.

19.3.1.1 Interim Guidelines on the Outstanding Universal Value of the Great Barrier Reef World Heritage Area

The *Interim Guidelines on the Outstanding Universal Value of the Great Barrier Reef World Heritage Area – for Proponents of Actions* (DSEWPaC, 2013a) sets out requirements with regards to the assessment of proposed actions that are likely to have a significant impact on the outstanding universal value of the GBRWHA. It is noted that the department is currently developing full guidelines. The interim guidelines note that:

"When referring a proposed action under the EPBC Act you must consider impacts to outstanding universal value of the Great Barrier Reef World Heritage Area. Attributes of the outstanding universal value of the Great Barrier Reef World Heritage Area that may be impacted as a result of actions include, but are not limited to: views from the air, ground and underwater..."

Chapter B.17 (Scenic Amenity) of the EIS considers impacts on views from the ground and air. As previously noted, impact on views underwater can be reasonably inferred from the findings of the marine water, marine sediment, marine ecological and economic assessments.

19.3.1.2 Queensland Coastal Plan

The *Queensland Coastal Plan* (October 2012) has been repealed and is no longer applicable. The *State Planning Policy SPP 3/11: Coastal Protection* has also been superseded by *Draft Coastal Protection State Planning Regulatory Provision*.

The new *Coastal Management Plan* (DEHP, 2014) commenced on 18 March 2014, which provides non-regulatory policy guidance. It notes that coastal resources are valued for scenic amenity but makes no specific recommendations with regards to the protection or evaluation of scenic values. Therefore, the scenic preference rating assessment undertaken in Chapter B.17 (Scenic Amenity) of the EIS is no longer mandatory. Regardless, Port Planning and Townsville City Council Planning are generally complementary and the scenic preference rating is still useful for reference purposes.

19.3.1.3 Townsville City Plan

The Townsville City Plan was adopted on 13 October 2014 (TCC, 2014). As noted in the EIS, the Port is exempt from complying with the requirements of the plan. 3.4.4 *Element - Strong and connected community*, provides specific outcomes relating to scenic amenity include the following:

1. "Townsville maintains the scenic amenity values and iconic features that contribute to its character and sense of place. Development in areas of high scenic amenity is limited to minimise the potential for deterioration of the scenic values.

2. *Areas of high scenic amenity generally include elevated and vegetated areas which may also contain significant ecological and other environmental values. These include:*
 - a) *mountainous backdrops, including Mount Elliot, Mount Cleveland, the Pinnacles, Many Peaks Range and Hervey Range to Paluma;*
 - b) *significant hills and ridgelines within and framing urban areas, including Castle Hill, Mount Stuart and Mount Louisa; and*
 - c) *coastal headlands, foreshores and waters, including The Strand, Magnetic Island, Cape Pallarenda, Cape Cleveland, Cleveland Bay and Halifax Bay.*
3. *Development is sited and designed to be sensitive to the landform, vegetation and other characteristics that contribute to scenic amenity values in all parts of the city.*
4. *Nonurban land is protected to define the edges to the city, and to protect nonurban landscape values. Urban and rural residential development does not occur in rural areas."*

Components as outlined in the Townsville City Plan are adequately considered in the scenic amenity assessment and do not require further assessment in the AEIS.

19.3.2 Design refinement

The project design has been revised as described in Section 2.0 of the AEIS. Key components of the Project anticipated during the construction and operational phases that are relevant to scenic amenity impact assessment include those items listed previously with the following modifications.

- The creation of approximately 150 ha of reclaimed land (expansion of an additional 50 ha to that previously proposed behind the berths to provide for cargo storage and handling infrastructure, including rail infrastructure. This land is to be created from material reclaimed from the outer harbour and channel dredging and include internal bunds to facilitate effective land reclamation.
- The widening of the Platypus Channel will be on the west side of the channel with the eastern edge remaining.
- The width between toelines will be 180m at the outer harbour and reducing to 135m at the junction with the Sea Channel.
- The widening of the Sea Channel will be on the east side of the channel (opposite side from Magnetic Island) with the western edge remaining. The width between toelines will be 135m at the junction with the Platypus Channel reducing to 120 m at the sea end.
- Requirement for the western breakwater is yet to be confirmed.

The expansion of the land reclamation is a result of the removal of offshore placement of dredge material. The significance of these changes is considered in relation to each of the viewpoints in Section 19.3.4 below.

19.3.3 Supporting studies

No additional studies were required to assess the revised design or address comments received from public submissions. An additional viewpoint has been assessed from Magnetic Island to give further consideration to the impacts of the additional shipping and potential anchorage site on views from the World Heritage Listed Magnetic Island. This is considered with the overall assessment of impacts in Section 19.3.4.

19.3.4 Revised assessment

19.3.4.1 Impact assessment

Refinements to the project design may potentially affect the severity of impacts to visual values of the area, including extent of visibility and impacts on key views. The impacts as summarised in Section B.17.4 of the EIS, remain relevant. The potential for impacts based on the revised design is discussed below.

19.3.4.1.1 Zone of Theoretical Visibility Assessment

As the ground level of the new extension area is the same as the area formerly assessed it is not considered likely that the Zone of Theoretical Visibility would change to any meaningful degree. Therefore, a new Zone of Theoretical Visibility assessment has not been prepared and the impact of the extension is considered in relation to the selected representative viewpoints.

19.3.4.1.2 Representative Viewpoint Assessment

Using the method set out in the EIS which has not been changed for the reasons described above, this section provides an assessment of the anticipated effects and subsequent impacts on scenic amenity associated with the revised design. The assessment has been organised into the following key receptor groups identified in the EIS:

- Offsite receptors: nearby residences/properties; residents living in Townsville's outer suburbs and nearby townships; residents, visitors and tourists visiting local attractors; residents and visitors using recreational tracks; residents and visitors travelling along scenic tourist drives and motorists using major and minor roads in the Study Area; users of aircraft such as airplanes, hot air balloons or paragliders. In addition information is provided on underwater receptors.
- Onsite receptors: people visiting and working at the Port of Townsville.

A number of photomontage representations were compiled and included in the EIS to illustrate the long-term visual implications of the PEP. All were produced based on a theoretical layout. Actual above-wharf projects would be based on the requirements of the future port tenants and products, and would be subject to separate development approvals. It is noted that these montages have not been updated to show the expanded land reclamation for the purposes of the AEIS as they are considered to be sufficiently illustrative of the location and nature of the likely impact. However, the descriptions and assessment of the proposed development have been updated where appropriate for each of the selected viewpoints to describe any changes that are likely to arise as a result of the additional land area. A summary of the changes in contrast to the previous assessment is described in Table 19.5.

Table 19.5 Comparative assessment of design refinement against original EIS assessment

Assessment	Significance Assessment in relation to Design Refinement
Baseline	
Viewpoint 1: The Rocks Guesthouse, Cleveland Terrace, Melton Hill	No change: From this angle and distance, the additional land reclamation area is located beyond the area already considered, so this would not significantly change the extent of visibility of the expansion works or consequent significance of visual impact.
Viewpoint 2 – Holiday Inn Tower in Townsville CBD	No change: The additional land reclamation area is located beyond the area already assessed in the EIS. Whilst the additional land would be visible it would not significantly change the visual impact of the expansion works.
Viewpoint 3 – Castle Hill	No change: The expanded land reclamation area is located beyond the area already assessed in the EIS but, due to the elevated nature of this vantage point, would be a noticeable increase in land area. This would encroach to a slightly greater extent on the view of open water between the coast and Magnetic Island. Whilst the additional land reclamation area would be visible it occurs within the context of existing port activities so does not significantly affect the magnitude of change or significance of the impact.
Viewpoint 4 – Mount Stuart Scenic Lookout	No change: The additional land reclamation area would be discernible and slightly extends the extent of port land visible to the north and east of the existing area. However, due to the distance this represents a minor incursion into the overall view so would not change the magnitude of change category or the significance of the change overall.
Viewpoint 5 – The Strand Pier	No change: The additional land reclamation area is located behind the expansion area already assessed in the EIS. As the new land would be located entirely beyond the area already assessed there would be no change in the magnitude of change or significance of the change from this vantage point.
Viewpoint 6 – Kissing Point Rock Pool	No change: From this vantage point, the additional land reclamation area is located behind the expansion area already assessed in the EIS so is only likely to be perceptible if additional elevated structures are constructed on this additional land area. As the new land would be located entirely beyond the area and structures already assessed the magnitude of change and significance would not meaningfully change.
Viewpoint 7 – Western Breakwater, near Townsville Entertainment Centre	No change: From this vantage point, the additional land reclamation area is located behind the expansion area already assessed so the magnitude of change is not anticipated to meaningfully change.
Viewpoint 8 – Freemasons Pallarenda Park	No change: From this vantage point, the additional land reclamation area is located behind the expansion area already assessed so the magnitude of change is not anticipated to meaningfully change.
Viewpoint 9 – Passenger Ferry Route between Townsville and Magnetic Island	No change: From this vantage point, the additional land reclamation area would be visible resulting in a slight further increase in incursion of land into the open water landscape east of the former proposed reclamation area. However, the overall magnitude of change and significance would not be changed by the slight increase in visible land as a result of the Project description.
Viewpoint 10 – Nelly Bay, Magnetic Island	No change: The additional area of land reclamation area would marginally extend the appearance of the developed area eastwards and northwards; however due to the distance and angle of view this does not affect the overall magnitude or significance of the proposed change.
Viewpoint 11 – Hawkings Point Lookout, Magnetic Island	No change: The additional expansion area would be perceptible from this vantage point, extending the extent of the developed area slightly eastwards and northward. However, at this distance the magnitude of change would not change as a result of this, so the significance of the impact would remain as currently assessed.
Viewpoint 12 - Northerly View from Benwell Road, South of the Townsville Marine Precinct	No change: From this location the additional reclamation area would be perceptible to a small extent, but is largely screened by foreground activities and the reclamation area assessed in the EIS. Therefore the magnitude of change is assessed to be the same.

Assessment	Significance Assessment in relation to Design Refinement
Viewpoint 13 – Indicative View from the Air	No change: The additional reclamation area arising from the design modification would be noticeable in its entirety from this 'birds-eye' vantage point but, due to scale and the long - distance of the viewer from the development, this is not considered to change the magnitude of impact or significance of the impact.

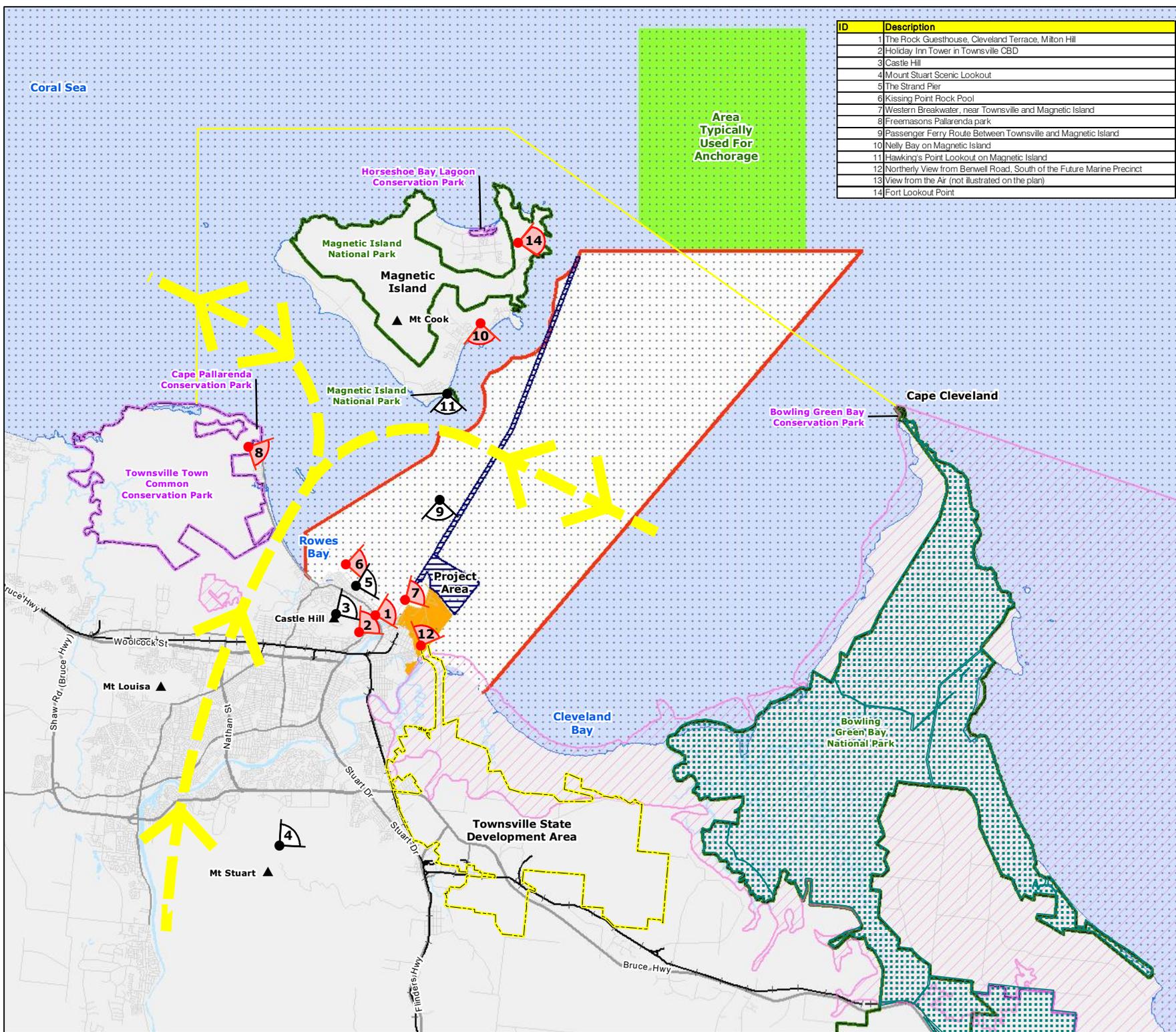
An additional viewpoint has been included in the AEIS in response to submissions in order to consider further the impacts of the PEP, including shipping movements on views from Magnetic Island National Park. This viewpoint has been labelled as Viewpoint 14 and, therefore, appears out of sequence in the text, in order to maintain the original viewpoint numbering to allow easier cross referencing between the EIS and AEIS.

PORT EXPANSION PROJECT
AEIS

Representative Viewpoint
Location Plan

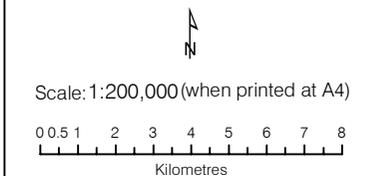
Figure 19.2

ID	Description
1	The Rock Guesthouse, Cleveland Terrace, Milton Hill
2	Holiday Inn Tower in Townsville CBD
3	Castle Hill
4	Mount Stuart Scenic Lookout
5	The Strand Pier
6	Kissing Point Rock Pool
7	Western Breakwater, near Townsville and Magnetic Island
8	Freemasons Pallarenda park
9	Passenger Ferry Route Between Townsville and Magnetic Island
10	Nelly Bay on Magnetic Island
11	Hawking's Point Lookout on Magnetic Island
12	Northerly View from Benwell Road, South of the Future Marine Precinct
13	View from the Air (not illustrated on the plan)
14	Fort Lookout Point



Legend

- ▲ Prominent Natural Landmarks
- Port Limits
- ▨ Project Area
- ▭ Townsville State Development Area
- ▭ Existing Port Land
- ▭ Marine Park Exclusion Area
- ▭ Government Reserves
- ▭ National Park or Forest
- ▭ Bowling Green Bay Ramsar Site
- ▭ Directory of Important Wetland Sites (DIWA) - Burdekin -
- ▭ Townsville Coastal Aggregation (QLD 005)
- ▭ GBRWHA/National Heritage Place
- ▭ Area Typically Used For Anchorage
- Flight Path
- 👁 Photomontage Location
- 📍 Viewpoint Location



PROJECT ID 60161996
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 FILE NAME 60161996_PLN_152

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 GBRMP Zones - Queensland Government 2012
 World Heritage Area - Queensland Government 2012
 Ramsar - Queensland Government 2012

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Table 19.6 Viewpoint 14 – Forts Lookout, Magnetic Island

Assessment	Description
Baseline Assessment	
Location and description	<ul style="list-style-type: none"> ▪ This viewpoint represents elevated north-easterly to south-easterly views from the Forts Lookout near the Signal Station located on the Forts Track, located in the north-eastern part of Magnetic Island National Park towards Cleveland Bay. ▪ Magnetic Island is an island off the coast of Townsville featuring 'spectacular natural landscapes and seascapes including boulder-strewn headlands, hoop pines, sandy beaches and fringing coral reefs' (DERM, 2006a). ▪ The Forts is a key lookout is a key vantage point identified in the Magnetic Island National Park walking track map (QPWS, 2011) that offers panoramic views north to Horseshoe Bay, eastwards across the WW2 communications tower and Florence Bay and south to Cleveland Bay. ▪ The Forts is a popular lookout that attracts a medium number of people daily, including tourists, visitors, and residents using walking tracks for recreation and fitness. ▪ This viewpoint has been selected to represent the impact on the scenic values of the GBRWHA and GBRMP. However, this viewpoint has been selected to consider the impact of shipping movements on views from Magnetic Island as opposed to port infrastructure which is addressed by Viewpoints 10 and 13. The waterscape in the middle ground to the east and south is located in the area excised from the GBRMP. However, the shoreline and the landscape of Magnetic Island and the wider seascape of the Coral Sea are located within the GBRWHA which is recognised for its 'exceptional natural beauty and aesthetic importance'. ▪ The Port is approximately 14 km in direct distance to the south-southwest of this viewpoint. The shipping channel is located approximately 2.4 km and the typically used anchorage area is located approximately 4.8 km from this view point.
Key sensitivities	<ul style="list-style-type: none"> ▪ The natural, cultural and historical value of Magnetic Island National Park, resulting in a popular tourist destination and iconic national asset. ▪ The viewpoint represents views from a location of national importance where the user's interest is specifically focused on the landscape.
Overall inherent sensitivity	High
Evaluation	
Judgement of magnitude of change (during both the construction and operational phases)	<p>The view is of the wider GBRWHA. The shipping and dredging activities would impact this and similar views of the GBRWHA and GBRMP from walking tracks within the Magnetic Island National Park. Activities associated with the PEP during construction and operation would be detectable from this elevated viewing location which overlooks the Sea Channel. Dredge operations would be visible during construction. Shipping movements would be visible during operation. It is assumed that at peak times up to 10 ships up to Panamax size would pass through the channel per day. No anchorage is permitted within or adjacent to the Sea Channel as shown on Figure 19.2; however, an unofficial area currently used for anchorage is located in the Coral Sea north-east of the Sea Channel. The additional berths within the Port may decrease the requirement for offshore anchorage; however, for the purposes of this assessment it has been assumed that this practice will continue.</p> <p>Ships travelling to the Port and recreational boats can already be seen from this location, as indicated on the viewpoint. As a result of the PEP, it is anticipated there will be a noticeable increase in the number of shipping movements, although this would occupy a relatively small area of the view. This would potentially decrease the sense of 'remoteness' of the GBRWHA but the broader scenic values of the GBRWHA would be maintained.</p> <p>As this viewpoint involves walking some distance uphill within a national park it is anticipated to have very limited numbers of people at night. However, as it is not closed to the public at night, it is considered in the assessment. The baseline lighting assessment illustrated that a high level of existing lighting exists associated with the Port and Townsville CBD, which lies some distance from the vantage point, and the increase would be barely perceptible. Additional light associated with the ships may be perceptible but would not be perceived as an adverse effect on views.</p>
Judgement of significance of impact (daytime)	Moderate adverse impact, due to the high sensitivity to change combined with a minor magnitude of change.
Judgement of significance of impact (night)	Moderate neutral impact, due to the high sensitivity to change combined with a minor magnitude of change.

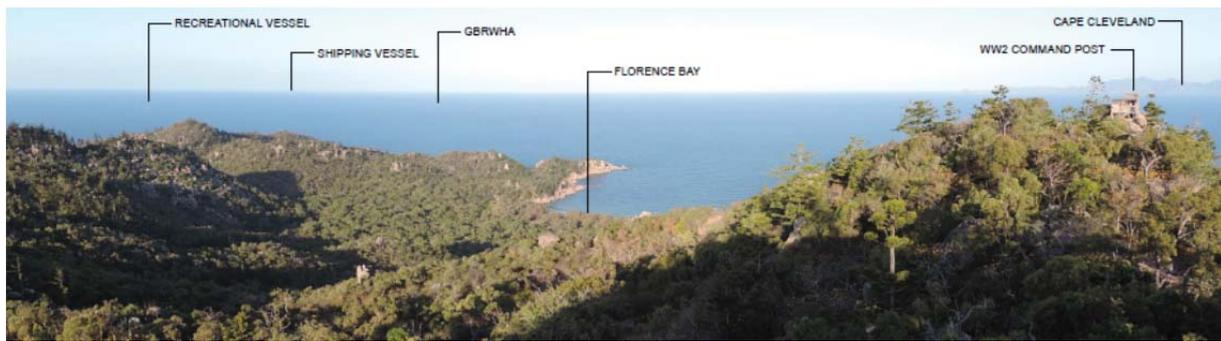


Figure 19.3 Viewpoint 14 – The Forts Lookout Magnetic Island

19.3.4.1.3 Scenic Amenity Impact Assessment Summary

The anticipated impacts of the Project on scenic amenity during the daytime are summarised in Table 19.7. These are based on the 14 selected representative viewpoints and take into account the existing port facilities and document the anticipated change in impact due to the Project. Night-time impacts due to lighting are typically of the same significant level but are more neutral in effect since many viewers would prefer night-time views of port lighting and would access vantage points (such as Castle Hill) to enjoy the view.

Table 19.7 Summary of Impact on Publicly Accessible Viewpoints

Viewpoint	Overall inherent sensitivity	Magnitude of Change	Significance of unmitigated impact	Significance Change from EIS
Nearby residence/property				
Viewpoint 1 – The Rocks Guesthouse, Cleveland Terrace, Melton Hill (refer Figure B.17.10 of the EIS)	Medium	Moderate (noticeable)	Moderate (adverse)	No change
Residents living in Townsville's CBD and outer suburbs				
Viewpoint 2 – Holiday Inn Tower in Townsville CBD (refer Figure B.17.11 of the EIS)	High	Moderate (noticeable)	Moderate (adverse)	No change
Local attractors				
Viewpoint 3 – Castle Hill (refer Figure B.17.12 and Figure B.17.13 of the EIS)	High	Moderate (noticeable)	Moderate (adverse)	No change
Viewpoint 4 – Mount Stuart scenic lookout (refer Figure B.17.14 and Figure B.17.15 of the EIS)	High	Minor (detectable)	Moderate (neutral)	No change
Viewpoint 5 – The Strand Pier (refer Figure B.17.16 and Figure B.17.17 of the EIS)	Medium	Moderate (noticeable)	Moderate (adverse)	No change
Viewpoint 6 – Kissing Point Rock Pool (refer Figure B.17.18 of the EIS)	Medium	Moderate (noticeable)	Moderate (adverse)	No change
Viewpoint 7 – Western breakwater, near Townsville Entertainment Centre (refer Figure B.17.19 of the EIS)	Medium	High (considerable)	Moderate (adverse)	No change
Viewpoint 8 – Freemasons Pallarenda Park (refer Figure B.17.20 of the EIS)	Medium	Moderate (noticeable)	Moderate (adverse)	No change
Viewpoint 9 – Passenger ferry route between Townsville and Magnetic Island (refer Figure B.17.21 and Figure B.17.22 of the EIS)	Medium	Moderate (noticeable)	Moderate (neutral)	No change
Viewpoint 10 – Nelly Bay on Magnetic Island (refer Figure B.17.23 of the EIS)	Medium	Moderate (noticeable)	Moderate (adverse)	No change
Recreational tracks				
Viewpoint 11 – Hawkings Point Lookout, Magnetic Island (refer Figure B.17.24 and Figure B.17.25 of the EIS)	High	Moderate (noticeable)	Moderate (adverse)	No change
Viewpoint 14 – Forts Lookout, Magnetic Island (refer Figure 19.3 of the AEIS)	High	Moderate (noticeable)	Minor (adverse)	Not previously assessed
Roads				
Viewpoint 12 – Northerly view from Benwell Road, south of Townsville Marine Precinct (refer Figure B.17.26 of the EIS)	Medium	Minor (detectable)	Minor (neutral)	No change

Viewpoint	Overall inherent sensitivity	Magnitude of Change	Significance of unmitigated impact	Significance Change from EIS
Air				
Viewpoint 13 – Representative view from the air (refer Figure B.17.27 of the EIS)	Medium	Minor (detectable)	Minor (neutral)	No change
People visiting and working at the port				
No viewpoints used to represent views from this receptor group				

19.3.4.2 Mitigation measures

The submissions requested the need for careful consideration to be given to the scenic amenity impacts of the proposals during the construction and operational phases of the Project.

Mitigation measures to reduce the visual amenity impact by the Project are outlined in the existing POTL Construction and Operational Environmental Management Plans, in accordance with the existing POTL Environmental Management System. The POTL Environmental Management System will be updated to accommodate the following measures.

- Management of lighting to reduce direct light spill from the site are consistent with the existing Operational Health and Safety and land use codes.
- Suitable measures are outlined in Section B.17.5 of the EIS and would need to be explored further at detailed design phase.

Implementation of other control measures would include the following.

- The new site will be fenced and access controlled in a similar manner to the existing port.
- POTL tenant activities will comply with existing port operational protocols and meet the overall environmental requirements established for the port and other conditions (e.g. buildings and equipment are to comply with maximum height and visual amenity provisions established by the port).
- Fugitive dust (refer to Air Quality, Chapter B.9 of the EIS, and amended Air Quality Section 11.0).
- Stormwater releases (refer to Water Resources, Chapter B.2 of the EIS, and amended Water Resources Section 4.0).
- Suspended sediment from dredging (refer to Dredge Management Plan, Chapter C2.1 of the EIS, and Appendix B1 of the AEIS).
- Waste control measures, including shipping waste (Chapter B.12 of the EIS, and Section 14.0 of the AEIS).
- Progressive stabilisation of reclaimed land and reducing disturbed and exposed areas (e.g. access road verges).
- Exterior lighting is to comply with relevant guidelines.

19.3.5 Summary

The revised design remains current with the overall risk ratings provided in Section B.17.7 of the EIS. The risks are based on the worst case scenario i.e. those impacts to scenic amenity occurring within relatively close proximity to the PEP. Beyond the identified study area, scenic amenity values would not be directly affected.

19.4 Conclusion

The Project will affect the views of several near and distant receptors in the Townsville/Magnetic Island locality. Impacts of moderate significance would be generated at the local level. As these impacts are classified as 'almost certain' this results in a high residual risk rating at the local level, including views within the GBRWHA. Scenic amenity impacts on the wider GBRWHA are of lesser significance and low risk due to visual containment. These impacts arise principally as a result of cumulative and perceptual aspects.

The implementation of mitigation measures to manage impacts on visual values as identified in the EIS would assist in integrating the port infrastructure into its landscape context at a local level but would not change the overall risk level.