Summary of key outcomes:

Representative view locations were selected at the immediate, local and regional level to determine the likely visual impact of the Port Botany Expansion on surrounding areas. The visual impact on views from the air and from the waters of Botany Bay were also assessed.

When viewed from the adjacent foreshore corridor or approaches to Sydney Airport, the proposed development would have a moderate or high visual impact and would partially impede views of Botany Bay. The local area views of the Port Botany Expansion would be low or moderate due to existing vegetation and structures which would impede views of the new terminal. At the regional scale, the Port Botany Expansion would generally have at most a low visual impact due to the long viewing distances. Views from the waters of Botany Bay would vary with distance. All views of the new terminal would be seen within the context of the existing port and other industrial uses which are located immediately adjacent to the site of the proposed expansion.

Mitigation measures to minimise the visual impact of the proposed development would include planting native vegetation screening along the foreshore corridor between the Mill Stream and Penrhyn Road, partial screening of terminal operations by the proposed noise wall and a terminal landscaping buffer strip, lighting control measures, use of low profile quay cranes, and careful selection of materials and colours to minimise the contrast and reflectivity of buildings and equipment at the new terminal. In addition, viewers would have an opportunity to see an increase in visually interesting port related activities including the movement of container ships, cranes and containers.

25.1 Introduction

The following assessment of visual impacts of the Port Botany Expansion is based on the report by Architectus Sydney Pty Ltd titled *Port Botany Expansion Visual Impact Assessment* (2003). This report is presented in **Appendix T**.

The visual impact assessment was carried out through an analysis of the existing visual environment, the use of visual simulations of the Port Botany Expansion from representative view locations within the visual catchment, and the assessment of visual impact from views in the immediate vicinity, local and regional levels and from the air and water.

25.2 Existing Visual Environment

The proposed site for the Port Botany Expansion is located in northern Botany Bay within Port Botany. The Port Botany landscape is dominated by the existing container terminals and associated infrastructure.

The existing container terminals cover an area of more than 80 ha and consist of large flat expanses of asphalt with multi-coloured shipping containers stacked up to about 9 m high. At the terminals, there are various types of container handling equipment including 12 quay cranes, which are painted either red or yellow and are more than 80 m in height as well as rail mounted gantries, rubber tyred gantries and straddle carriers.

Immediately to the south of the container terminals is the Bulk Liquids Berth, several large bulk liquid storage tanks and the Molineux Point revetment wall. Approximately 1 km to the west of the proposed site is Sydney Airport's Parallel Runway. The area to the northeast of Port Botany is dominated by industrial land uses as described in **Chapter 14** *Land Use*. These industrial facilities impact the view of the proposed site and from many locations in the Botany Bay region.

The location of the proposed Port Botany Expansion on the edge of Botany Bay makes it visible from many areas around the Bay including Foreshore Beach, La Perouse, Kurnell, Sydney Airport and Botany Bay itself.

Elevated dune areas, vegetated with trees and shrubs, within Sir Joseph Banks Park screen the proposed site from the open space and residential areas from the north. Coastal heath and shrubs behind Foreshore Beach partially obscure views to the proposed site from Foreshore Road.

The visual quality of the site and the surrounding area of Port Botany is relatively low. Factors which contribute to this assessment include the predominately industrial landscape, the limited and low vegetation, and the relatively flat topography which provides views of industrial and transport-related infrastructure from relatively long distances across land and water. However, the industrial nature of the landscape and views of dramatic structures such as the quay cranes and Sydney Airport appeal to some viewers.

25.3 Assessment Criteria

The potential visual impact of the proposed development would result from the combination of two factors:

- visibility of the components of the development; and
- visual absorption capacity of the landscape in which the components are placed.

The visibility and the visual absorption capacity of each representative view location have been assessed to determine the overall visual impact from each location. Visibility and visual absorption capacity are defined below.

25.3.1 Visibility

"Visibility" is a measure of the extent to which particular activities/components of a proposal may be visible from surrounding areas, the relative number of viewers, the period of view, viewing distance and context of view. The rationale for the assessment is that if a proposal is not visible the impact is nil; if the number of people who would potentially see the proposal is low, then the visual impact would be lower than if a large number of people had the same view.

For the purpose of this study, the general categories of visibility have been defined broadly as:

- High (H) – where a large number of people would see the proposed new terminal at short distance over a short, moderate or long period of time;
- Moderate (M) – where a small number of people would see the proposed new terminal at a short or medium distance over a moderate or long period of time, or a moderate number of people would see the proposed new terminal at a medium distance over a short, moderate or long period of time, or a large number of people would see it at a medium or long distance over a short period of time; and
- Low (L) – where a small number of people would see the proposed new terminal at long distance over a short, moderate or long period of time.

The procedure for assessing site visibility involved:

- determination of various categories and situations from which components of the proposed development could potentially be visible (eg. motorist, visitor, resident); and
- field inspection to determine the extent of visibility.

For the purpose of this EIS, the criteria listed in **Table 25.1** have been determined and used in the visibility assessment.

Table 25.1 Visibility Assessment Criteria

CRITERIA	DEFINITION
Number of Viewers	
▪ High	▪ >1,000 people per day
▪ Moderate	▪ 100 -1,000 people per day
▪ Low	▪ <100 people per day
View Distance	
▪ Long distance	▪ >3 km
▪ Medium distance	▪ 1.5 km – 3 km
▪ Short distance	▪ <1.5 km
Period of View	
▪ Long term	▪ >120 minutes
▪ Moderate term	▪ 1-120 minutes
▪ Short term	▪ < 1 minute

25.3.2 Visual Absorption Capacity

"Visual Absorption Capacity" is an estimation of the capacity of the landscape to absorb development without creating significant visual change resulting in a reduction in scenic quality. The capacity to absorb development is primarily dependent on vegetation cover, landform and the presence of other development.

Coastal areas generally have a low visual absorption capacity due to the availability of uninterrupted views across water. This is because visual contrast is increased for views of infrastructure set in a background of open water. However, visual contrast can be reduced by the presence of existing infrastructure. If, for example, a visually prominent wharf already exists, then the capacity of that section of the coastline to visually absorb an additional section of wharf is higher than a similar section of coastline that has a natural undeveloped visual character.

In the context of the proposed site, the visual absorption capacity is significantly increased by the presence of existing infrastructure including the existing container terminals, the Bulk Liquids Berth, Molineux Point, Sydney Airport and the industrial landscape northeast of the proposed site if the new terminal is viewed from Botany Bay.

For the purposes of this assessment, the criteria listed in **Table 25.2** have been determined and used in the assessment of visual absorption capacity.

Table 25.2 Visual Absorption Capacity Criteria

CRITERIA	DEFINITION
High	Landscape able to absorb development. Low degree of visual contrast would result.
Moderate	Landscape able to absorb some development. Some visual contrast would result.
Low	Landscape unable to absorb development. High degree of visual contrast would result.

25.3.3 Visual Impact Rating

A matrix was developed as shown in **Table 25.3** to compare the visibility rating with the visual absorption capacity rating to determine the visual impact rating.

Table 25.3 Visual Impact Rating Matrix

	VISIBILITY		
	LOW	MODERATE	HIGH
VISUAL ABSORPTION RATING	VISUAL IMPACT RATING		
High	Low	Low	Moderate
Moderate	Low	Moderate	High
Low	Low	Moderate	High

25.3.4 Viewing Zones

The potential view catchment, or the areas from which the new terminal would be visible, would extend longer distances across Botany Bay due to the direct views across the Bay, and shorter distances onshore due to the partial and complete screening effects of various existing landscape elements.

In order to assess the potential visual impacts of the Port Botany Expansion, viewing zones based on the distance from the proposed development were defined as follows (**Figure 25.1**):

- immediate vicinity (< 1.5 km);
- local area (1.5 km – 3 km);
- regional area (3 km – 6 km);
- from the air; and
- from the water.

Representative view locations (**Figure 25.2**) were selected from each zone and the visual impact of the new terminal assessed at each location. The assessment also included a determination of the visual impact from the air and from water in consideration of the proximity of the proposed development to Sydney Airport, the major international gateway to Australia, and the significance of Botany Bay for marine activities.

25.4 Visual Impact Assessment

It is anticipated that in terms of visibility, the potential impacts of the new terminal during construction and operation would be similar (i.e. activities, structures and mobile elements would be visible from the same view locations during both construction and operation). Therefore, the visual impact rating described in this section could also apply to construction activities, although the visual elements during construction would tend to be of a smaller scale.

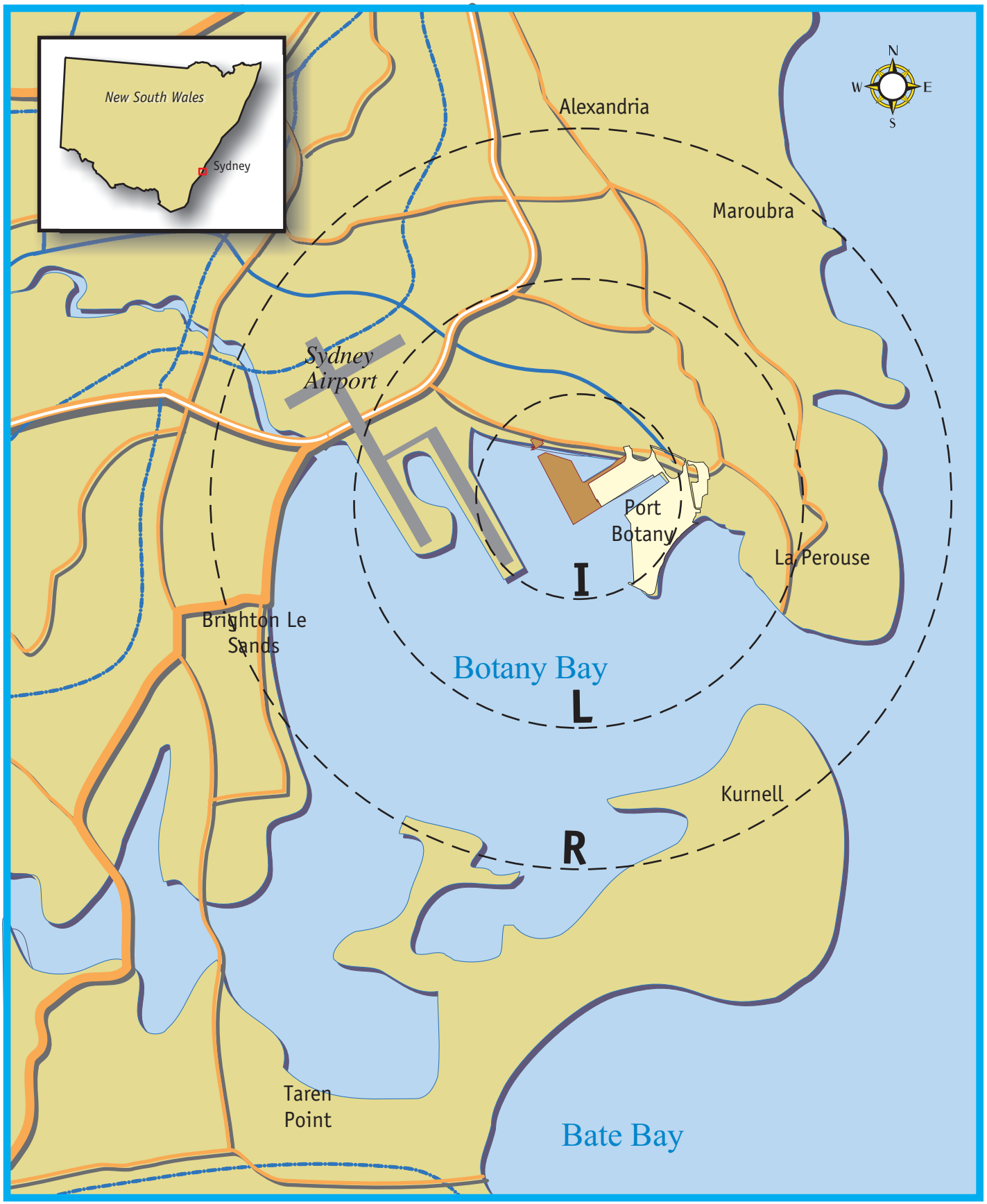
25.4.1 Construction

Visual impacts would be created by the following elements during construction:

- construction work areas;
- construction equipment;
- dredging equipment; and
- reclaimed surface.

Turbidity is not anticipated to create a visual impact outside of the immediate dredging and reclamation area due to turbidity control measures as described in **Chapter 16** *Hydrology and Water Quality*. Likewise, dust emissions would be controlled and would not be expected to create visual impacts as described in **Chapter 23** *Air Quality*.

Maritime construction equipment would not stand out in the context of port shipping traffic. Night lighting would be limited to dredging and reclamation offshore and to security lighting of construction work areas onshore. Light spill toward residential and industrial areas to the north and northeast would be partially screened by the existing vegetation and elevated dunes to the north of Foreshore Road. Construction lighting when viewed from the distant foreshores of Botany Bay would not be expected to significantly add to the lighting from the existing terminals and ships.



Source: Architectus Sydney Pty Ltd 2003

0 2.5km

Viewing Zones **Figure 25.1**

Proposed Port Botany Expansion

Viewing Zones

I Immediate Vicinity (<1.5km)

L Local Area (1.5km - 3km)

R Regional Area (3km - 6km)

25.4.2 Operation

Visually dominant elements that would create visual impacts during the operation of the new terminal include the following:

- hardstand and embankment – would provide a visual contrast to the Bay environment;
- container stacks – would provide vertical element to the new terminal;
- quay cranes and terminal equipment – would stand out as prominent vertical features;
- terminal lighting – would have the potential to increase light spill onto Foreshore Beach, Penrhyn Estuary and add to the existing terminal lighting from Port Botany and would be visible from Botany Bay foreshore areas; and
- ships – their movement and bulk would add to the visual impact of the terminal.

The visual contrast provided by these elements within the existing landscape would be moderated by the existing port facilities and the wider industrial landscape. The degree of contrast would be further reduced by careful attention to the colour, shape, scale, texture, reflectivity of structures and where possible by avoiding isolated views of vertical structures against the skyline, as discussed in Section 25.5.

In addition to the potential visual impacts of the proposed Port Botany Expansion, there are also several new viewing opportunities which would be created by the proposed works along the foreshore corridor near the port, which many visitors to the area would find visually interesting and dynamic. These opportunities would include views of operations at the new terminal, planes landing and taking off at Sydney Airport, and migratory shorebirds within Penrhyn Estuary. To make the most of these opportunities the proposal would include the following (refer to **Figures 7.1a**, **7.1b** and **7.1c**):

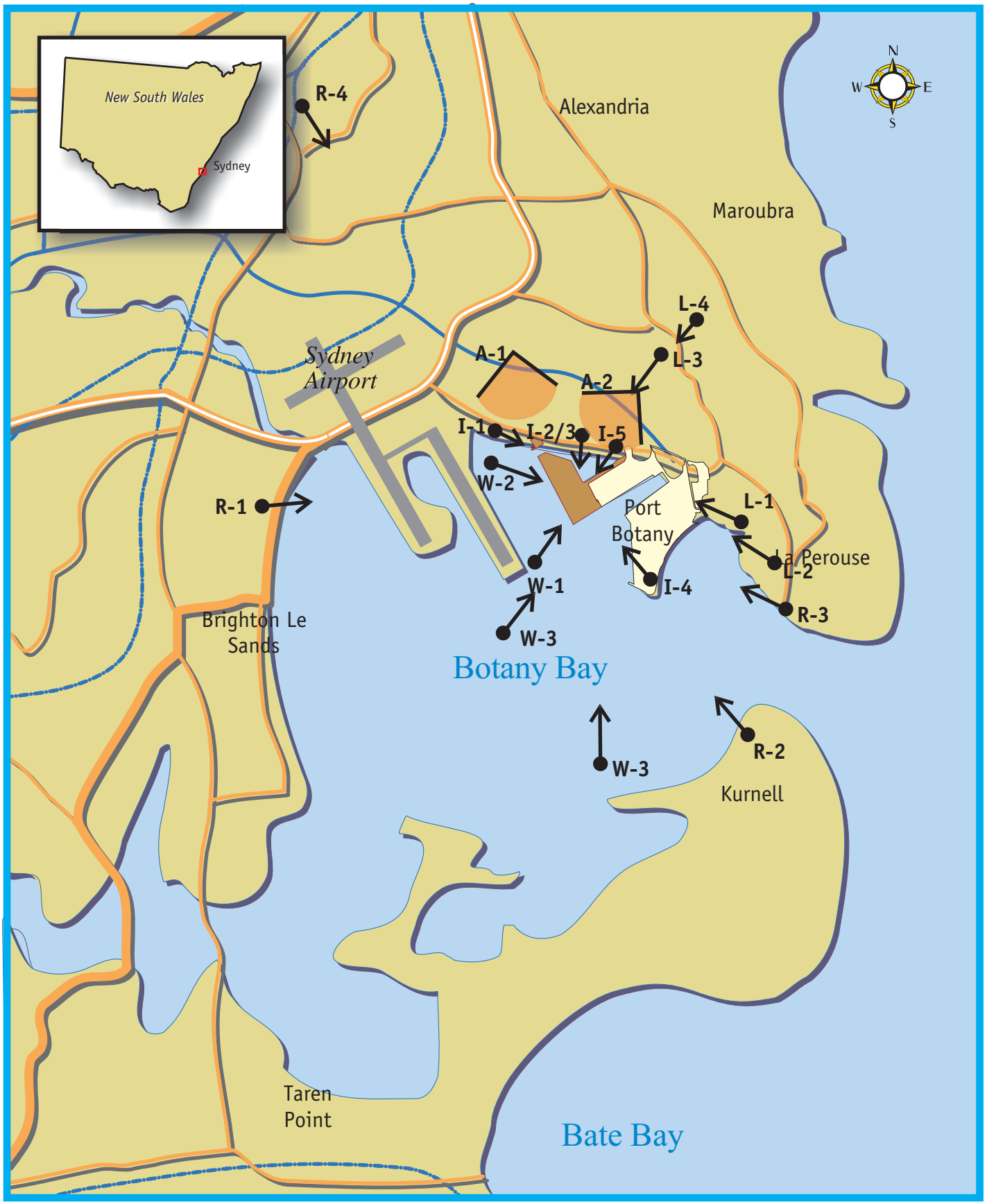
- an elevated viewing platform on a landscape mound (up to 10m LAT) near the mouth of the Mill Stream;
- a public promenade along the rock face at the new boat ramp area which would link to a public viewing area at the southwestern corner of the boat ramp;
- a viewing platform adjacent to the Government Jetty remains which would allow observation of wildlife within Penrhyn Estuary; and
- the pedestrian bridge over Foreshore Road which would provide viewing opportunities over Botany Bay.

The following sections list the representative view locations, together with the category of viewer, context of view, relative numbers of viewers, approximate distance of view from the proposed new terminal and the likely period of view. A visibility rating is derived from these elements, and together with the visual absorption capacity and associated visual simulations, a visual impact rating is provided for each of the representative view locations. Note that the visual simulations are only indicative representations of what the proposed new terminal would look like once fully developed.

25.4.3 Immediate Vicinity

The following representative views of the proposed Port Botany Expansion from the immediate vicinity have been assessed (**Figure 25.2**):

- Foreshore Road, Banksmeadow (I-1);
- Sir Joseph Banks Park lookout, Banksmeadow (I-2);



Source: Architectus Sydney Pty Ltd 2003

0 2.5km

View Locations Assessed for Visual Impact

Figure 25.2

Proposed Port Botany Expansion

Viewing Zones

I Immediate Vicinity (<1.5km)
L Local Area (1.5km - 3km)
R Regional Area (3km - 6km)
A Air
W Water

- Foreshore Beach (I-3);
- Molineux Point (I-4); and
- Penrhyn Estuary (I-5).

Foreshore Road

Viewing situation	Foreshore Road, looking southeast
Category of view	Motorists
Context of view	Glimpses of Botany Bay from moving vehicles
Relative number of viewers	High
Distance of view	< 1.5 km
Likely period of view	Short term
Visibility	Moderate
Visual absorption capacity	Moderate
Visual impact rating	Moderate

Comment

The proposed Port Botany Expansion would have a moderate visual impact on views of motorists using Foreshore Road. The new terminal would be partially visible through existing and new planting on the western side of Foreshore Road forming part of the public recreation and ecological plan for the Foreshore Road/Bay-side interface.

While a high number of motorists would view the Proposed Port Expansion from this vantage point, their likely period of view is low and expected to be less than 1 minute.

The visual absorption capacity of the Foreshore Road environment is moderate when viewed by motorists travelling southeast. In the background the existing Port Botany cranes are visible and the degree of visual contrast between the proposed terminal and Foreshore Beach would be relatively high.

Existing view, Foreshore Road. View looking southwest showing the Botany Bay beachfront vegetation and the cranes at Port Botany in the distance.

View of proposed Port Botany Expansion, Foreshore Road. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Sir Joseph Banks Park

Viewing situation	Sir Joseph Banks Park lookout, Banksmeadow, looking southwest
Category of view	Visitors to park
Context of view	Elevated panoramic views of Botany Bay and existing container terminals and Sydney Airport runways
Relative number of viewers	Low
Distance of view	< 1.5 km
Likely period of view	Moderate term
Visibility	Moderate
Visual absorption capacity	Low
Visual impact rating	Moderate

Comment

The Port Botany Expansion would have a moderate visual impact when viewed from Sir Joseph Banks Park lookout. The moderate visual impact is due to the close proximity of the new terminal to the lookout and the elevated position of this view. However, relatively few people visit the lookout and their likely period of view is moderate.

The potential visual impact would be reduced by the vegetation proposed as part of the public recreation and ecological plan, which when grown to maturity would partially screen the new terminal and port related structures from this vantage point.

Views south to Penrhyn Estuary and the Foreshore Beach would be screened by vegetation. The new terminal would be viewed in the context of the existing container terminals with similar visible structures. Visitors to the lookout would have the opportunity to view the increased activity at Port Botany resulting from the proposed Port Botany Expansion.

Existing view, Sir Joseph Banks Park. View looking southwest over Botany Bay showing the Sydney Airport runways, Foreshore Road, Foreshore Beach and Port Botany.

View of proposed Port Botany Expansion, Sir Joseph Banks Park. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Foreshore Beach

Viewing situation	Foreshore Beach, looking southeast
Category of view	Visitors to Foreshore Beach
Context of view	Low level panoramic views of Botany Bay, existing container terminals and Sydney Airport Parallel Runway
Relative number of viewers	Moderate
Distance of view	< 1.5 km
Likely period of view	Long term
Visibility	High
Visual absorption capacity	Low
Visual impact rating	High

Comment

The visual impact of the proposed Port Botany Expansion would be high when viewed from Foreshore Beach. The high visual impact from this vantage point is due to the close proximity of the new terminal, the moderate number of viewers and the long term likely period of view.

Views of Botany Bay would be screened by the proposed Port Botany Expansion. The new terminal would be seen within a family of existing port related structures at the existing container terminals. Visitors to the beach would have the opportunity to view the increased port related activity at Port Botany resulting from the proposed Port Botany Expansion.

Existing view from Foreshore Beach. View looking southeast toward the existing container terminals and bulk liquid storage tanks (white structures in centre of view) at Port Botany.

View of proposed Port Botany Expansion, Foreshore Beach. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Molineux Point

Viewing situation	Molineux Point, looking northwest
Category of view	Visitors to Molineux Point
Context of view	Panoramic views of Botany Bay and existing P&O Ports terminal
Relative number of viewers	Low
Distance of view	< 1.5 km
Likely period of view	Moderate term
Visibility	Moderate
Visual absorption capacity	Moderate
Visual impact rating	Moderate

Comment

The visual impact of the Port Botany Expansion from Molineux Point would be moderate. The new terminal and related structures would be viewed in the context of existing port related structures. While a portion of the proposed new port would be visible relatively few people visit Molineux Point and those that do stay for a moderate period.

Existing view from Molineux Point. View looking north over the existing P & O Ports container terminal and bulk liquid storage tanks.

View of proposed Port Botany Expansion, Molineux Point. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Penrhyn Estuary

Viewing situation	Penrhyn Estuary from location of historic remains of Government Pier
Category of view	Visitors to proposed boardwalk and viewing platform
Context of view	Panoramic views of Botany Bay, existing container terminals, Sydney Airport's Parallel Runway and historic remains of Government Pier
Relative number of viewers	Low
Distance of view	< 1.5 km
Likely period of view	Moderate term
Visibility	Moderate
Visual absorption capacity	Low
Visual impact rating	Moderate

Comment

The Port Botany Expansion would have a moderate visual impact when viewed from this vantage point. The visual impact is due to the close proximity of the new terminal to Penrhyn Estuary. However, relatively few people visit this vantage point and their likely period of view is moderate. When viewed from this vantage point, the proposed Port Expansion would displace existing panoramic views of Botany Bay to the west and southwest. The proposed boardwalk and viewing platform would give viewers at this vantage point the opportunity to see port related activities and migratory shorebirds within Penrhyn Estuary.

Existing view, Penrhyn Estuary. View looking southwest over Botany Bay showing the Sydney Airport Parallel Runway, the existing container terminals at Port Botany and the historic remains of Government Pier.

View of the proposed Port Botany Expansion, Penrhyn Estuary. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Based on the above, the visual impact of the proposed Port Botany Expansion, when viewed from representative view locations in the immediate vicinity, would have a moderate or high visual impact.

The elevated dune areas vegetated with trees and shrubs located within Sir Joseph Banks Park would screen the proposed new terminal from the open space and residential areas to the north. Coastal heath and shrubs behind Foreshore Beach would partially obscure views of the proposed site from Foreshore Road. The proposed new landscaping of native species along the foreshore corridor would further screen views of the new terminal from Foreshore Road and Sir Joseph Banks Park.

Whilst the new terminal would have a moderate visual impact on views from existing elevated viewing platforms at Sir Joseph Banks Park, Molineux Point and the proposed boardwalk and lookout at Penrhyn Estuary, these locations provide opportunities for visitors to view the operation of the proposed new terminal as well as the operations of Sydney Airport .

25.4.4 Local Views

The following local representative views of the proposed Port Botany Expansion have been assessed (**Figure 25.2**):

- Kooringai Ave, Yarra Bay Bicentennial Park (L-1);
- Elaroo Ave, Phillip Bay (L-2);
- Beauchamp Road, Hillsdale (L-3); and
- Beauchamp Road, Matraville (L-4).

Visual simulations of the proposed Port Botany Expansion have not been prepared to assess the visual impact on these local views, because the new terminal would be difficult to distinguish amongst the background of the existing container terminals and obstructions such as vegetation and buildings.

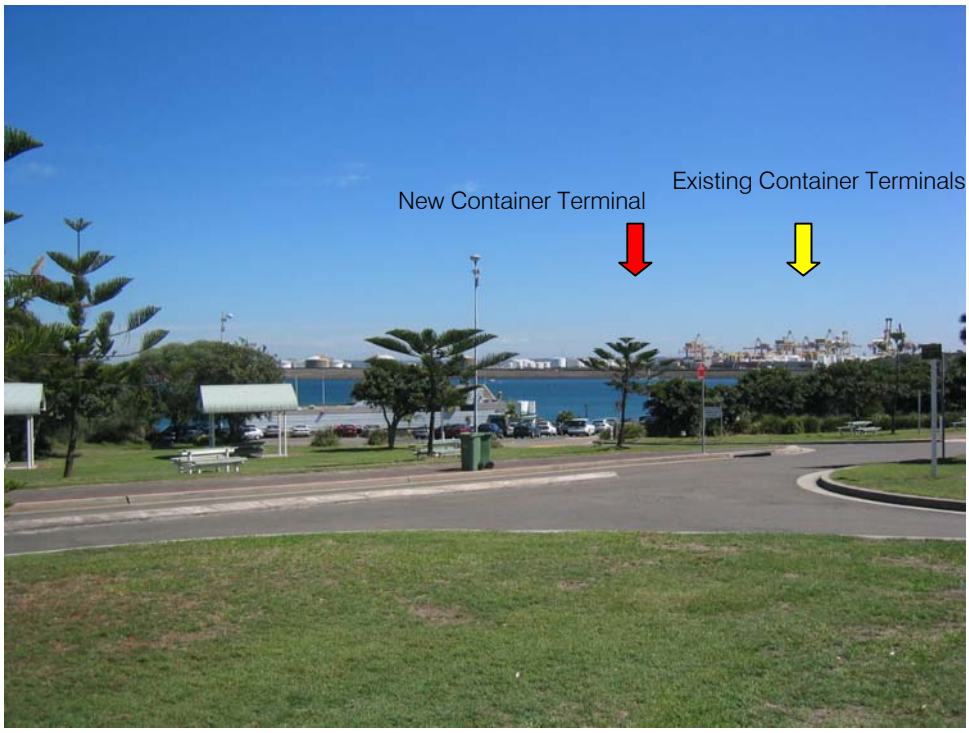
The assessment of visual impacts from individual residential properties is not assessed because it is considered that the views from points in the public domain sufficiently represent views from residential areas. The assessment considers the impact along streets forming view corridors within the local area and from important public open spaces.

Yarra Bay

Viewing situation	Kooringai Ave, Yarra Bay Bicentennial Park, looking northwest
Category of view	Visitors to Yarra Bay Bicentennial Park
Context of view	Views of Molineux Point revetment wall, P&O Ports terminal and bulk liquid storage tanks
Relative number of viewers	Moderate
Distance of view	1.5 km–3 km
Likely period of view	Moderate term
Visibility	Moderate
Visual absorption capacity	High
Visual impact rating	Low

Comment

The visual impact of the proposed Port Botany Expansion when viewed from Kooringai Ave, Yarra Bay Bicentennial Park would be low. The new terminal and related structures would be viewed behind the existing container terminals and within a family of existing port related structures including cranes, containers and bulk liquid storage tanks. The existing structures and landscape elements draw the viewer's attention to the foreground.



View from Kooringai Ave, Yarra Bay Bicentennial Park.

Phillip Bay

Viewing situation	Elaroo Ave, Phillip Bay, looking northwest
Category of view	Motorists and pedestrians
Context of view	Existing port related structures terminate view corridor
Relative number of viewers	Moderate
Distance of view	1.5 km–3 km
Likely period of view	Short term
Visibility	Moderate
Visual absorption capacity	High
Visual impact rating	Low

Comment

The visual impact of the Port Botany Expansion from Elaroo Ave, Phillip Bay would be low. The new terminal and related structures would be viewed behind the existing container terminals and within a family of existing port related structures including cranes, containers and bulk liquid storage tanks. The existing structures draw the viewer's attention to the foreground. The proposed Port Botany Expansion would also be obscured by buildings and vegetation in the streetscape.

View from Elaroo Ave, Phillip Bay.

Hillsdale

Viewing situation	Beauchamp Road, Hillsdale looking southwest
Category of view	Motorists and pedestrians
Context of view	Existing port related structures terminate view corridor
Relative number of viewers	High
Distance of view	1.5 km–3 km
Likely period of view	Short term
Visibility	Moderate
Visual absorption capacity	High
Visual impact rating	Low

Comment

The visual impact of the proposed Port Botany Expansion from Beauchamp Road, Hillsdale would be low. The new terminal and related structures would be viewed behind the existing container terminals. The existing structures draw the viewer's attention to the foreground. The proposed Port Botany Expansion would also be obscured by buildings and vegetation in the streetscape.

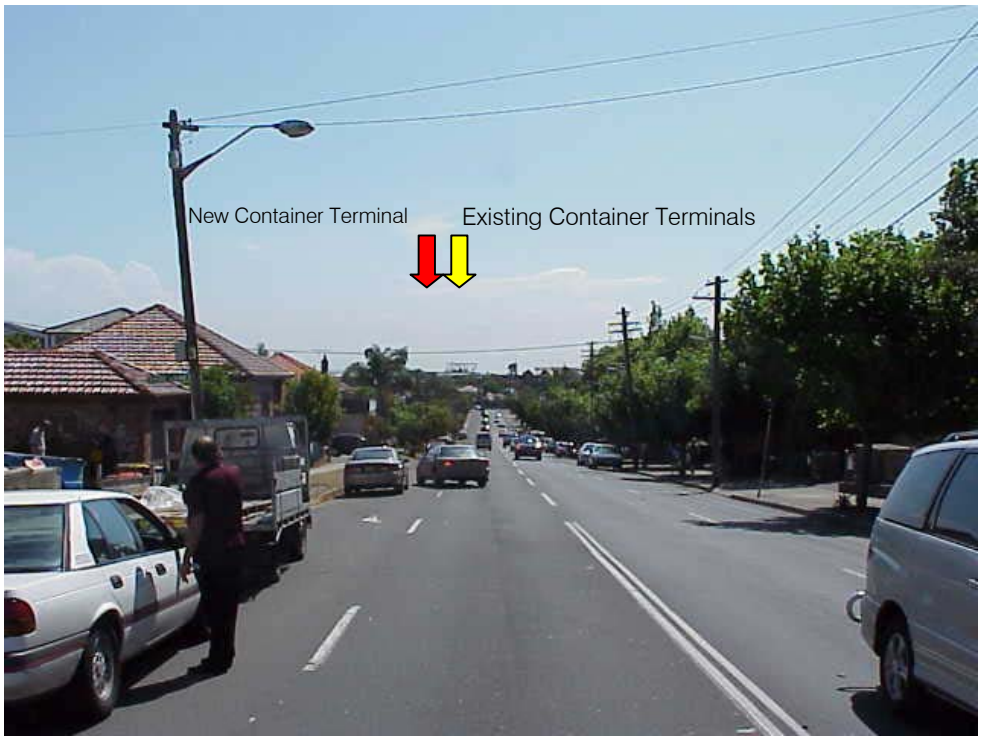
View from Beauchamp Road, Hillsdale.

Matraville

Viewing situation	Beauchamp Road, Matraville, looking southwest
Category of view	Motorists and pedestrians
Context of view	Existing port -related structures terminate view corridor
Relative number of viewers	High
Distance of view	1.5 km–3 km
Likely period of view	Short term
Visibility	Moderate
Visual absorption capacity	High
Visual impact rating	Low

Comment

The visual impact of the proposed Port Botany Expansion from Beauchamp Road, Matraville would be low. The new terminal and related structures would be viewed behind the existing P&O Ports and Patrick Stevedores terminals and within a family of existing port related structures including cranes, containers and bulk liquid storage tanks. The existing structures draw the viewer's attention to the foreground. The proposed Port Botany Expansion would also be obscured by buildings and vegetation in the streetscape.



View from Beauchamp Road, Matraville.

Based on the above, the visual impact of the proposed Port Botany Expansion, when viewed from local representative view locations, would have a low visual impact. This is generally due to the relatively flat topography of the local area which results in views from local streets and parks being obscured by existing buildings and vegetation. The most prominent feature of the new terminal which would be visible from these local view locations would be the quay cranes, but these would generally be seen within the context of the quay cranes of the existing container terminals at Port Botany.

25.4.5 Regional Views

The following regional representative views of the proposed Port Botany Expansion have been assessed (**Figure 25.2**):

- Lady Robinsons Beach, Brighton-le-Sands (R-1);
- Silver Beach, Kurnell (R-2);
- Botany Bay National Park, La Perouse (R-3); and
- Sydney Park, St Peters (R-4).

Lady Robinsons Beach, Brighton-le-Sands

Viewing situation	Lady Robinsons Beach, looking east
Category of view	Visitors to the beach
Context of view	Low level panoramic views of Botany Bay from the beach and moving vehicles
Relative number of viewers	High
Distance of view	> 3 km
Likely period of view	Long term
Visibility	Moderate
Visual absorption capacity	Low
Visual impact rating	Moderate

Comment

The visual impact of the proposed Port Botany Expansion from Lady Robinsons Beach would be moderate. While high numbers of people use Lady Robinsons Beach and environs for long periods, the long distance of the view ensures that the proposed Port Expansion would blend with the landscape. Also, the proposed Port Botany Expansion would be considerably screened by the existing North-South and Parallel Runways of Sydney Airport from this vantage point. The new terminal deck would sit below the level of the runways and would not be located further south than the end of Sydney Airport's Parallel Runway. Only the crane elements would be visible, however, they would visually be part of an existing family of port related structures.

At the southern end of Lady Robinsons Beach, views towards the proposed Port Botany Expansion are more distant. The long viewing distance would minimise the visual impact of the proposed Port Botany Expansion. From this view the proposed Port Botany Expansion would not be discernible within an existing family of port related structures and would tend to blend with the landscape.

Existing view from Lady Robinsons Beach. View looking east over Botany Bay showing Sydney Airport runways and existing container terminals at Port Botany. The horizontal expanse of Botany Bay characterises the landform. La Perouse headland breaks the horizon. The verticality of existing container cranes extends above the horizon.

View of the proposed Port Botany Expansion, Lady Robinsons Beach. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Silver Beach, Kurnell

Viewing situation	Silver Beach, Kurnell, looking north
Category of view	Visitors to Silver Beach, Kurnell
Context of view	Low level panoramic views of Botany Bay
Relative number of viewers	Low
Distance of view	>3 km
Likely period of view	Long term
Visibility	Low
Visual absorption capacity	Low
Visual impact rating	Low

Comment

The visual impact of the proposed Port Botany Expansion from Silver Beach, Kurnell would be low. The low visual impact rating is due to the long distance and relatively low number of viewers from this vantage point. Also, the new terminal would be partially screened by the Molineux Point revetment wall and port related structures including cranes on the P&O Port's terminal and bulk liquids storage tanks.

Existing view from Silver Beach, Kurnell. View looking north over Botany Bay showing Port Botany. Existing port related structures including the bulk liquid storage tanks and the existing container terminals are visible but blur into the landscape given the long distance of this vantage point from Port Botany.

View of proposed Port Botany Expansion from Silver Beach, Kurnell. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

La Perouse

Viewing situation	Botany Bay National Park, La Perouse, looking northwest
Category of view	Visitors to Botany Bay National Park, La Perouse
Context of view	Elevated panoramic views of Botany Bay and the existing container terminals
Relative number of viewers	Moderate
Distance of view	>3 km
Likely period of view	Long term
Visibility	Moderate
Visual absorption capacity	Moderate
Visual impact rating	Moderate

Comment

The visual impact of the proposed Port Botany Expansion from Botany Bay National Park, La Perouse would be moderate. The moderate visual impact rating from this vantage point is due to the long viewing distance. Also, the new terminal would be partially screened by the existing port related structures.

Existing view from Botany Bay National Park, La Perouse. The Molineux Point revetment wall, bulk liquid storage tanks and cranes at the existing container terminals are visible from this vantage point.

View of proposed Port Botany Expansion, Botany National Park. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Sydney Park, St Peters

Viewing situation	Sydney Park, St Peters, looking south
Category of view	Visitors to Sydney Park, St Peters
Context of view	Elevated panoramic view of Botany industrial and residential areas and existing port related structures
Relative number of viewers	Low
Distance of view	>3 km
Likely period of view	Long term
Visibility	Low
Visual absorption capacity	High
Visual impact rating	Low

Comment

The visual impact of the proposed Port Botany Expansion from this vantage point would be low. The low visual impact rating is due to the long distance of the vantage point from Port Botany and the relatively low numbers of viewers. Also, existing buildings and vegetation in Botany and Mascot would largely impede views of the proposed development.

Existing view, Sydney Park. View from a high point in Sydney Park. Port related structures at Port Botany in the background are visible on the horizon in the centre of the view.

Plate 25.22 View of Port Botany Expansion, Sydney Park. The proposed Port Botany Expansion would be obscured by the existing commercial and industrial buildings in Botany sited at the centre and right of the image. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the approximate location of the proposed Port Botany Expansion.

Based on the above, the visual impact of the proposed Port Botany Expansion, when viewed from regional representative view locations, would have a low or moderate visual impact. This is due to the large separation of these view locations from the proposed Port Botany Expansion and the fact that the proposed development would be viewed within the context of the existing port related structures at Port Botany which would be located immediately adjacent to the proposed development site. In many instances, urban obstructions such as buildings and vegetation reduce these regional views to glimpses.

25.4.6 Views from the Air

The following representative aerial views of the proposed Port Botany Expansion have been assessed (**Figure 25.2**):

- view of proposed Port Botany Expansion looking south (A-1); and
- view of proposed Port Botany Expansion looking west (A-2).

Aerial view looking south

Viewing situation	Aerial view looking south
Category of view	Passengers on planes arriving at and departing from Sydney Airport
Context of view	Aerial view from moving planes
Relative number of viewers	High
Distance of view	< 1.5 km
Likely period of view	Short term
Visibility	High
Visual absorption capacity	Low
Visual impact rating	High

Comment

The visual impact of the proposed Port Botany Expansion when viewed from the air looking south would be high. The high visual impact rating from this vantage point is due to the high number of viewers, close proximity of the view and the low ability of the landscape to visually absorb the proposed development. While there is a high number of viewers the likely period of their view would be relatively low (< 1 minute).

Existing aerial view of Port Botany. View looking south showing existing container terminals, Foreshore Beach and Sydney Airport Parallel Runway in the midground and Silver Beach, Kurnell in the background.

Aerial view of the proposed Port Botany Expansion. View looking south showing containers and ships docked at the new terminal. Public domain improvements including a boat ramp and car parking facility, road and rail access to the terminal would be visible.

Aerial view looking west

Viewing situation	Aerial view looking west
Category of view	Passengers on planes arriving at and departing from Sydney Airport
Context of view	Aerial view from moving planes
Relative number of viewers	High
Distance of view	< 1.5 km
Likely period of view	Short term
Visibility	High
Visual absorption capacity	Low
Visual impact rating	High

Comment

The visual impact of the Port Botany Expansion when viewed from the air looking west would be high. The high visual impact rating from this vantage point is due to the high number of viewers and close proximity of the view. While there is a high number of viewers the likely period of their view would be relatively low (< 1 minute).

Existing aerial view of Port Botany. The approximate view of visitors arriving at Sydney Airport from the north looking west. The existing container terminals are visible.

Aerial view of the proposed Port Botany Expansion. View looking west of the proposed Port Botany Expansion showing containers and ships docked at the new terminal.

The visual impact of the proposed Port Botany Expansion on aerial views would be high, although the proposed development would be viewed within the context of the existing port and other industrial land uses in the area.

25.4.7 Views from the Water

The following representative views of the proposed Port Botany Expansion from the waters of Botany Bay have been assessed (**Figure 25.2**):

- view from the immediate vicinity looking northeast (< 1.5km) (W-1);
- view from the immediate vicinity looking southeast (<1.5km) (W-2);
- view from Botany Bay (1.5 km-3 km) (W-3); and
- view from Botany Bay (>3 km) (W-4).

Water view from near Parallel Runway

Viewing situation	Botany Bay from west of Sydney Airport's Parallel Runway looking east
Category of view	Passengers on vessels
Context of view	Low level panoramic views of Botany Bay, existing container terminals and Foreshore Beach from stationary and moving vessels
Relative number of viewers	Low
Distance of view	<1.5 km
Likely period of view	Moderate
Visibility	Moderate
Visual absorption capacity	Low
Visual impact rating	Moderate

Comment

The proposed Port Botany Expansion would have a moderate level of visual impact from this vantage point. The moderate rating is due to the close proximity of the proposed Port Botany Expansion to this vantage point and the low capacity of the existing landscape to visually absorb development. While the proposed Port Botany Expansion would be highly visible from this vantage point, the relative number of viewers from Botany Bay would be low.

Water view from near the Parallel Runway. Existing port related structures at the existing container terminal and Foreshore Beach are visible.

View of the proposed Port Botany Expansion. The yellow arrow indicates the location of the existing Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

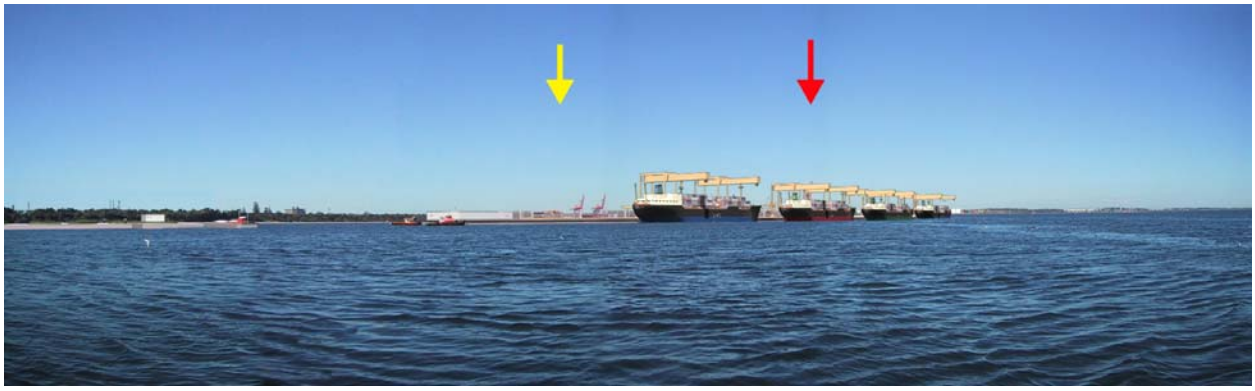
Water view from near Foreshore Beach

Viewing situation	Botany Bay between proposed Port Botany Expansion and Sydney Airport's Parallel Runway looking east.
Category of view	Passengers on vessels
Context of view	Low level panoramic views of Botany Bay, existing container terminals and Foreshore Beach from stationary and moving vessels.
Relative number of viewers	Low
Distance of view	<1.5 km
Likely period of view	Moderate
Visibility	Moderate
Visual absorption capacity	Low
Visual impact rating	Moderate

Comment

The proposed Port Botany Expansion would have a moderate level of visual impact from this vantage point. The moderate rating is due to the close proximity of the proposed Port Botany Expansion to this vantage point and the low capacity of the existing landscape to visually absorb development. While the proposed Port Botany Expansion would be highly visible from this vantage point, the relative number of viewers from Botany Bay is low. Also, the proposed new terminal and related structures would be seen within the context of existing port related structures to the southeast.

Water view from near Foreshore Beach. Existing port-related structures at the existing container terminals and Foreshore Beach are visible.



View of the proposed Port Botany Expansion. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Water view from Botany Bay (1.5 km-3 km)

Viewing situation	Botany Bay from west of Sydney Airport's Parallel Runway looking east
Category of view	Passengers on vessels
Context of view	Low level panoramic views of Botany Bay, existing container terminals and Foreshore Beach from stationary and moving vessels.
Relative number of viewers	Low
Distance of view	1.5 km-3 km
Likely period of view	Long term
Visibility	Moderate
Visual absorption capacity	Moderate
Visual impact rating	Moderate

Comment

The proposed Port Botany Expansion would have a moderate level of visual impact from this vantage point. While the proposed Port Botany Expansion would be visible from this vantage point the relative number of viewers would be low.

At a greater distance away from the proposed Port Botany Expansion the new terminal would blend with the landscape and existing port related structures. The wall of Sydney Airport's Parallel Runway, visible at the right of the image, would partially impede views of the proposed Port Botany Expansion.

Water view from Botany Bay (1.5 km – 3 km). Existing port related structures visible in the centre of view. Sydney Airport Parallel Runway visible to the left of view.

Water view from Botany Bay (1.5 km – 3 km) of the proposed Port Botany Expansion. Foreshore Beach would be partially screened by the new terminal from this vantage point. The proposed Port Botany Expansion would be viewed in a family of port related structures. The yellow arrow indicates the location of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

Water view from Botany Bay (>3 km)

Viewing situation	Botany Bay from west of Sydney Airport's Parallel Runway looking east
Category of view	Passengers on vessels
Context of view	Low level panoramic views of Botany Bay, existing container terminals and Foreshore Beach from stationary and moving vessels
Relative number of viewers	Low
Distance of view	>3 km
Likely period of view	Long term
Visibility	Low
Visual absorption capacity	Low
Visual impact rating	Low

Comment

The proposed Port Botany Expansion would have a low level of visual impact from this vantage point. The low visual impact rating is due to the low visible absorption capacity of the Botany Bay environment, the long distance of the view and the relatively low number of viewers. The proposed Port Botany Expansion would be seen within a family of existing industrial and port related uses.

Water view from Botany Bay (> 3 km). Existing port related structures are visible to the right of view.

Water view from Botany Bay (> 3 km) of the proposed Port Botany Expansion. The yellow arrows indicate the location/extent of the existing container terminals at Port Botany. The red arrow indicates the location of the proposed Port Botany Expansion.

The visual impact of the proposed Port Botany Expansion on views from the waters of Botany Bay would be low or moderate. The distance of the view would be a major determinant of the visual impact of the proposed development when viewed from the water. The greater the distance the viewer is from the proposed development the lesser the visual impact as the new terminal would tend to blend with the landscape and existing container terminals with increasing distance.

25.5 Mitigation Measures

The following mitigation measures would be implemented in order to avoid, reduce and compensate for potential landscape and visual impacts of the proposed Port Botany Expansion:

- public recreation and ecological plan – this plan would minimise potential visual impacts of the proposed development through an appropriately balanced landscape strategy including enhancement of the existing native vegetation buffer along the foreshore corridor between the Mill Stream and Penrhyn Road, and roadside and median strip planting/screening along Foreshore Road. This would assist in screening views of the new terminal from Foreshore Road, Botany Golf Course and parts of Sir Joseph Banks Park. Further details are provided in **Chapter 7** *Public Recreation and Ecological Plan*;
- lighting – low profile, low intensity lighting would be used in public areas, with lighting projecting landward and groundward to reduce visual impact when viewed from Botany Bay and the distant western shoreline. Light spill into Penrhyn Estuary and Foreshore Beach would be minimised by designing high mast lighting to focus illumination on the terminal and prevent light spill over these areas. Further details of lighting control are presented in **Chapter 30** *Operational Aviation Issues*;
- quay crane specification – quay cranes for the new terminal would be approximately 50 m high. These would be considerably lower than the standard container cranes installed at both the Patrick Stevedores and P&O Ports terminals, which are about 64 m high when working and 86 m when stowed (as the arm of the crane is raised into the air when stowed). The quay cranes at the new terminal would therefore be less visible than the existing cranes at Port Botany;
- container stacking height – containers would not be stacked more than six high (18 m) and would typically be only three high (9 m), as is the case with the existing terminals. This would limit the vertical elements of the new terminal and allow it to blend with the horizontal form of the natural landscape, airport runways and existing terminals;
- pedestrian bridge design – the pedestrian bridge linking Foreshore Beach with Sir Joseph Banks Park would be low in height and of horizontal form to minimise its visual impact;
- colour and materials – materials and colours for the terminal deck, administration buildings, cranes and other vertically prominent equipment would be selected to minimise contrast and reflectivity;
- noise wall – the proposed noise wall near the edge of the new terminal would be approximately 4 m in height and would partially screen the operations of the new terminal when viewed from foreshore areas near the port; and
- landscape buffer strip – a strip of native vegetation would be established along the southern side of Penrhyn Estuary, adjacent to the new rail spur into the terminal, and along the eastern perimeter of the new terminal (outside the proposed noise wall). The landscape buffer strip would further screen operations at the new terminal when viewed from foreshore areas near the port and would soften the hard edges of the proposed terminal infrastructure.

25.6 Conclusion

The visual quality of the proposed site and the surrounding area of Port Botany is relatively low. Factors which contribute to this assessment include the relatively flat topography, lack of significant vegetation, and

the dominance of existing industrial landscape components including the existing container terminals, Bulk Liquids Berth, Molineux Point, Sydney Airport and the industrial nature of areas to the northeast of Port Botany. The proposed Port Botany Expansion would therefore be consistent with the existing visual context provided by the Port Botany environment.

The visual impact of the proposed Port Botany Expansion would vary depending on the visual absorption capacity of the landscape, viewing distance, relative number of viewers and period of view.

When viewed from the adjacent foreshore corridor or approaches to Sydney Airport, the proposed development would have a moderate or high visual impact and would partially impede views of Botany Bay. The local area views of the Port Botany Expansion would be low or moderate due to existing vegetation and structures which would impede views of the new terminal. At the regional scale, the Port Botany Expansion would generally have at most a low visual impact due to the long viewing distances. Views from the waters of Botany Bay would vary with distance. All views of the new terminal would be seen within the context of the existing port and other industrial uses which are located immediately adjacent to the site of the proposed expansion.

Mitigation measures to minimise the visual impact of the proposed development would include planting native vegetation screening along the foreshore corridor between the Mill Stream and Penrhyn Road, partial screening of terminal operations by the proposed noise wall and a terminal landscaping buffer strip, lighting control measures, use of low profile quay cranes, and careful selection of materials and colours to minimise the contrast and reflectivity of buildings and equipment at the new terminal. In addition, viewers would have an opportunity to see an increase in visually interesting port related activities including the movement of container ships, cranes and containers.

In summary, the proposed Port Botany Expansion is in character with the existing visual context provided by the Port Botany environment, however, the construction and operation of the new terminal would result in high or moderate visual impacts when viewed from the air, from water and from the immediate vicinity of the proposed development. Views from other more distant locations would have a low or moderate visual impact which would be reduced by distance and the partial or complete screening effects of existing and proposed landscape elements.