Trinity Point Marina and Mixed Use Development

Henry Road, Morisset Park

Report prepared for Johnson Property Group

Report prepared by Dr Richard Lamb, BSc, PhD, CBiol.

VISUAL IMPACT ASSESSMENT

November 2008

1/134 Military Road, Neutral Bay, NSW 2098 PO Box 1727 Neutral Bay NSW 2089
T 02 99530922 F 02 99538911 E info@richardlamb.com.au W www.richardlamb.com.au

Table of Contents

Executive Summary

- The theme for and concept of design of the Concept Plan is to create a destination development, with the capacity to draw tourism demand, boating users and provide a unique level of accommodation for tourists and residents.
- The report addresses the amended Director General's Requirements dated 7 April 2008 and relevant comments made on the adequacy of the draft proposal by Lake Macquarie City Council.
- The site would be transformed to an urban setting from its original institutional use. The intentions for the site will create contrasts with existing development forms in the locality which must be taken into account in determining acceptable visual impacts.
- The visual impacts of the two components of the development, the residential and tourism and the marina, were assessed using a specially developed methodology specific to both urban and maritime development applications.
- The visual catchment for the proposed development is confined to isolated parts of the urban foreshores of surrounding settlements in the southern basin of Lake Macquarie, parts of the Lake and the eastern and southeastern shorelines.
- The landscape setting of the site is within Bardens Bay and is set in an urban context. The side slopes and foreshore of the Bay and the site itself are significantly modified features of the underlying natural character of the bay and shoreline.
- The intrinsic visual character of the development site would be moderately affected however, there would not be an introduction into the visual catchment of elements that are unexpected or out of character with land of similar zoning within the general Lake Macquarie area.
- The site is of a moderate scenic quality rating with generally low visual accessibility. Subject to other considerations, the landscape has a higher potential to absorb visual impacts than one of high scenic quality and high accessibility.
- The site has low visual exposure to the public domain on land and moderate exposure to part of the waters of the southern basin of Lake Macquarie. The southern basin experiences lower usage than the remainder of the Lake.
- View place sensitivity for public domain viewing locations was rated as high for locations less than 100m from the site, medium for locations between 100-1000m from the site and low for distances greater than 1km.
- Viewer sensitivity was rated high for residences along Lakeview Road and Doull Lane less than 100m from the site, medium for residences along roads located between 100-1000m from the site and low for residences more than 1km away.
- The effect on view composition of the marina would be greater than that of the built component of the proposal. The greatest effect would be on locations along Lakeview Road in the vicinity of the site and from the immediate waterway. The effect on view composition would also be high for a small number of viewing locations from where there are restricted, focal or feature views towards the site.
- There is a minor effect of relative viewing level overall; the topography of the visual catchment of the development is relatively flat and most views, including those on the waterway, are on grade with the site.

- The visual effects of the proposed development would be slightly increased for viewing locations that are close to level with the marina facilities and located at close or medium distance from it such as from the waterway, such as Brightwaters Park, the boat ramp and the immediate streetscape of Lakeview Road.
- Visual effects would be increased for passive users of recreation areas and foreshores and for frequent users of the immediate waterways. There are no roads which provide sustained views.
- The marina would cause some view loss and blocking effect, in views toward the site, however the buildings would not. There would be some view loss to parts of the shoreline from part of Brightwaters and some of the immediate waterways.
- The overall rating of the visual effects of the proposed redevelopment on its total visual catchment was assessed to be medium.
- The Physical Absorption Capacity (PAC) for the marina was rated to be low for medium range expansive or panoramic views, or restricted views. This is due to its high intrinsic visibility and the lack of structures or vessels on the waterway. It would be medium for close locations with panoramic views from the waterway, or from the adjacent residential subdivision approved for construction, distant restricted views, expansive or panoramic views.
- The PAC for the built component would be low from close range viewing places, medium where the viewing places were middle distant and of expansive, panoramic or restricted composition and generally high for locations with restricted views. It was rated to be generally medium for those with panoramic views.
- The visual compatibility with maritime features would be high or medium for locations from which there were views of a number of swing moorings, jetties, boatsheds etc in the foreground or background of views including the immediate waterway, the boat ramp on Lakeview Road, and views from the waterways and roads to the east and southeast.
- The visual compatibility with urban and natural features would be low or medium for viewing locations that had close range panoramic or feature views of the foreshores and shoreline as the background of view, and low or medium for medium and long range viewing locations where the built component of the proposed development would be seen without a residential backdrop.
- The overall visual impacts rating of the proposed redevelopment on its total visual catchment was assessed to range between medium and high.
- The overall effects and impacts rating for the high view sensitivity zone in the public domain were assessed to be medium to high. Highest individual levels of effects were found for close views from residences in the subdivision west of the site, those on parts of Lakeview Road and Doull Lane and the immediate waterway.
- The overall effects and impacts rating for the medium sensitivity zone, predominantly in the public domain, were also assessed to be medium to high.
- Low sensitivity zone locations included most public domain views. The overall effects and impacts rating for the low visual sensitivity zone were assessed to be medium.
- The radial form of the marina and low viewing angles for viewers mean that the vertical slats that act as a breakwater feature, the length of the marina arms and the vessels moored cause the main visual effects. Reducing the scale of the marina by reducing the number of arms, would make little difference to the visual effects on views from the Lake

or residential development to the northeast. Other than by significantly decreasing the length of the arms, there would be little difference to the visual effects. The character and quality of the view would remain the same.

- The marina component of the development when it is completed would be the largest one in the locality, however it would be constructed in stages according to demand. The existence of other marinas and boat accommodation of various kinds is a general feature of the Lake; however, there are no large facilities in the southern basin. Thus, there is considered to be a general compatibility of the facility with the maritime environment of the Lake, but a significant contrast in scale.
- The urban component of the development proposed in the Concept Plan would be different from any others on the Lake in extent but would be within the range of scales of built forms present on the foreshores. As is the case with the marina, reducing the height of part of the building component would have only a quantitative effect. Less height would be visible but there would be no significant change to the character and quality of the view.
- The visual effects and residual impacts of the proposal were assessed as being acceptable in the context of a destination development of distinctive character with a significant tourism and marina component.

1.0 Introduction

1.1 Purpose of this Report

This report is an assessment of the visual impacts of the proposed marina, mixed tourism and Stage 1 of the residential development at Trinity Point, which is proposed to incorporate a new village centre, tourist and residential accommodation adjacent to approved residential development, presently under construction by the proponents, Johnson Property Group for whom the report was prepared. It also considers the potential visual impacts of the future proposed development of the site under the principles shown in the Concept Plan Application.

The purpose of this report is to assist in the preparation of the Environmental Assessment required under Part 3A and to consider each of the amended Director General of Planning's requirements for that assessment with regard to visual impact considerations. The report is based on observations and fieldwork carried out on 22 February, 10 and 19 October, 14 November 2007 and on advices provided to JPG on the strategic and visual resources planning issues on various occasions in 2007 and 2008.

The report consists of an assessment of the likely extent and significance of the visual impacts of the proposed strategy for development of the subject land and of the specific built form and marina proposed, considered with regard to the range of public and private places which could be affected.

1.2 Documents consulted

In preparing this report, we have consulted the following documents:

- Kendall Grange Structure Plan and Concept Master Plan (Prepared by Architectus) September 2005
- Lake Macquarie City Council Lifestyle 2020 Strategy (Lifestyle 2020).
- Lake Macquarie Local Environmental Plan 2004 (LEP).
- Lake Macquarie Development Control Plan No 1 – Principles of Development (DCP 1).
- Lake Macquarie City Council Scenic Quality Guidelines 2004 (LMCCSQG).
- State Environmental Planning Policy No 71 – Coastal Protection 2005 (SEPP 71)
- NSW Coastal Policy 1997
- State Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP 2005)
- Development Control Plan to SREP Sydney Harbour Catchment, 2005 (DCP SREP 2005)
- Boat Storage Policy for Sydney Harbour, June 2004
- Amended Director General's Requirements dated 7 April 2008.
- Coastal Design Guidelines for NSW (2003)
- Concept Plan Documentation prepared by HBO+EMTB, including:
    - Site Analysis Documentation
    - Opportunities and Constraints Documentation
    - Design Evolution Process Documentation
    - Architectural Concept
    - Concept Plan Application and Principles

- Landscape Concept Plan, prepared by Terras Landscape Architects
- Detail and contours, including tree locations plan, prepared by Surdevel Consulting Surveyors, dated 8 October, 2008
- Vegetation Communities Plan prepared by Harper Somers O'Sullivan, dated 17 October, 2008
- Real Property Description for Subject Land Plan prepared by (Surdevel Consulting Surveyors), dated 22 October, 2008, registered to overlay aerial photograph
- Photomontages of the proposed development, prepared by POD Group

1.3 Checklist for address to the amended requirements of the Director General in this report

Key issues	Relevant sections in the report	Comments
3.1 Provide a comprehensive Site Analysis identifying constraints and including landform features, levels, vegetation, heritage and other relevant environmental features.	Sections 1.4 (1.4.1 and 1.4.2), Section 1.5 (1.5.1 and 1.5.2) Section 5.2.1.1, 5.2.1.2	Other site analyses have been provided for other specific aspects of the development by other consultants
3.2 Demonstrate the achievement of design excellence having regard to the significance of the site in relation to Lake Macquarie and its environs. Address impacts of the proposal on the amenity of the foreshore, overshadowing of open space and loss of views from public places and from existing approved development.	Section 1.6 (1.5.1 and 1.5.2) Sections 3.0 (3.1, 3.2, 3.3), 4.0, 5.0 and 6.0	
3.3 Identify urban design guidelines that take into account the existing low-density character of the locality and identify appropriate development parameters in relation to building heights (number of storeys and metres), foreshore setbacks, building separations, site coverage and floor space ratios based on careful analysis of the site's constraints and opportunities and the potential visual and environmental impacts.		This key issue has been addressed by the Architects and Urban Design Experts for this application. The urban design guidelines for the site have been developed based on the opportunities and constraints of the site and the potential visual and environmental impacts of a development of the nature proposed. It has been the outcome of a number of consultation meetings among the consultants of various disciplines, a detailed pre-DA process, meetings with the Council and other authorities. (The analysis of the character of the site, its surroundings, the opportunities and constraints of the site and the potential visual and environmental impacts of the proposed development have been included within this Report).

3.4 Address visual impact in the context of adjoining and surrounding development in relation to setting, density, built form, building mass, and height as viewed from the public domain including Lake Macquarie and all publicly accessible foreshore locations. The visual impact of the marina including the pylons and helipad and all other associated structures must be addressed in the visual impact analysis. In that regard a visual impact analysis should include all significant vantage points from where the site can be viewed, both water and land based and provide relevant mitigation measures.	Sections 4.0, 5.0 and 6.0 Appendix A, B and C.	
3.5 Use visual aids such as a scale model and photomontage to demonstrate visual impacts. Amelioration of visual impacts through design, use of appropriate colours and building materials, landscaping and buffer areas must be addressed.	Appendix A and B. Section 5.6	
3.6 Demonstrate the suitability of the proposal with the surrounding area in relation to potential character, hight, bulk, scale, built form, amenity (including noise) and visual amenity having regard to SEPP 71, NSW Coastal Policy 1997, Coastal Design Guidelines of NSW (2003), objectives of the 6(2) Tourism and Recreation zone and all relevant development control plans including Lifestyle 2020 Strategy, DCP No 1- Principles of Development.	Section 5.5 (5.5.1, 5.5.2, 5.5.3, 5.5.4, 5.5.5, 5.5.6, 5.5.7)	
3.7 Address the landscape setting and retention of existing significant vegetation on the site. Demonstrate that any removal of vegetation on the site will have minimal visual impacts.	Section 1.6 (1.6.1 and 1.6.2)	
3.8 Provide details of residential unit types and future management of tourist accommodation and measures to ensure conflict between user groups does not occur.		This key issue is not directly relevant to potential visual impacts of the proposal

1.4 Context and Concept for the Development

1.4.1 The Regional and Local Visual Context

The subject site is located on the west side of Lake Macquarie, the largest single coastal lake in the region, on the western foreshore of the part of the Lake south of Swansea Channel. The Lake is conventionally considered to be separated into a north and a south basin by the Channel. The southern section of the Lake is less intensely urbanised than the north. The site is closest to Morisset Park and Windemere Park to its west and northwest respectively and is visible across Bardens Bay from the

margins of the suburb of Brightwaters, which is adjacent to the north. Morisset is the nearest urban centre and is to the southwest of the site. There is no visual contact between Morisset and the site.

The southern basin of the Lake has a predominantly urbanised residential foreshore north of the site, with urban settlements and a higher proportion of rural and open space land of various kinds to the south and the east. There are no major commercial centres on the western or southern shoreline in the vicinity. The region also has an active and prominent coal extractive industry and series of coal fired power stations located behind and between town centres. There are two power stations in the locality of the site, located at Vales Point and Eraring.

The local geomorphology is that of a drowned valley landscape or ria coast, which is being in-filled by alluvial deposition, which is more prominent in the southern basin. The topography of the area is generally characterised by low ridges, minor promontories and low scale shoreline features developed on soft sandstone and shaly sedimentary rocks of the Triassic Narrabeen and Upper Permian Newcastle Coal Measures geology. Flat alluvial and depositional landscapes and flood plains are associated with creeks and bays. Wide, shallow inter tidal areas, sand and mud flats characterise the waterway margins.

Despite its existing partly naturalistic appearance, the site is a former church institution site in a residential setting on the edge of the Lake. The former institutional buildings have been demolished. There is predominantly detached residential development adjoining the site to the north and west and on most parts of the shore to the south, southeast and east. The foreshores to residential areas are generally a mixture of mostly manicured and/or cleared and privatised and publicly accessible foreshore reserves with residential development at their rear. There is a housing development immediately to the west of the site, which is presently under construction by JPG.

There are a number of areas of a treed or natural appearance in the local context including Point Wolstoncroft State Recreation Area (SRA) to the east, Bird Cage Point in the Lake Macquarie SRA to the southwest and the Morisset Hospital site.

The subject site has few natural features and it is a remnant cultural rather than a natural landscape. It has some discontinuous remnant foreshore vegetation within the foreshore reserve that helps give the site a natural appearance in views from across the Lake. The Lake is generally visible in outward views, through the foreshore vegetation which mainly consists of mature casuarinas and eucalypts. The area of thickest remnant vegetation surrounds an area of salt marsh west of the northern tip area of the site. There are some minor rock shelves on the southeast foreshore in the area referred to as Bluff Point. Minor undercutting is occurring along the waterline.

The site has been cleared; remnant vegetation is predominantly cultural plantings associated with part of the former college uses of the site. There are examples of figs, palms and Norfolk Island pines at the southern end of the site as well as smaller ornamental and other domestic plantings such as cactus and aloe, which are associated with or have overgrown the sundial gardens. The southern end of the site drops off steeply to an area of gently sloping foreshore that is associated with the swimming baths of the former college and the grotto.

1.4.2 Existing Scenic Resources

The Morisset Peninsula as indicated above is a remnant of a series of low ridges, which are now part of a ria coast landscape, flooded by rising sea levels in the past. The site is on the tip of a remnant of a low and quite flat-topped ridge among many running off the Peninsula.

The Morisset Peninsula is the only entire peninsula referred to in the Lake Macquarie Lifestyle 2020 Strategy as a single promontory. In comparison with other significant promontories on the west

side of the Lake such as Wangi Wangi Point, Fishing Point, Coal Point and Bolton Point, the Morisset Peninsula does not deserve that designation.

Of the individual points that run off the Morisset Peninsula, Bluff Point, on the site of the proposal, is among the least prominent. The site is the most indistinct of the three points on the southeast side of the peninsula which have minor bays between them, that is Bardens and Sugar Bays, for example Fishery Point, Bird Cage Point and the unnamed point between Bardens and Sugar Bay.

Thus, the site is on a point but not on a headland. This is relevant to assessing the visual implications of the proposal because of the relevance of this terminology to instruments such as SEPP 71 and the NSW Coastal Policy. The site is a development site, formerly totally occupied by an institutional development and is not a natural coastal feature, or a headland. Thus while the usual considerations of visual impacts and relevant planning instruments apply, it does not deserve the same level of scrutiny in the terms of SEPP 71 and the Coastal Policy, which are intended inter alia to protect significant headlands in a coastal context, such as Catherine Hill Bay.

1.5 Existing Opportunities and Constraints

The site presents both opportunities and constraints to which the development should respond positively. The summaries below can be read in relation to the Opportunities and Constraints Plan and Site Analysis Plans prepared by HBO+EMTB in the Concept Plan application, which shows many of the relevant features below in graphic form. The Detail and Contours and Tree Location Plans prepared by Surdevel are also relevant.

1.5.1 Opportunities

- Possibility for some distinctive buildings to signify and anchor the development.
- Views to the north, east and southeast across the adjacent bay or lake.
- The opportunity to share these views with the residential development to the west.
- Extensive and scenic views possible in all directions from taller buildings.
- Views to and from the residential streets to the west and the public domain generally.
- A foreshore reserve with existing and future natural attributes for public access, including intimate views of the northwestern bay and salt marsh environment.
- Opportunity to retain and enhance the existing partial screening of the site by vegetation in the foreshore reserve land.
- Exposure to eastern and northern sunlight and to winds for cooling and ventilation.
- Slopes on site predominantly with northerly aspect.
- The opportunity for high visual and physical permeability and security of the public domain by surveillance.
- Opportunity for a high quality public domain and scenic quality of the site landscape.
- Potential to link the future layout and the public and private domain landscapes to the existing and future development area immediately to the west of the site.
- Potential unlimited views from the foreshore, proposed marina, land/water interface.
- Urban and landscape interface with the existing and future residential development and street grid.

- High point, lookout and public parkland possible on southeast, cliff top area.
- Potential for high quality close range views, managed public access to salt marsh, and enclosed, scenic views to the bay at northwest margin of site.

1.5.2 Constraints

- Discontinuous and thin existing tree canopy on lakeshore.
- Variable height and form of existing trees.
- Predominant built form profile height that needs to be contained within the existing or future tree canopy line.
- Irregular shape of the foreshore reserve and steep edge on south and southeast face.
- Open aspect toward residential northern shoreline of Bardens Bay and Brightwaters.
- Exposure of marina and breakwater structure to views from the Lake and residential Brightwaters.
- High point of the site on southeast margin most potentially exposed.
- Exposure of taller built form to views from the residential areas to the north, Lake and SRA to the northeast.
- Village centre buildings could block views to the north and from the public domain.
- Vegetation in the foreshore reserve and internal site landscape could block views to the Lake and shorelines.
- Layout needs to achieve equitable view sharing and public domain access.
- Permeable but legible interfaces needed between private and public domain landscape.
- Building and landscape design and layout must not conflict with need for casual and physical surveillance of public spaces.

1.6 Future Scenic Resource Management Principles

The existing scenic resources of the site and the visual exposure to external and future internal views are relatively straightforward. The visual constraints, however, are quite challenging because of the relative flatness of the land and the potential for views to be internalised by the scale and position of future development. This means that particular care needs to be taken in managing the scenic resources of the site so that there is an overall high level of scenic amenity, that the best elements of view experiences are preserved, and that major physical adaptations to the landscape provide the best quality scenic environment. Care also needs to be taken to ensure that the most significant resources are visually and/or physically linked into a system of quality visual experiences and that, wherever feasible, existing resources are enhanced in character and quality for the future.

We provided advice to the proponents on appropriate priorities for future scenic resource management prior to and throughout development of the subject proposal. This included advice during the design evolution stages of the proposal, which went through several iterations, both as a result of discussions with officers of the Department of Planning and others and among consultants to JPG. A summary of the process of design evolution has been presented in both words and graphic form in the Concept Plan prepared by HBO+EMTB.

It can be seen that a wide range of options for the site were considered during the evolution process, which gradually developed and refined a series of desired outcomes for the site into the present application. These included outcomes referred to in the opportunities and constraints summarised above. The layout of the future proposed development was thus not pre-determined. At various stages, models were considered that optimised specific outcomes, for example the lowest built form footprint; lowest overall built form height; highest equitable access to views; highest permeability for adjacent future residential development and so on.

The layout and response to the opportunities and constraints of the site and locality were refined by us during this process into visual resource management strategies for which specific recommendations were made. These informed the principles for the Concept Plan and the relevant commitments. The strategies included those for the preservation, adaptation, linking and enhancement of the Lake foreshore, Bluff Point, cultural landscape and significant remnant vegetation resources and for linking the development in regard to views, access and the public domain to the existing approved residential environment to the west of the site.

For each resource and strategy, there is a summary of our recommendations, below. The response that is evident in the application is also summarised.

1.6.1 Recommendations for Scenic Resources

General

Recommended:

The existing scenic resources of the Lake, Bluff Point and remnant natural and cultural elements should be a focus for conservation. Visual links between the Lake and Bluff Point have been proposed and accentuated in the Trinity Point Concept Plan.

Response:

This is an important issue that has been addressed in creating visual and physical links (see Design Evolution drawings, Site Analysis Plans by HBO+EMTB and Concept Plan Indicative Outcome Plan).

Lake/foreshore

Recommended:

The most significant and abundant scenic resource of the site is the Lake/foreshore. The creation of both visual and physical linkages with the Lake and internal areas of the site as well as Bluff Point and the cultural elements and significant vegetation resources should be a priority.

Response:

The connections proposed between the existing and approved future development to the west of the site and the intended connections between the site's landscape and the Lake can be seen by inspection of the Site Analysis Plan, the Concept Plan and the Opportunities and Constraints Plans prepared by HBO+EMTB. They conform to our recommendations.

Bluff Point

Recommended:

Bluff Point is an important local scenic resource with linkages to cultural elements and to the Lake. Maintaining views from Bluff Point and from the Lake towards Bluff Point should be a priority.

Response:

The connections between and impressions of the intended future development of Bluff Point and the site's landscape can be seen by inspection of the Indicative Outcome Concept Plan, the Opportunities and Constraints Plans by HBO+EMTB, Landscape Master Plan by Terras Landscape Architects and the photomontages prepared by POD Group that accompany the application. The process of production of the photomontages is described below at 5.1.3.

Cultural landscape elements

Recommended:

Existing cultural landscape elements are considered useful and potentially valuable resources that not only provide a visual and historic context with the past but also present the potential for conversion or adaptation into open space or civic landscape settings. Where they are associated with prominent visual exposure and natural linkages to other resources such as in the Bluff Point vicinity, they are to be carefully integrated into the future landscape management.

Response:

The intention for integration of the remnant cultural landscape elements can be seen in the Indicative Outcome Concept Plan, the Opportunities and Constraints plans by HBO+EMTB and also in the Landscape Master Plan by Terras Landscape Architects. The cultural landscape surrounding the heritage features of the sundial garden and grotto and other existing associated cultural vegetation on Bluff Point and within the southern part of the site are proposed to be integrated into publicly accessible parkland, partly within the site and partly in the foreshore reserve.

Significant remnant vegetation

Recommended:

Significant vegetation is important to signify and locate recreation areas, provide initial screening of development in inward views and form the nucleus of a future foreshore landscape design and public domain scheme. Therefore, combinations of the Lake/foreshore and adjacent vegetation resources, particularly the remnant and cultural vegetation associated with Bluff Point are of the highest scenic protection priority. It is important that such resources are not visually isolated from the residential settings.

Response:

There is minimal necessity for tree loss or the disturbance of existing significant vegetation, as can be judged by reference to the Tree Location Plan, particularly when read in conjunction with the Site Analysis Plan, Vegetation Communities Plan by Harper Somers O'Sullivan and the Landscape Master Plan by Terras Landscape Architects. The 6(2) zoned part of the subject site is almost totally without trees, with only three trees potentially to be removed, subject to detailed assessment at the future design stage of implementation of the Concept Plan. The remnant vegetation of the Lake/foreshore, Bluff Point and cultural vegetation associated with the sundial garden and grotto areas are proposed to be incorporated into open space either in the foreshore reserve or within the public domain landscape on the future development site.

1.6.2 Strategies for Scenic Protection and Enhancement

Preservation

Recommended:

Preservation of existing resources in natural combination should be a priority. Combinations of Lake/ foreshore, Bluff Point, cultural elements and significant vegetation should be a priority in preservation. They should attract minimal alterations to landform, soil profiles, vegetation structure and drainage so as to retain and protect the scenic resources. In the same way, regeneration of the Lake/foreshore interface and salt marsh bay area should be given priority in providing visual access, linkages between open space areas and the Lake, and visual access to the Lake and prominent features from higher density residential development areas and civic spaces.

Response:

See comments above in relation to significant remnant vegetation. Future landscape management is proposed to further integrate remnant vegetation into the public and private domain landscape inside the site where appropriate, retaining existing natural connections and components of the natural environment. The applicant will not be the owner of the foreshore reserve land, however it is appropriate that care control and management of the foreshore reserve landscape be vested in or shared between the applicant and the land owner so that the best ecological and aesthetic outcome can be achieved by management and enhancement of the existing and future vegetation and scenic resources of the reserve land.

Adaptation

Recommendation:

Adaptation of scenic resources should have the priority intention of increasing the quality and range of visual experiences within the site, without compromising linkages between resources or devaluing the scenic quality of what is adapted. For example, the conservation of significant vegetation on the foreshore must ensure that regeneration and future appropriate vegetation structure can be assured so that the scenic resource value of the trees is not lost in the future. Road layouts, drainage works, gross earthworks and so on should be directed by the need to adapt the existing landscape to the use intended, mindful of conserving scenic resources, rather than with the intention of designing future landscape to replace all lower scenic quality areas. Adaptation of existing topography should wherever possible conserve and protect scenic natural and cultural elements.

Response:

The Design Evolution, Site Analysis and Tree Plans by HBO+EMTB show that adaptation to the existing scenic resources has been a priority in locating built form in relation to the existing topography and vegetation, the foreshore reserve and existing approved development adjacent to the western boundary of the subject site. The major scenic resources of the shoreline, natural topography and low cliff features will not be affected by the proposal and, along with remnant cultural vegetation and landscapes associated with the sundial garden and grotto areas, will be conserved. The potential for adaptation of this remnant vegetation and existing natural landscape into an integrated and largely public landscape resource is shown in more detail in the Landscape Master Plan by Terras Landscape Architects.

Linkages

Recommendation:

Scenic resources will be inevitably separated and severed from each other in some instances. In addition, existing scenic elements will lose prominence because of the extent of and scale of future development forms. As a result, the conservation of existing physical and visual linkages should be given priority, particularly where the effect will be to maintain a sense of the existing landscapes underlying cultural, scenic and natural structure.

Linkages that work both at ground level and visually between resources will be more successful than symbolic or formalised linkages. Linkages therefore need to be actively promoted between the Lake, Bluff Point, existing residential development and remnant vegetation and cultural resources so that they do not become isolated unnecessarily. Where resources are isolated among elements that prevent physical or visual contact, links as open space, pathways, boardwalks, and parkways should ensure the opportunity for residents to move through sequences of high scenic amenity experiences.

Because of the gentle topography, direct visual linkages must be considered at both the plan and 3-dimensional level. Vistas to the Lake, Bluff Point and cultural elements, present and future, need to be designed and protected. Future landscape design should not conflict with but should complement and enhance view access corridors.

The relationship between the building form and visual resources access needs to be considered, so that taller and higher density development does not have the effect of alienating lower density and lower forms of residential development from the major scenic resources. For example, the taller development adjacent to the Lake foreshore should not prevent the lower scale residential development behind and to the west from having visual access to the Lake.

Response:

Linking the future development of the site to the existing and future character of the adjoining area, in particular the approved residential area to the west of the site, has been a prime driver of the layout of development. This can be seen by inspection of the Site Analysis, Design Evolution and Architectural Concept documentation by HBO+EMTB, as well as the principles concerning Access and Open Space, Setbacks and Landscape in the Concept Plan Application.

Visual and physical linkages are established along the main east-west roads inside the existing residential development west of the subject site, to invite access to and exploration of views inside the development site itself and of the Lake foreshore and the Lake landscape itself. Links also exist to scenic resources along the western perimeter road, to views to the shallow bay northwest of the site and beyond, the village centre and marina area, as well as to panoramic views to the south across the Lake toward Wyee Bay.

Roads extending the existing approved east-west roads west of the site terminate close inside the western boundary, inviting shared access to the public domain landscape, boardwalks and the foreshore and a hierarchy in the formality of spaces.

Enhancement

Recommendation:

Existing scenic resources have been degraded in the past by former site uses including small scale farming practices and to some extent in the near past by selective clearing in anticipation of urbanisation. The enhancement of the underlying potential of the landscape to yield a pictorial story about its past and future should be a priority for all areas. Public domain landscape should

generally retain the existing natural and cultural landscape elements, rather than overpowering them with excessive formality, however there are logical limits for more formal civic spaces.

Formal and exotic planting should be employed appropriately so as not to conflict with the existing underlying resource base of the site, where this can be retained. For example, Bluff Point that has significant resources of indigenous trees and cultural plantings and natural topography should have minimal additional planting of exotic species, modification of topography and manicuring. Enhancement of the existing indigenous vegetation by regeneration with appropriate species should be a priority.

Remnant areas of indigenous and cultural vegetation deserve consideration for enhancement as future civic active and passive recreational spaces of various use types, associated particularly with higher density public use areas.

Response:

The Landscape Master Plan by Terras Landscape Architects shows how these principles of landscape and visual enhancement are proposed. The remnant vegetation of the Lake/foreshore, Bluff Point and cultural vegetation associated with the sundial garden and grotto areas is proposed to be incorporated into open space either in the foreshore reserve or within the public domain landscape on the future development site. Additional indigenous and cultural vegetation is proposed to complement and enhance the internal streetscapes, streetscapes on the western boundary of the site and the potential visual and physical links between the adjacent residential areas and the Lake/foreshore within the development area.

2.0 Assessment Methodology

The assessment of visual impacts is a field that requires a degree of subjective judgement and cannot be made fully objective. It is therefore necessary to limit the subjectivity of the work by adopting a systematic, explicit and comprehensive approach. This has the aim of separating aspects that can be more objective, for example the physical setting, visual character, visibility and visual qualities of a proposal, from more subjective elements, such as visual absorption capacity and the compatibility of the proposal with the setting.

The methodology used in the present assessment has been developed over several years and uses relevant aspects of methods accepted in landscape assessment, extended and modified to adapt to urban and maritime environments. The modifications introduced are informed by visual perception research that has been carried out by others and us in both natural and urban contexts.

We have independently also evolved a specific method for the assessment of maritime developments which is supported by the approach taken in Appendix D of the DCP to State Regional Environmental Plan, Sydney Harbour Catchment (DCP SREP 2005). The Appendix to DCP SREP 2005 provides a general method which is recommended for the assessment of visual impacts of boat storage proposals, including marina developments. While SREP 2005, and therefore DCP SREP 2005, does not apply to Lake Macquarie, the general approach of the methodology is useful and is also supported by some general principles for the impacts of various kinds of boat storage facilities and their physical contexts, which can with appropriate modifications, be applied to the Trinity Point locality and specifically to assessment of the Trinity Point Marina proposal. The assessment of Visual Impacts in this Report expands, where appropriate, on the guidelines given in D1.2, D1.3 and D1.4 of Appendix D of DCP SREP 2005.

In the present assessment, we have used a combined approach that considers both the assessment of the urban component and the maritime component of the development, these two aspects being in turn combined toward the end of the assessment process to arrive at an overall evaluation.

The overall methodology is intended to have compatibility with the Lake Macquarie City Council Scenic Quality Guidelines (LMCCSQG) which are of special relevance to assessment of the visual impacts of the urban development component of the proposal and the need for and effectiveness of mitigation measures to deal with residual impacts. The LMCCSQG however are of limited utility in the assessment of the taller building component and the marina component of the development proposed and therefore we have relied more on our own methodology in assessing that component.

2.1 Relationship to the DCP methodology

Appendix D in the DCP to SREP Sydney Harbour Catchments provides a general recommended approach to carrying out a View Analysis, the main components of which are adopted here. We have also shown the explicit indicative contributions to potential impacts method in this assessment and made modifications by way of adding further criteria for assessing the visual effects of the proposal. We adopted an original analytical approach to assessment of the impacts of the proposal by assessing the relative sensitivity of viewing locations in the public and private domains and assessing the compatibility of the proposal to the maritime and the urban/natural components of the setting when seen from a range of viewing places.

The overall assessment of visual impacts was undertaken using a Visual Effects and Impacts Matrix. A variation to the matrix in the DCP method is that we considered it necessary to establish a series of

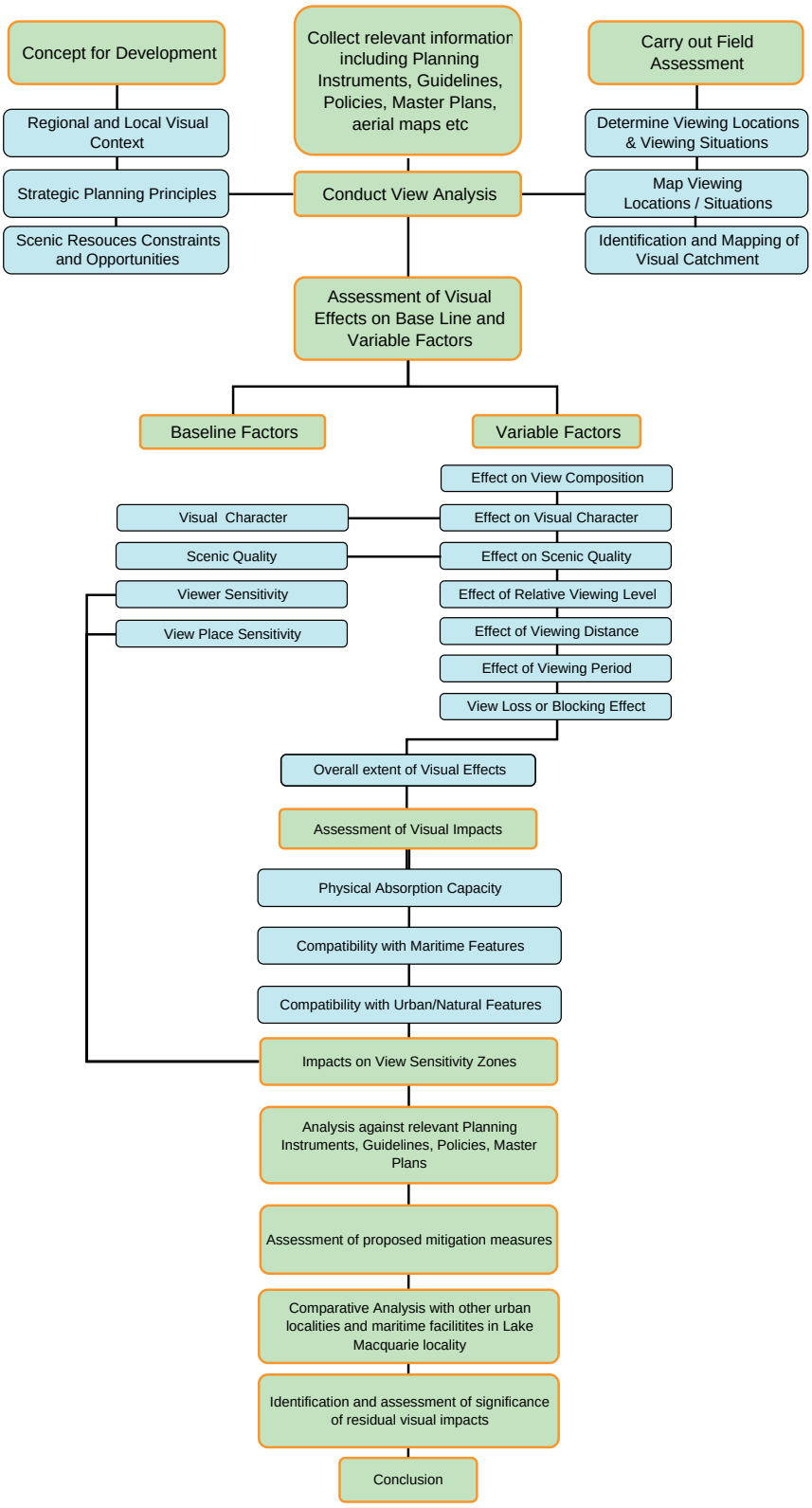
baseline criteria which are constants for the assessment of all viewing situations so as not to double count relevant assessment factors. The baseline criteria are explained below.

A second variation to the matrix is that it was decided to use a graphic symbol approach instead of numerical ratings and a quantified approach. The reason for the graphic approach is that it is easier for a reader unfamiliar with the method to perceive the pattern or response across the various criteria, rather than becoming distracted by individual rating numbers. A further reason for a graphic approach is that it is not statistically or logically valid to give numerical values to the ratings and to compute values for overall visual effects or impacts on individual viewing places by, for example, adding and averaging them. This is because there are logical relationships between some of the criteria which are invalidated by the computation. The variables are not fully independent and cannot be meaningfully quantified.

What is most important in using the matrix is to be able to see the pattern of the assessment on each criterion and how the overall pattern leads to an assessment of overall visual effects and overall visual impacts.

The flow chart at Figure 2.1 below indicates the relationships among the parts of the visual impact assessment methodology.

Figure 2.1: Flow Chart of the Visual Impact Assessment Methodology



2.2 Components of the Methodology

Overall, the major components of the visual impact assessment are determining the concept for the development, and general strategic planning principles, view analysis, visual effects analysis, visual impact evaluation and assessment of significance of residual visual impacts. This assessment is also supplemented with an assessment of the merits and compliance of the proposed redevelopment with the relevant Planning Instruments in relation to visual and related amenity impacts and the mitigation measures that have been undertaken to reduce or eliminate residual impacts. It is also supplemented by a comparative analysis of other mixed shoreline development and marinas in the Lake Macquarie locality.

2.2.1 The Components of the View Analysis

The development proposed and detailed field assessment

This includes a thorough understanding of the proposed development including its location, scale and extent to understand the scale and spatial arrangement of the development. The next step is to carry out a detailed field assessment by identifying the potential viewing locations, visiting the representative locations, documenting the proposal's approximate location on a base map, photographing representative locations and filling out an evaluation sheet for each, which contains separate and overall assessment of the visual effects and relative visual impacts factors. Examples of the analysis sheets can be found in Appendix C. The assessment factors are explained in Section 2.2.2 and 2.2.3. The analysis sheet that was filled out for each viewing location rated the factors in three ranges; Low, Medium and High. An indicative rating table that describes what is considered a low, medium and high effect and impact on each factor is shown in Table 2.2.

Identifying viewing locations and viewing situations

So as to represent all of the kinds of viewing locations which could be affected by each of these factors and variations among them, a view point analysis was conducted. This was carried out as part of the ground truthing exercise associated with mapping the visual catchment. Views on land and on the waterway were assessed. Viewing places were chosen so as to represent the full range of possible view experiences, situations, distances and land uses that are possible, in the entire visual catchment, as required by the Director General of Planning's Requirements and by good visual impact assessment practice.

The viewing locations fall into two categories, a) Public domain locations and b) Private domain locations. Public domain locations are major and minor roads, public reserves and recreation areas and waterways. The private domain viewing locations are predominantly residences.

It was not possible for views to be assessed from the many residences that would have views containing the proposal. However, it was possible to interpret the likely effects of the proposal based on views taken toward the proposal from roads and reserves in the vicinity of the residences and also by observing the locations of buildings with windows and outdoor areas which would provide views when these were seen from the existing facilities.

The viewing places visited and analysed therefore represent views predominantly from the public domain, but they also provide insights into the likely visual effects on private views. All the significant vantage points from which the site can be viewed, both water and land based, were assessed. A sample of the very large number of viewing places assessed, which represents examples of every relevant kind of viewing place, was abstracted from the total number of places assessed, for detailed analysis.

Mapping viewing locations and situations

The representative viewing locations sample visited during the field assessment are mapped including the ones for which photomontages have been prepared to represent the future appearance of the proposed redevelopment in the existing context.

Identification and mapping of visual catchment

The potential total visual catchment is mapped. The potential total visual catchment means the physical area within which the proposal would be visible and identifiable if there were no other constraints on that visibility, such as intervening vegetation and buildings. The catchment on the water is not delineated by a finite boundary because there is no identifiable physical feature that can define it. As is the case for views from the distant foreshore or land, the potential total visual catchment is larger than the area within which there could be visual effects of the proposal. This is because with increasing distance, perspective effects, the horizon of the water body itself and intervening elements such as topography, buildings and boats, a viewer's ability to discern and potentially be affected by the proposal would decrease to zero before the theoretical extent of the potential total visual catchment is reached.

Within the boundary of the area mapped as the potential total visual catchment, the visibility of the proposal would therefore vary. We identify the area within which the proposal would be identifiable and where it could cause visual impacts by assessing visibility.

Visibility means the extent to which the proposal would be physically visible to the extent that it could be identified, for example as a new, novel, contrasting or alternatively a recognisable but compatible feature. Features such as vegetation, buildings and intervening topography can affect the degree of visibility.

2.2.2 The components of the visual effect analysis matrix

2.2.2.1 Base-Line Factors

These are the criteria that remain predominantly constant and independent of the nature of viewing locations and factors which condition the viewing situation.

Visual character

The visual character of the locality in which the development would be seen is identified. It consists of identification of the physical and biological components of the area and the setting of the proposal that contribute to its visual character. The character elements include topography, vegetation, natural systems, land use, settlement pattern, urban form, interface of land-water elements, maritime features and waterways. Visual Character has also been assessed for the locality in the LMCCSQG.

Visual character is a baseline factor against which the level of change caused by the proposal can be assessed. The desired future character of the locality is also relevant to assessing the extent of acceptable change to character.

Scenic Quality

Scenic quality is a measure of the ranking, which the setting of the proposal either is accepted to, or would be predicted to have, on the basis of empirical research carried out on scenic beauty,

attractiveness, preference or other criteria of scenic quality. Scenic quality has also been assessed for the locality in the LMCCSQG.

Scenic quality is a baseline factor against which the visual impacts caused by the proposal can be assessed.

View place sensitivity

View place sensitivity means a measure of the public interest in the view. The public interest is considered to be reflected in the relative number of viewers likely to experience the view from a publicly available location. Places from which there would be close or middle distance views available to large numbers of viewers from public places such as roads, or to either large or smaller numbers of viewers over a sustained period of viewing time in places such as reserves, beaches and walking tracks, are considered to be sensitive viewing places. View place sensitivity in regard to likely viewer numbers and accessibility has also been assessed for the locality in the LMCCSQG.

Viewer sensitivity

Viewer sensitivity means a measure of the private interests in the effects of the proposal on views. The private interest is considered to be reflected in the extent to which viewers, predominantly viewing from private residences, would perceive the effects of the proposal. Residences from which there would be close or medium distance range views affected, particularly those which are available over extended periods from places such as the living rooms and outdoor recreational spaces, are considered to be places of medium and high viewer sensitivity respectively.

The relationship between the viewer's location in either the private or public domain and the viewing distance in determining view place or viewer sensitivity is shown in the table below. (For example, a view place in a reserve or foreshore at a distance of 100-1000m is rated as of medium sensitivity)

Table 2.1: Relationship between viewing situation, viewing distance and view/ viewer sensitivity zones

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/foreshore			
	Waterway			X
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

2.2.2.2 Variable Factors

These are the assessment factors that vary between viewing places with respect to the extent of visual effects.

View composition type

View composition type means the spatial situation of the proposal with regard to the organisation of the view when it is considered in formal pictorial terms. The types of view composition identified are:

- Expansive (an angle of view unrestricted other than by features behind the viewer, such as a hillside, vegetation and buildings.)
- Restricted (a view which is restricted, either at close range or some other distance, by features between or to the sides of the viewer and the view such as vegetation and buildings.)
- Panoramic (a 360 degree angle of view unrestricted by any features close to the viewer who is surrounded by space elements.)
- Focal (a view that is focused and directed toward the proposal by lateral features close to the viewer, such as road corridors, roadside vegetation, buildings, boats etc.)
- Feature (a view where the proposal is the form element that dominates the view, for example in close range views.)

It is considered that the extent of the visual effects of the proposal is related to its situation in the composition of the view. The visual effect of the proposal on the composition of the view is considered to be greater on a focal or a feature view, cognisant of the distance effect, compared to a restricted, panoramic or expansive view.

Relative viewing level

Relative viewing level means the location of the viewer in relative relief, compared to the location of the proposal. It is conventional in landscape assessment to assess views from locations above, level with and below the relative location of the proposal. However when maritime developments are concerned, the latter viewing level (i.e. relatively below the level of the proposal) has no practical application.

It is considered that the visual effects of a development are related to the relative viewing level and distance. Viewing levels above the development where views are possible over and beyond it decrease the visual effects, whereas views from level with and close to the development, dependent on viewing distance, may experience higher effects, particularly if built form intrudes into horizons.

Viewing period

Viewing period in this assessment means the influence on the visual effects of the proposal which is caused by the time available for a viewer to experience the view. It is assumed that the longer the potential viewing period, experienced either from fixed or moving viewing places such as dwellings, roads or the waterway, the higher the potential for a viewer to perceive the visual effects of the proposal. Repeated viewing period events, for example views repeatedly experienced from roads as a result of regular travelling, are considered to increase perception of the visual effects of the proposal.

Viewing distance

Viewing distance means the influence on the perception of the visual effects of the proposal which is caused by the distance between the viewer and the development proposed. It is assumed that the viewing distance is inversely proportional to the perception of visual effects: the greater the potential viewing distance, experienced either from fixed or moving viewing places, the lower the potential for a viewer to perceive and respond to the visual effects of the proposal.

Three classes of viewing distance have been adopted which are the same as those in Appendix D and Figure D2 in the DCP methodology, i.e. short range (<100m), medium range (100-1000m) and distant (>1000m).

View loss or blocking effects

View loss or blocking effects in this assessment means a measure of the extent to which the proposal is responsible for view loss or blocking the visibility of items in the view. View loss is considered in relation to the principles enunciated in the Land and Environment Court of NSW by Roseth SC in Tenacity v Warringah [2004] NSWLEC 140. Although Tenacity concerned view losses from residential properties, the matter of what could be construed to be a valuable feature of the view which could be lost, e.g. specific features of views such as whole views and iconic elements viewed across water, alluded to in Tenacity, are of some relevance to the public domain also.

It is assumed that view loss and blocking effects increase the perception of the visual effects of the proposal. It is also assumed that view loss and view blocking can be important matters for consideration in regard to short range views from the public domain of the foreshore and potentially from nearby adjacent residences. View loss and blocking effects are likely to be more pronounced for the marina component of the proposal than the buildings.

2.2.2.3 Overall Extent of Visual Effect

Based on the inspection of the pattern of the assessment ratings for the above factors on the relevant analysis sheet for each viewing location an overall rating is arrived at which represents an overall extent of visual effects for a viewing location.

2.2.3 The Components of the Visual Impact Analysis

The criteria in 2.3 concern assessment of the extent of the visual effects of the proposal when seen from specific viewing places. The extent of the visual effects is the baseline assessment against which to judge the visual impacts.

Whether or not a visual effect is an impact of potential significance cannot be equated directly to the extent of the visual effect. For example, a high visual effect can be quite acceptable, whereas a small one can be unacceptable. As a result, it is necessary to give a weighting to the assessed levels of effects to arrive at an assessment of the impact.

This method therefore does not equate visual effects directly to visual impacts. The approach is to assess visual effects as in 2.2.2 above to arrive at an overall level of visual effect of the proposal for each kind of viewing place and then to assess the level of impact, if any, by giving differential weighting criteria to impact criteria. By this means, the relative importance of impacts are distinguished from the size of the effect. We consider that two weighting criteria are appropriate to the overall assessment of visual impacts, Physical Absorption Capacity and Visual Compatibility. Each of these addressed the primary question of the acceptability of the visual effects and changes caused by the proposal.

2.2.3.1 Physical Absorption Capacity

Physical Absorption Capacity (PAC) means the extent to which the existing visual environment can reduce or eliminate the perception of the visibility of the proposed redevelopment.

PAC includes the ability of existing elements of the landscape to physically hide, screen or disguise the proposal. It also includes the extent to which the colours, material and finishes of buildings and in the case of boats and buildings, the scale and character of these allows them to blend with or reduce contrast with others of the same or closely similar kinds to the extent that they cannot easily be distinguished as new features of the environment.

Prominence is also an attribute with relevance to PAC. It is assumed in this assessment that higher PAC can only occur where there is low to moderate prominence of the proposal in the scene.

Low to moderate prominence means:

- Low: The proposal has either no visual effect on the landscape or the proposal is evident but is subordinate to other elements in the scene by virtue of its small scale, screening by intervening elements, or difficulty of being identified.

- Moderate: The proposal is either evident or identifiable in the scene, but is less prominent, makes a smaller contribution to the overall scene, or does not contrast substantially with other elements or is a substantial element, but is equivalent in prominence to other elements and landscape alterations in the scene.

Design and mitigation factors are also important to determining the PAC. Appropriate colours, materials, building forms, line, geometry, textures, scale, character and appearance of buildings, marina structures and vessels are relevant to increasing PAC and decreasing prominence.

PAC is related to but distinct from Visual Compatibility (see below).

2.2.3.2 Visual Compatibility

Visual Compatibility is not a measure of whether the proposal can be seen or distinguished from its surroundings. The relevant parameters for visual compatibility are whether the proposal can be constructed and utilised without the intrinsic scenic character of the locality being unacceptably changed. It assumes that there is a moderate to high visibility of the proposal to some viewing places. It further assumes that novel elements which presently do not exist in the immediate context can be perceived as visually compatible with that context provided that they do not result in the loss of or excessive modification of the visual character of the locality.

A comparative analysis of the compatibility of similar items to the proposal with other locations in the area which have similar visual character and scenic quality or likely changed future character can give a guide to the likely future compatibility of the proposal in its setting.

Because the development proposed is on the interface between water and land, with components on each, the question of its visual impacts also depends on its perception both as an entity and in regard to its compatibility with the major scenic character attributes. In this regard, both the maritime/industrial environment and the urban/natural environment are attributes of relevance. Hence, it is considered that there are two relevant measures of Visual Compatibility, i.e. Compatibility with Urban and Natural Features, and Compatibility with Maritime Features.

Visual compatibility with urban and natural features

This assessment is a measure of the extent to which the visual effects of the proposal are compatible with urban and natural features. It is assumed that in some views the proposal can be seen and clearly distinguished from its surroundings. Compatibility does not require that identical or closely similar features to those which are proposed exist in the immediate surroundings.

Compatibility with Urban and Natural Features means that the proposal responds positively to or borrows from within the range of features of character, scale, form, colours, materials and geometrical arrangements of urban and natural features of the surrounding area or of areas of the locality which have the same or similar existing visual character.

Visual compatibility with maritime features

This assessment is a measure of the extent to which the visual effects of the proposal are compatible with maritime features. In some views, the proposal can be seen and clearly distinguished from its surroundings. Compatibility does not require that identical or closely similar features to those which are proposed exist in the immediate surroundings.

Compatibility with Maritime Features means that the proposal responds positively to or borrows from within the range of features of character, scale, form, colours, materials and geometrical arrangements of maritime features of the surrounding area or of areas of the locality which have the same or similar existing visual character.

2.2.3.3 Overall Extent of Visual Impact

Based on the inspection of the pattern of the assessment ratings for the above factors on the relevant analysis sheet for each viewing location an overall rating is arrived at which represents an overall extent of visual impacts for a viewing location.

Table 2.2 Indicative Contribution to Visual Effects and Visual Impacts

2.2.4 Visual Sensitivity Zones

Three visual sensitivity zones are identified which are based on the view place sensitivity or viewer sensitivity as explained above in 2.2.2.1. These are related to the distance zones from the development site and whether views are from significant public domain or private viewing locations. Viewing places within the high or medium visual sensitivity zones are further assessed as explained below.

Impact assessment for each zone

An overall impact rating for each of the three visual sensitivity zones is arrived at by inspecting the pattern of the assessment ratings for the visual impacts factors (as given in 2.2.3) on the relevant analysis sheet for each viewing location in that zone. It is generally found that the close range visual sensitivity zone is most affected by any development as the development forms part of the foreground views from the viewing locations within this zone.

Analysis against relevant information/planning instruments/policies & master plans

The proposed redevelopment and its overall impacts on each of the visual sensitivity zones is analysed against the relevant information. These include:

1. Lake Macquarie City Council Lifestyle 2020 Strategy (Lifestyle 2020).
2. Lake Macquarie Local Environmental Plan 2004 (LEP).
3. Lake Macquarie Development Control Plan No 1 – Principles of Development (DCP 1).
4. Lake Macquarie City Council Scenic Quality Guidelines 2004 (LMCCSQG).
5. Section 4.7 Marinas (Commercial and Private), DCP to SREP Sydney Harbour Catchment, 2005 (Though Lake Macquarie is not within the area covered by the SREP, these performance criteria have been considered to be potentially relevant).
6. Boat Storage Policy for Sydney Harbour, June 2004 (though Lake Macquarie does not form part of Sydney Harbour, this policy has been considered to be potentially relevant).
7. Coastal Design Guidelines of NSW (2003).

Assessment of the mitigation measures proposed to eliminate visual impacts

The mitigation measures that are already proposed as part of the development are then assessed in terms of their capability to overcome the visual effects and impacts on each of the visual sensitivity zones. Other mitigation measures and management guidelines are then formulated to overcome every possible visual effect and impact.

Significance of residual visual impacts

Finally and subsequent to the visual effects of the mitigation factors being assessed, a relevant question is whether there are any residual visual impacts and whether they are acceptable in the circumstances. These residual impacts are predominantly related to the extent of visual change to the immediate setting and are also a result of personal choices and preferences.

In terms of the urban component of the development, residual impacts relate to individuals' preferences for the nature and extent of change which cannot be mitigated by means such as vegetation, colours, materials and the articulation of building surfaces. In terms of the marina component, they relate to preferences for the visual effects and appearance of the boat storage and to individual's preference for whether he/she would prefer a differently organised array of boats. This could be in the form of for example, a large number of scattered swing moorings in the views available to them instead.

These personal choices are also a result of people's resistance or resilience towards any change to the existing arrangement of views. Particular individuals or groups may express strong preferences for either form of urban development or of vessel storage. There is no clear research evidence of which we are aware to support either preference.

The significance of these residual impacts is assessed on the basis of the relative sensitivity of viewers and viewing places that may experience these impacts. Whether overcoming these impacts would result in undermining of the potential capacity of the development site to economically support the intended use is not the focus of a visual impacts assessment such as this.

Table 2.2 Indicative Contribution to Visual Effects and Visual Impacts

Visual Effects Factors			
Factors	Low Effect	Medium Effect	High Effect
Scenic quality	Proposal does not have any negative effects on features which are associated with high scenic quality, such as the quality of panoramic views, proportion of or dominance of natural vegetation, appearance of steep and complex topography and presence of extensive areas of water.	Proposal has the effect of reducing any or all of: the extent of panoramic views, the proportion of or dominance of natural vegetation, views of steep or complex topography or the perception of extensive areas of water and maritime features, without significantly decreasing their presence in the view or the contribution that the combination of these features make to overall scenic quality	The proposal significantly decreases or eliminates perception of the integrity of any of: panoramic views, dominance of natural vegetation, steep or complex topography, extensive areas or water and maritime features. The result is a significant decrease in perception of the contribution that the combinations of these features make to scenic quality.
Visual character	Proposal does not decrease the presence of or conflict with existing scenic character elements such as topography, urban fabric, land/water interface and maritime features.	Proposal contrasts with or changes the relationship between existing scenic character elements in some individual views by adding new or distinctive features, but does not affect the overall visual character of the Lake Macquarie setting.	The proposal introduces new or contrasting features which are in conflict with, reduce or eliminate existing character features. The proposal causes a loss of or unacceptable change to the overall visual character of the locality.
View place sensitivity	Public domain viewing places providing distant views, and/or with small no. of users for small periods of viewing time (Glimpses-as explained in viewing period).	Medium distance range views from roads, recreation areas and waterways with medium no. of viewers for a medium time period (few minutes up to half day-as explained in viewing period).	Close distance range views from roads, recreation areas and waterways with medium to high numbers of users for the majority of the day (as explained in viewing period).
Viewer sensitivity	Residences providing distant views (>1000m)	Residences located at medium range from site (100-1000m) with views of the development available from bedrooms and utility areas.	Residences located at close or middle distance (<100 or 100-1000m as explained in viewing distance) with views of the development available from living spaces and private open spaces.
View composition	Panoramic views, or views restricted in visibility of the proposal by the screening or blocking effect of vegetation and/or buildings.	Expansive or restricted views where the restrictions do not significantly reduce visibility of the proposal.	Feature or focal views of the proposal
Relative viewing level	Elevated position such as ridge top or higher up on slope with clear view over marina.	Slightly elevated (lower slopes) with partial views over marina.	Adjoining shorelines, waterway or reserves with view blocked by marina and boats.
Viewing period	Glimpse (eg moving vehicles).	Few minutes up to half day (eg walking along foreshore, recreation in adjoining open space, boating on adjoining waterway).	Majority of day (eg adjoining residence or workplace).

Viewing distance	Land area or waterways (Distant Views)(>1000m).	Land areas or water (Medium Range)(100-1000m).	Adjoining shoreline or waterway (Close)(<100m).
View loss or blocking effect	No view loss or blocking	Partial or marginal view loss compared to the expanse/extent of views available such as loss of part of foreshore, foothill or small portion of land-water interface in an expansive or panoramic view No loss of views of scenic icons.	Loss of majority of available views such as those of majority of shoreline, ridges, waterways, land-water interface in a restricted or focal view. Loss of views of scenic icons.
Visual Impacts Factors			
Factors	Low Impact	Medium Impact	High Impact
Physical absorption capacity	Existing elements of the landscape physically hide, screen or disguise the proposal. The presence of marinas, large nos. of swing moorings, marina buildings and associated structures in the existing landscape context reduce visibility. Low contrast and high blending within the existing elements of the landscape and built forms.	The proposal is of moderate visibility but is not prominent because its components, forms and line and its textures, scale and building and vessel form have low to moderate contrasts with existing features of the scene.	The proposal is of high visibility and it is prominent in some views. The marina buildings and/or the storage arrangement of boats has a high contrast and low blending within the existing elements of the landscape and waterway and associated built forms.
Compatibility with maritime features	High compatibility with the character, scale, form, colours, materials and geometrical arrangements of existing maritime features in the immediate context. The range of sizes of vessels accommodated in the marina is similar to other examples in the immediate setting	Moderate compatibility with the existing maritime features in the immediate context. The proposal introduces new maritime features, but these features are compatible with the scenic character and qualities of similar settings in which they are accommodated in Lake Macquarie. The average sizes of vessels accommodated in the marina is greater than the average of examples in the immediate setting	The character, scale, form and spatial arrangement of the proposal has low compatibility with the maritime features in the immediate context or which could reasonably be expected to be new additions to it when compared to other examples in the Lake Macquarie locality. The sizes and forms of vessels accommodated in the marina are outside the range of examples in the locality
Compatibility with urban/natural features	High compatibility with the character, scale, form, colours, materials and geometrical arrangements of existing urban and natural features in the immediate context. Low contrast with existing elements of the built environment.	Moderate compatibility with the character, and geometrical arrangements of the existing urban and natural features in the immediate context. The proposal introduces new urban features, but these features are compatible with the scenic character and qualities of similar settings in which they are accommodated in Lake Macquarie	The character, scale, form and spatial arrangement of the proposal has low compatibility with the urban features in the immediate context or which could reasonably be expected to be new additions to it when compared to other examples in the Lake Macquarie locality.

3.0 Concept for the Proposal

Parts 3.1-3.3 below describe the overall concept for the proposal, the concept for the built form component and for the overall proposal's intended landscape. The specific zoning for the site and the existing approvals mean that the site and the immediate locality will be changed significantly in character. This is acknowledged as a starting point for assessment of visual impacts of the proposal, in which what is proposed needs to be described both in concept and in physical terms. The acceptability of the proposal is not assumed simply because the concept as described below. The assessment of the visual impacts of the proposal is independent of the concepts for the site and built form and is the outcome of the assessment process outlined in Chapter 2.

3.1 Concept for the Site as a Destination

The underlying concept for this site is for a destination for tourism, with a mix of residential development and boat accommodation and servicing, which will achieve an active, vibrant local centre character. The mix of tourism with an appropriate density of residential accommodation is intended, along with the marina, to provide a unique, high quality urban environment with sufficient profitability to ensure a high quality public domain, civic landscape and conservation of natural foreshore and wetland features.

The development is intended to achieve realistic density targets and the appropriate use of existing resources. Realistic density for this purpose cannot be achieved by mimicking low density housing or dispersed 2-3 storey medium density housing as the predominant built form. While these were some of the features of the Concept Master Plan for the site prepared by Architectus, they may require re-consideration in the light of the factors above and the strategic planning initiatives in the LMCC Lifestyle 2020 Strategy.

3.2 Concept for the Built Form

LMCC supports development of the land to provide for a tourism destination. The proposal conforms to the overall structure plan and key design principles as laid out in the Kendall Grange Master Plan by Architectus. The Master Plan however had a significant but unresolved small scale tourism component. Subsequent research has shown that small scale tourism development is unworkable in bringing about a quality destination as required by Council or the financial return necessary for project viability. Acknowledging the need for the tourism component to be central to the appeal and destination quality, a marina and village centre have been added.

It is reasonable to consider whether a different built form from the predominant one in the adjacent context can be acceptable in the context of creating a local centre and tourism destination. It is clear that the intention for the development is not going to be appropriate if it is in the same language of form or character to the existing, predominantly mid to late 20th century modest low scale detached residential development of the Morisset area.

A legitimate intention for the development would be to take the lead in development on the shore of lower Lake Macquarie and provide a destination with a distinctive character that is relevant to the destination concept that LMCC has indicated is appropriate for the site.

Urban form could include one or more taller buildings, one or more of which could be visible above the predominant tree canopy. A legitimate part of this approach could also be to follow the existing

topography of the site and other natural elements, such as the tree canopy, to produce a built form which also reflects these factors.

Thus, a combination of the above approaches is proposed, i.e., a distinctive destination development with the built form determined largely in height and visibility from off site by the canopy heights, either existing or potential and predominantly either screened by or related to that canopy in height. The evolution of the concept for the built form of the proposal, architectural concept and an indicative outcome is set out in graphic form in the Design Evolution and Architectural Concept chapters of the Concept Plan documents by HBO+EMTB.

3.3 Proposed Solution

The likely practical outcome of achieving the necessary densities and a mixed residential and tourism development is a form of building which is not similar to the adjacent context. In our view, there is no objection which could be raised to the visual impacts of a development of the site if only the residents and visitors to it could discover that it was attractive, desirable and a place to return to and to recommend to others.

We consider that it would be unrealistic, impractical and retrograde to propose a development for a site zoned for the intended purpose that either mimics the undistinguished built form of the Morisset context or transplants other irrelevant forms, such as low-rise medium density.

A level of contrast and difference will be apparent in any appropriate development form. The difference will be highlighted in views within the site, whatever the built form and layout that is adopted. In addition, the marina component will be of high local visibility of its nature and cannot be hidden.

While recent developing areas such as Wallarah could be pointed to as examples of what could be achieved in this regard, the intrinsic character of the Wallarah landscape, its zoning and the subject site are very different. Wallarah is highly naturalistic, with significant existing tall vegetation, an extensive site area, low visual exposure, complex topography in which to situate and disguise development in views inward and a secluded location that is unrelated to existing urban centres.

Whatever the approach for the subject site, the built form would be visible from off site to some extent and may require a more creative and less mechanical interpretation of the provisions of the LMCCSQG. This is not to say that they are irrelevant by any means and the proposal needs to be assessed under the guidelines.

The solution proposed depends partly on the intrinsic capacity of the nature landscape and vegetation to hide, disguise or screen the tourism and residential built form on the site to the extent realistically possible. Subject to maintaining, protecting, enhancing and rehabilitating the foreshore reserve vegetation, along with a significant degree of screening of individual buildings by future landscape within the site in significant view lines, an acceptable outcome is possible.

While a high level of screening is possible however, it is also not necessarily desirable when considering residential amenity. Significant views through the site should be retained and enhanced by building locations, street alignment and landscape design for an integrated and enjoyable public domain. Sunlight availability is another constraint on screening the view in from the north. These features will lead to increased visual exposure.

View corridors through the site will increase visual exposure of the development, however it may be acceptable given that these would be predominantly toward the Lake, from which views are available to few viewers and less significant or from distances where the corridors do not cause significant exposure of details of the development and therefore are of less concern.

The approach taken is for a distinctive built form with a concentration of taller buildings, signifying Trinity Point, giving it a focus and a character, identification and meaning and a lower and more dispersed component among the trees. There may be legitimate grounds for a taller building component but they do not justify a significant bulk of tall building, given the extensive visual catchment and its existing character. In our view, a built form, stepping down significantly to the next, clearly subordinate "class" of building height, the remainder situated among the trees, present and future, is a legitimate approach.

The specific qualities of the proposal on which the visual assessment is based follow. The general description above of the concept and approach to the built form that is proposed does not influence the assumptions of the assessment. It is intended only to "set the scene" for what follows.

3.4 Physical Description of the Proposal

3.4.1 Proposed Village Centre

The village centre is proposed to incorporate a restaurant and cafe, function rooms, a health and fitness centre, commercial offices, retail outlets and short-term tourism accommodation. The buildings are to be of one and two storeys in height.

3.4.2 Tourism Component

Short-term tourism accommodation will be provided in the form of one, two and three bedroom apartments in ten buildings ranging from two to six storeys in height. The three main buildings are of two six-storey and one five-storey containing only one and two bedroom apartments. These are located southeast of the village centre buildings in a cluster overlooking the marina.

The remaining group of seven buildings is clustered in a reverse L shape south of the taller, distinctive buildings. The buildings range in height from a single two-storey building closest to the Lake foreshore, a three-storey building, four four-storey buildings and a five-storey building. A total of 34 one bedroom apartments, three two bedroom and six three bedroom apartments are contained within the group of buildings.

A pool is proposed to be located between the three main buildings and the group of seven buildings.

3.4.3 Café/Restaurant

A café will be located on the boardwalk overlooking the Lake to the northeast of the commercial/retail buildings. The café will provide alfresco dining for 30 seats on the boardwalk beneath an upper level restaurant that will seat up to 200 diners. The restaurant will be located on the first floor above the café and will consist of the kitchen bar and dining areas. An additional mezzanine dining level will be located above the kitchen and bar.

3.4.4 Commercial/Retail

The commercial/retail building will house the function rooms, retail spaces, commercial offices, a health and fitness centre and the village amenities in a two-storey building located southeast of the marina building. The ground floor consists of four retail spaces, the health and fitness centre, commercial offices and the village centre amenities. The first floor consists of the three function rooms, which overlook the Lake and the café/restaurant, and the associated servery.

3.5 The Marina Proposal : Key Elements of the Proposal

3.5.1 The Proposed Marina Structure

The proposed marina would provide a floating berth marina of up to 308 berths. Stage one of the Marina proposal is for the construction of Arm A of 72 berths to be increased to a further three Arms totalling 308 berths in the future. Included in Stage one is a breakwater, a travel lift with associated hardstand area for boat repairs and maintenance, and a workshop.

Stage one of the Marina is a single arm floating berth arrangement and part of the south and eastern sector of the breakwater including a helipad pontoon off the eastern portion of the breakwater jetty. The proposed Marina will ultimately provide floating berths for vessels between 8 and 20 metres in length. The Marina will include services to the berths including power, water and lighting. Fuel, sewage pumpout and oily bilge pumpout facilities will be provided on the Marina as will repair and maintenance facilities. The proposed floating helipad pontoon will provide helicopter access to the village centre, tourism facilities and residences.

3.5.2 Floating Berth Marina

The Marina is proposed to initially consist of a single arm of floating pontoons and a breakwater structure, which incorporates a walkway, around the southeast and eastern perimeter. The breakwater consists of spaced timber vertical slates attached to the walkway structure and associated steel piling. Provision has been made for up to three additional floating pontoon arms and extensions to the breakwater to be added at a future date. Timing of the construction of subsequent arms will be based on the permanent occupancy rate. An 80% take up rate for berthing will be the threshold for the next arm of the marina to be constructed. Arm A will consist of 72 berths, Arm B of 76 berths, Arm C of 78 berths and Arm D of 77 berths. The distribution and vessels size are shown in table 3.1 below.

Table 3.1 – Size and Distribution of Vessels and Berths

Vessel Size	Arm A	Arm B	Arm C	Arm D	Total
8m	2	6	8	5	21
10m	6	8	6	8	28
12m	32	30	25	33	120
14m	28	28	24	28	108
16m	4	4	8	6	22
18m	-	-	5	1	6
20m	-	-	2	1	3
Total Berths	**72**	**76**	**78**	**77**	**308**

The marina berths are proposed to be created at right angles to the walkways with fingers extending from the walkways creating berthing pens and providing access alongside the vessels.

Berths have been located such that larger vessels will be located towards the ends of the Arms away from the shoreline to have less visual impact from the Village Centre and residential areas of the development. This will have the additional benefit of reducing the need for dredging in the construction of the Marina.

Access to the Marina would be via an elevated boardwalk from the Village Centre to the floating berths. A hinged aluminium gangway of approximately 9m in length is proposed to connect the

elevated boardwalk with the floating pontoon walkway. A sliding security gate would be fitted at the head of the gangway.

3.5.3 Breakwater

The breakwater is proposed to be constructed of tubular steel piles with vertical timber slats fixed between the piles and a timber walkway allowing access to the floating helipad pontoon and to the perimeter of the marina. A breakwater of similar visual character exists in Belmont Bay at the Lake Macquarie Yacht Club marina. The breakwater would extend continuously around the north-eastern and southern sections of the Marina. The construction of the breakwater is proposed to be staged along with the stages of marina arm construction to provide adequate protection for the marina berths, as they are required. The breakwater will vary in visibility and apparent bulk and height with the tide, increasing as the tide falls. Because of the small maximum tidal range in the southern basin of the Lake (about 1m), the visual exposure of the breakwater at low tide will be less than for adjacent coastal environments where the tide range is typically approximately up to 2m.

3.5.4 Lighting, Fire Safety and General Services

Lighting and fire safety facilities would be provided on the Marina in the form of light and services pedestals, fire hose reels and fire hydrants. Service pedestals would be provided for each berth at the junction of the walkway with the finger. The pedestals house fresh water and power outlets with the capacity for the introduction of telephone and TV if required. Pedestals without service outlets are provided on the main arms of the marina which do not have berths associated with them at approximately 10m intervals. All pedestals provide low level lighting which is sufficient for the safety of patrons using the facilities after dark. Light levels would be low and are not intended to provide general lighting. The lighting for the proposal would be subject to the need for the design to meet the Australian Standard AS 4282-1997, Control of Obtrusive Effects of Outdoor lighting. A lighting management and general marina management plan would be likely requirements for consent.

Fire hydrants would be located at the head of each access gangway and at the northeast corner of the hardstand.

3.5.5 Fuel, Sewage and Bilge Pumpout Facilities

A fuelling berth is proposed to be located on Arm A and would consist of a dual bowser located on the wharf deck. Fuel storage would be in the form of two aboveground steel tanks in a bunded and secured area adjacent to the hardstand area. The tanks would be one of 20,000 to 25,000L capacity and the other of 10,000 to 15,000L capacity. Associated fire and environmental management service pedestals would be located adjacent to the bowser.

A sewage pumpout facility would be located at the same berth as the fuel facilities. The sewage pumpout facility would consist of a pumpout unit to empty holding tanks on vessels and a waste slops hopper for manual collection of chemical toilet waste. A bilge water pumpout facility would be located adjacent to the sewage pumpout facility.

3.5.6 Other Associated Facilities

Apart from the berthing facility/water-based facility, a number of associated facilities are proposed for the overall functioning of the proposed marina. These include:

a) A ship travel-lift facility at the northwestern corner of the hardstand area, comprising two runway beams of 20 to 25m in length constructed of concrete, and at least one of sufficient width to allow pedestrian access alongside the ship travel-lift device. The travel-lift would have a capacity of lifting a vessel of approximately 25m in length and 8m beam.

b) A hardstand area approximately 45m long and 20 to 25m wide, with an additional 50m long and 15m wide runway are for the ship travel-lift. The hardstand area would be capable of accommodating 7 to 9 vessels at once depending on the size of the vessels. The area would be fenced for safety and security.

c) A workshop facility on the northwestern corner of the Village Centre adjacent to the hardstand area. The workshop is proposed to be two-storey in construction and consisting of ground floor maintenance workshops and amenities and first floor offices associated with Marina activities and amenities.

d) A floating helipad helicopter landing pontoon is proposed on the southeastern side of the Marina breakwater. The helipad would be a 25m square floating steel pontoon with an access gangway to the Marina breakwater.

3.6 Proposed Accommodation Development

The southern portion of the site will potentially incorporate apartment style residential development with two to five storey buildings arranged in a series of three building clusters connected to each other and the marina village and tourist accommodation sector through the boardwalk network.

Two of the three clusters in the Indicative Outcome for the site are arranged in a U shape with five buildings on each of the parallel arms and four buildings forming the bottom of the U shape. The foremost buildings, those closest to the Lake, are conceived to be limited to two storeys in height. Those buildings behind on the arms potentially range from three to four storeys in height, and those along the bottom of the U shape are shown at between two and four storeys. The third cluster located adjacent to Bluff Point is conceived to be shaped in a reverse J shape and consists of buildings ranging in height from two storeys at each end to four storeys in the middle. Each of the clusters may have a pool associated with it and linked to the boardwalk.

3.7 Proposed foreshore treatment

3.7.1 Boardwalk

The entire development is shown connected by a series of boardwalks. The boardwalks are intended to link the marina buildings with the marina, the village centre and short-term tourist accommodation. These will in turn be linked with the future residential buildings on the southern portion of the site.

3.7.2 Enhancement and Nourishment

Enhancement and nourishment of the foreshore reserve is proposed to be undertaken for the purposes of upgrading existing vegetation, to improve bank stabilisation and ensure the longevity of the mature vegetation as a community. The management of the foreshore and landscape both within the foreshore reserves and the development site will be subject to a Landscape Management Plan (see Principle 8 of the Concept Plan and relevant Commitments.

Enhancement of the foreshore reserve will be by way of supplementing the vegetation between the existing seagrass and the existing vegetation with appropriate indigenous shrubs and small tree species. Nourishment of the foreshore of the reserve will only be undertaken if required and will consist of sections of imported pebbles/shingles of between 20 to 50mm in diameter laid on geotextile material between the area of existing seagrass and existing vegetation.

3.7.3 Proposed Landscape Scheme

The landscape scheme will be in accordance with the Landscape Master Plan prepared by Terras Landscape Architects. Street tree plantings will be utilised along the western boundary of the site to soften the development when viewed from the adjacent residential subdivision and to integrate the existing approved streetscape with the development. Additional plantings of appropriate species will be used to soften and screen the development viewed from the south. Foreshore vegetation will be replanted or rehabilitated/regenerated where appropriate to assist in stabilisation and minimise erosion as detailed above, subject to the Landscape Management Plan.

4.0 VIEW ANALYSIS

4.1 Visual Exposure

The effective visual catchment for the proposed development is confined by the topography, natural vegetation and settlement pattern, to a part of the southern basin of the Lake and to isolated parts of the urban foreshores of surrounding settlements. This effect is in response to the low relative topography of the site and the surrounding area and the expanse of waterway across which it can be seen from distances of up to approximately 4km. Most land based views of the site are from close or middle distant viewing locations. Close viewing locations include roads, in particular Henry Road and the northern end of Lakeview Road, as well as from residences in the immediate vicinity of the site. Close views from the adjacent residential development approved and under construction have been identified at 4.1.1 below. Other close viewing locations include the boat ramp and reserve at the end of Lakeview Road.

More middle distant land based viewing locations are found within suburbs to the north and northeast of the site including Brightwaters and Sunshine. These include views from parts of Pillapai and Bulgonia Roads and Bardon Lane, as well as from the foreshore reserve on Bardens Bay and adjacent to the Brightwaters Christian College. Development on the site is not significantly visible from Bird Cage Point in the Lake Macquarie SRA to the west southwest, because of the blocking effect of topography and vegetation in Morisset Park adjacent to the site and the likely future effects of residential development in the same area. It is minimally visible from the southern edge of the Morisset Hospital site, from which views of most of the site are blocked by Bird Cage Point and the features mentioned in relation to view from there, above.

Land based long distance views are available from suburbs across the Lake waters to the east, south east, south and to a limited extent south west of the site, including Summerland Point, Mannering Park and Wyee Point. The site can also be seen from part of the Lake Macquarie State Recreation Area at Point Wolstoncroft. At greater distances, the site is potentially visible from the Pacific Highway in the general vicinity of Catherine Hill Bay; however, view opportunities from this area are minimal.

On the waterway, the site can be seen at middle or long distant viewing locations between Wyee Point, Wyee Bay, Chain Valley Bay, Bardens Bay, Sugar Bay, the area between Fishery Point and approximately midway along Point Wolstoncroft.

The relatively low topography of the area and site results in the Watagan Mountains forming the horizon of views beyond it to the north west, west and south west in the predominant views from the Lake and settlements such as Mannering Park, Summerland Point and Point Wolstoncroft.

4.1.1 Views into the Land

Views from the area of the approved residential subdivision

The foreshore surrounding the salt marsh has the densest remnant vegetation on the site. When viewed from east of the existing entrance gate and south of the small salt marsh bay in the alignment with Henry Road facing north there are heavily screened views of the Lake and salt marsh through dense foreshore vegetation. From the same location, facing northeast the flat topography combined with sparse foreshore vegetation allows views of Bardens Bay and part of Brightwaters.

Facing east-northeast, the topography slopes gently upward and southward, before sloping downward and eastward at the foreshore on the site itself. The foreshore vegetation, coupled with remnant vegetation and cultural plantings in the interior of the site and the topography, quite heavily screen

views of the Lake other than toward the northeast. It is my understanding that some of the vegetation on the future subdivision site is to be removed; however, the prospect of views outward would not be significantly improved by this scenario due to the topography and blocking effect of vegetation, natural and cultural.

Views from the same location facing towards the east-southeast and south east towards Bluff Point provide no outward viewing opportunities due to the rising topography and cultural remnant and foreshore vegetation. Cultural vegetation adjacent to the existing paved driveway into the site at the south and along the southern foreshore allows limited views of the Lake to the south-southeast and south.

From the south, the topography slopes gently upward and southwestward. There are no views of the Lake available in these viewing directions.

Views into the site exist from the residential area presently under construction by JPG to the west of the site. Existing vegetation that is a remnant of the former vegetation on the St John of God site, west of the southwestern margin of the subject land, presently partly screens views into the site. This vegetation is approved for removal and the visual exposure of the site will initially increase (see Tree Location Plan by HBO+EMTB).

When development of the approved subdivision is complete, the general view access to the site will decrease as a result of the construction of dwellings and their landscapes. It will be focussed on views down the eastern part of the east-west street linkages, other than for the north side perimeter road and roundabout at the entry to the site which provides views into the salt marsh and to the Bardens Bay areas to the north and east as already indicated above (see Site Analysis, Topography and Tree Analysis, Opportunities and Constraints and Concept Plan by HBO+EMTB).

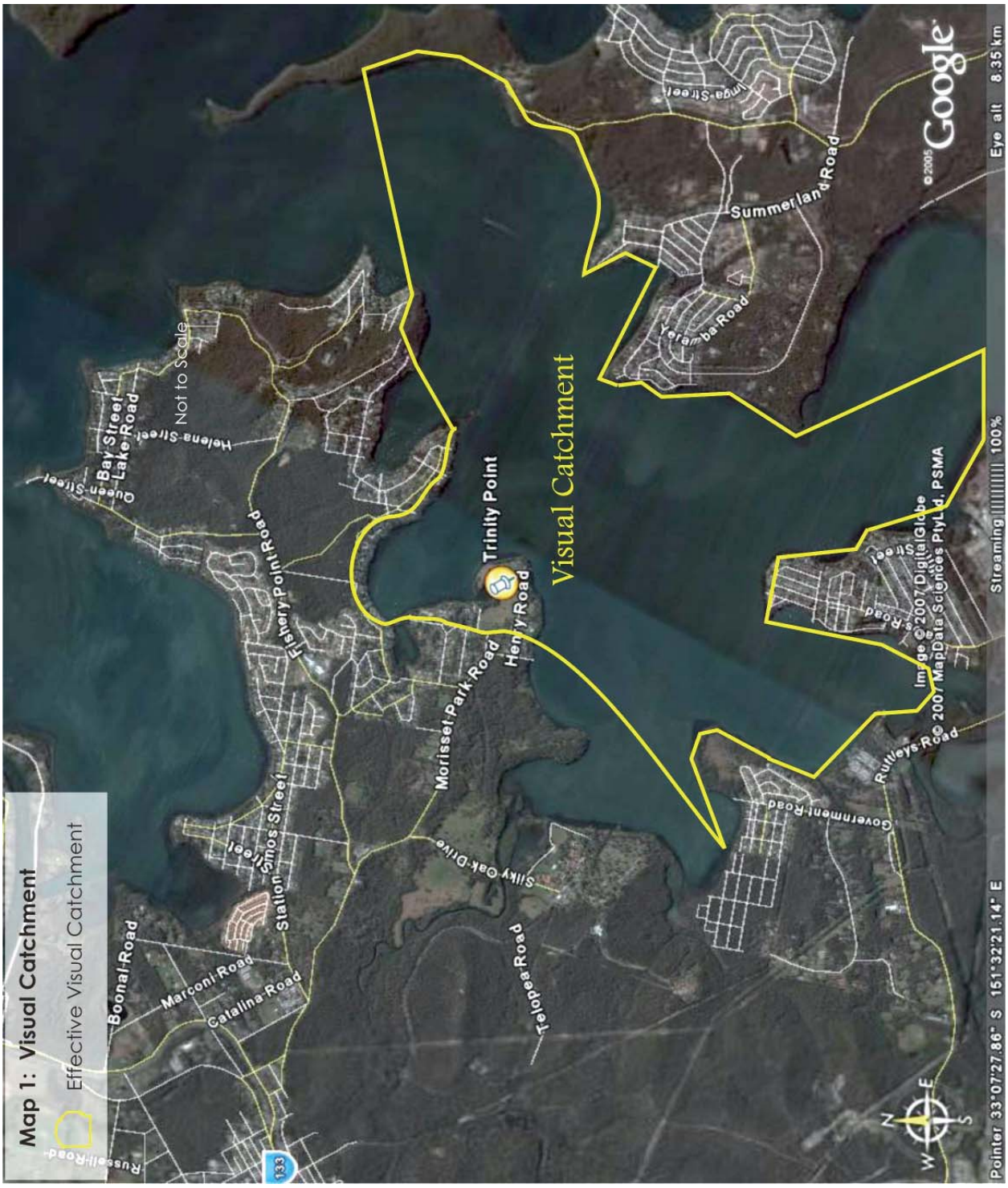
Views from the foreshore reserve

Views are possible into the site from the foreshore reserve. However, at present there is no practical access to this linking it to existing reserves on the north and south sides of the site. Views are open into the site from the north where there is limited or no vegetation on the foreshore, and partially screened on the eastern side. The views on the eastern and southeastern inner margin of the reserve are into the interior of the site (see Site Analysis, Topography and Tree Analysis Plan by HBO+EMTB) and partly screened by vegetation in the reserve or the remnant cultural vegetation in the southeast of the site. Views from the southeast and south on the margins of the reserve are limited or blocked by the minor cliff on the southeastern corner of the site.

Views from the wider visual catchment

Views into the site can be experienced from the waterway and the public and private domains. The northern, eastern and southern foreshores of the site are the most exposed to views inwards from both the waterway and surrounding areas including Morisset Park, Brightwaters, Summerland Point, Wyee Bay and Mannering Park. Existing trees along the foreshore provide limited screening of the site in these areas.

Publicly available views from nearby Morisset Park to the north west of the site are limited to those from the boat ramp on Lakeview Road and the waterway. No private residences on Lakeview Road were visited. However, it is assumed that views from the private domain would be similar to those available from the boat ramp. There were no publicly available views from Lakeview Road itself. The proposed marina and associated hardstand, as well as the village centre would be prominent in views from these locations.


Map 1: Visual Catchment
Effective Visual Catchment
Not to Scale
Visual Catchment
Trinity Point
Summerland Road
Yeralba Road
Fishery Point Road
Morisset Park Road
Henry Road
Silky Oak Drive
Telopea Road
Government Road
Rutleys Road
Station Sims Street
Boonal Road
Marconi Road
Catalina Road
Russell Road
Bay Street
Lake Road
Queen Street
Helena Street
Umga Street
Image © 2007 DigitalGlobe
© 2007 MapData Sciences Pty Ltd, PSMA
© 2005 Google
Streaming 100%
Eye alt 8.35 km
Pointer 33°07'27.86" S 151°32'21.14" E

There is a focal view from Henry Road Morisset Park directly into the site that currently consists of open grassland, foreshore vegetation and cultural plantings associated with the former uses of the subject site. The Lake can be viewed through gaps in the foreshore vegetation to the northeast, tapering away to no visibility to the east-southeast and south east due to the topography and increased screening effects of vegetation. Proposed mixed use buildings on the foreshore would be visible in views from Henry Road. Private residences on Henry Road are oriented away from the site and generally would not be impacted by the proposal.

Publicly available views into the site from Brightwaters included from foreshore reserves off Lake View Avenue, Bardon Street and Bardon Lane, focal views from these roads, glimpses from Bulgonia Road and Pillapai Road, and views from the waterway in Bardens Bay. Similar views would be available from private residences along the southern side of Pillapai Road, Bulgonia Road, and at the southern ends of Lake View Avenue, Bardon Street and Bardon Lane. Views of the proposal would be prominent from these locations which are generally within 1 km of the site.

Existing foreshore vegetation would provide some screening of the proposal similar to that that occurs at Diamond Drill Point (Gwandalan), Silverwater and Sunshine to some extent (refer to Photographic Plates 36 & 40). The proposed marina and village centre would screen to a large extent the proposed development internal to the site from the most open views from the north of Bardens Bay and the foreshore reserve in this vicinity. The marina by comparison would be prominent in views from these locations.

Publicly available views would also be available from the eastern extent of the foreshore reserve at Sugar Bay and Mirrabooka Road, Mirrabooka. There is the potential for glimpsed views from the eastern end of Dandaraga Road and certainly from private residences on the southern side of the road approximately east of Mirrabooka Road. There are views from the waterway from Sugar Bay east of the point between Bardens Bay and Sugar Bay and extending towards Fishery Point and Point Wolstoncroft. Similar views of the proposed development would be available from these viewpoints; however, the marina would be less prominent.

Point Wolstoncroft is part of the Lake Macquarie State Recreation Areas. There is the potential for public views into the site from the reserve and the Sports and Recreation Centre located on the peninsula approximately due east of the subject site at a distance of approximately 4 kms. The proposal would not be prominent in views from this location and would have the appearance of an extension to the development already visible in Morisset Park and Brightwaters.

Similar views are available to those from Point Wolstoncroft, from the waterway off Summerland Point Frying Pan Point and part of residential Summerland Point. Views from Gordon Avenue would be limited to those from private residences. The proposed marina may be visible in views from the terminus of Summerland Road across Frying Pan Bay and from the public reserve adjacent to the boat ramp off Cams Boulevard, but would not be prominent from this distance. Public and private views into the south east of the site are available from the reserve on the west foreshore of Summerland Point extending south to Black Neds Point including Sandy Beach, as well as for residences on the north-south extent of Kullaroo Road. Similarly, development on the site would not be prominent from this distance i.e. between 2 and 3kms.

Publicly available views from Mannering Park are limited to those from the waterway surrounding Vales Point including part of Chain Valley Bay and Wyee Bay, and the park on the northwest tip of Vales Point. Views from these locations are into the southern end of the site. Views from private residences would be available from Scott Road and Peveril Street, Mannering Park. The proposed marina would not be visible from these locations. The proposed village centre building would have limited visibility if any at all from these locations. Proposed development along the foreshore would

similarly have little visibility in views from this location due to the topography of the site at the southern end. The proposed tourism accommodation at the southern end of the site would be set well back from and screened from view largely by the proposed public reserve and associated plantings and remnant vegetation.

Publicly available views from Wyee Point are limited. Informal access to the area of undeveloped land and the foreshore on Wyee Point is available from Wymeera Circuit and Government Road. Views are also available into the site from the waterway surrounding Wyee Point and Wyee Bay. Views would be available from Wyee Wharf and Wyee Bay Marina. As in views from Mannering Park, the proposed marina would not be visible and the village centre building and mixed use residential/accommodation foreshore buildings would have limited visibility, if any. The tourist accommodation would likewise have minimal impact from these viewpoints.

There are no publicly available views from the waterway or Lake Macquarie State Recreation Area including Bird Cage Point adjacent to Morisset Park. Nor are there any views public or private from the Morisset Hospital site. Views from the waterway into the southern end of the site are available from the south east of Morisset Park.

There are very few viewing opportunities from the Pacific Highway generally, probably the greatest opportunity being near the access road to Cams Wharf and overlooking Point Wolstoncroft. Development on the site generally would be virtually invisible. The taller building may be visible but would not be prominent, given the distance and downward viewing angle. There is the potential for similar view experiences from Cams Wharf Road, Nords Wharf Road and Branter Road as the topography slopes towards the west from the Highway; however, viewing opportunities in reality are minimal.

4.1.2 Views out of the Land

Views outward from the site vary with the viewing location. Foreshore vegetation and cultural plantings coupled with the topography of the site create some viewing opportunities and limit others.

Views from Bluff Point

The sundial garden located on the southeast foreshore of Bluff Point has viewing opportunities ranging from Point Wolstoncroft to the east through to Summerland Point and Frying Pan Point in the southeast. From this location and in this direction the Lake appears to be in a relatively natural state with minimal development. Cultural vegetation in and around the sundial gardens is quite thick and shrubby and forms a band through which glimpses of the Lake may be experienced unless the viewer stands within the garden on the Point itself.

The high point on the site near Bluff Point and the sundial gardens provides a range of outward viewing opportunities. Vegetation on the lower southern foreshore as well as that on the higher ground directly adjacent forms a discontinuous and generally permeable screening effect. The Lake is highly visible as are the nearby suburbs across the Lake.

Facing south from the area between the sundial garden and the grotto the outward viewing opportunity extends from Sandy Beach in the southeast, through Chain Valley Bay, Mannering Park, Vales Point, Wyee Bay and Wyee Point in the south west. The Lake appears highly modified in views from this location. Vales Point and Mannering Park are prominent on the foreshore, however development is dwarfed by the Vales Point Power Station in Chain Valley Bay approximately 4 kms distant which is the focus of the view in the south east due to its massive size. Wyee Bay and Wyee Point appear less developed, however, large transmission power lines appear on the foreshore and above the horizon.

Facing west-southwest from the high point within the foreshore reserve there is limited screening provided by foreshore vegetation with relatively open views of the Lake. The Watagan Mountains form the horizon beyond Wyee Point and Bird Cage Point State Recreation Area across the Lake.

From the high point adjacent to Bluff Point and facing north along the length of the site, the existing vegetation in the foreshore reserve provides substantial screening of views to the Lake to the east. Views north-northeast to the area of foreshore where the marina is proposed to be located are open as there is little remnant vegetation in this area of the site. Brightwaters can be seen on the opposite foreshore, however does not appear heavily developed. Vegetation on the northern tip and surrounding the salt marsh screens any views of the development along Lakeview Road in Morisset Park. The existing cultural plantings on the western section of the site screen views towards the existing and new residential subdivisions.

Views from the eastern foreshore

Viewing opportunities from the eastern foreshore include Brightwaters, Fishery Point, Point Wolstoncroft and Summerland Point. The large expanse of natural appearing land on Point Wolstoncroft creates the perception of an area of undeveloped Lake frontage to the east generally. Development in Brightwaters to the north and northeast is prominent in views from the foreshore reserve.

From the approximate location of the proposed marina and village centre, the outward viewing opportunities include Morisset Park, Bardens Bay, Brightwaters, the Eraring Power Station stacks visible on the Brightwaters horizon, and Point Wolstoncroft. The foreshore vegetation on site is most open at this area providing an expansive viewing experience. Morisset Point to the northwest is relatively screened by remnant and landscape plantings. Residential development is prominent along the foreshore in Brightwaters with little landscape screening or foreshore vegetation off site.

4.2 Analysis of the Trinity Point Concept Plan against Scenic Resource Management Principles

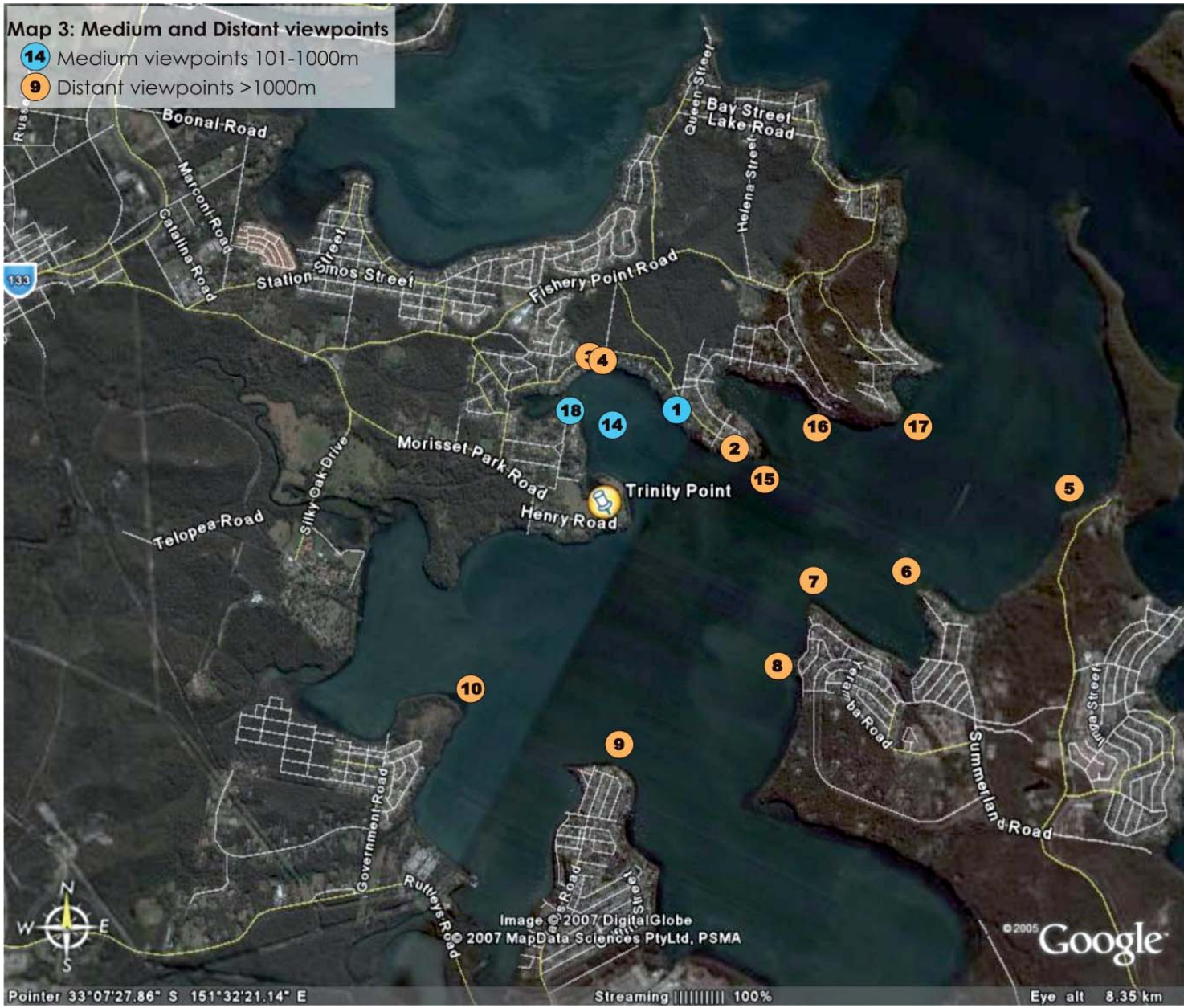
4.2.1 Scenic Resource Identification

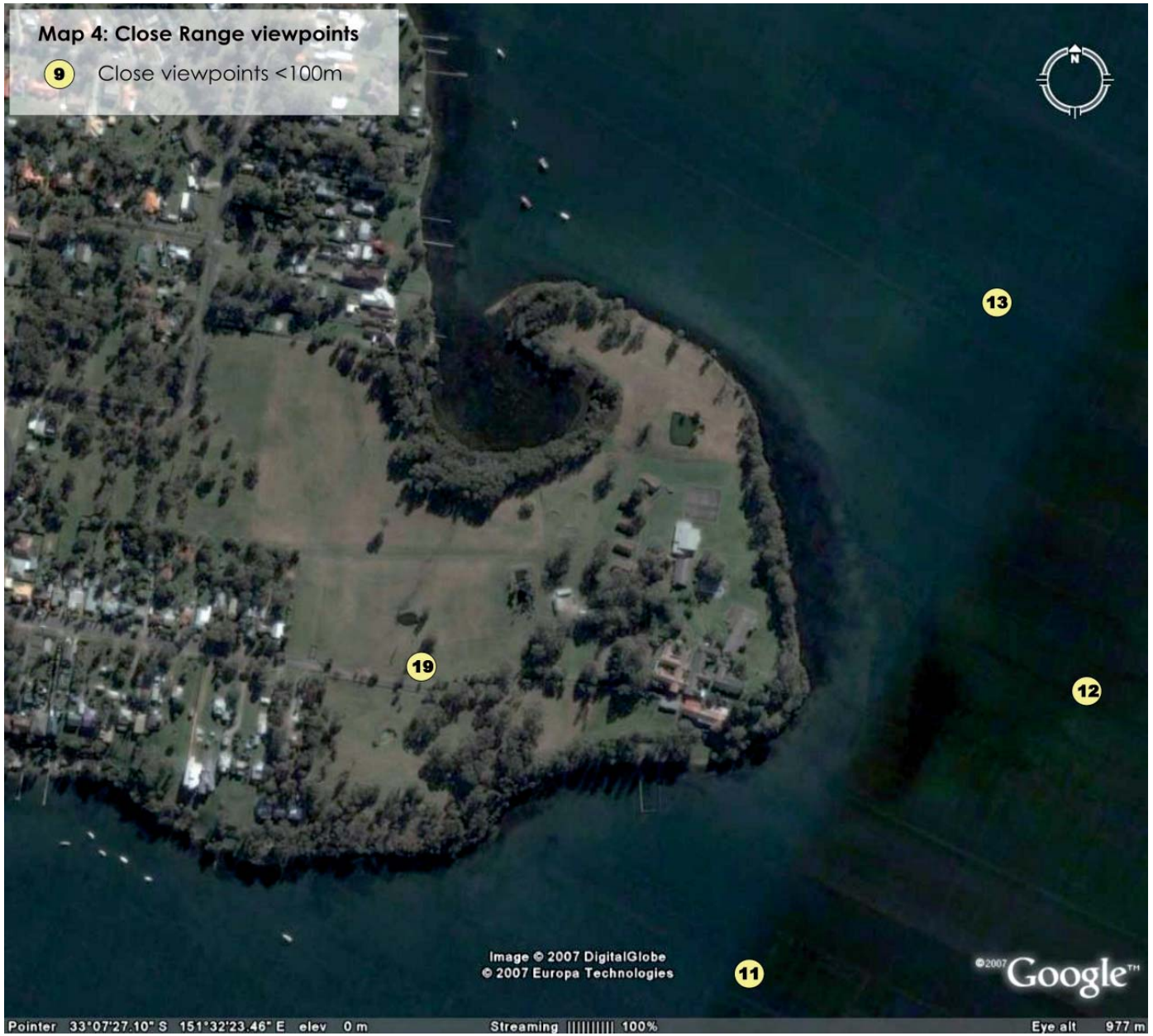
The Trinity Point Concept Plan has generally identified the main scenic resources adequately. The Lake foreshore, salt marsh bay and Bluff Point have been identified as priority areas for public reserves and consideration has been given to views outward from these. The response to landform has identified the same predominant components of the landscape as is in this study and generally situated development appropriately with regard to this from a visual point of view. The location of future roads in alignment with those of the already approved residential subdivision and the boardwalks that extend from each of these towards the foreshore preserve and potentially enhance important views towards the Lake and view place destinations at the boardwalks and foreshore reserve.

4.2.2 Preservation of Existing Resources

The Trinity Point Concept Plan predominantly seeks to preserve existing resources. The public foreshore reserve preserves the existing Lake/foreshore interface and remnant vegetation and the system of boardwalks links them to Bluff Point and the associated cultural elements. The setback of the residential buildings closest to Bluff Point has the potential to preserve the views from the point as well as the cultural elements associated with the former uses of the site including the sundial gardens, cultural plantings and the grotto. Future landscaping along the alignments of the roads and boardwalks with vistas to the Lake are intended to be designed not to obscure the views.


Map 2: Sensitivity Zones
Effective Sensitivity Zone
Medium sensitivity zone
101 to 1000m
High sensitivity zone
100m
Boonal Road
Bay Street
Lake Road
Fishery Point Road
Morisset Park Road
Telopea Road
Silky Oak Drive
Government Road
Summerland Road
Image © 2007 DigitalGlobe
© 2007 MapData Sciences Pty Ltd, PSMA
©2005 Google
Pointer 33°07'27.86" S 151°32'21.14" E
Streaming 100%
Eye alt 8.35 km


Map 3: Medium and Distant viewpoints
14 Medium viewpoints 101-1000m
9 Distant viewpoints >1000m
Boonal Road
Marconi Road
Catalina Road
Station Street
Smos Street
Fishery Point Road
Queen Street
Bay Street
Lake Road
Helena Street
133
Morisset Park Road
Trinity Point
Henry Road
Silky Oak Drive
Telopea Road
Government Road
Rutleys Road
Summerland Road
Image © 2007 DigitalGlobe
© 2007 MapData Sciences PtyLtd, PSMA
©2005 Google
Pointer 33°07'27.86" S 151°32'21.14" E
Streaming 100%
Eye alt 8.35 km


Map 4: Close Range viewpoints
9 Close viewpoints <100m
13
19
12
11
Image © 2007 DigitalGlobe
© 2007 Europa Technologies
©2007 Google™
Pointer 33°07'27.10" S 151°32'23.46" E elev 0 m
Streaming 100%
Eye alt 977 m

4.2.3 Linkages between Resources

Three different kinds of linkages have been recommended to exist, i.e. direct visual linkages (line of sight), physical linkages (that include direct visual access) and linkages between resources in space that do not have any direct visual connection. The principles are shown in the Concept Plan and Site Analysis Plan by HBO+EMTB.

Spacing and orientation of open spaces and the relationship of the internal road pattern to the adjacent residential development provide direct visual linkages to and through the site. Physical linkages are intended to be provided in the form of the boardwalks and landscaped spaces that also link to potential access to the foreshore reserves which provide continuity of flow and experience between viewing places. Separate landscape spaces of varied character provide alternative viewing destinations such as the enclosed salt marsh area, Bluff Point lookout site and the urban foreshore of the marina. Defined and informal paths of many alternative kinds provide can provided diverse linkages between disparate visual resources. The principles are shown in the Concept Plan and Site Analysis Plan by HBO+EMTB and in the Landscape Master Plan by Terrace Landscapes. They are supported by principles concerning setbacks and building footprint in the Concept Plan documentation.

4.2.4 Adaptation of Existing and Future Landscape Elements

The landscape of the site has experienced almost total physical adaptation in the past for the purpose that supported the St John of God retreat and the earlier, Little Company of Mary uses. It will again be significantly adapted from its present character, however the residual natural attributes are intended to be part of a consistent theme of adaptive re-use along with conservation of items of heritage significance such as the sundial, grotto and a significant component of the relevant adjacent trees.

Part of the adaptation is proposed to involve recovery and rehabilitation of foreshore vegetation and salt marsh communities, species from each of which will be used where appropriate as part of the landscape scheme, thus integrating the adapted natural environment into the visual experience of the land. The principles are shown to be followed in the Landscape Master Plan and any work affecting the reserve would be the subject of a Landscape Management Plan.

4.3 Relevant Planning Documents

The planning documents relevant to the potential visual impacts of the development proposal are as follows. Detailed analysis of the planning documents against the proposal in terms relevant to the visual impacts and amenity issue can be found in section 5.5.

4.3.1 Lake Macquarie Local Environmental Plan 2004

The objectives of the LEP are to develop land in accordance with the principles of ecologically sustainable development by promoting balanced development and by implementing the Lifestyle 2020 Strategy. The development site is zoned 6(2) Tourism and Recreation Zone. The relevant sections of the LEP with respect to the zoning are Part 3 Clause 15 General controls for land within zones.

4.3.2 Lake Macquarie Council Development Control Plan No. 1

DCP 1 is the supporting document to the LEP. The relevant sections of DCP 1 are Part 2.1 Clause 2.1.3 Scenic Values and Part 2.7 Clause 2.7.6 Views. The intent of the DCP 1 requirements in 2.1.3 Scenic Values is to protect and maintain the scenic values of the City, whether viewed from land or

water. The intent of the DCP 1 requirements in 2.7.6 Views is to ensure that development does not unreasonably impact or intentionally obstruct views from areas of high public usage, or from existing or future private development.

4.3.3 Lake Macquarie City Council Scenic Quality Guidelines

Lake Macquarie Scenic Quality Guidelines provide the support documentation for DCP 1 Part 2.1 Clause 2.1.3 Scenic Values. The guidelines set out the Landscape Setting Units, significant features, viewing points and ridgelines, Visual Accessibility, and Scenic Management Zones that apply to all areas of the City of Lake Macquarie. The guidelines are to be applied to assess the visual impact of a potential development in preparing a Visual Impact Statement.

The subject site falls into the Landscape Setting Unit of Bardens Bay which is a moderate rating unit as classified in the Scenic Quality Guidelines. The Scenic Quality Guidelines assess the visual accessibility of Bardens Bay and the Morisset Peninsula as Level Three – Low Viewing Level, for minor roads and less visited places. In the terms of our assessment methodology, accessibility is closely related to view sensitivity. The ranking indicates that the area is considered to be of low view and viewer sensitivity. The subject site falls into Scenic Management Zone C – Moderate, as classified in the Guidelines. The Guidelines describe Zone C as having landscape values that while not making a significant contribution to the City image and attractiveness, do not detract significantly from that image or amenity.

The LMCCSQG cannot easily be applied to a development in which buildings can be seen above the trees, no matter what the scenic quality or the Scenic Management Zone rating that is applied. This is because of the bias against visibility of buildings which pervades the guidelines. The Guidelines do not tell us what acceptable visual impact is because they equate impacts with visibility.

Our opinion, having assessed the outcome of applying the LMCCSQG is that on this site, a built form taller than the trees can be acceptable as long as it is considered that the visual impacts are no more than moderate. The approach with a taller building, the remainder of the development predominantly amid the tree canopy, can be acceptable, in our opinion. The development must still respond appropriately to the opportunities and constraints of the site and the setting.

4.3.4 Lifestyle 2020 Strategy

The Lifestyle 2020 Strategy provides the long-term direction for the future urban and rural land use and development of the City based on principles of ecological sustainability. The relevant section of the strategy with regard to visual issues is 5.3 - A Well designed and Liveable City.

The development would comply with the Urban Structure strategy to promote medium density in areas of high amenity near the Lake foreshore and adjacent to public open space, to encourage local neighbourhood centre development, reuse sites efficiently and to encourage tourism.

In relation to the Movement System strategy, it would provide possible future links across the Lake by water. It would fit into the Green System strategy also. The site is a significantly altered site part of a promontory but otherwise not a significant landscape feature. It is not on a significant ridgeline and has no significant remnant vegetation other than that in the foreshore reserve. Development does not conflict with natural areas that are a considerable distance away (between 1.5 and 3km), with the exception of the partially enclosed salt marsh wetland area on the site, which is proposed for conservation.

Development would respond to the Scenic/Amenity strategy, by avoiding development on high scenic significance areas. The site is rated of moderate significance in the LMCCSQG, ranking third from the top of a four-point scale.

The Green system incorporates land and water elements that are intended to enhance long-term biodiversity, scenic amenity and liveability of the City. Its intention is to ensure these elements are valued, retained and managed. The waterway surrounding the site is mapped as an area of aquatic habitat. The land is not mapped as part of the Green System. The Plan will limit development in the Green System (it is not part of the Green System; it is a redevelopment site), retain and enhance desirable amenity for residents and make an appropriate transition between areas of different densities, while retaining the sharing of views.

4.3.5 NSW Coastal Policy 1997

The Coastal policy is designed to guide coastal development, planning and conservation in New South Wales. Lake Macquarie is part of the coastal Zone adopted in the Policy. The relevant section of the Policy with regard to visual issues is Part B, Goal 3, Objective 3.2, Strategic Action3.2.2.

4.3.6 SEPP 71 – Coastal Protection

SEPP 71 is designed to further implement the Coastal Policy and aims to protect and manage the New South Wales coast, including the visual amenity of and the type, bulk and scale of development on it. The relevant sections of SEPP 71 are Part 1 Clause 2 Aims of Policy and Part 2 Clause 8 Matters for Consideration.

4.3.7 Coastal Design Guidelines of NSW (2003)

The Coastal Design Guidelines are designed to guide coastal development, planning and conservation in New South Wales. Lake Macquarie is part of the coastal Zone adopted in the Guidelines. The guidelines contribute to defining appropriate settlement types and developing place-specific development control plans.

5.0 Assessment

5.1 View Analysis

The components and features of the proposed development are explained in section 3.0. A detailed field assessment was undertaken on 22 February, 10 October and 19 October 2007 including from the waterway.

5.1.1 Viewing Locations and Viewing Situations

To assess the visual impacts that would be experienced by viewers, a view point analysis was conducted. This consisted of visiting the site and locality and assessing the likely impact on views from a selected series of locations. The key viewing locations ranged from a number of public domain locations including those on:

a) Roads,

b) Recreational areas

c) Waterways.

The locations were selected to represent the kinds of viewers' experience of the development that would exist in the immediate area. Locations that represent the main kinds of viewing areas that would be affected were visited and photographed. The photographs taken with a digital 35mm format camera set to simulate a focal length of 55mm, to approximate the correct proportions of the elements of views as experienced by the human eye. At each viewing place a series of observations and assessments were made, as documented in Map 3, Map 4 and Photographic Figures in Appendix A of the report and in the assessment sheets (Appendix C). A variety of other locations were also visited to ascertain the extent of the catchment and the characteristics of the views.

The viewing locations analysed during the site visit are shown in Map3 and Map 4. These are shown with respect to the viewing distance-close range, middle distance and long distance as explained in the Methodology. Figure 4 is a larger scale map showing all the close range viewing locations. It is to be noted that all the viewing locations visited are public domain viewing locations, but they also provide insights into the likely visual effects on private views.

5.1.2 Visual Catchment

Map 1 shows the potential visual catchment for the proposed development. The effective visual catchment for the proposed development is confined by the topography, natural vegetation and settlement pattern, to a part of the southern basin of the Lake and to isolated parts of the urban foreshores of surrounding settlements. This effect is in response to the low relative topography of the site and the surrounding area and the expanse of waterway across which it can be seen from distances of up to approximately 4km.

The visibility of the proposed redevelopment site is largely confined to the following public and private domain viewing locations:

Public Domain locations:

a) Close range and medium range views from the immediate waterways of Lake Macquarie and its foreshores.

b) Medium range views from Brightwaters Park foreshore reserve to the east of the site.

c) Medium range views from sections of Bulgonia Road, Lake View Street and Bardon Street to the north east of the site.

d) Medium range views from the reserve and boat ramp on Lakeview Road north west of the site.

e) Medium range views from Henry Road to the west of the site.

f) Distant views from waterways of Lake Macquarie.

g) Distant views from sections of Pillapai Road, Dandaraga Road and Bardon Lane northeast of the site.

h) Distant views from sections of the Pacific Highway east of the site.

i) Distant views from sections of Cams Wharf Road, Nords Wharf Road and Branter Road east of the site.

j) Distant views from Point Wolstoncroft SRA to the east.

k) Distant views from the terminus of Summerland Road to the southeast.

l) Distant views from the reserve off Cams Boulevard to the east.

m) Distant views from the reserve and Sandy Beach to the east of the site.

n) Distant views from the park on the northwest tip of Vales Point south of the site.

o) Distant views from Wyee Wharf and Wyee Bay Marina south of the site.

Private Locations:

a) Close range views from residences on a section of Doull Lane, Morisset Park in proximity to the site.

b) Close and medium views from residences located on Lakeview Road, Morisset Park.

c) Medium range and distant views from residences on Bulgonia Road, Brightwaters.

d) Medium range views from some residences on Lake View Avenue and Bardon Street, Brightwaters.

e) Distant views from some residences on Pillapai Road, Brightwaters.

f) Distant views from some residences Dandaraga Road west of Mirrabooka Road, Mirrabooka.

g) Distant views from some residences on Gordon Avenue and Kullaroo Road, Summerland Point.

h) Distant views from some residences on Scott Road and Peverill Street, Mannering Park.

5.1.3 Photomontages to Represent Views

Appendix B shows a series of photomontages prepared by POD Group, architectural and 3-D graphics specialists. The montages were created with my supervision and advice. A 3-dimensional computer model of the development was created from the architectural plans for the proposed development. The model became the base layer later to be inserted into the photographs, using the Adobe Photoshop program. A series of photographs of vessels of the maximum lengths which could occupy each of the classes of berths shown on the marina plan were taken by POD Group or chosen from their existing image library, so that the vessels shown on the montage would accurately depict the scale and character of the boats in the future marina when occupied.

These photomontages have been one of the many factors on which the assessment of visual impact is based in this report. The view montages have been prepared to represent the additional moorings. Vessels have been inserted at an occupancy ratio of 90% with maximum size vessels in each permanent marina berth to reflect worst/realistic case scenario. The public berths are not represented as 100% filled. The montages therefore accurately represent the size, form and character of the proposed vessels and marina structure. The montages were prepared for the following viewing locations which are a mix of close range, medium range and distant locations.

1. From the waterway mid Bardens Bay north of the site.
2. From the waterway approximately 100m south of the site.
3. From Brightwaters Park northeast of the site.
4. From the future roundabout on the alignment of the east-west running street facing east.

Surdevel Consulting Surveyors helped with establishing the accuracy of the photomontages and the alignment of the computer models of the built elements and the marina components of the proposed development in the montages. They assisted us in accurately placing markers on the site. Their locations and heights were surveyed and they were located to be visible from the viewing places above. The markers were made of sufficient height and scale and were colour coded, so that they could be individually identified from the chosen viewing places and to ensure that they would be visible in the photographs taken to create the montages for each viewing place. The markers act as a cross check on the location, height and alignment of the computer models of the proposed development when these are merged with the photographic images. The surveyors also accompanied me when I took the photographs and they surveyed the location and RL of each of the places from which the photographs were taken.

The photographs were taken with a Nikon D70S Digital SLR camera. A base plan was provided to POD Group, which showed the location and RL of each marker, as well as the location and RL of each of the places from which photographs had been taken, related to the photograph numbers. The photographs as electronic files are accompanied by electronic metadata that includes the focal length setting of the camera. The montage artists adjusted the settings for creating the montages using the focal length data so that the visual image size of the computer image has a correct relationship to the photographic image. As a result of this series of cross checks, the location, orientation and scale of each of the images merged with the montage photographs can be accepted to be of the highest practical level of accuracy.

5.2 Visual Effects Analysis

5.2.1 Base-Line Factors

5.2.1.1 Visual character

The landscape setting of the development site is within the visual catchment of Bardens Bay, a part of Lake Macquarie. The development site is over both water and land based toward the southern most head of the Bay. The landform of the Bay is typical of this part of Lake Macquarie with the surrounding topography being relatively low and the foreshores consisting of a narrow strip of land.

The development is set in an urban context. The side slopes and foreshore of the Bay feature the visual presence of residential development, mainly detached housing. Most of the dwellings within the side slopes and foreshore of Bardens Bay are of a moderate scale, and are either located on manicured lawns and highly visible, or their bulk is partially screened from the water by both native vegetation and cultural plantings.

The immediate setting of the site is the point on the south head of Bardens Bay adjacent to an area of salt marsh fringed by casuarinas to the north-northwest. Existing and future urban developments are immediately adjacent to the site at the west and northwest. A small number of boats associated with private residences on Lakeview Road and Doull Lane are moored on swing moorings on the western foreshores of the bay. A small number of private jetties are also associated with the residences in this location.

The northwestern foreshore of the Bay has a small range of vessels in a range of sizes and types, accommodated on swing moorings, as well as a variety of jetties, ramps and pontoons associated with private ownership of the foreshores, with which other vessels are associated. The north eastern and eastern foreshore consists largely of public reserve with residences to the rear. Various vessels are moored on swing moorings in these sections of the Bay. Where the foreshore is privatised, there are numerous boatsheds and associated ramps or small jetties.

The foreshore, residential area adjacent to the subject site and the existing subject development are significantly modified features of the underlying natural character of the bay and shoreline. The general relationships between the natural and cultural features of the landscape which provide its existing scenic character are widespread in various parts of the Lake Macquarie locality.

The visual character of the proposed development would differ from that of the existing urban development in several ways. Firstly, the presence of a commercial marina and helipad would be a new addition to the Bay. There would also be a redevelopment of the now cleared site incorporating marina buildings, commercial buildings and a restaurant/café on the foreshore, tourism accommodation in the form of three distinctive buildings of up to six storeys in height and additional tourism and residential accommodation of up to five storeys in height in four clusters.

The intrinsic visual character of the development site would be moderately affected by the proposal. Although it would be apparent to the viewer that there had been a change in the usage of the site, there would not be an introduction into the visual catchment of elements unexpected or out of character within the Lake Macquarie area.

5.2.1.2 Scenic quality

Scenic quality is a base line against which the effects of changes to the physical environment can be predicted to impact either positively or negatively on the perceptions and emotional reactions of viewers. There is an extensive empirical research literature concerning general relationships between aspects of the physical environment and predicted judgments of scenic quality or other expressions of this, such as scenic beauty and scenic preference.

This research would predict that Trinity Point and its locality would be of moderate scenic quality. While it shows the presence in many views of varied topography and vegetation, extensive water bodies, varied water edges and areas of higher scenic integrity (naturalness), it also exhibits factors which decrease scenic quality, such as urbanised areas, manicured foreshores, lack of prominent topography and water movement and large scale industrial structures.

Based on our research there is little published evidence as to the scenic quality of the subject site and its general locality. However, the LMCCSQG identified the site as within the Bardens Bay Landscape Setting Unit that is given a moderate rating. This agrees with our assessment. A moderate scenic quality baseline means that subject to other considerations, the landscape has a higher potential to absorb visual impacts than one of high scenic quality.

5.2.1.3 View place sensitivity

The public domain viewing locations were constituted by those located on roads, reserves/foreshores and waterways. The view place sensitivity for public domain viewing locations was rated as high for locations within less than 100m from the development site such as from the immediate streetscape of the approved residential subdivision and the immediate waterways (Refer Photographic Plates 11a, 11b, 12a, 12b, 12c, 13a, 13b & 19).

The view place sensitivity was rated as medium for locations that were located between 100-1000m from the development site such as Brightwaters Park, the boat ramp and reserve on Lakeview Road, Henry Road, parts of Bulgonia Road, Lake View Avenue and Bardon Street, and middle distant waterways (refer Photographic Plates 1, 14, 18a & 18b) and low for locations that were located at a distance greater than 1km from the development site such as the waterway, Sandy Beach, western foreshore reserve at Summerland Point, locations on Pillapai Road and Dandaraga Road (refer Photographic Plates 2, 3, 4, 5, 6a, 6b 7, 8, 9, 10, 15a,15b 16, 17 & 20).

5.2.1.4 Viewer sensitivity

The viewer sensitivity was rated high for residences along the section of Lakeview Road and Doull Lane less than 100m from the development site to the west of the site, medium for residences along roads located between 100-1000m from development site such as those located on sections along Lakeview Road, Doull Lane, Bulgonia Road, Lake View Avenue, and Bardon Street. The sensitivity was rated low for residences along roads located greater than 1km from development site such as those located along sections of Pillapai Road, Dandaraga Road, Bardon Lane, Gordon Avenue, Kullaroo Road and Scott Road.

Our ratings for both view place and viewer sensitivities are more conservative than the LMCCSQG, which rated the locality as Level Three, i.e. low viewing level. This indicates that the area has a generally low accessibility to the public and low numbers of viewers and therefore a lower sensitivity to the visual effects of development. We agree with that rating, but our criteria give greater weight to the significance of impacts on views from close and medium range than the LMCCSQG.

5.2.2 Variable Factors

Effect on view composition

We found that the effect on view composition of the marina would be greater than that of the built component of the proposed development. The greatest effect would be on locations closer to the development site such as along Lakeview Road in the vicinity of the development site and from the immediate waterway. The effect on view composition would also be high for a small number of viewing locations from where there were restricted, focal or feature views towards the development site (Refer Photographic Plate 19).

Effect on view composition would be medium or low for viewing locations that were located at distances greater than 100m and those generally which had panoramic or expansive views (Refer Photographic Plates 1, 5, 6, 7, 8, 9, 10 & 15).

Effect of relative viewing level

The topography of the visual catchment of the development is relatively flat and most views, including those on the waterway, are on grade with the site. As such, there is a minor effect of relative viewing level overall. The visual effects of the proposed development would be slightly increased for viewing

locations that are close to level with the marina facilities and located at close or medium distance from it such as from the waterway, Brightwaters Park, the boat ramp and immediate streetscape of Lakeview Road (Refer Photographic Plates 1, 18a &18b).

The few elevated viewing places that exist are at very considerable distances to the east. The elevated viewing position does not make a significant difference to the visual effects of the development.

Effect of viewing period

The visual effects would be increased for passive users of recreation areas and foreshores such as Brightwaters Park, the boat ramp and reserve on Lakeview Road, the shoreline along Sandy Beach, Frying Pan Point and for the frequent users of the immediate waterways. There are no roads that provide sustained views.

Effect of viewing distance

The visual effects of the proposed redevelopment would be increased for locations close to the development site within 100m (including the immediate streetscape of Lakeview Road and Doull Lane and immediate waterways). The viewing distance would have a medium influence on the visual effect for locations at a distance between 100-1000m from the development site (such as for some viewing locations along Bulgonia Road, Brightwaters Park, part of Lake View Avenue, Henry Road, parts of Lakeview Road, and the boat ramp and reserve on Lakeview Road) and low visual effect for locations at a distance greater than 1000m from the development site (such as from Pillapai Road, Gordon Avenue, Kullaroo Road, Sandy Beach and the park on Vales Point).

View loss or blocking effects

In views toward the site, the marina would cause some view loss and blocking effect, however the buildings would not. It was found that there would be some view loss to parts of the shoreline visible to the southwest from part of Brightwaters and some of the wider waterway for some viewing locations such as from the immediate waterway and Bulgonia Road (Refer Photographic Plates 3, 11a, 11b, 12a, 12b, 12c, 13a & 13b). There would be loss of view to parts of the far southeast shoreline for viewing locations on Bardon Street directly opposite and immediately to the north west of the marina and from parts of the immediate waterways.

5.2.3 Overall extent of visual effect

The overall extent of visual effects was evaluated by inspection of the pattern of assessment of the visual effects of all of the individual factors for each viewing location. These overall assessments of the visual effects of the proposal are shown in summary on Table 5.1. In summary, we assessed the overall visual effects rating of the proposed redevelopment on its total visual catchment to be medium.

Table 5.1: Overall Visual Effects

	Village Centre Tourism & Residential Component			Marina Component		
Overall Extent of Visual Effect	**Low**	**Medium**	**High**	**Low**	**Medium**	**High**
Close Range View Points						
VP11		X		X		
VP12		X	X		X	X
VP13		X	X		X	X
VP19		X	X	X		
	MEDIUM TO HIGH			**MEDIUM**		
Medium Range View Points						
VP1		X			X	
VP14		X				X
VP18		X				X
	MEDIUM			**MEDIUM**		
Distant View Points						
VP2		X			X	
VP3		X			X	
VP4		X			X	
VP5		X			X	
VP6		X		X	X	
VP7	X	X		X	X	
VP8	X	X		X	X	
VP9	X			X		
VP10	X			X		
VP15		X			X	
VP16		X		X		
VP17	X	X		X		
VP20	X			X		
	MEDIUM			**LOW TO MEDIUM**		

5.3 Visual Impact Analysis

5.3.1 Physical Absorption Capacity

The physical absorption capacity for the marina would be low for medium range expansive, panoramic views and restricted views. This is a function of its high intrinsic visibility and the lack of structures or vessels on the waterway that could reduce this.

It would be medium for close locations with panoramic views from the waterway or from the adjacent residential subdivision approved for construction, distant restricted views, expansive or panoramic views.

The PAC for the built component was assessed to be low from close range viewing places (Refer to Photographic Plates 12, 13 & 19). It was assessed to be medium absorbtion capacity where the viewing places were middle distant and of expansive, panoramic or restricted composition (Refer to Photographic Plates 1, 14 & 18). For distant viewing places, the physical absorbtion capacity was assessed to be generally high for locations with restricted views and generally medium for those with panoramic views.

5.3.2 Visual Compatibility

Visual compatibility with maritime features

The visual compatibility with maritime features would be high or medium for viewing locations from which there were views of a number of swing moorings, jetties, boatsheds etc in the foreground or background of views. These locations included views from the immediate waterway, the boat ramp on Lakeview Road, and views from the waterways and roads to the east and south east, Sandy Beach and Summerland Point (Refer Photographic Plates 7, 8 & 18).

The visual compatibility with maritime features was also observed to depend to some extent on the type of view composition available. It would be generally medium for panoramic and restricted views that contained views of other swing moorings, jetties and the like.

Visual compatibility with urban and natural features

The visual compatibility with urban and natural features would be low or medium for viewing locations that had close range panoramic or feature views of the foreshores and shoreline as the background of view.

The visual compatibility with urban and natural features would be low or medium for medium and long range viewing locations where the built component of the proposed development would be seen without a residential backdrop (Refer to Photographic Plates 1, 14 & 18). These included locations on Bulgonia Road, Buttaba Road, Bardon Street, Bardon Lane, Dandaraga Road, Summerland Point, Point Wolstoncroft and some locations from the immediate waterway.

5.3.3 Overall Extent of Visual Impact

The overall extent of visual impacts was evaluated by inspection of the pattern of assessment of the visual impacts of all of the individual factors for each viewing location. These overall assessments of the visual impacts of the proposal are shown in summary on Table 5.2. The overall visual impacts rating of the proposed redevelopment on its total visual catchment was assessed to be medium to high.

Table 5.2: Overall Visual Impacts

	Village Centre Tourism & Residential Component			Marina Component		
Overall Extent of Visual Impact	**Low**	**Medium**	**High**	**Low**	**Medium**	**High**
Close Range View Points						
VP11		X			X	
VP12		X	X		X	
VP13		X	X		X	
VP19			X		X	
	MEDIUM TO HIGH			**MEDIUM**		
Medium Range View Points						
VP1		X	X		X	
VP14		X	X		X	X
VP18		X				X
	MEDIUM TO HIGH			**MEDIUM TO HIGH**		

Distant View Points						
VP2		X	X		X	
VP3	X	X			X	
VP4	X	X			X	
VP5		X			X	
VP6		X			X	
VP7		X			X	
VP8		X			X	
VP9	X			X		
VP10		X		X		
VP15		X	X		X	
VP16	X				X	
VP17	X	X			X	
VP20	X			X		
	MEDIUM			**MEDIUM**		

5.4 Visual Sensitivity Zones

5.4.1 Impact Assessment (Ratings)

- The overall effects and impacts rating for the high view sensitivity zone in the public domain were assessed to be medium to high. Highest individual levels of effects were found for close views from residences in the subdivision west of the site, those on parts of Lakeview Road and Doull Lane and the immediate waterway.
- The overall effects and impacts rating for the medium sensitivity zone, predominantly in the public domain, were also assessed to be medium to high.
- Low sensitivity zone locations included public domain views. The overall effects and impacts rating for the low visual sensitivity zone were assessed to be medium.

The visual impacts on the high and medium sensitivity zones are analysed against the relevant mitigation measures in the section below. The views from low sensitivity zones were not analysed. This is because it was considered that no significant impacts could occur for these locations.

5.5 Analysis against relevant planning instruments

5.5.1 Lake Macquarie Local Environmental Plan 2004

Part 1 Clause 3 Objective of plan

The objective of this plan is to achieve development of land to which this plan applies that is in accordance with the principles of ecologically sustainable development by:
(a) promoting balanced development of that land; and
(b) implementing the Lifestyle 2020 Strategy adopted by the Council on 27 March 2000.

Comment:

Objective (a) is a matter for others with strategic and town planning expertise to address. In visual terms, the development is considered to comply with the Lifestyle 2020 Strategy, as explained in more detail below in 5.5.4 and therefore to comply with the objective of the plan.

Part 3 Clause 15 General controls for land within zones

The subject site is zoned 6(2) Tourism and Recreation Zone. The relevant objectives of the zone with

regard to visual impact are:

Zone 6(2) Tourism and Recreation Zone

1 Objectives of Zone

The objectives of this zone are to:

(b) encourage good quality design within the zone, and

(e) encourage tourism development that is sensitively designed to complement its location and minimise any adverse impacts on the environment

Comment:

The development is located in an existing and developing urban area. The design of the development whilst contrasting with the surrounding suburbs is intended to respond to and complement the urban setting. Given the zoning itself, which contemplates a form of development specifically to encourage tourism and recreation and is one of the very few sites in the locality with this capacity, the degree of contrast which would occur is partly inevitable. The zoning controls do not contain a series of provisions that would preserve a residential character, indeed on the contrary there are no specific controls that would suggest that a residential scale or character is the desired future for the site. There is clearly reasonable expectation that the development of the land will depart from the character of the adjacent zones and contrast with the existing character of the foreshore.

The natural components of the landscape will be protected and become part of the theme for recovery and rehabilitation of the foreshore and increase the capacity of the landscape to absorb the development. The more prominent buildings are considered to appropriately complement the emerging and intended character of the site as a destination, be of good design and to minimise impacts on the environment.

5.5.2 Lake Macquarie Council Development Control Plan No. 1

Part 2.1 Clause 2.1.3 Scenic Values

The relevant Performance Criteria as set out in 2.1.3 Scenic Values are:

P1.1 Development is designed to complement, rather than detract from the landscape, whether it is locating in an urban, rural or environmental setting.

Comment:

The development is located in an existing and developing urban area. The design of the development whilst contrasting with the surrounding suburbs is intended to respond to and complement the urban setting. The natural components of the landscape will be protected and become part of the theme for recovery and rehabilitation of the foreshore and increase the capacity of the landscape to absorb the development. The more prominent buildings are considered to appropriately complement the emerging character of the site as a destination.

P1.2 Development visible from or adjoining the coastline, Lake Macquarie or its waterways, or on ridgelines, maintains and enhances the scenic value of these features.

Comment:

The site is one of moderate scenic quality. This indicates that it has a moderate to high capacity to support development forms that are significantly different from the existing context, providing that

the remnant scenic and natural features of the site are protected.

The development is intended to be of moderate impact and of equivalent or lesser intrinsic visual exposure than development of similar use, form or density on the Lake. As such it is considered to maintain the existing scenic values of the Lake to the extent reasonably attainable in a moderate scenic quality setting, which also has low accessibility to the public. The development is intended to maintain and to enhance the features most responsible for the moderate scenic quality of the setting, i.e. the natural topography, foreshore vegetation and remnant natural wetlands of the site.

Part 2.7 Clause 2.7.6 Views

The relevant Performance Criteria as set out in 2.7.6 Views are:

P1. For Public Views, development

- *Permits and maintains views from public streets and open spaces.*
- *Preserves views of significant buildings, environments and landmarks.*
- *Maximises views between and over buildings.*
- *Maintains the visual character of the City.*

Comment:

The development maintains and does not obstruct views from the already approved residential subdivision to the site's west through maintaining the vistas from the roads to the Lake/foreshore, providing substantial side setbacks between groups of buildings to provide views to the Lake and by preserving the views from the public spaces in the form of views across the foreshore reserves. The development also permits a variety of new views from public streets and open spaces and will provide new views of significant buildings and natural environments which will enhance the quality and quantity of view accessibility. Where there is existing vegetation in view lines that is within the foreshore reserves, the vegetation was given priority for protection and enhancement over protection of all view opportunities.

The development will contrast to some extent with the existing character of the immediate locality, but the development is considered to maintain the emerging quality and character of the City.

P2. Vistas along streets are preserved or enhanced through sensitive landscaping and building location, form and design.

Comment:

The buildings have been located with substantial setbacks from the streets and boardwalks in the development to preserve views amongst other things. Public domain plantings will be according to the Landscape Master Plan provided by Terras Landscape Architects and will enhance the public domain whilst maintaining views and vistas.

The preservation and enhancement of the foreshore vegetation, both for its ecological and scenic values was made a priority in developing the scheme and landscape design. As such, there would be significant views retained along the axes along streets, however vegetation would not be removed or modified to ensure unhindered views from all locations.

P3. For Private Views, development allows for the reasonable sharing of views through the siting, height and design of buildings.

Comment:

Views from the approved residential subdivision will be maintained by retaining and enhancing views corridors and vistas along the existing street grids. The one and two storey development most directly adjacent to the apartment buildings would have views restricted by the topography of the site which rises upwards before falling towards the foreshore in the east and north east. The U shape clusters of apartment buildings allow views in various directions such as towards Bardens Bay and Summerland Point rather than directly to the east or south, for example.

5.5.3 Lake Macquarie City Council Scenic Quality Guidelines

Landscape Setting Units

The subject site falls into the Landscape Setting Unit of Bardens Bay which is a moderate rating unit.

The relevant Scenic Quality Objectives particular to the moderate rating unit given to the site are:

> *To ensure that new development does not diminish the scenic quality of Lake Macquarie landscapes by:*
>
> - *maintaining the dominance of the natural landscapes on ridgelines, Lake foreshore and coastline over urban development,*
> - *retaining vegetation and landscape features that contribute to the landscape character in major viewsheds, and*
> - *ensuring new development does not become prominent or dominate the landscape of its setting.*

Comment:

The retention and proposed enhancement of remnant foreshore vegetation and salt marsh bay will maintain the dominance of the natural appearing shoreline and help to ensure that the development does not dominate the setting. The taller, distinctive buildings will have prominence where foreshore vegetation or landscaping is not able to screen them however in the context of their intended distinctiveness and destination status this is not considered inappropriate. Bluff Point, the major landscape feature and high point of the site, is being retained and enhanced as a public park.

Significant Features, Viewing Points and Ridgelines

There are no significant features, viewing points or ridgelines indicated or mapped as being located on the site. The site is east of, and within 2km of Bird Cage Point, which is listed as a significant feature in the Guidelines. The development will not impact upon the scenic quality of Bird Cage Point and is also of minimal visibility from there.

Visual Accessibility

The Scenic Quality Guidelines assess the visual accessibility of Bardens Bay and the Morisset Peninsula as Level Three – Low Viewing Level, for minor roads and less visited places. In the terms of our assessment methodology, accessibility is closely related to view sensitivity. The ranking indicates that the area is considered to be of low view and viewer sensitivity.

Scenic Management Zones

The subject site falls into Scenic Management Zone C – Moderate.

The relevant Objectives and Strategies that apply to Scenic Management Zone C are:

Foreshore & Coastline

> *Objective: To maintain and enhance the natural character of all foreshores by ensuring development does not exceed a moderate level of visual impact.*

Comment:

The subject site is on an urban development site. The site has some remnant vegetation that gives the site a natural appearance when in fact it has been cleared and used for various institutional purposes. The moderate zone rating means that the site is not of high visual sensitivity and is therefore relatively unconstrained. The proposed development will not impact negatively on the foreshore which will be retained and enhanced as a foreshore reserve. The existing vegetation on the foreshore will help to screen the development to a certain degree and with recovery and rehabilitation will achieve the objective of maintaining and enhancing the natural character of the foreshore.

The objective to ensure that development does not exceed a moderate level of visual impacts is unaccompanied by any guidance as to what constitutes this level of impact. Our assessment methodology determined, using explicit and specific criteria, that the development does not exceed a moderate level of impact. Therefore, it is our view that it satisfies the objective of Scenic Management Zone C for Foreshore and Coastline.

> *Strategies:*
> - *Development proposals along the foreshore is permitted only to the extent that the natural foreshore is maintained or enhanced.*
> - *Development along the foreshore is limited within 20 metres of the Deed High Water Mark and landscape plan is submitted that demonstrates vegetation retention, restoration and screening.*

Comment:

The foreshore is proposed to be retained as a reserve to a distance of 30m from the Deed High Water Mark. Remnant vegetation on the foreshore will be retained and enhanced for the purpose of stabilisation, wildlife conservation and scenic quality enhancement. The Landscape Master Plan by Terrace Landscapes shows how vegetation retention, restoration and screening are generally intended. The Concept Plan would be subject to a commitment to a Landscape Management Plan for rehabilitation and management of vegetation. In our view, the development achieves the intentions of this strategy.

5.5.4 Lifestyle 2020 Strategy

A well designed and liveable city

The relevant section of the strategy with regard to visual issues is 5.3 - A Well designed and Liveable City.

Section 5.3.1 states:

> *Protects the scenic amenity of the City, through:*

- *Avoiding development that adversely impacts on areas of high scenic significance.*

Comment:

The subject site is not in an area of high scenic significance. The LMCCSQG classify the scenic management zone within which it falls as moderate and the landscape setting unit of Bardens Bay (scenic quality) is also classified as moderate.

- *Limiting development or the intensity of development within the Green System, including forested ranges and hills, ridge lines, agricultural landscapes, semi rural/open landscapes, waterway corridors, foreshores, the Lake, coastline and promontories.*

Comment:

Not applicable. The subject site is not within the areas identified as part of the Green System.

- *Retaining and enhancing the desirable scenic amenity of existing areas.*

Comment:

The proposed development will identify, retain and enhance the desirable features of the scenic amenity of the existing area by means of the strategies described in 1.6 above.

- *Establishing, retaining or enhancing significant views from areas of high public use to important natural features of the City.*

Comment:

The low accessibility rating and moderate view place sensitivity of the area means that there are no areas of high public use that are relevant to the terms used here. The proposal respects the existing and desirable future character of the setting and of the natural features which contribute to it, which will be conserved and enhanced.

- *Respecting that accessibility of views is a privilege rather than a right and aim to share this privilege.*

Comment:

The development of the site will not be in conflict with the rights or privileges which attach to views. The development shares views with the already approved residential subdivision to the west by maintaining vistas along streets, providing a generous setback between groups of residential buildings and providing a high quality public domain with opportunities for views not presently available.

Section 5.3.2 states:

Ensures that people are able to choose their residential location with realistic expectations of the future amenity of the area through:

- *Ensuring that development of a greater density than adjoining development respects existing character and amenity, by incorporating a transition area at the interface.*

Comment:

The proposed development adjoins the approved residential subdivision to its west. Residences in the approved subdivision along the western side of the street running north south in the proposed development will be of two storey design. The residential buildings on the proposed development have building heights varying between two and four storeys along the U shape sections running parallel to the north south running street. This creates a step-up interface from the two storey low density residential to the medium density multi storey apartments.

- *Minimising the loss of views from surrounding properties.*

Comment:

The proposed use of the land in the Concept Plan will minimise view loss by providing generous setbacks between clusters of buildings, maintaining views and vistas from streets and locating the buildings in such a way as to provide views wherever possible.

The green system

The Green system incorporates land and water elements that are intended to enhance long term biodiversity, scenic amenity and liveability of the City. Its intention is to ensure these elements are valued, retained and managed. The waterway surrounding the site is mapped as an area of aquatic habitat. The land is not mapped as part of the Green System.

5.5.5 NSW Coastal Policy 1997

Goal 3, Objective 3.2, Strategic action 3.2.2

Goal 3 states:

To protect and enhance the aesthetic qualities of the coastal zone.

Objective 2.2 states:

To design and locate development to complement the surrounding environment and to recognise good aesthetic quality.

Strategic Action 3.2.2 states:

The use of good design principles will be encouraged to ensure more compact, human scale towns are developed with their own character within the constraints of existing infrastructure.

Comment:

The broad Goals and objectives of the policy are matters more appropriately for others with town planning expertise to address.

However it is pointed out that proposed use of the land is located in an existing and developing urban area. The design of the development whilst contrasting with the surrounding suburbs is intended to respond to and complement the urban setting. It is considered to be a proposal of good design quality for Stage 1 and high potential to retain that quality through the later proposed stages of development that are shown in the Indicative Outcome plan for the whole site in the Concept Plan.

The LMSQG are more specific guidelines to appropriate response to the aesthetic qualities of the coastal zone than is provided by the general Goal 3. The extent to which the development could impact on the aesthetic qualities of the coastal zone is limited by the low visual accessibility of the site, low sensitivity and the moderate scenic quality. As such, the guidelines reinforce the fact that the existing scenic quality of the site does not contribute to the existing image and attractiveness of the zone locally, or is at the best neutral. We also consider that the changes to the site that are proposed, will have no significant negative effect on the resources of landscapes of the same or similar aesthetic quality and character that exist throughout the coastal zone generally and specifically in Lake Macquarie.

The natural components of the landscape that are aesthetic attributes of some value will be protected and become part of the theme for recovery and rehabilitation of the foreshore and increase the capacity of the landscape to absorb the development. The more prominent buildings are considered to appropriately complement the emerging character of the site as a destination.

5.5.6 SEPP 71 – Coastal Protection

Part 1 Clause 2 Aims of policy

The relevant aims of the policy are:

> *a) to protect and manage the natural, cultural, recreational and economic attributes of the New South Wales coast, and*

Comment:

The proposed use of the site would not have any unacceptable visual effect on the natural attributes of the coast. The proposal continues features of the urban, cultural and recreational attributes of the locality as a residential and recreational boating area and in that regard, the visual effects of the development are compatible with those attributes.

The land proposed to be subject to the Concept Plan is zoned to permit the intended uses and one of a very small number of such locations in the region. The natural and cultural features of the land are not affected negatively by the proposal. There is minimal tree loss, no change to the foreshore reserves proposed other than rehabilitation of vegetation and the cultural attributes of the site, including heritage items and landscape features are intended to be conserved and interpreted. In our view, the parts of this clause relevant to visual matters are satisfied in the Concept Plan.

> *e) to ensure that the visual amenity of the coast is protected*

Comment:

The proposed use of the site would not have any unacceptable impact on the visual amenity of the coast. The visual character of the immediate waterways and foreshore would be altered but this would not have an effect of degrading the overall visual amenity of the coast either by way of impacts on the visual character of the locality or of its scenic quality.

As stated above, the site is one of moderate scenic quality and of low visual accessibility and sensitivity. The development of the land as proposed in the Concept Plan will have no significant negative effect on the visual resources of the coast generally or on the resources of Lake Macquarie. Even if consideration is confined to the southern basin of the Lake, any negative effects on the overall amenity are minimal when the extent of the coastal resource is taken into account. In addition, the limited areas that can be put to the intended use because of the zoning, means that there would overall be a minimal impact on the amenity of the coast.

k) to ensure that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic quality of the surrounding area.

Comment:

The bulk and scale of the proposed buildings are similar to those found elsewhere in urban areas on Lake Macquarie where either mixed uses or tourism facilities exist adjacent to the shore, for example Belmont and Toronto. The tourism and recreation zoning of the site indicates an acceptance that the development will not be of a suburban nature or scale. The high quality design and destination status of the development improves the moderately rated scenic quality of the area.

At the same time, the proposal is to retain and improve the quality of the natural features of the site, albeit they are limited. There is an intention to retain and to rehabilitate and enhance the natural and cultural features of the shoreline and reserve and to integrate these into the landscape design of the land.

Part 2 Clause 8 Matters for consideration

The relevant matters for consideration are:

d) the suitability of development given its type, location and design and its relationship with the surrounding area.

Comment:

The buildings component of the proposed development and the marina and the associated structures are considered to be compatible with the existing context and not excessively prominent or out of character within the surrounding environment or with similar kinds of developments of a similar overall scale in Lake Macquarie generally.

The development proposed is suitable to the zone and the intended tourism use. It contrasts with the adjacent residential context, however the typical effect of this development form on the character of the locality is that it dominates the foreshores, diminishes or removes the natural features such as vegetation and allows built form to dominate and to privatise the shoreline. While this proposal is differently conceived, it produces a better outcome for the natural environment, the foreshores, the reserves the interface between development and the Lake and the users from the surrounding environment. We consider that that use of the land in the Concept Plan is suitable for the site and that the location and design is acceptable.

e) any detrimental impact that development may have on the amenity of the coastal foreshore, including any significant overshadowing of the coastal foreshore and any significant loss of views from a public place to the coastal foreshore.

Comment:

The built component of the development will have no negative impacts on the amenity of the foreshore. It will in fact enhance the existing amenity values by providing a managed and stabilised foreshore, foreshore reserve with public access, viewing places accessed by high quality public domain landscape and public parkland.

This outcome will be totally new for the surrounding environment, where the foreshores are essentially inaccessible, privatised and denuded.

The proposed marina would result in loss of views to parts of the north eastern and eastern foreshore from the foreshore reserves in Brightwaters, including the swimming baths at the end of Lake View Avenue and from parts of the roads in this vicinity. It may also result in potential loss of views to part of the foreshore along Pillapai Road and Lakeview Road when seen from Summerland Point. The effect is considered to be minor, given the extent of foreshore available to view from the same locations. The views to the scenic ridges beyond, the adjacent residential context and the expansive and panoramic views to the waterways available from the same locations, which form a much larger proportion of the horizontal field of the same views, would remain unaffected.

f) the scenic qualities of the New South Wales coast, and means to protect and improve these qualities

Comment:

The extent to which the development could impact on the aesthetic qualities of the coastal zone of New South Wales, even if the effects were agreed to be negative, is limited. It is limited by the low visual accessibility of the site to local people as well as the wider population of the state, low sensitivity in regard to the public domain and the moderate scenic quality. The resource of landscape of the same or similar quality and accessibility both locally and in the region is vast. The existing scenic quality of the site does not contribute to the existing image and attractiveness of the zone locally, or is at the best neutral. We consider that the changes to the site that are proposed, will have no significant negative effect on the resources of landscapes of the same or similar aesthetic quality and character that exist throughout the coastal zone generally and specifically in Lake Macquarie.

The development proposed is suitable to the zone and the intended tourism use. It contrasts favourably with the adjacent residential context that dominates the foreshores, diminishes or removes the natural features such as vegetation and allows built form to dominate and to privatise the shoreline. This proposal is produces a better outcome and therefore protects and improves the modest resources of scenic quality that the site possesses.

5.5.7 Coastal Design Guidelines of NSW 2003

Part 1 Introduction

To protect and enhance the cultural, ecological and visual characteristics of a locality

Comment:

The guidelines recommend that land use buffers and setback requirements are necessary to protect ecosystems such as coastal lakes and habitat corridors that often cross between settlements and across public and private boundaries. These aspects have been incorporated within the design of the proposed development. Adequate setbacks and retention and enhancement of the foreshore character has been one of the primary inspirations for and mitigation measures of the proposal.

To protect local character

Comment:

The guidelines promote diversity consistent with identity and enhance local cultural and natural values. The proposed development would appear to be compatible with the surrounding existing and approved land uses and the natural visual character of the locality. The site has been identified as a site which is suitable for tourism development in many local and regional planning instruments and is specifically

zoned for that purpose. The proposal would be consistent with the desired future character of the site and its surroundings as identified in Lake Macquarie Lifestyle 2020 Strategy.

To encourage new coastal settlements to be appropriately located

In general, large new residential and tourist development are being located on a site-by-site basis controlled by a variety of local and regional plans of differing age and contemporary relevance. Their location often has little regard for how the area will grow in the future or how the development will affect the economic viability of the settlement, its environmental quality, or its character. New development and subdivisions should be located and planned in the context of revised settlement strategies and consistent with provisions in SEPP71.

Comment:

The subject site is an intrinsic part of the suburb of Morriset Park within the broader City of Lake Macquarie. The proposed development is consistent with the provisions of SEPP 71, the LMCC lifestyle strategy 2020 and other planning instruments in relation to the desired future character of the locality. The built forms have been strategically chosen to positively respond to the character and the location of the site and at the same time respond and be compatible with the surrounding low density residential context. Further landscaping and foreshore treatment have been incorporated within the design to provide softening effects and maintain and enhance the foreshore visual quality of the site.

Vision Statement

The document provides guidelines for appropriate buildings in a coastal context. The vision statement is;

The vision for built form in coastal settlements is that all buildings are sensitively designed within their existing context so as to contribute positively to the settlement character in terms of form, height, footprint, scale, massing, amenity, external appearance and materials.

Comment:

I consider for reasons laid out in regard to other coastal amenity issues above that the proposed development positively responds to the location, character of the site and the surrounding context. The form, height and scale of the predominant proposed and indicative outcome buildings is not that of the surrounding context, however this does not mean that the form of development proposed in the Concept Plan does not contribute positively to the settlement character. As argued at length above, the location and character of the site and its almost unique zoning in the local and regional context allows a certain level of departure from the scale and form of adjacent buildings. These are not forming any distinctive settlement character, but a homogenous one with generally negative or at best neutral impacts on scenic quality, associated with negative impacts on foreshore character, natural systems, accessibility to to the foreshores and the quality of the public domain.

The height, footprint and massing proposed in the Concept Plan will produce a low built upon area, high quality private and public domain and the dominance of landscape over buildings at ground level. The outcome is a sensitive one that is satisfactory in regard to external appearance.

The proposed part of the application and the intended use in the Concept Plan is of a high quality of design and is proposed to be constructed of appropriate materials and with appropriate colours to respond to its coastal, natural and surrounding low density context.

Objectives Relative to Visual and Related Amenity

Objectives of the guidelines for appropriate buildings in a coastal context in relation to visual and related amenity are;

Ensure amenity is maintained on public land and on site

Be appropriate to its location within the settlement and the settlement type

Be appropriate to its natural setting

Add visual value to its location

Be of high quality design

Recognise the importance of materials suitable to the coastal setting

Maintain a high quality accessible interface with the foreshore.

Comment:

The proposed development incorporates foreshore character protection, enhancement and nourishment. It also improves public accessibility to the foreshore. Boardwalks have been proposed to provide improved access and linkages throughout the site that are also related to access to the foreshores and further opportunities for scenic views and vistas across the site.

The proposed landscape scheme would assist in softening the appearance of the proposed development and at the same time assist in retaining and enhancing the vegetated and natural character of the site. There is minimal impact on existing vegetation resources as a result of construction of the Indicative Outcome in the Concept Plan.

The Lake foreshore and Bluff Point have been identified as priority areas for integration with and conservation of public reserves and consideration has been given to views outward from these in the Trinity Point Concept Plan. The massing of the development form that is proposed is thus strategically located to appropriately respond to the landform and in particular to the Lake foreshore and Bluff Point from a visual point of view.

The Trinity Point Concept Plan aims to preserve existing resources. The public foreshore reserve assist in preserving the existing Lake/foreshore interface and remnant vegetation of both natural and cultural value and the system of boardwalks provide links to Bluff Point and the associated cultural elements. The setback of the residential buildings closest to Bluff Point assist in preserving the views from the point as well as the cultural elements associated with the former uses of the site including the sundial gardens, cultural plantings and the grotto. These elements are intended to be incorporated into a landscape that seamlessly integrates the foreshore reserve and public landscape inside the site as part of the open space system.

The appropriate spacing and orientation of open spaces and the relationship of the proposed internal road pattern to the adjacent residential development would provide direct visual linkages to and through the site. Separate landscape spaces of varied character have been proposed which would provide alternative viewing destinations such as the enclosed salt marsh area, Bluff Point lookout site and the urban foreshore of the marina. Defined and informal paths of many alternative kinds have been proposed or can be provided within the range of principles and commitments to provide diverse linkages between disparate visual resources

The proposed development would positively contribute to and further enhance the existing amenity of the site and the surrounding land. It is an appropriate development for a destination site of this nature and to its surrounding visual, natural and physical context. It is of a high quality design as demonstrated by the architects for the project. Appropriate colours, finishes and construction materials have been

proposed for the design and supported by relevant principles and commitments, to appropriately respond to the coastal context and mitigate any potential unreasonable impacts.

Guidelines for Appropriate Buildings

The guidelines for appropriate buildings in relation to visual and related amenity are;

Protect views from public places and streets by maintaining consistent setbacks along streets and not placing buildings in view corridors.

Protect local views and vistas throughout and surrounding the settlement from public places by relating new buildings to the topography, reducing heights to maintain views of the surrounding landscape and maintaining consistent, height, bulk, scale with the street and local context.

Comment:

There are no unreasonable view loss effects of the proposed development. However, the marina component would cause some view loss and blocking effect for the views towards the site. It was found that there would be some view loss to parts of the shoreline visible to the southwest from part of Brightwaters and some of the wider waterway for some viewing locations such as from the immediate waterway and Bulgonia Road. There would be loss of view to parts of the far south east shoreline for viewing locations on Bardon Street directly opposite and immediately to the north west of the marina and from parts of the immediate waterways.

In general, views of the waterway, far shoreline and ridges would be protected and further opportunity to such views would result due to the proposed increased public access to the foreshore.

The proposed development will have no significant effect on the local views and vistas from public places and streetscapes and is considered to be consistent with these guidelines. The location of future roads in alignment with those of the already approved residential subdivision and the boardwalks that extend from each of these towards the foreshore preserve important views towards the Lake. Future landscaping along the alignments of the roads and boardwalks with vistas to the Lake have been designed not to obscure the views.

5.6 Assessment of the proposed Mitigation Measures

5.6.1 Proposed Landscaping

The proposed landscape scheme would assist in mitigating potential visual effects and impacts for both high and medium sensitivity zones. Street tree plantings along the western boundary would partially screen the development and help to soften and bed it into the landscape when viewed from the existing and approved residential subdivisions. The scheme will also serve to integrate the streetscape of the adjacent residential development into the edge of the subject site, as well as forming part of a transition to the more organic and less geometrically structured landscape within the public domain of the subject site. Plantings of appropriate indigenous tree and plant species will be used towards the Lakeside of the development and between building clusters to have the maximum possible screening effect on the development. The size of tree species within these areas is limited to those that will not have future impacts on below ground car park structures due to their final size and weight. The screening effect of these plantings will therefore be limited but will be supplemented by the enhancement of and existing vegetation in the foreshore reserve. Plantings between building clusters will maintain the views and vistas to the Lake from the adjacent residential subdivision, the transitional area between it and the subject site the from within the site.

5.6.2 Foreshore Reserve Enhancement and Nourishment

The proposed enhancement and nourishment of the foreshore reserve would assist in mitigating the potential visual effects and impacts of all sensitivity zones. Existing vegetation in the foreshore reserve will be enhanced by appropriate indigenous species to improve screening of the development in views from the waterway and surrounding localities. Excepting the destination buildings which would break the canopy of the trees, appropriate plantings would successfully help to screen a large part of the development from most views.

5.6.3 Colours and Finishes

The colours and finishes of the built component of the development would be chosen to be sympathetic to the colours of the natural environment and to blend and harmonise with the natural features of the site as much as possible. Subject to final design and any residual concerns that Council may have, these may be subject to Conditions of Consent.

5.6.4 Lighting

The lighting for the buildings and marina are so proposed that it would only be sufficient for safe access and safe working and functioning of the marina and the buildings. The lighting arrangement is not considered to result in any unacceptable visual impacts on both high and medium sensitivity zones.

As indicated above, the lighting for the proposal would be subject to the need for the design to meet the Australian Standard AS 4282-1997, Control of Obtrusive Effects of Outdoor lighting. A lighting management plan would be a likely requirement for consent.

5.6.5 Scale of the Marina

Marinas are intrinsically of high visibility from shores and waterways. The main practical mitigation measure on their visual effects involves consideration of whether their scale causes specific effects, particularly the horizontal dimension. While the proposed marina is substantial, it is ideally located to minimise its impact on views from the Lake and it has low public domain exposure otherwise. Its north-south dimension (i.e. the profile seen from the Lake to the east and north east), would not be greatly reduced if only half of the proposed arms in future stages of the marina were constructed. This horizontal dimension causes the most significant effect on the views.

The radial form of the marina and low viewing angles for viewers means that the vertical slats that act as a breakwater feature, the length of the marina arms and the vessels moored on the nearest arm or arms to the viewer cause the main visual effects. Reducing the scale of the marina by reducing the number of arms would make little difference to the visual effect on views from the external environment. .As such, other than by significantly decreasing the length of the arms, reducing the scale of the marina in its proposed configuration would not make a substantial change to its appearance.

A different geometrical layout of the marina, for example a simpler, grid-like pattern of arms, may somewhat reduce the horizontal extent for the same number of berths. However, it would cause greater impacts on the view outward from the proposed development area, which are minimised in many views by the radial arrangement of the arms.

Thus, the scale of the proposal in terms of its horizontal dimension is acceptable. Seen from the north (residential views), viewers see over the marina and the horizontal scale does not cause view loss or blocking of scenic elements, but it does cause a change to visual character. Again, the scale is acceptable in that regard. Reducing the scale by reducing the number of arms would cause only a small quantitative change in what is visible, while the quality of the view would remain the same.

In our assessment, while the scale could be reduced, there are only quantitative benefits for most views (less of the marina to see), while the qualitative effect of the marina remains the same (character and quality of the view are unchanged). We do not consider that reduction in the scale of the marina, unless drastic and potentially impractical and uneconomic, would have any significant public domain benefits.

5.7 Comparative Analysis with other urban localities and maritime features in Lake Macquarie

5.7.1 Marinas

As part of the field study, photo documentation and observations were made on the visual context and scale of other marinas present in Lake Macquarie. These included marinas in Belmont Bay (Refer Photographic Plate 30), Marks Point (Refer Photographic Plate 31), Mannering Park and Wyee Bay (Refer Photographic Plate 33). The comparative analysis is relevant to assessment of the compatibility of the proposal to the Trinity Point setting.

The Lake Macquarie Yacht Club marina in Belmont Bay gives an indication of the likely future appearance of the slatted breakwater structure proposed in the current application. The grid like geometry of the marina however produces a higher density of vessels in any view line and the proportion of sailing vessels is greater than would be the case in the application.

The Marks Point Marina and the Wyee Bay marinas give a closer approximation of the appearance of the likely mix of vessels on the proposed marina; however, they are both small facilities by comparison.

The marina component of the development when it is completed would be the largest one in the locality, however it would be constructed in stages according to demand. The existence of other marinas and boat accommodation of various kinds is a general feature of the Lake; however, there are no large facilities in the southern basin. Thus, there is considered to be a general compatibility of the facility with the maritime environment of the Lake, but a significant contrast in scale.

5.7.2 Urban Form on the Foreshores

The Lake features many different forms and densities of development. In most cases however, the building form is of a lesser height than the maximum proposed on this site. One exception is in Belmont Bay. The development here is highly exposed to views by the flat topography and lack of vegetation in the vicinity. Two prominent buildings, one of an equivalent height to the proposed distinctive buildings are close to the foreshore (Refer Photographic Plate 33). It is evident that the articulated, landscaped 5-6 storey building, if set in a landscaped setting similar to the subject site, would be of relatively low prominence compared to the earlier building on the left.

Belmont Bay also features stepped two storey medium density development (Refer Photographic Plate 34) which is highly prominent because of its massing, sloped face to the water and lack of vegetation. The subject site will have higher density buildings with less prominence to the Lake as a result of attention to siting, screening vegetation, foreshore reserve and designed landscape.

Wallarah/Murrays Beach is a contemporary urban development under construction ((Refer Photographic Plate 35). The site as a high capacity to absorb development because of the amount of retained vegetation, complex topography and the extensive setback of development from the foreshore. It is not comparable to the proposed development.

Fishery Point close to the subject land (Refer Photographic Plate 36), Mannering Park (Refer Photographic Plate 37), Fishing Point (Refer Photographic Plate 38) and Coal Point (Refer Photographic Plate 39) are examples of the typical foreshore development form in the southern basin of the Lake. They are detached residential development areas with prominent buildings and modified and privatised foreshores. This is a form of development not considered suitable to the intentions or proposed use of the subject land, with visual impacts out of proportion to the low-density development use.

Diamond Drill Point at Gwandalan (Refer Photographic Plate 40) gives an indication of how the proposed development can fit into the natural features of the environment. It features two different landforms and foreshores, on both of which, there is residential development. The one with a modest cliff line to which the development responds in scale and natural vegetation (left in the photograph) has minimal visual exposure of the development, while the one with no foreshore vegetation, no topography to relate and no variation in height or articulation of the built form to is prominent (right).

The development proposed would be different from any of the above examples in extent, but within the range of built forms present on the foreshores.

6.0 Residual Visual Impacts and Overall Conclusions

The southern basin of Lake Macquarie has generally low public accessibility, including low accessibility from the waterway, as identified in the LMCCSQG. The locality is of moderate scenic quality and varied integrity. The subject site therefore has a significant capacity to absorb the development proposed without visual effects which would be perceived by large numbers of viewers from sensitive public domain locations. The subject site itself possesses minimal scenic resources.

There are sensitive public domain locations such as those in the Lake Macquarie SRA at Point Wolstoncroft and Bird Cage Point, from which the development would potentially be visible. The former provides distant views that would be minimally affected, while the latter does not provide views of any significant proportion of the site. Our analysis shows that most land based sensitive viewing places are medium range to distant and would not experience significant visual effects or impacts.

The site is exposed to a significant area of Lake Macquarie itself however, which although experiencing relatively low, informal levels of use, provides views, including close range views. The most prominent feature of the development in terms of change to existing character would be caused by the marina component rather than the residential/tourism component in these views. While there would be a significant change to the character of the built environment when seen in close range views, in medium to distant views the main built component would be significantly screened from view, or softened in appearance, by existing retained foreshore vegetation and by future regeneration of existing vegetation communities. Some softening effect would also derive from proposed landscape planting within the site consistent with the need to retain views outward. The exception would be the destination building group, which although more prominent, are of modest scale at a maximum of six storeys in height. The location of the development would be more noticeable by the presence of the marina than the presence of the buildings.

The theme for and concept of design of the development is to create a development destination, with the capacity to draw tourism demand, boating uses and provide a unique level of accommodation for tourists and residents. We provided a set of principles to be followed in layout of the built form of the development and the public domain that have informed the design of the proposal, based on our assessment of the opportunities and constraints of the site (1.5 above).

The overall concept for the proposal is an integrated one, where the marina and its land based facilities forms a central part of the tourism image and attraction of the site. While the methodology we have adopted considers each of the components separately as is appropriate in the analytical phase of assessment, it is not ultimately reasonable to separate consideration of the built form and marina component.

The site would be transformed to an urban setting with a mixture of residential accommodation of low to medium density, unified by a public domain landscape unique to the Lake Macquarie locality. The intentions for the site will create contrasts with existing development forms in the locality that must be taken into account in determining acceptable visual impacts.

The assessment carried out here does not accept that the above alone is a justification for the visual effects and residual impacts of the built component of the development. However, it is necessary to recognise that means of assessing impacts which rely largely on existing character as a benchmark of acceptability, including the LMCCSQG, are inherently biased against taller or denser development form and are limited in application. Nevertheless, this assessment against the criteria of the LMCCSQG found the development proposed to be acceptable.

The overall form of the built component of the development would be different from other foreshore development present in the southern basin of the Lake, although there are isolated examples of medium density residential development form in places. The five to six storey component of the development would be unlike most other examples on the Lake shore. The marina would be the largest in the Lake generally and the associated public areas in and around the development would be of a character and quality not found elsewhere in the vicinity.

The residual visual impacts of the proposal, taking into account the overall impacts and the effects of mitigation measures in decreasing these, would occur predominantly for close range viewers in the public domain of Doull Lane, some nearby residences on Lakeview Road and those in the approved residential subdivision west of the site.

The primary cause of residual impacts would be the change of character to the immediate waterway adjacent to the residences and the geometric arrangement of vessels associated with the fixed berths of the floating marina. The blocking of view access to part of the more distant foreshores in some view lines is an unavoidable outcome of the proposal and would occur to some extent with a marina proposal of any scale and geometry. However, the overall horizontal scale remains relevant.

There is a hidden benefit of the marina that may be taken into account by the consent authority in balancing its changes to the visual character of the immediate locality. A marina with floating berths as proposed is of significantly lower environmental impact than the predominant highly dispersed swing moorings that cause significant damage to benthic flora and fauna in shallow waters like Lake Macquarie.

Successive stages of the marina will have the effect of organising and accommodating vessels some of which are larger than the present average size of vessels in Bardens Bay. Because there is a relationship between the length and bulk of vessels generally and because the superstructure other than of masts of motor vessels are typically taller than sailing vessels, there is a cumulative effect on views which is related to vessel size. However, the height and visual bulk does not increase in a linear way and the fashion of motor cruisers is trending away from tall flying bridges, tuna towers and the like, toward a more streamlined and lower profile. Nevertheless, the effect on view blocking would be greater than would occur if an average group of vessels from the existing swing moorings in the locality were accommodated in the marina.

This assessment concluded, notwithstanding there are no fixed berths in the Bay at present and that marinas are more characteristic of the upper Lake Macquarie area, that the marina proposal is not intrinsically incompatible with Bardens Bay. This assessment was assisted by the comparative analysis of other marina facilities in the locality. However, it is to be stressed that this analysis does not justify the proposal; it is simply a factor to be given some weight in assessing whether a facility which is not a feature of the existing setting of Bardens Bay could be compatible with it.

The secondary cause of residual impacts would be the visibility of the distinctive and taller buildings from residences in Morisset Park including the approved residential subdivision west of the site. The blocking of view access to the Lake and more distant foreshores in some view lines would occur as a result of the ongoing development of that residential precinct and to some extent would also be an unavoidable outcome of the proposal. It would be compensated for by the public domain of the proposal, which provides for a range of linkages through the site, movement patterns, its permeability and many kinds of viewing opportunities.

In giving these effects weight, it is also important to consider the whole view experience which is available to people in the public domain. These locations included part of the foreshore of Bardens and Sugar Bays, parts of the foreshore of Summerland Point and Sandy Beach, Point Wolstoncroft,

the boat ramp on Lakeview Road, sections of roads in Brightwaters, Mirrabooka and Morisset Park and the immediate waterways. The horizontal extent of the view which is available from the public domain on the east side of the Lake is almost unlimited in an arc from north west through north to the south east, within which arc the site and proposed development is in most cases a very small proportion of the arc. In views from the east side of the Lake, which has low public accessibility, the same unrestricted views exist, in an arc extending from the south to the northwest. As is the case for views from the west side, the proposed development would occupy a small proportion of the arc.

The extent to which the view would be interrupted by the taller buildings in that context is even more limited. The height of the scenic background to views is also such that the Watagan Ranges will continue to be the background to most views and will be essentially unaffected.

A third issue is the urban context which would be significantly changed compared to the typical density of development on the foreshore. However, differently from the privatised foreshores and lack of visual access that is also typical of the Lakeshores, the development will have a designed and organised public domain providing free accessibility to the foreshore and views to the Lake and locality, which also flows into the adjacent residential area. Thus the higher residential and tourism density results in better and more equitable access to views rather than the reverse. The typical existing situation of two storey development form being dominant adjacent to the Lake edge would also remain.

Finally, this assessment concluded that while there would be a localised character change to Bardens Bay, the overall visual character and scenic quality of the Bay itself and Lake Macquarie in general would not be degraded by the construction and occupation of this proposal.

The overall visual impacts of this proposal were rated as moderate in extent. This is a conservative assessment. It recognises that there would be some localised higher impacts. It also anticipates that there may be divergent views as to the merits of the application presented by some local people who have particular emotional attachments to the locality.

The assessment above shows that the subject site is one which is relatively secluded and which has overall low exposure to views in the public domain. The subject site is not a major topographic feature or promontory, but rather a relatively minor point, among other more prominent local examples.

Medium range views are also possible from public domain locations in a small part of the suburb of Brightwaters to the north. Both the marina and the residential/tourism development would be visible and make a significant change to the existing character and composition of the views. The most significant change would be caused by the marina component; however, the difference in character of the built form, compared to adjacent residential areas, would be significant.

The site has an overall low exposure to private domain views, given its location on a point on the Lakeshore. A number of residences in Brightwaters will have views of the development at medium range and a small number in Morisset Park, both on the Lake shore to the west of the subject site and within the residential area presently under construction, from close range.

Private domain views in Brightwaters and part of Morisset Park will be predominantly affected by the marina component of the development changing the character and the composition of the foreground of the view. While this is in line with the concept for and intentions of the development as a destination tourism development area, part of the view would be significantly changed, particularly for viewers in residences immediately west of the site on the shore of the Lake in Morisset Park. This would also be the experience for residents of the area being constructed to the west of the site at present.

Our assessment is that while there would appear to be significant changes to the views available from the residential area immediately west of the site, for example Doull Lane, other than in Lakeview Road, this is not of significance. This is because the perception of being able to travel through the site or

experience relatively unrestricted views is a recent phenomenon, created by the transformation of the site from an institutional development with no public access, to a cleared site as at present. Retaining existing views is not a reasonable expectation.

There would be significant change to the composition of views from the private domain for a small number of residences in Lakeview Road, Morisset Park. The feature causing the change would be the marina component of the development, the built component being screened out by foreground vegetation. There would be some view blocking effect, to the view to the north east across Bardens Bay. The effect would be greater than occurs in other bays in the vicinity, most of which have significant numbers and sizes of vessels accommodated in them, but a lower density of vessels and no marina structures.

Taken overall, it is our opinion that while there would be significant changes to the character of the site and the immediate waterway, predominantly to viewers in the private domain, that those changes are acceptable. They are acceptable in the context of the zoning of the land, the intention to create a destination development, tourism attraction and a level of accommodation capable of delivering the extent of, character and quality of the public domain proposed. We consider that the public domain benefits of the development and the contrast they will provide to the generally privatised foreshores of the Lake in the vicinity are major compensatory factors in considering the marina component of the proposal, which has a higher level of effect on visual character than the built form. The benefits will flow to high numbers of people, not only those within the subject site, but from elsewhere in the locality and the region.