

trinity point

LAKE MACQUARIE

Proposed Helipad Visual Impacts Assessment Report

September 2016



Trinity Point Helipad application

Trinity Point Road, Morisset Park

Report prepared for Johnson Property Group
Report prepared by Dr Richard Lamb, BSc, PhD

VISUAL IMPACT ASSESSMENT

October 2016



Executive Summary

- The Trinity Pont site would be transformed by the existing Concept Approval and the approved marina. This will create contrasts with existing development form in the locality which must be taken into account in determining acceptable visual impacts of the proposed helipad.
- The visual impacts were assessed using a methodology specific to built developments including marina applications and cross checked using the methods in the Lake Macquarie Scenic Management Guidelines (LMSMG).
- The visual catchment for the proposed development site (the site) is confined to isolated parts of the urban foreshores to the north east of the site and the foreshore of Trinity Point.
- The small scale and minimal vertical dimension of the proposal would significantly limit its visibility.
- The landscape setting of the site is within Bardens Bay and is set in an existing context facilitated to be transformed by the Concept Approval and subsequent individual approvals, including the marina.
- The site is of a moderate scenic quality rating with generally low visual accessibility, as identified in the LMSMG and confirmed in this assessment. The southern basin experiences lower usage than the remainder of the Lake.
- The landscape has a higher potential to absorb visual impacts than one of high scenic quality and high accessibility.
- The ability of the site to absorb visual impacts of the helipad is significantly increased by the approved marina, to which the helipad is proposed to be attached.
- The site has low visual exposure to the public domain on land to the south, west and north and moderate exposure to part of the waters of the southern basin of Lake Macquarie to the north east and east.
- There are no view places on land in the high sensitivity zone of less than 100m from the site. Sensitivity was rated medium for locations between 100-1000m from the site and low for distances greater than 1km.
- Few public domain locations on land are affected by visual exposure to the site.
- Most public domain views other than close views from the water and the fringe of future residential development west of the site are in the Low sensitivity zone.
- The effect of the proposal on view composition would be minor.
- 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.
- Visual effects would be increased for passive users of the immediate foreshore and for frequent users of the immediate waterway. There are no roads which provide sustained views that would include the helipad.
- The proposal would cause no greater impact on view through the site from the waterway and foreshores to the north east than the approved marina and in most views would be masked or totally screened by it.
- The overall rating of the visual effects of the proposed development on its total visual catchment was assessed to be low to medium.
- Medium impacts would be confined to close range views from the waterway and visibility of movement of aircraft associated with the helipad.



- The proposal would not cause significant view loss.
- The Physical Absorption Capacity (PAC) for the proposal was rated high for all viewing locations, as a result of the adjacent approved marina.
- The visual compatibility of the proposal with the Concept Approval and the approved marina was rated to be high.
- The overall effects and impacts rating for the high view sensitivity zone in the public domain were assessed to be medium, reflecting the visibility of change in character when viewed in detail, but only from close range on the waterway.
- The overall visual impacts rating of the proposed redevelopment on its total visual catchment, when all relevant weighting factors were taken into account, was assessed to be low.
- 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 component and compatibility with the Concept Approval and approved marina.



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1.0 Introduction

1.1 Purpose of this Report and Background

This report is an assessment of the visual impacts of a proposed helipad by Johnson Property Group (JPG) at Trinity Point. The helipad would be integrated with the Stage 1 marina which has been approved, subject to conditions, by Lake Macquarie City Council and would support the wider tourist destination.

This report specifically relates to visual impacts of the application for the helipad only. The report was prepared by Richard Lamb and Associates (RLA) and authored by the principal, Dr Richard Lamb. A curriculum vitae for Dr Lamb can be viewed on the RLA website at www.richardlamb.com.au accessed from the tab on the Home page.

RLA have prepared the following visual impact assessment (VIA) reports in relation to approved developments at Trinity Point:

- VIA report for the Trinity Point Concept Plan (MP 06_0309) which was approved with amendments (2008);
- VIA report for the approved DA and EIS for Stage 1 of the Marina and ancillary development (2014);
- s75W VIA report on proposed amendments to the Concept Approval (2014);
- VIA addendum report to the s75W report (RLA MOD 5 report) on proposed amendments to the Concept Approval, which were approved by the Planning Assessment Commission (2015).
- VIA report on the approved DA/496/2015 Tourism Accommodation and Residential Flat Buildings precinct (2015).
- VIA report on the approved DA/1731/2014 Tourism and Hospitality precinct (2016);
- VIA for approved s96 application to vary approved Stage 3 DA.

The purpose of this report is to assist in the development assessment of the potential visual impacts of the helipad.

The methodology adopted in this report is similar in concept and logic to the methodology adopted in the VIA reports leading to approved MOD 5 to the Concept Approval and the approved DA for the Stage 1 Marina and ancillary development. It is appended at Appendix B.

As no substantive changes have occurred to the visual context or setting of the subject site of the proposed helipad in the period since the approval of the DA for Stage 1 of the Marina and ancillary development, the observations, analyses and assessment remain valid and are not repeated in this report.

Subsequent reports have reviewed the overall findings of the RLA reports with regard to the visual setting within which the approved marina would exist and confirmed the validity of the existing observations.

This report consists of an assessment of the likely extent and significance of the visual impacts of the specific visual effects likely to be caused by the existence of and use of the helipad, considered with regard to the range of public and private places that could be affected.

This report is relevant as a stand-alone assessment of the visual impacts of the proposed helipad and also to an application to vary MP 06_0309 MOD 3, seeking modification of the Concept Approval to include a helipad as part of the approved marina design.



As a consequence, there are two sets of Environmental Assessment Requirements that are relevant, ie, the SEARs for MP 06_0309 MOD 3, issued in July, 2016 and the EAR 846 for the helipad application. As the initial application for a helipad was lodged when LMLEP 2004 and the controls in LMDCP 1 were in force, the SEARs refer to these and must be considered in addition to LMLEP 2014 and LMDCP 2014.

1.2 Documents consulted

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

- Lake Macquarie City Council Lifestyle 2020 Strategy (Lifestyle 2020).
- Lake Macquarie City Council Lifestyle 2030 Strategy (Lifestyle 2030).
- Lake Macquarie LEP 2004 (LMLEP 2004)
- Lake Macquarie DCP 1 (LMDCP 1)
- Lake Macquarie LEP 2014 (LMLEP 2014).
- Lake Macquarie DCP 2014 (LMDCP 2014).
- Lake Macquarie Scenic Management Guidelines 2013 (LMSMG) (which are also guidelines to DCP 2014).
- State Environmental Planning Policy No 71 – Coastal Protection 2005 (SEPP 71)
- NSW Coastal Policy 1997
- Coastal Design Guidelines for NSW (2003)
- Indicative images of the likely appearance of the helipad, derived from the internet.

1. Secretary Environmental Assessment Requirements

Table 1.1: Checklist: Requirements of the Director General (MP 06_0309 MOD 3)

Key issues	Relevant sections in the report	Comments
5. Design and Visual Impact <ul style="list-style-type: none"> a) Address visual impact in the context of adjoining and surrounding development in relation to setting, as viewed from the public domain including Lake Macquarie and all publicly accessible foreshore locations. b) Use visual aids such as scale model and photomontage to demonstrate visual impacts. c) 3.6 Demonstrate the suitability of the proposal with the surrounding area in relation to 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 2.0 Section 3.0 Sections 4.1, 4.2 Section 4.3 Section 4.4	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.

Table1.2: Checklist: Requirements of the Director General (EAR 846) in this report

Key issues	Relevant sections in the report	Comments
<ul style="list-style-type: none"> • Visual impacts – of the floating helipad, particularly when viewed from: <ul style="list-style-type: none"> – Properties along the foreshore; – Waterway users; and – Public and other significant land-based vantage points 	Section 3.0, Section 4.1, 4.2 Section 4.3	



1.3 Context for the Development

1.3.1 The Regional and Local Visual Context

The regional and local visual context are described in the series of reports prepared by RLA and detailed above. With the exception of further development of adjacent approved residential land by JPG to the west of the proposed development site for the helipad (the site), there have been no significant changes to the character, quality or visual accessibility of the site.

1.3.2 Existing Scenic Resources

No significant changes have occurred in existing scenic resources since approval of the Stage 1 marina, to which the helipad would be attached and in the context of which it would be seen. The helipad, being a floating structure of similar height in elevation to the approved pontoons of the Stage 1 Marina, has minimal vertical dimensions and is not capable of causing any significant change to the visibility or character of the background features visible in views toward the Trinity Point site generally, or of the approved marina.

As a result, the future approved character of views toward the site would be largely unchanged if the helipad is approved. While this is considered in greater detail below, the structure is not capable of causing significant view loss or view blocking effects to views either toward it from Lake Macquarie and adjacent residential areas, or from the development area of Trinity Point, looking outward.

1.4 Existing Opportunities and Constraints

The site presents essentially the same opportunities and constraints to which the helipad DA should positively respond to those identified in the RLA 2014 report on the approved marina. The opportunity for views to and from the public domain including the foreshore would be effectively the same as would occur under the existing consent for the marina. The helipad would occupy slightly more of the waterway than that which is required for the approved marina, making use of the opportunity for a connection to the existing structure to provide access.

1.5 Scenic Resource Management Principles

The existing scenic resources of the site, the visual exposure to external and future internal views and the visual constraints remain as assessed in the RLA 2014 report on the approved marina. While the helipad is separated from and in addition to the floating structure of the marina, it would have no extra bulk added to it visually by the presence of vessels moored to it, as occurs with marina pontoons. The occasional presence of a helicopter would add intermittently to its visual presence.



2.0 THE PROPOSAL

The proposal is for a floating helipad on a pontoon of square plan 20m x 20m situated to the east-south-east of the approved marina (refer to Sheet 1 of Dwg. 37429 (4) -DA-001-G) prepared by ADW Johnson. The nearest part of the helipad would be 26m from the outer edge of the floating breakwater.

The helipad would be accessed by a combined 1.5m wide aluminium gangway with handrails, connecting to a floating pontoon without handrails, composed of three individual 4m wide by 3m long sections. The gangway and pontoon access structure would be a total of 26m long.

The pontoon for the helipad and the three-piece access pontoon would be supported on telescopic piles, so there are no projections of piles above the surface of the helipad and access pontoon. Beyond the end of the gangway where the handrails end, there would be no vertical projections above the pontoon access section and the surface of the helipad pontoon. This arrangement is shown in elevation on Sheet 3 of Dwg. 37429 (4) -DA-001-G.

The helipad would have line marking painted onto its surface, in the form of broken white lines along the outer edges. The touchdown and lift-off area (TLOF) would be marked by a yellow painted circle surrounding a large white coloured letter "H", centred on the helipad pontoon. Yellow double headed arrows (approach/departure markings) would also be painted onto the helipad surface as shown on Sheet 2 of Dwg. 37429 (4) -DA-001-G.

A managed safety zone measured 30m horizontally in all directions, from the outer edge of the helipad pontoon, is to be maintained during take-off and landing of aircraft. There would be no visual evidence of this zone other than bollards and chain preventing access along the floating breakwater at such times and two red flashing lights, lit only during take-off and landing, in approved pedestals. A floating cone-shaped illuminated cardinal marker buoy with a red light (approx. 700mm high) is proposed on the alignment of the managed safety zone, 30m east of the helipad.

The helipad is proposed for day-time use only by helicopters up to 38 movements a week (ie. up to 19 landings and 19 departures), with a maximum of 8 movements a day (ie. 4 landings and 4 departures)..

2.2 Visual effects unique to the application

The application is for a pontoon structure and the use of that structure as a helipad. Floating pontoons are a feature both of the existing wave attenuation pontoon or floating breakwater that forms a perimeter to the east and south east of the approved marina and also of the marina itself, the main structure of which comprised floating pontoons.

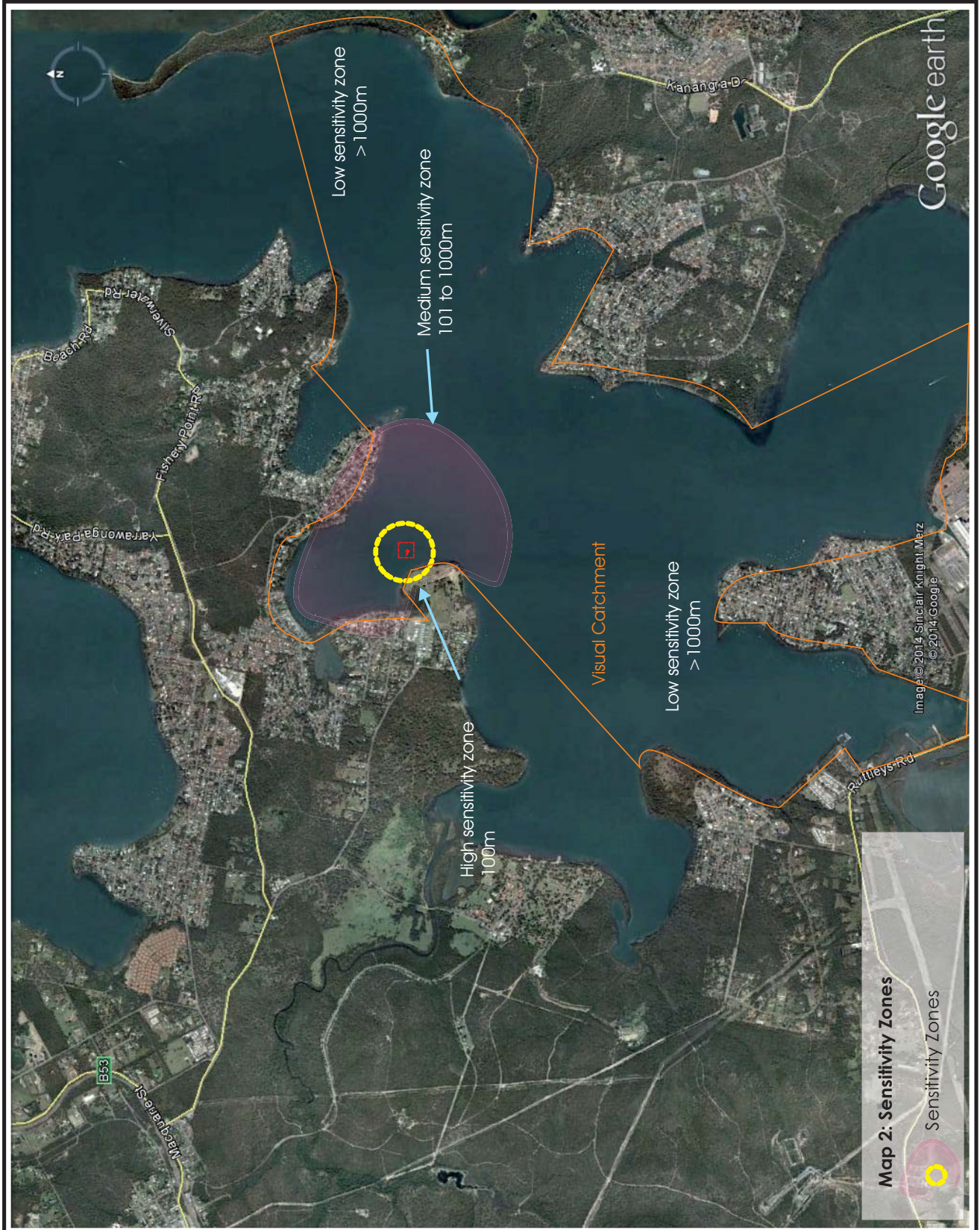
The overall scale of the proposed helipad pontoon and access structure compared to the approved marina is evident on the inserted locality sketch on Sheet 1 of DWG 37429 (4) -DA-001-G. The additional structure proposed is minor in the context of the existing approved marina and of a kind that is compatible with that which has been approved. The proposed helipad in that regard is not visually distinctive or unique, other than in regard to the width of the pontoon, at 20m.

As the helipad is proposed to be to the south east of the existing approved marina and has minimal vertical dimensions, it would be hidden from view from Morisset Park, development north of Bardens Bay and from most of the viewing places in Brightwaters.

The use of the pontoon and access structure for landing and take-off of helicopter is the feature that would be most responsible for unique visual effects of the application. The occasional presence of a helicopter on the helipad and the approach and departure of the helicopter, would be visual effects unique to the application.



Associated with the activity of arrival and departure of the aircraft would be minor visual effects of two red flashing lights on approved pedestals of the floating marina breakwater. As the use of the lights would be confined to daylight hours and as they are intended as warnings for the safety of pedestrians on the breakwater and not as a navigation aid intended to be more widely visible, the lights would be of minor visibility and have no significant impact on more distant viewers.





3.0 VIEW ANALYSIS

3.1 Visual Exposure

The effective visual catchment of the application is essentially the same as was identified in the RLA 2014 DA and EIS report on the approved marina. The structure proposed extends marginally further south than the existing approved marina and would theoretically therefore have a larger visual catchment. The structure would be visible in some close range views from the Trinity Point development area and the foreshore. However, that is also the case for the much more extensive approved marina, which would dominate the foreground of such views and in most cases mask views of the helipad, as a result of the presence of vessels moored to the pontoons in the marina.

In views from the waterway, the structure has minimal vertical dimension and is no higher in elevation than the very much more extensive wave attenuation breakwater pontoon. This would most often be seen directly behind or appear continuous with the proposed structure. As a result, it is most unlikely that the proposed helipad pontoon would be easily discernible in most views. The minor difference in 'footprint' of floating structure caused by the construction of the helipad pontoon compared to the existing approved marina would not significantly change the extent of the visual catchment. In addition, the visibility of the structure would be less than for the marina when constructed and occupied by moored vessels.

3.1.1 Views into the Site

Views from the area of the approved residential subdivision

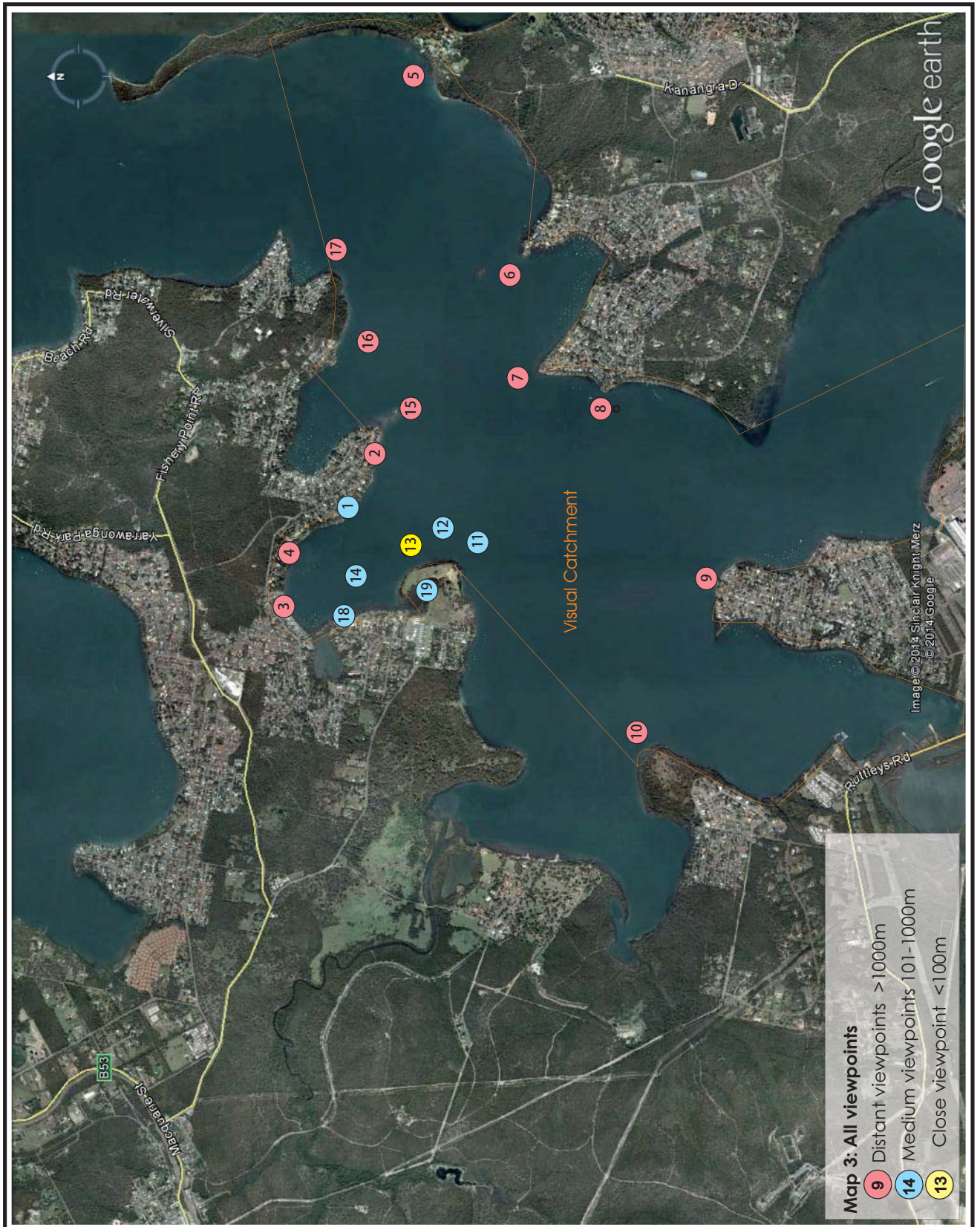
There will be a minor but not a significant change to access to close range views of the proposed development compared to views of the existing consent for the marina. There may be a slight increase in visibility of floating pontoon structures in view from the terminus of Trinity Point Drive, however this would only occur if none of the developments approved for the north end of the Trinity Point site were constructed. Arrivals and departures of helicopters may be partly perceivable above approved buildings and vessels moored at the approved marina.

Views from the public domain inside the site

The access to views from the public domain would remain essentially as in the existing consent for the marina. There will be minor visibility of the structures to give access to the helipad and of the helipad pontoon from part of the public domain toward the centre of the Trinity Point site. This would be seen in the context of the much more extensive and immediately adjacent, approved marina, to be occupied by significant and potentially bulky vertical elements such as vessels, masts etc., whereas the proposed helipad would have no significant vertical element. Partial views of arrivals and departures of aircraft would be possible.

Views from the foreshore reserve

The proposal would be a new feature of views from part of the foreshore reserve and be visible at relatively close range. Because of the low viewing angle toward the site from the foreshore, it is unlikely that any of the navigation aids painted on the helipad would be of significant visibility. Seen in elevation, as it has no significant vertical elements, the structure would appear minimal. Arrivals and departures of aircraft would be of high visibility, as would aircraft on the helipad, when present.





Views from the wider visual catchment

As noted above in relation to the general visual exposure, the proposed structures would not cause any substantive change to views from the wider visual catchment compared to the existing consent for the marina. The scale and character of the structures in the proposal would lead to them being of minimal visibility in views from the wider visual catchment. Aircraft arriving and departing would be the most evident visual effects, both because of the contrast in form between them and vessels of the marina and also because of the perception of their movement of aircraft against the sky and background.

3.2 Relevant Planning Documents

The planning documents relevant to the potential visual impacts of the development proposal are those referred to in the RLA 2014 report and EAR for the helipad. Detailed analysis of the planning documents against the proposal in terms relevant to the visual impacts and amenity issue can be found below in section 4.4.

3.2.1 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 adjacent development site is zoned 6(2) Tourism and Recreation and Zone 6(1) Open Space. The site of the proposed helipad is zoned 11, Lakes and Waterways (water). Under the provisions of LMLEP 2004, the helipad is permissible, with consent. The relevant sections of the LEP with respect to the zoning are Part 3 Clause 15 General controls for land within zones.

3.2.2 Lake Macquarie Local Environmental Plan 2014

Relevant to visual impacts, the particular aims of the plan include recognising the importance of Lake Macquarie and its waterways and the coast as an environmental, social, recreational and economic asset to the City of Lake Macquarie and the Hunter and Central Coast regions. In addition, it aims to implement a planning framework, which protects areas of significant conservation importance, while facilitating development and public facilities in appropriate areas, and to facilitate a range of accommodation types throughout the City. The adjacent site is zoned SP3 Tourist, and RE1 Public Recreation and the site of the proposed helipad is zoned W1, Natural Waterways. The development is not permissible in the zone.

3.2.3 Lake Macquarie Development Control Plan No.1

DCP 1 is the supporting document to MLEP 2004. 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.

3.2.4 Lake Macquarie Development Control Plan 2014

DCP 2014 is the supporting document to LMLEP 2014. Its purpose is to implement Council's Lifestyle 2030 Strategy. It consists of a written document and a number of parts that contain controls relating to the zonings in LEP 2014, of which parts 6 (Development in Recreation and Tourism Zones) and



Map 4: Proposed helipad in relation to approved marina
Graphic overlay adapted by RLA with permission of ADW Johnson

Part 9 (Specific Land Uses), which includes Foreshore and Waterway Development and Tourist and Visitor Accommodation are relevant. Technical Guidelines are required to be considered in some circumstances, including the Lake Macquarie Scenic Quality Guidelines (LMSQG). Those Guidelines have now been superseded by the Lake Macquarie Scenic Management Guidelines (the LMSMG).

3.2.5 Lake Macquarie Scenic Management Guidelines

Lake Macquarie Scenic Management Guidelines (LMSMG) provide the support documentation for DCP 2014 in relation to views. The guidelines are to be applied to assess the visual impact of a potential development in preparing a landscape visual impact assessment (LVIA) if this is justified. Inspection of Table 1 in the LMSMG shows that an LVIA is required. The assessment carried out in this report is considered to address all of the relevant issues in the LMSMG. A closer analysis is provided below.

3.2.6 Lifestyle 2030 Strategy

The 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. Relevant directions of the strategy with regard to visual issues are within Strategic Direction 3, A Well designed and Liveable City, Outcomes 3.13, and in regard to the helipad, as it is attached to the approved marina, in Direction 6, Outcome 6.14.

The development would comply with the Lower Hunter Regional Strategy in which Morisset is identified as an emerging regional centre as shown on the Urban Structure Map, which will experience substantial dwelling and employment growth and respond effectively to the City Vision with regard to environmental protection of scenic values and opportunities.

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 and would not conflict with the Green System strategy. The site is a significantly altered site part of a promontory, development of which is not in conflict with natural areas, with the exception of the partially enclosed salt marsh wetland area adjacent to the site, which is proposed for conservation.

The Lifestyle 2030 Strategy superseded Lifestyle 2020, and as such Lifestyle 2020 is not addressed further.

3.2.5 NSW Coastal Policy 1997

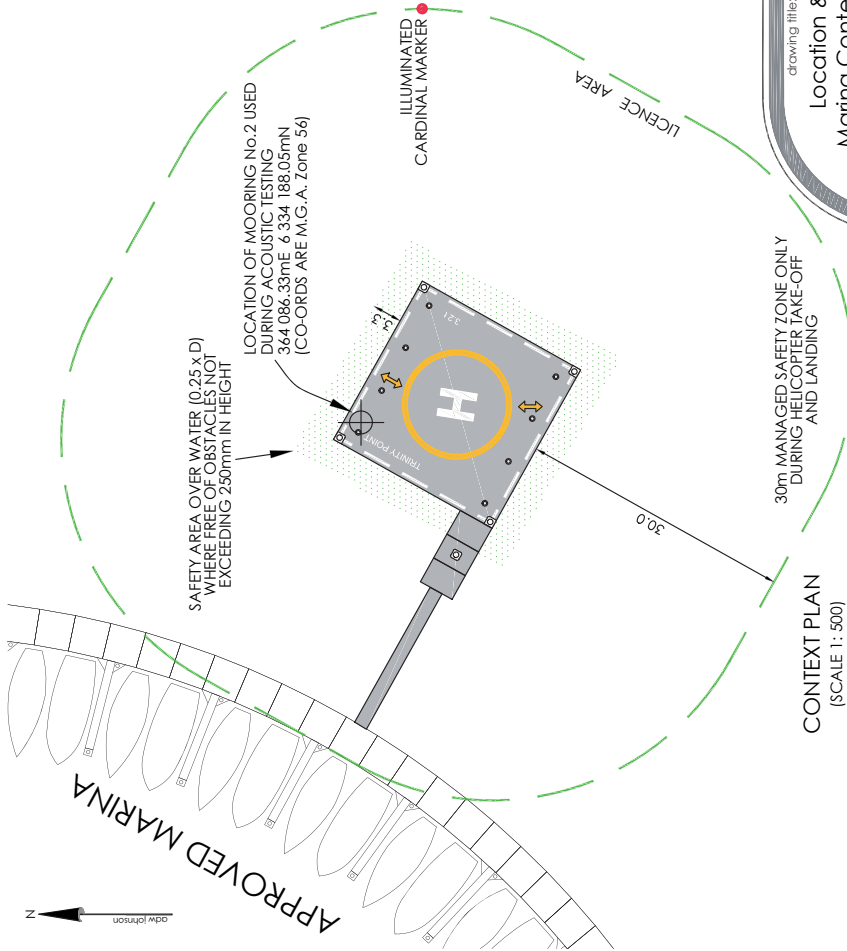
The Coastal policy is designed to guide coastal development, planning and conservation in New South Wales. Lake Macquarie is part of the coastal Zone adopted in the Policy. The relevant section of the Policy with regard to visual issues is Part B, Goal 3, Objective 3.2, Strategic Action 3.2.2.

3.2.6 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.



LOCALITY SKETCH
(SCALE 1: 10 000)



drawing title:

Location &
Marina Context of
Proposed Helipad

location:	Trinity Point Marina
council:	LAKE MACQUARIE
dwg ref:	37429(4)-DA-001-G

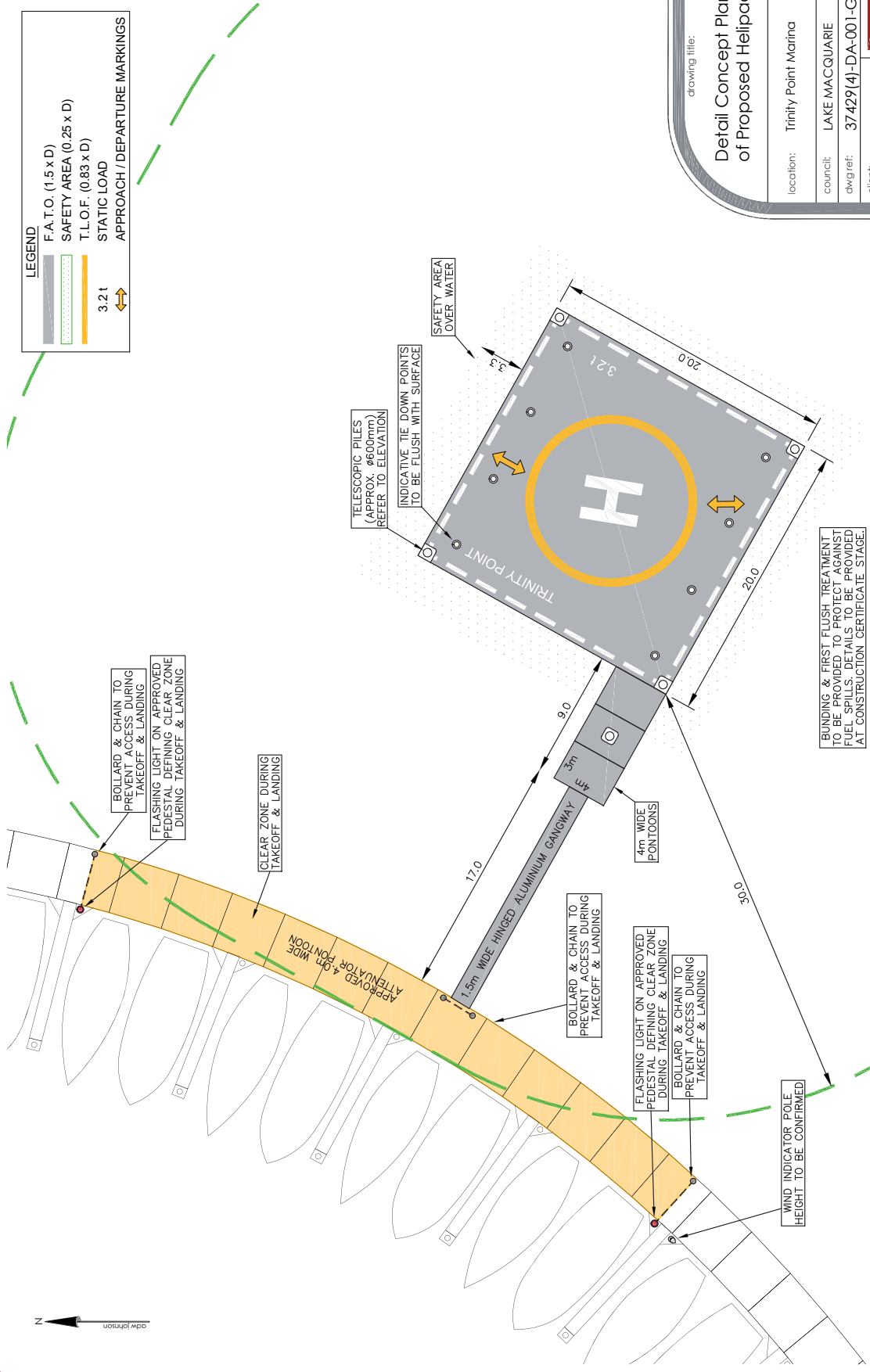


central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100

ver.	date	comment	surveyed	drawn	checked	pm	co-ordinate & level information	scale (A3 original size)	page
D	24.08.16	UPDATE HELIPAD DESIGN	-	Z.J.	M.D.	S.H.	CO-ORDINATE SYSTEM: M.G.A. 54		1 OF 3
E	25.08.16	UPDATE HELIPAD DESIGN	-	Z.J.	M.R.	S.H.	ORIGIN OF CO-ORDINATES: P.58712		
F	29.08.16	REVISE LAYOUT	-	Z.J.	M.R.	S.H.	DATUM: N/A		
G	12.09.16	UPDATE CARDINAL MARKER LOCATION	-	Z.J.	M.R.	S.H.	ORIGIN OF LEVELS: N/A CONTOUR INTERVAL: N/A		

37429(4)-DA-001-G

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LEGEND	
	F.A.T.O. (1.5 x D)
	SAFETY AREA (0.25 x D)
	T.L.O.F. (0.83 x D)
	STATIC LOAD 3.2t
	APPROACH / DEPARTURE MARKINGS

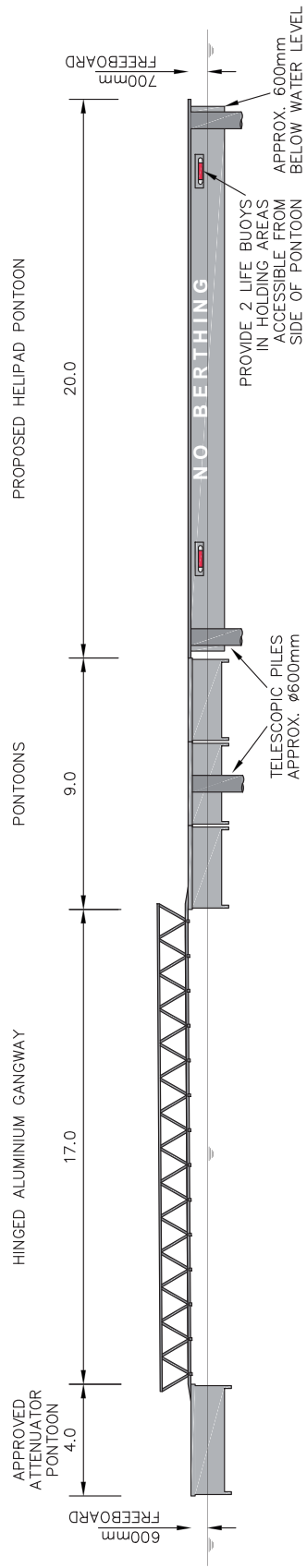
drawing title:
**Detail Concept Plan
of Proposed Helipad**

location:	Trinity Point Marina
council:	LAKE MACQUARIE
dwg ref:	37429(4)-DA-001-G
client:	JOHNSON PROPERTY GROUP
central coast office ph: (02) 4305 4300	
hunter office ph: (02) 4978 5100	

ver.	date	comment	surveyed	drawn	checked	pm	co-ordinate & level information	scale (A3 original size)	page
D	24.08.16	UPDATE HELIPAD DESIGN	-	Z.J.	M.D.	S.H.	CO-ORDINATE SYSTEM: M.G.A. 56		2 OF 3
E	25.08.16	UPDATE HELIPAD DESIGN	-	Z.J.	M.R.	S.H.	ORIGIN OF CO-ORDINATES: P.M.58712		
F	29.08.16	REVISE LAYOUT	-	Z.J.	M.R.	S.H.	DATUM: N/A		
G	12.09.16	UPDATE CARDINAL MARKER LOCATION	-	Z.J.	M.R.	S.H.	ORIGIN OF LEVELS: N/A		
							CONTOUR INTERVAL: N/A		
							Date of Surv		

BUNDLING & FIRST FLUSH TREATMENT
TO BE PROVIDED TO PROTECT AGAINST
FUEL SPILLS. DETAILS TO BE PROVIDED
AT CONSTRUCTION CERTIFICATE STAGE.

Application Drawings 2 of 3 Details in plan



drawing title:
Typical Concept
Elevation of
Proposed Helipad

location: Trinity Point Marina
council: LAKE MACQUARIE
dwg ref: 37429(4)-DA-001-G
client:

JOHNSON PROPERTY GROUP
central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100

JOHNSON
central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100

ver.	date	comment	surveyed	drawn	checked	pm	co-ordinate & level information			scale (A3 original size)	page
D	24.08.16	UPDATE HELIPAD DESIGN	-	Z.J.	M.D.	S.H.	CO-ORDINATE SYSTEM:	M.G.A. 56		 0 5.0 10.0m SCALE: 1:200 (FULL)	3 OF 3
E	23.08.16	UPDATE HELIPAD DESIGN	-	Z.J.	M.R.	S.H.	ORIGIN OF CO-ORDINATES:	P.M.58712			
F	29.08.16	REVISE LAYOUT	-	Z.J.	M.R.	S.H.	DATUM:	N/A			
G	12.09.16	UPDATE CARDINAL MARKER LOCATION	-	Z.J.	M.R.	S.H.	ORIGIN OF LEVELS:	N/A			
							CONTOUR INTERVAL:	N/A			Date of Rev.



3.2.7 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.

4.0 ASSESSMENT

4.1 View Analysis

4.1.1 Viewing Locations and Viewing Situations

There has been no change to the visual catchment subsequent to the RLA 2014 report. The documentation of the visual catchment and of views from the 20 viewing places analysed in the report has not been repeated in this report. That report reviewed the findings of earlier reports in this regard.

For reasons outlined with regard to visual exposure above in Section 3.1, it was considered that there was no need to further analyse the likely visibility of the proposal from viewing locations and situations. The coverage provide in the RLA 2014 report with regard to visibility of the approved marina is considered adequate to assess the likely visual effects and impacts of the proposed helipad.

4.2 Visual Effects Analysis

4.2.1 Base-Line Factors

The landscape setting of the development site has been reviewed in the RLA 2014 report against baseline factors. A table summarising the findings in relation to the helipad application is below (Table 4.1).

Table 4.1: Baseline Criterial for Visual Impact Assessment

Criteria	Helipad Application
Regional and Local Visual Context	No significant changes have occurred since DA Approval of the marina
Landscape Setting Unit (LMSMG criterion)	No change has occurred in the landscape setting unit, visual quality, or visual accessibility The Landscape Setting Unit is rated as of overall Low Visual Sensitivity
Visual Catchment	No changes have occurred since consent was granted to the marina The proposed helipad has effectively the same visual catchment
Visual Exposure	The proposal does not contain any structures that have a significantly different visual exposure than the approved marina Visual exposure of aircraft arriving and departing from the helipad would be to a wider catchment than the structure itself
Views into the site (Distant and medium distance classes)	The visibility and visual effects of the proposed helipad would not be significantly different from the approved marina Views from medium distances to the north west and north would be blocked by the approved marina The visual evidence of the structures would be less overall than the marina as there is a minimal vertical element The proposed structures would be of minimal visibility in medium and distant viewing classes Visual exposure of aircraft arriving and departing from the helipad would be evident to a wider catchment Aircraft on the helipad may be visible from medium distances where the pontoon is not significantly visible
Views into the site (Close distance classes)	There would be a minor but not a significant visual effect compared to the existing approved marina Close range views would be possible of aircraft arriving and departing from the helipad
Visual exposure to the Public Domain (land)	There would be a minor but not a significant visual effect compared to the existing approved marina Close range views would be possible of aircraft arriving and departing from the helipad
Visual exposure to the Private Domain (land other than adjacent development west of Trinity Point Drive)	There would be a minor but not a significant visual effect compared to the existing approved marina Views would be possible of aircraft arriving and departing from the helipad

4.2.2 Visual effects of variable factors

The assessment of visual effects of variable factors in the application is summarised below in Table 4.2.

Table 4.2: Visual Effects of Variable Factors

Visual effects	Helipad application
Effect on view composition	Minimal
Relative viewing level	Predominantly level with proposal
Viewing period	Varies with viewing situations but no different from findings in relation to the approved marina
Visual Distance	No significant change compared to the findings in relation to the approved marina
View loss or blocking effect	Lesser effect compared to the findings in relation to the approved marina, as a result of the minimal vertical dimension of the pontoon Aircraft on the pontoon, when present, would not lead to significant view blocking
Overall extent of visual effects	Low

4.2.2 Overall extent of visual effect

The overall extent of visual effects based on the assessment summarised in the RLA 2014 report in comparison to the effects of the proposed amended DA is presented in Table 4.3, below.

Table 4.3: Overall extent of visual effects

Viewing situation	Overall impacts Helipad application
Distant views (low sensitivity zone)	Negligible
Medium distance views (low sensitivity zone)	Low
Medium distance views (medium sensitivity zone)	Medium (Significantly lower compared to existing marina consent)
Close range views (high sensitivity zone)	Medium (Similar in extent to aspects of the existing marina consent)

4.3 Visual Impact Analysis

4.3.1 Physical Absorption Capacity

The physical absorption capacity for the proposal (its PAC) has primarily to be judged not against the existing site characteristics but in relation to the existing consents, including the adjacent approved marina and approved built form. The existing characteristics of the site have been agreed to satisfactorily absorb the visual effects of the existing consents for built development and the approved marina and therefore the relevant question is whether the helipad is capable of being satisfactorily absorbed into that future character context.

The structures proposed (gangway and pontoons, including the helipad pontoon) are similar in appearance to more extensive approved marina structures and in that regard are considered to benefit from the high PAC they provide. In many views, the structures would not be easily perceived in the

context of adjacent similar and more extensive structures. In addition, the location of the proposed helipad to the south east of the existing approved marina is such that it is physically absorbed by the marina in views from the north and north west, and also absorbed by existing approved development in views from off site in existing and approved future residential development to the west.

4.3.2 Visual Compatibility

4.3.2.1 Visual compatibility with urban and natural features

The proposal is of small scale and of minimal vertical dimensions. If considered in isolation, as a maritime feature associated with a site zoned for tourism, it is considered to be of moderate compatibility with the existing urban and natural features of the site.

4.3.2.2 Visual compatibility with approved and desired future character

The structures would be of high compatibility with other floating pontoons and gangways of the existing approved marina. The proposal would also be compatible with the approved built form on land, given the expressed objective for desired future character of creating a site of world-class tourism appeal. A helipad would not be incompatible with that objective.

4.3.3 Overall Extent of Visual Impact

The overall extent of visual impacts of the proposal is considered to be low, both considered in isolation and in relation to the impacts of the approved, adjacent marina. The highest level of impact would be moderate impacts on close range views from an isolated part of the foreshore and waterway and related, but not directly applicable impacts, of the view of aircraft arriving at and departing from the helipad.

Overall visual impacts are determined by application of the relevant weighting factors of PAC and Visual Compatibility to the overall extent of visual impacts (how much impact there is), to arrive at an assessment of the significance (importance) of the impact.

The overall effect of the weighting factors on the overall visual impacts and resulting assessment of significance of impact of the application is summarised in Table 4.4, below.

Table 4.4: Effect of weighting factors on overall visual impacts

Weighting factors	Helipad Application
Physical Absorption Capacity (Baseline: existing approvals)	Moderate Reduces significance of impact Low impact
Visual compatibility with urban and natural features	Moderate Neutral with regard to significance of impact Moderate impact, if considered in isolation
Visual compatibility with desired future character	High Reduces significance of impact Low visual impacts
Overall visual impact after applying weightings	Low



4.4 Analysis against relevant planning instruments and planning principles

The application was assessed in relation to impacts on sensitivity zones and the relevant planning instruments, policies and guidelines, as follows.

4.4.1 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 2030 Strategy which is considered in more detail below in 4.4.x. In that regard, the proposal is considered to comply with the objective of the plan.

Part 3 Clause 15 General controls for land within zones

The adjacent land based site is zoned 6(2) Tourism and Recreation Zone and 6(1) Open Space Public. The site of the helipad and approved marina to which it would be connected is zone 11, Lakes and Waterways (water). The SEARs for MP06_0309 MOD3 require the suitability of the proposal to be considered in relation to objectives of the 6(2) Tourism and Recreation zone in LMLEP 2004. Logically, as the site of the helipad is zoned 11, Lakes and Waterways (water), the objectives of zone 11 are also relevant.

Zone 6(2) Tourism and Recreation Zone

The relevant objectives of the 6(2) zone with regard to visual impact 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 for which there is Concept Approval that will transform the character of the adjacent area and which includes the approved marina. The design of the helipad is consistent with and compatible with the approved surrounding setting. The helipad is intended to respond to and complement the desired future urban and maritime setting reflected in the zoning.

There would be a high capacity for the approved environment to absorb the impacts of the proposal, which is of itself intended to encourage tourism. It is sensitivity designed to complement its location and its scale, colours and materials would tend to minimise any adverse visual impacts on the environment.

In our opinion, the proposal complies with the objectives of the zone with regard to visual impacts.



Zone 11, Lakes and Waterways (water)

The relevant objectives of the 11 zone with regard to visual impact are to:

- (a) recognise the importance of Lake Macquarie and its waterways as an environmental asset, not only to Lake Macquarie City, but to the Hunter and Central Coast Regions, and*
- (c) ensure development does not adversely affect the ecology, scenic values or navigability of the Lake or its waterways, and*

Comment:

The Concept Approval recognises the importance of the Lake Macquarie and its waterways and acknowledges that tourist development is consistent with these values. This assessment concluded that the proposed development does not adversely affect the scenic values of the site and the environmental assets of Lake Macquarie. We consider that the proposal is consistent in this regard with the relevant zone objectives.

4.4.2 Lake Macquarie Local Environmental Plan 2014

The site is zoned part SP3 Tourist, Part RE1 and part W1 Natural Waterways.

The objectives of the adjacent SP3 zone to which the helipad provides access with regard to visual impacts are:

- To provide for a variety of tourist oriented development and related uses.*
- To encourage tourism development that is sensitively designed to enhance and complement its location and which avoids unacceptable adverse impacts on the environment.*

Comment:

The existing Trinity Point approvals provide the context for tourism development as the desired future character of the site. The proposal has high capacity to support tourism, with a low visual impact of the facility and structures. This assessment found that the application is sensitive to the visual context and does not have unacceptable adverse impacts on the environment as regards visual impacts.

RE1 Public Recreation Zone

The objectives of the RE1 zone with regard to visual impacts are:

- To enable land to be used for public open space or recreational purposes.*
- To protect and enhance the natural environment for recreational purposes.*
- To facilitate the preservation of the environmental qualities of the land.*

Comment:

The application is considered to be consistent with the above objectives. It enables a use that does not significantly diminish features that protect and enhance the appreciation of the natural environment and its recreational values, while facilitating the preservation of the environmental qualities of the foreshore reserve and enhancing potential recreational use.



W1 Natural Waterways Zone

The objectives of the W1 zone that are relevant to visual impacts are:

To protect the ecological and scenic values of natural waterways.

Comment:

Whilst the proposed development has become prohibited under LMLEP 2014 (notwithstanding the proposal will be determined on the basis of the former LMLEP 2004 pursuant to transitional provisions), the following observations are made:

- The proposed development is not for a stand-alone helipad, but for a helipad directly related to providing access to the approved marina to which it would be attached, to the adjoining land based tourist facilities and to the overall recreational use of the Lake. The helipad is directly related to and ancillary to approved permissible development.
- The primary purpose of the helipad is to provide direct and improved access to the Trinity Point facilities.
- The helipad, whilst not listed as a permissible use, is consistent with the zone objectives of LMLEP 2013, in particular providing access to the recreational uses of the Lake.

The proposal is considered to protect the scenic values of the waterway to the extent that is reasonable given the tourism and recreational oriented development intended by the zoning of the adjoining land and the approved Trinity Point development. The overall scenic values of the waterway will not be significantly changed by approval of the proposal.

Part 5, Miscellaneous Provisions at clause 5.5 Development within the coastal zone provides Objective 1 (b) which is relevant to visual impacts, as follows:

To implement the principles in the NSW Coastal Policy and in particular to:

(ii) provide opportunities for pedestrian public access to and along the coastal foreshore, and

(v) protect amenity and scenic quality, and

(ix) 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 areas, and

(x) ensure that decisions in relation to new development consider the broader and cumulative impacts on the catchment

Comment:

A specific analysis of the proposal in relation to the NSW Coastal Policy, which includes attention to each of the sub-objectives above, is provided below in part XYZ.

Briefly however, the proposal does not have any significant impact on the opportunity for pedestrian access to and along the foreshore and protects the amenity and scenic quality of the foreshore, as well as providing potential for views through and over the development.



4.4.3 Lake Macquarie 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 proposed to be located in an existing and developing urban area intended to contain tourism and marina facilities. The proposal is considered to be of high compatibility with the marina and of low visual impacts. As a result, the proposal not detract from the urban and environmental setting. The helipad is considered to appropriately complement the emerging and intended character of the site as a tourism 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 compatible with the future context. The scenic values of the site are intended to be significantly changed by approved development.

The proposed development is considered to be compatible with the future context and also of low overall visibility and visual impact on the Lake and foreshore. It is considered that the proposal satisfies performance criterion P1.1 and P1.2.

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 permits and maintains views from public open spaces such as the foreshore reserve and has low impacts on views from the residential parts of the City. It would be a low structure with the same appearance independent of the state of the tide, most views to which would be screened or blocked by the marina and moored vessels. Where visible from the foreshore reserve, the structure would allow views to be retained above and beyond the helipad. The development would complement the emerging quality and character of the City as intended in the Trinity Point approvals.



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

Comment:

View from private dwellings would not be significantly affected by the structures associated with the proposed helipad.

4.4.4 Lake Macquarie Development Control Plan 2014

The overall objectives of the plan are to implement the LS 2030 Strategy, elaborate on the requirements of LEP 2014 and to provide detailed guidance to a range of stakeholders of Council's requirements for land development and to provide detailed guidance for assessment of development applications as required by s 79C (1)(a) of the EP&A Act.

DCP 2014 is divided into a number of parts based on landuse zones, of which Parts 6 (Development in recreation and tourist zones) is relevant. The controls for specific land use in Part 9 take precedence over general principles in Part 6 if there is a conflict.

Associated with DCP 2014 are guidelines to supply technical requirements for specific matters, of which the LMSMG are of specific relevance. An analysis of this report against the requirements of the LMSMG follows in section 5.5.6.

The aims for development in tourist zones include 2, 3 and 4 which are relevant to visual impacts:

- 2: To minimise adverse impacts from tourist developments;***
- 3: to promote innovative designs for tourism developments: and***
- 4: To promote Lake Macquarie as a tourism destination and to promote appropriate tourism related development and investment in the City.***

Comment:

The existing Concept Approval and approval of the marina shows that the site is suitable for the type of development proposed. This assessment concluded that the visual impacts of the application would be minor and that it would be of high compatibility with the approved marina as a result of the design and layout of the helipad. The structures proposed are minimal in that context and would not cause significant visual impacts. The application is of an innovative design to promote tourism development. In that regard, the proposed development is considered to be consistent with the aims of Part 6 of DCP 2014.

In Part 6 – Development in Recreation and Tourist Zones, 2.2 Scenic Values refers to the Landscape Settings and Significant Natural Landscape Features Maps, which identify Landscape Setting boundaries and the relevant Scenic Management Zone for each Landscape Setting. The maps are a guide to the scenic quality associated with lands within Lake Macquarie and are contained within the LMSMG (see response to the LMSMG below in part 4.5.3).

The objectives in relation to 2.2 Scenic Values are:

- a. To ensure that the scenic values of the City are protected and enhanced.***
- b. To ensure that developments visible or adjoining the coastline, Lake Macquarie or ridgelines, maintain and enhance the scenic value of these features.***

Comment:

Controls are 1; whether a development requires a landscape and visual assessment prepared in accordance with section 7.3 of the LMSMG and 2; design guidelines. Table 1 in 2.2 shows that the proposed development requires a landscape and visual assessment, as set out in this report. Control 2 is only partly relevant, as it predominantly concerns built form design and landscaping. Subject to appropriate colours and materials that are compatible with the natural context that are non-reflective, the proposal would clearly comply with the design guidelines.

4.4.5 Lake Macquarie City Council Scenic Management Guidelines

A specific requirement of LMDCP is consideration of the requirements of the LMSMG. The guidelines have been used to determine that the proposal requires a visual impact assessment (see Table 4.5 below), which summarises the response of this report in relation to the Table 1 and Table 5 or the guidelines.

Table 4.5: Analysis of the application against the LMSMG

Key Issue	Included in assessment/ comments
Identify the landscape setting unit	Yes The site is identified in the Scenic Management Zone Map and in Appendix A of the LMSMG as the Bardens Bay landscape setting, Scenic Management Zone 3
Is the site rated as a visually sensitive landscape?	Yes (Table 2) Site adjacent to a foreshore is automatically considered to be a sensitive location Viewing Level of 3 for the landscape setting unit indicates a low level of public access to the views
Is the site of high or moderate visibility?	Yes (Table 2) All foreshore sites are rated as of high visibility, however the level of public access to views is Level 3 (low)
Is the site identified as a specific Scenic Management Zone?	Yes Specific recommendations for the Scenic Management Zone are considered
Is a Landscape Visual Assessment required?	Yes This report specifically addresses the requirements of the LMSMG as well as other relevant guidelines
Is the development proposed assessed against the relevant Scenic Management Zone	Yes The development is specifically assessed in relation to the Scenic Management Zone for Bardens Bay and Appendix B of the guidelines

Comment:

The site is in the Landscape Setting Unit of Bardens Bay which is given a Moderate scenic quality rating and a Viewing Level (public accessibility) of 3, low.

Appendix B in the LMSMG provides Scenic Management Zone guidelines for the Scenic Management Zone of 3 (lake surround, moderate settlement) (Table 8). They identify the existing character of the shoreline as partially or almost totally affected by development, presence of vegetated backdrop ridges and areas of development among almost continuous areas of intervening vegetation. Desired future character is to have regard to key landscape elements. A balance is desired between built form and natural landscape.



Guidelines include minimising substantial alterations to natural ground level and dominance of structures along the foreshore, retaining ridgeline vegetation, screening of buildings and structures, minimising vegetation clearance within 20m of Mean High Water Mark, preserving and improving recreational reserves and keeping the height of buildings below existing ridgelines.

These general guidelines are considered to be satisfied in the proposed development, as it does not require any change to ground levels, has no effects on ridges or ridge top vegetation, does not require clearing of vegetation adjacent to the waterway and is not adjacent to a ridge.

We consider that the requirement to prepare an LVIA consistent with the requirements of the LMSMG are met by the assessment in this report.

4.4.6 Lifestyle 2030 Strategy

Direction 3: A well designed and liveable city

Specific relevant directions of the strategy with regard to visual issues are within Strategic Direction 3, A Well designed adaptable and liveable city, Outcomes 3.13, which states:

The scenic qualities of the Lake and its setting, such as foreshores, forested ridged, wooded ridges, riparian areas are promoted, protected and enhanced.

Comment:

The subject site is recognised as of moderate scenic quality and low visual accessibility in this assessment and in the LMSMG, leading to a higher capacity to protect and enhance its values through appropriate development, as is proposed. The application protects the scenic qualities of the Lake and its setting, foreshore etc. and has no significant additional impacts than the approved marina. In our opinion, the application satisfies Outcome 3.13.

4.4.7 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:

These 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 application is made to a location with an existing Concept Approval and approved marina, those approvals having been made in the context of the above objectives and strategic actions.

The LMSMG to which this assessment has had regard has more specific guidelines as to appropriate



responses to the aesthetic qualities of the coastal zone than is provided by the general Goal 3. We also consider that the proposal 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 as they are not affected by the application.

4.4.8 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 application was determined not to be likely to cause unacceptable visual effects on the natural attributes of the coast and responds appropriately to the existing approved and intended future urban, cultural and recreational attributes of the locality as a tourism site. In that regard, the visual effects of the development are compatible with those attributes. In our view, the parts of this clause relevant to visual matters are satisfied in the application.

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

Comment:

The proposal would not have unacceptable impact on the visual amenity of the coast. The visual character of the immediate setting will be slightly altered, but this would not have an effect of degrading the overall visual amenity of the coast.

As stated above, the site is one identified in the LMSMG as of moderate scenic quality and of low visual accessibility and sensitivity. The development would have no significant negative effect on the visual resources of the coast generally or on the visual resources of Lake Macquarie, even if this consideration is confined to the southern basin of the Lake.

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 character of the built structures proposed is similar to that contemplated in the Concept Approval and in the approved marina. There would be minimal change to perception of the bulk, scale and size of development. The natural and cultural features of the shoreline and reserve are not negatively affected by the proposal, as it is proposed totally on water.



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 Concept Approval includes the marina, now approved. The proposed development is considered suitable in relation to the marina, as it is a logical ancillary use attached to and associated with it and its location. The proposal would be of high compatibility with the existing visual setting.

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 proposal would not cause significant loss of views, as set out above and the existing approved level of amenity of the foreshore would not be significantly changed.

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, 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. In addition, the proposal is of small scale in the context of adjacent approved developments and of low overall visibility.

We consider that the proposal would 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. However, we also note that approval of the application would facilitate improved tourism access to the site and the region, to the benefit of and improvement of the appreciation of the scenic qualities of the NSW coast.

4.4.9 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 of the application are for those with appropriate expertise to address.



To protect local character

Comment:

The guidelines promote diversity consistent with identity and enhancement of local cultural and natural values. The proposed development is compatible with the surrounding existing and approved land uses and the intended future visual character of the locality approved in the Concept Approval and the marina. The proposal would be consistent with the desired future character of the site and its surroundings as identified in Lake Macquarie Lifestyle 2030 Strategy.

To encourage new coastal settlements to be appropriately located

Comment:

These aspects of the guidelines in relation to the application are for those with appropriate town planning expertise to address.

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 amended development positively responds to the location, character of the site and the surrounding context. The structures proposed are minimal with regard to visual impacts and subject to appropriate colours and materials to further minimise impacts would be consistent with the vision statement.

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 would have minor and acceptable impacts on the amenity of public land, confined to views from the foreshore and nearby waterway.

The proposal is considered to be appropriate in location and has no negative impacts on the natural setting: it would be of appropriate materials consistent with and compatible with the adjacent approved marina. The proposal has no impacts on the approved accessible interface with the foreshore.

The development is of potentially high quality design and proposes to employ materials that are relevant to the coastal setting. Appropriate colours and finishes for materials would appropriately respond to the coastal context and assist in mitigation of impacts.

Guidelines for Appropriate Buildings

The guidelines 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:

These guidelines are of limited application. However if the helipad qualifies for consideration as a building, then it is considered that the proposal will have no significant effect on the local views and vistas from public places as a result of its minimal vertical dimension and low overall visibility. To that extent, it is considered to be consistent with these guidelines.

4.4.10 Relevant Planning Principles

The principles enunciated in the Land and Environment Court of NSW by Roseth SC in *Tenacity* and by Moore SC in *Rose Bay* were considered in relation to view loss from the private and public domains respectively.

Tenacity solely concerns view loss from the private domain. It is considered that in this instance the planning principle in *Tenacity* has no work to do, as there would be no discernible view loss from private residences caused by the proposal.

The planning principles in *Rose Bay Marina* have extended *Tenacity* to considering view loss from the public domain. For the sake of completeness RLA have reviewed this planning principle and summarised its guidelines below.

Moore SC sets out a process for assessing the acceptability of visual impacts of private developments on views from the public domain in the vicinity of the development. The process of determining whether a development is acceptable or not must account for reasonable development expectations as well as the enjoyment of members of the public, or outlooks from public places. The principle is divided into 2 Stages involved in assessment. The first is factual and the second analytical.



Stage 1

In this stage relevant baseline data is identified and is broken down into 5 key components;

1. Identification of Views

Nature and extent of any obstruction in the view.

Relevant compositional elements (eg static, dynamic and frequency if a view is dynamic).

What might not be in the view (eg compositional elements)

Is the change permanent or temporary?

What might be the curtilages of important elements within the view? (eg will an acceptable amount of space around such elements remain to allow the existing setting to be viewed and appreciated?)

2. Location of Views

The assessment should define locations within the public domain from which the potentially interrupted view is enjoyed.

3. Extent of Obstruction

A public domain view is one which can be enjoyed by all members of the whole population and therefore it is not appropriate to adopt a normative eye height from which views are to be assessed, as is the case in the Planning Principle developed in *Tenacity*.

4. Intensity of the public use

How well used are the public domain locations from which the view is currently enjoyed and therefore how many people (a few, a moderate number or many) will be affected by that or those views being obscured in whole or in part, by the proposed development.

5. Identified Views

The assessment must determine whether the importance of public domain views are identified in any document. This includes whether there is specific acknowledgement of the importance of a view eg heritage or whether the need for retention or protection of public domain views are recorded in any statutory document.

Stage 2

This involves the analysis of the baseline data, which will need to be weighted in some way in order to develop a quantitative and qualitative assessment.

Qualitative Assessment

This evaluation requires an assessment of aesthetic and other elements in the view, which despite being subjective must follow a defined process which outlines the factors taken into account and the weighting attached to them. As with *Tenacity* a high value (or weighting) is to be attached to what may be regarded as iconic views of major landmarks or weight determined by other factors such as the status of a statutory document and the terms in which an objective about views is expressed. A specific weighting framework is not provided.

Factors to be considered include;

- Is any significance attached to the view likely to be altered?
- Who has attributed the significance to the view and why?
- Would a change (ie the proposed development) make this view less desirable?
- Would a change alter whether the view is static or dynamic and is this positive or negative?
- If the view is a known attraction from a specific location, how will the view be impacted?

- Would a change render a view tokenistic?
- Has the existing view already been degraded such that the remaining view warrants preservation?

Quantitative Assessment

This requires an assessment of the extent of the present view, compositional elements within it and the extent to which the view will be obstructed by or changed by the insertion of the elements of the proposed development.

Relevant questions to answer include; Is the impacted view (which is created after the change) still sufficient for the public to understand the nature of and appreciate the attractive or significant elements which existed in the non-impacted view eg. the view that exists prior to the development? Moore notes that the greater the existing obstruction of a view, the more valuable that which remains may be.

Table 4.6: Analysis of RLA methodology against *Rose Bay* planning principles

Assessment Stages	Rose Bay planning principle themes	Present in RLA methodology
Stage 1		
Identification of Baseline Factors	Identification of View, its nature and scope, existing obstructions, compositional elements, longevity of change, view setting	Yes View Analysis and field assessment Analysis of visual resources, visual character and scenic quality
	Location of Views; where is the view available from	Yes Determination of viewing locations and situations
	Extent of obstruction or visual impacts in each view	Yes Analysis of effect on view composition, visual character, quality, PAC
	Intensity or frequency of exposure to the view	Yes View distance classes, effect of viewing period, sensitivity zones
	Views identified in any statutory documents	Yes Relevant instruments and policies are addressed
Stage 2		
Qualitative assessment	Changes to the significance of the view, what are the effects of change, do the impacts make the view less desirable or understandable	Yes Assessment of scenic quality, effects on sensitivity zones, compatibility
Quantitative assessment	Analysis of existing effects and those proposed, compositional changes, proportional change in the view compared to the remaining unobstructed view	Yes Assessment of compatibility, sensitivity, effect on composition, significance of residual visual impacts on desired future character

RLA note that our Visual Assessment Method as set out in the Flow Chart addresses the themes and issues discussed by Moore SC. We have tabulated the key attributes set out in *Rose Bay* and compared them to those addressed in this assessment using our own methodology. In this regard we consider that all the relevant themes have been addressed. Our assessment is that the proposal would not result in significant view loss to the public domain.

4.4.11 Summary of findings on relevant planning instruments and planning principles

Below at Table 4.7 is a summary of final weighted visual impacts in relation to the only sensitivity zones that could be affected (close and medium range views) and the findings of the analysis against relevant planning instruments and planning principles.

Table 4.7 Summary assessment in relation to planning instruments

Sensitivity zone	Findings in relation to Helipad application
High (Close range residential and immediate waterway)	Medium impacts on small, restricted area: No significant difference in nature of impacts compared to approved marina
Medium (Medium range on waterway and private domain on north eastern foreshore)	Low impacts, primarily caused by visibility of aircraft rather than helipad
Analysis against planning instruments	
Lake Macquarie LEP 2004	Satisfies the objectives for zone 6(2) and zone 11.
Lake Macquarie LEP 2014	Satisfies the objectives of the zones W1 and adjacent zones SP3 and RE1
Lake Macquarie DCP No.1	Satisfies the performance criteria for scenic values and views in the DCP
Lake Macquarie DCP 2014	Satisfies the aims for development in tourist zones. Satisfies objectives in Part 6 in relation to the Scenic Values Application supported by LVIA required in the LMSMG
Lake Macquarie Council Scenic Management Guidelines (LMSMG)	Complies with LMSMG requirement (see Table 4.6)
Lifestyle Strategy 2030	Existing marina consent complies with the strategy No significant increase in impacts caused by application
NSW Coastal Policy 1997	Existing marina consent complies with the Policy No significant increase in impacts caused by application
SEPP 71–Coastal Protection	Existing marina complies with the SEPP No significant increase in impacts caused by application
Coastal Design Guidelines of NSW 2003	Existing marina consent complies with the Guidelines No significant increase in impacts caused by application
Relevant planning principles (view loss): <i>Tenacity</i> <i>Rose Bay Marina</i>	Application would cause no significant or different view loss than the approved marina Application does not cause significant view loss

4.5 Assessment of proposed Mitigation Measures

4.5.1 Minimising vertical dimensions

The practical issues of air navigation and safety require there to be minimal vertical projections above the helipad pontoon and the adjacent part of the access. This necessitates the use of telescopic piles to support and stabilise the helipad and access pontoon, so no piles project above the surfaces. As a result, the vertical dimension of the proposed development is minimised: in effect, the height in elevation is no greater than the height of the immediately adjacent wave attenuating floating breakwater to the approved marina to which the proposal is to be attached.



4.5.2 Matching colours and materials with approved marina

To minimise any visual contrasts between the proposal and the existing approved marina, the materials and colours would be matched as closely as possible.

4.5.3 Location to minimise visibility

The location of the helipad, while determined for a combination of reasons, has the effect of minimising its visibility and maximising the distance away from existing residential development areas to the north and north east. The helipad would not be visible from residential areas to the west or north, as a result of blocking of the view by the approved marina or vessels in it. Air navigation aids painted on the surface of the helipad, while they would contrast with the existing marina pontoons in close view, are unlikely to be of significant visibility, as the viewing angle toward them from the shore is low and from the water, even lower.

4.5.4 Minimal lighting

No lighting is proposed other than warning lights shown prior to and during takeoff and landing of aircraft. Two red flashing lights would be visible from close range for a short period, primarily in the immediate vicinity of the access to the helipad only.

4.5.5 Summary on impact mitigation

The constraints of air safety and navigation are largely responsible for the location and form of the proposed structures. However, this results in a proposal that is of minimal vertical dimensions and overall low visibility. The outcome is a high level of impact mitigation for the helipad.



5.0 Conclusions

The application is of small scale and low overall visibility in the context of the existing Concept Approval and approved marina. The most evident visual effect of the use of the helipad would be arrival and departure of helicopter aircraft. For the majority of the time, there would be no evidence of this activity. The presence of the helipad would on occasions be marked by the visibility of an aircraft on it.

No significant changes have occurred in visual exposure of the marina since our report of 2014, subsequent to which the marina was approved. The proposal would not differ significantly in visual exposure and therefore the overall findings remain current. However, a full review of the visual exposure and effects of the proposed helipad is set out above.

The proposal is a natural addition to the marina that has been foreshadowed for some time and it shares many visual attributes with it. As a result, it was determined that the helipad would be of high compatibility with the marina. It would also benefit from the screening effect on views afforded by the future marina and its occupation by vessels of various sorts and sizes in views from a significant part of the visual catchment.

It is concluded that the on visual grounds the helipad application is worthy of support.

Richard Lamb and Associates

Appendix B: Assessment Methodology

B.1 Introduction

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. The methodology is also designed to be compatible with the LMSMG.

The flow chart at Figure B1 indicates the relationships among the parts of the visual impact assessment methodology.

B.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.

B.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 D. The assessment factors are explained in Section B2.2.2 and B2.2.3. 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 B2.2.

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 (see photomontages, Appendix A).

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.

B2.2.2 The components of the Visual Effect Analysis Matrix

B2.2.2.1 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.

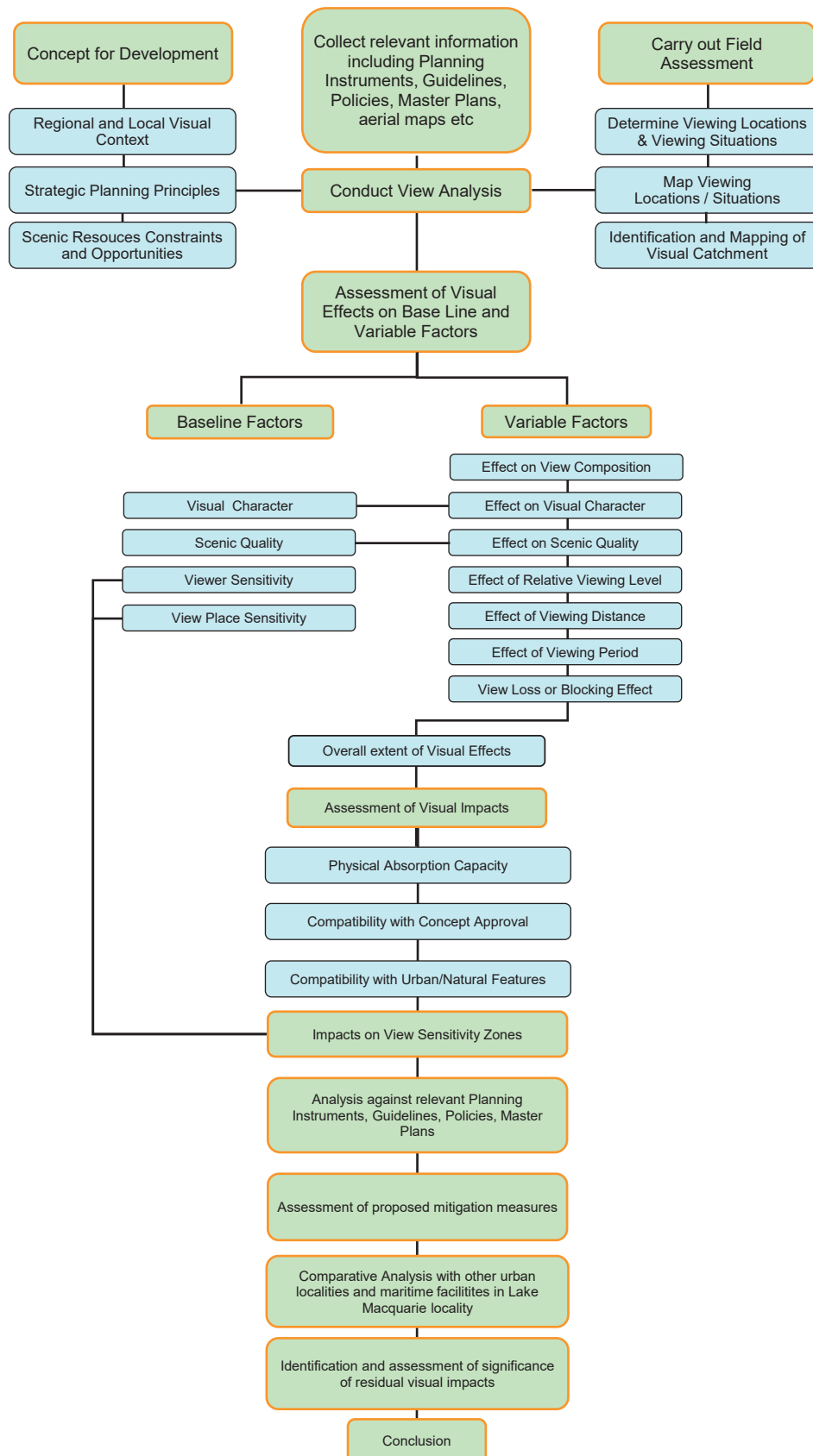


Figure B1: RLA Development Assessment Methodology Flow Chart



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 LMSMG.

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 LMSMG.

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 LMSMG.

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)

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 helipad.
Viewing period	Glimpse (eg moving vehicles or boats).	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).

Table B2.2 Indicative Ratings Table

Table B2.3: Relationship between viewing situation, viewing distance and view/viewer sensitivity zones

View Place or Viewer Sensitivity		L	M	H
P u b l i c Domain	Roads			
				X
P r i v a t e Domain				
		>1000m	1 0 0 - 1000m	<100m
	Viewing Distance			

B2.2.2.2 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 Consulting v Warringah [2004] NSWLEC 140 - Principles of view sharing: the impact on neighbours*. 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. View loss in the public domain specifically has been considered in relation to the planning principles in *Rose Bay Marina Pty Limited v Woollahra Municipal Council and anor. [2013] NSWLEC 1046*.

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.

B2.2.2.3 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.

B2.2.3 The Components of the Visual Impact Analysis

The criteria in 2.2 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.

B2.2.3.1 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).

B2.2.3.2 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 Concept Approval

This assessment is a measure of the extent to which the visual effects of the proposal are compatible with the existing Concept Approval. 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 that are approved exist in the application or the immediate surroundings.

Compatibility with the Concept Approval means that the proposal responds positively to or borrows from within the range of features of character, scale, form, colours, materials and overall qualities of tourism development sites of the surrounding area or of areas of the locality or region.

B2.2.3.3 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.

B2.2.4 Impacts on 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 and Table B2.1. 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 above in Section 4.5.

Assessment of the mitigation measures proposed to eliminate visual impacts

The mitigation measures that are proposed and approved in the Concept Approval are then assessed in terms of their capability to overcome the negative 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.

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 the approved or proposed form of urban development. 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.



APPENDIX B: CV Dr R Lamb

Summary

I am a professional consultant specialising in landscape heritage and visual impacts assessment and the principal of Richard Lamb and Associates (RLA). I was a senior lecturer in Architecture and Heritage Conservation in the Faculty of Architecture, Design and Planning at the University of Sydney for 28 years and Director of the Master of Heritage Conservation program. I have taught and specialised in environmental impact assessment and visual perception studies for 30 years.

As the principal of RLA I provide professional services, expert advice and landscape heritage and aesthetic assessments in many different contexts. I carry out strategic planning studies to protect and enhance scenic quality and heritage values, conduct scenic and aesthetic assessments in contexts from rural to urban, provide advice on view loss and view sharing and conduct landscape heritage studies. I act for various client groups on an independent basis, including local councils, government departments and private clients to whom I provide impartial advice. I provide expert advice, testimony and evidence to the Land and Environment Court of NSW and the Planning and Environment Court of Queensland in various classes of litigation. I have appeared in over 170 cases and made submissions to several Commissions of Inquiry. I have been the principal consultant for over 500 consultancies concerning the visual impacts and landscape heritage area of expertise during the last ten years.

At the University of Sydney I had the responsibility for teaching and research in my areas of expertise, which are visual perception and cognition, aesthetic assessment, landscape assessment and conservation of heritage items and places. I taught postgraduate students in these areas and also gave specialised elective courses in aesthetic heritage assessment. I supervise postgraduate research students undertaking PhD and Masters degree academic research in the area of heritage conservation and Environment Behaviour Studies (EBS). The latter field is based around empirical research into human aspects of the built environment, in particular, in my area of expertise, aspects of visual perception, landscape preference and environmental cognition.

I have a number of academic research publications in local and international journals that publish research in EBS, environmental psychology and cultural heritage management. I have developed my own methods for landscape heritage assessment, based on my education, knowledge from research and practical experience.

Qualifications

- Bachelor of Science, First Class Honours, University of New England (Botany and ecology double major).
- Doctor of Philosophy, University of New England in 1975.
- Principal of Richard Lamb and Associates and Director of Lambcon Associates Pty Ltd.

Employment History

- Tutor, Botany and Ecology, School of Botany, UNE (1968-1974)
- Lecturer in Resource Management, School of Life Sciences, UTS (1975-1980)
- Lecturer, Foundation Program in Landscape Architecture, Faculty of Architecture, University of Sydney (1980-1989)
- Lecturer and Senior Lecturer, Architecture and Heritage Conservation, University of Sydney (1989-2011)

Since 1975 I pursued research related to my teaching responsibilities and professional practice. My research works are in:

- Plant ecology
- Landscape heritage assessment
- Visual perception
- Social and aesthetic values of the natural and built environment

Publications and presentations relevant to visual perception and assessment of landscapes are listed at the end of this CV.

International Journals for which papers have been refereed

- Landscape & Urban Planning
- Journal of Architectural & Planning Research
- Architectural Science Review



- Journal of the Australian & New Zealand Association for Person Environment Studies
- Journal of Environmental Psychology
- Australasian Journal of Environmental Management
- Ecological Management & Restoration
- Urban Design Review International

Recent Experience : for full CV see website (www.richardlamb.com.au)

Heritage Impacts

Assessment and Advice

Private Clients

- Advice and advocacy concerning heritage view impacts, proposed maritime facility, Toocooya Road, Hunters Hill
- Advice and advocacy with Willoughby Council on visual impacts and amenity effects of development controls on new dwelling proposal in heritage conservation area, Northbridge.
- Advice and analysis of visual and landscape heritage impacts of approved development in Parramatta including referral to Federal Minister for DSEWPaC under provisions of the EPBC Act.
- Advice concerning heritage and visual impacts of proposed additions to the SCEGGS School., Darlinghurst
- Advice concerning heritage and visual impacts of proposed demolition and redevelopment of Willeroon, Ocean Road, Palm Beach.
- Advice on heritage and visual impacts, potential rezoning and development applications, Medlow Bath, Blue Mountains NSW.
- Advice on heritage values, scenic qualities and landscape heritage resources, pre-DA for additions and alterations to heritage streetscape and stone walls, Bronte.
- Advice on heritage, visual and impacts of proposed development application, Currawong Beach, Pittwater.
- Advice on streetscape and character of conservation area for a property on Schedule 2, of Parramatta Council Heritage LEP, Railway Parade, Granville.
- Advice on visual and heritage conservation constraints, development application, Bishops court, Darling Point.
- Advice regarding visual and related heritage impacts of proposed development, St Marys Church, Waverley.
- Advice, advocacy and evidence to Land and Environment Court of NSW concerning potential visual impacts of additions and alterations to two heritage listed dwellings, Victoria Street, Watsons Bay.
- Assessment of heritage and related scenic issues for strategic planning study, CUB site, Broadway, Sydney.
- Assessment of heritage impacts of proposed retrospective approval of adjoining development, Loch Lomond Crescent, Burraneer Bay.
- Assessment of heritage impacts of proposed terrace style infill housing and advocacy with City of Sydney Council, Wilson Street, Newtown.
- Assessment of heritage impacts on specific groups of trees and views caused by proposed redesign of Killara Golf Course. Statement of heritage impact of proposed safety screens on adjacent heritage items.
- Assessment of heritage significance of item proposed to be listed on the ACT Heritage Register; St Patrick's Church, Braddon, ACT
- Assessment of potential impacts on heritage views of proposed development, area of National Significance, Tramway Lane, Rosehill.
- Assessment of visual and heritage aspects of development application, conversion of The Boiler House building, Pyrmont Point.



- Assessment, analysis and report to the Federal Minister for the Environment in response to Emergency Listing of Kurnell Peninsula under the Environment Protection and Biodiversity Conservation Act 1999.
- Design stage advice and visual and landscape heritage impact assessment of a proposed seniors living development, SHT listed property, 'Neerim Park', Centennial Road, Bowral.
- Development Control Plan, South West Lochinvar.
- Heritage and visual impact analysis for proposed new residential development, SHR item "Swifts", Darling Point.
- Heritage assessment and Statement of Cultural Significance for Anzac Parade, Sydney.
- Heritage curtilage, cultural landscape assessment and visual controls recommendations, Elderslie Urban Release Area, Camden LGA.
- Heritage Impact Assessment of proposed adjacent new dwelling on heritage registered item "Camelot", 3 The Basion, Griffin Estate, Castlecrag.
- Heritage impact assessment of proposed amendment to permissible uses table in the Wingecarribee LEP, Berrima.
- Heritage impact assessment, curtilage, review of SHR entry and proposal of new landscape conservation area, The Glebe Gully Cemetery, East Maitland.
- Heritage impacts assessment for proposed employment lands rezoning, Menangle, NSW.
- Heritage landscape and streetscape assessment as part of pre-DA study, Easterly, Upper Spit Road, Mosman.
- Heritage view analysis and mitigation strategy for the proposed "Wet n Wild" Water Theme Park, Reservoir Road, Prospect.
- Heritage view line study and pre-DA report, proposed residential development, Morton Street, Parramatta.
- Heritage view study, proposed rezoning for residential use, curtilage of Menangle village including several SHI registered items, Menangle Village.
- Heritage, scenic qualities and landscape impact assessment, proposed residential development, Potts Point.
- Landscape assessment, curtilage study and heritage impact assessment as part of a Local Environmental Study, curtilage of St Helena, Lochinvar, Hunter Valley.
- Landscape heritage impact assessment, proposed aged care development, McLaren Street, North Sydney.
- Local & regional visual assessment study to accompany rezoning and subdivision proposal, Mount Harris, Hunter Valley.
- Pre DA advice re heritage impacts of proposed additions and alterations to heritage homestead Kurrawong, Dunmore.
- Review of documentation concerning heritage landscape and visual issues, St Columba's Springwood.
- Scenic quality and landscape heritage assessment, rural subdivision proposal, Duckenfield, Hunter Valley.
- Statement of heritage impact : proposed development in the vicinity of "Alma's Tree", North Narrabeen.
- Statement of Heritage Impact and Heritage Discovery Plan, proposed dual occupancy dwellings on two lots approved by Land and Environment Court of New South Wales, Birrell Street, Tamarama.
- Statement of heritage impact of proposed additions and alterations, The Corso, Manly.
- Statement of heritage impact of proposed additions and alterations, Military Road, Mosman.
- Statement of heritage impact of proposed development on heritage listed stone wall, Burns Bay Road, Lane Cove.
- Statement of heritage impact on significant gardens, proposed building extensions, PLC Croydon.
- Statement of visual and heritage impact as part of Statement of Environmental Effects, proposed conservation of Ashton, Elizabeth Bay Road, Elizabeth Bay and construction of new apartment building.
- Submission to Kiama Council on potential heritage impacts of a potential alternative dwelling footprint adjacent to two SHI registered items, Jamberoo Road, Jamberoo
- Submission to Minister for Planning regarding potential visual impacts, proposed alterations to White Bay Cement Terminal.
- Submission to the Minister for DSEWPac including assessment of the potential heritage impacts of the Shine Dome



(National Heritage List) of the proposed Nishi Building, New Acton, ACT.

- Visual and cultural landscape assessment, constraints and strategic planning study, potential urban release area, Raby Road, Leppington.
- Visual and cultural landscape assessment, constraints and strategic planning advice, potential seniors living development, Kiama.
- Visual impact, visual constraints and landscape heritage study, proposed residential development, Morpeth, Hunter Valley.

Government Clients

- *Blue Mountains City Council*

Advice on visual and heritage impacts of development application, SHI listed item Everglades, Everglades Avenue, Leura.

Advice on visual impacts of building materials and colours, heritage precinct, Lawson.

Advice on merits of development application with respect to heritage significance, Scenic Railway site, Katoomba.

- *Camden Council*

Cultural landscape and assessment of heritage significance of William Howe, Reserve, Camden, Heritage Assistance Grant Program.

Scenic and cultural landscape advice re proposed subdivision, Kirkham Lane, Camden.

Scenic and Cultural Landscape Study of the entire municipality, including specific input into the Rural Lands and Town Centre Urban Design Studies.

- *Department of Planning and Infrastructure:*

Advice on impacts on views and heritage values of Lennox Bridge and Old Government House and Domain of proposed additional height to approved mixed use building, 330 Church Street, Parramatta.

- *Department of Urban Affairs and Planning*

Scenic Quality Study of the Hawkesbury-Nepean River as part of review of State Regional Environmental Plan No. 20.

Landscape, heritage values and strategic planning study of Hoxton Park Corridor, Western Sydney.

Visual, heritage and cultural landscape boundary location investigations, Hoxton Park Corridor, Western Sydney Regional Parklands.

Cultural and recreational landscape values study, recommendations for form and location of expansion of Waste Services New South Wales facilities, Eastern Creek, Western Sydney.

Cultural and scenic landscape assessment of excluded lands parcels, Western Sydney Regional Parklands, Doonside.

Visual and heritage landscape assessment, Western Sydney Parklands, Core Parklands Precinct 2 and interface parcels 2, 3 and 4.

- *Hornsby Shire Council*

Heritage, scenic qualities and landscape heritage resources study of rural lands of the Shire as part of the Rural Lands Study.

Scenic resources study and strategic planning advice, Brooklyn and Environs Management Plan.

- *Lake Macquarie City Council*

Development assessment of visual and landscape heritage impacts, application for resort and high density housing, former coal preparation plant and other SHI registered heritage items Catherine Hill Bay.

- *Manly Council*

Advice on landscape heritage and visual impact issue concerning an appeal against refusal of development application, Manly Wharf, by Manly Wharf Pty Ltd.

Heritage impact assessment, residential development, Pine Street, Manly.

- *Mosman Council*

Heritage curtilage assessment as part of development assessment adjacent to SHI item, "Woolley House", Bullecourt Avenue, Mosman.

- *Pittwater Council*

Palm Beach Conservation Area: Heritage impact assessment on proposed redevelopment of Blueberry Ash Square and its impact on the Palm Beach Conservation Area.

- *Roads and Traffic Authority*

Heritage Impact Assessment of proposed tree maintenance, SHI registered item "Overthorpe", New South Head Road, Double Bay.

- *Wingecarribee Shire Council*

Visual and heritage landscape impact assessment, Burrawang, Southern Highlands.

Author of Development Control Plan No.53 for siting of dwellings in rural zones.

Land and Environment Court Proceedings

Altamira v Burwood Council: Demolition and SEPP5 development, Livingstone Street, Burwood.

Architectural Projects v Manly Council: Conservation and addition of apartments, 'Dungowan' South Steyne, Manly.

Australand Holdings Pty Ltd v Sutherland Council: Resort development, Captain Cook Drive, Cronulla.

Blue Mountains Council ats Cecil D Barker: Subdivision and new dwellings, curtilage of Stoneholme Estate, Woodford.

Cody Outdoor Advertising Pty Ltd v South Sydney Council: Retention of existing rooftop advertising sign, Oxford Street, Darlinghurst.

Dixon H v Wingecarribee Council: Proposed conversion of existing stable to manager's residence, Sutton Forest.

Dumaresq Shire Council ats Commercial and Residential Developments Pty Ltd: Proposed residential subdivision, curtilage of Palmerston Estate, Kellys Plains, Armidale.

Hobhouse K v Minister assisting Minister for Infrastructure & Planning and Sydney Gas Operations Pty Ltd: Proposed gas plant adjacent to heritage listed Mt Gilead Homestead, Campbelltown.

Hunters Hill Council ats Bykerk: Proposed additions and alterations to heritage listed property, Vernon Street, Hunters Hill.

Joshua International Pty Ltd v Ku ring gai Council: Proposed new residence, Rosebery Road, Killara.

Kanowie v Woollahra Council: Proposed residential apartment building adjacent to heritage properties, Yarranabbe Road, Darling Point.

L D Fowler Pty Ltd and anor. ats Flower and Samios: Proposed subdivision and construction of residential development, Jane Street, Balmain.

Leichhardt Council ats Bezzina Developments Pty Ltd: proposed demolition and alterations to SHI item Darling Street Wharf, Balmain.

Leichhardt Council ats Charteris: Proposed demolition and construction of new dwelling, Punch Street, Birchgrove.

Lend Lease Development Pty Ltd v Manly Council:
St Patrick's Estate, Manly

- Development precinct 2 (1998)
- Development precincts 1, 2, 3 and 5 (1997)
- Development precincts 5, 10 and 11 (1998)

Manly Council v Vescio: Proposed new dwelling in curtilage of heritage property, Pine Street, Manly.

Marie Antoinette Aviani v Burwood Council: SEPP5 development proposal, Livingstone Street, Burwood.

McClenehan J and T v North Sydney Council: Proposed SEPP5 development, Cremorne Road, Cremorne.

Commission of Inquiry into proposed Exeter Quarry extension and Village bypass route on SHR registered property, Vine Lodge: Concrete Quarries, Primary Submission, Southern Highlands, 2000.

Ricki Developments Pty Ltd v The City of Sydney: Proposed redevelopment, former warehouse building, Quay Street Haymarket.

Royal Botanic Gardens & Domain Trust and Minister for the Environment ats City of Sydney Council: Judicial Review of heritage and aesthetic impacts of replacement of trees in The Outer Domain, Sydney.

South Sydney Council ats Gameplan Sport and Leisure Pty Ltd: Proposed McDonalds restaurant, Anzac Parade, (the Old Grand Drive), Centennial Park, Sydney.

Sydney City Council ats Anglican Church: Proposed master plan for new apartments, curtilage of St John's Church, Darlinghurst.

Taralga Landscape Guardians Inc v Minister for Planning and RES Southern Cross Pty Ltd: appeal against Minister's approval of proposed wind farm, Taralga.

Toon, John v Ku ring gai Council: Proposed demolition of existing dwelling and SEPP5 residential development, Pentecost Avenue, Pymble.



V Berk and M Kersch v Woollahra Council: Proposed demolition and construction of mixed development, Gap Tavern site, Military Road, Watsons Bay.

Wilton v Hunters Hill Council: Proposed alterations and additions to heritage listed dwelling, Edgecliff Road, Woolwich.

Winten Property Group v Campbelltown Council: Proposed rural and residential development adjacent to Macquarie Field House, SHR item, Quarter Sessions Road, Glenfield.

Wollongong City Council v Weriton Finance: Proposed resort and dual occupancy development, Headlands Hotel site, Austinmer.

ACT Administrative Claims Tribunal

Catholic Archdiocese of Canberra and Goulburn v ACT Heritage Council: Appeal against decision to place St Patrick's Church, Braddon, on the ACT Heritage Register.

Landscape Planning

Assessment and Advice

Private Clients

- Advice on merits of proposal for SEPP HSPD development, Pokolbin.
- Advice on visual impacts of alternative building footprint locations, Foxground Road, Foxground.
- Advice on visual impacts of proposed residential development at Cambewarra.
Report on strategic planning issues related to Scenic Preservation hatching and Draft LEP specific to visual quality protection, Cambewarra Village.
- Advice on visual impacts of proposed subdivision and draft submission to Gosford Council, The Scenic Road, MacMasters Beach.
- Aesthetic assessment and evaluation of REF for proposed wind farm by Pacific Power and Partners, Crookwell.
- Assessment of visual impacts of proposed development and submission to Shoalhaven City Council, Bendeela Road, Kangaroo Valley.
- Heritage and visual impacts assessment as part of statement of environmental effects, proposed monastery at Mangrove Mountain, City of Gosford
- Independent assessment and advice concerning identification of viewing places and presentation of visual impact scenarios, Harrington Park Stage II, Camden.
- Initial advice concerning visual resources of site and potential to accommodate large scale institutional development, Campbelltown Road, Denham Court.
- Landscape assessment and evaluation of alternative building sites, Saddleback Mountain, Kiama.
- Landscape character analysis and visual assessment in relation to "Gateway" concept, The Northern Road, Glenmore Park.
- Landscape constraints and development capability assessment for potential residential development, Governors Way, Macquarie Links.
- Landscape planning strategy and visual impacts assessment, proposed cemetery and crematorium, Elizabeth Drive, Luddenham.
- Landscape visual constraints and capability assessment for potential for residential development, Shellharbour Road, Dunmore.
- Landscape visual constraints and capability assessment for potential residential development, Old Princes Highway, Dunmore.
- Landscape visual constraints and capability assessment of a land proposed to be rezoned for residential development, Cooby Road, Albion Park
- Landscape visual constraints and capability assessment of a parcel of land proposed for rezoning, Ashburton Drive, Albion Park
- Landscape visual constraints and capability assessment of parcels of land proposed for rezoning to residential use within the urban fringe area, Albion Park.



- Pre DA advice and statement of visual exposure, seniors living proposal, Cobbitty, Camden municipality.
- Pre DA advice on constraints and development envelopes, strategy and advice, Windang, Lake Illawarra.
- Pre-DA advice and visual impact assessment of proposed rezoning of rural land for potential residential development, Corner Kirkham Lane and Macquarie Grove Road, Kirkham.
- Pre-DA advice on design, visual and streetscape impacts assessment, proposed Islamic school, Burragorang and Cawdor Roads, Camden
- Pre-DA advice on visual impacts of proposed SEPP 5 development at Cambewarra.
- Report on visual impacts and effects on adjoining zones of a proposed subdivision, Glenhaven Road, Glenhaven.
- Pre DA advice and advocacy on proposed rural residential subdivision, The Northern Road, Glenmore Park.
- Statement of visual impact to accompany rezoning application, Old Northern Road, Castle Hill.
- Strategic planning advice concerning development potential, Fernhill, Mulgoa.
- Strategic planning and 3D modelling study to establish visibility constraints on zone boundaries, East Leppington Urban Release Area.
- Submission of feasibility study for re-zoning of land and subdivision for rural residential uses, Macquarie Grove Road, Kirkham.
- Submission to NSW Department of Planning against proposed extension of Catherine Hill Bay, Mooney Village and Gwandalan for residential development by Asquith & Dewitt Pty Ltd for Rosecorp Ltd.
- Visual and environmental impact assessment, proposed new dwelling, Dora Creek.
- Visual and heritage landscape assessment of impacts of proposed additions on the locality and Landscape Conservation Area, Benedictine Abbey, Jamberoo Pass.
- Visual and scenic impacts advice both pre- and post-DA, SEPP 5 Development, Old Northern Road, Castle Hill.
- Visual and scenic resources management study and visual impact assessment of a Concept Plan for Mixed Use Development, Tallawarra Lands, Tallawarra.
- Visual assessment and development strategy for proposed re-zoning of land partly for cemetery purposes, Varroville, Campbelltown.
- Visual assessment and development strategy for proposed re-zoning of land partly for residential purposes, Grange Hills, Campbelltown.
- Visual assessment and statement of environmental effects, proposed rezoning and subdivision, Cooranbong, Lake Macquarie.
- Visual assessment of proposed Town Centre land, Nambucca Drive, Scotts Head.
- Visual impact advice and report regarding location of dwellings on subdivided lots, Princes Highway, Kiama.
- Visual impact advice for proposed location of new dwelling, Weir Street, Kiama.
- Visual impact assessment and scenic amenity statement, proposed rural residential development, Dido Street, Kiama.
- Visual impact assessment for Jack Nicklaus Golf Resort, Rothbury, Hunter Valley
- Visual impact assessment for proposed Seniors Living Development, Pokolbin, Hunter Valley.
- Visual impact assessment of potentially unsightly landscape features vis-à-vis the Local Government Act definition in the vicinity of Vacy Downs Estate subdivision, Vacy.
- Visual impact assessment of proposed new dwelling, Pheasant Point Drive, Kiama.
- Visual impact assessment of proposed rezoning of land for urban residential use, Blue Seas Parade, Lennox Head.
- Visual impact assessment of proposed subdivision, Hillcrest Road, Mirrabooka, Lake Macquarie.
- Visual impact assessment, assessment against the provisions of Wingecarribee DCP 53 and advice concerning merits of proposed new dwelling location and design, Bibbys Lane, Werai Junction, Southern Highlands.
- Visual impact assessment, residential subdivision and development application, Scotts Head.



- Visual impact assessment, strategic planning analysis and peer review of proposed Forde Masterplan, Canberra.
- Visual impacts assessment of the proposed residential subdivision, Old Northern Road, Castle Hill.
- Visual resources and visual constraints study to accompany DA for establishment of new necropolis, Berrima district, Southern Highlands of NSW.
- Visual resources and visual constraints study, design advice and advocacy for potential DA, proposed resort and seniors living development, Glossodia.

Government Clients

- *Camden Council*
Camden Scenic and Cultural Landscape Study, Local Government Area of Camden.
Report on strategic planning for landscape protection based on the Camden Scenic and Cultural Landscape Study, for the Camden Rural Lands Study.
- *Dungog Council*
Assessment of visual and heritage impacts, scenic protection controls and heritage impact performance standards, proposed rezoning and rural residential development, Paterson, Upper Hunter Valley.
- *Shellharbour City Council*
Strategic planning study for identification, protection and conservation of landscapes of natural and cultural heritage significance, Shellharbour Local Government Area.
- *The Joint Old Growth Forest Project*
Empirical study to assess the feasibility of including cultural and aesthetic values in the evaluation of old growth forest.
- *The Resources and Conservation Council of New South Wales (RaCAC)*
Aesthetic values audit of the Upper North East region of NSW.

Expert workshop on integrating heritage values into the CRA/RFA process for evaluation of Australian forests.
- *Wingecarribee Shire Council*
Preparation of Development Control Plan No.53 for sighting of dwellings in rural zones.

Land and Environment Court Proceedings

Australian Native Landscapes v Warringah Council: s82A Review of conditions of consent, retail nursery, Mona Vale Road, Terrey Hills.

Baevski v Wingecarribee Shire Council: proposed covered dressage arena, Myra Vale Road, Robertson.

Baulkham Hills Council ats Gelle: proposed extension to existing caravan park, KoVeda Caravan Park, Wisemans Ferry.

Broken Bay Pty Ltd v The National Parks and Wildlife Service of NSW: valuation matter concerning acquisition of land, Hawke Head Road, Killcare.

CD Barker Pty Ltd for Eodo Pty Ltd v Council of the City of Blue Mountains: proposed subdivision and detached residential development, Heather Road, Winmalee.

Design Collaborative Pty Ltd v Wingecarribee Shire Council: proposed spring water extraction facility, Governors Street, Bundanoon.

Erolmore Park Pty Ltd v Maitland City Council: proposed industrial development, New England Highway, Thornton.

Flower and Samios v Shoalhaven Council: proposed Seniors Living Development, Main Road, Cambewarra.

Heathcote Gospel Trust v Sutherland City Council: proposed place of worship, Forum Drive, Heathcote.

Hornsby Shire Council

- *ats Haoushar*, proposed attached dual occupancy dwellings, Crosslands Road, Galston.
- *ats Momentum Architects*, proposed SEPP5 development, Old Northern Road, Kenthurst.
- *ats M&R Civil*, proposed SEPP5 development, Old Northern Road, Kenthurst.

Kiama Council ats Moss: proposed new residence in rural land, Alne Bank Road, Gerringong.

Liverpool City Council ats Kira Holdings Pty Ltd: proposed subdivision and low density residential development, Hoxton Park.



Luke Tappouras v Lake Macquarie City Council: proposed Heritage College, Ironbark Road, Morisset.

Marsim (Queensland) Pty Ltd and Gold Coast City Council ats Hoffman & Ors: proposed neo-traditional settlement development, Killowill Avenue, Paradise Point, Gold Coast.

Molusso J v Gosford Council: proposed apartment building, Grosvenor Road, Terrigal.

Penrith City Council

- *ats Pacific Waste Management Pty Ltd*, proposed waste facility, Elizabeth Drive, Badgery's Creek.
- *ats Penrith Waste Services Pty Ltd*, prosecution for alleged breaches of conditions of consent, Mulgoa Quarry.
- *ats Sydney Anglican Schools Corporation*, proposed rural school construction, Homestead Road, Orchard Hills.

Pope Shenouda Coptic Christian Centre v Campbelltown City Council: proposed redevelopment of religious and community facilities, Wills Road, Long Point.

RTA ats Scollard: valuation matter concerning compulsory acquisition of land, Olympic Way, Gerogery.

Sangha Holdings Pty Ltd v Kiama Council: proposed subdivision, Cooby Road, Albion Park.

Save Hawkesbury's Unique River Environment (SHURE) ats Consensus Developments: proposed tourist accommodation facility, Kangaroo Point, Brooklyn.

Seaview Gardens Pty Ltd v Port Stephens Shire Council: proposed medium density residential development, One Mile Close, Boat Harbour, Port Stephens.

Sherringham v Baulkham Hills Council: proposed retail nursery, Old Northern Road, Dural.

Sutherland Shire Council: primary submission to Commission of Inquiry into land use, Helensburgh.

The Coffs Harbour Environment Centre v the Minister for Planning: proposed rezoning of Look at Me Now Headland for the purpose of sewage treatment plant and outfall, Coffs Harbour.

The Jehovah's Witnesses Congregations v Penrith Council: proposed place of worship, Homestead Road, Orchard Hills.

Tony Fidler as Trustee for Howship Holdings v Port Stephens Shire Council: valuation matter concerning acquisition of land, Lily Hill, Nelson Bay.

Townsend W & D v Lake Macquarie City Council: proposed rural dwelling, Chelston Street, Warners Bay.

Warringah Council ats Vigor Master: proposed dwelling construction, Brooker Avenue, Beacon Hill

Wingecarribee Shire Council

- *ats Knox*, prosecution for illegal construction of earth bank, Range Road, Kangaloon.
- *ats Webb*, proposed rural dwelling, Silver Springs Hill, Burrawang.
- *ats Allen*, proposed rural dwelling Greenhills Road, Berrima.

Visual Impacts

Assessment and Advice

Private Clients

- Advices and visual impact assessment of a proposed aged care facility, McLaren Street, North Sydney.
- Advices and visual impact assessment of the proposed concept plan for a medium density residential development, Belmore Street, Ryde.
- Advices and visual impact assessment of the proposed new dwelling and swimming pool, Mountain Road, Austinmer.
- Advices and visual impact assessment of the proposed retirement resort, Oakey Creek Road and Marrowbone Road, Pokolbin.
- Advices on potential visual impacts of the proposed driveway and basement car park, Musgrave Street, Mosman.

Advice on potential visual impacts of proposed amendments to existing consent, Minamurra Road, Northbridge.



- Assessment and advice on visual effects of lighting from adjacent parking garage, Ocean Street, Woollahra
- Assessment of visual impacts of additions and alterations to existing retirement village, Jersey Road, Paddington.
- Assessment of visual impacts of proposed subdivision, Bantry Bay Road, Frenchs Forest.
- Landscape assessment, curtilage study and heritage impact assessment as part of a Local Environmental Study, curtilage of Duckenfield House, Duckenfield, Hunter Valley.
- Local environmental study, proposed subdivision and residential development, Berkeley Vale, Wyong Shire.
- Report on strategic planning issues and submission to Shoalhaven City Council related to Scenic Preservation hatching being proposed over the locality of Cambewarra Village, North Nowra.
- Scenic resources and visual constraints study, proposed seniors living proposal involving concurrent rezoning, Milton, South Coast.
- Strategic planning and visual impact assessment for proposed rezoning and master plan application, Riverlands Golf Course, Milperra.
- Strategic planning study for Stage 1 Master Plan, visual impact assessment for rezoning applications, principles for siting of buildings and mitigation of potential impacts, Boydtown, Eden region.
- Submission to Council against a proposed industrial development on Burley Road, Horsley Park on the visual amenity, Capitol Hill Drive, Mt Vernon.
- Submission to Council against a proposed industrial development on Burley Road, Horsley Park on the visual amenity, Greenway Place, Horsley Park.
- Submission to Waverley Council concerning visual impacts of proposed amended DA, Birrell Street, Tamarama.
- Urban design and visual impact study, Beach Street, Coogee.
- Urban design and visual impacts assessment, proposed Trinity Point Marina and tourism development Concept Plan, Lake Macquarie.
- Visual and landscape strategic planning assessment of proposed draft amendment to Wingecarribee LEP 1989, Burradoo, Moss Vale
- Visual constraints and residential development strategy advice, Lennox Head.
Advocacy concerning strategic planning process and proposed rezoning of land, Lennox Head.
- Visual impact and view loss assessment for proposed seniors living development, former Loreto site, Bronte Road, Bronte
- Visual impact assessment and advice on building height controls for Greystanes Estate, Southern Employment Land, Greystanes.
- Visual Impact Assessment and advices on rural subdivision, The Northern Road, Glenmore Park.
- Visual impact assessment and strategic planning for proposed rezoning and subdivision of land at Menangle Road, Menangle
- Visual impact assessment as part of the Review of Environmental Factors for Shellharbour Waste Water Treatment Works.
- Visual impact assessment for subdivision application, The Northern Road, Glenmore Park.
- Visual impact assessment of land proposed for rezoning to support a proposed clay target shooting facility, Bong Bong Road, Huntley.
- Visual impact assessment of new school house, Kingswood Road, Orchard Hills.
- Visual impact assessment of proposed amendments to existing consent, Tulloch Avenue, Concord
- Visual impact assessment of proposed residential development, Bray Street, Mosman.
- Visual impact assessment of proposed residential subdivision, mitigation measures and advice on conditions for site specific DCP, Scarborough Gardens, Bonnell's Bay
- Visual impact assessment of proposed seniors living development, St Albans Street, Abbotsford.
- Visual impact assessment of the proposed mixed use development, Columbia Precinct, Parramatta Road and Columbia Lane, Homebush.
- Visual impact assessment of the proposed residential townhouses development including preparation and certification of



photomontages, Johnston Street, Annandale.

- Visual Impact Assessment Part 3A Concept Plan application. Old Canterbury Road, Lewisham.
- Visual impact evaluation of a series of possible locations for dwelling sites, Menai.
- Visual impacts assessment of proposed residential developments, Thomas and Dumbarton Streets, McMahon's Point.

Government Clients

- *Ashfield City Council*

Ashfield Town Centre, Study of Building Heights to be incorporated into the Town Centre Development Control Plan. Review of DA for Abacus Ashfield Mall Redevelopment, against the performance standards of Building Heights Study.

- *Brisbane City Council*

Cultural Mapping exercise, for Quality Urban Corridors Program, Logan Road, Lutwyche/Gympie Roads, in association with Archimix Brisbane.

- *Brisbane City Council and the Department of Natural Resources, Queensland*

Protection of Scenic Landscapes Study; Regional landscape study to develop a methodology for the documentation of scenic values of the South East Region of Queensland.

South East Queensland Regional Organisation of Councils
advice on Scenic Amenity Study

- *Council of the City of Gosford*

City Wide Visual Quality Study in association with David Kettle Consulting Services.
Development Control Plan-Scenic Quality.
Local Environmental Study, The Scenic Highway, Terrigal.

- *Department of Infrastructure, Planning and Natural Resources and The Uniting Church of Australia*

Visual impact assessment for subdivision of land at Ingleside Road, Ingleside.

- *Hastings Shire Council*

Review and redrafting of DCPs 9 and 20 relating to scenic and heritage resource protection, Port Macquarie.
Visual resources and scenic conservation study as part of Camden Haven River Estuary Processes Study, in association with Patterson Britton and Partners.

- *Ku ring gai Council*

Brief development for municipality wide neighbourhood visual and streetscape study.
Local Environmental Study: scenic quality of South Turramurra.

- *Landcom*

Strategic planning advice and visual impact assessment for proposed NSW Police Facilities on former Sydney Water land, Potts Hill.

- *Manly Council*

advice on and provision of certified photomontages of proposed Major Projects developments in Manly Town Centre.

- *Pittwater Council*

Scenic qualities, landscape resources and visual constraints study, potential rezoning and land swap exercise, Council Works Depot site, Ingleside.

- *Sydney Water*

Review of visual environmental effects for Wongawilli Reservoir proposal, West Dapto, Illawarra.

- *Road Transit Authority*

Review of visual environmental effects for Oak Flats Highway Interchange proposal, Oak Flats to Dunmore section, Princes Highway, Illawarra.

- *Office of Marine Administration and Department of Environment and Planning*

Methodology for assessment of visual issues and design guidelines for the DCP to accompany SREP 22 and 23, Sydney and Middle Harbours and Parramatta River: and Part 5 checklist.

- *Rockdale City Council*

Development control strategy and advice for Draft DCP, Rocky Point Road, Ramsgate.

- *Singleton City Council*

Visual impact assessment of proposed temporary accommodation village, Putty Road, Singleton.

- *Shoalhaven City Council*

East Nowra Local Environmental Study.



Old Erowal Bay visual quality study.

Brief for Mollymook Local Environmental Study: Visual Impacts.

- Visual impacts assessment relating to land swap and rezoning proposals, Milton and Narrawallee.

- Sutherland Shire Council, jointly with Wollongong City Council.

Commission of Inquiry into rezoning, primary submission on visual impacts, Helensburgh.

- *Wingecarribee Shire Council*

Preparation of Development Control Plan No 53 for the siting of buildings in rural zones.

Publications

Refereed articles

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