

Objection to Stage 1 DA for SSD 7874 Redevelopment of the Harbourside Shopping Centre



Prepared on behalf of the Owners of Strata Plan 49249 Analysis of Visual Effects and Impacts on One Darling Harbour Prepared by Dr Richard Lamb, February 2017 Richard Lamb and Associates



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SSD 7874 Redevelopment of the Harbourside Shopping Centre

Submission on Visual Effects and Impacts

1.0 Background

Richard Lamb and Associates (RLA) have been engaged by the Owners Strata Plan 49249 (the owners) at One Darling Harbour also known as 50 Murray Street, Sydney to review, analyse and assess the potential visual effects and impacts of an application for the redevelopment of the Harbourside Shopping Centre in Darling Harbour as represented in the EIS for SSD 7874.

Richard Lamb and Associates (RLA) has extensive experience in visual impacts assessment over the last 20 years. The company specialises in landscape assessment, landscape heritage conservation, visual impacts assessment and strategic planning. I have 30 years' experience in strategic landscape planning and heritage conservation and have published extensively in local and international journals on perception, aesthetic assessment and landscape management and have extensive experience working on view analysis, view loss and view sharing, in which RLA specialise. The author of this submission is Dr Richard Lamb, Principal and Managing Director of RLA.

RLA have been involved in the preparation of Visual Analysis and Heritage View Studies in relation to many Major Project Applications, Urban design studies and planning proposals. In addition to this we very familiar with this area, having carried out visual analysis studies in and around The Rocks, parts of Sydney Harbour, Walsh Bay, Darling Island, White Bay and Pyrmont and other locations within the City of Sydney. A full CV for Dr Lamb can be found on our website www.richardlamb.com.au.

We are familiar with typical requirements for development within the City of Sydney and in Darling Harbour that relate to visual effects and impacts and planning principles established in the Land and Environment Court of New South Wales including those related to view loss in private and public domains in the judgements in "*Tenacity*" and "*Rose Bay*", respectively.

2.0 Purpose of Report

This submission provides an independent review of the methodology, content and conclusions made in the following documents accompanying the EIS:

- 1. Views and Visual Impacts Analysis Appendices Q: Visual and View Impact Analysis Report
- 2. Appendix A and B (the VIA) prepared by JBA Urban Planning Consultants
- 3. Appendix Q-C Parts 1 and 2 prepared by Virtual Ideas.



One specific concern has been to investigate the scope, comprehensiveness, accuracy and the veracity of the analyses and assessment provided in relation to visual effects and impacts on private domain views from One Darling Harbour. As part of our analysis we have undertaken an assessment of the potential visual effects and impacts of the proposed development on private domain pursuant to the planning principles in the judgment of Roseth SC of the Land and Environment Court of New South Wales in *Tenacity Consulting v Warringah* [2004] NSWLEC 140 - Principles of view sharing: the impact on neighbours (Tenacity).

Our submission was also assisted by analysis of block model photomontages prepared independently by Digital Line, architectural illustrators and photomontage artists, in February 2016. This part of our assessment takes into account the visibility, visual exposure, and visual effects on views that would be likely to occur in relation to construction of built form within the Stage 1 DA building envelope as shown in the EIS, on views from One Darling Harbour.

Our submission also considers the visual effects and impacts on public domain views and the existing visual setting, desired future character, regulatory and heritage context of the subject site and impacts on views in public domain. In undertaking that assessment in relation to view loss, we have had regard to the planning principle in the judgement of Moore SC of the Land and Environment Court of New South Wales in *Rose Bay Marina Pty Limited v Woollahra Municipal Council and anor.* [2013] NSWLEC 1046.

Documents reviewed include those listed below;

- Secretary General Assessments Requirements (SEARS) 30th August 2016
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP)
- SEPP 2011 (State and Regional Development) which refers to Darling Harbour precinct as a State Significant Site
- Darling Harbour Development Plan No.1
- City of Sydney LEP and DCP 2012
- Harbourside Stage 1 DA Architectural Design Report and Drawings Prepared by FJMT studio
- Harbourside Urban Design Review prepared by Architectus



3.0 Proposed Development

The site subject of the application is located on the west side of Darling Harbour which forms part of the Darling Harbour Precinct in the City of Sydney Local Government Area (LGA). and is determined as being of State Significance in SEPP 2011, State and Regional Development.

The application is for a Stage 1 DA including approval of a building envelope that covers approximately 2.05 hectares, located approximately between Pyrmont Bridge to the north and to the ICC Sydney Hotel currently under construction adjacent to it to the south.

The Darling Harbour precinct accommodates mixed use and residential developments, recreation, tourism, entertainment and retail uses. Parts of the precinct to the south and along the eastern side of the Darling Harbour are undergoing significant redevelopment eg. The Sydney International Convention Exhibition and Entertainment Precinct (SICEEP) and redevelopment of the IMAX theatre.

The proposed development includes a Staged DA for land uses, gross floor area, building envelopes, public domain areas, pedestrian and vehicle access and circulation arrangements, and associated car parking. Future separate DAs will be lodged for the detailed design and construction of the development. The Stage 1 application is for the approval of a building envelope that will allow for a podium of up to five storeys and tower up to 38 residential storeys in height. However, the proposed levels in the podium are such that in reality the podium reaches a level equivalent to approximately nine residential levels in height, rather than five, with significant and unacceptable impacts on views.



4.0 Regulatory framework relevant to visual impacts

Requirements of the applicant in relation to an assessment of public and private domain views is included in the SEARs dated 30th August 2016. I have reviewed the SEARs and note that section 2 refers to Visual and View Impacts as follows;

The EIS shall provide a detailed visual and view impact analysis, which considers the impact of the proposal when viewed from the public domain and key vantage points surrounding the site, including Pyrmont, Darling Harbour, Pyrmont Bridge and adjacent buildings.

Section 7 states in relation to Environmental and Residential Amenity that the EIS shall address"

View loss and view sharing impacts to surrounding areas including neighbouring properties and the public domain.

Whilst at first glance it appears that the documentation provides coverage of these issues, in our opinion the assessment, analysis and conclusions drawn as to potential visual impacts are inadequate and the impacts throughout are understated.

The VIA includes a review of statutory and non-statutory planning issues that relate to view loss and view sharing and concludes that in this context the consideration, maintenance and protection of private views is less important that public views. This is justified on the basis of a review of the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP), the City of Sydney DCP 2012 and the Darling Harbour site specific DCP1.

Having reviewed the same legislation and based on our specialist experience in relation to view loss and view sharing, RLA reach an alternative conclusion. In our opinion the highest level of regulatory protection as determined under the SREP does not provide any specific direction in relation to the relative importance or weighting to be given to private views, as opposed to public views. The other documents used as a basis for the VIA's conclusions and from which it draws comfort in suggesting that impacts on private views are unimportant, are either non-statutory guidelines eg. Sydney City Council DCP and Draft DCP amendments, or documents that have no status at all, eg. Central Sydney Planning Strategy.

Notwithstanding the applicant seeks to diminish the importance of the retention of private domain views, it is a requirement of the SEARS that private domain visual privacy, view loss and view sharing is examined. This requirement of the Department of Planning & Environment is that consideration of such issues is considered of critical importance for assessment of the impacts at a State level. Although there are no quantitative controls that apply to development in Darling Harbour at present, Section 79(C)1(a)(i) and 79(C)1(b), (c) and (e) of the EP&AAct remain relevant to assessment of the environmental impacts of the proposal, as there is a statutory plan (the SREP) in place.

Planning controls beginning with the statutory controls in the SREP are reviewed as follows;



4.1 SREP (Sydney Harbour Catchment) 2005

Part 1 of the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (the SREP) includes the overarching aims of the plan in Clause 2. These are general requirements in relation to any new development and they collectively present clear aims that relate to the importance and significance of foreshores, waterways and islands and their use by the public. This is demonstrated by the following aims relevant to visual impacts;

1(a) to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained:

(i) as an outstanding natural asset, and

(ii) as a public asset of national and heritage significance for existing and future generations,

2(a) Sydney Harbour is to be recognised as a public resource, owned by the public, to be protected for the public good,

(b) The public good has precedence over the private good whenever and whatever change is proposed for Sydney Harbour or its foreshores,

(c) Protection of the natural assets of Sydney Harbour has precedence over all other interests.

Sydney Harbour and its foreshores including Darling Harbour are therefore required be considered as an outstanding public asset of national and heritage significance. These aims are to ensure that the public retains existing views and when new development occurs and will be provided with additional visual access to Sydney Harbour and its foreshores, including its visual and heritage assets. These aims make clear the importance of the Harbour particularly as a public resource for the public good.

In relation to these aims, the VIA report states at Page 12 that;

Whilst the genesis of this principle is largely rooted in ensuring continuous and unobstructed foreshore access to the public, the principle of view corridors tied to access to the foreshore is primary as compared to the secondary issues of private views.

We disagree strongly with this interpretation of aims of the SREP, which neither mentions nor implies that public views take precedence over private views, nor that view corridors to the foreshore have precedence over views of or from the Harbour. In any event, as noted below, the proposal provides no new view corridors to the foreshore and privileges the private views from the proposed residential tower, contrary to its own statement above and to the aims of the SREP in Part 1, Clause 2.

The SREP includes many other references to views. In Part 2 Clause 14 Foreshore and Waterways Area it states that;

(d) development along the foreshore and waterways should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands and foreshores,

It is clear that the proximity of the tower to the foreshore, land-water interface, to Pymont Bridge and as an impediment to views from the bridge itself and its western approaches, does not protect and enhance the unique visual qualities of Sydney Harbour and its foreshore.



Specific references to the retention of views occur in points (a) and (b) Division 2, Clause 26, Maintenance, protection and enhancement of views, as follows;

(a) development should maintain, protect and enhance views (including night views) to and from Sydney Harbour.

(b) development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items,

No distinction is made between public or private views and therefore this objective applies equally to both provisions of Division 2. Thus, the views from both the public and private domains should be given equal weight. The proposal however privileges the views from the commercial podium and residential tower, the bulk and scale of which will cause view loss to the public domain and heritage items, contrary to the above provisions of Division 2 of the SREP.

Further, in relation to the above provisions of the planning principles in Division 2 of the SREP, the section of the podium that extends to the western site boundary will not only block private domain views from a substantial proportion of east-facing apartments in One Darling Harbour eg. central and northern parts of levels 1-5, but also block south-east views from the public domain as pedestrians approach and enter Pyrmont Bridge from the west.

In this vicinity, the majority of the podium is RL17.50 and within 2 to 3 metres of Pyrmont Bridge, the deck of which sits at the significantly lower level at approximately RL11.0. The proposed envelope would create a wall of built form immediately adjacent to Pyrmont Bridge, equivalent to two residential storeys in height above deck level. Notwithstanding the obvious intrusion into the visual setting of the heritage item, the proposed envelope would also block public domain views to the east and south-east of a section of Pyrmont Bridge approximately 60m in length, that includes areas of land-water interface in Cockle Bay and parts of the Sydney CBD skyline.

As the waters of Sydney Harbour are a heritage item in the terms of the SREP, this effect is contrary to the aims and the provisions of Division 2, Clause 26. The fact that the Harbour is a heritage item is ignored in the Heritage Impact Statement (HIS).

In relation to provision (b) above, we have reviewed information provided in the HIS prepared by Curio Projects September 2016. The HIS includes references to visual impacts of the proposed envelope in relation to Pyrmont Bridge and suggests that the tower is well placed "to have the least impact on existing views to Pyrmont Bridge" and adjacent properties and "with respect to the need to protect key views and vistas to and from the International Convention Centre (ICC) Hotel". We firstly note that the HIS is largely silent on the impacts of the podium on the heritage item and its setting. RLA are also unaware of any documented heritage importance placed on views to and from the yet to be completed commercial hotel (the ICC), which would justify an assessment of the heritage values of the view to it from Pymont Bridge. There are other heritage items, the views to which would be affected by the placement of the tower (ie the view to the Goldsborough Mort building in 243 Pyrmont Street and to and from the Harbour itself), that have not been considered.

Public ground view photomontage 14 in the VIA shows that the proposed envelope extends out to effectively a nil setback to Pyrmont Bridge and its pylons to an extent that is similar to the existing structures. We also note that the photomontage shows a white outline of the maximum extent of envelope proposed not all of which is filled with the rendered built form inside it, which is hypothetical, only). The lesser extent of the rendered form shown could be misinterpreted as showing the extent of development proposed and in this regard is misleading when used as a basis for analysis of the potential visual impacts on views to and from the heritage item.



The benefit to public domain views that is claimed in the VIA, ie the precedence of public good that is required by the SREP, is not born out in the VIA or design report. The SREP states in Part 2 Planning Principles, Clause 13 that;

(g) the number of publicly accessible vantage points for viewing Sydney Harbour should be increased

No additional public views, or view corridor access as required in (g) that will be become available as a result of construction of the proposed development have been identified by the applicant, other than a potential pedestrian link from Bunn Street. Given the depth of the envelope perpendicular to Bunn Street, a functional view corridor would need to be of significant width and kept free of built form, to provide the public benefit of a view of Sydney Harbour.

However, the proposed development envelope fills the entire footprint of the existing Harbourside Shopping Centre with no indication of a corridor to provide views from Bunn Street, other than a notional pedestrian connection. It is quite evident that additional potential public domain views will not be made available along the Darling Harbour foreshore area or through the proposed podium from public domain vantage points in the vicinity.

The form and height of the podium envelope, which far exceeds the existing low height form of the Harbourside Shopping Centre, will not allow for increased publicly accessible view corridors, unless these are through ground level separations between individual built forms. No articulation of the form of the podium in this way is proposed. Instead, it extends continuously for the entire footprint of the existing Harbourside Shopping Centere, the existing ridgeline of which is predominantly between RL 17.41m to RL 17.45, except for a central glazed curved roof feature at RL 27.26.

The proposed podium envelope includes a number of steps in height. The predominant heights ie. those that apply to the majority of the podium closest to One Darling Harbour, are at RL 25.50 south of the tower form and RL 30.50 and RL 23.80 immediately north of the tower form. The podium reduces in height towards the Pyrmont Bridge in series of narrow sections the predominant height of which is RL 17.50. Whilst this may provide a visual transition and a change to the interface with the heritage item, it does not provide a significant or appropriate opening up of views.

The height of the podium envelope increases via a stepped transition to the taller tower form eg. RL 25.5, RL 30.0 before rising significantly in height to RL 41.9 and RL 54.5. We note that the angled section of envelope at RL 54.50 is not considered in the applicant's documentation to form part of podium, notwithstanding it extends 21.52m to the south of the tower and will increase the potential view blocking for apartments located at the south end of the One Darling Harbour.

Part 2 Clause 13 of the SREP states;

(c) decisions with respect to the development of land are to take account of the cumulative environmental impact of development within the catchment,

Cumulative effects include visual effects and impacts that create escalating changes to the visual character of the site and wider context of Darling Harbour. The proposal, for a tall tower set far too close to the foreshore, projecting out of an over-scaled podium, would cause a cumulative impact on the built form principles, that are characteristic of Darling Harbour and the adjacent waterfronts to the north of Pyrmont Bridge, that would irrevocably and negatively change the character, scenic quality and ambience of the area.



The VIA relies on the Sydney City Council strategic policy to expand the CBD to the west side of Darling Harbour for the justification that the proposal satisfies desired character objectives. As the development of the area is not subject to the City of Sydney's controls and as the policy has no statutory force, there is little merit in the VIA's reliance on the strategy, while ignoring the overarching statutory force of the SREP.

In our opinion the cumulative visual effects of the size and scale of the podium and tower envelope proposed should be considered in relation to the cumulative visual effects of other either approved or proposed developments located in Darling Harbour. In that context, the application is premature and pre-emptive, as it would if approved effectively sterilise the potential planning of appropriate development on the western side of Darling Harbour south of Pyrmont Bridge. This issue has been addressed in greater detail in the submission of Mr Ingham for Ingham Planning.

The scale and height of proposed developments within the wider visual setting of Darling Harbour and Cockle Bay should be considered holistically in terms of potential impacts on visual access especially in the context of Harbour and its foreshores being considered as a "*public asset of national and heritage significance*" under Clause 2, 1(a)(ii) of the SREP.

Clause 13 of the SREP states:

(f) development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour

The proposed development as represented by the building envelope will not maintain, protect and enhance the unique visual qualities of Sydney Harbour. The envelope extends to within 9m of the water and to Pyrmont Bridge. Public domain views to and from the bridge in the vicinity of Darling Harbour and Cockle Bay will not be enhanced by the location of the podium or tower form.

The existing unique qualities of Sydney Harbour in Darling Harbour include the spatial qualities derived from setback of development from the foreshores, low height buildings as the first tier of structures behind the foreshores, which do not overpower the waterfront tourism resources, scenic quality and ambience of the waterfront and tall buildings set back behind. This typology is characteristic of Darling Harbour, Darling Island and the east side of Darling and Sydney Harbours north of Pyrmont Bridge. While it may have developed in recent times in a planning 'vacuum', it is a consistent feature of the character of the area which is also equitable with regard to view sharing between commercial and residential properties. In our opinion there is minimal, if any, justification for corrupting these principles as proposed, in the VIA.

Part 2, Planning Principles, of the SREP in Clause 15 states in relation to heritage conservation:

(a) Sydney Harbour and its islands and foreshores should be recognised and protected as places of exceptional heritage significance,

The VIA and HIS do not refer to Sydney Harbour, including Darling Harbour and Cockle Bay or foreshores, as being places of exceptional heritage significance. Neither document recognises the exceptional heritage significance of the waterway, nor ways that visual or physical access to the heritage values of the Harbour is enhanced or protected by the development proposed.

A planning principle concerning impacts on the aesthetic and landmark significance of a heritage item is in the judgement of Roseth SC and Brown, C in *Anglican Church Property Trust v Sydney City Council* [2003] NSWLEC 352 (Anglican Church). The principle, at Paragraph 34, is as follows:



34 How can impact on the aesthetic and landmark significance of a heritage item be assessed? When is the impact acceptable? It seems to us that four main principles apply to such an assessment:

• First, new development should not unreasonably reduce public views of the heritage item and its setting. This is because the pleasure people derive from a landmark heritage building is by viewing it. If one cannot see a landmark, it ceases to be one.

 \cdot Second, new development should not visually dominate the heritage building. A dominant new building, even when it does not obscure the heritage building, will render the experience of seeing the heritage building more complex and less delightful.

· Third, new development should not unreasonably overshadow the heritage building.

 \cdot Fourth, new development should relate to the character and form of the heritage item. This does not require imitating style or using the same materials. It requires only that new development should sit comfortably in a view that embraces both the old and the new.

This planning principle is relevant, as there are few specific controls in the SREP that relate to aesthetic impacts on heritage items and landmarks. This principle is supported in the judgment in *Bastas Architects v Willoughby Council [2008] NSWLEC 1360 (Bastas)* in the judgement of Hoffman, C, in Paragraph 11, as follows:

11 Even though the view loss might be small in an assessment under Tenacity v Warringah [2004] NSWLEC 140, the Council's statutes and DCP controls are so detailed they override Tenacity. The Court principles are only intended to be activated when a state or council statute and/or control are inadequate to deal with a particular dispute.

Darling Harbour is clearly in the category where the controls are minimal or inadequate to deal with the assessment of impacts on views of and from heritage items. The planning principle in Anglican Church is therefore the appropriate framework in which to assess impacts on the heritage item, Sydney Harbour and other items, including Pymont Bridge.

In our opinion, the four parts of the principle have not been addressed in the VIA or adequately considered in the HIA.

Further, Clause 15 states:

(d) the natural, scenic, environmental and cultural qualities of the Foreshores and Waterways Area should be protected,

Scenic and environmental qualities of the foreshores and waterways will not be protected by the proposed development. The building envelope and tower form will create a sense of visual enclosure, being located immediately adjacent and far too close to it. Both forms will create over-shadowing of the public promenade, parts of the harbour and across parts of Pyrmont Bridge (see submission by Mr Ingham). All of these impacts are contrary to the planning principle in *Anglican Church*.



4.2 Non-statutory development controls

The City of Sydney Development Control Plan (SDCP) includes objectives and provisions that relate to 'outlook', as distinct from 'views'. The VIA suggests that the objectives of the SDCP is to reduce the importance placed on the maintenance and retention of private domain views within the City of Sydney. The DCP does not apply to the application and should be given no significant weight in determining environmental impacts.

Notwithstanding, the DCP does not apply the proposal, the VIA takes comfort from part of it, in particular Section 4.2.3.10 of DCP 2012, which refers to outlook and views in relation to the impact of development on existing and future residential amenity, as follows:

(1) Provide a pleasant outlook, as distinct from views from all apartments.

(2) Views and outlooks from existing residential development should be considered in the site planning and massing of new development.

Note: Outlook is a short range prospect, such as building to building, while views are more extensive or long range to particular objects or geographical features."

In our opinion these provisions are irrelevant, as the only non-statutory development control plan that applies is the Darling Harbour Development Control Plan No.1 (the Darling Harbour DCP). There are no relevant planning objectives or policies relevant to view loss or sharing in the Darling Harbour DCP No.1. This document is predominantly concerned with the mix of new development proposed in the area, and its relationship to heritage items eg. the Corn Exchange building.

As a consequence, the non-statutory controls are not relevant to visual issues and instead the statutory instruments and planning principles of the Land and Environment Court of New South Wales should be applied, as there are no provisions to guide view loss and sharing in either the public or private domains.

As noted above, this principle is supported in the judgment in *Bastas in* Paragraph 11. The prevailing controls are minimal or inadequate to deal with the assessment of impacts on views, in particular, but not limited to, view in the private domain. Therefore, the assessment should be guided by the relevant planning principles of the Land and Environment Court of New South Wales, in this case *Tenacity*. In an analogous way, as the statutory framework of the SREP does not distinguish between impacts on public and private views, the planning principle in *Rose Bay*, which concerns view loss in the public domain, is the appropriate guide to the assessment of impacts on the public domain.

4.3 Central Sydney Planning Strategy

The VIA claims that the Central Sydney Planning Strategy (CSPS) has the objective of diminishing the importance placed on the value and protection of private domain views.

It states in section 2.3 at Page 9:

"that removing the relevance/importance of private views from within Central Sydney and surrounds is reflected in proposed amendments to Sydney LEP 2012 and Sydney DCP 2012."

The argument in the VIA that the importance of private domain views should be secondary to public views is based primarily on information included in this strategy and in draft changes to the SLEP and SDCP (neither of which apply to the site). The VIA quotes relevant parts of the CSPS below;



"As old buildings are replaced with new ones, views are subject to change. Given the constantly changing built environment of Central Sydney, regulating for maintenance of private views is overly restrictive and complex. Maintaining existing private views inhibits change and would render Central Sydney uncharacteristically static.

Central Sydney has a privileged position on a peninsula in a harbour surrounded by water and parklands, containing a large number of highly significant structures and buildings of a height that vastly exceeds its surroundings. This means that the large majority of available views are considered "iconic". This sets Central Sydney apart from other places; standard principles around views and the sharing of them are not applicable".

New development must be designed to make a positive contribution to the characteristics and composition of designated public views. These public views should be preserved and have priority over private views."

This strategic policy of the current City of Sydney Council, has no statutory force. In our opinion this strategic direction focusses more on the characteristics and composition of designated public views which should understandably be preserved and have priority over private views. If the strategy applied to Darling Harbour, it would concern views obtainable from public places such as the Sydney Harbour foreshore, Sydney Harbour itself, Pyrmont Bridge, parks, promenades etc. including those from existing public domain areas east of the Harbourside Shopping Centre.

These types of views should be preserved or where possible enhanced during the process of planning and redevelopment. The proposed development will indeed provide improved physical public domain areas on parts of the podium and promenade, however the development does not make a positive contribution to the composition of designated views. No designated public views are identified in relation to the site, therefore no designated views could be protected.

In this regard to we also point out, contrary the claims in the VIA that the strategy justifies the built form proposed, that the map in the strategy at Page 200, Section 3, Proposed Central Sydney Expansion (Figure 1), is the only map that includes the area and the strategy does not provide any controls that would apply to western Darling Harbour, or any designated views.

Furthermore, we do not agree that intent of the strategy is to have complete disregard for the sharing of established private views in the context of new development, or desired future character.

4.4 Private Domain Views

In our opinion the significance of potential visual impacts on commercial buildings such as the adjacent hotel developments is less than for residential apartments that include a permanent resident community, such as One Darling Harbour. Potential impacts on views from the private domain are long term, sustained views and in our opinion, of greater importance and should be given greater weigh in assessment of environmental impacts.

In addition, as noted above, potential visual effects and impacts on the composition of views from such locations should be assessed against the guidance provided in the planning principle in *Tenacity,* as the City of Sydney DCP does not apply to the site, which instead is covered by the Darling Harbour Development Plan No.1, which is silent on the issue of view loss and view sharing.

Section 4 of the VIA, which provides a visual impact analysis in relation to private views from key building including One Darling Harbour, is the most relevant to this submission. The VIA did not follow the planning principles for view sharing in *Tenacity*.



5.0 Review of VIA prepared by JBA

The VIA addresses potential view loss impacts of the proposed development in relation to views from the residential apartments located at One Darling Harbour.

The VIA is divided into 5 sections. Section 1 which includes a brief statement in relation to the methodology followed and justifies the selection of public and private viewing places to be assessed. The report discusses the planning context in Section 2.0 and visual analysis of parts of the visual context of the site in relation to impacts on the public domain in Section 3.0. The analysis of visual impacts in relation to private domain views at One Darling Harbour is in Section 4.0.

Section 4 identifies One Darling Harbour as a primary building given that it is in the vicinity of the site and includes private residential apartments. This is category that includes other buildings near the site that are hotels, eg. Ibis Hotel Darling Harbour, Novotel Sydney Darling Harbour and the ICC hotel (under construction).

The report also includes block-photo montages included in Appendix Q-C Parts 1 and 2 prepared by Virtual Ideas. The accuracy and adequacy of photomontages is reviewed in depth below in Section5.1.

We have made a comparative analysis of the findings of the VIA against our own methodology for visual impact assessment. Although different approaches to the assessment of visual impacts exists it is good professional practice to begin with an analysis of the existing visual context of the site and its surroundings to be able to establish "baseline" information. This forms the basis for a comparative analysis of the existing context and the proposed visual context. Baseline information typically includes an assessment of for example, existing view compositions and character, scenic quality including the identification of icons' or scenic items that may be highly valued eg. Sydney Harbour, the Sydney CBD skyline, Pyrmont Bridge and land-water interface views within Darling Harbour. The visual effects of the proposed development can then be considered in the context of that baseline data eg. the effect of the proposed building envelope on the composition or character of private domain views and the sharing or blocking of them.

Once the effects of a proposed development have been established, the potential impacts caused by the visual changes can be assessed in terms of their compatibility with and sensitivity to the existing and emerging visual contexts and the extent of any potential view loss or blocking can be identified.

In our opinion the methodology adopted although brief appears to cover the basic inclusions of a typical visual impact assessment. Section 4.1.4 addresses the views available from 50 Murray Street and potential effects and visual impacts on them. RLA make the following comments in relation to the accuracy and adequacy of the documentation provided;

 Viewing locations are separated broadly into groups according to their height eg. low-rise RL30m and below, mid-rise RL 30m to RL50m and high rise levels RL 50m and above. We note that the applicant's documentation included 3 photomontages from apartments at level 2 ie. "low-rise', 1 photomontage and 2x3D model images from "mid-rise" locations and 1x3D image and 2 photomontages from mid-rise locations. In our opinion this provides



insufficient coverage of existing and potential views.

- No photomontages were provided to show potential views along the east elevation of the building between level 2 and 13. In our opinion the documentation does not provide adequate representation of existing views, potential visual effects and impacts for apartments located in mid-rise locations or in the central part of the east elevation of the building. We note further that the only photomontage provided for this group is from apartment 504, stated to be at RL 30.1m or SSL 29.1m as shown on as-built drawings, is at low level in this group and does not adequately represent existing or potential views from 'mid' levels.
- The lowest parts of One Darling Harbour particularly those located on levels 1, 2, 3 and 4 will be subject to obvious and significant view loss. The SSL for level 2 is RL 20.55 well below the predominant podium height of 23.80 which is the closest part of the proposed envelope to One Darling Harbour. In this case, there is no utility in providing 3 montages from locations at level 2, particularly when montages from higher levels are under-represented, or absent.

5.1 Review of Photomontages prepared by Virtual Ideas

The VIA and appendices prepared by Virtual Ideas include views from 9 apartments in One Darling Harbour.

No methodology is provided in relation to the photomontages prepared for private domain views. However, we note at Page 2 and 3 of Appendix A, Virtual Ideas include a methodology statement that refers to 'public ground view photomontages'. In the absence of any other information, we have assumed that the methodology adopted has also been used for the private domain views. In our opinion the methodology adopted for the preparation of photomontages appears to satisfy the practice direction for the preparation of photomontages provided by the Land and Environment Court of NSW. However, there are a number of errors included in the documentation which potentially affect the accuracy of the photomontages provided. Such errors create doubt as to whether the proposed views can be used as objective and reliable aids for assessment. Furthermore, in relation to private domain views in our opinion it is a reasonable expectation that images prepared should be accurate.

RLA provide the following commentary in relation to Virtual Ideas' documentation;

- The assessment states that all photographs were taken from surveyed locations using a lens of 24mm focal length. However, images representing the equivalent of 50mm focal length photographs are included for both public and private domain views (see Appendix B). The 50mm photograph is actually not a separate photograph taken with a 50mm lens, it is an image cropped from part of the 24mm photograph, which is observable by the inclusion of same details and features in the view eg. the view from No.3 Market Street which includes the same car and people in the same location.
- Private domain photographs are shown at 24mm but include a white square outline labelled 50mm. The part of the photo inside the white square is not shown elsewhere and its purpose is not explained.
- 50mm focal length lenses are commonly used in landscape photography with 35mm format cameras to approximately represent the proportions of the view as seen with the



human eye. In the context of a tall building such as the proposal, a 50mm lens is not capable of encompassing all of the composition of a typical view and a wide angle lens is more appropriate, such as the 24mm focal length used. The use of a wide angle lens results in items in the view appearing smaller than in reality and increases the apparent distance between items along the horizontal plane. We accepted that these limitations and that the use of the 24mm focal length lens has these effects, in interpreting the photomontages and CGIs. However, the use of 50mm focal lengths would have been more appropriate for internal views from apartments, as the effects on view blocking are more realistic. No 50mm images were used for his purpose.

- Photomontages and computer generated images (CGI) were prepared to provide an indication of the form and scale of the proposed building envelope. CGIs were used as substitutes for views which had not been photographed.
- The CGIs were recorded as P1, P2 and P3. P1 is located at the north end and mid-level of One Darling Harbour at stated camera level of RL 41.831. P2 appears to be at the same level of the building but is located more centrally on the south-east facing curve of the façade and P3 is located at stated camera level RL 53.91 at the southern end of the building.
- An assessment of the potential visual impacts from these locations uses a model of the proposed building envelope inserted into a CGI of a model of the City of Sydney instead of a photograph.
- We note that the model of the City of Sydney appears to include some buildings which are not constructed and that in some cases others appear to be missing. For example, in some views the background model of the CBD includes buildings that are smaller in one image and larger in another image eg. in CGI P1C the proposed envelope appears smaller in the view against a larger background model compared to the view in P1B where the proposed envelope is larger against a smaller background model. This alters the relationship of the size and scale of proposed envelope in relation to its surrounding visual setting and potentially misrepresents the accuracy of the proposed development.
- The legend with P1 and P2 CGIs states that they are at RL 41.83. There is a discrepancy in heights between levels shown on the One Darling Harbour 'as-built' drawings and the levels states on the CGIs. Based on the stated levels, the images appear to relate to potential views from Level 9 of the One Darling Harbour. Virtual Ideas state at Page 2 in the VIA Appendix A (Appendix A) Methodology that all photographs have been taken at 1.6m above ground to "replicate approximate eye height". The as-built drawing shows that Level 9 of One Darling Harbour is at SSL (Structural Slab Level) RL 40.500, which would give a camera level of RL42.100. The CGI is stated to be at RL 41.83, or a camera height of 1.33m above floor level.
- Other discrepancies in the height between surveyed RLs used for CGI's and photomontages and SSL's recorded on the as built drawing exist at levels 2, 5,13 and 15. The differences in height vary from 700mm to 2.01m.
- Other issues that relate to the accuracy of documentation prepared by Virtual Ideas include inconsistent or incorrect labelling of RLs on photomontages and on the Location Map indicating Surveyed Private View positions (Harbourside-Private Views Q_C Part 1). eg the photomontage for apartment 1509 is identified as being at RL 61.95 on the location



map but is recorded as 58.30 on the photomontage. Another example of inaccuracy is in relation to apartment 201. The location map states that the view is from RL 22.1, the photomontages view from this apartment is recorded as RL22.50, whereas as-built SSL levels for level 2 are shown as RL 20.55.

- Further to this the location map shows that CGI locations P1 and P2 at different levels of the building ie P2 appears to be one level higher than P1. The levels recorded on the images for each are said to be at the same of RL 41.831.
- RLA appreciate that this project is of a scale whereby errors in documentation may occur, however given the frequency and variety of such errors we have a legitimate concern about the accuracy of the information prepared given that it forms the basis of the visual impacts assessment and conclusions drawn by JBA.

5.1.1 Verification of private domain views

In order to verify the actual levels of residential apartments and existing and potential views in One Darling Harbour RLA visited residential apartments at the same levels and in similar locations to those shown in the VIA.

In consultation with the client and following a review of the proposed development, RLA recommended the assessment of further views from a more representative selection of locations at One Darling Harbour, in particular from locations that we determined to be potentially affected by the height of the podium form and by the location of the tower, including views from 'mid-rise' locations at levels 5, 6 and 7.

Views were inspected on January 31st 2017 from apartments; 201, 501, 504, 513, 604, 613, 701, 902, 913, 1302 and 1509. RLA determined that based on the Virtual Ideas location map and RLs shown for P1, P2 and P3 (CGI locations) were at or close to apartments 902, 912, and 1302 respectively.

Access to apartments was arranged by the One Darling Harbour Facilities Manager. RLA visited the in the presence of a registered surveyor from Survey Plus. The height and location of the camera at each viewing location was surveyed and data collected on camera RLs is shown below in Figure 4 where it is compared to the data provided by Virtual Ideas.

Photographs were taken by Dr Richard Lamb, using a professional quality Canon EOS 5D Mark 3 SLR camera in JPG and RAW image format using a fixed focal length 24mm lens. The camera includes a self-levelling device and was set on a tripod at 1.6m above floor level. Photographs were taken from central locations on external balconies adjacent to living areas.

The geographic location co-ordinates of each camera location were provided by Survey plus to the photomontage artist Digital Line Pty Ltd.

RLA briefed, supervised and certified the accuracy of the preparation of the photomontages. Sufficient existing survey information including 'as-built' drawings of One Darling Harbour and an adequate number of surveyed fixed built forms in the environment and on the site were used to be able to insert a model of the proposed building envelope into each image.



5.1.2 Creation of the model

A 3D digital architectural model of the proposed development based on the extent of built form envelope proposed shown in the applicants SEE was created by Digital Line Pty Ltd. Digital Line specialise in the preparation of architectural modelling and the preparation of photomontages. We had requested access to a 3D model of the envelope that it shown in the EIS from Mirvac, but this was denied. Digital Line were therefore forced to create the model from graphic information provided in the EIS. There are minor variations between the model as shown in their photomontages and those of Virtual Ideas. These are probably attributable to difficulty in converting pictorial information at large scale into a digital form. The variations do not affect the interpretation of view loss in this submission.



6.0 Views assessment

6.1 Assessment of view loss in public domain

RLA have been requested to provide a brief commentary in relation to the adequacy of the assessment of public domain views in relation to the proposed development. We have considered requirements of the applicant outlined in the SEARs, potential impacts based on our own methodology and experience and guidance provided by Moore SC and Adam SC in the Land and Environment Court of New South Wales in respect of view impacts, in public domain views. As previously stated, in our opinion given the planning vacuum that exists for the site, excluding the objectives in the SREP, assessment of impacts on public domain views requires that the appropriate principles should be applied to guide the assessment of view loss. The principle in *Rose Bay Marina Pty Ltd and Woollahra Municipal Council and anor (2013) NSW 1046 (Rose Bay)* sets out a process for assessing the acceptability of the impact of private developments on access to views from the public domain in the vicinity of the development. The framework developed is broadly consistent with but not identical to matters raised for consideration in *Tenacity*. It is assumed that view loss and blocking effects increase the perception of the visual effects of the proposal. View loss and view blocking are important matters for consideration regarding short-range and mid-range views from the public domain of Cockle Bay and Darling Harbour and the foreshore as identified in the SEARs.

The process of determining whether a development is acceptable or not in visual terms must account for reasonable development expectations as well as the enjoyment of members of the public or outlooks from public places. The assessment of visual impacts is undertaken in 2 stages, the first being similar to *Tenacity* in that the nature of the view should be considered eg; existing view access, compositional elements impacted and not impacted, whether the change is permanent or temporary and are there acceptable curtilages around important features of the view eg sufficient setting of a heritage item to allow it to be viewed and appreciated. In summary Stage 1 should include an assessment of the following;

- Location of Views eg. define locations within the public domain from which the potentially interrupted view is enjoyed.
- Extent of Obstruction eg. a public domain view is one which can be enjoyed by all members of the whole population.
- Intensity of the public use eg. 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 potentially affected by the visual effects either in whole or in part, of the proposed development.
- Identified Views eg. the assessment must determine whether the importance of public domain views are documented. This includes whether there is specific acknowledgement of the importance of a view eg. to and from heritage items.

Stage two of the assessment includes an application of weighting in some way in order to determine the quantitative and qualitative effects and impacts on views.



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.

Will the impacted view (which is created after the change), be sufficient for the public to understand the nature of and appreciate the attractive or significant elements of 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.

A review of SEARs for public domain views confirms that the applicant is required to address impacts on "the heritage significance of the site and adjacent area, including built and landscape heritage items, conservation areas, views or settings, and in particular the impact on the State heritage listed Pyrmont Bridge".

The commentary provided by JBA in the VIA in respect of each public ground views does not follow the guidance provided in *Rose Bay* and in this regard we provide the following comments;

Sufficient baseline analysis of the potential visual effects and impacts for highly sensitive public domain views has not been provided. Particular views or sensitive viewing zones have not been identified or examined eg. to and from the Pyrmont Bridge heritage item. Two viewing locations 5 and 6 at the east side of Cockle Bay are shown on the 'Locations of Groundview Photomontages Cameras". Location 6 is a view from Cockle Bay East to the subject site, however the field of view does not include the western side of Pyrmont Bridge and its close relationship to the proposed building envelope. In our opinion this is a highly sensitive public view and requires further investigation and the application of the *Rose Bay* principles to the assessment of view loss.



Further, the reverse view from the western approaches of the Pyrmont Bridge ie. location 14 "forecourt area adjacent to Pyrmont Bridge" indicates that view loss of part of Cockle Bay water and land-water interfaces from the public domain will occur. The proposed building envelope extends several residential storeys in height above the bridge deck in close proximity to the bridge in this vicinity. The Design Report envelope plans show that the proposed podium extend to within 0m and approximately 6m to the bridge at heights of RL 13.5 and RL 17.5, which appears to be similar to or closer than existing monorail structures. The part with minimal setback is purely to allow pedestrian steps in the northern façade. The relative relationship is shown in photomontage 14 and Figure 34 at Page 43 of the VIA. This relationship is not represented in the HIS which appears to rely on an image provided by FJMT (Figure 41 schematic drawing of the proposed Harbourside Shopping Complex and tower at Page 45 of the HIS). This image shows a conceptual image of a building and podium that is smaller in floor plan, with a greater setback and does not match the proposed building envelope assessed in the VIA. The HIS concludes that;

"The setback of the tower, combined with the podium setback helps to soften the overall visual impact of the proposed development on the readability of the bridge by creating a clear separation between the bridge and the surrounding development at the approaches to the bridge, and will help to provide a transition between the scale of the bridge, the new shopping complex and the tower".

RLA disagree with this assessment in our capacity as views impact and landscape heritage specialist consultants and in our opinion the visual effects and potential impacts on views from the public domain require further investigation in the context of the *Rose Bay* principles. Furthermore, the guidance provided in the *Rose Bay* judgement will be required to be more widely used when Darling Harbour and Cockle Bay are correctly assessed as public assets of national and heritage significance as required in Part 1, Clause 2a(ii) of the SREP.

6.2 Assessment of view loss in private domain views from One Darling Harbour

Section 4.1.4 of the VIA addresses private domain views from One Darling Harbour. Effects and impacts are described in general terms in relation to areas of the building eg. the northern, central and southern sections of the east elevation of the building, although it is not clear where each of these sections starts and finishes.

At Page 27 a brief description of existing views states that:

"the low-rise eastern elevation apartments have more restricted/no water views".

This is incorrect as photographs taken from apartment 201 by the applicant and RLA show that a narrow section of water above the Harbourside Shopping Centre is included in the mid-ground composition of the view (refer to Virtual Ideas photomontage and RLA photograph 7404 apart 201 east view).



Northern Portion

At Page 29 the VIA states in relation to the northern part of the building that;

Easterly and south-easterly views will change, however the degree of overall impact to midrise and upper levels is considered to be minimal....there will be a reduction in the extent of water views and a replacement of part of the existing southern CBD skyline with the proposed tower element. However, existing views available of the central and northern CBD skyline, Centrepoint Tower and Pyrmont Bridge will be unaffected

Apartment 913 is located in the northern part of the building (see Figure 3 typical floor plan $4^{th} - 11^{th}$ floor). In views from Apartment 913 view loss includes nearly 40% of the existing water view in Cockle Bay. This is a significant view loss, not a minimal impact.

For apartments located at the northern end of the building in the low-rise levels the VIA suggests that views to the north-east that include Pyrmont Bridge and parts of Darling Harbour will be improved.

"At low rise levels there will be an improvement in some apartment views in terms of opening up views of Pyrmont Bridge and Darling Harbour through the replacement of the existing Shopping Centre with a lower profile envelope than the existing structure at this location."

Although the proposal includes the removal of the redundant monorail structures this form will be replaced by built form immediately adjacent to and within approximately 0m of Pyrmont Bridge at RL 17.50 which is equivalent to the existing ridgeline of the Harbourside Shopping Centre. Section 7.0 Envelope Evolution of the Design Report shows that the height of the north-eastern part of the envelope that projects directly to the southern side of the Pyrmont Bridge is also RL17.50. This is the closest part of the proposed envelope to One Darling Harbour and is at a height equivalent to more than two residential storeys ie.8.3m. In other words, a limited extremely oblique view to the north-north-east may become available to the northern-most low-rise apartments, but the majority of the immediate foreground will be replaced by additional built form in views to the north-east and east that is more than two residential storeys above the highest part of the existing Harbourside Shopping Centre ridgeline. Put another way the benefit derived from 'opening up' part of the view may be to two apartment types eg. 12 and 13 on level 2 and 3, however the increased podium envelope will block views from the majority of apartment types eg.14, 01, 02, 03, and 04 at level 2, 3, 4 and 5.

We find the claims of improved view access from low-rise apartments to be both over-stated and factually incorrect.

Central Portion

The VIA acknowledges that;

There will be a reduction in the extent of water views, a reduction of views to Pyrmont Bridge, and the partial replacement of central CBD skyline views (including Centrepoint Tower) with the proposed new tower element.

Individual assessment of the effects and visual impacts from representative heights and locations through the mid-rise central portion of One Darling Harbour have not been undertaken. In addition, the impacts on upper level apartments have been virtually dismissed, despite the fact that the tower has significant impacts on all of the upper level apartments in the central portion of the building.



The VIA nevertheless manages to assess the overall impact to mid-rise and upper levels in this location as 'moderate'. Further the VIA suggests that the skilful placement of the tower assists in minimising view impacts and promotes view sharing. In our opinion and based on the assessment of additional photomontages RLA fundamentally disagree with the claims made.

The VIA asserts that there are no water views available from low-rise locations. Low-rise locations as determined by JBA included levels up to RL30.00. RLA photographs from apartment 504 at RL 29.100 clearly show that Cockle Bay, including a wide expanse of water, is visible in the view. A similar composition is shown in the applicant's photomontage for this apartment, notwithstanding a different RL for level 5 has been stated. Although views were not inspected at level 4, in our opinion east facing apartments on this floor will also be exposed to views of Cockle Bay, which include land-water interfaces.

Contrary to the assessment of JBA, the placement of the slim tower form in front of a residential apartment building is not skilful. Placements in front of a commercial building such as the IBIS of Novotel Hotel would seem more appropriate, given that these are commercial views of a transitory and short term nature compared to those of a permanent community in One Darling Harbour. The tower is responsible for the blocking of views from all levels of One Darling Harbour in east facing views and the effect is greater for the central portion of the building. More widespread view loss overall is caused the podium, including steps to the south of the tower that reach RL41.9m, which equates to the SSL shown for level 9 at One Darling Harbour.

The submission of Mr Ingham for Ingham Planning shows in Appendix A the total horizontal angles of view lost for a number of apartments on several levels. The angles shown are for views from the extremity of the balconies of the apartments. As a result, they actually understate the impacts which would occur for the more day to day views from the interiors, where the horizontal extent of view is limited by walls, window returns and other features of the building itself. For many of the apartments for which there is some lateral view retained in the view from the balconies, the view from the interiors would be dominated by the proposal, which would have devastating impacts on existing views. The same principle applies to views affect by the tower on levels above those devastated by the podium. That is, interior views toward the east from upper level apartments would in many cases be partially or totally blocked by the tower. Views to the east would even be blocked from the communal areas on the roof level of One Darling Harbour, thus negatively affecting the opportunity for residents from west-facing apartments, which do not have access to higher scenic quality views, to experience the currently spectacular views that are otherwise denied to them.

Southern portion

Impacts on views in this part of the building are claimed to be moderate notwithstanding the VIA's own ranking of the impact on Apartment 504 as being moderate to high. No other mid to low-rise views are discussed for the southern portion of the building.

The separation between the proposed tower envelope and the ICC Sydney Hotel is claimed to promote view sharing in relation to south-east views from apartments located at the south end of One Darling Harbour. However in our opinion views to the south-east from such apartments would be considered as less being valued in the context of *Tenacity*, given that the majority of the view includes areas of the southern CBD, a district view, rather than one containing valued items. Therefore in our opinion the placement of the tower envelope serves to share a small additional part of a city view from the south end of One Darling Harbour rather than promoting view sharing



Apartment and View RLA image No. type	Apartment and View location/room RLA image No. type	Existing view access	Analysis of photomontages prepared for ODH	VIA analysis/rating	Relevant steps in <i>Tenacity</i> achieved eg. 1 to 4	Potential view loss rating (negligible, minor, moderate, severe, devastating)
Apartment 201 Image No 7404	Low-rise central location, external balcony associated with living area	East view to Darling Harbour and Cockle Bay including a slim horizontal area of water in Cockle Bay, land-water interfaces, Sydney CBD iconic skyline and Pyrmont Bridge.	Views inspected by RLA, but not selected for the preparation of photomontage. All views to the east will be blocked by the podium form. The claimed benefit of 'opening up' an oblique north-east view by the removal of monorali structures will be of limited value, given the angle of view from central apartments eg. 201, the western projection and height of the proposed envelope, which is closer to level 2 viewing locations eg. 212 and 214 and at or higher than the existing Habourside roof level	Moderate to high impact at low-rise levels. Impacts are considered 'reasonable' given the location of the site in Darling Harbour within a global city.	1, 2, 3	Devastating
Apartment 501 Image No. 7406	Low-rise central location, external balcony associated with living area	The east view to Cockle Bay includes land-water interfaces, the majority of water in Cockle Bay, parts of Sydney CBD iconic skyline and the majority of Pyrmont Bridge. The north-east view includes Darling Harbour and areas of land-water interface	Views inspected by RLA, but not selected for the preparation of photomontage. Our assessment of view loss for this location is based on a desktop review of RLs, floorplans and views the inspections including analysis of the applicants photomontages. All views to the east will be blocked by the podium and tower forms including the highly valued items listed.	Moderate to high impact at low-rise levels. Impacts are considered 'reasonable' given the location of the site in Darling Harbour within a global city	1, 2, 3 and 4	Devastating
Apartment 504 Image No. 7409	Low-rise southern location, external balcony associated with living area	The east view to Cockle Bay includes land-water interfaces, the majority of water in Cockle Bay, Sydney CBD iconic skyline and the majority of Pyrmont Bridge. The north-east view includes Darling Harbour and areas of land-water interface.	Views inspected by RLA, but not selected for the preparation of photomontage. Our assessment of view loss for this location is based on a desktop review of RLs, floorplans and views inspections undertaken at other level 5 apartments. All views to the east will be lost including areas of water, land-water interface, and the Sydney CBD iconic skyline. Views to the south-east may remain.	Moderate view loss, but improved views to south-east due to removal of monorail structures	1, 2, 3 and 4	Devastating

View Loss Assessment under Tenacity principles



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Potential view loss rating (negligible, minor, moderate, severe, devastating)	Severe	Severe to devastating	Severe
Relevant steps in <i>Tenacity</i> achieved eg. 1 to 4	1, 2, 3 and 4	1, 2, 3 and 4	1, 2, 3 and 4
VIA analysis/rating	Extent of view loss not identified, but said to be improved in views to the north-east due to removal of monorail structures	Mid-rise and high-rise levels in the southern end of the building, north- easterly, easterly and south-easterly views will change, with the overall impact considered to be moderate.	Minimal due to dual aspect of northern apartments
Analysis of photomontages prepared for ODH	Views inspected by RLA, but not selected for the preparation of photomontage. Parts of the east view will be blocked by the podium and tower forms including areas of water, land-water interface, and the Sydney CBD iconic skyline. All views to Pyrmont Bridge will be lost. North-east views to parts of Darling Harbour and the CBD will remain available.	The podium form will block all downward views that include areas of water and views that include areas of water and interface, the majority bad-water interface in Cockle Bay. The Bay, Sydney CBD the majority of the the majority of pyrmont the majority of pyrmont the majority of the view to Sydney Iconic skyline. a small part of the view to Pyrmont Bridge will be ind areas of land-water areas of water north of the Bridge will remain available.	One apartment type has dual aspect views eg type 12. Views north from apartment type 13 are blocked by a solid party wall. Therefore east views are the main and only views available from internal areas for apartmnet types 13 and 14. The majority of all water views in cockle Bay will be blocked by the podium form. All views to Pyrmont Bridge will be lost. A limited section of water in oblique north-east views north of the Bridge will remain available
Existing view access	The east view to Cockle Bay includes land-water interfaces, the majority of water in Cockle Bay, Sydney CBD iconic skyline and the majority of Pyrmont Bridge. The north-east view includes Darling Harbour and areas of land-water interface.	The east view to Cockle Bay includes areas of land-water interface, the majority of water in Cockle Bay, Sydney CBD iconic skyline and the majority of Pyrmont Bridge. The north-east view includes Darling Harbour and areas of land-water interface.	The east view includes the majority of water in Cockle Bay and areas of land-water interface, public domain areas at the west side of Pyrmont Bridge, the majority of Pyrmont Bridge and the Sydney CBD iconic skyline. The north-east view includes areas of water and land-water interface in Darling Harbour.
location/room	Low-rise northern location, external balcony associated with living area	Mid-rise southern location, external balcony associated with living area	Apartment 613 Mid-rise northerm mage No. 7412 balcony associated with living area
Apartment and View RLA image No. type	Apartment 513 No image	Apartment 604 Image No. 7419	Apartment 613 Image No. 7412

View Loss Assessment under Tenacity principles

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				Relevant steps in	Potential view loss
	Existing view access	Analysis of photomontages prepared for ODH	VIA analysis/rating	<i>Tenacity</i> achieved eg. 1 to 4	rating (negligible, minor, moderate, severe, devastating)
Apartment 701 Mid-rise central location, the second parameter of the second of the sec	The east view includes the majority of water in Cockle Bay eg areas of land- water interface, public domain areas at the west side of Pyrmont Bridge and small parts of the public domain/promenade along the west side of Cockle Bay. The view includes Sydney CBD iconic skyline. The north-east view includes areas of water and land-water interface in Darling Harbour.	The podium form will block all downward views that include areas of water and land-water interface in Cockle Bay. The tower form will block views to parts of the Sydney CDB skyline. The majority of the sives to Pyrmont Bridge will be lost. Parts of Darling Harbour, north of the Bridge in north-east views will remain available. South-east views including urban form will remain.	Moderate based on CGI, Easterly and south-easterly views will change, with the overall impact to mid-rise and upper levels in this location considered to be moderate.	1, 2, 3 and 4	1, 2, 3 and 4 Severe-devastating
Apartment 902 external balcony p Image No. 7435 associated with living a area	The east view includes the water and land water interfaces in Darling Harbour and all of Cockle Bay eg areas of land-water interface north and south of Pyrmont interface north and south of Pyrmont external balcony parts of the public domain/promenade associated with living area The north-east view includes areas of water and land-water interface in Darling Harbour and public space at the western approach to Pyrmonth Bridge	The podium form will block the majority of views that include areas of water and land-water interface in Cockle Bay. The tower form will block views to parts of the Sydney CDS skyline. The majority of views to Pyrrmont Bridge will be lost. Parts of Darling Harbour, north of the Bridge in north-east views will remain available. South-east views including urban developmnet will remain available.	Moderate based on CGI, Easterly and south-easterly views will change, with the overall impact to mid-rise and upper levels in this location considered to be moderate.	1, 2, 3 and 4	Severe-devastating
mid-rise northern location, external blocny associated with living area	The east view includes the water and land blocked to the north by a solid party wall. water interfaces in Darling Harbour and all of Cockle Bay e graes of land-water only view from internal areas for any view from interface north and south of Pyrmont Bridge, the majority of Pyrmont Bridge, the majority of Pyrmont Bridge will be parts of the public domain/promenade blocked by the podium and tower form. Allow the works sydney CBD iconic skyline. It is not the east view south-east view includes sydney read and allocnies to Darling Habour interface in Darling Harbour will remain areas to will be blocked by the podium and tower form.	Views north from apartment type 13 are blocked to the north by a solid party wall. East views constitute the main view and only view from internal areas for apartmnet types 13 and 14. The majority of all water views in Cockle Bay will be blocked by the podium and tower form. Minimal views to Pyrmont Bridge will be lost, north-east views from external balconies to Darling Habour including areas of water will remain available. Views south-east to urban development will remain	Minimal' based on CGI and due to dual aspect of northern apartments	1, 2, 3 and 4	moderate-severe

View Loss Assessment under Tenacity principles



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View	

Apartment and View RLA image No. type	Apartment and View location/room RLA image No. type	Existing view access	Analysis of photomontages prepared for ODH	VIA analysis/rating	Relevant steps in <i>Tenacity</i> achieved eg. 1 to 4	Potential view loss rating (negligible, minor, moderate, severe, devastating)
Apartment 1302 Image No. 7422	Apartment 1302 location, from a central Indegration of the molorly of Image No. 7422 of an the external Invertiges, the molorly of parts of the public dom along the west side of New includes Part of S skyline. The north-east living area areas of water and lan	the water and land ling Harbour and eas of land-water th of Pyrmont Pyrmont Bridge ain/promenade Cockle Bay. The ydney CBD iconic view includes J-water interface in	Approximately half of the view east to Cockle Bay including highly valued items will be lost due to the podium and stepped tower form. Views to the north- east and south-east will remain available	North-easterly, easterly and south- easterly views will change, with the overall impact considered to be moderate	1, 2, 3 and 4	Moderate-severe
Apartment 1509 Image No. 7428	Apartment 1509 location, external Image No. 7428 balcony associated with living area	The east view includes the water and land water interfaces in Darling Harbour and all of Cockle Bay eg areas of land-water interface north and south of Pyrmont Bridge, the majority of Pyrmont Bridge parts of the public domain/promenade along the west side of Cockle Bay. The view includes Sydney CBD iconic skyline. The north-east view includes areas of water and land-water interface in Darling Harbour	The east view includes the water and land views inspected by RLA, not selected for water interfaces in Darling Harbour and all of Cockle Bay egareas of land-water the preparation of photomontage. The central tower form will block a section of interface north and south of Pyrmont Bridge the majority of Pyrmont Bridge the worth-water includes Sydney CBD iconic skyline. Central and southern apartments at this level will constrained and water and land-water interface in Darling highly valued items.	The degree of overall impact to mid-rise and upper levels are considered to be minimal.	1,2 and 3	Minor to moderate



for the majority of views from the building, such as would be provided by relocating the tower envelope further to the south and closer to the ICC Sydney Hotel.

In addition, the new built form in the foreground composition of views replaces an east and south east view that includes the whole view of Cockle Bay and the iconic waters of Sydney Harbour. The small part of the view that remains includes a small section of water and Sydney CBD skyline to the south-east, the composition of the whole view having been destroyed.

In the VIA, more importance appears to have been placed on the subjective 'comfortable' and wide separation distance between the tower and the ICC Sydney Hotel that is stated in the Design Report, rather than promoting equitable view sharing with the permanent private community in One Darling Harbour. We do not consider that there is any reasonable justification for the location of the tower that comes out of the VIA.

6.3 Private domain views in relation to **Tenacity**

As discussed earlier in this report in our opinion the principles established in *Tenacity* should be applied to analyse the extent and severity of visual effects and potential impacts on private domain views caused by the proposed envelopes.

In order to systematically and objectively review the applicants' assessment of view loss, RLA have undertaken a comparative analysis of the photomontages prepared by Virtual Ideas and those prepared by Digital Line on behalf of One Darling Harbour. We have tabulated a summary of our assessment of each view against *Tenacity* principles in Table 6.3, below.

RLA selected additional mid-rise apartments for views inspection and assessment given that there was insufficient coverage provided in the VIA.

Below, we outline our understanding of the objectives and intent of the *Tenacity* judgement. Roseth SC defines a four-step process to assist in the determination of the impacts of a development on views from the private domain. The steps are sequential, meaning that further steps may not be required to be applied if the conditions for satisfying the preceding threshold is not met in each case.

An initial threshold in *Tenacity* is whether a proposed development takes away part of the view and enjoys it for its own benefit. If it does, the other steps in the planning principle, beginning with Step 1, may need to be undertaken. The application will take away views from apartments in One Darling Harbour and therefore the remainder of the planning principle may be relevant.

RLA have prepared a summary table below that includes our assessment of the ratings of view loss based on an application of Tenacity principles. Our analysis is based on the following assumptions;

RLA have adopted the same criteria to describe the levels of apartments in One Darling Harbour used in the VIA for example;

- Low-rise dwellings with floor levels at or below RL 30.00 ie. levels 1, 2, 3, 4 and 5 (Level 5 is at SSL 29.10),
- Mid-rise dwellings are those located at RL 30.00 to RL 50.00 (levels 6-12),
- High-rise dwellings are those located at RL 51.00 and above (levels 13-16)



The VIA does not include consideration of the communal areas at level 17, which has a roof terrace facing north and a main terrace facing east. There is no terrace facing west. As a result, the communal area is also subject to view loss caused by the proposed tower.

- Northern parts of the building include apartments types 12 and 13,
- Central parts of the building include apartments types 14, 01, 02 (and 315,)
- Southern parts of the building include apartment types 03, 04, 05 (and apartment 202),
- Typically, there are 7 apartments at each level between levels 2 and 12 which have main views to the east. Above level 12, apartments increase in size and decrease in number at each level (eg. 5, 6, 6 and 4 apartments on each of levels 13-16, respectively).

Step 1: Views to be affected

This step requires analysis of views including a description and analysis of the composition of the views. The views to be affected have been analysed above. The value of a view depends on the visual components and features within it such as land, water, land-water interfaces or icons. Water views are more highly valued than land views, iconic views more highly valued that views without them and whole views are more valued than partial views, etc.

Valued items are lost in views from all apartment types at levels inspected at One Darling Harbour.

As a result, the threshold for proceeding to Step 2 is met. *Tenacity* is therefore relevant to each apartment inspected. The threshold can be reasonably assumed to have been met in all other apartments that have east views.

Step 2: From where are views available?

This step considers the relationship of the building to the affected views and how they are available in relation to the orientation of the building to its land and to the view in question. Roseth SC points out in *Tenacity* that views from the front or rear of the residence are more easily protected than views across the side boundary, as are views from the standing rather than a seated position.

All views inspected are from external terraces associated with main living areas. Views to the east from the apartments inspected and others located along the eastern elevation of One Darling Harbour provide the only views available for these dwellings, as the building is fundamentally split north-south, with circulation space separating east and west-facing parts into those with views to the east and those with views to the west. The east view is the only view (or whole view) available from internal living spaces of apartments on the east elevation. We acknowledge that oblique views to the south-east and north-east are available form external terrace locations in some cases.

The threshold for proceeding to Step 3 is whether it is reasonable to expect to protect the views in relation to the orientation of the building to its site and the views. In our opinion in this situation it is reasonable to expect easterly views to be protected for east-facing apartments.

Step 3: Extent of Impact

The impacts are assessed from all views from all relevant areas within a property. The likely amount of impact on each view and the location from which it is viewed must be considered. In this case,



the location is relevant with regard to the kind of place from which the view is seen. Living spaces such as living rooms and kitchens, in which people customarily spend long periods of time are given more importance than bedrooms or service areas. The potential impacts are recommended as being best described qualitatively on a scale from lowest to highest as negligible, minor, moderate, severe or devastating.

The places from which views are available have also to be considered for the whole residence, not merely the place where the views are most affected. For a multi-unit building, the views from individual apartments, groups of apartments with similar view access and the whole building need to be considered.

The apartments facing east and affected by view loss are orientated to the view and designed in ways that prevent the owners from escaping the loss of view. It is irrelevant in our opinion that there are apartments that face west, which are not affected by the proposal, which lead the VIA to conclude that the overall view loss to the building is acceptable, in effect by averaging view loss across the whole building. We consider the assessment to be invalid on that ground.

We consider in relation to Step 1, that views to the east from apartments are primary views and are whole views as described in *Tenacity*. The view composition available from the majority of east-facing rooms inspected, including living rooms, external terraces and bedrooms, include similar elements and highly valued scenic features. Therefore in the majority of apartments potential view loss from different rooms or viewing locations in the same apartment is likely to be similar ie. views to Cockle Bay land-water interfaces lost from external terraces will also be lost from internal living areas and bedrooms.

We consider the loss of a view that includes Darling Harbour, Cockle Bay, Sydney CBD skyline and sections of land-water interface as being devastating for apartments at level 2, 3, 4 and 5. In our opinion all apartments at level 6, 7, 8 and 9 depending on the viewing location will experience either devastating or severe view loss. The majority of apartments located in the central part of the building between levels 6 and 13 will be exposed to severe or devastating view loss. We acknowledge that apartments located at level 9 or above in the northern or southern parts of the building will retain view access to the north-east and/or south-east, which is reflected in a downweighting from devastating to severe. However, the composition of some views retained eg. to the south-east, include less valued features.

The threshold for proceeding to Step 4 is clearly met for the majority of east-facing apartments in One Darling Harbour.

Step 4: Reasonableness

The planning principle states that consideration should be given to the causes of the visual impact and whether they are reasonable in the circumstances. As stated in the preamble to the four step process in *Tenacity*, a development that takes the view away from another residence may notwithstanding be reasonable.

As a principle in considering the reasonableness of a proposal in *Tenacity*, a development that complies with the development controls would be considered more reasonable than one that breaches them, if the breach leads to view loss. In other words, where an impact on views arises as a result of non-compliance with one or more planning controls, even a moderate impact may be considered unreasonable. With a complying proposal, the question should be asked whether a



more skilful design could provide the applicant with the same development potential and amenity and reduce the impact on the views of neighbours. If the answer to that question is no, then the view impact of a complying development would probably be considered acceptable and the view sharing reasonable.

The last question to be answered in regard to Step 4 relates to compliance with controls. The question is not easily answered in the context of Darling Harbour, where there is a planning vacuum and no quantitative controls apply. In that context, the question of reasonableness may appear not be to be able to be answered. However, the provisions of Section 79(C)1of the EP&A Act apply equally to this application as any other.

In that regard Section 79(C)1(a)(i) is relevant. As noted in our assessment of the compliance of the application with the aims and provisions of the Harbour SREP, the application fails to comply with relevant aims and provisions regarding views of and to the Harbour, foreshore, icons and heritage items.

Section 79(C)1(b) is also relevant to assessment of the likely environmental impacts of the development, which include visual impacts and impacts on views. Our assessment concluded that there would be unacceptable impacts on views in both the public and private domains and that the extent of impacts has been underestimated or ignored in some cases.

With regard to Section 79(C)1(c), we are of the opinion that the site is not suitable for the development, in particular the location of the tower and the location, height and massing of the podium, which give rise to significant and unacceptable visual impacts on views in both the public and private domains.

With regard to Section 79(C)1(e), the public interest, we refer to our assessment of the application with regard to the aims and provisions of the SREP, which has specific aims for the retention and enhancement of views of and to the Harbour as a public asset which takes precedence over other (ie. private) interests. As noted above, we consider that the application does not satisfy the aims and provisions of the SREP with regard to visual impacts on the public domain.

In our opinion, with regard to the relevant aspects of Section 79(C) of the EP&A Act, the proposal is not reasonable as regards impacts on views.

Our analysis of impacts on views in the public and the private domains guided by the planning principles in *Tenacity* and *Rose Bay*, shows that the proposal is not reasonable with regard to view loss in the public and private domains.

Taking these matters together, it is our opinion that the application is not reasonable with regard to view loss and should not be supported.



7.0 Summary

- The applicant's documentation in respect of location maps, recorded levels and accuracy of photomontages includes many errors.
- The majority of the form of the podium envelope is more than two residential storeys greater in height than the ridgeline of the existing Harbourside Shopping Centre.
- The proposed podium envelope is a continuous form of excessive bulk and scale across the entire length of the site. The podium alone will cause severe or devastating view loss for almost all east-facing apartments at One Darling Harbour from levels 1-6.
- The removal of the redundant Monorail structures and modest stepped transition of the podium at the north end will not provide any significant view improvement for views from One Darling Harbour as claimed because;
 - the envelope extends to Pyrmont Bridge with zero setback,
 - The envelope height is the same or greater in height than the existing Harbourside Shopping Centre ridgeline,
 - The closest part of the envelope to Pyrmont Bridge is at a height of 17.50m, being approximately 2 residential storeys in height above the bridge deck,
 - The north end of the podium at RL 23.80 extends to the western boundary of the site creating a built form that is much closer than and approximately 2 residential storeys greater in height than the existing Harbourside Shopping Centre ridgeline.
- The commercial-residential tower form is located centrally in front of a residential apartment development at One Darling Harbour.
- The siting of the tower form provides greater protection of commercial views from the Ibis and Novatel Hotels than One Darling Harbour and an excessive separation from the ICC Sydney Hotel.
- The application is inadequate in term of its consideration of SREP objectives in relation to;
 - The Harbour as an outstanding natural asset of national and heritage significance, as a public resource, owned by the public and to be protected for the public good,
 - development should maintain, protect and enhance views (including night views) to and from Sydney Harbour.
 - development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items,
 - the number of publicly accessible vantage points for viewing Sydney Harbour has not been increased, as required.
- The assessment of visual effects and impacts from the public domain is inadequate. Baseline data and weightings in relation to the level of effects or impacts has not been undertaken.
- There has been inadequate analysis and assessment of public domain views.



- The guidance for assessment of view loss in the public domain in the planning principle in *Rose Bay* has not been followed.
- Potential impacts on heritage views or on the visual setting of Pyrmont Bridge particularly in views from the west have not been fully considered.
- The guidance for assessment of view loss in the private domain in *Tenacity* has not been followed.
- We consider that views to the east from apartments are primary views and are whole views as described in *Tenacity*.
- The view composition available from the majority of east facing rooms inspected including living rooms, external terraces and bedrooms include highly valued scenic features eg. views to Cockle Bay land-water interfaces, the iconic skyline of Sydney's CBD and the Pyrmont Bridge.
- Application of *Tenacity* principles indicates that for almost all east facing apartments on levels 2, 3, 4 and 5 of One Darling Harbour, view loss will be devastating.
- View loss from apartments at levels 6, 7, 8 and 9 depending on the viewing location will experience either devastating or severe view loss.
- The majority of apartments located in the central part of the building between levels 6 and 16 will be exposed to severe or devastating view loss.
- Inadequate analysis and assessment of representative and the most affected private domain views has been provided in respect of One Darling Harbour.
- The proposed building envelopes will create unacceptable view loss and do not promote equitable view sharing.
- On this basis in our opinion insufficient information has been provided by the applicant and insufficient justification for the extent of the building envelopes and placement of the tower form has been provided.

ichardhaust

Dr Richard Lamb



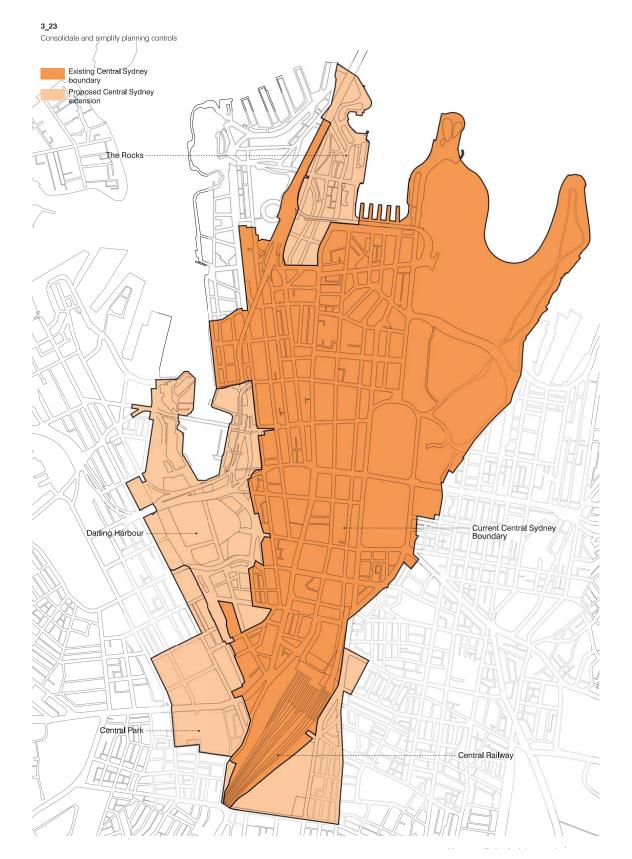


Figure 1: Map of Proposed extension of Sydney City CBD to the west



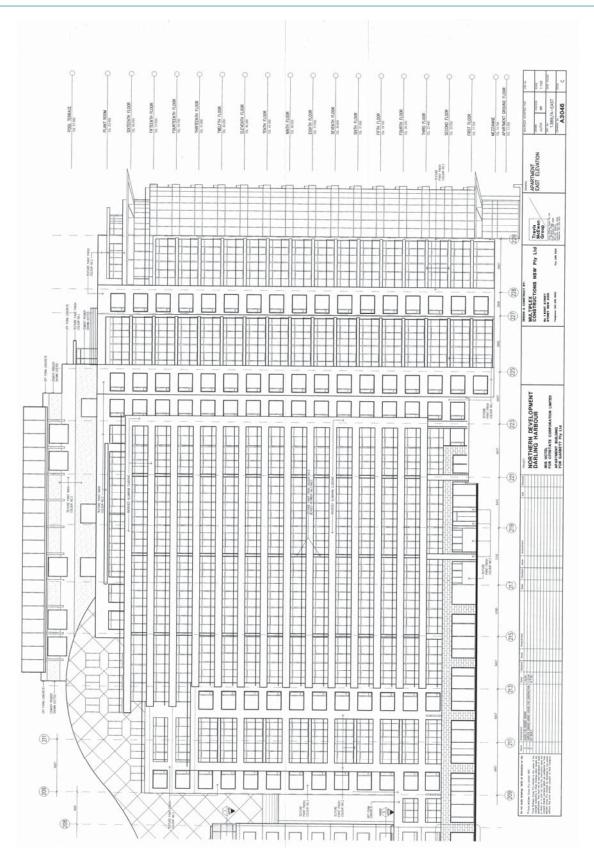


Figure 2: East Elevation as built drawing One Darling Harbour



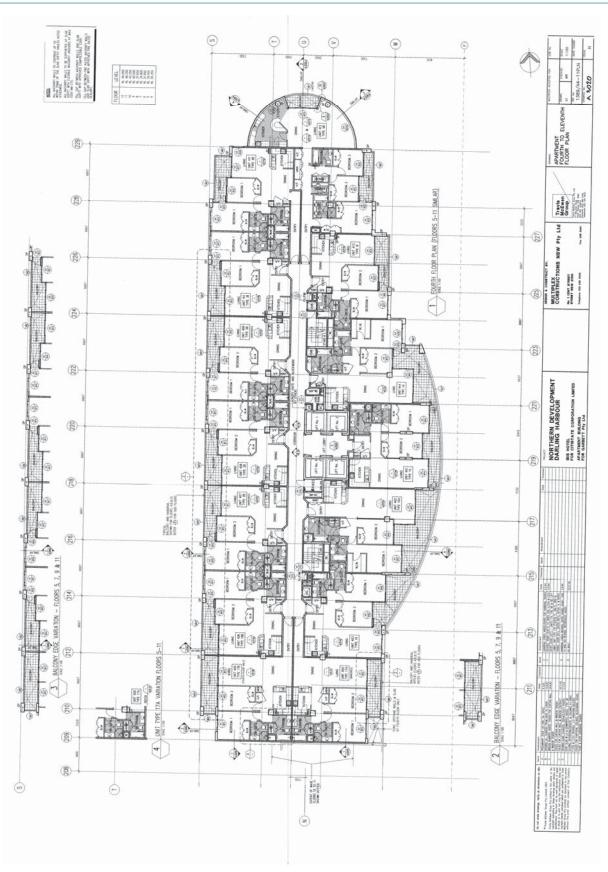


Figure 3: Typical Floor levels 4-11 One Darling Harbour



One Darling Harbour

Comparison of levels for photomontages

Apartment	Virtual Ideas Iocation Map RL	Virtual Ideas photomontages or CGI RL	RLA surveyed locations	SSL on ODH as built drawing
201 level 22	22.1	22.5	22.10	20.55
501, 504	30.10	30.10	30.61	29.10
604	NA	NA	33.43	31.95
701	NA	NA	36.28	34.80
902, 913	NA	41.83	41.99	40.50
1302	53.30	53.91	53.40	51.90
1509	61.95	58.30	59.40	57.60

Figure 4 : Levels stated in the VIA and by RLA for photomontages





View east from apartment 604



View east from apartment 613





View east from apartment 701



View east from apartment 902





View east from apartment 913



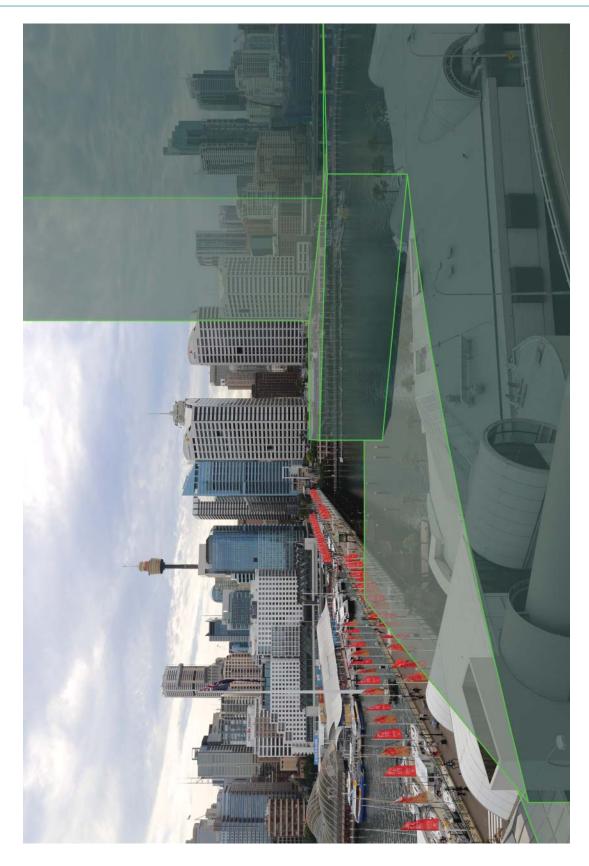
View east from apartment 1302





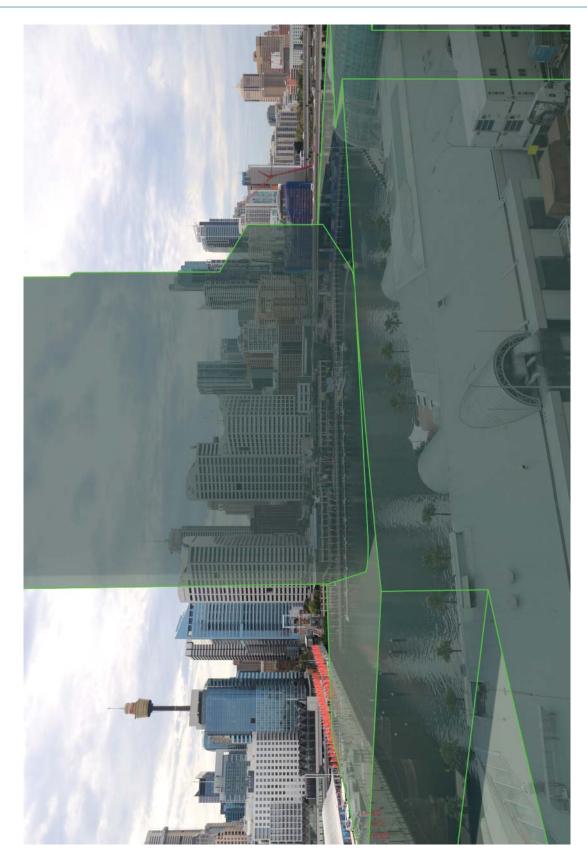
Photomontage from apartment 604, east view. View from the interior would be totally lost





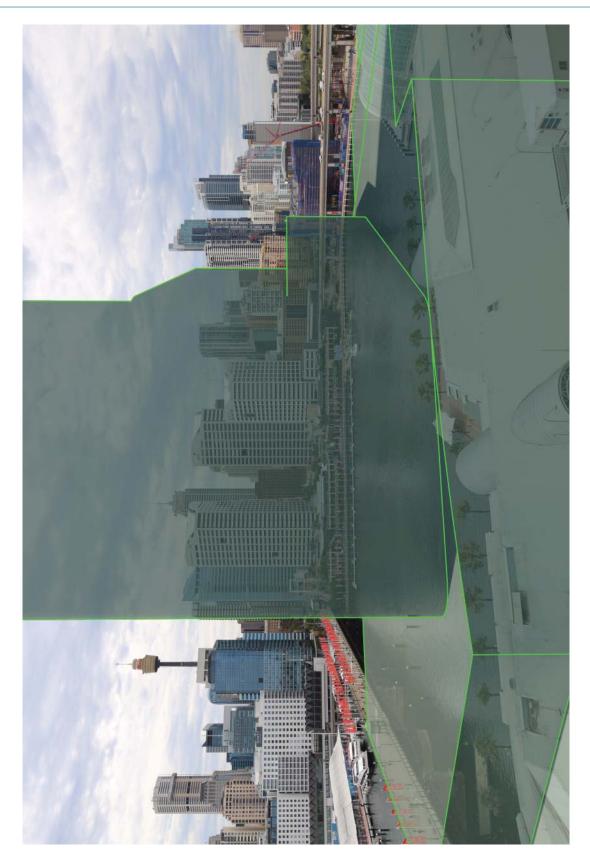
Photomontage from apartment 613. View from the interior would be largely lost





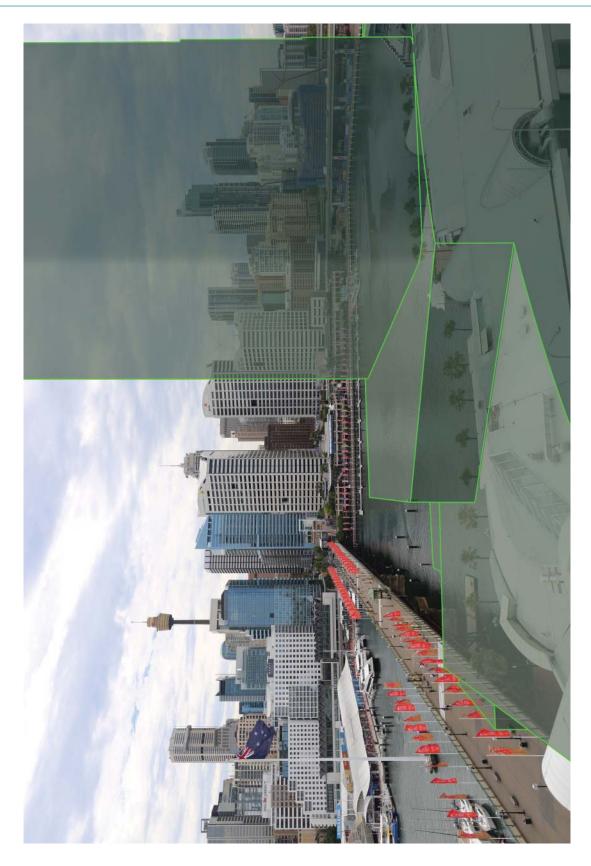
Photomontage from apartment 701. View from the interior would be totally lost





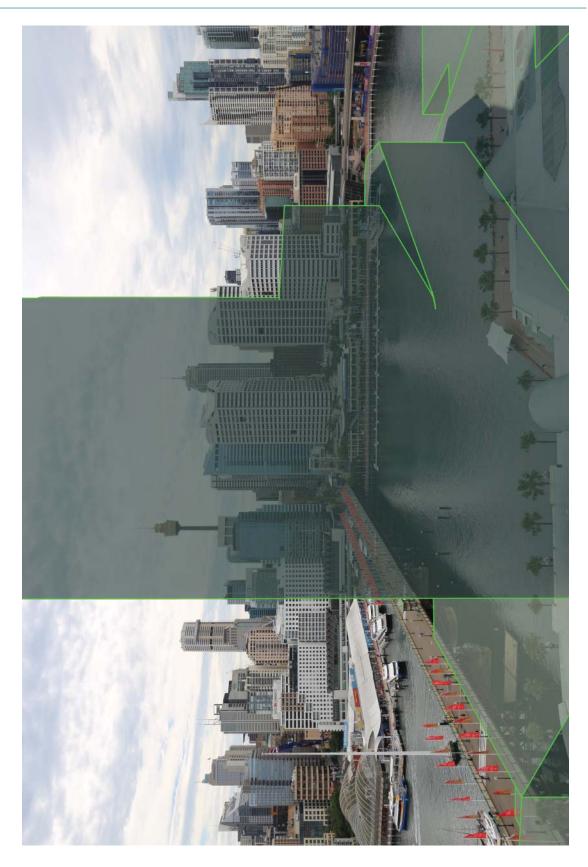
Photomontage from apartment 902. View from the interior would be totally lost





Photomontage from apartment 913.





Photomontage from apartment 1302. View from the interior would be almost totally lost



CV Dr Richard Lamb

Summary

I am a professional consultant specialising in visual impacts and landscape heritage and assessment and the principal of Richard Lamb and Associates (RLA). I was a senior lecturer in Landscape Architecture, Architecture and Heritage Conservation in the Faculty of Architecture, Design and Planning at the University of Sydney for 28 years and was 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 on visual and landscape heritage matters. I have appeared in over 240 cases and made submissions to several Commissions of Inquiry. I have been the principal consultant for over 600 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 landscape assessment, visual perception, aesthetic assessment, and conservation of heritage items and places. I taught undergraduate architecture and postgraduate students in these areas and also gave specialised elective courses in aesthetic heritage assessment. I supervised 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.

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 visual and 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 and Teaching Fellow, Botany and Ecology, School of Botany, UNE (1968-1974)

Lecturer in Resource Management, School of Life Sciences, NSW Institute of Technology (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 main research works are in:

Plant ecology

Visual perception

Social and aesthetic values of the natural and built environment

Journals for which papers have been refereed Landscape & Urban Planning Journal of Architectural & Planning Research Architectural Science Review Journal of the Australian and New Zealand Association for Person Environment Studies Journal of Environmental Psychology Australasian Journal of Environmental Management Ecological Management & Restoration Urban Design Review International

Assessing Heritage Items, Settings and Cultural Landscapes

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 and visual 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, Bishopscourt, 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, 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 Avenue, 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.
- 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 for 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 heritage impact concerning proposed amendments to permissible land uses in LEP, Berrima, Southern Hignlands.

• Statement of visual and heritage view 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 on 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.

- Statement of heritage impact for proposed telecommunications facility, Macarthur Road, Elderslie.
- 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.

 Assessment of visual impacts of proposed works to significant and heritage trees, Elaine, New South Head Road, Woollahra.

- Heritage views assessment of impacts of a proposed mixed use development, Arthur Street, Parramatta.
- Heritage views assessment and visual impacts evaluation of planning proposal to rezone land for residential and ancillary heritage curtilage hub, Menangle Village.
- Heritage views assessment of impacts of a proposed mixed use development, Tramway Avenue, Rosehill.

 Historic heritage impact assessment report for EIS, proposed amended open cut coal mine, Rocky Hill, Gloucester.

Statement of heritage impact, application to remove tree, Merrivale Road, Pymble.

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.

Maitland City Council

Development assessment of two applications in the Morpeth Heritage Conservation Area.

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. Preparation of Development Control Plan No.53 for sighting 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.

Dixson 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.

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

Assessing Visual Impacts of Urban Developments

Assessment and Advice

Private Clients

• Advice and advocacy concerning the impacts on views and streetscape character caused by proposed landscape scheme for former BP Site, Waverton.

- Advice and statement of visual impacts for residential subdivision, Bantry Bay Road, Frenchs Forest.
- Advice and submission to Council in relation to potential visual and related amenity impacts of neighbouring development, Mitchell Street, Greenwich
- Advice and submission to Council on potential visual and related amenity effects of proposed covered outdoor space on neighbouring properties, Dalley Avenue, Vaucluse.
- Advice and submission to Pittwater Council on potential visual and related amenity effects of proposed seniors living development on neighbouring site, Cabarita Road, Avalon.
- Advice concerning visual impact and view sharing issues, proposed new residential development, Onslow Avenue, Elizabeth Bay.
- Advice concerning visual impact of proposed residential refurbishment, Wentworth Park Road, Glebe.
- Advice concerning visual impacts of proposed development for aged accommodation, Lindfield Gardens Retirement Village, East Lindfield.
- Advice concerning visual impacts, proposed residential alterations, Hopetoun Avenue, Vaucluse.
- Advice on potential for urban development as part of South West Urban Release Area, Oran Park 'Tidapa' Cobbitty.



 Advice on potential streetscape, visual and related amenity effects, proposed redevelopment of Crows Nest Shopping Centre, Willoughby Road, Crows Nest.

 Advice on potential streetscape, visual and related amenity impacts, proposed mixed use development, Araluen Drive, Hardys Bay

Advice on privacy and visual impacts; submission to Wollongong City Council in relation to proposed adjacent development, Wellington Drive, Balgownie.

 Advice on urban design and visual resources strategic planning for Material Change of Use application to Gold Coast Shire Council, Emerald Lakes, Carrara, Queensland.

 Advice on view loss and advocacy with Pittwater Council on behalf of client, proposed new dwelling, Riverview Road, Clareville.

 Advice on visual constraints and issues related to proposed apartment development, St Pauls Street, Randwick.

Advice on visual impacts of DA for adjacent dwelling, Newtown, with submission to Council on development assessment.

• Advice on visual impacts of proposed development on foreshore building lines and views from the waterway, Kareelah Road, Hunters Hill.

- Advice on visual impacts, additions and alterations to dwelling, Cameron Street, Edgecliff.
- Advice regarding potential visual impacts of proposed new dwelling, Merewether.

 Advices on potential visual impact assessment of a proposed mixed use development, Cross Street, Double Bay.

 Analysis and advice on planning and visual amenity issues surrounding proposed demolition, Edinburgh Road, Castlecrag.

- Analysis and assessment of potential visual impacts for residential development, Girilang Avenue, Vaucluse.
- Assessment and advice with regard to the potential visual, streetscape and view blocking effects of the proposed shopping centre, The Princes Highway, Corrimal.

 Assessment of visual impacts of proposed amendments to building, East Quarter Stage 3, Jack Brabham Drive, Hursville.

 Certification of accuracy of photomontages of development options, Putney Hill sites, Stages 1 and 2, North Ryde

• DA advice and advocacy with Sydney City Council, proposed additions and alterations to existing warehouse building, Riley Street, East Sydney.

• DA advice on potential visual impacts, view loss, and streetscape character, and recommendations for modifications to the proposed development, Greenknowe Avenues, Potts Point.

• DA advice on urban design, potential impacts on streetscape character and recommendations for modification of design for industrial building, Burrows Road, St Peters.

Design advice and visual impact assessment, proposed residential flat building, Beach Street, Coogee.

 Design stage advice and visual impact assessment of proposed seniors living development, former OLSH site, Centennial Road, Bowral.



Gateshead Industrial Estate Development Proposal; visual resources management plan.

 Heritage and streetscape assessment of proposed new residential development, Grosvenor Street, Wahroonga.

• Opinion, advice and advocacy with Pittwater Council on visual impacts of proposed alterations and additions to existing dwelling, Princes Street, Newport.

 Potential view loss analysis for neighbouring residents, submitted to Independent Hearing and Assessment Panel, approved seniors living development, Pittwater Road, Dee Why.

• Pre DA advice and Statement of Environmental Effects to accompany DA, potential visual impacts of proposed mixed use redevelopment, The Entrance Road, The Entrance.

• Pre DA advice concerning potential visual and heritage streetscape impacts, proposed mixed development, Coles site, The Corso, Manly.

• Pre DA advice concerning potential visual and streetscape impacts of proposed mixed development, Landmark Charlestown development.

Pre DA advice on demolition and construction, Fernleigh Road, Caringbah.

• Pre DA advice on visual impact of design, urban design and setbacks, industrial warehouse and showroom building redevelopment, Dunning Avenue, Rosebery.

Pre-DA advice and visual impact assessment, proposed residential development, Parkview Road, Chiswick.

 Pre-DA advice regarding potential building envelope scale and location for proposed residential subdivision, Windang.

 Pre-DA advice, visual impacts assessment and contribution to statement of environmental effects, proposed seniors living development, Oxford Falls Road, Frenchs Forest.

 Pre-design advice and DA stage visual impact assessment , proposed medium density residential development, Shepherd and Ocean Streets, Mollymook

 Statement of visual impacts to accompany application for proposed extension of portion of unmade road to access existing house, Birrell Street, Tamarama (2007).

 Statement of visual impacts to accompany application for proposed extension of portion of unmade road and for new dwelling, Birrell Street, Tamarama (2009).

 Submission of objection to and advocacy with Lane Cove Council regarding potential view loss effects of a neighbouring development, Kellys Esplanade, Northwood.

 Submission of Objection to and advocacy with Woollahra Council on potential visual and view loss impacts of a proposed neighbouring development, Kings Road, Vaucluse.

• View analysis and assessment of the proposed redevelopment of the existing shopping Centre, Parke and Waratah Streets, Katoomba.

 Visual and landscape impact assessment of the proposed redevelopment of the north and south paddocks, Manly Golf Club

- Visual and streetscape analysis, proposed redevelopment of Lower Queenwood School for Girls, Balmoral.
- Visual impact assessment, proposed Queenwood Arts School campus, Esther Road, Balmoral
- Visual assessment and advice for proposed shopping centre development, Argyle Street, Camden.



- Visual assessment and streetscape assessment of visual significance of tree, Colbourne Avenue, Glebe.
- Visual assessment of proposed mixed use development, Queen Street, St Marys.
- Visual assessment of proposed multi-unit housing development, Beach and Arden Streets, Coogee.
- Visual impact advice of proposed development, Brighton Avenue, Toronto.

• Visual impact and streetscape character evaluation of mixed retail and residential development, proposed, Collins Street, Kiama.

 Visual impact assessment and advice for proposed amendment to proposed seniors living development, Old Bowral Road, Mittagong.

• Visual impact Assessment and advice whether provisions of Woollahra Development Control Plan 2003 have been properly considered in regard to consent issued for adjoining property, Tivoli Avenue, Rose Bay.

- Visual Impact Assessment and Advices for residential property Oswald Street, Mosman.
- Visual Impact Assessment and advices on residential development Nott Lane, Longueville

 Visual Impact Assessment and Advices, design of proposed additions and alterations to existing building, Henry Lawson Avenue, Blues Point.

- Visual Impact Assessment and Advices, Queens Avenue, Vaucluse.
- Visual impact assessment and advice to Pittwater Council, proposed neighbouring development, The Pinnacle, Bilgola.
- Visual impact assessment and analysis of mitigation strategies, Chelmsford Road, Asquith.
- Visual impact assessment and Statement of Environmental Effects, proposed Plaza West development, Church Street and Victoria Road, Parramatta.

• Visual impact assessment and statement of environmental effects for proposed redevelopment, Kirribilli Club, Milsons Point.

• Visual impact assessment and statement of environmental effects to accompany subdivision application, Orchard Street, Warriewood.

- Visual impact assessment of glare off adjacent building, Linton Retirement Village, Yass.
- Visual impact assessment of proposed additions to neighbouring property, Norma Road, Palm Beach.
- Visual Impact Assessment of proposed refurbishment and additions, South Steyne.
- Visual impact assessment of s96 Application to vary conditions of consent, Yarranabbe Road, Darling Point.

 Visual impact assessment of the proposed Concept Plan for residential apartment development, Shepherds Bay, Meadowbank.

- Visual Impact Assessment to form part of DA for subdivision of land, Harcourt Place, North Avoca.
- Visual impact assessment, design advice and advocacy with Sydney City Council concerning proposed alterations and additions, Walter Street, Paddington.
- Visual impact assessment, statement of environmental effects and advocacy with Pittwater Council on proposed alterations, Rednal Street, Mona Vale.
- Visual Impact Assessment, view and amenity impacts, renovations and additions, Fermoy Avenue, Bayview



- Visual impact evaluation, advice and advocacy, proposed commercial development, Orange.
- Visual impacts and visual amenity assessment, proposed residential flat building, Frazer Street Collaroy.
- Visual impacts and visual amenity assessment, proposed seniors living development, Pittwater Road, Bayview.
- Visual impacts assessment of a proposed residential flat building, Spit Road, Mosman.
- Visual impacts, constraints assessment and design advice, proposed mixed development, Palm Beach.

• Visual resources, streetscape analysis and tree significance survey, former Ormond site, Duffy Avenue, Westleigh.

• Visual impact and view loss advice, building refurbishment application, Lavender Street, Lavender Bay.

 Visual, streetscape and heritage impacts assessment of the proposed residential apartment development, Nijong Drive, Pemulwuy.

• Visual assessment and development strategy for proposed conversion of existing commercial building to mixed use, Bolton Street, Newcastle.

• Advice concerning visual impacts of proposed development of aged accommodation, Georges River Road, Jannali.

Advice on potential view loss effects of potential residential development, Marine Parade, Watsons Bay.

• Visual impact assessment for Compatibility Certificate for proposed seniors living development, Old Saddleback Road, Kiama.

• Visual impacts assessment of a Planning Proposal to rezone land for residential development, Dee Why.

 Visual impacts assessment of a Planning Proposal to rezone land for mixed uses and residential development, Brookvale.

 Visual impacts assessment of a Planning Proposal to rezone land for mixed use and residential development, Freshwater.

• Visual impacts assessment of a Planning Proposal to rezone land for residential development, Gladesville Shopping Village, Gladesville.

• Visual impacts assessment of a Planning Proposal to rezone land for residential development, East Quarter, Hurstville.

 Visual impacts assessment of a Planning Proposal to rezone land for residential development, Station Street, Menangle.

• Visual impacts assessment of a Planning Proposal to rezone land for use as a cemetery, St Andrews Road, Varroville.

• Visual impacts assessment of a Planning Proposal to rezone land for use as a cemetery, Luddenham.

 Visual impacts assessment of a Planning Proposal to rezone land for residential use, Columbian Preicinct, Homebush

Visual impacts and visual amenity assessment and submission to JRPP, proposed residential development,
 Pinnacle development, Mann Street, Gosford.

Visual impacts and visual amenity assessment and submission to JRPP, proposed mixed use development,



Waterside development, Mann Street, Gosford.

- Visual impacts and view sharing assessment, Wenona School Project Archimedes, North Sydney
- Visual impacts assessment of a Planning Proposal to rezone land for a waste water treatment facility, Cooranbong

 Visual impact assessment of proposed mixed use development, Pittwater Road and Mooramba Road, Dee Why.

• Landscape and visual assessment for proposal to rezone land for various uses, proposed Ingleside Urban Release Area.

 Visual impacts assessment of a Planning Proposal to rezone land for mixed use development, Gladesville Shopping Village.

• Visual impacts assessment of a Planning Proposal to rezone land for mixed use development and vary development controls, Victor and Pittwater Roads, Brookvale.

 Visual impacts and view sharing assessment of an urban redevelopment proposal, "Waterside", Mann Street, Gosford.

• Visual impacts assessment of a Planning Proposal to rezone land for mixed use and uplift height controls, Darlinghurst Road, Kings Cross.

 Visual impacts assessment of a Planning Proposal to rezone land for residential use, former Bushells Factory, Concord.

- Visual analysis and certification of the accuracy of photomontages, Pacific Highway, St Leonards.
- Visual analysis and certification of the accuracy of photomontages, Shepherds Bay, Meadowbank.

Government Clients

Department of Planning and Infrastructure

Preparation and certification of photomontages of proposed developments. Flyers Creek Wind Farm

Department of Urban Affairs and Planning

Advice and advocacy with Manly Council concerning visual impacts, proposed additions to neighbouring property, Jenner Street, Seaforth.

Bankstown Council

Assessment of visual and streetscape impacts of development application for low and medium density residential development, Grandview Estate, Stacey Street, Bankstown.

Blue Mountains City Council

Visual impacts, view loss and view share analysis as part of development assessment, residence at Wilson Street, Katoomba.

Visual impact assessment as part of development assessment, proposed SEPP 5 Development, San Jose Avenue, Lawson.

Department of Planning and Infrastructure, Urban Growth NSW and Pittwater Council
 Visual and landscape analysis study for Ingleside Urban Release Area Master Plan



Gosford City Council

Development assessment, proposed subdivision and new dwelling, Ascot Avenue, Avoca. Development assessment, proposed development, Scenic Highway, Terrigal. Development assessment, proposed development, Karalta Road, Erina. Development assessment, proposed new dwelling, Calais Road, Wamberal

Growth Centres Commission of NSW

Landscape and visual assessment to inform the strategic planning of development footprint and urban form analysis of North Kellyville precinct identified as an urban release area forming part of North West Growth Centre, North Kellyville.

Hunters Hill Council

Advice, analysis, assessment and redrafting of Foreshore Building Line, Kareela Road, Hunters Hill.

Leichhardt Council

Visual impacts assessment from waterway and streetscape, proposed residential development complex, Blackwattle Studios site, Glebe Point Road, Glebe.

Planning and Assessment Commission of NSW

Assessment of potential visual impacts on thoroughbred studs of proposed open cut coal mine, Drayton South, Jerrys Plains.

Roads and Maritime Services NSW;

Certification of accuracy of photomontages of development options, Wentworth Point urban activation precinct, Homebush.

- TransportforNSW and Department of Planning and Infrastructure
 Visual impact assessment of proposed mixed use development and DCP for rezoning of land, North Ryde
 Station Precinct.
- Urban Growth NSW

Visual impact assessment for planning proposal to re-zone land at Mooney Mooney for various uses.