



Development Application

Macarthur Memorial Park

166-176 St Andrews Road, Varroville

Visual Assessment

Report prepared for: Catholic Metropolitan Cemeteries Trust

by: Dr. Richard Lamb

September, 2017

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1.0 Introduction

1.1 Background and purpose of this report

Richard Lamb and Associates (RLA) have been appointed by the Catholic Metropolitan Cemeteries Trust (CMCT) to provide advice with regard to the likely visual impacts of a Development Application (DA) for the subject site (the Site), known at the Macarthur Memorial Park, St Andrews Road, Varroville.

RLA are familiar with Campbelltown municipality, the locality and the Scenic Hills both as an item and as a concept and have carried out assessments of the impacts of proposed residential and other forms of developments on various parts of the Scenic Hills, such as Macquarie Field House, James Meehan Estate, Macquarie Links, Emerald Hills, East Leppington, Kearns, Eschol Park, Mt Gilead and the Scenic Hills Riding Ranch land which is immediately adjacent and which formerly included the Site.

RLA are specialists in visual impacts and heritage landscape assessment and have assisted the CMCT in preliminary advice on the visual issues in the Planning Proposal, assessment of the likely effect of the Proposal on views from the Campbelltown urban area prior to the Gateway Determination and in a report to the Department of Environment and Planning on compliance of the proposal for use of the part of the Site as a cemetery, with the objectives of zone E3 in what was then a draft and is now Campbelltown LEP 2015 (CLEP 2015).

Pursuant to CLEP 2015, the land subject to the proposed use as a cemetery is wholly within the land zoned E3.

The whole Site is mapped in orange as Development on Steep Land (Scenic Hills) and as an Escarpment Preservation Area, indicated by hatching on the Environmental Constraints Map, ECM_007. Part 7, Additional local provisions in CLEP 2015, Clause 7.6(1) Scenic protection and escarpment preservation, provides the objectives for the Escarpment Preservation Area. Clause 7.6(3) lists matters that the consent authority must be satisfied with before granting consent, which include measures to minimise visual impacts and to preserve the scenic qualities of views.

A 'No build area' designation wholly within the Site is also shown on the Environmental Constraints map, occupying two lots south east of the lot occupied by Varroville House. The 'No build area' refers to Part 7, Additional local provisions in CLEP 2015, Clause 7.7(3)(d), Considerations for development on environmentally constrained land, which provides that, for land in Varroville, identified as 'No build area' on the Environmental Constraints Map;

The fact that the land is not capable of accommodating development other than for a lawn cemetery and associated fencing.

The use of the Site for a cemetery is permissible with consent. Part 7, Additional local provisions, Clause 7.8A(1). Clauses 7.8(a) and (b) sets out matters with which the consent authority must be satisfied before granting consent, including, with regard to visual impacts, that;

a) the development will complement the landscape and scenic quality of the site, particularly when viewed from surrounding areas including the Campbelltown urban area, "Varro Ville" (homestead group at 196 St Andrews Road, Varroville) and the Hume Highway, and

The development will not adversely affect the visual or physical qualities of the site.....

This report is an assessment of the visual impacts of the DA for the Macarthur Memorial Park, in relation to the relevant planning controls and specifically in relation to the 'No build area', which was defined to protect views of the south-east part of the Site. The report includes certification of photomontages that have been prepared to analyse the likely visibility of the proposed development and impacts on views.

1.2 Documents consulted

The following documents were consulted in the preparation of this Report;

1. Campbelltown Local Environmental Plan 2015 (CLEP 2015).
2. Macarthur Memorial Park, Landscape Design Response, including Masterplan, prepared by Florence Jaquet, Landscape Architect (FJLA).
3. Macarthur Memorial Park, Public Art Strategy, prepared by Florence Jaquet, Landscape Architect (FJLA).
4. Macarthur Memorial Park, Interpretation Strategy, prepared by Florence Jaquet, Landscape Architect (FJLA).
5. Macarthur Memorial Park, Visual Impact Study, prepared by Virtual Ideas (VI).
6. Macarthur Memorial Park, Site Plan and Detailed Landscape Plans, prepared by Narelle Sonter Botanica (NSB).
7. Macarthur Memorial Park, Vegetation Management Works, Tree Survey and Assessment prepared by Travers Bushfire and Ecology, (TBE).
8. Macarthur Memorial Park, Ecological Constraints Assessment prepared by Travers Bushfire and Ecology, (TBE).
9. Macarthur Memorial Park DA Report, Design Statement, prepared by Francis-Jones Morehen Thorp (FJMT Studio).
10. Conservation Management Plan, Varroville Estate, 166-176 St Andrews Road, Prepared by Urbis, October 2015 (the CMP).
11. Paul Davies & Geoffrey Britton, "Visual Analysis of Campbelltown's Scenic Hills and East Edge Scenic Protection Lands", October 2011, prepared for Campbelltown Council to inform preparation of the comprehensive LEP.

12. State Planning Authority of New South Wales, *The New Cities of Campbelltown, Camden, Appin: Structure Plan*, NSW Government Printer, 1973.
13. Wellings Smith and Byrnes, *A Local Environmental Study of Certain Land at Glenfield, Macquarie Fields and Ingleburn*, Campbelltown, Campbelltown Council, 1990.
14. Metropolitan Strategy, South West Growth Centre Structure Plan and Planning Report for the Leppington Growth Centre, NSW Government, 2005.
15. Response to RFI from Campbelltown Council, Planning Proposal to Campbelltown Council by CMCT, Assessment of Visual Opportunities and Constraints in relation to Zone Objectives, prepared by Richard Lamb and Associates, December, 2013 (RLA 2013 report)
16. Visual Assessment for Planning Proposal, 166-176 St Andrews Road, Varroville, prepared by Richard Lamb and Associates, October 2015 (RLA 2015 report).

1.3 Significance of the Scenic Hills to this report

The Site is all within land designated Development on Steep Land (Scenic Hills) and as an Escarpment Preservation Area, indicated by hatching on the Environmental Constraints Map, ECM_007 in CLEP 2015.

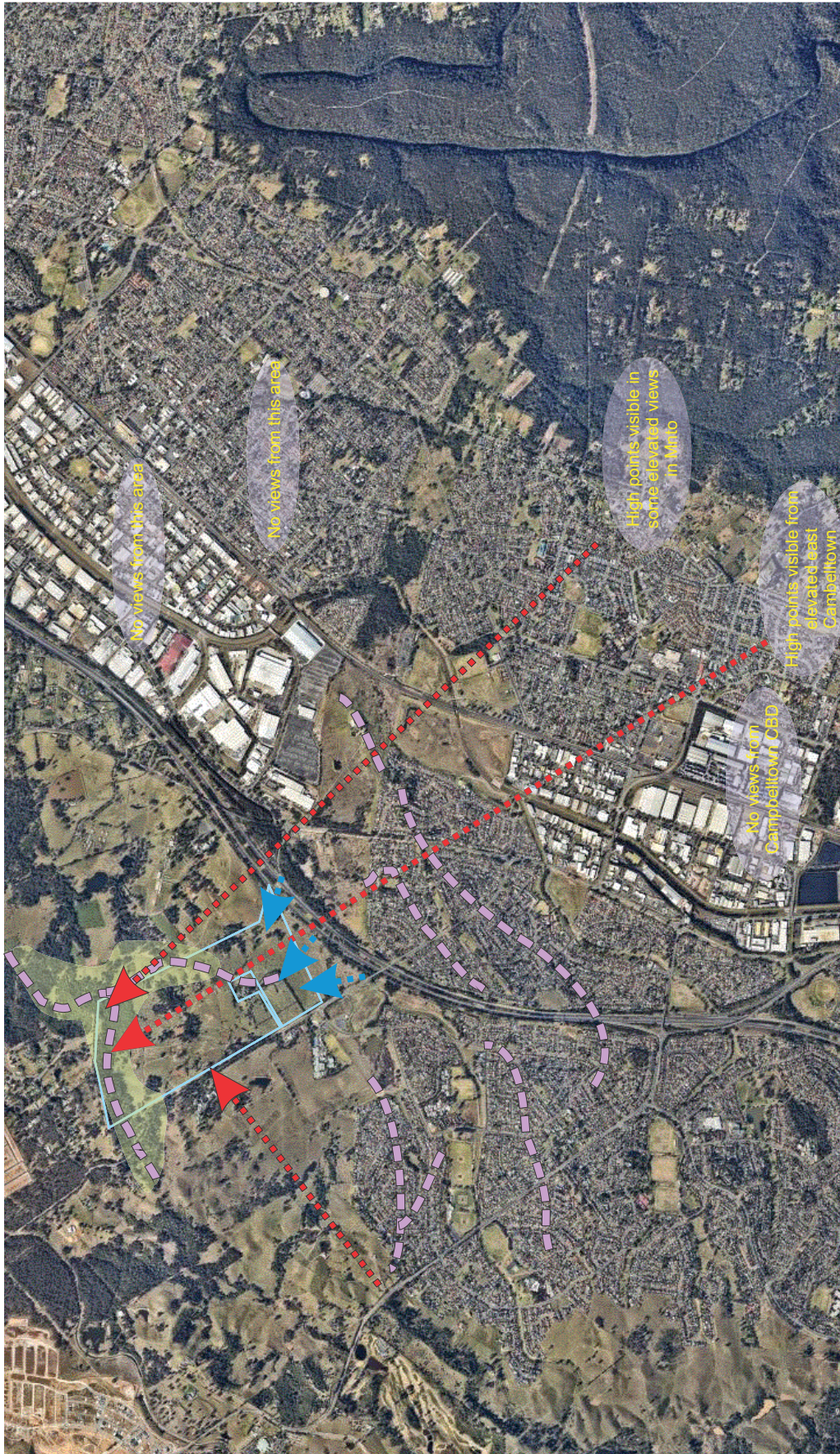
The concept of the Scenic Hills is relevant to the Site, as set out in the RLA 2013 report. The concept has its genesis in the Three Cities Structure Plan which envisaged the three satellite cities separated by rural breaks. Relative to Campbelltown, the rural break was predominantly conceived as the view north-west from urban toward rural land.

The predominant desired character of the Scenic Hills was as a grassy, rural backdrop conceived as the original character of much of the land. There has been changing character of the rural landscape in the intervening period caused among other things by residential expansion pressure and changes in rural economics. Both of these influences are evident in the vicinity of and on the subject land.

The prominent slopes, which appear in most views from the public domain in Campbelltown and Minto to be the backdrop to the view and to be the Scenic Hills (see Map 1), are significantly more wooded than even in the 1990s, as a result of prominent and expanding stands of re-growth woodland and areas of woody weed invasion. Historical aerial photographs in the Davies and Britton report show the area to have been predominantly cleared in the 1950s.

Many of the causes of landscape character change are processes that are outside the influence of planning controls (ie. rural economics and land management). It is not possible to mandate for a grassy, pastoral landscape, or a past cultural landscape.

Increasing presence of woodland and forest vegetation for example is a change that is occurring and is also considered by most contemporary viewers as a desirable change because of the scenic and ecological benefits. Increasing vegetation presence is also a legitimate means to mitigate the visibility and visual impacts of development in the Scenic Hills. Such a change would not be inconsistent with the objectives of the zoning of the land.



1.4 Study by Paul Davies and Geoffrey Britton

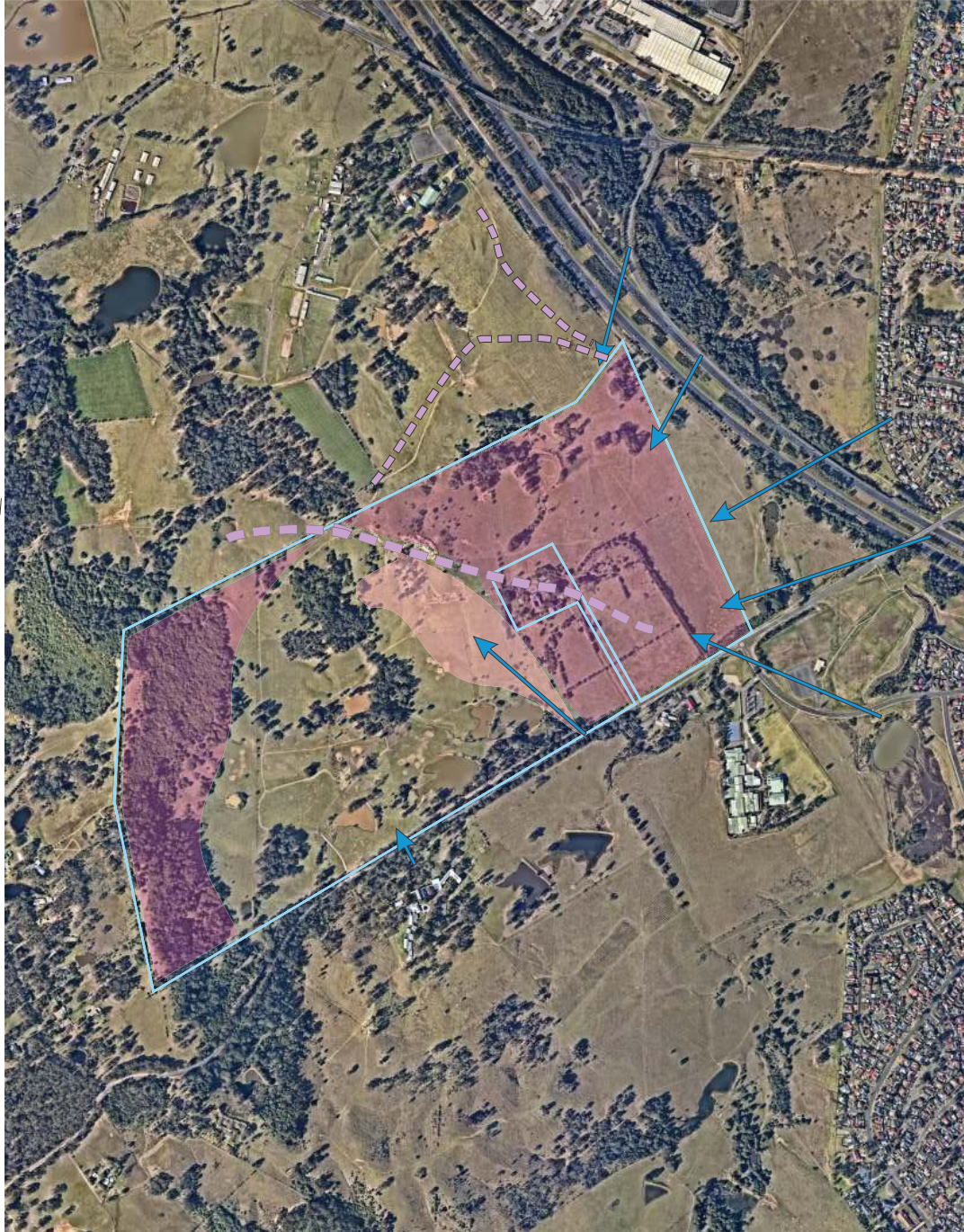
Paul Davies and Geoffrey Britton were engaged by Campbelltown Council to prepare a study entitled “Visual Analysis of Campbelltown’s Scenic Hills and East Edge Scenic Protection Lands” in 2011, as an aid to informing the preparation of CLEP 2015.

Denham Court Road to Raby Road Landscape Unit 1, in the report contains the subject Site. Figure 4.1.65 identifies the primary view catchments, including areas of east Campbelltown and Minto at a significant distance from the Site and the general area between Raby Road in the south and Denham Court Road in the north, at closer range. Major view lines are identified from each of these areas.

We undertook field assessment in relation to the Planning Proposal for the Site in December, 2013, along the entire East Edge lands, reviewed the findings in September, 2014 for the RLA 2015 report and have confirmed the findings in September, 2017 in relation to the DA.

The part of the Site generally south and south east of Varroville House (the ‘No build area’) is not visible from the urban area of Campbelltown. The majority of the north-western part of the Site, with the exception of the upper part of Bunbury-Curran Hill, is also not visible from urban Campbelltown. View opportunities from the Eastern Edge Lands are also decreasing, as a result of urbanisation of land in Minto in the Eagleview Road area, which provides the highest possible viewing locations.

A magnified view from Eagleview Road is shown in the RLA 2013 report. Seen from these distances of 4-5km, details of buildings and structures are not evident to the unaided eye and buildings and structures proposed in the north-western part of the Site in the DA would not be identifiable.



Approximate Site Location

Potential Exposure



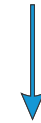
Low

Medium

High



Ridges that constrain closer views



Potential exposure to be analysed

Map 2
Potential exposure to all views
(anticipated in 2015, over 2017 image)

2.0 Visual exposure of the Site

2.1 Long range views

Between the East Edge lands and the subject Site is the valley floor of the Bunbury Curran Creek catchment and a series of ridges onto which the urban areas of Campbelltown have extended to the north and north west. These ridges prevent views of the Site from the Campbelltown urban area (see Map 1). They also substantially block views from the Eastern Edge lands and from suburbs to the north-west in the vicinity of Woodbine, Claymore, Bow Bowling, Eagle Vale and St. Andrews.

The land designated 'No build area' on the Environmental Constraints Map' in CLEP 2015 is not identifiable to the unaided eye from the Eastern Edge lands, as it is hidden by the ridges mentioned above. The canopy of vegetation in the Varroville House garden and associated with buildings outside the lot boundary is visible to the educated eye over the St Andrews Ridge from the Eagleview Road area in elevated East Minto. As noted above, the view opportunities from this area have significantly declined since 2013 as a result of construction of residential development in the area.

The steep and naturally vegetated land of Bunbury Curran Hill and other prominent vegetated hills nearby are clearly evident behind and to the north-west in isolated views, however the land north west of Varroville House and between it and Bunbury Curran Hill is not visible.

2.2 Medium range views

Residential buildings in Kearns and Raby to the south-west are visible from higher parts of the Site, but there are limited opportunities for views from the public domain looking toward the Site from these areas, as the foreground of views are dominated by buildings and landscape associated with the residential development. Views are possible from a short section of Raby Road north-west of Kearns, looking north-west, where part of the west-facing slope and of Bunbury Curran Hill are distantly visible, with the western part of the Site largely screened by topography and vegetation in properties south-west of St Andrews Road and by vegetation along the road itself. The 'No build area' is not visible.

2.3 Close range views: roads




2.3.1 Hume Motorway

Part of the Site is potentially visible to travellers on the Hume Motorway over a short section between the overpasses of St Andrews and Campbelltown Roads. This potential view orientation is of special relevance to the 'No build area' and is referred to in Cl. 7.8(a) of CLEP 2015.

The view is at an upward angle as the south-eastern part of the Site is above the road in relative



Map 3 (2010 image)
 Evolving constraints on visibility

- Features that constrain views
-  Ridges
 -  Cuttings
 -  Vegetation

 Potential views from motorway

 Approximate Site Location

 Not to Scale

elevation. The land toward which views would be directed is the foot or side slopes of the main ridge that slopes down from north to south through the southern half of the Site (see Maps 2, 3, 5 and 6).

The ridge blocks views into the centre, north-west and north parts of the Site from the Motorway (see Map 2). If it was visible, the ridge would form the horizon to views. However, for reasons set out below, the ridge is either of minimal or no visibility from the Motorway. This is a result of the shape of the topography in the foreground and intervening features such as cuttings and vegetation.

The slope that would be visible from the Motorway, if intervening features are ignored, is convex on the west part of the Site and concave on the east (see Map 2). A minor extension of the main ridge runs down from the north to the south east approximately toward the entry of the Jackaman period entry road from St Andrews Road, the alignment of which is currently marked by a dense hedge-like stand of vegetation, mainly comprised of African Olive and Coral trees. On the south-east side of the Site there are stands of remnant vegetation in a drainage line and crossing the boundary into adjacent land to the east.

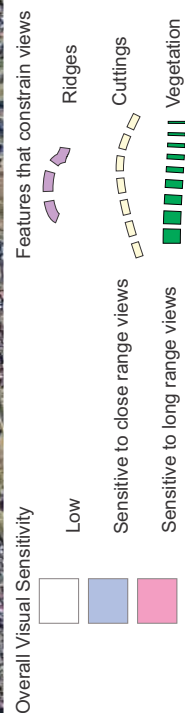
Although quite low in form, the vegetation on the Jackaman road alignment forms the predominant horizon of the few view opportunities that occur fleetingly from part of the Motorway. Isolated significantly taller trees in the Varroville House garden and some individuals associated with the outbuildings south of the house lot are only partly visible.

The likely visual exposure of the Site was anticipated in 2014 to extend to the alignment of the main ridge through the south-east part of the Site (see Map 3). The rose-coloured fill on Map 3 indicates what was considered the likely extent of visual exposure to closer views, including views from the Motorway and from St Andrews Road, which runs along the south-west side of the Site. The blue arrows indicated potential view opportunities. Map 3 shows the visual exposure that was anticipated in 2014, over a 2017 NearMap aerial image.

What became evident in reviewing the visual exposure of the south-eastern part of the Site to views from the Motorway in 2017, is that the visual exposure of the Site has significantly declined, as a result of landscape works undertaken in the Motorway reserve and also as a result of natural regeneration of vegetation. A combination of road cuttings, slope and vegetation, work together to minimise the view into the Site. The views that were formerly open or filtered by foreground vegetation only a few years ago are now largely and increasingly blocked by the growth of vegetation.

To illustrate this, Map 3 is provided to assist in showing how constraints on visibility from the Motorway have evolved. Map 3 was prepared with a NearMap aerial image from 2010. Features that constrain views from the Motorway such as ridges, cuttings and vegetation are indicated. The wide and largely bare median areas between the Motorway carriageways present in 2010 are evident as a light, sandy-coloured band on the image. Some of the blue arrows indicate potential views of parts of the Site from the Motorway that were potentially available at the time the image was captured. The foregrounds of the view indicated by the arrows appear relatively unconstrained by foreground screening features in the aerial image underlying Map 3.

Map 3 can be compared to Map 4, a 2017 aerial image at the same scale. In the intervening six years, blocks of vegetation have been planted on the Motorway median areas and verges and



Approximate Site Location



Map 4 (2017 image)
Sensitivity constraints to be assessed

have grown substantially. These are visible between the carriageways, throughout the potential visual catchment on the Motorway identified above, for example, as shown without any over graphic overlay, on Maps 5 and 6. These limit potential views outward to narrow breaks between blocks. The blocks are rectilinear in shape and relatively close together, meaning that the direct views toward the Site exist only between blocks and the views are perpendicular to the line of travel. As a consequence, particularly when considering the average speed of travel of potential viewers with a speed limit of 110km per hour, views are not only highly restricted in availability but also fleeting, at best.

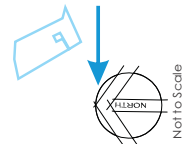
In many cases, the potential for a view between vegetation blocks is then blocked at a slightly greater distance, by vegetation in the road reserves. Vegetation is present between the carriageways and the Site in the reserve between the north-west side of the Motorway carriageway and the Site. This vegetation has also grown significantly between 2010 and the present (see a comparison between Maps 3 and 6, for example). Land that is not part of the Site also intervenes in the view line, some of which also carried tree vegetation that causes screening or blocking of views from the Motorway, in particular a band of vegetation associated with a riparian area that crosses under the Motorway.

To further illustrate the evolving foreground landscape and decline of visibility of the Site from the Motorway, a potential viewing location with lower speed view opportunities, that has become significantly screened by vegetation that is associated with the Motorway, is the on-lane to the Motorway for south-bound traffic from Campbelltown Road. The extend of vegetation growth in the vicinity of the on-lane is clear if Maps 3 and 6 are compared. Where there was as recently as 2010 a significant area clear of vegetation from which there may have been a view toward part of the Site in that vicinity, in 2017 the window of opportunity has largely been closed down and the Site is now of minor visibility. This will be shown in more detail by means of a photomontage, shown and discussed later in this report (see photomontage for View Point 08) below.

Map 4 shows, with a transparent blue shading, the area that had been anticipated as potentially sensitive to close views in the RLA2015 report. Observations from the Motorway and from adjacent residential areas in Bow Bowing, St Andrews and Raby in 2017 indicate that the area identified was conservative, as it is considerably larger than what is exposed to close views, in reality. Photomontages have been subsequently prepared, representing views from several locations with potential views of this area (see key Map 5), which demonstrate the low visibility of this part of the Site and the low potential for any visual impacts of the proposed development (see Chapter 4).

There is thus very little exposure to close views from the Hume Motorway. The views are highly constrained by vegetation in the reserves between the widely separated carriageways, riparian vegetation in the creek line crossed by a bridge between the two overpasses and by vegetation in the subject Site. As the view is in an upward direction and the foreground formed by land outside the Site and between it and the Motorway is convex in topography, there is little of the south-eastern slope of the Site that is visible. The low vegetation associated with the former 1950s Jackaman period road to Varroville House from St Andrews Road, mostly of African Olives and Coral Trees, forms most of the horizon, above and behind which are the canopies of individual remnant trees of cultural vegetation associated with outbuildings and possibly the Varroville Houses gardens further to the north. The remainder of the Site is not visible.

A Google Streets image is provided as an insert to the rendered photomontage for View Point 08



Approximate Site Location

Views of special heritage significance



Area with visual resources of seclusion, potential low visual exposure, existing access, appropriate sites for buildings, regrowth vegetation, natural topography and water bodies

Area with visual resources of the open setting, landscape fabric and views associated with Varroville House



Potential expansive views outward
Bushland reserve and rehabilitation area

Map 5 Strategic opportunities

by VI, to give an indication of the composition of the 'worst case' view from the Hume Motorway, as it is illegal to stop to take photographs from the carriageway. Given the traffic speeds on the road, the many distractions of driving in multi-lane traffic and the factors which limit direct or sustained views, the view from the Motorway are not considered to be significant. The view is undated, however it was downloaded from Google Earth in 2014. A photomontage has been prepared to represent a similar view taken from the verge of the Motorway in 2017 (see the photomontage by VI for View Point 09). The Google Streets image from a similar location is shown as an insert to the photomontage.

With regard to the east side slope that is east of Varroville House and on part of which are former contour trenches associated with an historical vineyard, the view of this slope is obscured to views from the Motorway for south-bound viewers by a ridge approximately parallel to the Motorway on the former Scenic Hills Riding Ranch land (see Maps 2, 3 and 5). North-bound viewers have no significant view of this part of the Site either, as it is obscured by vegetation and foreground topography.

Map 5, which has been modified from the corresponding map in the RLA 2015 report, shows the opportunities that were identified for potential use of the Site as proposed in the Masterplan for the Site prior to the rezoning. The opportunities analysis remains relevant, as the proposal in the DA follows the Masterplan closely.

2.3.2 Campbelltown Road

A view from an isolated location is possible from land west of the reserve of Campbelltown Road as it leaves St Andrews north-bound, looking north west (see Figure 4.1.1.11 in the Davies and Britton report and a corresponding photomontage for a similar location, View Point 07). The existing view (see Figure 07 existing) contains part of south east slope of the north-south ridge that runs through the south-eastern half of the Site, on which Varroville House is situated. The roofs of outbuildings and what may be part of the roof of Varroville House are visible but more easily inferred by the presence of taller trees in the gardens. A narrow area of grassy landscape is visible down slope, with scattered small trees. This is an area east of the elbow in the former Jackaman driveway, which turns to the north at one point to run toward the group of outbuildings outside the Varroville House lot. What appears to be a vegetated ridge across most of the view of the Site is vegetation on the alignment of the Jackaman driveway. Above and behind this, individual taller trees are visible, mainly cultural vegetation associated with the outbuildings outside the house lot and others in the Varroville House gardens. A small part of the ridge occupied by the lower significance contour trenches of the former vineyard that is outside and north of the 'No build area' is visible from this location. The foreground of the view between Campbelltown Road and the Hume Motorway beyond has a rural appearance, but is actually an infrastructure corridor. The extent of growth of vegetation in the vicinity of the Motorway in the intervening period between the Davies and Britton report and the present can be observed by comparing their Figure 4.1.1.11 with the existing view in the photograph taken by VI (Figure 07 existing). The visibility of the south-eastern part of the Site has significantly decreased in the intervening period.



Approximate Site Location



Views locations analysed for planning proposal



Additional view locations analysed for DA



Map 6
Visual analysis
Photomontage locations

2.3.3 St Andrews Road

Close views are possible from St Andrews Road, which runs from south-east to north-west along the southwest boundary of the Site after leaving the suburb of St Andrews. The road crosses a ridge that runs approximately north-south through St Andrews slightly before the Hume Motorway overpass bridge. Direct views are possible into some of the southern part of the Site before reaching the intersection with Spitfire Drive adjacent to Mt Carmel School, after which views are intermittently, to heavily, screened by vegetation in the road reserve and inside the Site. A short section of Spitfire Drive provides an axial view into the southern part of the Site and in particular the ridge though that part of the Site, on which Varroville House and one of its former road accesses, remnant vegetation and the roofs of some outbuildings are visible.

2.4 Close range views: residential areas

The adjacent fringes of the suburbs of St Andrews and Raby, to the south east and south west respectively, provide potential views into the southern part of the Site. The road patterns and built form in general do not provide axial or focal views, but the closer streets such as Ballantrae Drive and Lochalsh Street in St Andrews and Spitfire Drive and Thunderbolt Drive in Raby are locations in which residents may view parts of the Site. The south-eastern part of the Site is most visible (see photomontages in this report that show views from nine external locations within relatively close viewing distances (see key Map 6).

2.5 Summary of visual exposure

The overall visual exposure of the Site to views is summarised on Map 2, Potential exposure to all views. Closer analysis of the visual exposure of the Site in 2017, previously assessed in December 2013 and again in 2015, showed that our assessment for the Planning Proposal as summarised in Map 2 had been conservative and that the visual exposure to close views from the south-east in particular, was less than had previously been assessed and is also declining.

The summary figure that shows higher visibility, indicated by a rose-coloured transparent overlay, was shown to relate to two visually distinctive parts of the Site, ie. The ridge and steep side slopes of Bunbury Curran Hill in the north west, which are visible in the more distant views, and the south-east side and foot of the ridge through the southern half of the Site, part of which is potentially exposed to limited, closer views.

The visual character of the two areas is quite different, one the heavily vegetated ridge with steep side slopes, compared to the low, largely cleared ridge with its remnant cultural landscape features and buildings. The area of low exposure is also distinctive, with cleared paddocks, many water bodies and riparian corridors, stands of both remnant and regenerating vegetation and undulating topography. The slightly steeper west-facing side slopes are considered to be of medium exposure, predominantly to distant views from residential areas to the south west and in distant views from part of Raby Road. Notwithstanding this distant visibility, the proposed development of the Site would be of minimal visual presence, given the viewing distance, absence of built form, proposed landscape treatments and likely effects of the passage of time. The area of medium exposure is

in Stages 2 and 3 of the proposed development, estimated not to be put to use before the years 2105 and 2131, respectively. Closer analysis of the likely visibility of development proposed in the DA in the south-east part of the Site and in particular the area designated as the 'No build area', assisted by photorealistic photomontages, showed that the area over which there are close views is very limited. Not only is visibility limited, but the development proposes only lawn cemetery use, as permissible, removal of weed vegetation and addition of minor avenue or alignment plantings of vegetation, associated with roads. The regeneration of riparian vegetation, retention of existing native vegetation and minimal addition of plantings, as shown in the photomontages, will cause additional partial screening of the Site in those views that remain.

To put the evolving changes to visibility of the south-eastern part of the Site into context, it is to be noted that the 'No build area' of the Site is almost totally within the areas proposed as Stages 4 and 5 of the development. The area is to be used solely for lawn cemetery use and is estimated as not being developed, other than for work to conserve the outbuildings that are of heritage significance, before the years 2141 and 2156, respectively.

2.6 Visual sensitivity

Our previous assessments, confirmed in 2017, is that the Site exhibits two areas of visual sensitivity (see Map 4), one to distant views, in which the land of the escarpment in the north-western part of the Site and the steep slopes is sensitive and one to closer range views. The latter is land in the south-eastern part of the Site and includes the face and potentially the side slopes of the ridge on which Varroville House and most of the built structures and designed landscape, one original road and evidence of past land use practices, are situated.

Visual sensitivity has been considered both a constraint and an opportunity for an appropriate use of the Site in the FJLA Master Plan and in the DA. The DA recognises the low sensitivity of most of the Site that is inside the area designated as Stages 1 and 2, where all six of the buildings proposed in the DA are situated. None of the buildings would be significantly visible from locations outside the Site and would have no significant visual impact on the public domain.

The areas designated Stages 3-5, which include the area of potential sensitivity to closer views, is almost exclusively devoted to lawn burials, while the upper part east of Varroville House, in Stage 3, includes the vineyard trenches, part of which is proposed to be returned to vineyard use, as an appropriate interpretation and statement of significance of the item. This vineyard as a feature would be visible in some views, as evidenced in the photomontages. However, as it would also have the appearance of a rural use of the land that can be seen in other parts of the Scenic Hills and is a land use that is permissible without consent in the zone, it would be compatible with the existing and desired future character of the Site.

The grassy, open character of the south-east part of the Site, that has specific protection as a 'no build area' in CLEP 2015 would be retained in the DA, acknowledging the higher sensitivity of this area. Reassessed in 2017 in relation to the DA, the distinction above between the areas of sensitivity remains valid. However, a closer examination of the likely visual effects of the proposed development on the south-eastern part of the Site, assisted by more detailed assessment of views and the photomontages, reveals that the visibility of this part of the Site from residential areas is generally low and from close range, in particular from the Hume Motorway, is declining.

The CMP, in proposing an extended conservation zone/curtilage for Varroville House has included the cultural and natural landscape resources associated with Varroville House formerly outside its lot boundary curtilage and owned by others into a conservation zone/curtilage. The DA provides another layer of certainty that the scenic and cultural resources of the Site will be protected as proposed in the CMP.

2.7 Opportunities

Our assessment of the opportunities presented by the Site for the protection and enhancement of the scenic resources, prior to development of the concept for the Site reflected in the DA, is shown schematically on Map 5. In the DA, the distribution of buildings, infrastructure, cemetery functions and uses, landscape design and rehabilitation of ecological resources on the Site, closely follows the visual opportunities map.

The boundaries on the map were not intended to be interpreted literally, but to indicate that there would be different but overlapping criteria for the attainment of the visual objectives of the zone that now applies to the Site. The opportunities identified can also be seen as constraints in relation to conserving the scenic resources of the Site as outlined in 3.2 above.

As a means of testing the performance of the DA in relation to the Site's sensitivity to visual impacts and the opportunities identified for potential use as a cemetery, a series of photorealistic photomontages were prepared, as described in the next chapter.

3.0 Photomontages and certification

3.1 Purpose of this section of the report

RLA were engaged by the CMCT independently of advice on visual impacts of the proposed development, to provide certification of the adequacy and accuracy of photorealistic photomontages which form the basis of the visualisation of the likely visual effects of proposed development of the Site in the DA to be submitted to Campbelltown Council as the consent authority.

3.1.1 Relevant experience with photomontage certification

Supervision of the preparation of both block model and photorealistic photomontages is a routine part of the practice 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 and are familiar with this area. RLA have been involved in urban design and heritage view studies for planning proposals and large scale developments in Brookvale, Dee Why, Menangle, Prospect, Harbord, Somersby, Gosford, Putney Hill, North Ryde, Parramatta, Rosehill, Homebush, Terrigal, Wentworth Point, Shepherds Bay, Gladesville, Yarrowarra and other locations. We have also been involved in a number of projects and planning proposals in which the Department of Planning and Environment or other government authorities have requested view analysis work and photomontage certification, the visualisation work for which we have supervised.

3.2 Visual impact study by Virtual Ideas

The Visual Impact Study by VI addresses potential visibility and visual impacts on the public domain of the setting of the DA, based on advice from RLA on the locations from which views should be captured. The locations have in most cases been chosen by RLA to represent those which were previously assessed and from locations from which view impacts were visualised in reports for the Planning Proposal which led to rezoning of the Site under CLEP 2015.

The Visual Impact Study by VI accompanies the DA as a free-standing document, which provides the detail of the technology employed in preparation of 10 photomontages. The photorealistic photomontages derived from the Visual Impact Study by VI are analysed and discussed below and are attached to this report

With one exception, the locations from which views were to be captured in the photomontages were provided to VI by RLA in graphic form (ie. as locations indicated by pins on a Google Earth KMZ file), as photographs or representative graphics of the views from those locations taken in earlier studies, and also as a table of the GPS coordinates of the view places for photography.

RLA further advised VI on fine-tuning of the locations for photography. This is because in the intervening period between capture of the original photographs provided by RLA, or capture of Google Earth images used to indicated the photograph locations to be used, conditions had in some cases changed. For example, growth of vegetation, construction of buildings or the presence of temporary features, such as parked cars in views, required adjustments to be made to the

photograph locations. RLA also advised VI in the appropriate focal length for the photographs to be used (see discussion below). Advice was also provided on the bearing of photographs to be used, so as to capture as much of the Site as was reasonably possible in the circumstances from each view place. VI had the photographs taken independently. A number were taken from each view place, covering a wide field of view, so as to ensure that the photographs to be used captured the whole Site.

A summary of the technology adopted by VI and assumptions made in rendering the details of the photomontages is below.

The locations from which photographs used for the visualisations in the Visual Impact Study by VI is shown on Map 6. The location of the photographs used to prepare the photomontage for view place 01 by VI was chosen on-site on the advice of RLA, in consultation between the VI photographer, a surveyor who surveyed the location and RL of the camera at each view place and a representative of TBE, who could advise on the likely effects on the view from that location of the future vegetation, in particular the riparian and rehabilitation landscape that could affect views toward the dams.

Three new locations, that had not been assessed by RLA for earlier reports, were added to the locations for photography for preparation of photomontages (locations 7, 8 and 9 on Map 6), Google Earth images from these locations, downloaded from the internet, were provided to VI to assist their photographer and surveyor to locate the view points for capture of photographs.

For reasons explained below, for full certification, it is necessary that the location of the camera used to capture the images used in preparation of photomontages is surveyed, ie, that the XYZ coordinates of the camera location are known. In some cases, additional 3D reference points need to be identified that would be visible in the photographs, so the 3D model of the proposed development can be accurately located relative to the photographic image. This could require surveying of features in the view, such as telegraph poles, kerb lines and similar features, or may require erection of height poles or similar temporary items, the locations of which are surveyed and added to the survey along with the camera location.

The VI documentation of how the photomontages have been prepared shows extra 3D reference points in relation to most view places, as a check and a demonstration that the location of the 3D model of the Site can be accurately related to the camera location. However, in relation to view points 8 and 9, which were nominated as places associated with the Hume Motorway that have potential views of the south-east part of the Site, the surveyors were prevented from assisting with surveying the camera locations adjacent to a major motorway. RLA had nominated the two view points based in personal observation of the views from those locations in 2014, however views from the Motorway had not been taken, as it is illegal to stop and in addition is contrary to RLA OH&S protocols to take photographs on a motorway or while driving.

As a result, while the VI photographer captured the views used to prepare the photomontages for view points 8 and 9, the camera location could not be surveyed and GPS coordinates of the view point were relied on instead, for preparation of the photomontages. Notwithstanding, as noted in the Visual Impact Study, VI have undertaken camera matching in similar situations many times and are confident that the view shown in the photomontages from these two locations is as accurate as is reasonably achievable. In addition, we note that the Site is not significantly visible from view point 9, as a result of growth of vegetation in the foreground of the view and in the photomontage for view point 8, on-lane to the Motorway from Campbelltown Road, the Site is only partly visible.

3.3 Role of RLA in reviewing View Impact Study by VI

RLA were commissioned to advise on appropriate methodology for preparation of photomontages and to advise on the views that should be given priority in fairly representing the likely visual effects of the proposal on the most important viewing locations, while also meeting the concerns of the provisions of Clause 7.7 of CLEP 2015, with regard to views of the 'No build area'. Potential effects on these views are important to understanding and assessing the likely visual impacts of proposal in the DA.

3.4 Specific objectives for RLA in this report

The specific objectives for RLA with regard to the certification of the photomontages were;

1. to verify that the viewing locations chosen for the preparation of photomontages are;
 - comprehensive of the relevant kinds of views affected;
 - representative of the relevant features in the composition of each kind of view;
 - captured by photographs taken in a standardised way with a camera of appropriate quality, with a lens of appropriate focal and at high resolution;
 - surveyed or geotagged, so the location of the camera and its height above ground can be added as a 3D reference point to the existing 3D model of the proposed buildings and landscape/topography.
2. To certify that the photomontages prepared are as accurate as is reasonable in the circumstances and represent best practice, by satisfying the following criteria;
 - there is a good fit of the proposed development Site to existing survey data and items either on the survey or which can be added to it, if necessary;
 - there is a good fit of the 3D model of the proposed development to items visible in the photographs, provided that they satisfy the criteria in (1) above;
 - the photomontages faithfully represent the likely location, height, bulk, mass and scale of the proposed development including buildings and landscape design;
 - the rendering of the effect of vegetation is representative of the likely effects on views.

3.5 Limitations

This chapter of the report concerns only the process and methodology of preparation of the photomontages that accompany the DA and the certification that they represent best practice and are a reasonable representation of the likely appearance of future development, if the project proceeds to the construction of the development in accordance with the plans in the DA. The photomontages are appended to this report at Appendix 1.

3.6 Principles of verification of photomontages

For the certification of photomontages, the fundamental requirement is that there is a 3D computer model of the proposed development that can be accurately located and merged with representative photographs taken from key viewing places, to produce a photomontage.

VI were provided with a 3D model derived from the survey plan of the Site and of the buildings located in relation to the survey of the Site, including any site works, by FJMT. The landscape plans prepared by NSB were used to populate the model with a layer of models of trees and shrubs at the heights for the individual species that are specified on the planting schedules of the NSB landscape plans.

The location and height of the 3D model of the building in relation to the photographs used as the base for the photomontages must be verified with respect to surveyed features of the existing development Site and the location of features of the surrounding environment, interpolated from aerial imagery.

The key to being able to certify the accuracy of the photomontage resulting from merging the 3D model and photographs is being able to demonstrate that the 3D model of the proposed building envelope has a good fit to known surveyed features of the existing development on the Site and of other fixed features either shown on the survey plan or interpretable from aerial imagery, which are visible in the photographs.

The Visual Impact Study by VI shown in relation to all view points, other than points 8 and 9, that extra 3D reference points were identified to act as cross checks on the horizontal and vertical location of the 3D model of the Site, buildings and landscape.

The 3D models of the survey information and of the proposed buildings and landscape are then merged with digital photographic images of the existing environment.

A single image photograph is the best base onto which to fit the computer model of the development proposed. This is because the conventions of perspective which are used by the computer software to generate a 3D image of the proposed development area are relatively consistent with the geometry of a single photographic image, because both have a flat ground plane and one centre of view.

3.7 Focal length of lens for photographs

The camera images for the photomontages need to be of sufficient resolution taken with a lens of low distortion. The focal length of the lens used needs to be appropriate for the purpose and the focal length of the lens used to take the single frame photographs has to be known and standardised as far as is possible.

The reasons for using a specific focal length is determined by the vertical and horizontal scale of the subject of the view. It is conventional to use a 'normal' lens to take landscape photographs, for example a 50mm lens on a 35mm format film camera, as when reproduced as large scale images, the objects in the image appear of 'normal' scale. However, in photographing large sites, that convention cannot be adopted other than for relatively distant views. In the current project,

distant views are useful to analysing the visual impacts of the proposal, but closer and wider views are also necessary.

It is a common problem in architectural photography that in close views a building or landscape cannot be encompassed in a single image. The focal length of the lens used to take the image from which the photomontage will be derived is not critical, as long as it is known and standardised.

A further reason for choice of focal length with regard to visual impacts concerns the composition of the view containing the view subject. It is necessary for images used to demonstrate the principles of visual impact to contain the components of the view that comprise the whole composition, context or setting of the subject. In this project, the main issues of visual impact concern not only the appearance of the proposed buildings and designed landscape, but also the view in an expansive context..

As a practical matter, therefore, it is not possible to represent the composition of the views from close range in some relevant viewing places, without using a wide-angle lens. The horizontal and vertical scale relationships are such that a 'normal' lens could not capture the appropriate context.

VI took the photographs used under standardised conditions on the advice of RLA, with Nikon D810 DSLR using a 24mm focal length lens. 24mm focal length is a standard commonly adopted for architectural photography. The camera is a full-frame professional quality camera with a maximum resolution capacity of 36.3Mp.

3.8 Checking the montage accuracy

The accuracy of the fit of the computer model of the proposed development to the photographs for the photomontages should be checked in more than one way. The model is checked for alignment and height with respect to the surveyed fixed features which are visible in the images and with a wireframe model of the terrain of the Site. The alignment of the model is also checked with fixed features in the view that are on the survey, to ensure an accurate 'fit'.

It is not possible for a perfect fit to occur, because of minor distortions that occur with the camera lens and because of significant differences that occur in the visibility of reference objects caused by the distance between the view place and the item used as a reference point.

3.9 Assumptions made in rendering photorealistic images

As the proposed development is a cemetery and has a small number of structures compared to the large number of landscape items, the assumptions made in rendering vegetation are important to achieving realistic outcomes.

RLA were advised by VI that all trees, shrubs and other landscape features that are shown on the DA plans were set up in the 3D terrain model of the Site as models of the corresponding items (eg. trees), and not simply rendered over the underlying model, as is sometimes done with complex items like vegetation. VI have an extensive library of real models of trees and shrubs that are used to render the appearance of the proposed landscape items individually.

As a result of this approach, the effect of vegetation on the landscape plans by NSB in specific views is realistic, as the size, shape, colour, appearance of foliage and the density of the crowns of the trees is realistic at any distance represented in the photomontage. As noted above, the trees and shrubs were rendered at the early mature age nominated in the planting schedules prepared by NSB. This is realistic, given the long life span of the proposed development, as set out in the staging in Chapter 9 of the Landscape Design Response report by FJLA. For the sake of extra realism, approximately 20% of trees and shrubs in each category was shown at 10% below the stated height potential.

Natural vegetation that is proposed to be retained was shown in its existing appearance. Areas of potential vegetation rehabilitation were not modelled, as they were shown on the landscape plans. The photomontages in that regard are therefore conservative, as they don't show the potential increase in screening of views that would occur over time as rehabilitation growth of vegetation occurs.

As a result of the assumptions made in rendering the photomontages, we can certify that this aspect of the preparation of the images is as accurate as is reasonably possible in the circumstances.

3.9 View location documentation

The view locations and views were documented by VI. RLA advised on the best images to use to prepare the photomontage, based on the most representative coverage of the Site in the view.

3.10 Certification of photomontages

Based on the information provided to us by VI, a review of their methodology and the process undertaken for the preparation of block-model photomontages, RLA certify that the proposed development is represented as accurately as is reasonable in the circumstances. The photomontages therefore can be relied upon as objective visual aids for the purposes of the assessment of potential visual effects and impacts of the DA.

3.11 Analysis of the photomontages

Photomontage 01

Photomontage 01 is intended to represent a view from adjacent to the boundary of the Varroville House lot, on the approximate alignment of windows in the south-west wing of the house, looking north-west. As noted above, the owners of Varroville House did not permit access the property for the purposes of preparation of the photomontage and as a result it does not and cannot represent a realistic view from the interior.

We understand that staff of the OEH advised that no buildings or structures such as headstones should be visible in this view or on a similar alignment of view from Varroville House toward the dams, two of which are visible in the image.

The rendered photomontage shows a part of a road in the foreground, manicured lawn cemetery,

landscape associated with the dams, riparian vegetation, CPW and on the horizon to the right, vegetation on the crest of Bunbury Curran Hill. No buildings or significant structures are visible.

Photomontage view point 02

Photomontage 02 is a view from St Andrew Road, with the current entry to Varroville House on the left.

The rendered photomontage shows a part of a road on the right in the future lawn cemetery that is part of Stage 5. The road runs at first south west from the outbuildings group (which is hidden from view by vegetation) and then loops back toward Entry 4, which would be out of view to the right. The road is informally marked out by indigenous native vegetation species. On the left is a border planting of vegetation that surrounds a burial 'room'. No buildings or significant structures are visible.

Photomontage view point 03

Photomontage 03 is a view from St Andrew Road, near the intersection of Spitfire Drive, approximately toward the Site of the outbuildings that are outside the Varroville House lot to its south.

The rendered photomontage shows a part of the future lawn cemetery that is part of Stage 5 and part of the loop road visible in photomontage 02. The outbuildings group is on the horizon but is hidden from view by vegetation. The former vegetation associated with the Jackaman period driveway alignment has been removed and the alignment is marked out discontinuously and informally by small trees. No buildings or significant structures are visible on the Site.

Photomontage view point 04

Photomontage 03 is a view from St Andrew Road, near the intersection of Ballentrae Drive, approximately toward the proposed Site of the chapel.

The rendered photomontage shows that the retention of existing vegetation and growth of vegetation in the landscape of Stage 1 of the DA and the sparse vegetation associated with a road in each of Stages 2 and 5 of the development would screen views of the proposed development. The dark band of vegetation in the view to the right of the car in the image, which would be on the overpass over the Hume Motorway, is growing on the batter of the Motorway and is likely to soon block the view of the Site. No buildings or significant structures are visible on the Site.

Photomontage view point 05

Photomontage 05 is a view from Lochalsh Street, St Andrews, across houses on the low side of the street. Varroville House would be in the approximate centre of the view if it was visible through the vegetation that intervenes in the view line.

The rendered photomontage shows the proposed vineyard on part of the vineyard trenches, above the house with a dark, tiled roof on the right side of the view, as a relatively even area that is greener than open grassland on most of the Site. There are two road alignments potentially visible, but the open screening provided by informal avenue plantings largely disguises them. The Site retains a rural character. No buildings or significant structures are visible on the Site.

Photomontage view point 06

Photomontage 06 is a view from St Andrews Road, St Andrews, at a high point where the road crosses a ridge south -west of the Site.

The rehabilitation of vegetation in Stage 1 of the DA would screen views of the proposed development. No buildings or significant structures are visible on the Site.

Photomontage view point 07

Photomontage 07 is a view from the infrastructure corridor north of residences in Bow Bowling, adjacent to Campbelltown Road. An image taken from a similar location in 2010 is Figure 4.1.1.11 in the Davies and Britton report.

The rendered photomontage shows that the proposed development of Stages 3, 4 and 5 proposed in the DA would not be of significant visibility, even if no changes occurred in the foreground in the intervening period. The only change evident would be the reinstatement of part of the vineyard, which is visible as a relatively even, green area on the right of the view, where it contrasts with the colour of grassland (far right). No buildings or significant structures are visible on the Site.

Photomontage view point 08

Photomontage 08 is a view from the verge near the on-lane to the Hume Motorway from Campbelltown Road. The Site is largely hidden from view by vegetation and topography.

The rendered photomontage shows that the proposed development of Stages 4 and 5 proposed in the DA would not be of significant visibility, even if no changes occurred in the foreground in the intervening period.

Photomontage view point 09

Photomontage 09 is a view from the verge of the Hume Motorway north of the on-lane from Campbelltown Road. The Site is largely hidden from view by vegetation.

The rendered photomontage shows that the proposed development of Stages 4 and 5 proposed in the DA would not be of significant visibility, even if no changes occurred in the foreground in the intervening period.

Photomontage view point 10

Photomontage 10 is a view from the Spitfire Drive looking approximately north. The Site is largely hidden from view by vegetation and topography.

The rendered photomontage shows that the proposed development proposed in the DA would not be of significant visibility, even if no changes occurred in the foreground in the intervening period. No buildings or significant structures are visible on the Site.

4.0 The DA in relation to visual impacts

The visual character of the existing Site has been described above. Its character is typical of rural land in the vicinity and in adjacent parts of the Scenic Hills and it demonstrates overall a similar range of visual attributes to land adjacent to it to the south east and north-west. In common with other areas of the Scenic Hills, the Site is predominantly of an open and largely cleared character, with a small number of buildings, stands of vegetation and water bodies.

Locally, the north-western part of the Site in Bunbury Curran Hill is more prominent as a result of the height, slope and vegetation of the higher ridge. That part of the Site is zoned RE1 Public Recreation. The DA does not propose any active use of the land zoned RE1. However, some rehabilitation of the degraded Moist Shale Woodland (MSW) vegetation is proposed, including management of the African Olive infestation, which would have benefits for the scenic quality and recreational values of the land.

Varroville House, its formal garden and part of its curtilage and setting is adjacent to and surrounded by the Site and although not part of the Site, is visually integral to it.

The CMP contains specific conservation policies to ensure that existing and future use of the Site respects and promotes the cultural values of the place, its fabric, setting, landmarks, views and vistas. A heritage curtilage has been identified in the CMP to ensure that the heritage values of Varroville House are protected and promoted. The curtilage includes all of the Varroville House lot and substantial areas of the Site outside the lot, encompassing the group of outbuildings south of the house, original carriage drive from Campbelltown Road to its east, former vineyard terraces north east of the house and land associated with dams north-west of the house, among other features. We understand that a slightly larger curtilage has been proposed by the OEH which includes a larger area north west of the house and land outside the Site to the south-east and east.

4.1 Staging of the proposed development

The DA is for the development of the Site as a cemetery, in five stages. The assumptions for the life span of the stages is set out in the Landscape Design Response report by FJLA in Chapter 9, along with a map indicating the areas of the Site identified with each stage. Stage 1 occupies what is described as the northern part of the Site, is the largest area devoted to any stage and would have the longest life span until reaching capacity in a minimum of approximately 85 years' following commencement. In Stage 1, all buildings and services would be constructed along with Entrances A-C and the outbuildings associated with the Varroville House group would be restored. Stages 1, 2 and 3 would accommodate a variety of interment types as set out in Chapter 7 of the Landscape Design Response, while Stages 4 and 5 are proposed solely for lawn burials. It is anticipated that Stage 4, the first stage occupying some of the 'No build area' identified in CLEP 2015 would not begin to be constructed for approximately 122 years' from commencement.

4.2 Visual resources

Re-zoning of the Site for the purpose of a cemetery, as permitted by CLEP 2015, recognises the potential for that use to be compatible with the attributes of the Scenic Hills. The visual resources that the Site represents as an example of land in the Scenic Hills were identified in the RLA reports of December, 2013 and reviewed in 3015, as follows:

1. Prominent steep, vegetated land.
2. Grassy, open areas.
3. Existing and potential lookout and ridge trail locations.
4. A network of internal former roads and tracks.
5. Secluded areas of low visual exposure.
6. Water bodies, riparian corridors and remnant vegetation.
7. Regrowth of indigenous native vegetation.
8. A small number of buildings of a rural scale and character.
9. Buildings located in a traditional manner.
10. Open setting of Varroville House.
11. Cultural landscape fabric and vegetation and evidence of existing and former agricultural practices.

4.3 How does the DA protect the visual resources?

An assessment of how the use of the land for the purpose proposed in the DA conserves, protect or enhances the relevant visual resources of the Site follows. The photomontages prepared to show the potential views from urban Campbelltown assist in showing how the existing visual resources will be protected in the DA.

4.3.1 Prominent steep, vegetated land

The high heritage, scenic significance and public accessibility potential of the northern section of the land, noted by the Davies and Britton study and in the RLA report of December, 2013 for the Planning Proposal is acknowledged in the provision of public access to the RE1 zoned land for public use of that land for recreation purposes. The ecological values of the land vary from low to moderate MSW (see Ecological Constraints Assessment by TBE), with significant areas invaded by African Olive. The ecological values are intended to be upgraded by gradual removal of weed species and revegetation with MSW species. This aspect of the DA would retain and augment the significance of this resource for the public and as a destination. Steeper land in the adjacent E3 zone that is excluded from cemetery use would receive the same management, consistent with having similar visual qualities.

4.3.2 Grassy, open areas

Retention of the visual character of grassy, open areas is relevant to the maintenance of the rural character of the land if seen from external locations such as the urban areas of Campbelltown and the Hume Motorway. The visual exposure of the main grassy open areas of the Site, other than those exposed to the isolated locations which provide closer views is low, as shown in the photomontages. The existing low visual exposure would also be decreased, where this is intended, by the proposed landscape design by NSB. Overall, vegetation proposed in the landscape plans in the DA is intended primarily for the purposes of wayfinding, definition of spaces, shade and amenity, rather than as screening or view blocking devices. This is consistent with the retention of a grassy character of spaces that are also defined by riparian, rehabilitated indigenous native and newly planted vegetation.

The photomontages show that the proposed use of the Site, in particular the 'No build area', will satisfactorily retain the existing visual resource of a grassy, open character. The Landscape Design Report by FJLA in Chapter 7, Design Elements, shows examples of lawn burials such as are proposed for Stages 4 and 5 in the DA for the south-east part of the Site. In this area, which has been shown to be of lower visual exposure than had been anticipated at the Planning Proposal stage, there is minimal infrastructure of new roads. The only interventions into the existing scenery other than rehabilitation of riparian vegetation and CPW, include the interpretation of the original carriageway route to Varroville House by symbolic plantings, removal of some non-significant and invasive vegetation from the later Jackaman driveway route and conservation of significant outbuildings,

The DA is consistent with the retention of a grassy and open character for the landscape that has that character. Close consideration has been given to specific view lines, vistas, landmarks and cultural landscape features, supported by certified and accurate photomontages that interrogate views from relevant locations. The photomontages show that the area subject to the 'No build area' constraint is of low intrinsic visibility when the management proposed in the DA is rendered realistically. The minimal additional vegetation proposed in that area would partly screen the views into the Site, however that is an outcome of the appropriate landscape design and conservation management proposed. The vegetation is not intended to mitigate impacts by blocking or screening views. The form of burial proposed would be of low visual impacts and would retain the existing grassy, open visual resource.

In relation to vegetation, consideration of the location, height, species characteristics and potential effects of landscape elements on heritage views are addressed by specific policies to ensure the retention of the appropriate setting for Varroville House in relation to views, which include consideration of views from the south and east, specific view lines, vistas, landmarks and cultural landscape features.

The photomontages show that the underlying grassy, open character of the southern and south eastern part of the Site will be retained after implementation of the Master Plan, which has the specific intention of making use of the grassy character of this part of the Site as outdoor 'rooms', defined and partially screened by vegetation associated with the boundaries, the minimal internal roads, remnant existing vegetation and cultural plantings associated with specific heritage items. The photomontages show that the minimal additional planting that is proposed and rendered will both partially screen the grassy areas but also complement the existing character of the Site, without transforming its character into a developed or built one.

The photomontage that represents a view from Varroville House looking north west toward the group of dams adjacent to St Andrews Road, shows that the grassy, open character of the view, one that is said to be of specific historic significance, would be retained. The view is considered to be generally representative of a view on the alignment between Varroville House and the dams, but cannot reproduce the view from the interior of the dwelling. The reason for this is that access to the dwelling has been denied to the applicants by the owners of Varroville House. It was therefore necessary to try to anticipate the alignment of the view from windows of the house, which are partly visible from the Site in the vicinity of the dam group. The view location chosen for the photograph used to prepare the photomontage from Position 01 is outside the fence of the Varroville House lot, on the alignment of a view from windows in the south-west wing of the house. The view appears to be framed or bounded by by cultural vegetation inside the Varroville House lot. The viewing location however is lower than that of a viewer inside the house. This is unavoidable, given the circumstances.

4.3.3 Existing and potential lookout and ridge trail locations

The Site will remain private land, but the current low accessibility to the public will be changed, as areas with potential lookout and ridge trail location will become public in the DA, allowing users to make use of its scenic resources and have access to views of the external environment. Bunbury Curran Hill is a proposed location for a formal lookout. The road near the north-east perimeter of the Site and the site of former vineyard terraces east of Varroville House will provide potential regional-scale views. Use of those sites for informal viewing would not be in conflict with retaining the scenic values of the Site consistent with the provisions of CLEP 2015.

4.3.4 Natural topography and network of internal tracks

The Site has had minor changes to its natural topography over its history of past use and has an existing network of internal informal roads and tracks as part of the legacy of the former riding ranch, in particular in the northern section. The DA Master Plan is responsive to the existing pattern of informal access to the part of the Site that is of low sensitivity to external views (see Map 4). The development does not require significant changes to prominent landform and the relatively natural overall topography of the Site and its rural character would be retained. The most substantial area of earthworks would be associated with the chapel and rear courtyard, which are nestled into the foot of the side slope below the Bunbury Curran Ridge so as to provide an appropriate outlook for the building as a focus for activity in the north-west part of the Site. Roads generally follow the alignment of existing tracks and are kept as close as possible to on-grade, or where this is not possible, minimise cross-falls or run perpendicular to the contours to minimise the need for cut and fill. The majority of new roads and more formal landscape design is confined to the lower sensitivity area of the Site that is of low visibility to external views.

In the south-eastern part of the Site and the 'No build area', there are minimal interventions into the topography, as there are no buildings proposed and only two roads. The gentle topography means that the impact of road building would have a minor and transitory effect on views. New roads would be not only of low visual impacts, but would also be consistent with the existing informal pattern of roads in rural properties in the vicinity.

The existing former Jackaman road, which is not considered to be of heritage significance in the CMP would be removed along with the invasive vegetation that currently marks its location in the landscape, the alignment being interpreted instead by scattered trees. The original carriageway to Varroville House would be reinstated and interpreted by means of a specific pallet of plantings, assisting wayfinding and heritage interpretation of the significance of the road and the outbuilding group south of Varroville House, the significant items of which (slab hut, cottage and coach house) would be conserved, consistent with the policies of the CMP. A landscape design consistent with interpretation of the heritage values of the buildings and past use of the Site is proposed by NSB for the site of the outbuildings.

From the outbuildings group, a new loop road is proposed that runs approximately parallel to the current driveway to Varroville House, before turning south to join the secondary entrance road, Entrance D. The location of the link was determined as a means of reducing potential visibility in views from the south-east, as it runs behind a minor ridge that interrupts close range views, for example from the overpass of the Hume Motorway on St Andrews Road, or the Motorway itself. The road is intended to be informally marked in location by predominantly indigenous native plantings.

A new road links the north-west and south-east parts of the Site, east of and upslope of Varroville House. The visual impacts of the road have been carefully considered, as it crosses the foot of the slope below an area of former vineyard terracing. The visibility of the road has been minimised by being placed perpendicular to the contours and in cut where it crosses a minor ridge east of Varroville House, after which it runs down slope adjacent to proposed riparian rehabilitation associated with a dam in the south-east corner of the Site. The road crosses the drainage line to then run toward the secondary entrance from St Andrews Road in the vicinity of the intersection with Spitfire Drive. Informal avenue planting of predominantly indigenous native species is proposed for this road, to distinguish it from the formal and more distinctive vegetation proposed for the former carriage drive, which it crosses low on the slope of the Site. The photomontages prepared to interrogate the likely visibility of development on the Site and in particular the 'No build area' show that the roads proposed would be of minimal visibility (see Chapter 5).

4.3.5 Secluded areas of low visual exposure

As was shown in the RLA 2105 report and has been confirmed in 2017 for this report, the Site contains significant areas that are of low exposure to existing views from the public domain in Campbelltown. Most of the area proposed to be utilised in Stages 1 and 2 are in this category, other than for the steep, heavily vegetated land zoned RE1 and the lower side slopes south-east of this. Neither area is proposed for any active cemetery use

Within the Stage 1, 2 and Stage 3 areas, there are areas of slightly higher potential visual exposure however, including the upper, cleared slopes on part of the north-east side of the Site. These are proposed for lawn burials only (see Chapter 7.5 of the Design Response report by FJLA) and the nearest road is kept back from the boundary and will be protected from view from the south-west by existing and rehabilitated Cumberland Plain Woodland (CPW) vegetation. The existing character of views from the north-east will be retained, as at the distances from which any views are possible (eg. from Denham Court), lawn burial areas would be indistinguishable from existing grazing land adjacent to the Site.

An area of moderate visibility is adjacent to the north-west boundary of the Varroville House lot and between it and the dams adjacent to the south-west boundary of the Site. This area is of partial visibility from St Andrews Road and Raby, in the Spitfire Drive area and is shown in salmon coloured fill on Map 2. This area is also proposed for lawn burials only, protecting the character of the Site in the limited views available. During utilisation of Stages 1 and 2, the visibility of this area will decrease, as a result of growth of vegetation planted on the road accessed by Entrance C and defining burial rooms in Stage 2 south-west of Varroville House and between it and the Site boundary.

This effect is shown in the photomontage for view point 03 by VI. The character of the area in the foreground of views from Varroville House looking north-west toward the group of dams adjacent to the St Andrews Road is shown in the photomontage for view point 01 by VI, but as demonstrated by the photomontage for view points 03 and 10, visual effects of the proposed development would be minimal.

The DA is therefore consistent with preserving the secluded quality of the areas of low visual exposure. There will be no buildings or significant structures visible other than from inside the Site and the existing landscape and future proposed landscape is capable of absorbing impacts and to ensure that important views inward and outward are not compromised.

The policies in the Master Plan and to the extent that they are relevant, in the CMP, will work together to ensure that the form of development proposed will in most views appear no different from an area of landscaped rural parkland, consistent with its existing rural character.

4.3.6 Water bodies, riparian corridors and remnant vegetation

The existing natural resources of the Site include water bodies including 11 dams, riparian corridors and significant stands of remnant vegetation. The DA proposes a sophisticated interplay between water bodies, riparian corridors, water sensitive urban design (WSUD) and rehabilitation of vegetation as set out in Chapter 7, Design Elements, Section 7.12 and Chapter 8.4 of the Landscape Design Response report by FJLA.

The ecological and management status of vegetation on the Site has been investigated in detail by TBE in the Vegetation Management Works, Tree Survey and Assessment and the Ecological Constraints Assessment reports. The reports identify the conservation status of MWS and CPW vegetation, which are dominant in the remnant vegetation and are endangered. Vegetation management works in the DA aim to conserve and enhance both vegetation communities, consistent with the intended utilisation of the Site. The level of investigation in the tree survey goes to the individual tree level.

Through the landscape design response, rehabilitation of the riparian areas and CPW in particular, is proposed to be integrated into the specific treatment of burial areas, the interpretation plan and visual impacts mitigation strategy. There are thus parallel objectives of landscape design, ecological conservation, vegetation rehabilitation and visual impacts mitigation, the outcome of which would be protection of and an increase in the visual presence the water bodies, riparian corridors and vegetation visual resources.

In addition to ecological and riparian corridor values, some of the dams have been recognised in the CMP to have historical significance. The CMP contains detailed conservation policy so the development of the Site will sympathetically respond to these natural and cultural features, which also add charm and attractiveness to the land, as well as natural ecological and cultural values. A detailed analysis of the CMP policies in relation to the landscape design for the Site is in Chapter 8 of the Landscape Design Response report by FJLA.

A significant part of the Stage 1 area is proposed for public use associated with a group of dams, riparian areas and remnant CPW. It provides public landscaped open space as a way of acknowledging the natural and cultural values of these resources in a landscaped area on the south west side of the Site and the integration of the associated riparian corridors and water bodies into this area. This use would be compatible with retaining and enhancing these rural landscape values.

There would be no significant external visibility of the activities on the Site associated with the water bodies, riparian corridors and associated remnant vegetation in the Stages 1, 2 or 3 areas, other than the effect of the existing and future vegetation canopy to further define and assist in screening of views into the Site. In the Stage 4 area, rehabilitation of the riparian zones would increase the vegetation presence on the Site and also assist in screening views into the shallow valley on the south-east corner of the sit that is partly visible from the Hume Motorway.

In our opinion, the DA will lead to conservation and enhancement of these visual resources.

4.3.7 Regrowth of indigenous native vegetation

As indicated above and confirmed in the Davies and Britton study, what appears today as a characteristic of the rural landscape of the Site in the form of stands of indigenous native vegetation is largely regrowth, following almost total clearing in the past.

The vegetation of the RE1 zoned land and adjacent steep side slopes below Bunbury Curran Hill has been determined by TBE to be predominantly MSW of low to moderate ecological value, heavily invaded by African Olive and some other environmental weeds. The other vegetation community most represented on the Site is CPW.

Although the regrowth of vegetation creates a landscape that differs from the likely appearance of the colonial landscape of the early settlers and owners of the Varro Villa property, the current landscape with regrowth is regarded in the contemporary community as possessing both aesthetic and environmental/ecological significance. The regrowth of vegetation and increasing recognition of its scenic and cultural values is an example of the change in cultural values given to the environment in contemporary society, compared to the values attributed to it in the past.

The DA, as explained in detail with regard to the landscape design in Chapter 7.10 and 7.11 of the Landscape Design Response report by FJLA, retains, fosters and enhances natural vegetation regrowth, with a minimum of removal. Where possible, links between 'pockets' of CPW, including riparian and planted new areas of CPW species are proposed. In addition, using indigenous native vegetation is a legitimate means of increasing the visual attractiveness, visual absorption capacity and environmental values of the landscape and of the Scenic Hills generally.

The photomontages show that a combination of regrowth associated with existing remnant vegetation and the use of appropriate species in defining roads and outdoor 'rooms' as identified in the Master Plan, will provide an outcome which conserves the visual resources of the Site in a way that is compatible with the emerging character of the Scenic Hills.

The CMP, which provides relevant policies for conservation including adaptive re-use of parts of the Site acknowledges the scenic values of the indigenous native vegetation and potential for future growth of vegetation and rehabilitation of degraded vegetation, to enhance the visual and cultural values of the Site.

4.3.8 A small number of buildings of a rural scale and character

A characteristic of the Scenic Hills landscape is that in any view of a holding of reasonable size, there is a small number of buildings that are generally of a rural scale and character set in a wider landscape. Buildings that can be constructed in the E3 zone can vary in individual scale from sheds, through residences to large individual buildings. Building complexes such as the school south-west of the Site are also permissible. Buildings associated with various forms of agriculture that is permissible in the zone can also vary substantially in scale etc.

The Davies and Britton study emphasises the characteristic of small numbers of buildings seen in a wider landscape and analyses the numbers of buildings visible in relation to historical subdivision patterns and lot sizes.

The DA is for a use of the Site that does not require a significant number of buildings. The location of the buildings is consistent with the assessment of Visual Sensitivity of the Site shown on Map 4 and with the need to have no structures that could conflict with the visual evidence of the significance of Varroville House as seen in the most significant view lines.

The proposal in the DA is for a minimum number of buildings (six), located in the Stage 1 area of the Site. The proposed buildings are:

- The Chapel complex
- The Gatehouse
- The Administration building
- The Function building
- The Café and Flower Shop
- The Garden Staff building

All the buildings are of a single storey form. A series of small individual shelters have also been designed, responding to the same architectural theme as the larger buildings, in particular, the Chapel complex.

As described in the DA Report Design Statement by FJMT (Design Statement), the buildings are inspired by the surrounding landscape and reflect the understanding of remembrance and ritual. The Concept for the buildings is set out in Chapter 1.1 of the Design Statement and the eight underlying design principles for the designs are explained.

The buildings have been the subject of a design competition won by FJMT, the project architects for the DA. The structures are small scale, elegant, well located to minimise external visibility, contemporary and responsive to the Site and are of architectural design excellence. They are proposed to be composed of a palette of natural materials and colours to complement the natural landscape. To quote the Design Statement;

This will create an appropriate 'timeless' contemporary expression through the use and assembly of carefully proportioned and expressive forms that embody the natural top of the existing landscape.

The building design is also grounded in principles of sustainability and ecology (Principle 8, Chapter 4.8 of the Design Statement).

Each building has a specific orientation and relationship with the landscape and topography of the Site. Each is composed of massive and grounded base and wall elements, with a contrasting light, open aspect to the landscape and views, under roofs that express in various forms a metaphor of the varied topography, over a simple enclosure of space. This is described under Principle 2, Elements in the Park, Chapter 4.2 in the Design Statement.

The chapel complex is the largest building on the Site, a single large column-free space, divisible into three smaller spaces, entered on the axis of its symmetrical plan. It has a light and organic, curvilinear roof form reminiscent of the contours of the foot slope where it is to be located. The roof is punctuated on the main axis, as though sliced through to allow light penetration through window-form skylights.

Situated on the lower side slope of the hill behind, the chapel is outside the sensitive view zone and not visible at all from close or medium distance viewing locations. It has an underground garaging level beneath. Although theoretically visible from the Eastern Fringe land in Minto, more than 5km away, the building would be unlikely to be perceivable, given the ground-hugging form, natural materials, variable roof planes, dark and non-reflective materials and the effect of vegetation growth, both planted and by rehabilitation, in the view lines to the south-east. Deep shadow caused by the overhanging and curvilinear roof plane, lack of walls from which light would reflect toward the south and could otherwise be visible, wave-like leading edge of the roof and the modulation of the underlying structure in elevation, would contribute to its low visibility. Visual impacts of the building would be minimal.

The photomontage for view place 04 by VI has the chapel approximately in the centre of the part of the Site that is visible. If the intervening landscape existing and proposed was not present, the building would theoretically be visible. However, in reality, it would be hidden.

The Gatehouse building is located inside the Site accessed from Main Entry B. It is a small, linear building with temporary part-covered parking on one side under a cantilevered, curved and overhanging roof form. Open to the light and gentle topography behind, the heavy wall structure is the face to the road, punctuated by the entry at one end.

The Administration building is also a linear and narrow building like the Gatehouse, with a massive wall 'front' elevation, opening to the rear and semi-private landscape beyond. It features the signature curvilinear roof form as soaring canopy over the public side of the building, that drops lower on the private side of the building, to overhang a continuous balcony space, slightly elevated above ground.

The Function building is a small, simple, versatile building that can be put to a variety of uses with a full commercial kitchen, partially cantilevered over a water body, adjacent to a 90-car car park. With a massive back and light, open front to the water, it also has a light, organic canopy-like roof, gently folded along its axis.

The Café and Flower Shop is a similar typology to the Function building, smaller and similarly versatile. Also partly cantilevered over water, it has a grounding massive wall at the public entry face, a small flower shop, a small kitchen and café seating area, inside. Outside, the roof partly overhangs a much wider deck.

The Garden Staff building is accessed through a separate entry, Entry A, which is north of the main Entry B. It is also a small and linear building. Simpler and more utilitarian than other buildings, it lacks the massive wall/base typology and has a simpler, flat roof, however the roof is detailed to appear to sit lightly over the building. The building is composed of two separate functional sub-buildings on a common base and under a single roof plane. Situated adjacent to the area where St Andrews Road begins to curve away toward the north west from the boundary of the Site, the building would be screened from view by vegetation both in the Site and in the road reserve and have minimal individual visual impact.

4.3.9 Buildings located in a traditional manner

The traditional location of most rural buildings in the Scenic Hills is on the side slopes of the foothills, rather than in prominent or hill-top locations. Most exceptions are relatively recent dwellings rather than rural buildings or groups, as pointed out by Davies and Britton.

As recommended as a means of conserving the existing scenic resources of the Site in the RLA December 2015 report, the natural topography dominates and buildings are proposed to be located in a traditional and sympathetic way. The locations of the buildings is consistent with traditional locations, existing topography and with the opportunities identified on the revised Map 4 in this report. In that regard, this location would be consistent with a traditional location for a small number of buildings, located in a traditional manner. The proposed use of the Site is appropriately responsive to the need to situate buildings in way that is consistent with the rural character of the Scenic Hills and the objectives of the zoning of the land.

4.3.10 Setting of Varroville House

Varroville House, its formal gardens, carriage loop and immediate area are inside its own lot boundary while its farm buildings, two earlier road accesses and various items of built and cultural landscape significance are inside the Site. The significance of the landscape and setting has been described by Morris and Britton (2000), by Davies and Britton in their report and now in more detail in the CMP. The CMP has defined a heritage curtilage and a conservation zone to ensure that the values of the place that extend beyond the lot boundary of the Varroville House allotment are protected.

There are clear benefits of a use for the Site by the CMCT, which will have the resources to identify, protect, conserve and promote the heritage values of Varroville House in the conservation zone outside the house lot, which may not occur with an alternative use of the land, for example for agriculture.

The house has local landmark significance. There is also claimed to be visual contact along view lines that remain between it and significant properties such as Denham Court and Macquarie Field House, the site of Robin Hood Farm and traditional routes such as Campbelltown Road. Views both toward and from the setting are constraints on the use of the Site that are recognised in the DA and in the policies of the CMP.

Section 5 of the CMP assesses the heritage significance of the place against the criteria of the NSW Heritage System and includes a Statement of Significance and Schedule of Significant Elements. Significant Views and Vistas are identified in Part 5.7. Conservation Policies 16-23 in Part 8.4 concern protection of curtilage, settings and views. With regard to use of the Site, the CMP concluded in 9.7 that the proposed cemetery appears to be one of the least intensive uses within the zone, other than retaining the Site for its present farming/agricultural use. Further it is concluded that the proposed adaptation (cemetery use) would be compatible with providing an open, landscape setting. Section 9.7 contains Policies with regard to the proposed new use of the place.

Chapter 82 of the Landscape Design Response report by FJLA contains a detailed analysis of the responses of the DA to the many policies in the CMP that are relevant to the setting of Varroville House.

The CMP is consistent with regard to views with the advice provided by RLA in 2013 and 2015, which concluded that cemetery use of the land in the setting of Varroville House is not antithetical to the objectives of the zone that now applies in CLEP 2015.

3.3.11 Cultural landscape fabric

Landmark value is associated with the visibility of cultural vegetation associated with the formal garden of Varroville House and the species used, which are characteristic of the place and estate gardens of a similar period. Informal planting and cultural vegetation associated with outbuildings, former roads and some internal boundaries contribute to the distinctiveness of the setting and do not conflict with the landmark vegetation that is contained within the existing house lot.

The Master Plan by FJLA, DA Plans, landscape plans and the CMP recognise the need to maintain the landmark character of the garden vegetation and the distinctiveness of any significant vegetation in choice of species, locations, densities and distribution of areas of any new vegetation. The policies of the CMP recognise that any new vegetation may need to be of subordinate scale, appropriate species and distributed in space and at densities and future heights that does not conflict with the characteristics identified above. The CMP in Section 8.8.3 contains relevant Policies 55-62. Chapter 82 of the Landscape Design Response report by FJLA contains an analysis of the responses of the landscape design to the policies of the CMP that are relevant to the cultural landscape fabric of the Site.

Use of the Site as proposed in the DA and supported by the CMP would be compatible with providing an open, landscaped setting and the conservation of values of the cultural landscape fabric of the Site. The detailed consideration of planting schedules, location, density and identity of plant species in the DA is compatible in our opinion with conservation of significant cultural landscape fabric.

4.4 Summary on principles for conserving visual resources

It is concluded that the DA provides a mechanism for the conservation of the visual resources of the Site and is therefore acceptable with regard to visual impacts. The existing visual resources will be adequately protected and the public interest in the conservation, restoration and interpretation of the heritage values of the place will be enhanced.

There is in our opinion therefore no inconsistency between the use of the site as proposed and the zone objectives and special local provisions that apply, as set out below in Chapter 5.

5.0 Compliance with the zone objectives

RLA do not have the expertise to comment on detailed statutory town planning matters and provide the following commentary only with regard to the visual issues in relation to the assess of the visual impacts that would occur with construction and occupation of the site as proposed in the DA, in relation to the objectives of the zones and special provision that apply to the Site.

The principle planning instrument which applies to the site is Campbelltown Local Environmental Plan 2015 The particular aims of the Plan in in Part 1, 1.2 in relation to views are:

(b) to facilitate Campbelltown's development as the compact, vibrant primary business centre for the Macarthur Regions, with distinct limits to urban growth and a clearly defined separation between urban and non-urban areas, and;

(l) to conserve and enhance the environmental, scenic and landscape values of land in Campbelltown.

The history of the Scenic Hills as a concept has been provided above to give a context to the reference in the underlying objective above to the planning that preceded significant urbanisation of Campbelltown.

The scenic resources of the landscape in general and the site in particular have been analysed with regard to what it is that comprises the rural character from a visual standpoint. It is considered that the proposed development is compatible with the objectives above, in that it can respond appropriately to the range of visual resources, opportunities and constraints of the site, preserve a rural visual character for the site and not conflict with retaining defined separating between urban and non-urban land.

Zone RE1 Public Recreation

1 Objectives of zone

The objectives of the RE1 zone in CLEP 2015 are as follows:

To enable land to be used for public open space or recreational purposes.

- *To provide a range of recreational settings and activities and compatible land uses.*
- *To protect and enhance the natural environment for recreational purposes.*
- *To provide for land uses compatible with the ecological, scientific, cultural or aesthetic values of land in the zone.*
- *To facilitate the multiple use of certain open space areas.*
- *To facilitate development that is ancillary or incidental to the special land uses provided for in this zone.*

- *To provide for the sufficient and equitable distribution of public open space to meet the needs of the local community.*
- *To preserve and rehabilitate bushland, wildlife corridors and natural habitat, including waterways and riparian lands, and facilitate public enjoyment of these areas.*
- *To provide for the retention and creation of view corridors.*
- *To protect and enhance areas of scenic value and the visual amenity of prominent ridgelines.*
- *To preserve land that is required for public open space or recreational purposes.*

Taking each relevant objective in turn, with regard to visual issues only:

- *To protect and enhance the natural environment for recreational purposes.*

The DA will provide for the recreational use of the land zoned RE1 as a publicly accessible resource, for the enjoyment of the public, who will be able to experience the access to views, heritage interpretation of Bunbury Curran Hill for its scenic, historic and cultural values and the opportunity of scenic regional scale views. The DA will include bush regeneration, vegetation rehabilitation, weed removal, provision of access and pathways and a lookout site and a secondary access to the publicly accessible areas in the cemetery. Rehabilitation of MSW will increase the values of the natural and scenic environment and complement the recreational values of the land. In our opinion, the proposed DA will achieve this objective of the RE1 zone.

- *To provide for land uses compatible with the ecological, scientific, cultural or aesthetic values of land in the zone.*

In the existing environment, the cultural and aesthetic values of the land in the zone are inaccessible and not able to be interpreted for the benefit of the public. The ecological and scientific values of the remnant vegetation communities have no uses that are compatible with their values. The DA provides the circumstance in which the public has the opportunity to view, experience, interpret and understand the ecological, scientific, cultural and aesthetic values associated with Bunbury Curran Hill, including the historical values of the place in relation to the colonial heritage landscape theme. The development of the site as proposed in the DA is compatible with this objective of the zone.

- *To preserve and rehabilitate bushland, wildlife corridors and natural habitat, including waterways and riparian lands, and facilitate public enjoyment of these areas.*

The DA provides the mechanisms for preservation and rehabilitation of bushland, in particular MSW in the RE1 zone. This will facilitate public appreciation and aesthetic enjoyment of these areas, consistent with this aim of the zone. In our opinion, the development of the site as proposed in the DA is compatible with this objective of the zone.

- *To provide for the retention and creation of view corridors.*

The DA will provide the circumstances in which views of the surrounding landscape are retained and new views created, by the creation of lookout sites and of tracks and paths linking these sites. The area is currently private land and inaccessible. View corridors from the lookouts would be public resources that are presently unavailable, or not formalised. The DA will facilitate retention and creation of new view corridors, consistent with this zone objective.

- *To protect and enhance areas of scenic value and the visual amenity of prominent ridgelines.*

The Bunbury Curran Hill as an entity, part of which is associated with the subject Site, is of scenic and historic value. The north-western ridge of the site is prominent. The land in the RE1 zone is not proposed for active cemetery use, however the DA provides a mechanism by which the area is protected and enhanced and will provide for public access to a lookout and trails with potential scenic views, acknowledging the scenic value and visual amenity of this ridge area. The south-eastern ridge is of minor visibility, however the heritage resources of that area add to the visual amenity of the Site. The DA will protect and enhance areas of scenic value and the visual amenity of prominent ridgelines, consistent with this zone objective.

Zone E3 Environmental Management

1 Objectives of zone

The objectives of the E3 zone in CLEP 2015 are as follows:

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
 - *To provide for a limited range of development that does not have an adverse effect on those values.*
 - *To enable development for purposes other than rural-residential only if that development is compatible and complementary, in terms of design, size and scale, with the character of the surrounding area.*
 - *To allow cellar door premises, restaurants and cafes only where they are directly associated with the agricultural use of the land.*
 - *To protect, and maintain the environmental and visual amenity of, the Scenic Hills, the Wedderburn Plateau and environmentally sensitive lands in the vicinity of the Georges River from inappropriate development.*
 - *To preserve the rural heritage landscape character of the Scenic Hills.*
 - *To protect and enhance areas of scenic value and the visual amenity of prominent ridgelines.*
 - *To protect bushland, wildlife corridors and natural habitat, including waterways and riparian lands.*
 - *To ensure the preservation and maintenance of environmentally significant and environmentally sensitive land.*
-

Taking each objective relevant to visual issues in turn:

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*

The DA provides a means to protect and restore the Site's ecological, scientific, cultural and aesthetic values as foreshadowed in the Planning Proposal that resulted in a cemetery being made a permissible use of the Site. Continuation of the existing use of the land for farming uses would be a poorer planning outcome, as the cultural and aesthetic values associated with the extended curtilage of Varroville House, for example, would not be conserved and interpreted for the public's benefit to the extent that would be achieved by the DA. As indicated in the CMP for example, the cultural values of items such as the reputed Sturt dams, Varroville House outbuildings, cultural vegetation outside the existing house lot and endangered ecological communities are under threat as a result of neglect and lack of appropriate conservation management. The DA is better able to ensure that the objective is achieved than would occur with an owner of the Site pursuing agricultural use of the land, in which situation the Council is essentially powerless to ensure the achievement of the objective.

- *To enable development for purposes other than rural-residential only if that development is compatible and complementary, in terms of design, size and scale, with the character of land in the zone.*

In our opinion, this objective is met by the DA, because the proposed use is compatible with and complementary in terms of design, size and scale with the character of the land in the zone. The built components are confined to the area of low sensitivity to views from outside the Site, are small in scale and complementary in design, size and scale with others in the locality. Permissible in the zone are educational and institutional establishments that can feature large individual buildings and assemblages of buildings far in excess of what is proposed in the DA, for example the school and religious establishments in the vicinity. The proposal has minimal built form, none of which would be of significant visibility from off-site in urban areas of Campbelltown, as demonstrated in the photomontages and our specific visual assessment for the DA. The proposed use is benign as regards impact on the character of the Site and the surrounding land in the same zone, for reasons stated above in Chapters 3 and 4.

- *To protect, and maintain the environmental and visual amenity of, the Scenic Hills, the Wedderburn Plateau and environmentally sensitive lands in the vicinity of the Georges River from inappropriate development.*

In our opinion, this objective is met in the DA. The proposal would maintain the existing environmental and visual amenity of the Scenic Hills. Rehabilitation, weed management and use of the adjacent prominent ridge area of part of Bunbury Curran Hill for public recreation, would also protect and maintain that aspect of the Scenic Hills in the adjacent zone. The combined effect of the sensitively designed DA and the policies for heritage management in the CMP would be likely to better protect the aesthetic heritage values of the Site than would be likely to occur with continued use of the Site for agricultural uses, therefore achieving a satisfactory planning outcome. The development, as demonstrated in the DA, is in our opinion appropriate to the zone.

- *To preserve the rural heritage landscape character of the Scenic Hills.*

The DA proposes a sophisticated programme of complementary designs, policies, techniques and landscape design elements that are specifically intended to preserve the rural heritage landscape of the Scenic Hills as seen by the public. As noted above, it is not possible for Council to legislate for a past character to be carried forward into the future other than by controlling land use. The rural landscape evolves as rural management, economics and ecology evolve. Active landscape management with the specific intention of creating and retaining the appropriate character is essential, in fact indispensable, if the rural heritage landscape character is to survive into the future. The special provision of the 'No build area' is specifically intended to ensure that rural character remains dominant in the part of the Site that has potential exposure to closer views. The analysis of visibility, visual sensitivity and of the photomontages specifically prepared to interrogate the likely appearance of this area has shown that the character of the views of the Site would be protected.

In addition, the policies in the CMP, implemented in the landscape design and landscape management in the DA, will preserve critical aspects of the rural heritage landscape of the Site that would otherwise be lost. In our opinion, this objective would be met in the DA.

- *To protect and enhance areas of scenic value and the visual amenity of prominent ridgelines.*

The main, prominent ridgeline is of part of Bunbury Curran Hill and will be unaffected by the proposal, other than in regard to the management and rehabilitation of MSW and removal of invasive vegetation, which will have a positive impact on scenic values and visual amenity. The DA, in relation to more sensitive views to the east and south slopes of the Site, supported by the policies in the CMP, will protect and enhance the Site and setting of Varroville House, which are identified as of visual amenity value. In our opinion, this objective will be satisfied by the implementation of the DA.

- *To protect bushland, wildlife corridors and natural habitat, including waterways and riparian lands.*

As noted with regard to the first objective of the zone, the DA will achieve protection of the Site's bushland, natural habitat, waterways and riparian land. Capital investment in the implementation of conservation, interpretation and public art policies that would occur as a result of construction and utilisation of the Site as proposed in the DA will lead to protection of bushland, wildlife and riparian lands to an extent unlikely to be achieved by existing use of the land for farming. In our opinion, the DA is a better able to ensure that the objective is achieved on the Site.

- *To ensure the preservation and maintenance of environmentally significant and environmentally sensitive land.*

To the extent that the land may be considered environmentally significant from a visual and landscape heritage stand point, it is our opinion that the above objective would be met if the DA is approved. The proposed use is well placed to ensure the preservation and maintenance of these values. Rural use of the Site would not be subject to the level of planning, management and heritage policy implementation that would ensue from the approval of the DA, fuelled by capital investment in the preservation and maintenance of environmentally significant resources.

5.1 Additional local provisions

Some of Part 7, Additional Local provisions are relevant to the application, viz. Clauses 7.6 and 7.7.

7.6 Scenic protection and escarpment preservation

Clause 7.6(2) refers to the Environmental Constraints map ECM_007 in CLEP 2015, which applies to the whole of the land on the Site and identifies a 'No build area' on two lots on the south-east part of the land, partly abutting the south-east boundary of the Varroville House lot. The legend on the map identifies the area coloured orange on the map as Development on Steep Land, the Scenic Hills. The whole Site is also covered by cross-hatching, which is identified on the legend as Escarpment Preservation Area.

(1) The objectives of Clause 7.6(1) are as follows:

- *(a) to recognise and protect the scenic, environmental, cultural and historic qualities of the Scenic Hills and the landscape setting of Campbelltown,*
- *(b) to protect visual aesthetic amenity and views to and from the Scenic Hills,*
- *(c) to reinforce the visual dominance of landscape over built form,*
- *(d) to ensure development on land to which this clause applies is appropriate for the location and is located and designed to minimise its visual prominence in the landscape.*

The proposal is responsive to the requirement to recognise and protect the identified qualities of the Scenic Hills and the landscape setting of Campbelltown. The sense of separation from development in Camden by land in the Scenic Hills that is of a visual rural character will be retained. The DA would also protect the aesthetic amenity of views toward and would provide new and currently unavailable views from the Scenic Hills. The dominance of landscape over built form would be reinforced, by the small sale, small number and low visual impacts of buildings in a landscape setting. The proposed development is also appropriately located to minimise its visual presence in the landscape. In our opinion, objective 7.6(1) is met in the DA.

Clause 7.6(2) identifies the land to which the clause applies and Clause 7.6(3) cites matters to be taken into consideration by Council before consent can be granted to development on the land, as follows;

- (2) This clause applies to land identified as "Escarpment Preservation Area" on the Environmental Constraints Map.*

All of the Site is within the Escarpment Preservation Area as shown on Map ECM_007.

(3) Development consent must not be granted to any development on land to which this clause applies unless the consent authority is satisfied that:

- (a) measures will be taken, including in relation to the location and design of the proposed development, to minimise the visual impact of the development on the natural and visual environment of the land, and*
- (b) the external surfaces of any building consist of prescribed materials, and*
- (c) the development will incorporate measures to preserve the scenic qualities of, and views to and from, the land, and*
- (d) measures will be taken to reduce any potential land use conflict, and*
- (e) the development will maintain the existing natural landscape and landform and will not affect the stability of the land.*

RLA do not have the expertise to comment on provisions of Clause 7.6(3)(d) and(e), which are for those with the appropriate expertise to address. With regard to visual impacts, we consider that requirements of provisions (a) to (d) in Clause 7.6(3) would be satisfied, as follows;

Specific measures have been taken in relation to the location and design of the proposed development, to minimise visual impacts, as analysed and assessed in Chapters 3 and 4 of this report, above. The natural and visual environment of the land will be protected and aspects of both the natural and visual environment will be enhanced by the development proposed, as a result of vegetation management, landscape design and implementation of policies to conserve heritage values in the CMP. The requirements of Clause 7.6(3)(a) would be satisfied in the DA.

The external surfaces of the buildings proposed are of prescribed dark-coloured and non-reflective materials as required in Clause 7.6(3)(b). Should Council have concerns in that regard, the colours could be specified by conditions of consent.

The development, as closely considered in the report above, incorporates a suite of measures intended to preserve the scenic qualities of views to the land. With regard to views from the land, the DA will provide opportunities for the public to enjoy views of the scenic landscape which are currently unavailable, satisfying the requirements of preserving the scenic qualities of views to and from the land (the Site) in Clause 7.6(3)(c).

6.0 Conclusion

Further analysis of exposure to views in 2017 in relation to the DA, confirmed the findings of the RLA December 2013 report for the Planning Proposal and 2015 report to the NSW Department of Planning and Environment in relation to Condition 2(d) of the Gateway Determination. Views of the eastern and southern slopes of the Site below Varroville House, which are specifically identified as the 'No build area' on the Environmental Constraints Map ECM_007 in CLEP 2015, are confined to a small area. The area is on the fringes of Raby, St Andrews, Bow Bowing and the Hume Motorway. Views from the closest potential viewing places, the Hume Motorway, are declining as natural revegetation and amenity plantings associated with the Motorway grow toward eventual maturity.

3D modelling of the Site, buildings and landscape in rendered photomontages of representative views prepared by VI on advice from RLA, show that the proposed development of the Site in the DA would not significantly degrade the quality or significantly alter the character of the Site.

As the DA also provides the mechanisms by which the natural attributes of the landscape, such as indigenous native vegetation and riparian corridors will be conserved and enhanced, the natural attributes of the views will be enhanced. The DA also provides the means by which the cultural values of land that is not within the ownership of the Varroville House lot, will be conserved and the historic and cultural values interpreted for the public. None of these outcomes would be likely if the existing use of the Site for rural use was continued.

The internal character of views in the parts of the Site that are of low sensitivity to external views will be significantly changed, however the character of the Scenic Hills as perceived from Campbelltown would be maintained. the Site will also provide a significant resource of land for public use, including the opportunity to experience views of Campbelltown and the Scenic Hills that are currently inaccessible.

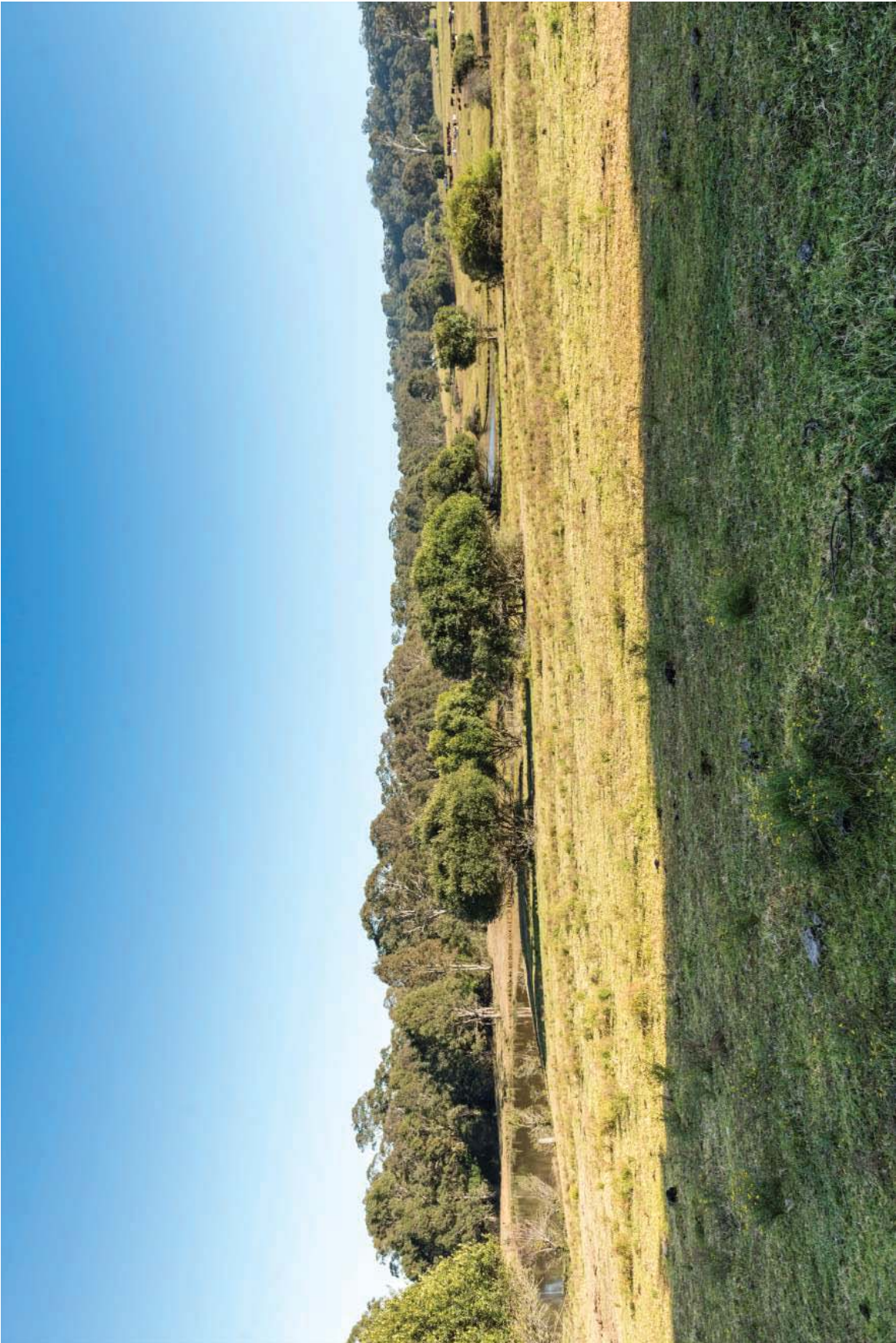
The development provides for a combined opportunity for the conservation of the natural, cultural and scenic resources of the Site and public participation in the interpretation of those values, that would otherwise not be likely to occur.

In the intervening period, before the part of the Site that is visible in some localised views would be put to lawn cemetery use (this would be more than 110 years into the future on current assumptions on occupancy rates), conservation works would have been long completed in relation to the significant building resources in the setting of Varroville House, outside its house lot, as required in the CMP. This would include conservation of heritage fabric, both built and landscape and management and interpretation of landscape associated with significant structures.

Vegetation management including removal of invasive vegetation and its replacement with more appropriate species, interpretation of significant heritage items such as the original carriage drive access from the south-east to Varroville House would not occur before the end of Stage 3, perhaps 125 years from today. Minimal infrastructure would be established in the 'No build area' consisting of minimal roads and vegetation, consistent with the existing rural character of the Site.

An analysis of the performance of the DA against the objectives of the zones on the Site and the provisions of Part 7 of CLEP 2015 in Clauses 7.6 and 7.7 that are of special relevance to the Scenic Hills found that the acceptance of the proposal would comply with those objectives.

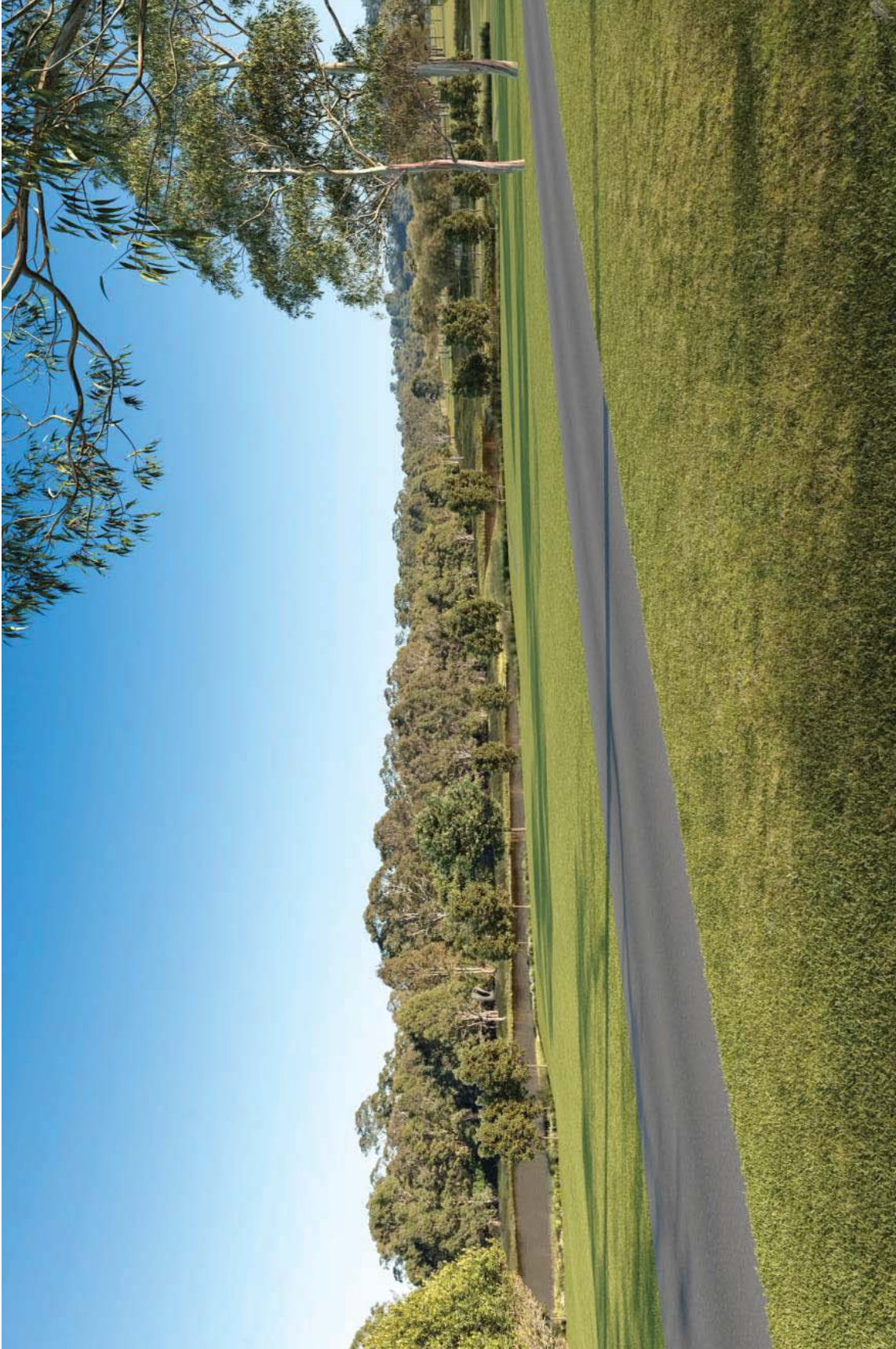
In our opinion, the proposal can be supported on visual and associated landscape heritage grounds.



Virtual Ideas View Point 01, Alignment of view from Varroville House to dam

Existing view
Virtual Ideas View Point 01





Virtual Ideas View Point 01, Alignment of view from Varroville House to dam

Rendered Photomontages
Virtual Ideas View Point 01



Virtual Ideas View Point 02, St Andrews Road

Existing view
Virtual Ideas View Point 02



Virtual Ideas View Point 02, St Andrews Road



Virtual Ideas View Point 03, St Andrews Drive and Spitfire Drive intersection

Existing view
Virtual Ideas View Point 03



Virtual Ideas View Point 03, St Andrews Drive and Spitfire Drive intersection

Rendered Photomontages
Virtual Ideas View Point 03



Virtual Ideas View Point 04, St Andrews Road and Ballentrae Drive intersection

Existing view
Virtual Ideas View Point 04



Virtual Ideas View Point 04, St Andrews Road and Ballentrae Drive intersection



Virtual Ideas View Point 05, Lochalsh Street, St Andrews

Existing view
Virtual Ideas View Point 05



Virtual Ideas View Point 05, Lochalsh Street, St Andrews

Rendered Photomontages
Virtual Ideas View Point 05



Virtual Ideas View Point 06, St Andrews Road

Existing view
Virtual Ideas View Point 06



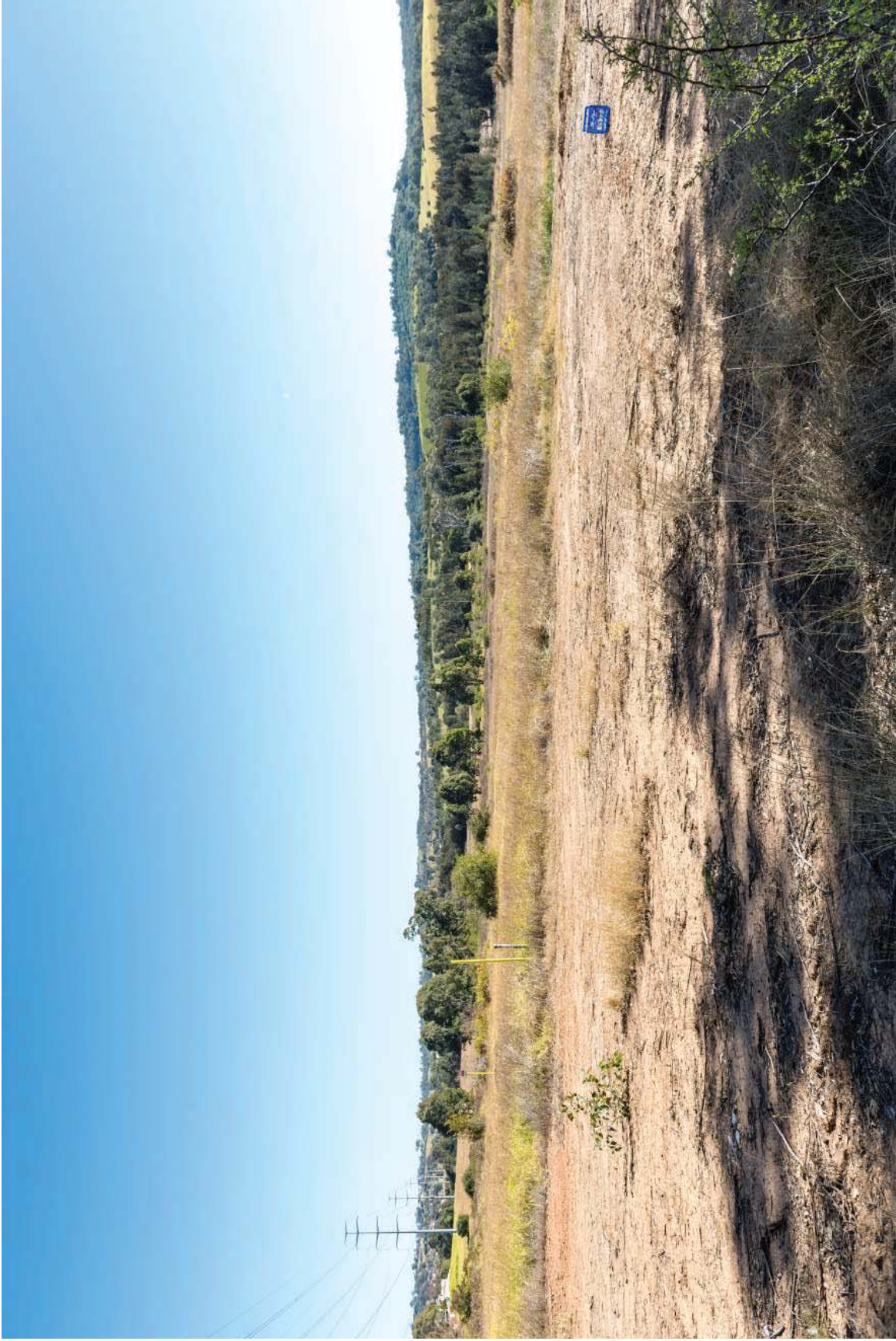
Virtual Ideas View Point 06, St Andrews Road

Rendered Photomontages
Virtual Ideas View Point 06



Virtual Ideas View Point 07, Campbelltown Road

Existing view
Virtual Ideas View Point 07



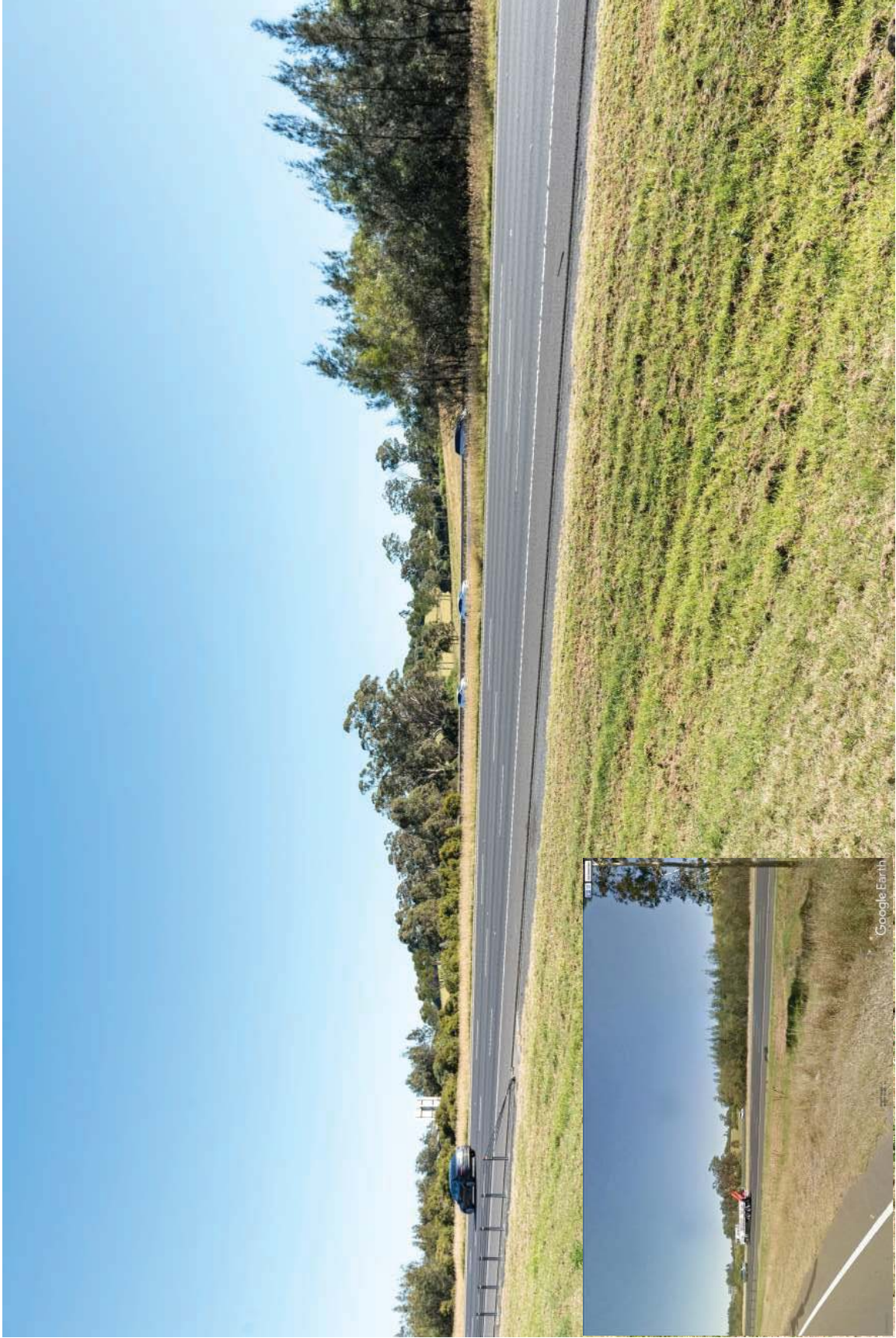
Virtual Ideas View Point 07, Campbelltown Road

Rendered Photomontages
Virtual Ideas View Point 07



Virtual Ideas View Point 08, On-ramp to Hume Motorway from Campbelltown Road

Existing view
Virtual Ideas View Point 08



Virtual Ideas View Point 08, On-ramp to Hume Motorway from Campbelltown Road

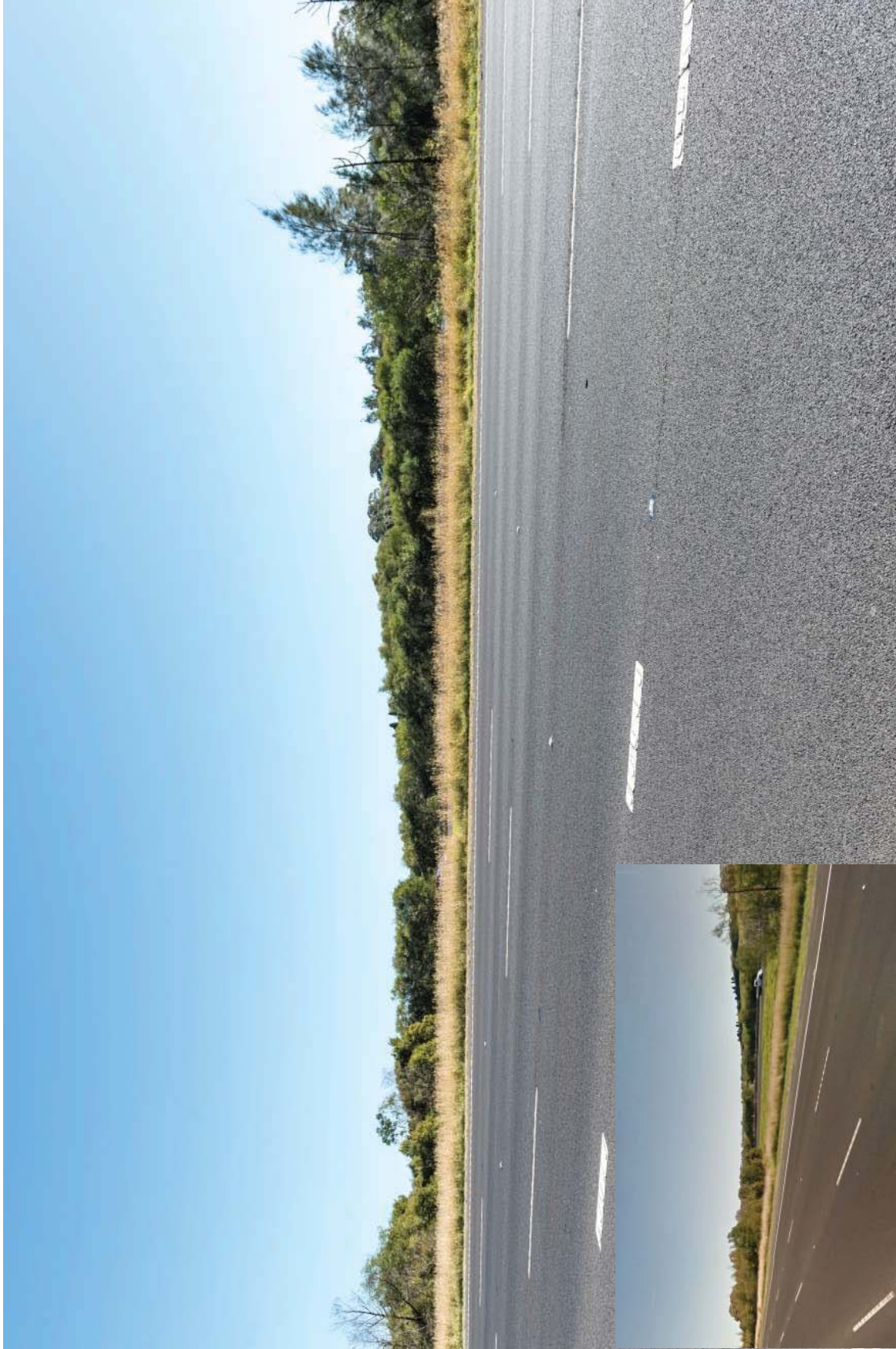
Insert: Google Streets image from similar location, downloaded 2014

Rendered Photomontages
Virtual Ideas View Point 08



Virtual Ideas View Point 09, Hume Motorway

Existing view
Virtual Ideas View Point 09



Virtual Ideas View Point 09, Hume Motorway

Insert: Google Streets image from similar location, downloaded 2014

Rendered Photomontages
Virtual Ideas View Point 09

Appendix 2: Visual Impact and Heritage Landscape CV Dr Richard Lamb

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.

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- 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
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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 Highlands.
- 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

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- 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.
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- 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.
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- 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.
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- 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 Precinct, 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
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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.