

Visual Impact Photomontages and Methodology Report

Waterbrook Bowral

BACKGROUND

This document was prepared by Virtual Ideas for the purposes of visual impact assessment of the proposed Waterbrook Bowral Development Application within its context.

The report presents original photographs of the existing site conditions, as captured on the dates noted, alongside photomontages showing the proposed built form massing and proposed future landscaping of the Stage 2 (east) development will look like when superimposed over the existing site conditions.

The report also outlines the methodology used to establish an accurate 3D model and the process followed to create the visual impact photomontages.

Information used in the creation of this report is also noted in the methodology and/or included as an appendix for reference.

OVERVIEW

This visual impact assessment presents photomontages with proposed built form massing and semi-mature landscaping for the purposes of evaluating the visual impact of the development post-construction. Where this is hidden behind landscaping or vegetation, the proposed built form has been indicated by an outline. Stage 1 built form is shown as a dotted blue line and Stage 2 built form is shown as a dotted red line.

The process of creating accurate photomontage renderings involves the creation of an accurate, real-world scale digital 3D model.

Photographs are taken on location, with each camera position subsequently surveyed to identify the Map Grid of Australia (MGA) coordinates at each position.

3D cameras are then set-up in the 3D model to match these same real-world camera positions. By matching the real-world camera lens properties to the camera properties in our software and rotating the camera so that surveyed points in 3D space align with the corresponding points in the photograph, we can create a rendering that is correct in terms of position, scale, rotation, and perspective.

Time and camera data information is also recorded during the site photography so that accurate lighting conditions can be reproduced in the 3D rendering.

A digital image is then rendered from the camera in the 3D software application that is subsequently superimposed into the real-world photo to generate an image that represents accurate form and visual impact.

METHODOLOGY

Site Photography

Site photography was taken from various positions along Centennial Road, Kirkham Road and Mount Road. The photomontage positions shown in this report were selected to demonstrate the interface of the proposed Waterbrook Bowral development with the bordering transit ways.

Photographs were taken using the camera and lens equipment noted below:

- NIKON D800 digital camera, using a 14-24mm f/2.8 lens
- SONY ILCE-7RM3 digital cameras, using a 24mm f/3.5 lens

Photographs were taken from an approximate eye height of 1.6m above ground level.

The photos were taken with a 24mm focal length to present a uniform field of view within the images.

Survey Data

Accurate 2D/3D survey data was used to prepare the photomontages.

Survey data was used:

- for depiction of existing buildings, trees, power poles and other existing elements as shown in the wire frame; and
- to establish an accurate camera location and RL of the camera.

As noted in the camera position survey (refer to Appendix A), survey information was acquired through GPS (RTK) and is based on the Map Grid of Australia (MGA) and the Australian Height Datum (AHD).

Each camera position in the report includes a wire frame overlay showing the surveyed elements used for the purposes of 3D camera alignment.

A contour mesh was also extracted from the survey data to assist with aligning visible terrain in the base photography with the imported 3D contour mesh.

3D Model

For Stage 1 built form, the supplied 3D model of the proposed development was imported into our 3D software (Autodesk 3DS Max) referencing the imported surveyed data.

These models were then duplicated and positioned relative to their equivalent footprints shown on the supplied masterplan drawing for each relevant Villa.

Stage 2 built form was modelled from drawings provided by Marchese.

Alignment

The positions of the real world photography were located in the 3D scene by referring to the surveyed positions supplied by the Veris survey data (refer to Appendix A).

Cameras were then created in the 3D model to match the corresponding locations and height of where the photographs were taken from on site.

These were then aligned in rotation so that the points of the 3D model aligned with their corresponding objects visible in the photograph.

Renderings of the building with realistic textures and lighting were then created from the aligned 3D cameras and montaged into the existing photography at the same location. The resulting images presented an accurate representation of the scale and position of the proposed development relative to the surrounding context.

Conclusion

In conclusion, it is my opinion as an experienced, professional 3D architectural and landscape renderer, that the following photomontages have been prepared in accordance with the Land and Environment Court's practice directions and accurately portray the level of visibility and impact of the built form.

Yours sincerely,

Grant Kolln



DESCRIPTION OF COLLECTED DATA

To create the 3D model and establish accurate reference points for alignment to the photography, a variety of information was collected.

This includes the following:

- 1) Architectural drawings of built form and site and 3D model of 2 x Villa types
 - Created by: Marchese Partners - 1/53 Walker St, North Sydney, NSW, 2060
 - Format: PDF & DWG drawing files and Sketchup model file

- 2) Landscape Plan
 - Created by: Site Design Studios, Sydney North Studio, Seaforth, NSW 2092
 - Format: PDF and DWG file

- 3) Camera Position Survey (Appendix A)
 - Created by: Veris - Suite 1, Level 5, 8 Australia Avenue, Sydney Olympic Park, NSW 2127
 - Format: DWG file and PDF file

- 3b) Camera Position Survey (Appendix A)
 - Created by: Australian Survey Solutions - PO Box 498, Bowral, NSW 2576
 - Format: DWG file and PDF file

- 4) Tree Survey (Appendix B)
 - Created by: Veris - Suite 1, Level 5, 8 Australia Avenue, Sydney Olympic Park, NSW 2127
 - Format: DWG file and PDF file

- 5) Site Survey (Appendix C)
 - Created by: Veris - Suite 1, Level 5, 8 Australia Avenue, Sydney Olympic Park, NSW 2127
 - Format: DWG file and PDF file

- 6) Site photography
 - Created by: Virtual Ideas
 - Format: JPEG and NEF file

CV OF GRANT KOLLN, DIRECTOR OF VIRTUAL IDEAS

Personal Details

Name: Grant Kolln
 DOB: 07/09/1974
 Company Address: Suite 71, 61 Marlborough St, Surry Hills, NSW, 2010
 Phone Number: (02) 8399 0222

Relevant Experience

2003 - Present Director of 3D visualisation studio Virtual Ideas.
 During this time I have created architectural visualisation media for use in a large number of visual impact assessments across a variety of different industries including architectural, industrial, mining, landscaping and large public works projects.
 Through this experience I have developed a highly accurate methodology for the creation of architectural visualisation media for use in visual impact assessments.

1999 - 2001 Project manager for global SAP infrastructure implementation - Ericsson, Sweden

1999 - 1999 IT consultant - Sci-Fi Channel, London

1994 - 1999 Architectural Technician, Thomson Adsett Architect, Brisbane QLD.

Relevant Education / Qualifications

1997 Advanced Diploma in Architectural Technology, Southbank TAFE, Brisbane, QLD



Location map of camera position



Existing photograph



Existing photograph showing surveyed alignment elements



Photomontage including proposed development









Location map of camera position



Existing photograph



Existing photograph showing surveyed alignment elements



Photomontage including outline of proposed built form



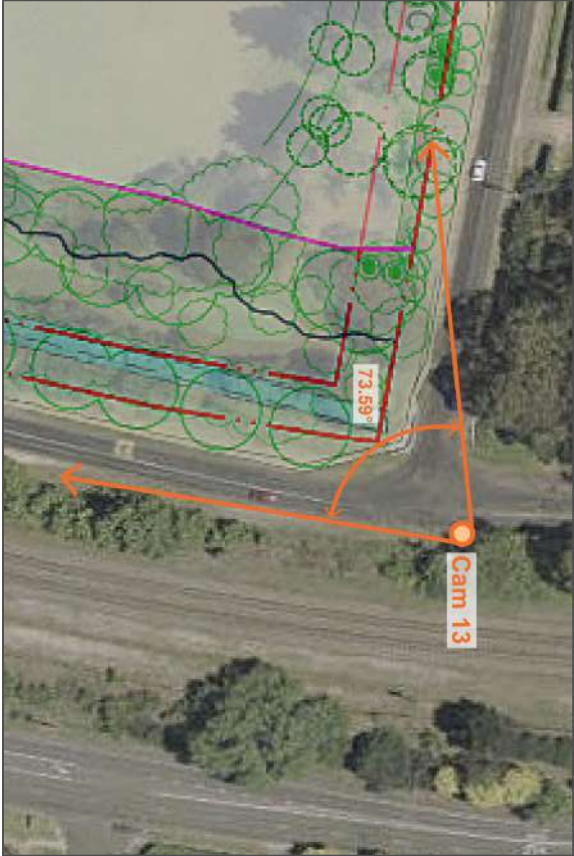




Camera Position C08B - Photomontage including outline of proposed built form VIRTUAL IDEAS



Location map of camera position



Existing photograph



Existing photograph showing surveyed alignment elements



Photomontage including outline of proposed built form









Location map of camera position



Existing photograph



Existing photograph showing surveyed alignment elements



Photomontage including outline of proposed built form









Location map of camera position



Existing photograph



Existing photograph showing surveyed alignment elements



Photomontage including outline of proposed built form









11/09/2018

Ref:
200426.02

Nicholas Turner,
Waterbrook Retirement Lifestyle Resorts
Level 8 43 Bridge Street Bridge, Hurstville
NSW 2220

RE: Photo Stand Points, 2-18 Centennial Road, Bowral NSW

Nicholas,

Please find below a table of the Photo Stand Points that have been surveyed in September 11, 2018. The method used, as discussed with you, to acquire this information is through GPS(RTK) and is based on the Map Grid of Australia (MGA) and the Australian Height Datum(AHD).

Stand Point Number	Easting (MGA)	Northing (MGA)	Elevation (AHD)
C01	262602.24	6182534.55	689.97
C02	262615.64	6182533.86	689.85
C03	262666.54	6182527.43	688.37
C04	262700.67	6182515.59	686.63
C05	262752.41	6182507.92	683.44
C06	262796.12	6182501.47	681.55
C07	262868.38	6182490.04	678.11
C08	262908.28	6182483.18	676.69
C09	262938.34	6182478.44	675.60
C10	262991.91	6182457.95	673.43
C11	262999.53	6182453.16	673.07
C12	263015.84	6182532.78	674.42
C13	263017.35	6182475.77	673.34
C14	262896.91	6182142.20	670.07
C15	262812.25	6182154.34	670.08
C16	262750.61	6182150.78	668.72

If you require further information please do not hesitate to contact us.

Sincerely,

Ben Burley
Senior Subsurface Surveyor
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b.burley@veris.com.au

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Office Locations
Over 20 offices
across Australia
veris.com.au/contactus

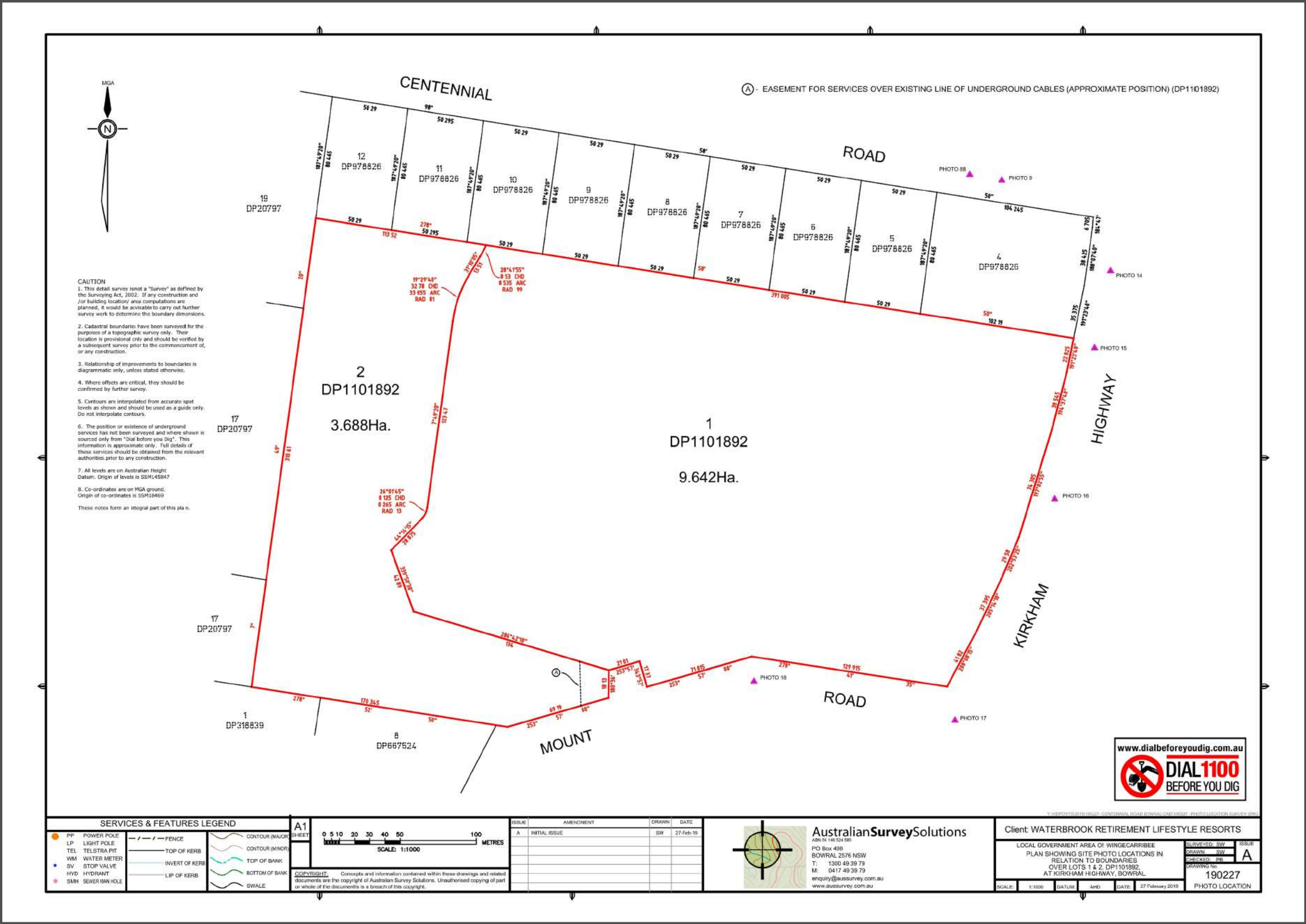
Veris Australia Pty Ltd
ABN 53 615 735 727

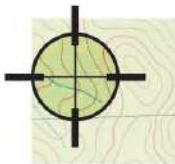
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AustralianSurveySolutions

190227 – PHOTO AND SURVEY FEATURE CO-ORDINATES

PHOTO 8B LOCATION		262917.505	6182480.762	676.373
8000	262911.904	6182464.591	676.166	
8001	262901.698	6182461.531	676.533	
8002	262911.383	6182472.933	676.129	
8003	262895.833	6182468.908	676.365	
8004	262909.643	6182469.529	676.451	

PHOTO 9 LOCATION		262938.568	6182477.000	675.626
9000	262934.555	6182467.486	675.398	
9001	262941.907	6182466.225	674.970	
9002	262946.573	6182461.802	675.370	
9003	262930.192	6182463.334	675.312	

PHOTO 14 LOCATION		263010.034	6182417.473	672.202
14000	262996.634	6182405.922	671.809	
14001	262993.555	6182411.898	672.053	
14002	262994.392	6182416.929	672.116	
14003	262995.441	6182421.840	672.163	

PHOTO 15 LOCATION		262999.587	6182367.013	671.381
15000	262986.399	6182371.881	671.363	
15001	262989.826	6182366.840	671.259	
15002	262992.210	6182385.965	671.522	
15003	262988.608	6182385.116	671.555	

PHOTO 16 LOCATION		262973.317	6182267.812	670.928
16000	262968.461	6182280.722	670.834	
16001	262968.260	6182281.290	670.849	
16002	262965.016	6182288.631	670.268	
16003	262971.535	6182314.690	670.850	
16004	262972.428	6182316.480	670.851	

PHOTO 17 LOCATION		262907.810	6182122.529	670.894
17000	262903.224	6182139.937	670.974	
17001	262903.015	6182144.622	671.292	
17002	262909.950	6182143.547	670.891	
17003	262905.271	6182134.526	671.007	
17004	262920.179	6182168.838	670.940	

PHOTO 18 LOCATION		262775.610	6182148.070	669.161
18000	262778.722	6182163.694	669.449	
18001	262774.767	6182164.330	669.234	
18002	262770.389	6182162.588	668.876	
18003	262789.202	6182233.045	669.088	
18004	262759.881	6182183.641	668.602	

Please see attached photos for survey feature diagrams

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