

Parramatta Metro OSD

Visual Impact Photomontage and Methodology Report

21st February 2024

1. INTRODUCTION

This document was prepared by Virtual Ideas to demonstrate the visual impact of the proposed developments at this site with respect to the existing built form and existing site conditions.

We understand that the purpose of the report will be for DA submission.

2. OUR EXPERTISE

Virtual Ideas is an architectural visualisation company that has over 15 years experience in preparing visual impact assessment content and reports on projects of major significance that meet the requirements for relevant local and state planning authorities.

Our reports have been submitted as evidence in proceedings in both the Land and Environment Court and the Supreme Court of NSW. Our director, Grant Kolln, has been an expert witness in the field of visual impact assessment in the Supreme Court of NSW.

Virtual Ideas' methodologies and outcomes have been inspected by various court appointed experts in relation to previous visual impact assessment submissions, and have always been found to be accurate and acceptable.

3. PHOTOMONTAGE METHODOLOGY

The following describes the process that we undertake to create the photomontage renderings that form the basis of this report.

3.1 DIGITAL 3D SCENE CREATION

The first step in our process is the creation of an accurate, real world scale digital 3D scene that is positioned at a common reference point using MGA 56 coordinates system (GDA2020).

We use a variety of data from various sources to create the 3D scene, most commonly survey data from registered surveyors, 3D photogrammetric models of cities and building 3D models supplied by Architects. In this case we used a 3D model supplied by Ethos Urban and site survey data provided by RPS Group as well as CMS Surveyors.

All data is imported into the 3D scene at real world scale and positioned to a common reference point. This common reference point is established by using the MGA-56 coordinates system (GDA2020). When we receive data sources that are not positioned to MGA-56 coordinates, we use common points in the data sources that can be aligned to points in other data sources that are positioned at MGA-56. This can be data such as site boundaries and building outlines. Descriptions of how we have aligned each data source can also be found in Appendix A.

Once the various data sources have been imported and positioned with reference to each other, we then create digital 3D cameras in the 3D scene. The camera locations selected for the photomontages in this report were proposed by Ethos Urban.

3.2 SITE PHOTOGRAPHY

Using the 3D scene digital camera locations as our reference, we then capture site photography from locations as close as possible to the digital camera locations. In some cases we may need to modify the location due to site conditions that were not visible prior to conducting the photo shoot.

Camera lenses for each photograph are selected taking a variety of factors into consideration including the distance from the site, the size of the proposed development with respect to existing built form and landscape and any specific planning authority requirements.

In some cases a specific lens requirement set by planning authorities may not produce a photomontage that is effective for visual impact assessment. In the cases where we are required to satisfy a specific lens stipulation, and we consider that this is not effective for assessment of visual impact, we will either outline the extent of the longer lens or provide a separate cropped image at the required focal length.

Full metadata of the photographs are recorded during the site photography. The critical data we extract is date, time and lens width or field of view.

3.3 SITE AND PHOTOGRAPHY LOCATION SURVEY

To correctly adjust the digital cameras in our 3D scenes to match the positions of the site photography, we engage a registered surveyor to survey all camera locations and reference this survey to MGA 56 (GDA2020) coordinates.

In addition to the camera location, we also instruct the surveyor to survey select features that are visible in the photographs from each individual location. This might include building corners, kerb lines, posts etc.

This survey data can be found in Appendix C.

3.4 ALIGNMENT OF 3D SCENE TO PHOTOGRAPHY

To align the 3D scene to the photograph we first import the site and photography location survey data into the 3D scene. We then load the photograph into the background of the corresponding 3D scene camera view, ensuring that the aspect ratio and lens setting match. The 3D scene camera is moved to the surveyed position and rotated so that the surveyed feature locations match the same features in the photograph. Additional surveyed data can be used to verify alignment such as existing site surveys (Appendix B) and photogrammetric 3D models.

3.5 RENDERING AND PHOTOMONTAGE CREATION

After the camera alignment we add lighting to the 3D scene.

A digital daylight system is added into the 3D scene to match the lighting direction of the sun in the photograph. This is done using the software's daylight system that matches the sun angles using location data and time and date information. This data is extracted from the metadata of the site photographs.

Images are then rendered from the software and layered over the photograph.

4.1 OVERVIEW OF CAMERA LOCATIONS



1. Old Government House looking East
2. Governor's Bath House looking East
3. Western side of Parramatta River along Byrne's Avenue

1. 24mm
2. 24mm
3. 50mm

5.1 View 01 - Old Government House looking East

ORIGINAL PHOTOGRAPH



PHOTOMONTAGE INCLUDING PROPOSED DEVELOPMENT



ORIGINAL PHOTOGRAPH INCLUDING SURVEYED ALIGNMENT DATA



PHOTOGRAPH DETAILS

Photo Date:	9th February 2024
View Location:	Old Government House
Camera Used:	Sony ILCE-7C
Camera Lens:	DT 24-105mm F4 SAM
Camera RL:	5.25m
Focal length in 35mm Film	24mm

ORIGINAL PHOTOGRAPH



PHOTOMONTAGE INCLUDING PROPOSED DEVELOPMENT



ORIGINAL PHOTOGRAPH INCLUDING SURVEYED ALIGNMENT DATA



5.1 View 2 - Governor's Bath House looking East

ORIGINAL PHOTOGRAPH



PHOTOMONTAGE INCLUDING PROPOSED DEVELOPMENT



ORIGINAL PHOTOGRAPH INCLUDING SURVEYED ALIGNMENT DATA



PHOTOGRAPH DETAILS

Photo Date:	9th February 2024
View Location:	Governor's Bath House
Camera Used:	Sony ILCE-7C
Camera Lens:	DT 24-105mm F4 SAM
Camera RL:	5.25m
Focal length in 35mm Film	24mm

ORIGINAL PHOTOGRAPH



PHOTOMONTAGE INCLUDING PROPOSED DEVELOPMENT



ORIGINAL PHOTOGRAPH INCLUDING SURVEYED ALIGNMENT DATA



5.1 View 3 - Western side of Parramatta River along Byrnes Avenue looking East

ORIGINAL PHOTOGRAPH



PHOTOMONTAGE INCLUDING PROPOSED DEVELOPMENT



ORIGINAL PHOTOGRAPH INCLUDING SURVEYED ALIGNMENT DATA



PHOTOGRAPH DETAILS

Photo Date:	9th February 2024
View Location:	Parramatta River
Camera Used:	Sony ILCE-7C
Camera Lens:	DT 24-105mm F4 SAM
Camera RL:	5.25m
Focal length in 35mm Film	50mm

ORIGINAL PHOTOGRAPH



PHOTOMONTAGE INCLUDING PROPOSED DEVELOPMENT



Proposed Building Envelope

ORIGINAL PHOTOGRAPH INCLUDING SURVEYED ALIGNMENT DATA



APPENDIX A: 3D SCENE DATA SOURCES

A.1 - 3D Model of proposed development

The 3D model of the proposed development was supplied by Create NSW, Department of Premier and Cabinet.

- 220811_VirtualIdeas_Planning Envelope 3D Model.skp

A.2 - Camera location

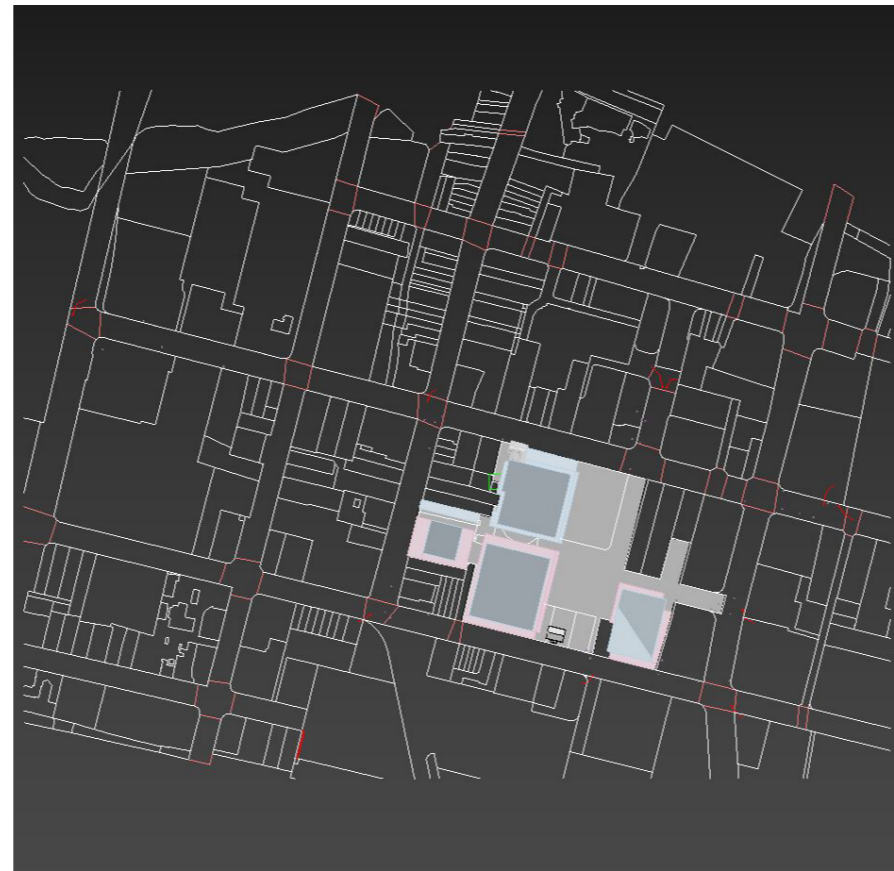
The 3D cameras positions that were used for this study were supplied by Ethos Urban.

A.3 - Alignment of the 3D model

The 3D model was positioned in the scene referencing the Site survey drawing provided by CMS Surveyors positioned to MGA 56 (GDA2020).



LTS Site Survey



3D model supplied by Ethos Urban

APPENDIX B: SITE SURVEY



NOTES



LEGEND:

- AWN = AWNING
- BLD = CORNER OF BUILDING
- LP = TOP OF LIGHT POLE
- PAR = PARAPET
- RR = ROOF RIDGE
- SGN = TOP OF SIGN
- TG = TOP OF GUTTER
- TLI = TOP OF TRAFFIC LIGHT
- THD = TOP OF HOARDING

HORIZONTAL DATUM:
 CO-ORDINATE SYSTEM: MGA2020
 MARKS ADOPTED: SSM 503M
 E 315372.077 N 6256690.495

VERTICAL DATUM:
 DATUM: AUSTRALIAN HEIGHT DATUM (AHD)
 B.M. ADOPTED: SSM 503M
 R.L. 8.847 (CLASS B)
 SOURCE: S.C.I.M.S. (03/06/2022)

I FIRST ISSUE 6/06/2022

CLIENT:
 VIRTUAL IDEAS
 STUDIO 71/61 MARLBOROUGH ST
 SURRY HILLS, NSW, 2010

SURVEY PLAN
 SHOWING PHOTO LOCATIONS
 IN PARRAMATTA METRO
 OSD PUBLIC DOMAIN
 PARRAMATTA, NSW, 2150

C.M.S. Surveyors Pty Limited
 ACN: 096 240 201
 PO Box 463 Des Why
 NSW 2059
 2/89A South Creek Road,
 Des Why NSW 2059
 Telephone: (02) 9971 4802
 Facsimile: (02) 9971 4822
 E-mail: info@cmsurveyors.com.au

LGA: PARRAMATTA		SHEET 1 OF 1	
SURVEYED JL	DRAWN CJR	CHECKED JL	APPROVED DR
SURVEY INSTRUCTION 2140B	SCALE 1:500 @ A1 1:2000 @ A3	DATE OF SURVEY 02/06/2022	
DRAWING NAME 2140B photo locations		ISSUE 1	
CAD FILE 2140BphotoLocations 1.dwg			

APPENDIX C: PHOTOGRAPHY SURVEY

CMS Surveyors Pty Limited
 A.B.N. 79 096 240 201
 LAND SURVEYING, PLANNING & DEVELOPMENT CONSULTANTS



Date: 14-02-2023
 Our Ref: 22644A Photo Locations

Studio 71/61 Marlborough Street
 Surry Hills
 NSW 2010

Dear Rick Mansfield,

RE: PHOTO LOCATIONS – Parramatta Metro

As requested, we have attended site and measured the Co-ordinates and Elevation of the photo locations for Parramatta Metro, Parramatta.

Co-ordinates are MGA Zone 56 (GDA 2020) and elevation to Australian Height datum (AHD). Co-ordinates were taken using GNSS CORSNET. MGA coordinates and AHD are derived from GNSS measurements and verified against coordinated marks (SSM 24887 & SSM 24888) shown on SCIMS.

Measurements were taken using Leica TS15 & GNSS CORSNET.

DWG of locations has also been supplied.

Point Number	Easting	Northing	Reduced Level (RL)	Photo Point
1	314674.740	6256828.645	17.56	PHOTO 1
5	314549.225	6256864.641	22.81	PHOTO 5
8	314472.404	6257186.600	8.94	PHOTO 8A
100	315010.185	6256866.170	58.30	Building
101	314936.291	6256681.763	88.83	Building
102	314923.455	6256664.753	82.59	Building
103	314994.632	6256544.843	111.17	Building
104	314992.479	6256534.990	111.15	Building
105	314871.287	6256502.892	106.61	Building
106	314775.241	6256819.690	10.31	Post
107	314755.243	6256791.425	14.40	Post
108	314728.686	6256729.911	16.52	Post
109	314653.690	6256720.357	18.26	Post
110	314594.769	6256840.740	22.95	Post
111	314554.730	6256861.267	23.53	Post
112	314591.186	6256860.041	27.38	Chimney
113	314608.089	6256878.137	26.68	Roof ridge

Point Number	Easting	Northing	Reduced Level (RL)	Photo Point
114	314633.961	6256991.903	7.75	Top of wall
115	314629.925	6256983.232	7.18	Top of wall
116	314540.642	6257131.082	9.09	Tree
117	314549.046	6257050.052	5.10	Tree
118	314540.300	6257141.841	9.94	Tree

Note: R.L. shown on the report for photo locations are ground levels. Camera height should be added to the supplied RL of each corresponding photo location.

Yours faithfully,

CMS Surveyors Pty Limited

Ben Son
 Surveyor



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APPENDIX C: PHOTOGRAPHY SURVEY

CMS Surveyors Pty Limited
A.B.N. 79 096 240 201
LAND SURVEYING, PLANNING & DEVELOPMENT CONSULTANTS



Date: 9/10/2023

Rick Mansfield
Senior Account Manager
Virtual Ideas
Studio 71
61 Marlborough Street
Surry Hills NSW 2100
rick@virtualideas.com.au

SURVEYOR'S STATEMENT

RE: Content for Visual Impact Study PROPERTY ADDRESS: Parramatta Metro Station, Parramatta

Under your instructions, we have collected/sourced and coordinated content to support the creation of a Visual Impact Study for the proposed works at the aforementioned address.

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

The survey data was used for depiction of existing buildings or existing elements shown in the wire frame and to establish an accurate camera location and RL of the camera.

The following employees prepared the survey information:

Hyeokseong Son, Bachelor of Spatial Science (Honours) with major in Surveying

Yours faithfully,

Damon Roach
Operations Manager



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