Print full image at 1505mm wide for accurate viewing at 400mm reading distance

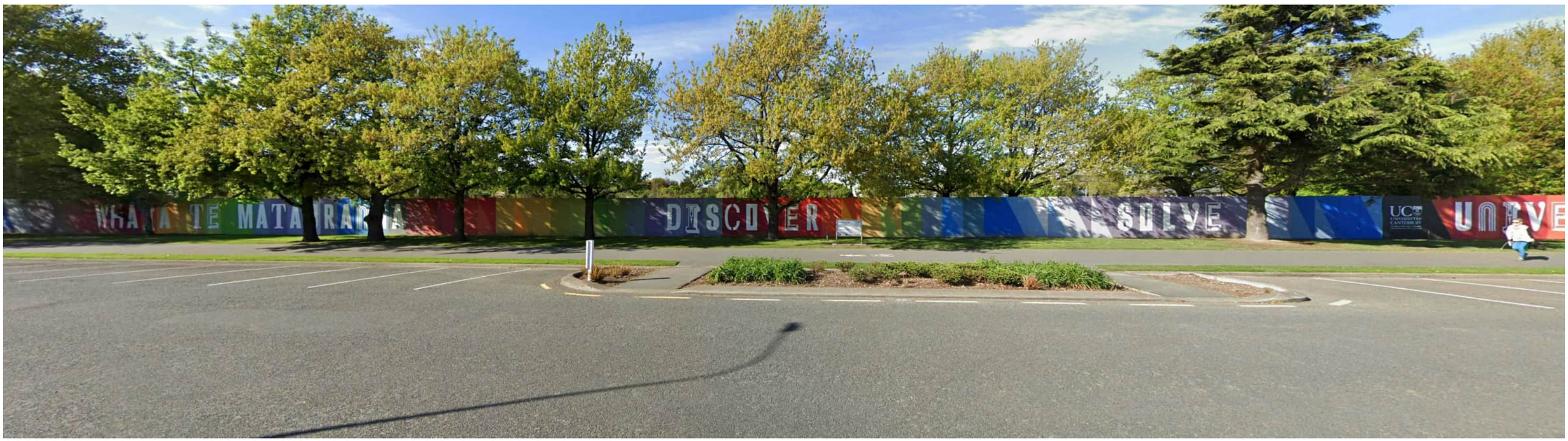
VIEWPOINT 3 - EXISTING

VIEWPOINT 3 - PROPOSED

PHOTOGRAPH DETAILS: Rectilinear panorama composed of 21 frames (7 horizontal x 3 vertical). Horizontal FOV 124°, Vertical FOV 55°
CAMERA DETAILS: Canon 7DMkII, Sigma 30mm F1.4 Art Series Lens. Camera Sensor Crop Factor 1.6. FFS equivalent focal length of individual frames 48mm

CAMERA LOCATION: Northing 807781.1m, Easting 387362.0m (Mount Pleasant NZGD2000), Elevation 16.80m (NZVD2016), Camera Height 1.55m above existing ground
VIEW DIRECTION: south-east
PHOTOGRAPH TAKEN: 14th July 2022, 02:54pm

For correct viewing keep head pointed towards centre of photograph, and move eyes only to view periphery



GOOGLE STREET VIEW REFERENCE IMAGE - SHOWING SUMMER FOLIAGE ON FOREGROUND TREES

VIEWPOINT 3 - PROPOSED

Technical limitations prevent the production of an 'indicative summer foliage' version of Viewpoint 3 that could have meaningful value to the visual assessment of the depicted proposal, due to the direct, front-on nature of the image, and the resulting complexity and visual permeability of the foreground trees.

The top image above is a rectilinear panorama composed of several images taken from Google Street View. This image is provided for reference, to assist with assessment of the likely visual effects of the proposal as viewed from Viewpoint 3 with the foreground trees in full leaf during summer.

PHOTOGRAPH DETAILS: Rectilinear panorama composed of 21 frames (7 horizontal x 3 vertical). Horizontal FOV 124°, Vertical FOV 55°
CAMERA DETAILS: Canon 7DMkII, Sigma 30mm F1.4 Art Series Lens. Camera Sensor Crop Factor 1.6. FFS equivalent focal length of individual frames 48mm

CAMERA LOCATION: Northing 807781.1m, Easting 387362.0m (Mount Pleasant NZGD2000), Elevation 16.80m (NZVD2016), Camera Height 1.55m above existing ground
VIEW DIRECTION: south-east
PHOTOGRAPH TAKEN: 14th July 2022, 02:54pm

For correct viewing keep head pointed towards centre of photograph, and move eyes only to view periphery

BACKGROUND

Method Visual is a division of the registered New Zealand company Method Design Limited.

Method Visual is regularly engaged to prepare Visual Simulations that depict development proposals with a high and repeatable degree of accuracy, to assist in communicating the visual effects likely to arise from their implementation.

The work of Method Visual does not include assessment or interpretation of the visual effects of the depicted proposal in regard to their significance or appropriateness for the receiving environment.

PROJECT

Method Visual has been engaged by University of Canterbury to prepare a series of Visual Simulations from three viewpoints, depicting the new facilities proposed for the University of Canterbury Dovedale Campus.

VIEWPOINT SELECTION

The three Visual Simulation viewpoints have been confirmed in collaboration with University of Canterbury and their consultant team. Viewpoints 1 and 2 approximately replicate the viewpoints of digital artist's impressions previously prepared by the project architect, Herriot Melhuish O'Neill Architects. Viewpoint 1 is located on Dovedale Avenue to the north west of the proposal site and oriented south east towards it. Viewpoint 2 is located on Dovedale Avenue to the north east of the proposal site and oriented south west towards it. Viewpoint 3 is located the north side of Dovedale Avenue, approximately centered between Viewpoints 1 and 2, and is oriented directly south across the street towards the proposal site.

PROJECT INFORMATION

The proposal depicted in the Visual Simulations is based on the following project information provided by the consultant team:

- Herriot Melhuish O'Neill Architects – architectural 3D models, CAD site plan, material specifications and supplementary instructions
- Rough Milne Mitchell Landscape Architects – CAD landscape plan and supplementary instructions
- Harrison Grierson – CAD topographical survey plan and camera control point survey

VISUAL SIMULATION METHODOLOGY

The preparation of Visual Simulations by Method Visual follows the guidelines set out by NZILA Best Practice Guide, Visual Simulations BPG 10.2.

The steps involved in the preparation of the attached Visual Simulations are as follows:

1. Photographs taken on site in RAW format using a Canon 7D Mk2 camera and a Sigma 30mm F1.4 Art Series Lens*. Camera mounted on manually operated panoramic tripod head to ensure pan and tilt of camera occurs around the lens nodal point, eliminating parallax error and ensuring an optically correct panorama. Up to 21 individual frames in three horizontal rows are taken per image. Camera positions marked on site with temporary paint for surveyor's reference.
2. RAW format photographs post-processed with Adobe Camera RAW plugin, including correction of optical distortion inherent in camera lenses.
3. Post-processed photographs compiled using specialised panorama compositing software into 124x55 degree primary human field of view panoramas with rectilinear / planar projection (as described in NZILA BPG 10.2) for presentation as 'existing views', and backplates for Visual Simulations.
4. Panoramic photographs annotated with camera control points required for virtual camera matching, and issued to licensed surveyor.
5. Geographic coordinates of specified camera control points and camera viewpoints received from licensed surveyor, and used to generate a series of virtual cameras within 3D modelling and rendering software that match the position, orientation and pixel dimensions of each panoramic photograph. Refer to following page for camera control points used to match each viewpoint.
6. Project data received from consultant team compliled into a unified 1:1 scale 3D model, located in the true geographic location of the proposal, incorporating all specified structures, surfaces and vegetation.
7. Digital textures applied to all visible surfaces of 3D model, in accordance with project documentation and instructions received.
8. Virtual sun position set within 3D software to match geographic location, date and time of day for each panoramic photograph, and light intensity, shadow sharpness etc. adjusted as necessary to match lighting conditions on site at time of photography.
9. 2D image of 3D model digitally rendered from each viewpoint / virtual camera, with pixel dimensions matching backplate panoramic photographs.
10. Rendered images of proposal composited into their respective backplate panoramic photographs using Adobe Photoshop image editing software, including masking of rendered image where the proposal is occluded by foreground elements such as vegetation, vehicles, lamp posts, etc., and removal of elements within existing photograph that are understood to be removed by the depicted proposal**.
11. Colour correction and focus adjustments made to rendered images to integrate them into backplate photographs in as realistic manner as possible.
12. Completed panoramic Visual Simulations presented in document with corresponding existing view panoramas, accompanied by printing and viewing instructions, camera and photography information, and reference viewpoint map.

INDICATIVE SUMMER FOLIAGE VIEWS

In the case of the attached Visual Simulation set, additional versions of the Viewpoint 1 and Viewpoint 2 Visual Simulations have been prepared to provide an indication of the likely visibility and visual impact of the proposal during summer months, when the predominantly deciduous mature trees along the Dovedale Avenue frontage of the propsal site are in full leaf.

Using Adobe Photoshop image editing software, summer foliage was digitally added to the foreground trees that were identified as having an effect on the visibility of the proposal. Images available on Google Street view dated October 2019, depicting the deciduous trees along the Dovedale Avenue frontage in full leaf, were used as a visual reference for the addition of foliage. In most cases the foliage of individual trees was copied from downloaded versions of the Google Street View imagery and pasted into the visual simulaton document. In some cases where a clear copy of the foliage couldn't be reliably sampled from the Google Street View images, foliage was instead sampled from stock photographs of the corresponding tree species.

The geometry of copied foliage was scaled and adjusted to match the form and branch structure of each tree as shown in the photographs taken on site, and applied to duplicate copies of the Visual Simulations and their corresponding existing view panoramas to create the attached *Indicative Summer Foliage* views.

A version of the Viewpoint 3 Visual Simulation with summer foliage was not created, due to the inctricate and nuanced nature of the proposal's visibility from this location. It was determined that attempting to represent the likely effect of summer foliage on the visibility of the proposal from this particular viewpoint, and presenting it under the title of a 'Visual Simulation', would potentially give a false impression of the level of accuracy inherent in the process. Instead a reference panorama was created from existing Google Street View images that approximates the view from Viewpoint 3, to assist the viewer in visualising the likely effect that summer foliage would have on this view.

ADDITIONAL NOTES ON THE VISUAL SIMULATION PROCESS

*The Canon 7D Mk2 camera has an APS-C sensor with a 1.6 crop factor. When paired with a 30mm lens, a crop factor of 1.6 produces an image with a 35mm equivalent focal length of 48mm. This places the focal length of the 30mm lens within the range referred to as a 'normal lens'. A 50mm lens paired with a full frame sensor is one common example of a normal lens, due to being widely available and having a long history of use in photography.

**In some situations when integrating a rendered image into a photographic backplate, it is not possible to distinguish with absolute certainly between existing foreground elements that will appear in front of the proposal, and existing background elements that will be occluded by it, for example, where existing foreground foliage overlaps exsiting background foliage of a similar colour. In addition, where existing elements in the photographs are to be removed, but do not completely overlap the rendered digital image of the proposal, it is not always possible to determine exactly what existing features behind the removed elements will become visible. In both cases described above careful judgement is used during the compositing process, often by referring to supplementary site photos and aerial photography. However, in these situations no assurance can be given as to the absolute accuracy of these aspects of the final images. Nonetheless, the position of the proposed development within the backplate photograph remains survey-accurate, and emphasis is always placed on ensuring that the overall impression of visibility given by the Visual Simulation is as accurate and realistic as possible.

Jeremy London
8th August, 2022

VIEWPOINT 1 CAMERA CONTROL POINTS

VIEWPOINT 2 CAMERA CONTROL POINTS

VIEWPOINT 3 CAMERA CONTROL POINTS