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VISUAL IMPACT STUDY

37-43 HAY STREET
COLLAROY

05.03.2024

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VISUAL IMPACT STUDY PROCESS

Preamble

CMS Surveyors has been engaged to prepare the following survey accurate representation of the visual impact of the proposed development.

CMS Surveyors have developed this methodology based on sound knowledge of coordinate systems, survey data, 3D modelling software and Photography.

In preparing this documentation to support the Visual Impact Study, CMS Surveyors has collected survey data and photography on site, related this information to a coordinate system, and prepared rendered views from a composition of the design model (as supplied), the 3D Point Cloud and the captured photographs.

Process

The site and existing building(s) are surveyed using a Laser scanner which is able to capture millions of points to an accuracy of 3mm at 50m from the scanner and is able to scan almost any material or surface. The scan data is related to to the Australian Height Datum (AHD) and the Map Grid of Australia (MGA).

The location of the physical camera was scanned at the time of photography so that the camera exists within the point cloud. The virtual camera is then aligned with the scanned camera and orientation is determined using the 3D point cloud.

The proposed development model has been supplied by the Architect and has been aligned and referenced to survey data captured on site, including existing physical features and/or the boundaries of the site.

The methodology used for scene setup is further described in the images on the right of this page.

View Points and Lens Choice

Various view points have been produced to ascertain the impact of the proposed development on the existing "high value" view elements as per the client's directions and available photography.

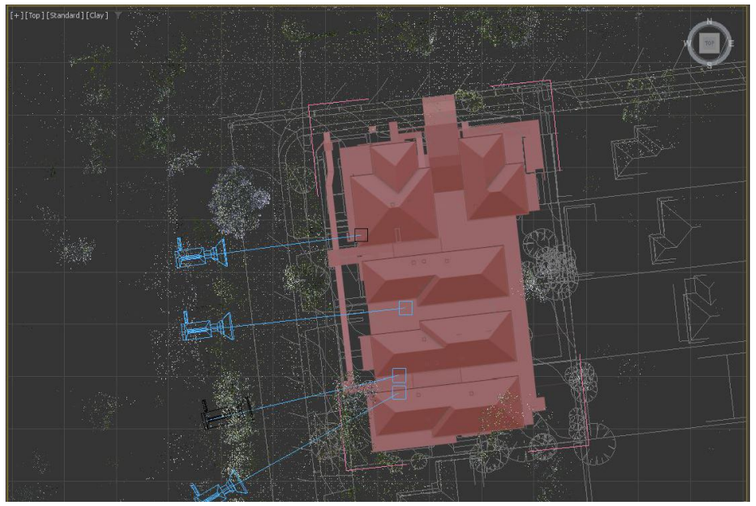
The photos in this study have been captured at the focal lengths representing fields of view (FoV) as shown in the table on the following page. The field of view of human vision is subject to conjecture and the way an image of a scene is viewed on a flat piece of paper or screen is different to how it is perceived in reality. Due to the variabilities in the way the scene is perceived to the viewer, to be most confident in how the proposed development will look in reality, the photomontages are best viewed on site in the position of the camera to get the best 'feel' for the visual impact of the proposal.

This report has been produced by Christopher Larmour B. Eng (Surveying and Spatial Information Systems), NSW Registered Surveyor 8786

Christopher Larmour

NSW Registered Surveyor 8786

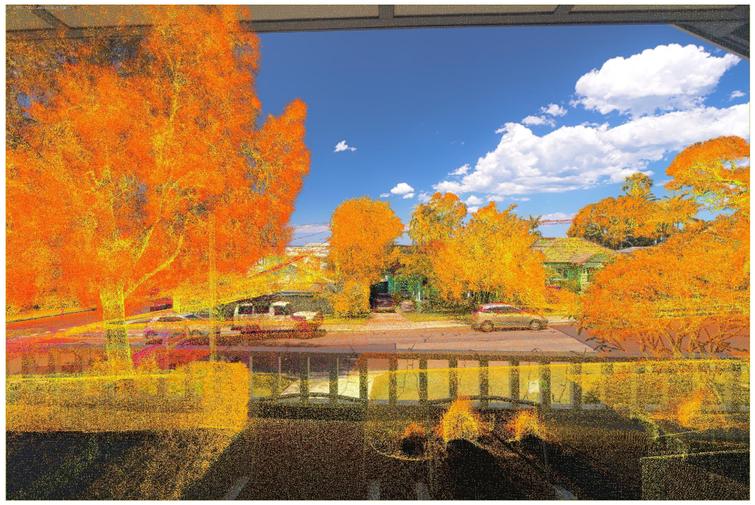
VIRTUAL SCENE SETUP



Step 1:

- Laser scan existing location and surrounds on MGA coordinates (Location) and AHD (height).
- Carry out boundary survey to accurately align design with intended position
- Take photos on site at known coordinates pointing towards measured target.
- Set up scene in 3D graphics software

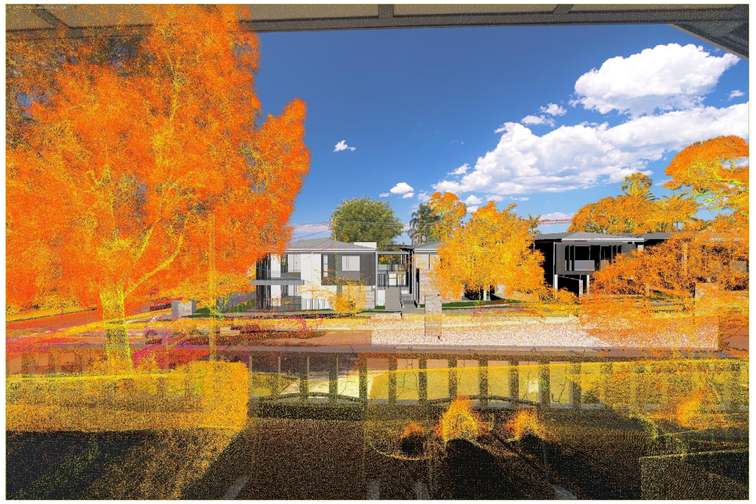
REAL + VIRTUAL CAMERA ALIGNMENT PROOF



Step 2:

- Using the surveyed (or software-determined) camera position and the point cloud data, accurately align the virtual camera to the captured 3D data and check the alignment on the photograph background
- This image shows the alignment of the 3D Scanner point cloud data overlaid on the 2D photograph proving correct camera position, direction and characteristics.

INSERT PROPOSAL



Step 3:

- Position proposed development in CAD software based on DA plans, surveyed boundaries and existing features.
- Import 3D model of proposed development into scene

FINAL COMPOSITION

Step 4:

- Render out model and re-layer with any foreground objects. Note that any colour, lighting and materials of the proposed development is strictly indicative only.

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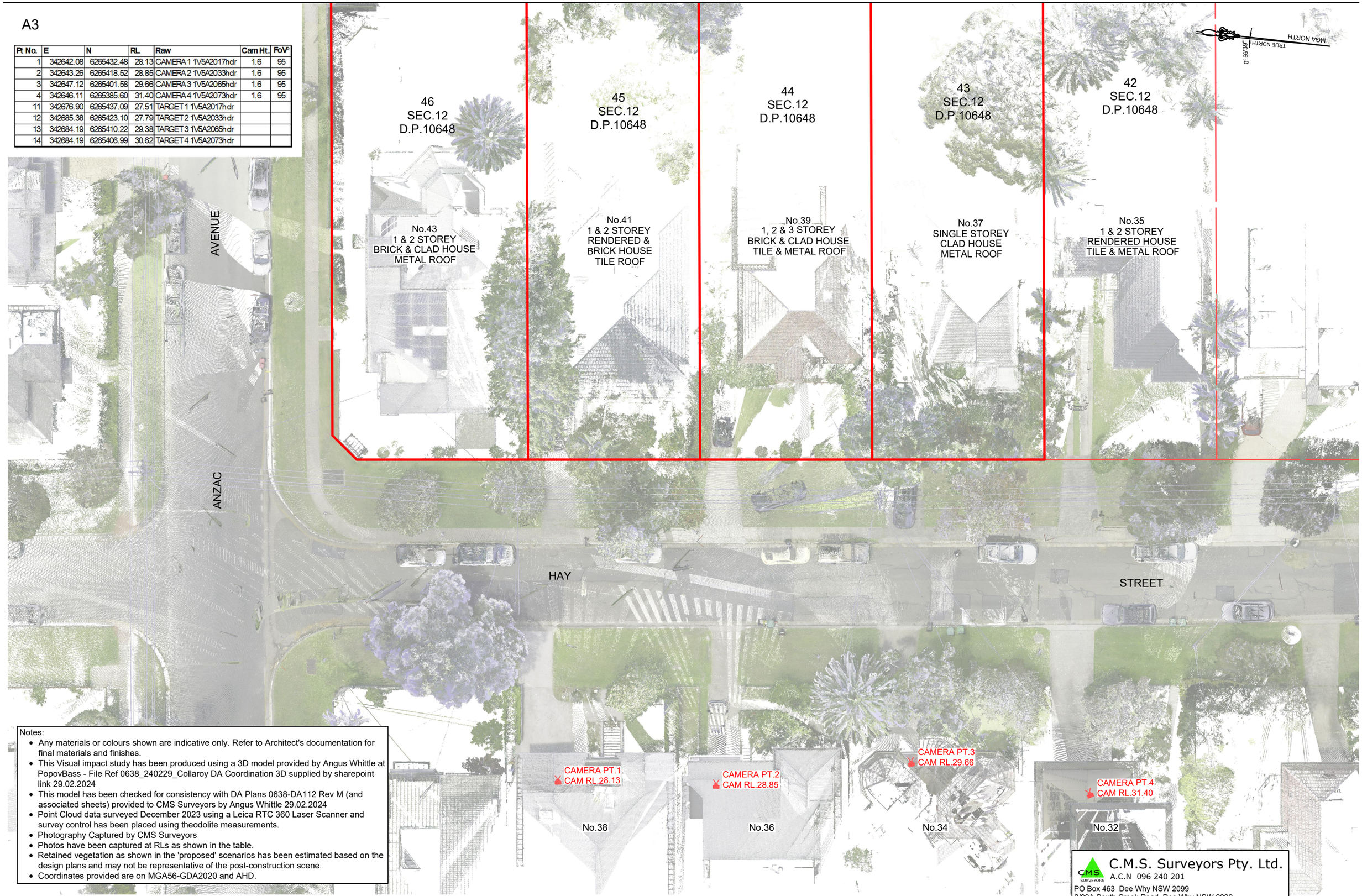
Pt No.	E	N	RL	Raw	Cam Ht.	FoV°
1	342642.08	6265432.48	28.13	CAMERA 1 1V5A2017hdr	1.6	95
2	342643.26	6265418.52	28.85	CAMERA 2 1V5A2033hdr	1.6	95
3	342647.12	6265401.58	29.66	CAMERA 3 1V5A2065hdr	1.6	95
4	342646.11	6265385.60	31.40	CAMERA 4 1V5A2073hdr	1.6	95
11	342676.90	6265437.09	27.51	TARGET 1 1V5A2017hdr		
12	342685.38	6265423.10	27.79	TARGET 2 1V5A2033hdr		
13	342684.19	6265410.22	29.38	TARGET 3 1V5A2065hdr		
14	342684.19	6265406.99	30.62	TARGET 4 1V5A2073hdr		



Notes:

- Any materials or colours shown are indicative only. Refer to Architect's documentation for final materials and finishes.
- This Visual impact study has been produced using a 3D model provided by Angus Whittle at PopovBass - File Ref 0638_240229_Collaroy DA Coordination 3D supplied by sharepoint link 29.02.2024
- This model has been checked for consistency with DA Plans 0638-DA112 Rev M (and associated sheets) provided to CMS Surveyors by Angus Whittle 29.02.2024
- Point Cloud data surveyed December 2023 using a Leica RTC 360 Laser Scanner and survey control has been placed using theodolite measurements.
- Photography Captured by CMS Surveyors
- Photos have been captured at RLs as shown in the table.
- Retained vegetation as shown in the 'proposed' scenarios has been estimated based on the design plans and may not be representative of the post-construction scene.
- Coordinates provided are on MGA56-GDA2020 and AHD.

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PERSPECTIVE IMAGE SHOWING THE PROPOSED DESIGN MODEL IN THE SURVEYED 3D POINT CLOUD

NOTE THAT MATERIALS SHOWN ARE INDICATIVE ONLY - REFER TO ARCHITECT'S DOCUMENTATION FOR COLOURS AND FINISHES.
VEGETATION SHOWN IN THE 'PROPOSED' SCENES IS INDICATIVE ONLY. REFER TO LANDSCAPE ARCHITECT'S PLANS.

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1V5A2017hdr - No.38 : existing scene

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1V5A2017hdr - No.38 : Proof showing surveyed point cloud overlaid on photograph

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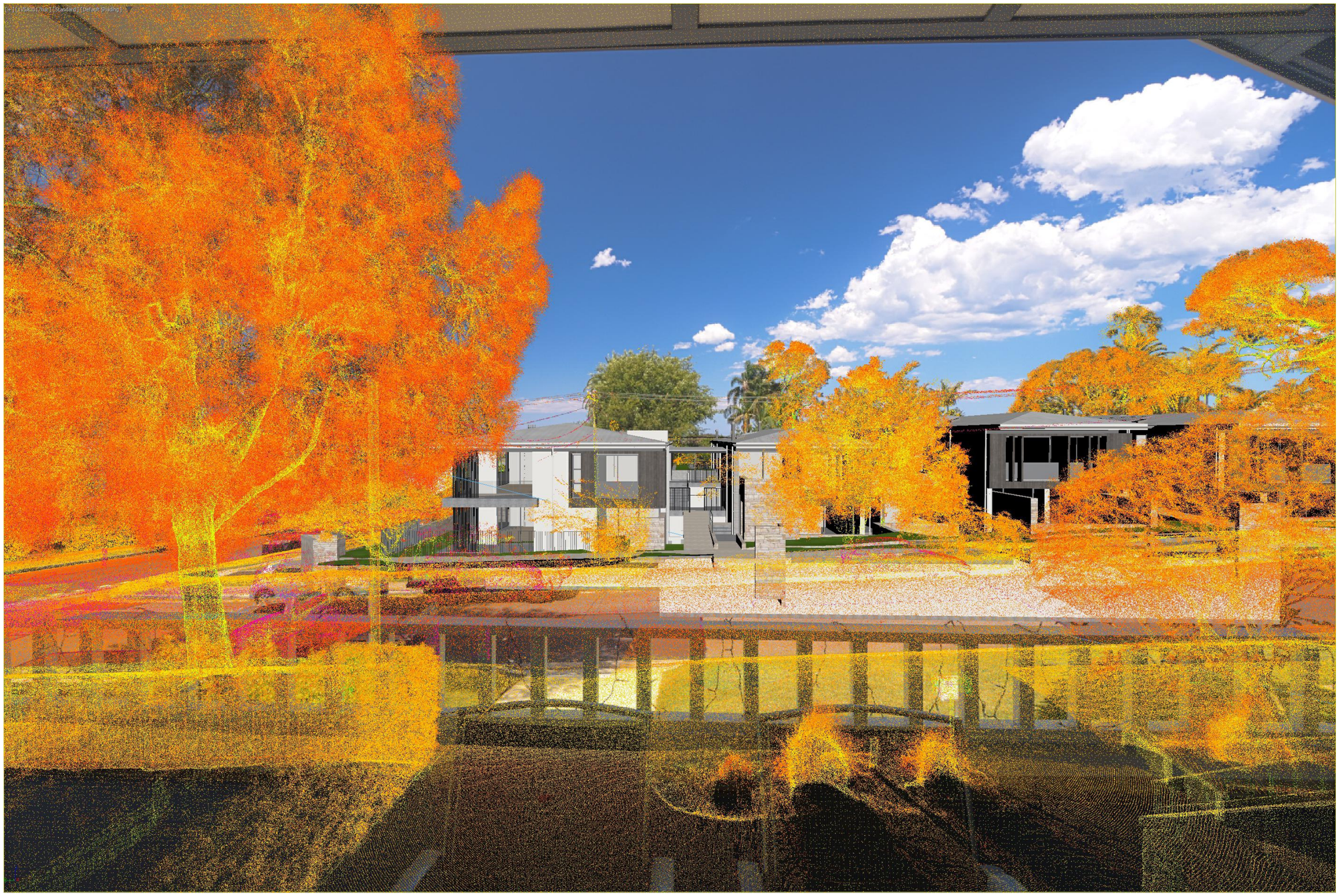

1V5A2017hdr - No.38 : Proof showing surveyed point cloud overlaid on photograph with proposal

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1V5A2017hdr - No.38 : Showing outline of proposal (Yellow) and Compliant Envelope (Red)

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1V5A2017hdr - No.38 : Showing proposed scene

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1V5A2033hdr - No.36 : existing scene

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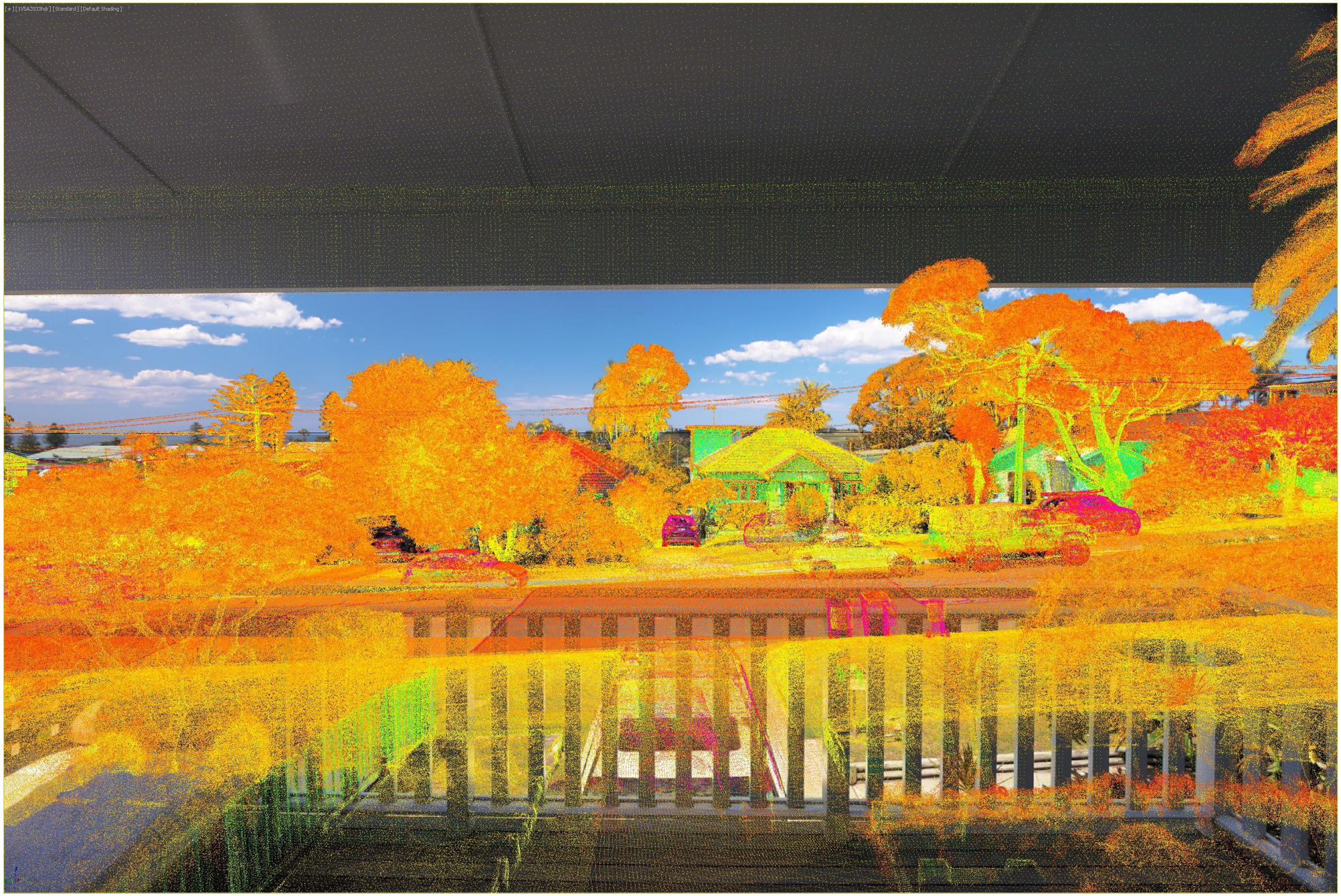

1V5A2033hdr - No.36 : Proof showing surveyed point cloud overlaid on photograph

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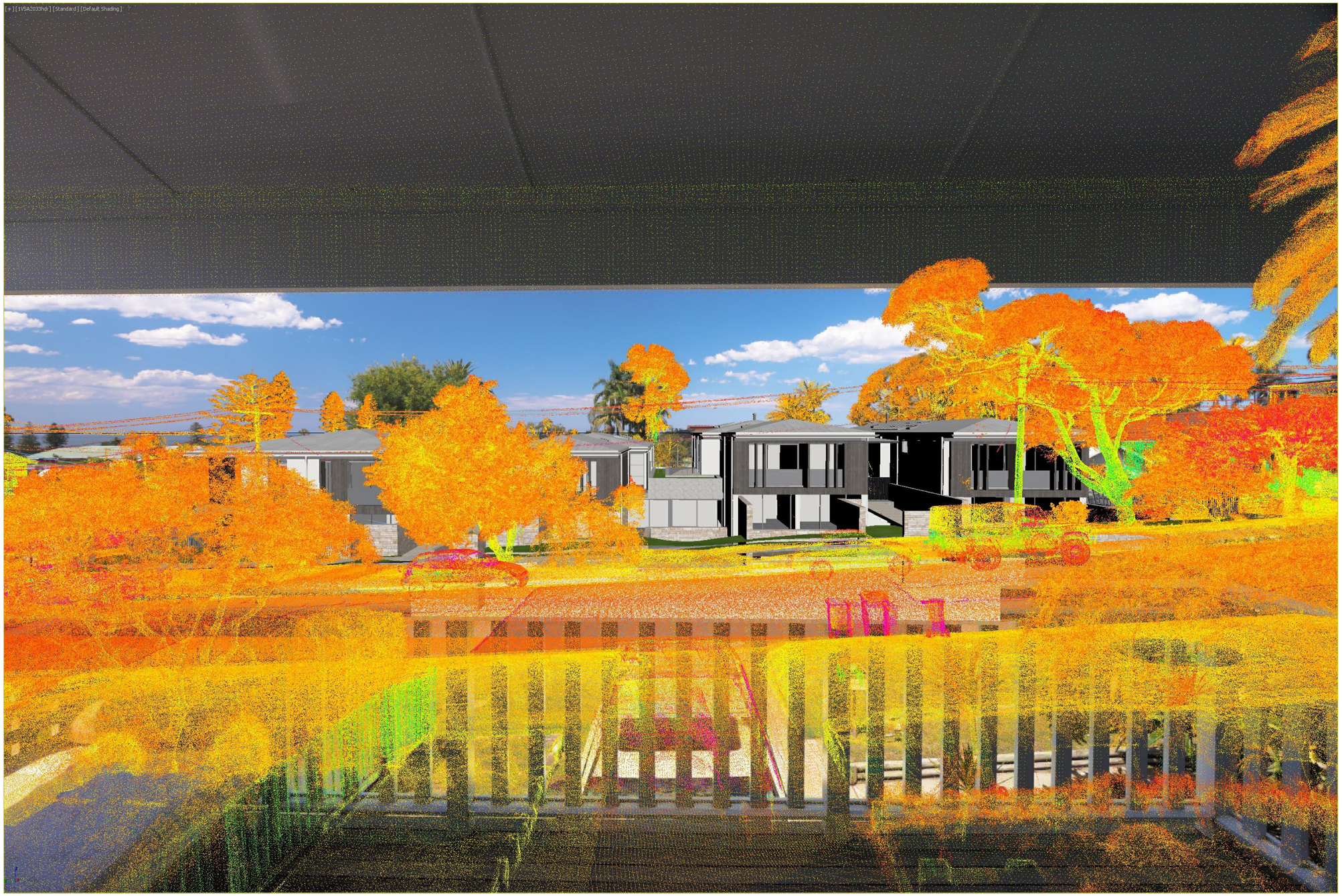

1V5A2033hdr - No.36 : Proof showing surveyed point cloud overlaid on photograph with proposal

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1V5A2033hdr - No.36 : Showing proposed scene

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1V5A2065hdr - No.34 : existing scene

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1V5A2065hdr - No.34 : Proof showing surveyed point cloud overlaid on photograph

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1V5A2065hdr - No.34_Proposed_outline

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1V5A2065hdr - No.34 : Showing proposed scene

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1V5A2073hdr - No.32 : existing scene

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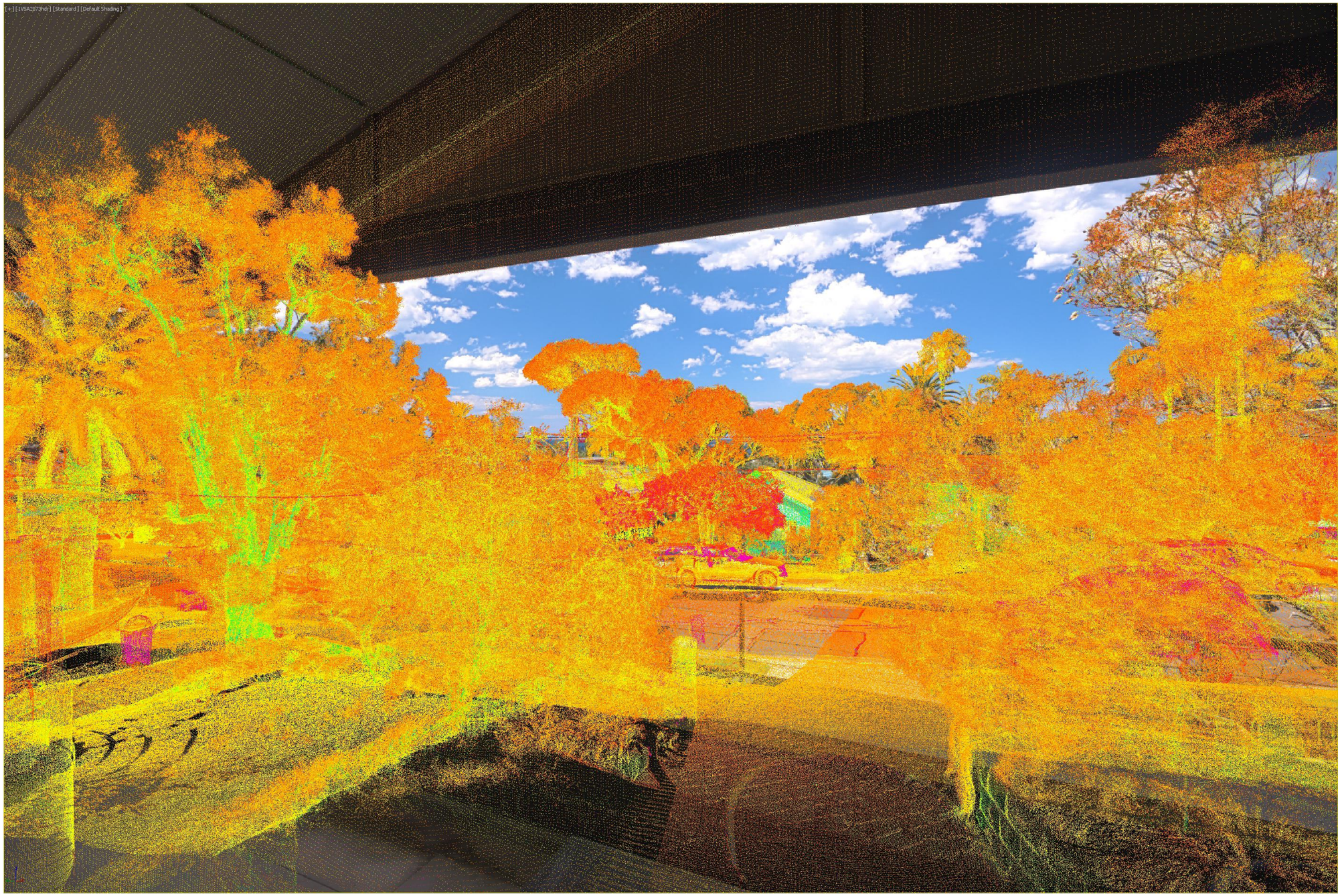

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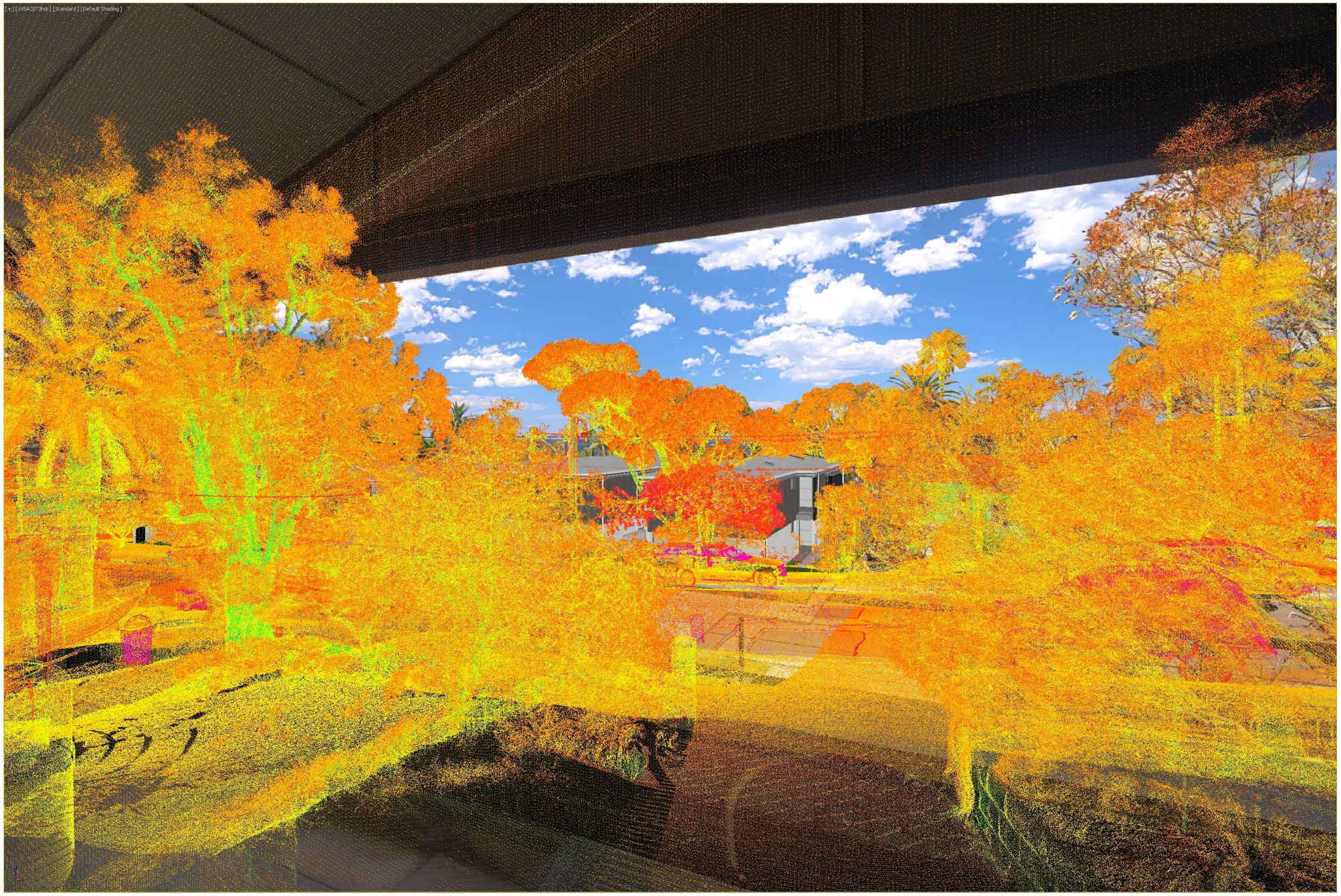

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