

ANGEL PLACE LEVEL 8, 123 PITT STREET SYDNEY NSW 2000

URBIS.COM.AU Urbis Ltd ABN 50 105 256 228

18 April 2024

Attn: Roberta Ryan, Acting Chair Hunter Central Coast Regional Planning Panel

CC: Damien Jaeger Principal Development Officer City of Newcastle

Dear Roberta,

RESPONSE TO HCCRPP RECORD OF DEFERRAL - S4.55 MODIFICATION 121 HUNTER STREET NEWCASTLE, MA2023/00175 (HCCRPP REF: PPSHCC-220)

1.1. PURPOSE

This response provides further detail, new information, and answers specific questions raised by the Hunter and Central Coast Regional Planning Panel (HCCRPP) Record of Deferral dated 19th March 2024.

This response is limited to data required to satisfy the requests made by the Panel in the Record of Deferral only.

This response does not repeat the detailed, extensive, and objective assessment of view loss caused separately, or cumulatively, by the Approved Concept, Permissible form plus bonus, and the proposed s4.55 Modification. The parts of the development that cause view loss are shown in 11 public and 9 private domain photomontage views, which are color-coded and explained in relation to relevant planning principles in the Urbis Visual Impact Assessment (VIA), April 2023 and Urbis View Sharing Report (VSR), January 2024.

Please refer to the Urbis VSR photomontages per dwelling or building, and VIA photomontages per public views including DCP views for this detail described and shown in the respective reports.

1.2. LIMITATIONS

- The findings presented are informed by publicly available information including floorplans, supplemented by survey data and fieldwork observations in relation to a number of dwellings at each building requested to be inspected.
- Assumptions regarding the number and layout of dwellings are based on the interrogation of floorplans, and the data and analysis previously submitted in the 2024 Urbis VSR.
- Numerical analysis is based on publicly available floorplans. These may vary compared to DA approved sets that are available e.g. unit 7, the penthouse at the western end of the Herald Building is an amalgamation of 2 units. Therefore, the data presented is an informed estimate



- of the maximum potential number of units affected, noting that less units may be affected, in relation to internal layout changes or room use, since construction.
- Analysis of view impacts to the Herald Apartments relates only to the contemporary building (constructed 2017) which formally presents to King Street and does not include the converted, original Herald Building facing Bolton Street. Dwellings located in the original Herald Building are not impacted by the development and have therefore been discounted from this analysis.
- The Urbis VSR, analyses views to be retained or lost where dwellings have access to views that are characterised by scenic and highly valued items or combinations, as defined in *Tenacity*, as opposed to 'outlook'.
- Dwellings with 'outlooks' that are vernacular, localised and predominantly of existing development are not highly valued in *Tenacity* terms, and as such do not attract any weight in this analysis. This includes for example dwellings located at Newcomen Apartments, podium level and upper west-facing dwellings at the Herald Apartments.
- However, for completeness, our quantitative analysis considers all views to be retained or lost, including 'outlooks' from lower level apartments.
- Clarification of formal boundaries for each building assessed is shown in Map 1 below.



Figure 1 Map 01, showing formal boundaries of each building assessed.

Source: Nearmap with Urbis overlay.



1.3. PANEL REQUEST (1A) AND (1B)

- 1. The Applicant to provide further consideration of the visual impact assessment modelling which details, clarifies and compares the cumulative impact of the proposed changes to the building height and includes the following:
- a. all impacted properties (Newcastle Business Club, Segenhoe and the Herald Apartments) which will **retain views** if the modification is approved
- b. all impacted properties (Newcastle Business Club, Segenhoe and the Herald Apartments) which will **lose views** if the modification is approved

Urbis Response

Tables 1, 2 and 3 below, quantify the retention and loss of views from each building assessed.

Table 1

R = Retained (existing views unaffected), PA = Retained but Partially Affected, VC=Visual Change: existing development replaced by new development, A=Affected

Segenhoe Building (based on available floorplans)

Floor	No. of	From where view	is obtained (across	boundary)		Extent (quantity) of visual change for existing field of view
	<u>Units</u>	FRONT Boundary (east - Wolfe Street towards Christ Church Cathedral & Park)	REAR Boundary (WEST – towards Perkins Street)	SIDE Boundary (North – towards King Street & Hunter River)	SIDE Boundary (South – towards Church Street)	
1-4	16	R All existing views retained	R All existing views retained	R All existing views retained	R All existing views retained	None
5, 6 & 7	12	R All existing views retained	R All existing views retained	R All existing views retained	PA Retained but Partially Affected	Low/minimal (or less)

SUMMARY KEY POINTS

- Each level of the building is occupied by 4 units. One dwelling occupies the west end and east end of the floorplate separated by two central units.
- Only the east-end dwelling at each level has direct easterly views across the front boundary (Wolfe Street). There are no views to the site from the eastern window of the east unit, from levels 1,2,3 or 4 due to vegetation in Cathedral Park. All 4 eastern dwellings (one per floor) retain all existing views.



Table 1

R = Retained (existing views unaffected), PA = Retained but Partially Affected, VC=Visual Change: existing development replaced by new development, A=Affected

- All northerly views via the side boundary from all north-facing units (3 dwellings per floor) at levels 1-7, are unaffected and will be retained.
- 16 units across levels 1, 2, 3 and 4 retain all existing views in all directions and are unaffected by the proposal.
- 12 north elevation, north-facing units at levels 5, 6 and 7 retain all existing views to the north and north-west. From the same 12 units, potential views are available to the proposal via the north-east edge of the building's side (north boundary). These units are partially affected, from some rooms by a low/minimal extent of view loss per dwelling.
- 3 east facing units at levels 5, 6 and 7 (with rooms that occupy the north-east corner of the building) have potential views to the proposal via the junction of the buildings side and front boundary. These units are partially affected, from some rooms by a **low/minimal extent of view loss per dwelling.**
- 24 rooms, out of 78 rooms across 12 dwellings at levels 5, 6 and 7 are affected by low/minimal view loss (1/12 windows from 1/7 rooms for each western unit, 3/8 windows from 2/6 rooms for each central unit and 6/12 windows in 3/7 rooms for each eastern unit).
- 10 windows out of 40 across all 4 dwellings at levels 5, 6 and 7, offer oblique north-easterly views towards the site, gained at the window and are not widely available from 1m or greater from the window, deeper inside each room or from seated locations.
- The height and scale of a permissible form on the council carpark site will create closer, intervening, additional blocking effects to parts of a north-easterly view from the 12 units identified.

Table 2

R = Retained (existing views unaffected), PA = Retained but Partially Affected, VC=Visual Change: existing development replaced by new development, A=Affected

Herald Apartments (based on available floorplans)

Floor	oor No. of	From where view	Extent			
	<u>Units</u>	FRONT Boundary (south towards King Street)	REAR Boundary (north towards adjoining development)	SIDE Boundary (east towards Bolton Street)	SIDE Boundary (west Newcomen Street)	(quantity) of Visual Change for whole field of view



Table 2

R = Retained (existing views unaffected), PA = Retained but Partially Affected, VC=Visual Change: existing development replaced by new development, A=Affected

Ground	17	R All existing views retained	R All existing views retained	R All existing views retained	VC view or outlook changed	None
Basement 1	4	R All existing views retained	R All existing views retained	R All existing views retained	VC view or outlook changed	None
1,2 & 3	17	R All existing views retained	R All existing views retained	R All existing views retained	VC view or outlook changed	None
4	14	R All existing views retained	R All existing views retained	R All existing views retained	VC view or outlook changed	None
5, 6 & 7	12	R All existing views retained	R All existing views retained	R All existing views retained	VC view or outlook changed	None
5, 6 & 7	3	R All existing views retained	R All existing views retained	R All existing views retained	PA (westerly view only)	low /minimal (or less)

SUMMARY KEY POINTS

- 61/64 units across levels ground, basement 1, floors 1, 2, 3, 4, 5, 6 & 7 retain all existing views.
- All west end podium units (levels 1-4) and 2 units at level 5 and 6, and 1 unit at level 7, are subject to some level of visual change in westerly views only.
- The west end of levels 5 and 6 are occupied by 2 units. The northernmost unit includes 3 bedrooms and 1 living which present to the western elevation. Loss of scenic compositions affects 1 room only per dwelling in one view direction, via a side boundary to the north-west to a low/minimal or less extent.
- The west end of level 7 is occupied by one penthouse unit. Loss of scenic compositions affects 1 room only per dwelling in one view direction, via a side boundary to the north-west to a low/minimal or les extent.
- 3 rooms out of 3 dwellings, out of 64 units at the Herald Building are affected.



Table 3

R = Retained (existing views unaffected), PA = Retained but Partially Affected, VC=Visual Change: existing development replaced by new development, A=Affected

Newcastle Club (based on available floorplans)

Floor	Spaces/rooms	FRONT Boundary (East towards Newcomen Street)	REAR Boundary (West towards Cathedral)	SIDE Boundary (North towards King Street)	SIDE Boundary (South towards adjoining development)	Extent (quantity) of Visual Change for whole field of view
Ground	All rooms	R All existing views retained	R All existing views retained	R All existing views retained	R All existing views retained	Moderate
Ground	Outdoor space	R All existing views retained	R All existing views retained	A Affected	R All existing views retained	Moderate
1 & 2	All rooms	R All existing views retained	R All existing views retained	A Affected	R All existing views retained	Moderate
1 & 2	Outdoor spaces	R All existing views retained	R All existing views retained	A Affected	R All existing views retained	Moderate

SUMMARY KEY POINTS

- All rooms and outdoor spaces with north side boundary views from ground, level 1 and 2 will be affected by view loss.
- View loss of scenic compositions in northerly views from ground, level 1 and 2 is caused by the approved concept and/or permissible envelope.
- All rooms and outdoor spaces with existing views to the east, north-east and west-north-west, south and west from ground 1, and 2 are not affected and retain all existing views.
- One room or space occupies the north end of the Newcastle Club floorplate at each floor. Only northerly views via a side boundary, from 3 rooms (at ground, 1 and 2) out of all rooms within the Club are affected by view loss in northerly views.
- The extent of view loss is shown in photomontages 03, 04 and 05 (Urbis VIA), where blocking of scenic compositions is caused by the approved concept and/or permissible envelope.
- The height and scale of a permissible form on the council carpark site will create significant, immediate foreground visual change and additional blocking effects to parts of a north-westerly view from the Newcastle Club.



1.4. PANEL REQUEST (1C)

c. explanation of view impacts (positive and negative) resulting from the demolition of the council car park having regard to the maximum building height for this site in any future development

Urbis Response

The visual effects of a permissible envelope (24m) have been modelled and are visible in photomontage image numbers 5405, 0169, 0025, 5445 in **Appendix A.**

Positive

- Demolition of the council carpark has increased visibility to Christ Church Cathedral and Gardens from various locations including the Waterfront and Laing Street.
- Demolition of the council carpark has improved Public and Private views to the Christ Church Cathedral from the north, east and west by removing a large bulky mass located directly opposite the Cathedral gardens.
- Demolition of the council carpark has created fortuitous and temporary views to the Cathedral and Gardens. The views do not result from built form controls.
- The removal of the council carpark allows for construction of a permissible envelope on the site (24m) which will retain the newly created view corridor, as per the Newcastle DCP.
- A permissible envelope on the site will achieve the vision of the Newcastle DCP to include a view corridor between the Waterfront and Christ Church Cathedral.

Negative

- The removal of the council carpark creates a visual break in built form along King Street.
- The removal of the council carpark allows for construction of a permissible envelope on the site (24m) which may increase private domain view loss.

1.5. PANEL REQUEST (E)

e. confirmation of all view loss of impacted properties if the modification was to be approved, compared with the already approved concept plan.

Urbis Response

The Urbis VSR includes 9 certifiably accurate photomontages which visually show the proposed development as a translucent, grey mass. The height of the approved concept envelope is indicated by a white dotted line and the LEP height plane +10% is indicated by a solid green line. The view loss caused by the s4.55 Modification is the built form shown above the LEP +10% (green solid line).

View loss caused by the s4.55 Modification at affected properties:

• Partial view loss for 12 units at levels 5, 6 and 7 (4 dwellings per floor) of the Segenhoe Building (refer to Table 1), via a side boundary (north) for 9 (3 dwellings per floor) and via the junction of the side and front boundary (north and east) for 3 dwellings (one per floor), as per guidance set out in *Tenacity*.



- Partial view loss for 3 units across levels 5, 6 and 7 (1 dwelling per floor) of the Herald Apartments (refer to **Table 2**), via a side boundary (west) as per guidance set out in *Tenacity*.
- View loss for 3 rooms and outdoor spaces at the northern end of the building at ground, levels 1 and 2 of the Newcastle Club, via a side boundary (north), as per guidance set out in Tenacity.

1.6. PANEL REQUEST (F)

f. the specific number of units on each floor of impacted properties that will have further view loss (total numbers of units on each floor), or areas of specific properties impacted (e.g. the Newcastle Club)

Urbis Response

Quantifiable view loss is shown in the Urbis VSR photomontages, and is further quantified by number of dwellings affected in Tables 1, 2 and 3 and is summarised below:

- Segenhoe Building: 12 units at levels 5, 6 and 7 (4 dwellings per floor) where less than half of the available rooms per dwelling are affected to a low/minimal extent in 1 view direction (NE) only via the side boundary (north) or junction of side and front boundary (north and east).
- Herald Apartments: 3 units across levels 5, 6 and 7 (1 dwelling per floor) where 1 room per dwelling is affected to a low/minimal extent in 1 view direction (NW) only, via a side boundary (west).
- Newcastle Club: 3 rooms and outdoor spaces at the northern end of the building at ground, levels 1 and 2 via the side boundary (north) where majority of view loss is caused by the Approved Concept.

1.7. PANEL REQUEST (G)

g. the specific storey/level the view assessment relates to in each affected building, and

Urbis Response

Tables 1, 2 and 3 outline all views to be retained and/or affected per dwelling, per floor across the three assessed properties. Affected levels of each building are summarised as follows:

- Segenhoe Building: Levels 5, 6 and 7.
- Herald Apartments: Levels 5, 6 and 7.
- Newcastle Club: Ground, floors 1 and 2.

1.8. PANEL REQUEST (H)

h. supplementary assessment in relation to loss of significant public views from Hunter Street, Morgan St, Laing St, Market St, waterfront, Hilltop Park to harbour, Nobby's, and Cathedral as raised by submitters in the public briefing.



Urbis Response

- The supplementary assessment of likely visual effects contained in Table 4 is informed by existing visual markers in views e.g. The Herald Building and/or the Cathedral and previously prepared photomontages.
- Urbis previously prepared 11 certifiably accurate photomontages, 10 (Urbis VIA April 2023) and 1 additional view (Council RFI, January 2024). The height and massing shown in these photomontages has inform the likely visual effects in additional views requested by the panel.
- Urbis has recorded additional views and provided supplementary assessment as requested.
 All public domain view locations inspected and documented are shown on Map 02. The effects of a permissible envelope are shown in **Appendix A** (image numbers 5405, 0169, 0025, 5445).



Table 4					
View Name	Reference Description	<u>Location</u>	Supplementary Assessment (additional locations inspected and documented)	Thumbnail of Existing View Assessed	Extent of Visual Change in Significant Public View
Hunter Street	Refer to Photomontage 08 (Urbis VIA April 2023).	View east along Hunter Street towards the site, near corner of Perkins Street.	The proposed development is of low/no visibility and will not create any significant blocking effects or streetscape change.		Low
Morgan Street	Refer to photomontage for View Corridor 17 (Urbis VIA in response to RFI January 2024).	View to Cathedral along Morgan Street from Hunter Street Mall.	The proposed development is of partial and low visibility and does not create any significant blocking effects to the Cathedral.	PO PARA	Low



Table 4					
<u>View Name</u>	Reference Description	<u>Location</u>	Supplementary Assessment (additional locations inspected and documented)	Thumbnail of Existing View Assessed	Extent of Visual Change in Significant Public View
Laing Street	Urbis has recorded 2 additional views from the centre of Laing towards Christ Church Cathedral.	Centre of Laing Street towards Christ Church Cathedral.	 The proposal and permissible development on the Council Carpark site will likely block all south-easterly views from this vicinity. All view loss would likely caused by low and complying/ permissible built form. Therefore, the extent of visual change is contemplated by the controls. Views form this location are not documented in the DCP/LEP. 		Medium



Table 4					
<u>View Name</u>	Reference Description	Location	Supplementary Assessment (additional locations inspected and documented)	Thumbnail of Existing View Assessed	Extent of Visual Change in Significant Public View
Market Street	Refer to Photomontage 04 (Urbis VIA April 2023).	View south towards Christ Church Cathedral from Market Street,	Refer to visual effects assessment in Urbis VIA.		Low-medium



Table 4					
<u>View Name</u>	Reference Description	<u>Location</u>	Supplementary Assessment (additional locations inspected and documented)	Thumbnail of Existing View Assessed	Extent of Visual Change in Significant Public View
Waterfront	Urbis has recorded 3 additional views from the Waterfront area.	 View towards site from intersection of Wharf Road and Watt Street x 2. View towards site from pedestrian link between carpark and park. 	 The proposed development is unlikely to create any significant blocking effects and is difficult to distinguish in the built form context. There are more prominent view places where clear views to the Cathedral are possible as the viewer moves east and west of this location. These have been tested in 11 public domain photomontages. Please refer to the Urbis VIA dated April 2023. 		Negligible or will not be visible



Table 4	Table 4						
View Name	Reference Description	Location	Supplementary Assessment (additional locations inspected and documented)	Thumbnail of Existing View Assessed	Extent of Visual Change in Significant Public View		
Hilltop Park	Urbis has recorded and inspected several additional views from high points from the obelisk, Reserve Road and King Edward Park.	 View towards the site from Obelisk. View towards the site from Reserve Road pedestrian path. View from central open space in King Edward Park. 	 The proposed development is of low visibility and does not create any significant blocking effects and is difficult to distinguish in the built form context. There are alternative view places where clear views to the Cathedral are possible. These have been tested in 11 public domain photomontages. Please refer to the Urbis VIA dated April 2023. 		Negligible or will not be visible		



Table 4					
<u>View Name</u>	Reference Description	<u>Location</u>	Supplementary Assessment (additional locations inspected and documented)	Thumbnail of Existing View Assessed	Extent of Visual Change in Significant Public View



Table 4					
<u>View Name</u>	Reference Description	<u>Location</u>	Supplementary Assessment (additional locations inspected and documented)	Thumbnail of Existing View Assessed	Extent of Visual Change in Significant Public View
Nobby's Head	Refer to Photomontage 03 (Urbis VIA 2023). Urbis has also recorded an additional view from Nobby's Head Walkway.	View south-west towards site from Nobby's pedestrian walkway.	 The proposed development is of low visibility and does not create any significant blocking effects and is difficult to distinguish in the built form context. The proposal does not block views to locally known features Fort Scratchley or Christ Church Cathedral. 		Negligible or will not be visible



Table 4					
<u>View Name</u>	Reference Description	<u>Location</u>	Supplementary Assessment (additional locations inspected and documented)	Thumbnail of Existing View Assessed	Extent of Visual Change in Significant Public View
Christ Church Cathedral	Refer to Photomontages 04 and 05 (Urbis VIA April 2023).	 View south towards Christ Church Cathedral from Market Place (view 04). View south towards Christ Church Cathedral from Queens Wharf promenade (view 05). 	Refer to visual effects assessment in Urbis VIA.		Medium





1.9. CONCLUSIONS

Urbis have addressed all matters raised by the Panel in the Record of Deferral, quantifying the extent of visual change per development or residential flat building and providing assessment in relation to additional public domain locations.

More than 37 public view places have been inspected, documented and or represented in the Urbis VIA or Urbis VSR (View Corridor 17).

17 additional views were re-inspected and documented as part of this response. Two new photomontages were prepared including from the Hill and from the Waterfront.

11 public domain views including three DCP mapped significant views, have been assessed using certifiably accurate photomontages. These photomontages show the effects of the Approved Concept, a permissible built form across the site, and effects of the s4.55 Modification. All original photomontages (VIA and View Sharing) as well as additional photomontages are appended to this report in **Appendix A**.

In all 11 public domain photomontage views, and 2 additional public domain views (Panel requested views), views to the Christ Church Cathedral are not blocked, its form remains visually prominent, including form the Waterfront (5 locations inspected), Nobbys Headland walkway (3 locations inspected) and elevated parts of the Hill and Edwards Park.

Three photomontages have been updated to include a theoretical permissible envelope on the Council carpark site (to 24m as per the LEP height control and 10% competition bonus 2.4m).

A mass in this location to this height will create significant blocking effects in some close public and private domain views and would obliterate the proposed and designed view corridor included in the s4.55 Modification.

The majority of all scenic and highly valued compositions to be lost, from all private domain locations and from residential flat buildings as a whole, **is caused by the Approved Concept and permissible forms**

The s4.55 Modification will block open areas of sky or background development, in views from all close public and private domain locations except for views from one room on level 2 of the Newcastle club

As shown in the Urbis VSR, the s4.55 Modification will block a short section and small extent of part of a wide scenic and highly valued view composition, from either 1 or 2 rooms at 9 north-facing units at the Segenhoe levels 5, 6 and 7. **View loss per dwelling is minor**.

As shown in the Urbis VSR photomontages, the s4.55 Modification will block a short section and small part of a scenic composition (Nobbys head) for **3** east end, north and east-facing units at levels 5, 6 and 7 at the Segenhoe Building. Dwellings lose a short section of part of Nobbys Head in one isolated section of a much wider view available to those whole dwellings.

Rooms that occupy the north-east corner of the building have potential views to the proposal via the junction of the buildings side and front boundary. These units are partially affected, from some rooms by a low/minimal extent of view loss per dwelling.

The view impact for those 3 dwellings out of all units at the Segenhoe Building is conservatively moderate.



Yours sincerely,

Jane Maze-Riley Director

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Dukley



APPENDIX A PHOTOMONTAGES

EAST END NEWCASTLE

VISUAL ASSESSMENT | PHOTOMONTAGES

PREPARED FOR IRIS CAPITAL APRIL 2024

PHOTOMONTAGES PREPARED BY:

Urbis, Level 10, 477 Collins Street, MELBOURNE 3000.

DATE PREPARED:

17 April 2024

VISUALISATION ARTIST:

Ashley Poon, Urbis - Lead Visual Technologies Consultant

Bachelor of Planning and Design (Architecture) with over 20 years' experience in 3D visualisation

Manuel Alvelo, Urbis – Design Assistant

Bachelor of Architecture and student in Masters of Urban Planning and Environment

LOCATION PHOTOGRAPHERS:

Nick Sisam, Urbis - Associate Director, National Design

Jane Maze-Riley, Urbis - Director, National Design.

CAMERA:

Canon EOS 6D Mark II camera

CAMERA LENS AND TYPE:

Canon EF 24-105mm f/4L IS USM

SOFTWARE USED:

- 3DSMax 2023 with Arnold 5.0 (3D Modelling and Render Engine)
- AutoCAD 2022 (2D CAD Editing)
- Globalmapper 23 (GIS Data Mapping / Processing)
- Photoshop CC 2022 (Photo Editing)

DATA SOURCES:

- Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets
 Newcastle 2018 & 2014
- Aerial photography from Nearmap 2022-01-15
- Proposed 3D model received from Architect 2023-02-27
- Height planes 3D model received from Architect 2023-04-03
- Viewplace and fixed features survey data prepared by Positive Survey Solutions 2023-12-20
- 2 EAST END, NEWCASTLE | Photomontages for proposed development

METHODOLOGY:

Photomontages provided on the following pages have been produced with a high degree of accuracy to comply with the requirements as set out in the practice direction for the use of visual aids in the Land and Environment Court of New South Wales.

The process for producing these photomontages are outlined below:

- Photographs have been taken on site using a full-frame digital camera coupled with a quality lens in order to
 obtain high resolution photos whilst minimising image distortion. Photos are taken handheld or using a tripodmounted full frame digital camera at a height of 1.65m above natural ground level. Photos have generally been
 taken at a standard focal length of 50mm or at 35mm to cover a wider context. A photo taken using the 50mm
 focal length on a full-frame camera (equivalent to 40° horizontal field-of-view / 46.8° diagonal field-of-view) is
 an accepted photographic standard to approximate human vision.
- Independent survey data has been used in tandem with available geo-spatial data for the site, including aerial
 photography, digital elevation models and LiDAR point-clouds. This data is used to cross check the accuracy
 of alignment of the 3D architectural model in each view. The relevant datasets are validated and combined
 to form a geo-referenced base 3D model from which additional information, such as proposed architecture,
 landscape and photographic viewpoints can be inserted.
- Layers of the proposed development are obtained from the designers as digital 3D models and 2D plans. All
 drawings/models are verified and registered to their correct geo-location before being inserted into the base 3D
 model
- For each photo being used for the photomontage, the photo's survey or GPS location, camera, lens, focal length, time/date and exposure information is extracted, checked and replicated within the 3D base model as a 3D camera. A camera match is created by aligning the 3D camera with the 3D base model against the original photo, matching the original photographic location and orientation.
- From each viewpoint, a reference 3D model camera match is generated to verify an accurate match between
 the base 3D model (existing ground survey/vegetation etc) and original photo. A 3D wireframe image of the 3D
 base model is rendered in the 3D modelling software and composited over the original photo using the photoediting software.
- From each viewpoint, the final photomontage is then produced by compositing 3D rendered images of the proposed development into the original photo with editing performed to sit the render at the correct view depth. Photographic elements are cross-checked against the 3D model to ensure elements such as foreground trees and buildings that may occlude views to the proposed development are retained. Conversely, where trees/buildings may be removed as part of the proposal, these are also removed in the photomontage.





PHOTOMONTAGES - VIEW LOCATION MAP

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_MAP REV: -





VP27 IMG 0006: WATERFRONT VIEW SOUTH WEST EXISTING CONDITIONS: 2024-04-10 16:18 AEST

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_27A REV: -





VP27 IMG 0006: WATERFRONT VIEW SOUTH WEST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_27B REV: -





VP27 IMG 0006: WATERFRONT VIEW SOUTH WEST

THE PROPOSAL HAS LOW VISUAL EFFECTS, HIGH COMPATIBILITY AND LOW VISUAL IMPACT.

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_27C REV: -





VP28 IMG 0026 : HILL AREA RESERVE ROAD VIEW NORTH WEST EXISTING CONDITIONS : 2024-04-10 16:18 AEDT

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_28A REV: -





VP28 IMG 0026 : HILL AREA RESERVE ROAD VIEW NORTH WEST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_28B REV: -





VP28 IMG 0026: HILL AREA RESERVE ROAD VIEW NORTH WEST

JOB NO: P0042943 THE PROPOSAL HAS NO VISUAL EFFECTS (INCLUDING ON CHRIST **DWG NO:** VP_28C REV: -CHURCH CATHEDRAL) AND NO VISUAL IMPACTS.

DATE: 2024-04-17





EAST END - NEWCASTLE - VISUAL ASSESSMENTVP05 IMG 5405: EXISTING CONDITIONS: 2023-02-08 11:53 AEDT

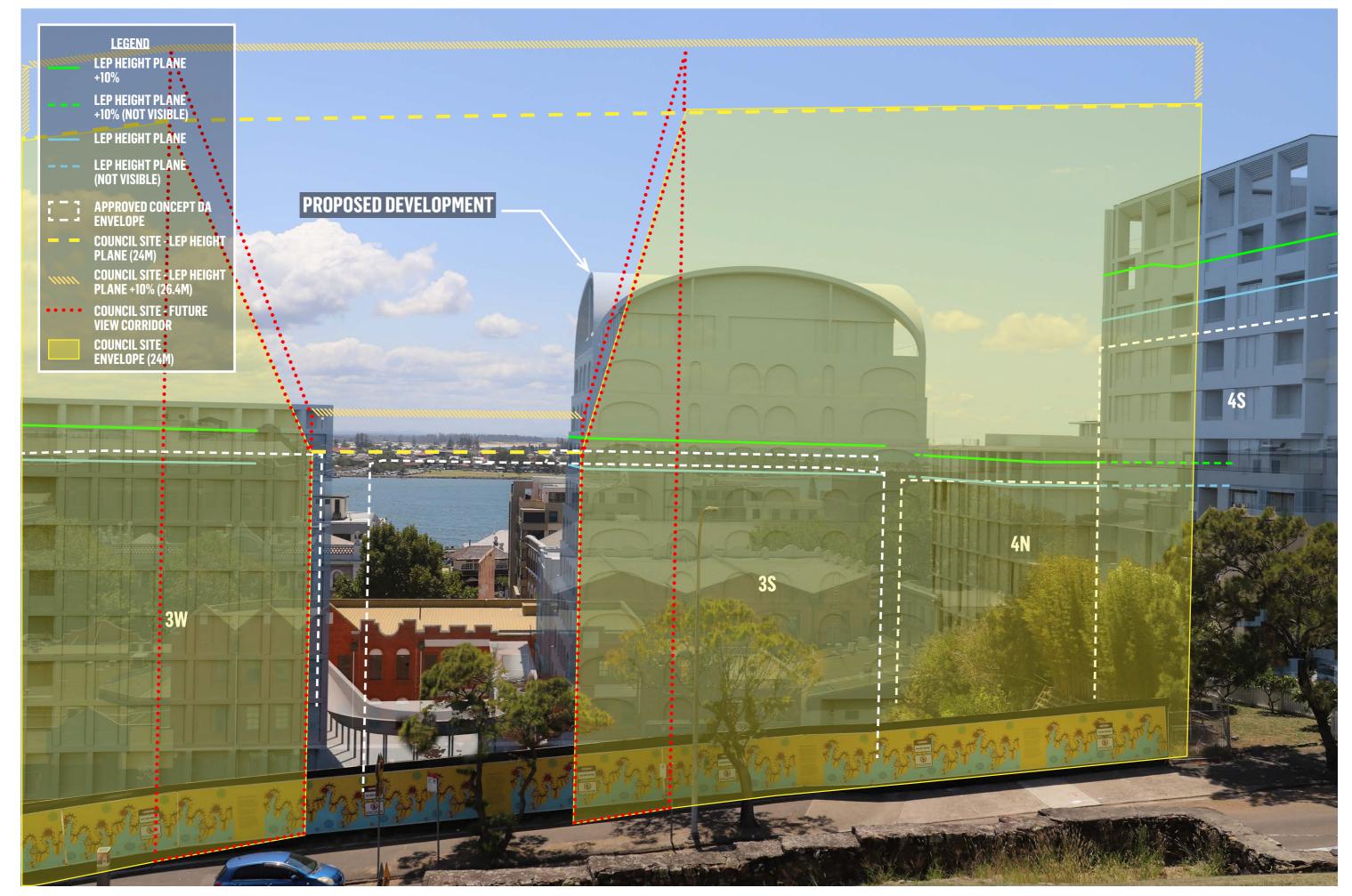
DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_5A REV: -



URBIS

EAST END - NEWCASTLE - VISUAL ASSESSMENT VP05 IMG 5405 : CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_5B REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP05 IMG 5405: PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_5C REV: -





 $\textit{VP19} \; \textit{IMG} \; \textit{0169} : \textit{SEGENHOE} \; \textit{APARTMENTS}, \; \textit{APARTMENT} \; \textit{20} \; \textit{STUDY} \; \textit{AREA} \; \textit{VIEW} \; \textit{NORTH} \; \textit{EAST}$

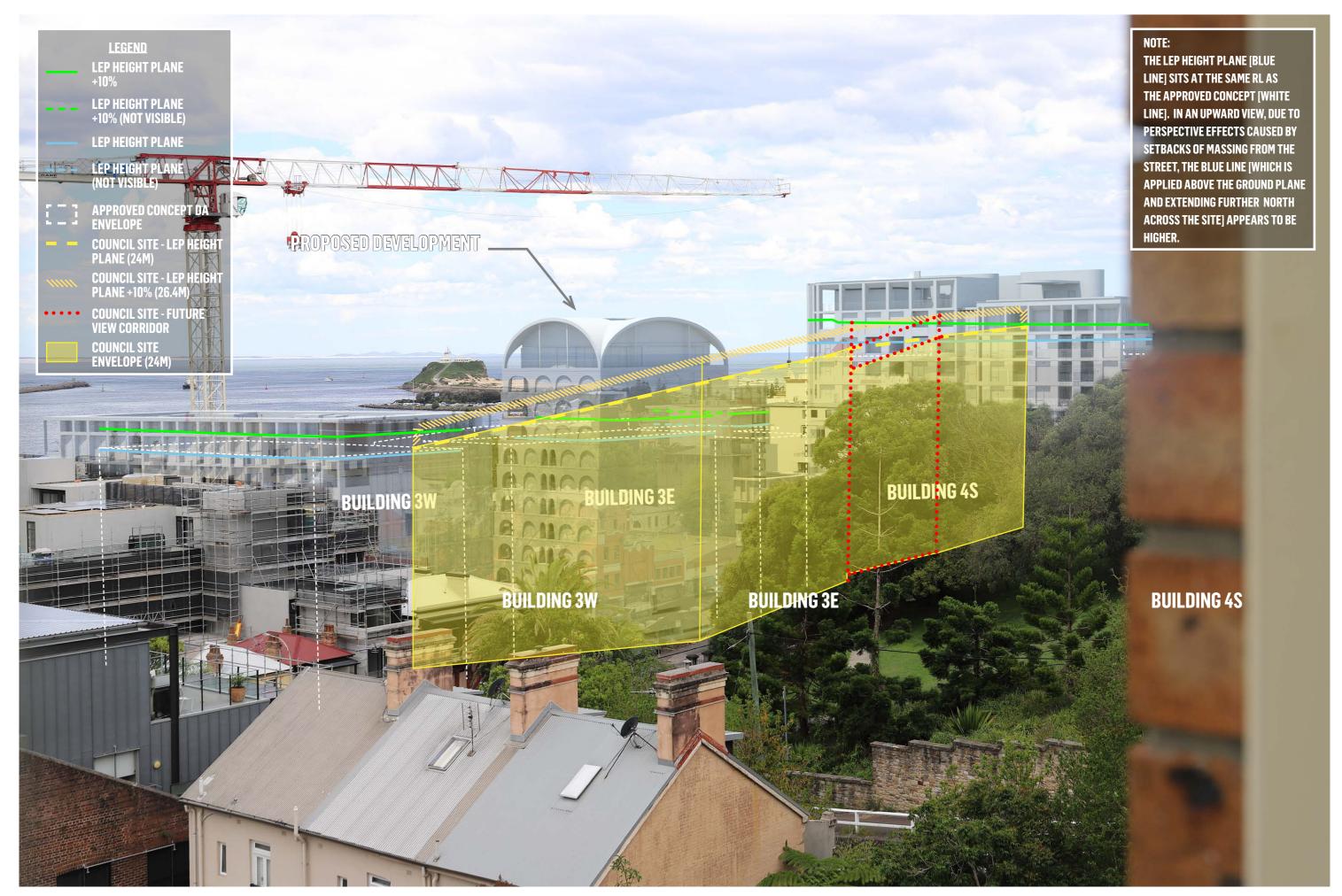
EXISTING CONDITIONS: 2023-11-30 13:43 AEDT





VP19 IMG 0169 : SEGENHOE APARTMENTS, APARTMENT 20 STUDY AREA VIEW NORTH EAST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_19B REV: -





VP19 IMG 0169 : SEGENHOE APARTMENTS, APARTMENT 20 STUDY AREA VIEW NORTH EAST PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_19C REV: -





VP04 IMG 0025: NEWCASTLE CLUB, WEST END MID-LEVEL (ADJACENT GROUND FLOOR) GARDEN TERRACE VIEW NORTH-NORTH-WEST EXISTING CONDITIONS: 2023-11-30 09:09 AEDT

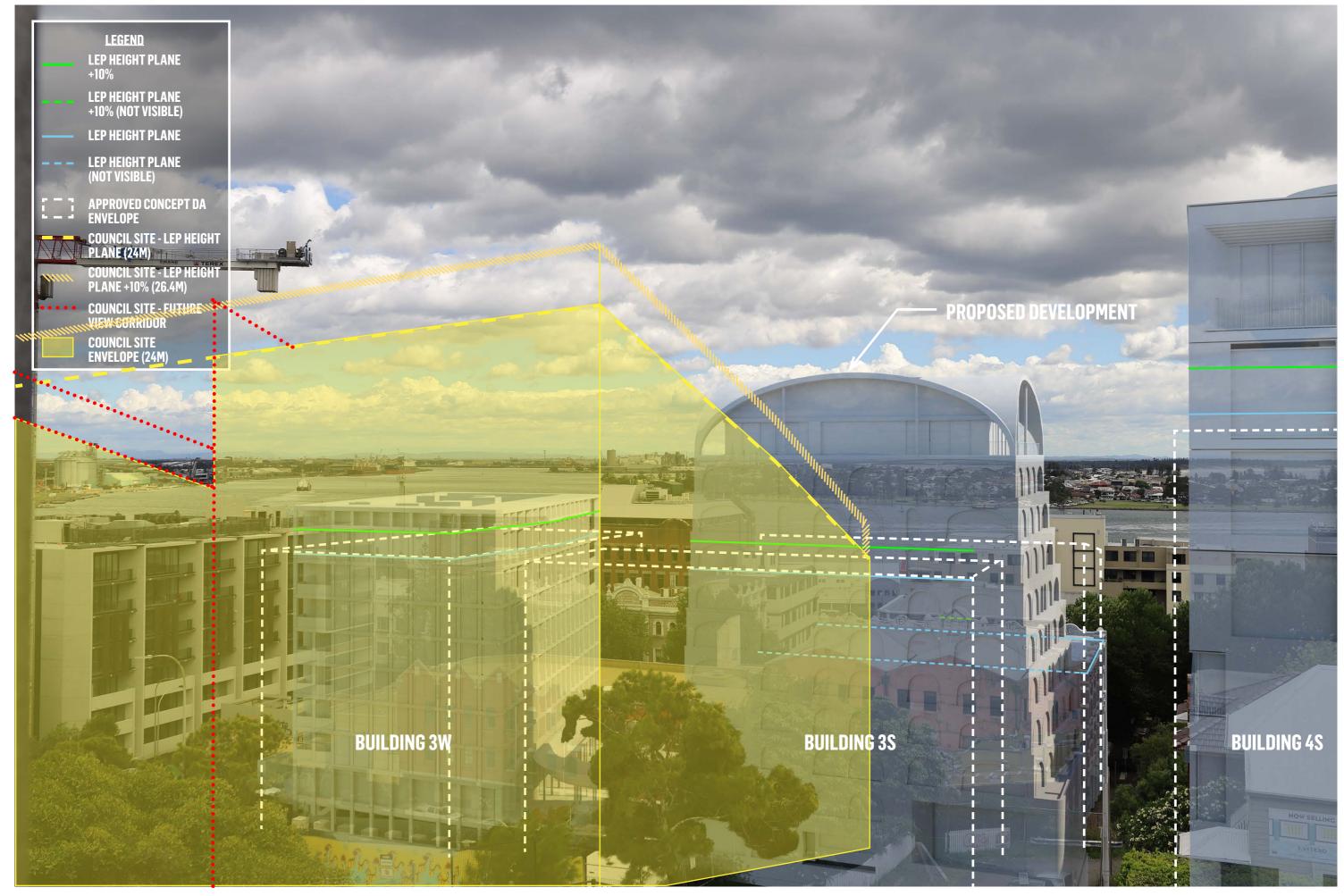
DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_4A REV: -





P04 IMG 0025: NEWCASTLE CLUB, WEST END MID-LEVEL (ADJACENT GROUND FLOOR) GARDEN TERRACE VIEW NORTH-NORTH-WEST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_4B REV: -





P04 IMG 0025: NEWCASTLE CLUB, WEST END MID-LEVEL (ADJACENT GROUND FLOOR) GARDEN TERRACE VIEW NORTH-NORTH-WEST PHOTOMONTAGE - PROPOSED DEVELOPMENT

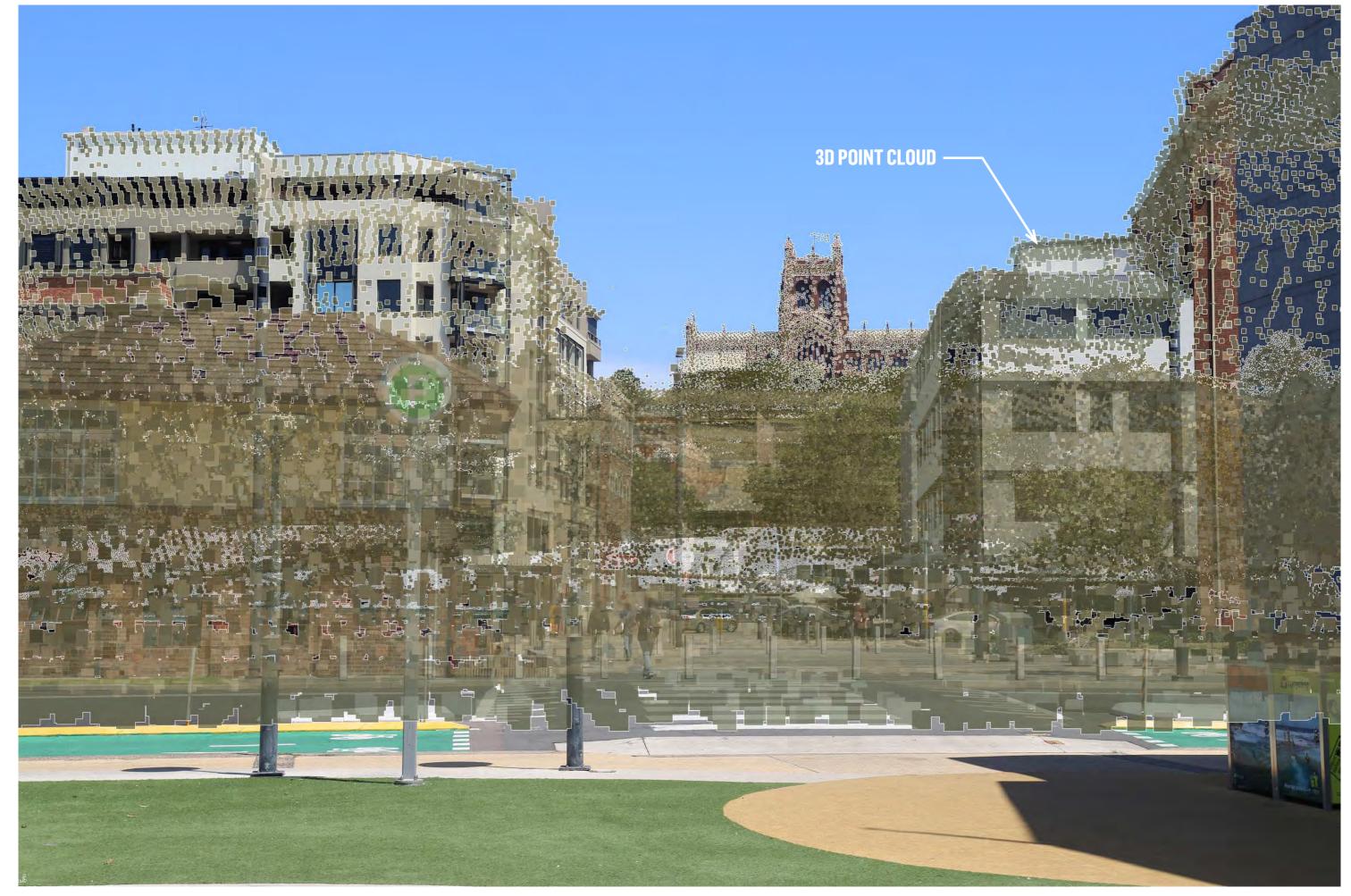
DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_4C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENTVP09 IMG 5445: EXISTING CONDITIONS: 2023-02-08 13:17 AEDT

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_9A REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP09 IMG 5445 : CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_9B REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP09 IMG 5445: PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-04-17 JOB NO: P0042943 DWG NO: VP_9C REV: -

EAST END NEWCASTLE

VISUAL ASSESSMENT | PREVIOUSLY ISSUED PHOTOMONTAGES

EAST END NEWCASTLE

VISUAL ASSESSMENT | PHOTOMONTAGES

PREPARED FOR IRIS CAPITAL
JANUARY 2024

PHOTOMONTAGES PREPARED BY:

Urbis, Level 10, 477 Collins Street, MELBOURNE 3000.

DATE PREPARED:

17 January 2024

VISUALISATION ARTIST:

Ashley Poon, Urbis - Lead Visual Technologies Consultant

Bachelor of Planning and Design (Architecture) with over 20 years' experience in 3D visualisation

Enisa Muranovic, Urbis – Visual Technologies Consultant

Bachelor of Design (Landscape Architecture)

LOCATION PHOTOGRAPHERS:

Nick Sisam, Urbis - Associate Director, National Design

Jane Maze-Riley, Urbis - Director, National Design.

CAMERA:

Canon EOS 6D Mark II camera

CAMERA LENS AND TYPE:

Canon EF 24-105mm f/4L IS USM

SOFTWARE USED:

- 3DSMax 2023 with Arnold 5.0 (3D Modelling and Render Engine)
- AutoCAD 2022 (2D CAD Editing)
- Globalmapper 23 (GIS Data Mapping / Processing)
- Photoshop CC 2022 (Photo Editing)

DATA SOURCES:

- Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets
 Newcastle 2018 & 2014
- Aerial photography from Nearmap 2022-01-15
- Proposed 3D model received from Architect 2023-02-27
- Height planes 3D model received from Architect 2023-04-03
- Viewplace and fixed features survey data prepared by Positive Survey Solutions 2023-12-20

2 **EAST END, NEWCASTLE |** Photomontages for proposed development

METHODOLOGY:

Photomontages provided on the following pages have been produced with a high degree of accuracy to comply with the requirements as set out in the practice direction for the use of visual aids in the Land and Environment Court of New South Wales.

The process for producing these photomontages are outlined below:

- Photographs have been taken on site using a full-frame digital camera coupled with a quality lens in order to obtain high resolution photos whilst minimising image distortion. Photos are taken using a tripod-mounted Canon EOS 6D Mark II full frame digital camera at a height of 1.65m above natural ground level. Photos have generally been taken at a standard focal length of 50mm or at 35mm to cover a wider context. A photo taken using the 50mm focal length on a full-frame camera (equivalent to 40° horizontal field-of-view / 46.8° diagonal field-of-view) is an accepted photographic standard to approximate human vision.
- Independent survey data has been used in tandem with available geo-spatial data for the site, including aerial
 photography, digital elevation models and LiDAR point-clouds. This data is used to cross check the accuracy
 of alignment of the 3D architectural model in each view. The relevant datasets are validated and combined
 to form a geo-referenced base 3D model from which additional information, such as proposed architecture,
 landscape and photographic viewpoints can be inserted.
- Layers of the proposed development are obtained from the designers as digital 3D models and 2D plans. All
 drawings/models are verified and registered to their correct geo-location before being inserted into the base 3D
 model
- For each photo being used for the photomontage, the photo's survey location, camera, lens, focal length, time/ date and exposure information is extracted, checked and replicated within the 3D base model as a 3D camera. A camera match is created by aligning the 3D camera with the 3D base model against the original photo, matching the original photographic location and orientation.
- From each viewpoint, a reference 3D model camera match is generated to verify an accurate match between the base 3D model (existing ground survey/vegetation etc) and original photo. A 3D wireframe image of the 3D base model is rendered in the 3D modelling software and composited over the original photo using the photoediting software.
- From each viewpoint, the final photomontage is then produced by compositing 3D rendered images of the proposed development into the original photo with editing performed to sit the render at the correct view depth. Photographic elements are cross-checked against the 3D model to ensure elements such as foreground trees and buildings that may occlude views to the proposed development are retained. Conversely, where trees/buildings may be removed as part of the proposal, these are also removed in the photomontage.





PHOTOMONTAGES - VIEW LOCATION MAP

DATE: 2024-01-17 JOB NO: P0042943 DWG NO: VP_MAP REV: -





VP15 IMG 0130 : UNIT 701, HERALD TERRACE VIEW NORTH WEST EXISTING CONDITIONS : 2023-11-30 11:49 AEDT

DATE: 2024-01-17 JOB NO: P0042943 DWG NO: VP_15A REV: -





VP15 IMG 0130 : UNIT 701, HERALD TERRACE VIEW NORTH WEST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-01-17 JOB NO: P0042943 DWG NO: VP_15B REV: -





VP15 IMG 0130 : UNIT 701, HERALD TERRACE VIEW NORTH WEST PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-01-17 JOB NO: P0042943 DWG NO: VP_15C REV: -

EAST END NEWCASTLE

VISUAL ASSESSMENT | PHOTOMONTAGES

PREPARED FOR IRIS CAPITAL APRIL 2024

PHOTOMONTAGES PREPARED BY:

Urbis, Level 10, 477 Collins Street, MELBOURNE 3000.

DATE PREPARED:

16 April 2024

VISUALISATION ARTIST:

Ashley Poon, Urbis - Lead Visual Technologies Consultant

Bachelor of Planning and Design (Architecture) with over 20 years' experience in 3D visualisation

Enisa Muranovic, Urbis – Visual Technologies Consultant

Bachelor of Design (Landscape Architecture)

LOCATION PHOTOGRAPHERS:

Nick Sisam, Urbis - Associate Director, National Design

Jane Maze-Riley, Urbis - Director, National Design.

CAMERA:

Canon EOS 6D Mark II camera

CAMERA LENS AND TYPE:

Canon EF 24-105mm f/4L IS USM

SOFTWARE USED:

- 3DSMax 2023 with Arnold 5.0 (3D Modelling and Render Engine)
- AutoCAD 2022 (2D CAD Editing)
- Globalmapper 23 (GIS Data Mapping / Processing)
- Photoshop CC 2022 (Photo Editing)

DATA SOURCES:

- Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets
 Newcastle 2018 & 2014
- Aerial photography from Nearmap 2022-01-15
- Proposed 3D model received from Architect 2023-02-27
- Height planes 3D model received from Architect 2023-04-03
- Viewplace and fixed features survey data prepared by Positive Survey Solutions 2023-12-20

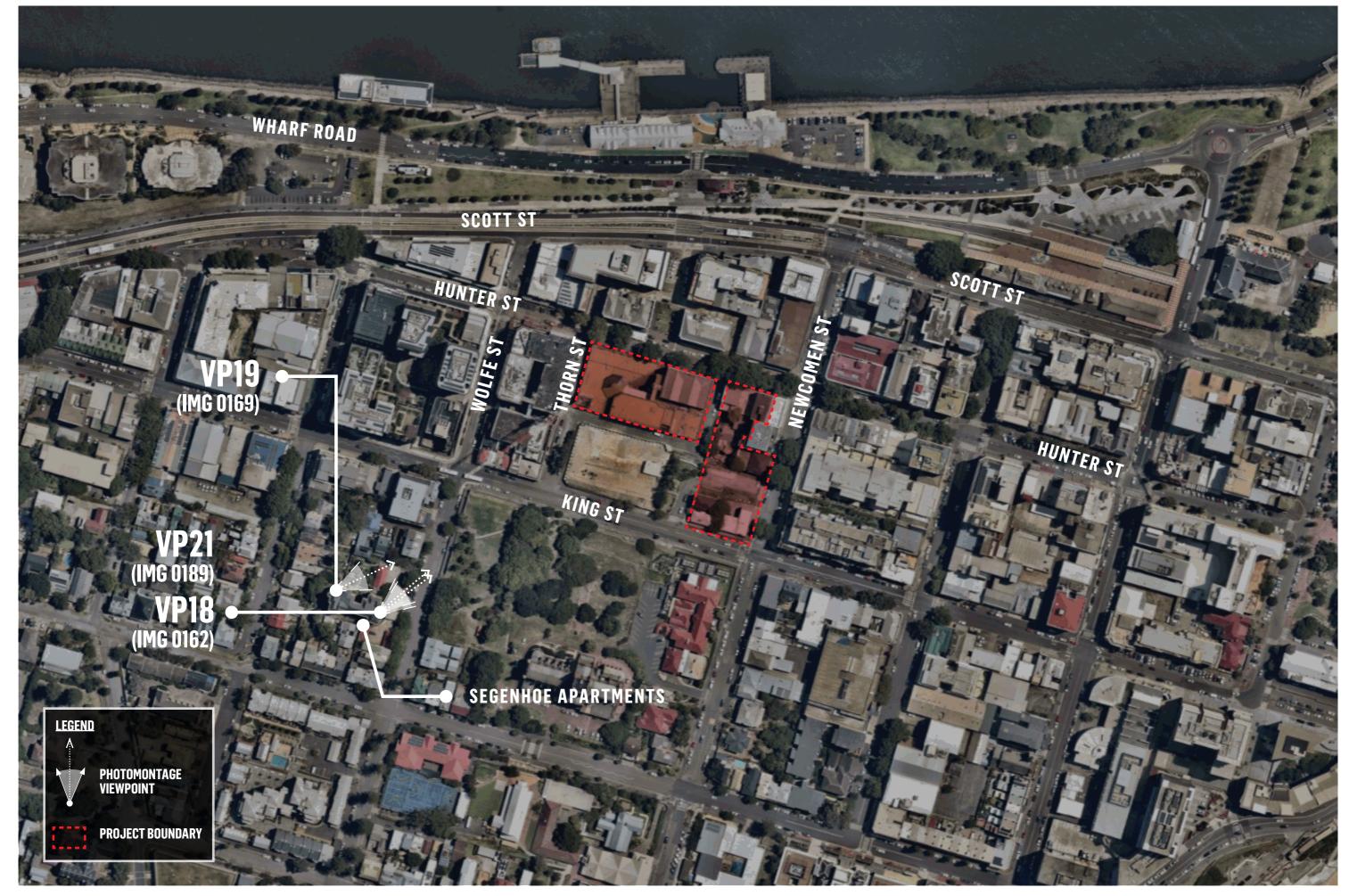
2 **EAST END, NEWCASTLE |** Photomontages for proposed development

METHODOLOGY:

Photomontages provided on the following pages have been produced with a high degree of accuracy to comply with the requirements as set out in the practice direction for the use of visual aids in the Land and Environment Court of New South Wales.

The process for producing these photomontages are outlined below:

- Photographs have been taken on site using a full-frame digital camera coupled with a quality lens in order to obtain high resolution photos whilst minimising image distortion. Photos are taken using a tripod-mounted Canon EOS 6D Mark II full frame digital camera at a height of 1.65m above natural ground level. Photos have generally been taken at a standard focal length of 50mm or at 35mm to cover a wider context. A photo taken using the 50mm focal length on a full-frame camera (equivalent to 40° horizontal field-of-view / 46.8° diagonal field-of-view) is an accepted photographic standard to approximate human vision.
- Independent survey data has been used in tandem with available geo-spatial data for the site, including aerial
 photography, digital elevation models and LiDAR point-clouds. This data is used to cross check the accuracy
 of alignment of the 3D architectural model in each view. The relevant datasets are validated and combined
 to form a geo-referenced base 3D model from which additional information, such as proposed architecture,
 landscape and photographic viewpoints can be inserted.
- Layers of the proposed development are obtained from the designers as digital 3D models and 2D plans. All
 drawings/models are verified and registered to their correct geo-location before being inserted into the base 3D
 model
- For each photo being used for the photomontage, the photo's survey location, camera, lens, focal length, time/ date and exposure information is extracted, checked and replicated within the 3D base model as a 3D camera. A camera match is created by aligning the 3D camera with the 3D base model against the original photo, matching the original photographic location and orientation.
- From each viewpoint, a reference 3D model camera match is generated to verify an accurate match between the base 3D model (existing ground survey/vegetation etc) and original photo. A 3D wireframe image of the 3D base model is rendered in the 3D modelling software and composited over the original photo using the photoediting software.
- From each viewpoint, the final photomontage is then produced by compositing 3D rendered images of the proposed development into the original photo with editing performed to sit the render at the correct view depth. Photographic elements are cross-checked against the 3D model to ensure elements such as foreground trees and buildings that may occlude views to the proposed development are retained. Conversely, where trees/buildings may be removed as part of the proposal, these are also removed in the photomontage.





PHOTOMONTAGES - VIEW LOCATION MAP

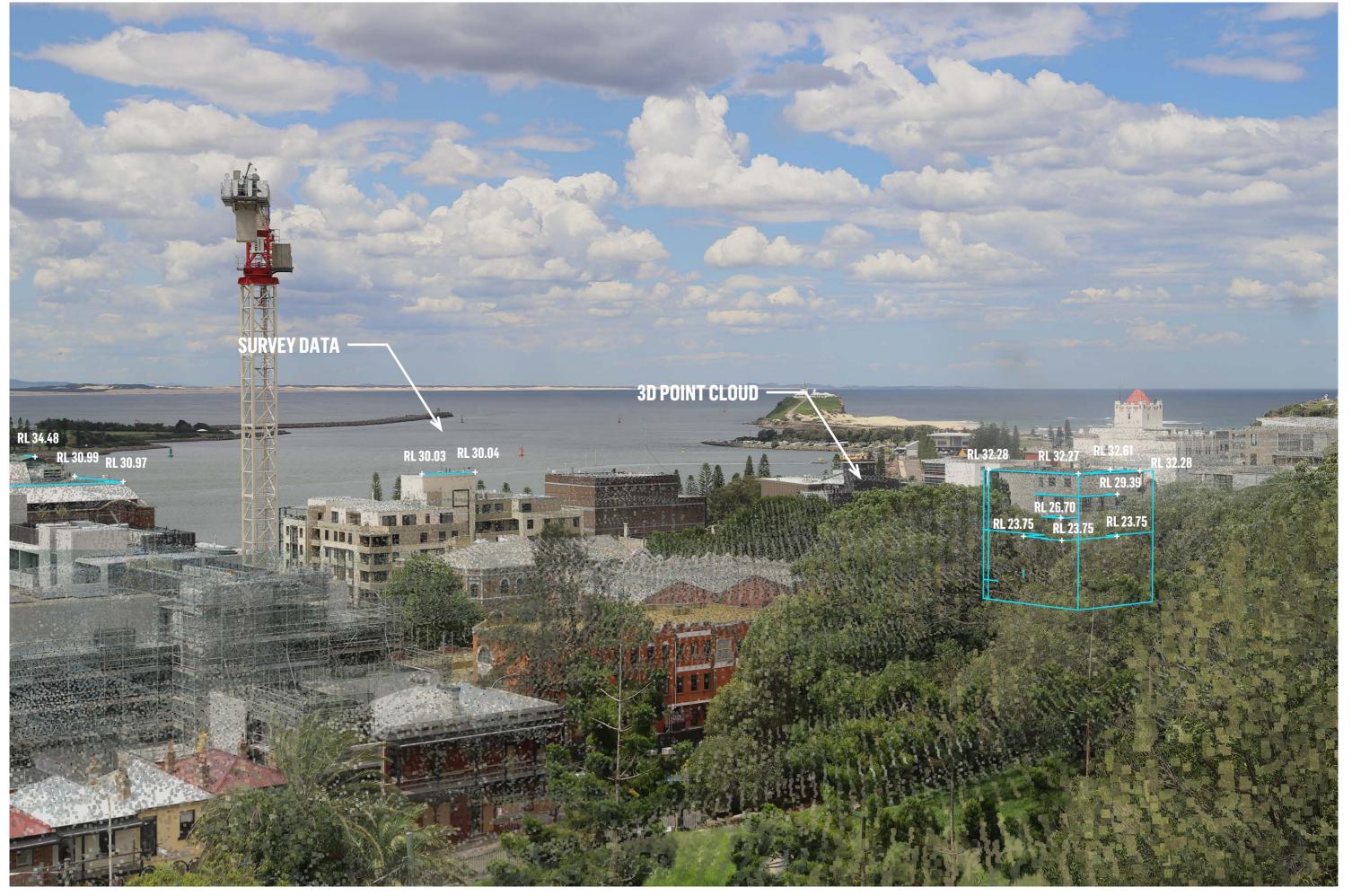
DATE: 2024-04-16 JOB NO: P0042943 DWG NO: VP_MAP REV: -





 $\textit{VP18} \; \textit{IMG} \; \textit{0162} : \textit{SEGENHOE} \; \textit{APARTMENTS}, \; \textit{APARTMENT} \; \textit{21} \; \textit{DINING} \; \textit{AREA} \; \textit{VIEW} \; \textit{NORTH} \; \textit{EAST} \;$

EXISTING CONDITIONS: 2023-11-30 13:28 AEDT





VP18 IMG 0162 : SEGENHOE APARTMENTS, APARTMENT 21 DINING AREA VIEW NORTH EAST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-16 JOB NO: P0042943 DWG NO: VP_18B REV: -





VP18 IMG 0162 : SEGENHOE APARTMENTS, APARTMENT 21 DINING AREA VIEW NORTH EAST PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-04-16 JOB NO: P0042943 DWG NO: VP_18C REV: -





 $\textit{VP19} \; \textit{IMG} \; \textit{0169} : \textit{SEGENHOE} \; \textit{APARTMENTS}, \; \textit{APARTMENT} \; \textit{20} \; \textit{STUDY} \; \textit{AREA} \; \textit{VIEW} \; \textit{NORTH} \; \textit{EAST} \;$

EXISTING CONDITIONS: 2023-11-30 13:43 AEDT





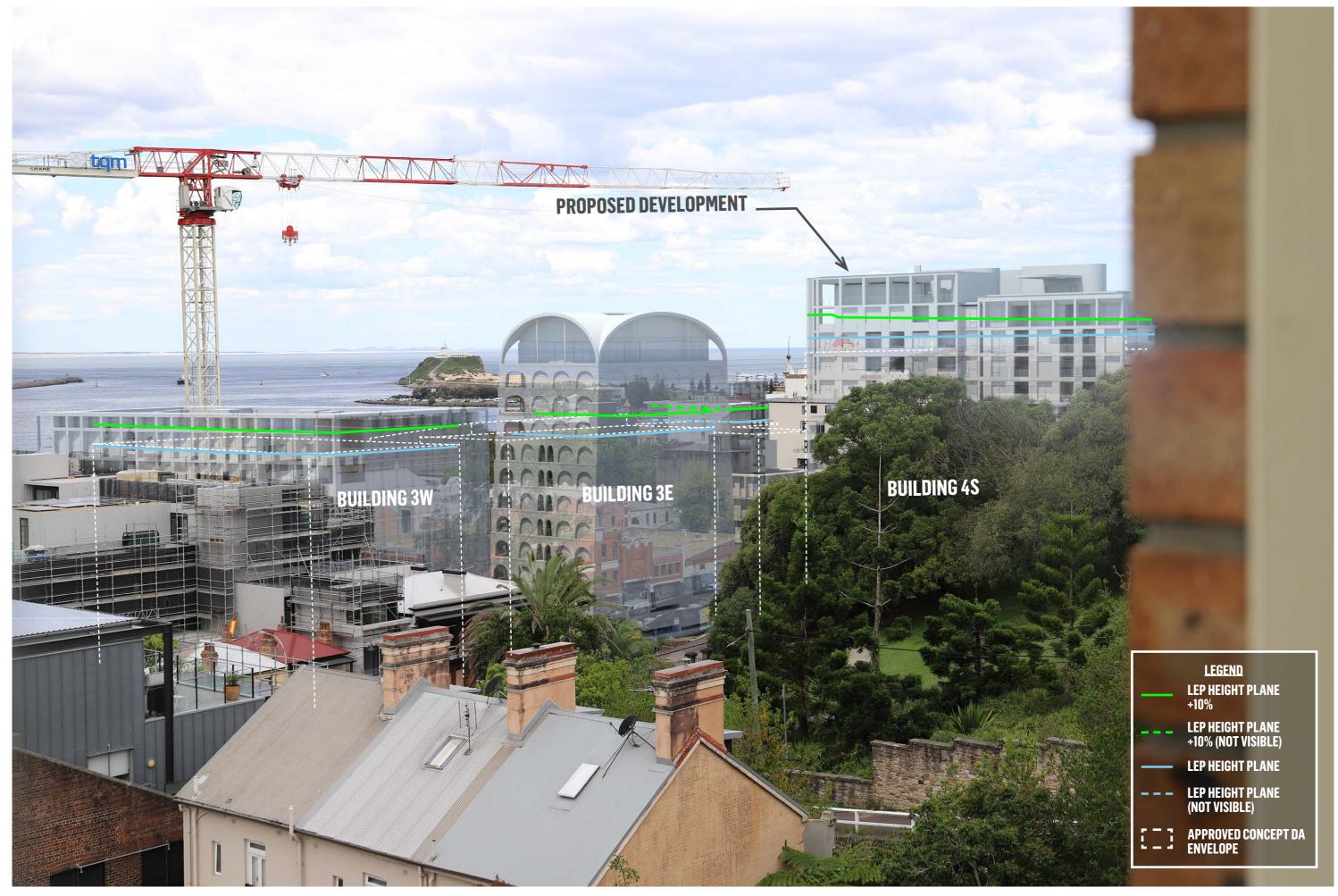
VP19 IMG 0169 : SEGENHOE APARTMENTS, APARTMENT 20 STUDY AREA VIEW NORTH EAST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-16

JOB NO: P0042943

DWG NO: VP_19B

REV: -





VP19 IMG 0169 : SEGENHOE APARTMENTS, APARTMENT 20 STUDY AREA VIEW NORTH EAST PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-04-16 JOB NO: P0042943 DWG NO: VP_19C REV: -





 ${\tt VP21\,IMG\,0189:SEGENHOE\,APARTMENTS,APARTMENT\,17\,DINING\,AREA\,VIEW\,NORTH\,EAST}$

EXISTING CONDITIONS: 2023-11-30 14:14 AEDT





VP21 IMG 0189 : SEGENHOE APARTMENTS, APARTMENT 17 DINING AREA VIEW NORTH EAST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-04-16

JOB NO: P0042943

DWG NO: VP_21B

REV: -





VP21 IMG 0189 : SEGENHOE APARTMENTS, APARTMENT 17 DINING AREA VIEW NORTH EAST PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-04-16 JOB NO: P0042943 DWG NO: VP_21C REV: -

EAST END NEWCASTLE

VISUAL ASSESSMENT | PHOTOMONTAGES

PREPARED FOR IRIS CAPITAL
JANUARY 2024

PHOTOMONTAGES PREPARED BY:

Urbis, Level 10, 477 Collins Street, MELBOURNE 3000.

DATE PREPARED:

15 January 2024

VISUALISATION ARTIST:

Ashley Poon, Urbis - Lead Visual Technologies Consultant

Bachelor of Planning and Design (Architecture) with over 20 years' experience in 3D visualisation

Enisa Muranovic, Urbis – Visual Technologies Consultant

Bachelor of Design (Landscape Architecture)

LOCATION PHOTOGRAPHERS:

Nick Sisam, Urbis - Associate Director, National Design

Jane Maze-Riley, Urbis - Director, National Design.

CAMERA:

Canon EOS 6D Mark II camera

CAMERA LENS AND TYPE:

Canon EF 24-105mm f/4L IS USM

SOFTWARE USED:

- 3DSMax 2023 with Arnold 5.0 (3D Modelling and Render Engine)
- AutoCAD 2022 (2D CAD Editing)
- Globalmapper 23 (GIS Data Mapping / Processing)
- Photoshop CC 2022 (Photo Editing)

DATA SOURCES:

- Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets
 Newcastle 2018 & 2014
- Aerial photography from Nearmap 2022-01-15
- Proposed 3D model received from Architect 2023-02-27
- Height planes 3D model received from Architect 2023-04-03
- Viewplace and fixed features survey data prepared by Positive Survey Solutions 2023-12-20
- EAST END, NEWCASTLE | Photomontages for proposed development

METHODOLOGY:

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- Independent survey data has been used in tandem with available geo-spatial data for the site, including aerial
 photography, digital elevation models and LiDAR point-clouds. This data is used to cross check the accuracy
 of alignment of the 3D architectural model in each view. The relevant datasets are validated and combined
 to form a geo-referenced base 3D model from which additional information, such as proposed architecture,
 landscape and photographic viewpoints can be inserted.
- Layers of the proposed development are obtained from the designers as digital 3D models and 2D plans. All
 drawings/models are verified and registered to their correct geo-location before being inserted into the base 3D
 model
- For each photo being used for the photomontage, the photo's survey location, camera, lens, focal length, time/ date and exposure information is extracted, checked and replicated within the 3D base model as a 3D camera. A camera match is created by aligning the 3D camera with the 3D base model against the original photo, matching the original photographic location and orientation.
- From each viewpoint, a reference 3D model camera match is generated to verify an accurate match between the base 3D model (existing ground survey/vegetation etc) and original photo. A 3D wireframe image of the 3D base model is rendered in the 3D modelling software and composited over the original photo using the photoediting software.
- From each viewpoint, the final photomontage is then produced by compositing 3D rendered images of the
 proposed development into the original photo with editing performed to sit the render at the correct view depth.
 Photographic elements are cross-checked against the 3D model to ensure elements such as foreground trees
 and buildings that may occlude views to the proposed development are retained. Conversely, where trees/
 buildings may be removed as part of the proposal, these are also removed in the photomontage.





PHOTOMONTAGES - VIEW LOCATION MAP

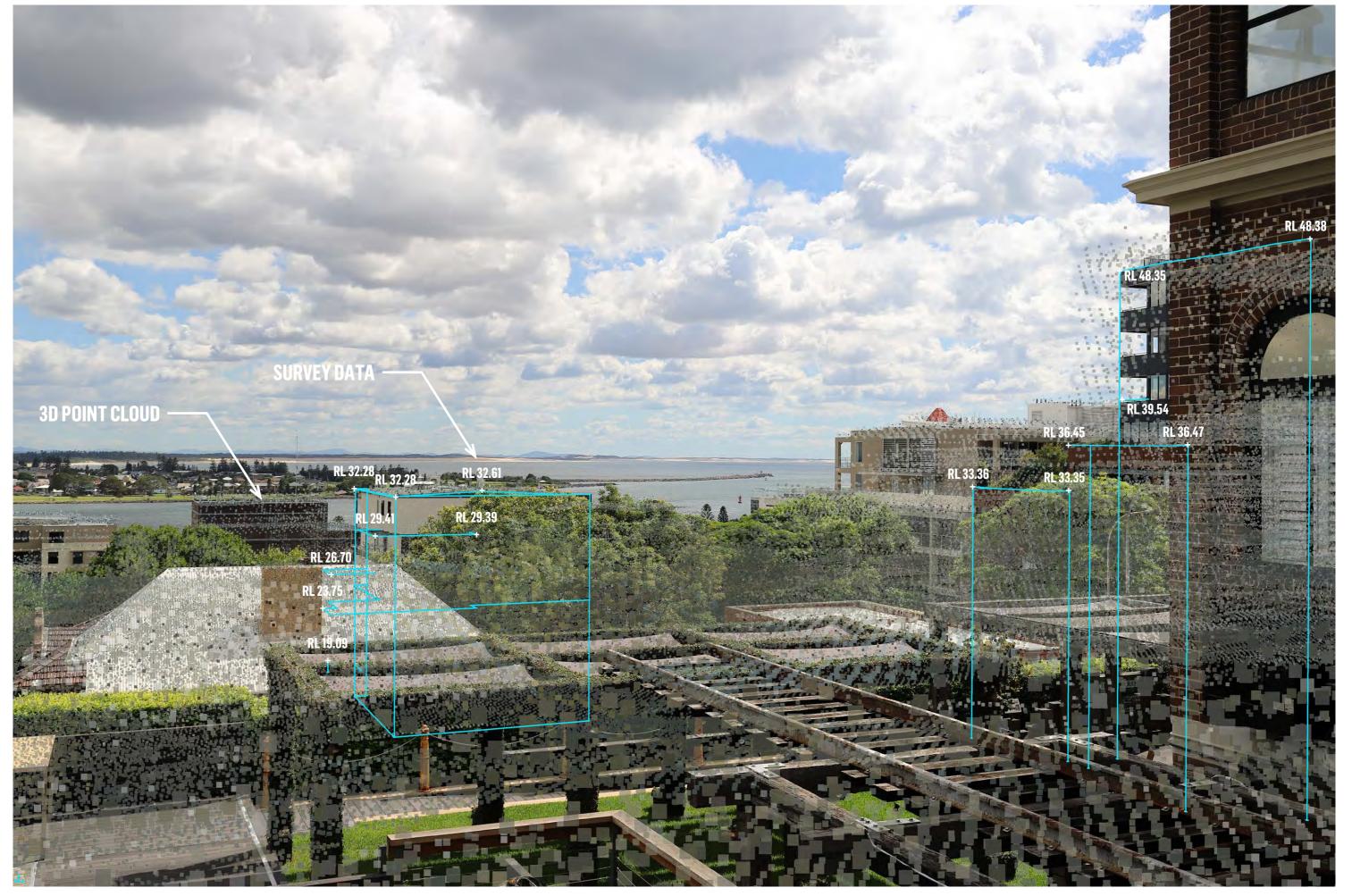
DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_MAP REV: -





VP03 IMG 0013 : NEWCASTLE CLUB, UPPER GROUND LEVEL GARDEN TERRACE VIEW NORTH EXISTING CONITIONS: 2023-11-30 09:03 AEDT

DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_3A REV: -





VP03 IMG 0013 : NEWCASTLE CLUB, UPPER GROUND LEVEL GARDEN TERRACE VIEW NORTH CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_3B REV: -





VP03 IMG 0013: NEWCASTLE CLUB, UPPER GROUND LEVEL GARDEN TERRACE VIEW NORTH PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_3C REV: -





VP04 IMG 0025: NEWCASTLE CLUB, WEST END MID-LEVEL (ADJACENT GROUND FLOOR) GARDEN TERRACE VIEW NORTH-NORTH-WEST EXISTING CONDITIONS: 2023-11-30 09:09 AEDT

DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_4A REV: -





P04 IMG 0025: NEWCASTLE CLUB, WEST END MID-LEVEL (ADJACENT GROUND FLOOR) GARDEN TERRACE VIEW NORTH-NORTH-WEST CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_4B REV: -





P04 IMG 0025: NEWCASTLE CLUB, WEST END MID-LEVEL (ADJACENT GROUND FLOOR) GARDEN TERRACE VIEW NORTH-NORTH-WEST PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_4C REV: -





VP05 IMG 0032 : NEWCASTLE CLUB, CENTRE OF LEVEL 1 BAR (TOP FLOOR) VIEW NORTH EXISTING CONDITIONS : 2023-11-30 09:14 AEDT

DATE: 2024-01-15 **JOB NO:** P0042943 **DWG NO:** VP_5A

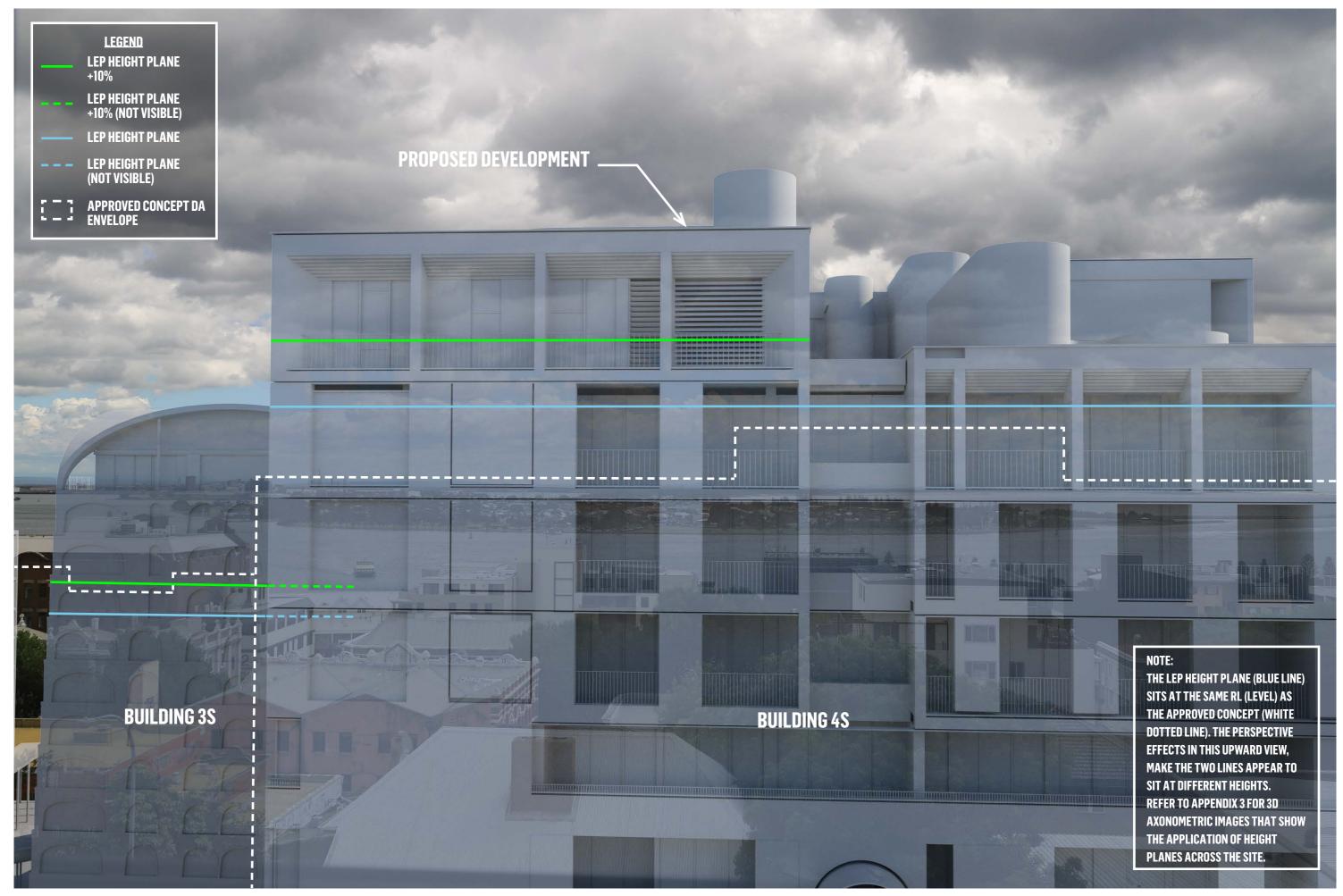
REV: -





VP05 IMG 0032 : NEWCASTLE CLUB, CENTRE OF LEVEL 1 BAR (TOP FLOOR) VIEW NORTH CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_5B REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT

VP05 IMG 0032 : NEWCASTLE CLUB, CENTRE OF LEVEL 1 BAR (TOP FLOOR) VIEW NORTH PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-01-15 JOB NO: P0042943 DWG NO: VP_5C REV: -

EAST END NEWCASTLE

VISUAL ASSESSMENT | PHOTOMONTAGES

PREPARED FOR IRIS CAPITAL APRIL 2023

PHOTOMONTAGES PREPARED BY:

Urbis, Level 10, 477 Collins Street, MELBOURNE 3000.

DATE PREPARED:

13 April 2023

VISUALISATION ARTIST:

Ashley Poon, Urbis - Lead Visual Technologies Consultant

Bachelor of Planning and Design (Architecture) with over 20 years' experience in 3D visualisation

Enisa Muranovic, Urbis - Visual Technologies Consultant

Bachelor of Design (Landscape Architecture)

LOCATION PHOTOGRAPHERS:

Nick Sisam, Urbis - Associate Director, National Design

Jane Maze-Riley, Urbis - Director, National Design.

CAMERA:

Canon EOS 6D Mark II - 26 Megapixel digital SLR camera (Full-frame sensor)

CAMERA LENS AND TYPE:

Canon EF 24-105mm f/4L IS USM

SOFTWARE USED:

- 3DSMax 2023 with Arnold 5.0 (3D Modelling and Render Engine)
- AutoCAD 2022 (2D CAD Editing)
- Globalmapper 23 (GIS Data Mapping / Processing)
- Photoshop CC 2022 (Photo Editing)

DATA SOURCES:

- Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets 2018 & 2104
- Aerial photography from Nearmap 2022-01-15
- Proposed 3D model received from Architect 2023-02-27
- Height planes 3D model received from Architect 2023-04-03

2 **EAST END, NEWCASTLE |** Photomontages for proposed development

METHODOLOGY:

Photomontages provided on the following pages have been produced with a high degree of accuracy to comply with the requirements as set out in the practice direction for the use of visual aids in the Land and Environment Court of New South Wales.

The process for producing these photomontages are outlined below:

- Photographs have been taken on site using a full-frame digital camera coupled with a quality lens in order to obtain high resolution photos whilst minimising image distortion. Photos are taken handheld at a standing height of 1.65m above natural ground level. Photos have generally been taken at a standard focal length of 50mm or at 35mm to cover a wider context. A photo taken using the 50mm focal length on a full-frame camera (equivalent to 40° horizontal field-of-view / 46.8° diagonal field-of-view) is an accepted photographic standard to approximate human vision.
- Using available geo-spatial data for the site, including independent site surveys, aerial photography, digital
 elevation models and LiDAR point-clouds, the relevant datasets are validated and combined to form a georeferenced base 3D model from which additional information, such as proposed architecture, landscape and
 photographic viewpoints can be inserted.
- Layers of the proposed development are obtained from the designers as digital 3D models and 2D plans. All
 drawings/models are verified and registered to their correct geo-location before being inserted into the base 3D
 model.
- For each photo being used for the photomontage, the photo's survey location, camera, lens, focal length, time/ date and exposure information is extracted, checked and replicated within the 3D base model as a 3D camera. A camera match is created by aligning the 3D camera with the 3D base model against the original photo, matching the original photographic location and orientation.
- From each viewpoint, a reference 3D model camera match is generated to verify an accurate match between
 the base 3D model (existing ground survey/vegetation etc) and original photo. A 3D wireframe image of the 3D
 base model is rendered in the 3D modelling software and composited over the original photo using the photoediting software.
- From each viewpoint, the final photomontage is then produced by compositing 3D rendered images of the proposed development into the original photo with editing performed to sit the render at the correct view depth. Photographic elements are cross-checked against the 3D model to ensure elements such as foreground trees and buildings that may occlude views to the proposed development are retained. Conversely, where trees/buildings may be removed as part of the proposal, these are also removed in the photomontage.





EAST END - NEWCASTLE - VISUAL ASSESSMENT

PHOTOMONTAGES - VIEW LOCATION MAP





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP01 IMG 5376: EXISTING CONDITIONS: 2023-02-08 09:54 AEST

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_1A REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP01 IMG 5376: CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13
JOB NO: P0042943
DWG NO: VP_1B
REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENTVP01 IMG 5376: PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_1C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP02 IMG 5382 : EXISTING CONDITIONS : 2023-02-08 10:51 AEST

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_2A REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP02 IMG 5382 : CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_2B REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENTVP02 IMG 5382: PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_2C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP03 IMG 5389: EXISTING CONDITIONS: 2023-02-08 11:12 AEST

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_3A REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP03 IMG 5389: CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13
JOB NO: P0042943
DWG NO: VP_3B
REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP03 IMG 5389: PHOTOMONTAGE - PROPOSED DEVELOPMENT

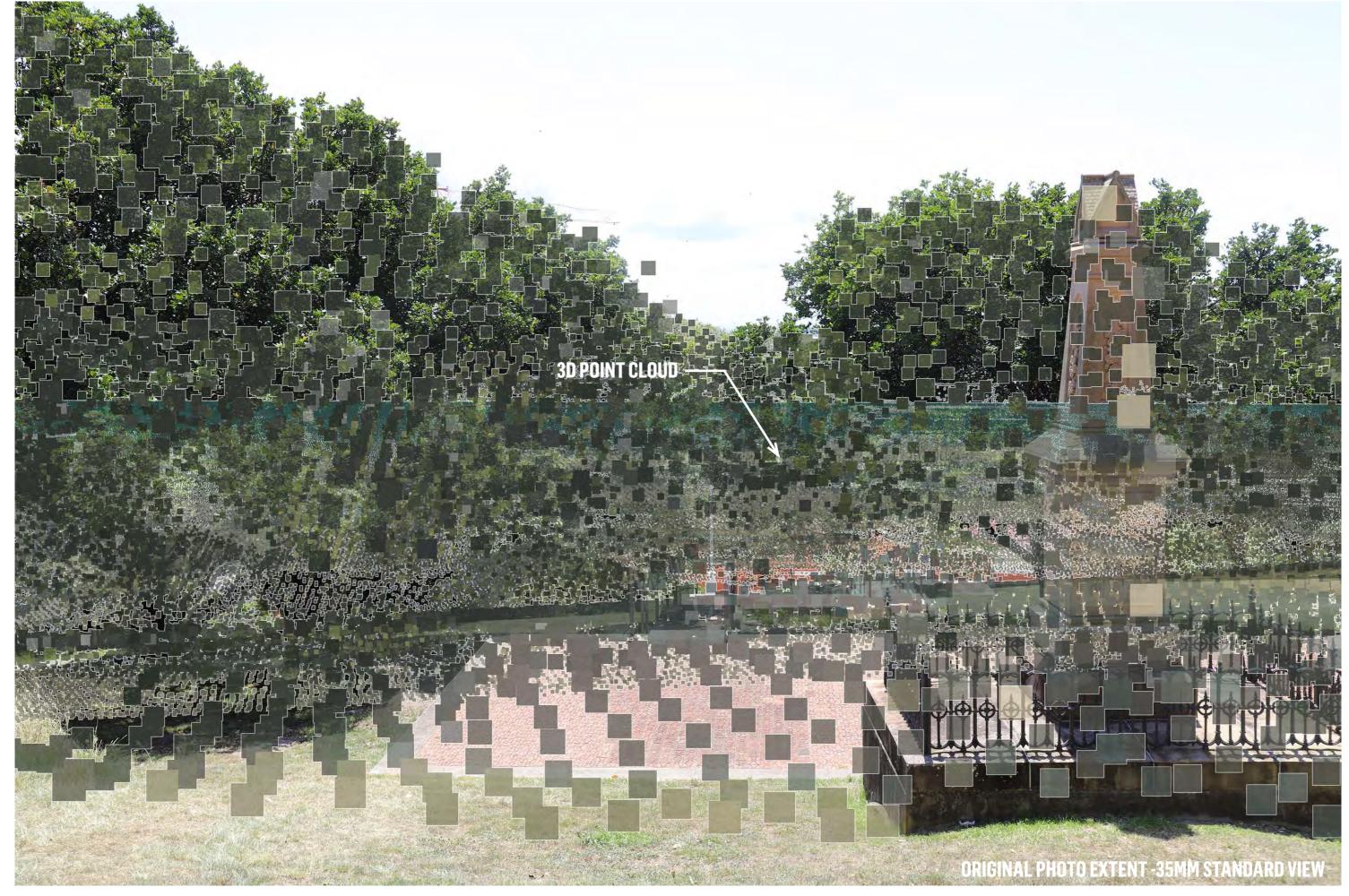
DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_3C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP04 IMG 5399: EXISTING CONDITIONS: 2023-02-08 11:47 AEST

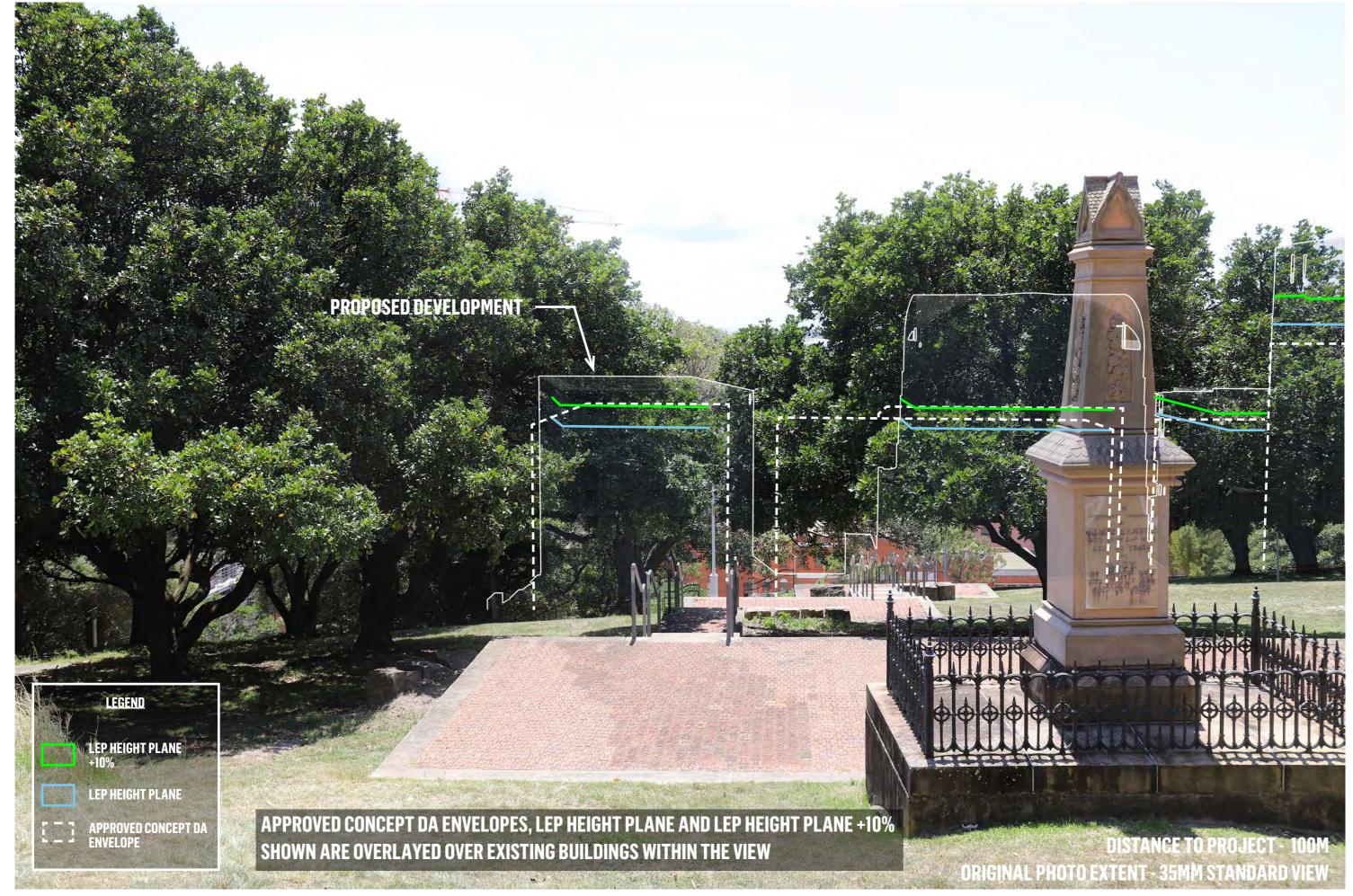
DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_4A REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP04 IMG 5399: CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_4B REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP04 IMG 5399: PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_4C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP05 IMG 5405: EXISTING CONDITIONS: 2023-02-08 11:53 AEST

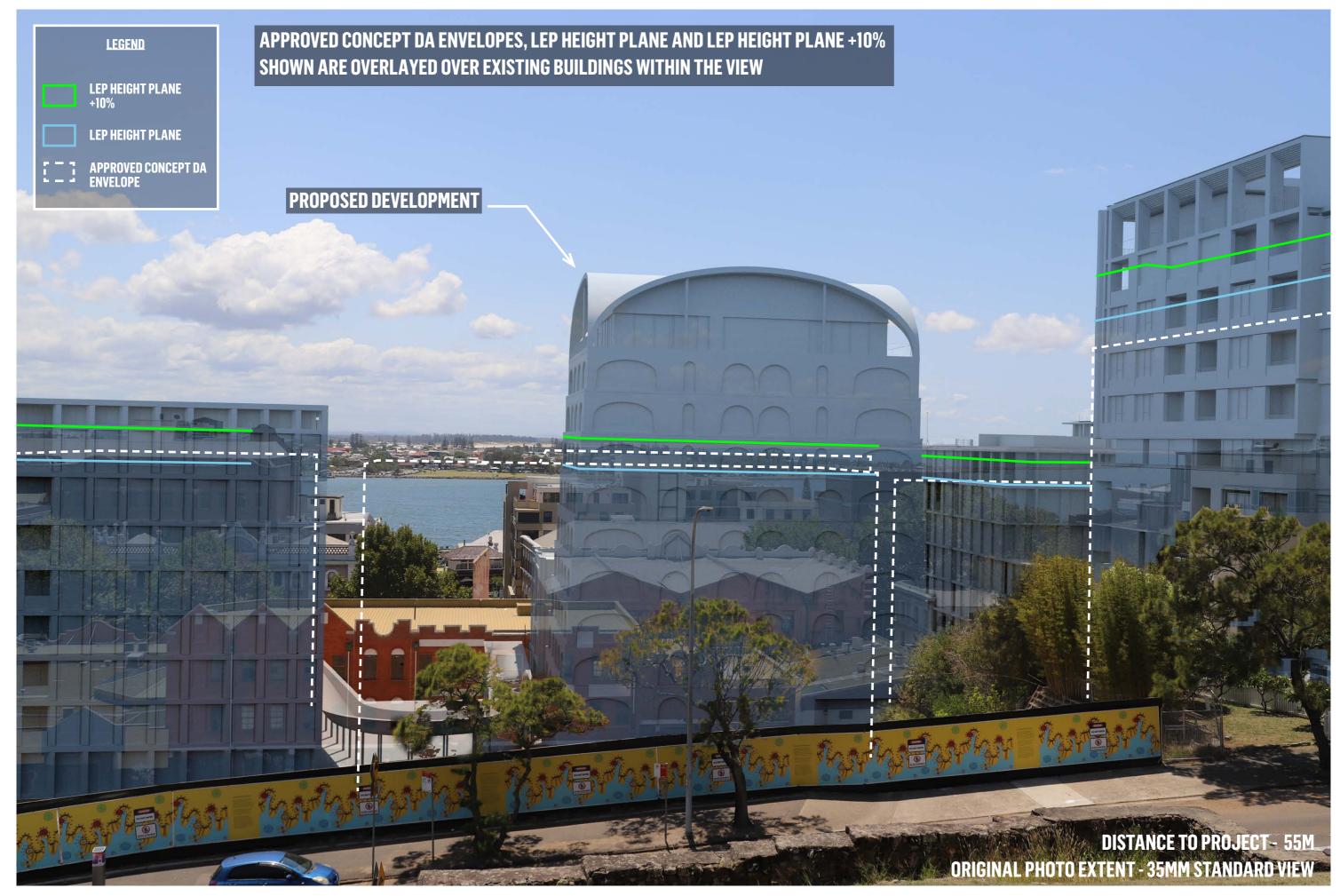
DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_5A REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP05 IMG 5405 : CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_5B REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP05 IMG 5405: PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_5C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP06 IMG 5407: EXISTING CONDITIONS: 2023-02-08 11:56 AEST

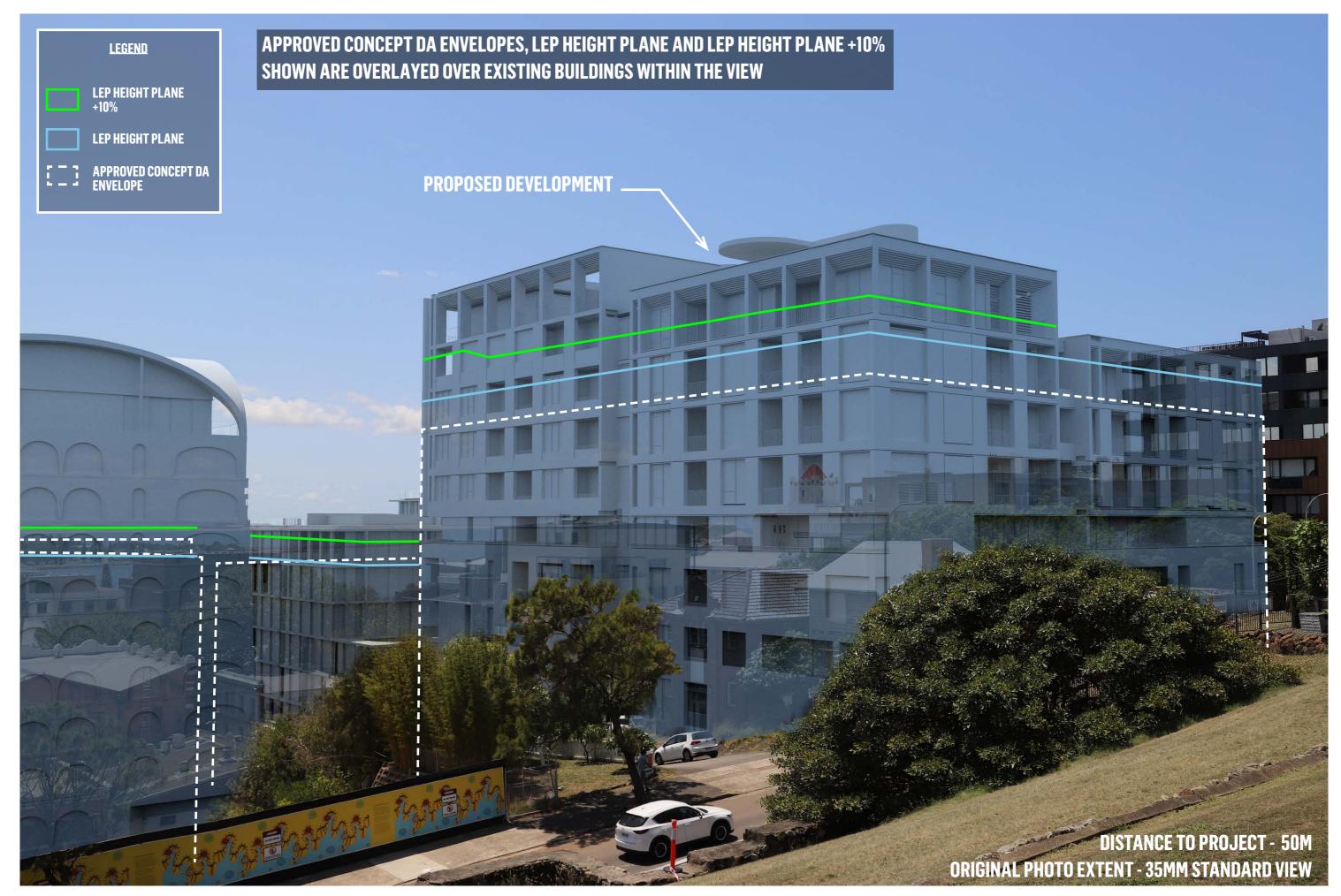
DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_6A REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP06 IMG 5407: CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_6B REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP06 IMG 5407: PHOTOMONTAGE - PROPOSED DEVELOPMENT

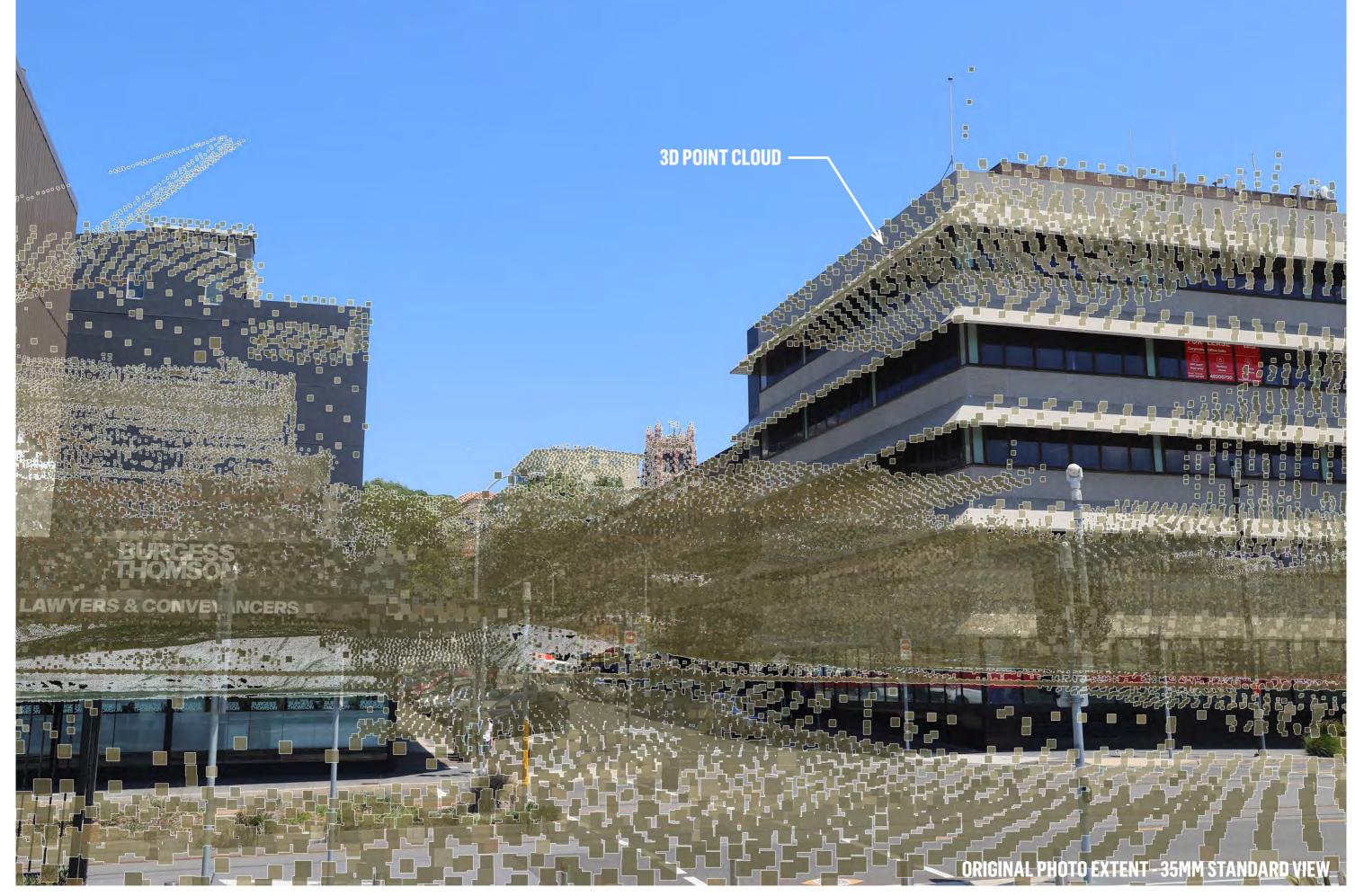
DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_6C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP07 IMG 5427: EXISTING CONDITIONS: 2023-02-08 12:59 AEST

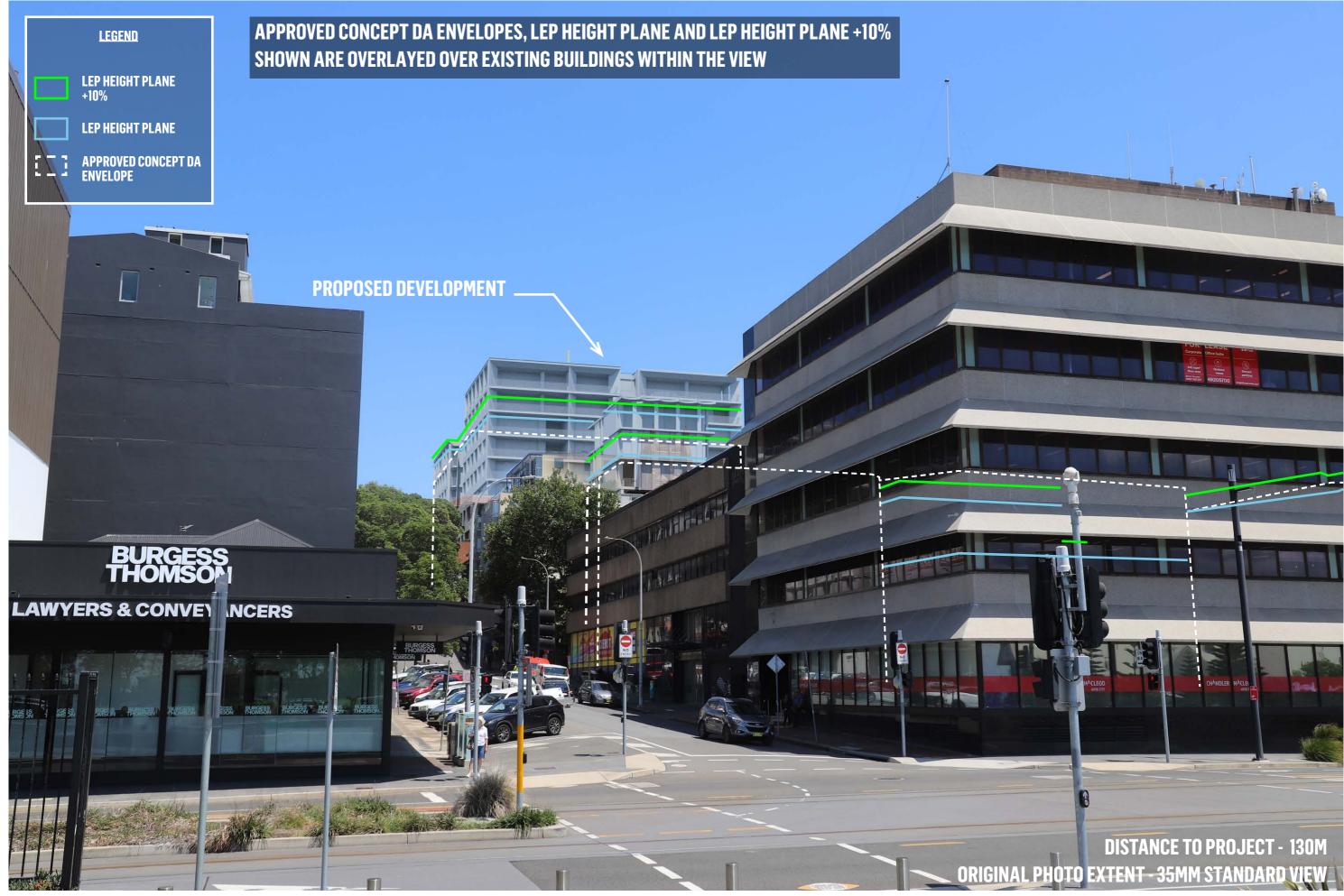
DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_7A REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP07 IMG 5427 : CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13
JOB NO: P0042943
DWG NO: VP_7B
REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENTVP07 IMG 5427: PHOTOMONTAGE - PROPOSED DEVELOPMENT

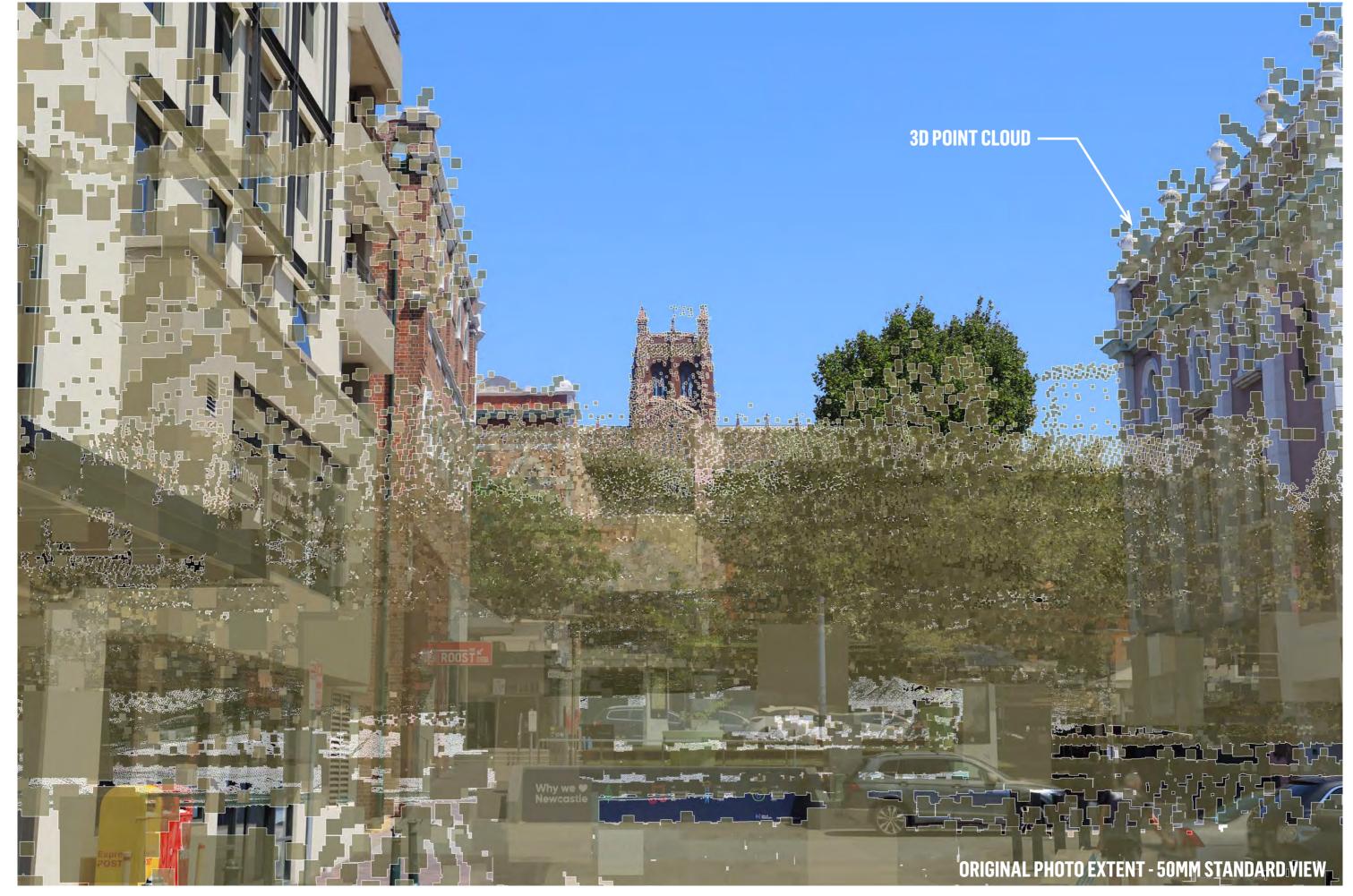
DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_7C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP08 IMG 5440: EXISTING CONDITIONS: 2023-02-08 13:15 AEST

DATE: 2023-04-13
JOB NO: P0042943
DWG NO: VP_8A
REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP08 IMG 5440 : CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13
JOB NO: P0042943
DWG NO: VP_8B
REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP08 IMG 5440: PHOTOMONTAGE - PROPOSED DEVELOPMENT

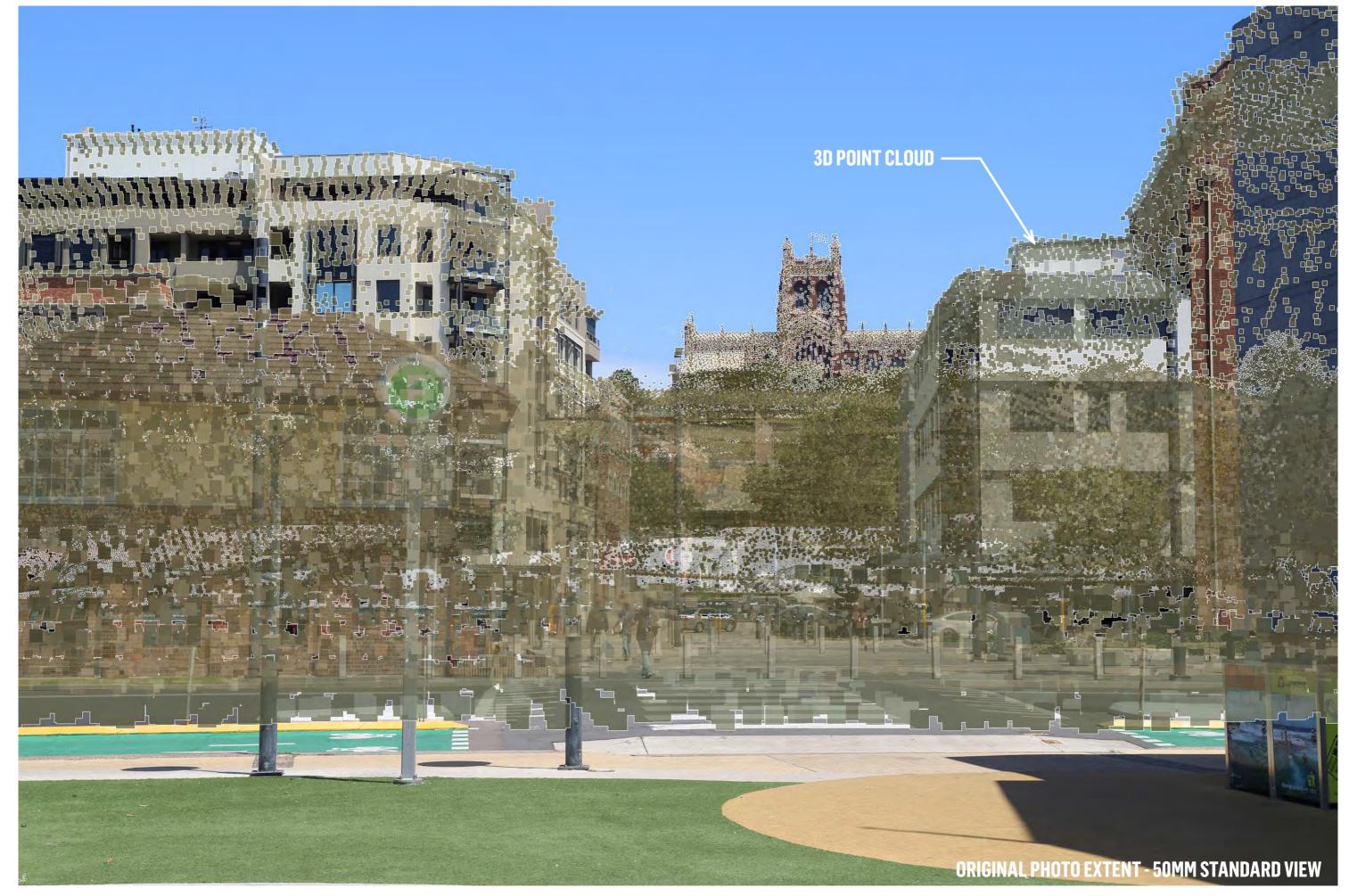
DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_8C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP09 IMG 5445: EXISTING CONDITIONS: 2023-02-08 13:17 AEST

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_9A REV: -





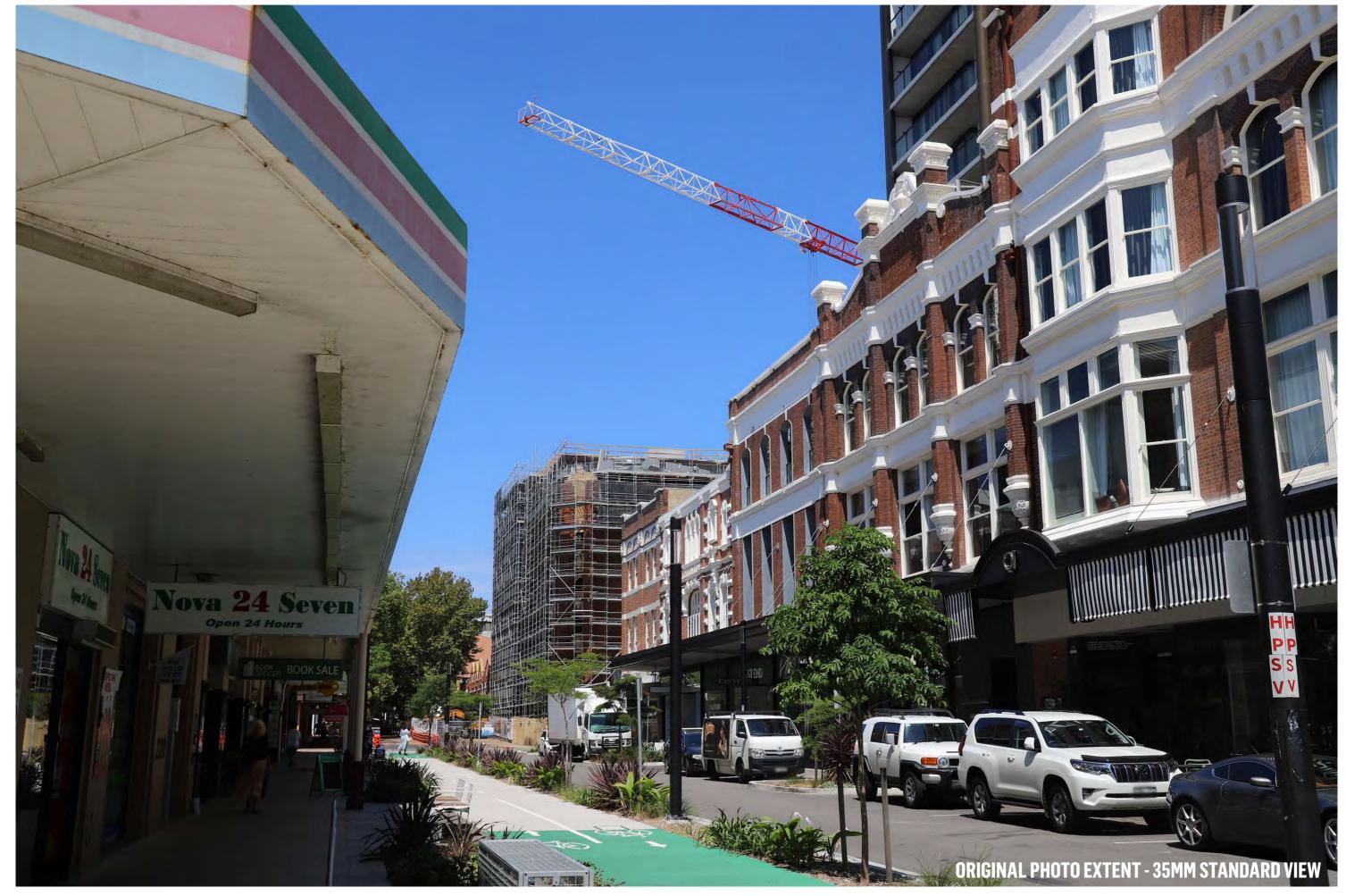
EAST END - NEWCASTLE - VISUAL ASSESSMENT VP09 IMG 5445 : CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_9B REV: -



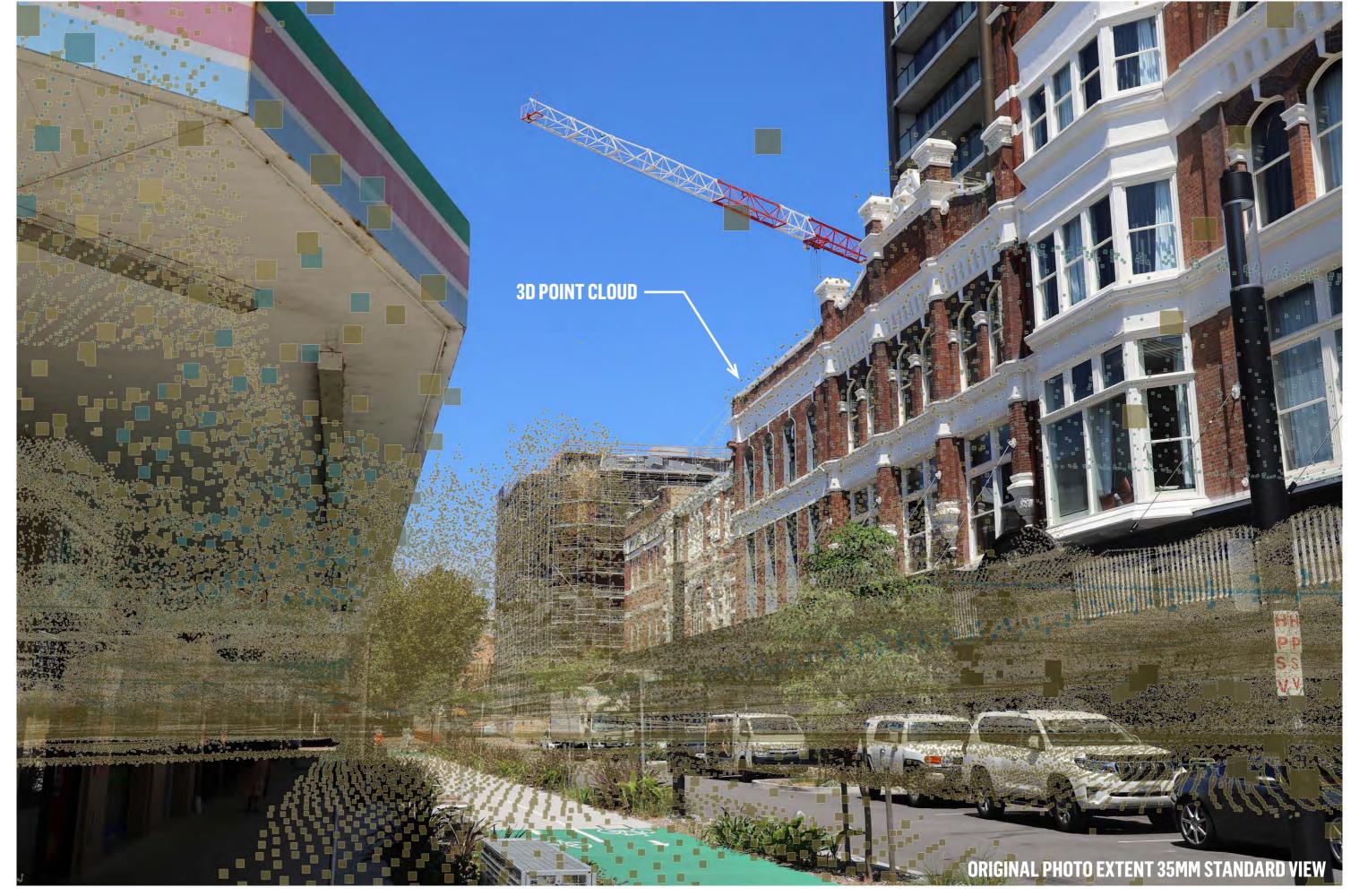


EAST END - NEWCASTLE - VISUAL ASSESSMENT VP09 IMG 5445: PHOTOMONTAGE - PROPOSED DEVELOPMENT DATE: 2023-04-13 JOB NO: P0042943 DWG NO: VP_9C REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP10 IMG 5450: EXISTING CONDITIONS: 2023-02-08 13:29 AEST





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP10 IMG 5450 : CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2023-04-13
JOB NO: P0042943
DWG NO: VP_10B
REV: -





EAST END - NEWCASTLE - VISUAL ASSESSMENT VP10 IMG 5450: PHOTOMONTAGE - PROPOSED DEVELOPMENT