

5-7 CULVERSTON ROAD, MINTO (MINTO LOGISTICS HUB) VISUAL IMPACT ASSESSMENT

PREPARED FOR
CHARTER HALL
OCTOBER 2021

URBIS STAFF RESPONSIBLE FOR THIS REPORT:

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Project Code: P0034246

Report Ref: 01 RPT_5-7 Culverston Road Minto_VIA

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Date: October 2021

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1.0 PURPOSE OF REPORT

Urbis have been commissioned by Charter Hall to prepare this Visual Impact Assessment report in relation to a Section 4.55 Modification Application for SSD-7500 Minto Logistics Hub at 5-7 Culverston Road, Minto.

This report analyses the likely visual effects of the built form proposed in the Modification Application on public domain views compared to the Approved Development (SSD-7500). It does not consider the potential effects of the built form proposed on private domain views or streetscape character, given that visual impacts to a similar extent have been approved.

2.0 BACKGROUND

Charter Hall are preparing a Modification Application to alter the consent for an approved warehouse development at 5-7 Culverston Road, Minto. The development consent includes the demolition of existing built form on site and the construction of four new warehouses and associated infrastructure including ancillary offices, external storage spaces, loading docks and car parking.

The Modification Application (the Mod) as shown in plans prepared by Watch This Space Design (September 2021) retains the existing approved warehouse with the largest floor plate on the south-western corner of the site and the external storage areas on the eastern boundary of the site. The Mod proposes the revision of project staging, additional floor space to the northern elevation of the Stage 3 warehouse, the reduction of floorplates of the Stage 1 and 2 Warehouses at the north-western corner of the site, new external storage areas to the west of the proposed Stage 1 and 2 Warehouses, relocation of two offices and reduction of these from 2 storey to 1, additional car parking and loading dock space, and internal screening.

2.1 PROJECT DESCRIPTION

The plans for the Mod show that the greatest extent of change from the Approved Development is proposed for the north-western boundary of the site.

An extension of the floor plate on the northern elevation of the approved Stage 3 Warehouse is proposed. The proposed Stage 1 Warehouse sits 12 metres directly north of the Stage 3 Warehouse and the Mod will reduce the floor plate on the western elevation. Between the western elevation of Stage 1 Warehouse and the western boundary of Airds Road an external storage area that extends approximately has racking for storage at up to 7.5 metres high.

The proposed Stage 2 Warehouse aligns approximately with the extent of the Stage 1 Warehouse which sits to the south. The Mod proposes a reduction in the floorplate on the western boundary and a proposed external storage area with timber pallets and the like stored up to 7 metres high.

The Stage 1, 2 and 3 Warehouses have hardstand car parking to the east. Stage 1 and 2 Warehouses have covered loading areas on the north and west elevations, and open hard standing to the setback on the western boundary. The Mod proposes a 2.4m high powder coated palisade screening at an approximately 7m setback to the north-western corner of the site to screen the proposed Stage 1 and 2 Warehouse outdoor storage areas. On the northern boundary to Airds Road from the western edge of the Stage 2 Warehouse to the east the Mod proposes 2.4m high powder coated palisade screening. The proposed built form of the Mod is well within the setbacks to each boundary.

The Landscape Plan for the Mod shows that where possible existing trees along the northern, western and southern boundary will be retained and additional buffer planting is also proposed. The planting proposed includes tall canopy trees, low-level shrubs and a native plant understorey.

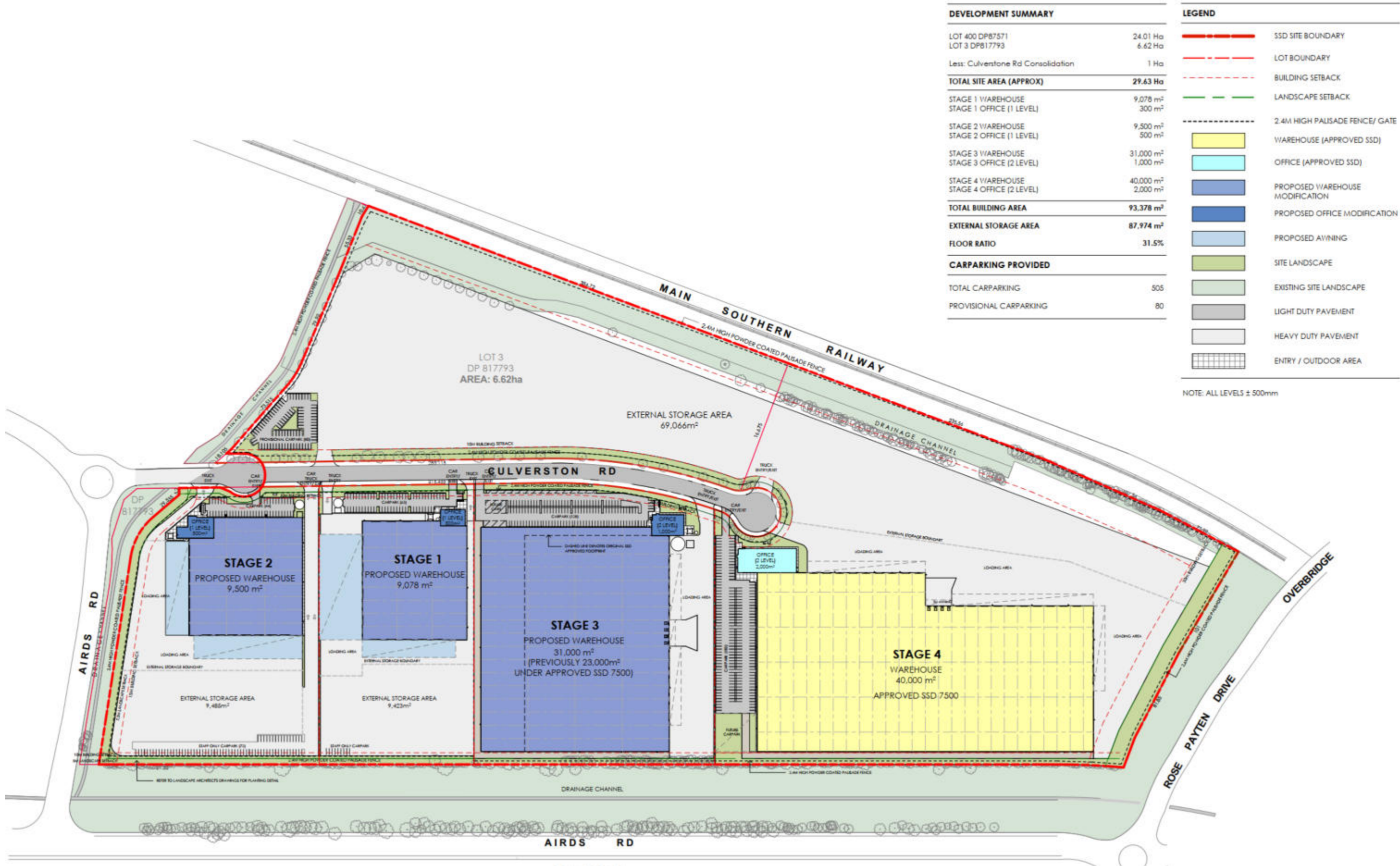


Figure 1 Proposed Master Plan (Watch This Space Design, 2021)

3.0 SITE AND SURROUNDING CONTEXT

3.1 SUBJECT SITE

The site is 29.36 hectares and is broadly trapezoidal in shape, with long edges to the west and east and bound by Rose Payten Drive to the south and Airds Road to the west and north. The Western Railway runs parallel to the eastern boundary of the site. Culverston Road runs north/south through the centre of the site from the northern boundary and ends approximately two thirds of the length into the site.

Rose Payten Drive to the south is elevated above the site.

The site is located on the western edge of Minto in IN1 General Industrial land.

The site is relatively flat with a gentle crossfall from the south to the north, and sits just below the street level of Rose Payten Drive. The site is currently occupied by large industrial warehouses which are located towards the centre of the site and hardstand car parking and loading bays to the north and south of the larger built form. The site is consistent with the industrial character of the area and is predominantly characterised by bulky rectangular forms.

The site has significant setbacks from the surrounding roads, where its boundary is marked by linear rows of mature vegetation along Airds and Culverston Roads. The site is further setback from the north and west by the expanse of Bow Bowing Creek site parallel to Airds Road and the McBarron Creek to the north. The outer boundaries of the site adjacent to the creeks sloping and characterised by grassed and concrete embankments. The southern setback to Rose Payten drive is characterised by an open grassed areas with scattered vegetation.

3.2 SURROUNDING VISUAL CONTEXT

The site occupies a low point within the Campbelltown valley such that topography rises to the north-west and south-east. The wider visual context of Minto west of the site, is predominantly industrial, characterised by large bulky warehouse development but to the east is characterised by low scale and density residential development. Directly opposite the western edge of the site between Airds Road and Campbelltown road are large material storage and distribution facilities, which include bulky industrial structures and associated offices that present east towards the subject site, these include 137-149, 155, 157,159 and 165 Airds Road.

To the south of the site beyond Rose Payten Drive is a large hardstand commuter carpark which services the Leumeah Train Station, and to the south-east is the Campbelltown Sports Stadium and Athletics Centre.

The area north of the site is characterised by large industrial warehouse forms such as storage facilities and distribution centres along Airds Road, Swaffham Road, Pembury Road, Culverston and Huntsmore Road. The eastern side of the Southern Railway which is parallel to the eastern site boundary is predominately characterised by large bulky warehouse forms. In this regard, the site is bound to the west, north and east by large industrial forms, and the bulky structures of the Sport Stadium to the south.

Public open spaces within the visual context of the site include Rose Payten Reserve, Jackson Park and Kanbyugal Reserve to the west and Bellevue Park, Ernest Walsh Reserve and Leumeah Reserve to the east. High points near the site include the northern end of Jackson Park, Payten Reserve and the southern end of Peace Park.



Figure 2 View Location Map

EXTERNAL VISIBILITY OF THE SITE



View 1 View north-west on Rose Payten Drive towards the southern boundary of the site



View 2 View south towards northern boundary of the subject site from the intersection of Airds and Culverston Roads



View 3 View east from the corner of Airds Road



View 4 View north-east towards the south-western corner of the site from the intersection of Rose Payten Drive and Airds Road



View 5 View east from Airds Road to the north-western corner of the site and Bow Bowing Creek



View 6 View west down Airds Road along the northern boundary of the site

SURROUNDING VISUAL CONTEXT



View 7 View west from Culverston Road within the subject site



View 8 View north-west from southern end of Culverston Road



View 9 View north to site from car park adjacent to Campbelltown Sports Stadium



View 10 View north to site from pedestrian railway overpass at Campbelltown Sports Stadium



View 11 View east from south-eastern corner of Peace Park



View 12 View west from northern end of Payten Reserve

INDUSTRIAL DEVELOPMENT CHARACTERISTIC OF THE IMMEDIATE CONTEXT



View 13 Detail of 137-149 Airds Road opposite the western site boundary



View 14 Detail of 159 Airds Road opposite the western site boundary



View 15 Detail of 113 Airds Road to the north of the subject site



View 16 View west towards site from Pembroke Park



View 17 Campbelltown Road looking east towards subject site



View 18 Detail of 103 Airds Road north of the subject site

INDUSTRIAL DEVELOPMENT CHARACTERISTIC OF THE IMMEDIATE CONTEXT



View 19 Detail of 4/27 Grange Road on the south-western corner of the intersection of Airds Road and Rose Payten Drive



View 20 Detail 109 and 103 Airds Road



View 21 Detail of 6 Huntsmore Road north-east of subject site



View 22 Detail of 155 Airds Road opposite the western site boundary



View 23 View south from the corner of Airds Road and Huntsmore Road



View 24 Detail of 157 Airds Road opposite the western site boundary

4.0 EXTERNAL VISIBILITY

The site has limited external visibility to a small visual catchment and is predominantly visible from adjoining roads and the elevated section of Rose Payten Drive. The greatest extent of visual change proposed is to the north-west including sections of Airds Road and potentially parts of Culverston Road.

4.1 EFFECTIVE VISUAL CATCHMENT FOR THE MODIFICATION

The effective visual catchment refers to the geographical area within which architectural details, materiality and colours proposed are likely to be perceived by viewers.

The visual catchment of the site is predominately restricted to the closest locations and adjacent roads including Airds Road to the west and north, and Rose Payten Drive. Built form changes proposed in the Mod are likely to be predominantly visible from the north-western bend of Airds Road at the intersection of Swaffham Road, development along the western side of Airds Road, and development on the northern side of Airds Road and 1 Culverston Road to the north-east. Notwithstanding, the proposed Mod on the north-western corner of the site will be less visible than the Approved warehouse buildings on this corner as the Mod includes larger setbacks and less height.

Residential development and public open spaces are separated from the subject site by industrial development, Campbelltown Road and the Southern Railway. Industrial built forms blocks and restricts visibility to the site from the west, north and east and in this regard the potential private domain visual catchment of the site is small.

Visibility to the site from the south is limited by the elevated section of Rose Payten Drive. Notwithstanding, the modification does not propose any changes to the approved Stage 4 Warehouse on the southern boundary and as such the visibility of new built form across the site is unlikely to change significantly.

4.2 EXISTING VIEWS ACCESS

Potential views that are available towards the site which may be affected by the proposed Mod include;

- Close views from the intersection of Rose Payten Drive and Airds Road.
- Views east from development opposite the site on the western side of Airds Road.
- Views to the south-east from the intersection of Airds Road and Swaffham Road towards the north-west corner of the site where majority of built form changes in the Mod are proposed.
- Views west from Culverston Road towards the proposed and approved warehouse forms on the western boundary of the site.

5.0 REGULATORY CONTEXT

5.1 CAMPBELLTOWN DEVELOPMENT CONTROL PLAN

The Campbelltown Development Control Plan 2015 (CSDCP 2015) provides some objectives relevant to views.

Table 1 below outlines the relevant controls to the site.

Section/Clause	Provisions
Volume 1: Development Controls for all Types of Development	
Part 2 Requirements Applying to all Types of Development	
2.3 Views and Vistas	<p>(a) Development shall appropriately respond to Campbelltown's important views and vistas to and from public places. These include views and vistas to and from:</p> <ul style="list-style-type: none"> (i) the Scenic Hills; (ii) rural/semi rural landscape areas; (iii) the Georges and Nepean River corridors; (iv) areas of significant public open space (formal and informal); and (v) heritage items. <p>(b) District views and existing significant view corridors as viewed to and from public places shall be protected.</p>

Table 1 - CSDCP 2015 Controls Relevant to Views

Urbis Comment In relation to (a)

The proposed Mod will not significantly affect views to and from the Scenic Hills and is not within the visual context of rural/semi-rural landscapes nor in proximity to the Georges and Nepean River corridors. There are no public open spaces within the immediate setting of the site from which direct views to the site are available or could be significantly affected.

Bulky warehouses development surrounding the site restrict views towards the site and constrain visibility from elevated open areas or high points within the valley to the north-west and south-east. The minor changes in built form proposed as part of the Mod would contribute to the existing industrial character of the western side of Minto and are reflective of existing height, form and character of surrounding industrial development and the Approved Development.

From elevated locations, if partly visible, the proposed built form would occupy a similar extent of existing expansive view as currently exists. The forms proposed will not interrupt important views or vistas to and from heritage items.

Urbis Comment In relation to (b)

The proposed built form in the Mod does not block any documented existing significant view corridors as viewed from public places. The proposed development does not interrupt district views, such as those to the Scenic Hills or other highpoints. In distant views the proposed warehouse may be visible amongst other warehouse forms of comparable density size and density.

5.2 REIMAGINING CAMPBELLTOWN CITY CENTRE MASTERPLAN 2020

Reimagining Campbelltown City Centre Masterplan 2020 highlights a commitment to built form which celebrates the 'city centre in a valley setting'. This setting includes views within the valley and distant views such as to the Scenic Hills. The Masterplan outlines that building heights should provide a city skyline with visual diversity and interest and contribute to and celebrate Campbelltown's 'City Centre in a Valley' setting.

Figure 3 outlines key outcomes relevant to views from the Masterplan.

Urbis Comment In relation to (b)

The proposed site massing contributes to the 'city centre in a valley' setting and does not block or significantly impact on distant views to and from the Scenic Hills.

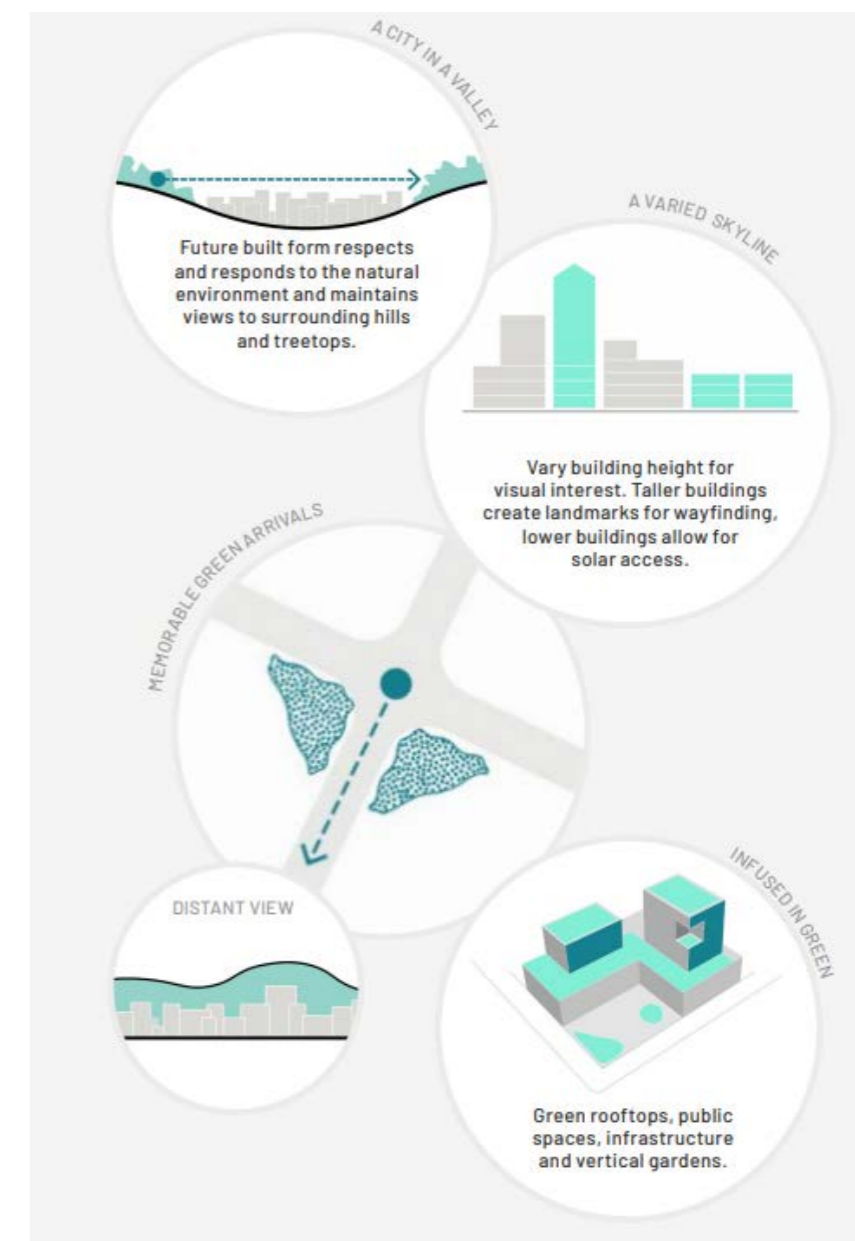


Figure 3 Reimagining Campbelltown City Centre Master Plan key outcomes in relation to views

6.0 VIEWS ANALYSIS

Urbis staff undertook fieldwork around the vicinity and site in June 2021 and are familiar with the visual setting of the site. In September 2021 Urbis undertook a desktop review and analysis of aerial imagery to determine view places and views for further analysis. Due to Covid travel restrictions Urbis directed a professional photographer to capture particular view compositions from selected locations.

A number of close views were selected for modelling and further analysis. 4 views were used as a basis for the preparation of photomontages. The original photographs were taken using a Sony, ILCE-7RM3 full frame camera using a 35mm Focal length lens and the GPS coordinates to locate each view place. The locations were uploaded to a google earth KMZ file as a means to confirm each view place. Appendix 1 includes further detail regarding the preparation of photomontages.

The photomontages prepared provide an accurate and faithful representation of the proposed built form of the Mod. The process followed is as accurate as possible in the circumstances and in this regard the photomontages can be relied upon as objective visual aids to inform this assessment.



Figure 4 Photomontage view location map

6.2 PHOTOMONTAGES

VIEWPOINT 02

VIEW NORTH TO NORTH-EASTERN CORNER OF SITE FROM MID-WAY ALONG AIRDS ROAD APPROXIMATELY ADJACENT TO 155 AIRDS ROAD



Existing view to north-eastern corner of site from Airds Road

LEGEND

- Approved Stage 2 - WH1B
- Approved Stage 2 - WH1C
- Approved Stage 3 - WH1D
- Approved Stage 2 - WH1A
- Storage to east - shipping containers x2 high

APPROVED VIEW

This is a close view from opposite the western boundary of the site looking north-east. The composition includes the grassed embankment, and concrete drainage and approved Stage 3 warehouse and part of Approved Stage 1 and 2 warehouse forms to the north (left of the image). The mid-ground includes a semi-continuous band of existing vegetation and proposed planting included in the Approved Development, along the western site boundary, which filters views to the site. The composition does not include any areas of high scenic quality or access to important features such as reserves or heritage items through or beyond the site. There is no existing views access beyond the existing built form and vegetation in the mid-ground to heritage items or items of scenic quality or value.

PROPOSED VIEW

The proposed Mod is partially visible in the mid-ground composition behind existing and proposed planting. A minor amount of additional built form proposed is visible, compared to the Approved Development which is characterised by dark recessive colours in relation to the foreground vegetation and non-reflective materials. A 2.4m palisade screen springs from the slab level so that it is visible in upward views from the surrounding road carriageway. The upward angle of the view improves its screening capability. The Mod does not block any views of high scenic quality and does not create any significant visual effects or impacts additional to those of the Approved Development. Further, any such views of the built form proposed in the Mod, would be visible for short time periods and from moving viewing situations in some close views from the road carriageway.



Proposed view to north-eastern corner of site from Airds Road with approved built form outline

VIEWPOINT 03

VIEW SOUTH-EAST TO NORTH-WEST CORNER OF SITE FROM THE NORTHERN BEND OF AIRDS ROAD



Existing view to north-west corner of site

APPROVED VIEW

This is a close view from opposite the north-western corner of the site, where Airds Road bends to the east. The composition includes foreground road carriageway, grassed verges and semi-mature vegetation along Airds Road. The mid-ground composition includes the approved low horizontal warehouse forms as indicated by the orange line. The Approved built form is heavily screened by the existing continuous boundary vegetation and proposed vegetation where filtered views to a minor extent of built form is available. The composition does not include any areas of high scenic quality or access to important features such as reserves or heritage items through or beyond the site. There is no existing access to views beyond the existing built form and vegetation in the mid-ground to heritage items or items of scenic quality or value.

PROPOSED VIEW

Parts of the Stage 1 and 2 warehouse forms are visible behind the existing retained vegetation. The built form proposed in the Mod is significantly lower in height when compared to the Approved Development and is not silhouetted against the sky. The majority of the proposed storage areas are screened by a 2.4m high palisade screen and proposed planting in addition to retained planting. The palisade screen springs from the slab level so that it is visible in upward views from the surrounding road carriageway. The upward angle of the view improves its screening capability. A narrow horizontal band of some storage is partly visible but does not make any significant contribution to the view composition. Further, any such views of the built form proposed in the Mod, including screening and any stacked storage material would be visible for short time periods and from moving viewing situations in some close views from the road carriageway.



Proposed view to the north-west corner of site with approved built form outline

LEGEND

- Approved Stage 2 - WH1B
- Approved Stage 2 - WH1C
- Approved Stage 3 - WH1D
- Approved Stage 2 - WH1A
- Storage to east - shipping containers x2 high

VIEW 04

VIEW SOUTH-WEST FROM INTERSECTION OF AIRDS AND CULVERSTON ROADS TO NORTHERN BOUNDARY OF SUBJECT SITE

APPROVED VIEW

This is a close view from opposite the northern boundary of the site, at the intersection of Airds and Culverston Roads north of the site. The composition includes grassed verges and semi-mature vegetation along Airds Road in the foreground. The mid-ground composition includes the low horizontal warehouse forms approved. The Approved built form is set closer to and is highly visible from the road. The composition does not include any areas of high scenic quality or access to important features such as reserves or heritage items through or beyond the site. There is no existing views access beyond the approved built form and vegetation in the mid-ground to heritage items or items of scenic quality or value.

PROPOSED VIEW

Parts of the Stage 2 warehouse forms are lower compared to the Approved buildings and are partially visible in filtered views behind existing and proposed vegetation. The majority of the proposed Stage 2 warehouse and covered loading area on the northern elevation are screened by a 2.4m high palisade screen and proposed planting in addition to retained planting. The palisade screen springs from the slab level so that it is visible in upward views from the surrounding road carriageway. The upward angle of the view improves its screening capability. The Mod forms are finished in dark colours that are visually absorbed by the existing and proposed vegetation and are of low reflectivity. Glimpses of the warehouse are partly visible but do not block access to any item of scenic quality or value. Further, any such views of the built form proposed in the Mod, including screening and the warehouse form would be visible for short time periods and from moving viewing situations in some close views from the road carriageway.



Existing view to northern site boundary from intersection of Airds and Culverston Roads



Proposed view to the northern site boundary from intersection of Airds and Culverston Roads with approved built form outline

LEGEND

- Approved Stage 2 - WH1B
- Approved Stage 2 - WH1C
- Approved Stage 3 - WH1D
- Approved Stage 2 - WH1A
- Storage to east - shipping containers x2 high

VIEWPOINT 08

VIEW NORTH-WEST TO SOUTH-EAST CORNER OF SITE FROM ROSE PAYTEN DRIVE

APPROVED VIEW

This view is from an elevated section of Rose Payten Drive opposite the south-east boundary of the site. Notwithstanding the elevated view place, the foreground composition is dominated by the Approved warehouse 4 which occupies the majority of the width of the southern end of the site. A triangular section at the north-east edge of the site is visible and includes approved stacked storage areas.

PROPOSED VIEW

Approved Warehouse 4 blocks the majority of the views into the site and towards built form and storage areas proposed in the Mod. A minor to negligible amount of the north-east corner of Stage 2 warehouse will be visible, but does not make any significant contribution to the view composition. The Mod does not block any views of high scenic quality and does not create any significant visual effects or impacts to those anticipated in the Approved Development. Further, any such views of the built form proposed in the Mod, would be visible for short time periods and from moving viewing situations in some close views from the road carriageway.



Existing view north-west to south-east corner of site from Rose Payten Drive



Proposed view north-west to south-east corner of site from Rose Payten Drive with approved built form outline

LEGEND

- Approved Stage 2 - WH1B
- Approved Stage 2 - WH1C
- Approved Stage 3 - WH1D
- Approved Stage 2 - WH1A
- Storage to east - shipping containers x2 high

7.0 CONCLUSION

- The visual catchment of the site is small to moderate in size constrained by surrounding bulky industrial development and vegetation and would not significantly increase as a result of built forms proposed in the Modification Application.
- The immediate visual context is predominantly characterised by industrial development main roads, infrastructure and recreational facilities to the south. Residential development is spatially well separated from the site and external visibility from the closest residential locations would be limited due to intervening development.
- There are few elevated locations from which to view the site and proposed changes included in the Modification Application, except for a short section of Rose Payten Drive from which views towards the Modification Application are significantly screened by the approved Stage 4 warehouse.
- Public domain exposure to potential views of the Modification Application are greatest from the north-west and north-west from Airds Road and Culverston Road.
- In the two northern views where the Modification Application would be most visible, the majority of the proposed storage areas are effectively screened by a 2.4m high palisade screen and mature existing and proposed vegetation.
- In views 3 and 4 the built form proposed as part of the Modification Application is significantly lower in height compared to the Approved Development.
- Therefore in views 2 and 3 the Modification Application generates a lower level of visual effects and impacts on those close views compared to the Approved Development.
- In views 2 and 3, narrow horizontal bands of storage proposed in the Modification Application, which may be visible from time to time, will be seen against a backdrop of industrial built form and will not make any significant contribution to the view composition.
- Visual effects of the Modification Application from the west (as modelled in View 2 from Airds Road) are low and also largely screened by existing and proposed vegetation.
- In Views 1 and 4 only a minor amount of additional built form proposed in the Modification Application, will be visible compared to the Approved Development which in our opinion will not create any significant visual effects.
- Based on an analysis of photomontages potential views from all locations surrounding the site would be visible for short time periods and from moving viewing situations in some views from the road carriageway.
- The minor amount of built form proposed in the Modification Application, including screening of storage areas, does not generate any significant visual effects in views or impacts on those view compositions.
- Potential visual impacts are successfully mitigated by the inclusion of 2.4m high screening to Airds Road, retention of mature boundary planting and additional planting.
- The minor amount of additional built form proposed in the Modification Application as shown in two representative views, does not create any significant additional visual effects or impacts compared to the Approved Development.
- The reduced extent of built form proposed and shown in views 2 and 3 reduces the level of visual effects and impacts already approved.
- Based on the analysis of the representative views modelled, in our opinion the level of visual effects and potential visual impacts subsequent to the approval of the Modification Application would be negligible and acceptable, and would cause minimal environmental impact.
- The approval of the Modification Application is strongly supported on visual impacts grounds.

APPENDIX 1

PREPARATION OF PHOTOMONTAGES

5-7 CULVERSTON ROAD, MINTO, NSW

VISUAL ASSESSMENT - PHOTO-SIMULATIONS

PREPARED FOR
TACTICAL GROUP
OCTOBER 2021

PHOTO-SIMULATIONS PREPARED BY:

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

DATE PREPARED :

7 October 2021

VISUALISATION ARTIST :

Ashley Poon, Urbis – Lead Visual Technologies Consultant

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

LOCATION PHOTOGRAPHER :

Grant Leslie - PerfectImages Photography and Design Australia,

under direction from Jane Maze-Riley, Urbis - Associate Director, National Design

CAMERA :

Sony a7R mark III (ILCE-7RM3) - 42 Megapixel digital SLR camera (Full-frame sensor)

CAMERA LENS AND TYPE :

Canon EF24-70mm f/2.8L II USM

SOFTWARE USED :

- 3DSMax 2021 with Arnold 4.0 (3D Modelling and Render Engine)
- AutoCAD 2021 (2D CAD Editing)
- Globalmapper 22 (GIS Data Mapping / Processing)
- Photoshop CC 2021 (Photo Editing)

DATA SOURCES :

- Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets - Wollongong 2019-06
- Aerial photography from Nearmap - 2021-08-11
- Site survey data received via Client - 2021-09-11
- Proposed 3D model received from Architect - 2021-09-13
- Proposed Architectural drawings from Architect - 2021-10-06
- Approved SSD 7500 3D Model received via Client - 2021-09-28
- Proposed landscape plan from Landscape Architect - dated 2021-09-15

METHODOLOGY :

Photo-simulations 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 photo-simulations are outlined below:

- Photographs have been taken on site using a full-frame GPS enabled digital camera coupled with a quality lens in order to obtain high resolution photos whilst minimising image distortion. Photos are taken tripod mounted and at a standing height of 1.6m above natural ground. Photos have generally been taken at 35mm to cover a wider context, with a 50mm reference window provided to assist with standardising the set for a standard view. 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 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 photo-simulation, the 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, 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 photo-editing software.
- From each viewpoint, the final photo-simulation 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 photo-simulation.



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT
 PHOTO-SIMULATIONS - VIEW LOCATION MAP



DATE: 2021-10-07
 JOB NO: P0036022
 DWG NO: VP_MAP
 REV: -



50MM STANDARD VIEW - REFERENCE

ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT

VP 2 : (PHOTO 104) VIEW LOOKING NORTH-EAST, FROM 155 AIRDS RD | EXISTING PHOTO : 2021-09-09 13:40 AEST

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_2A
REV: -



3D POINT CLOUD

DIGITAL ELEVATION MODEL

50MM STANDARD VIEW - REFERENCE

ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT
VP 2 : (PHOTO 104) VIEW LOOKING NORTH-EAST, FROM 155 AIRDS RD | REFERENCE 3D MODEL - CAMERA MATCH

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_2B
REV: -



DISTANCE TO PROJECT - 80M
ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT
VP 2 : (PHOTO 104) VIEW LOOKING NORTH-EAST, FROM 155 AIRDS RD | PHOTO-SIMULATION

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_2C
REV: -



50MM STANDARD VIEW - REFERENCE

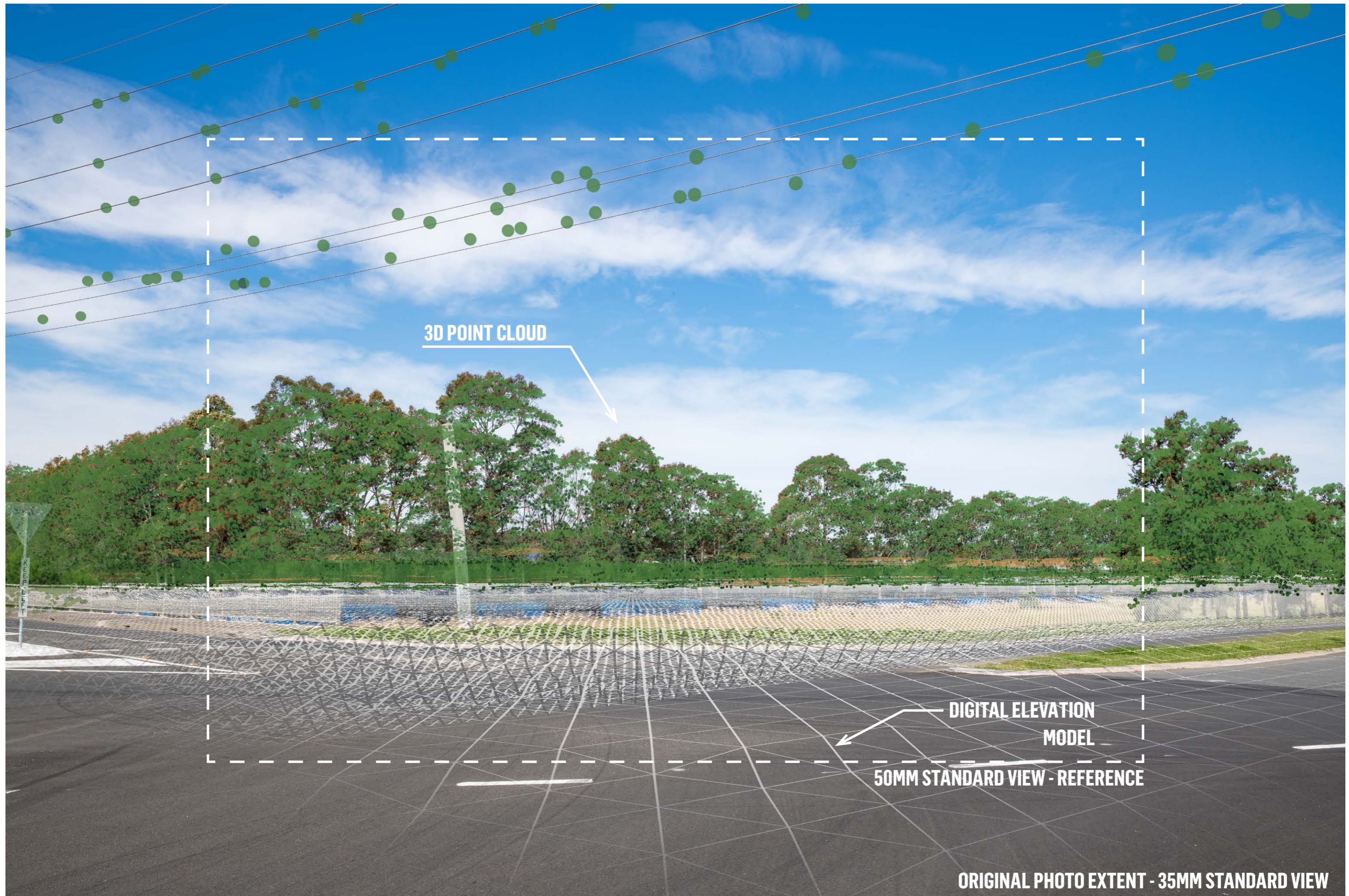
ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT

VP 3 : (PHOTO 90) VIEW LOOKING SOUTH-EAST, FROM NORTH-WEST CORNER OF AIRDS RD | EXISTING PHOTO : 2021-09-09 13:15 AEST

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_3A
REV: -



3D POINT CLOUD

DIGITAL ELEVATION
MODEL

50MM STANDARD VIEW - REFERENCE

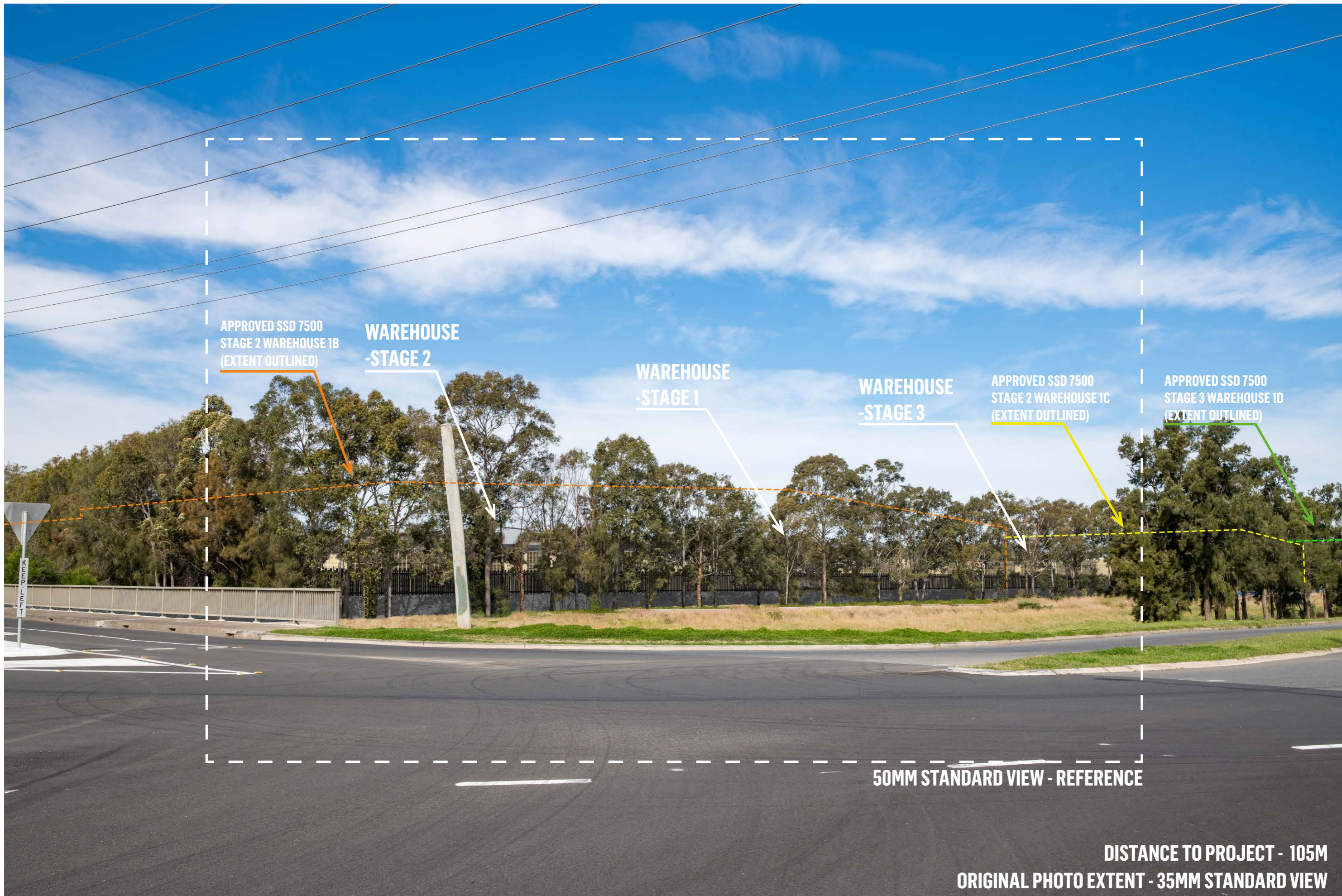
ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT

VP 3 : (PHOTO 90) VIEW LOOKING SOUTH-EAST, FROM NORTH-WEST CORNER OF AIRDS RD | REFERENCE 3D MODEL - CAMERA MATCH

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_3B
REV: -



APPROVED SSD 7500
STAGE 2 WAREHOUSE 1B
(EXTENT OUTLINED)

WAREHOUSE
-STAGE 2

WAREHOUSE
-STAGE 1

WAREHOUSE
-STAGE 3

APPROVED SSD 7500
STAGE 2 WAREHOUSE 1C
(EXTENT OUTLINED)

APPROVED SSD 7500
STAGE 3 WAREHOUSE 1D
(EXTENT OUTLINED)

50MM STANDARD VIEW - REFERENCE

DISTANCE TO PROJECT - 105M
ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT
VP 3 : (PHOTO 90) VIEW LOOKING SOUTH-EAST, FROM NORTH-WEST CORNER OF AIRDS RD | PHOTO-SIMULATION

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_3C
REV: -



50MM STANDARD VIEW - REFERENCE

ORIGINAL PHOTO EXTENT - 24MM WIDE ANGLE VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT

VP 4 : (PHOTO 45) VIEW LOOKING SOUTH-WEST, INTERSECTION CULVERSTON AND AIRDS RD | EXISTING PHOTO : 2021-09-09 9:27 AEST

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_4A
REV: -



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT

VP 4 : (PHOTO 45) VIEW LOOKING SOUTH-WEST, INTERSECTION CULVERSTON AND AIRDS RD | REFERENCE 3D MODEL - CAMERA MATCH



DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_4B
REV: -



WAREHOUSE
-STAGE 2

APPROVED SSD 7500
STAGE 2 WAREHOUSE 1B
(EXTENT OUTLINED)

50MM STANDARD VIEW - REFERENCE

DISTANCE TO PROJECT - 60M

ORIGINAL PHOTO EXTENT - 24MM WIDE ANGLE VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT

VP 4 : (PHOTO 45) VIEW LOOKING SOUTH-WEST, INTERSECTION CULVERSTON AND AIRDS RD | PHOTO-SIMULATION

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_4C
REV: -



50MM STANDARD VIEW - REFERENCE

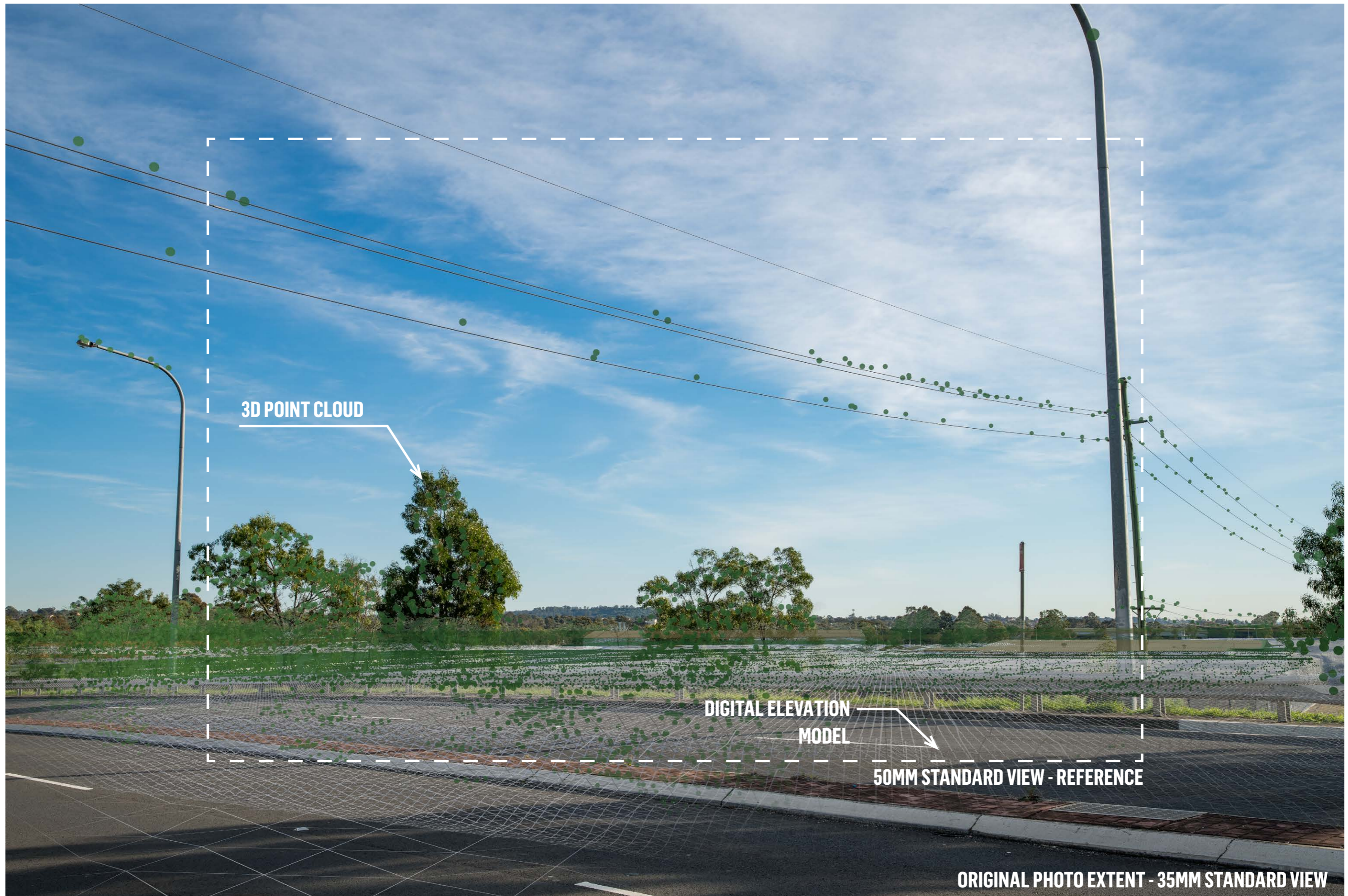
ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT

VP 8 : (PHOTO 8) VIEW LOOKING NNW, ELEVATED VIEW FROM ROSE PAYTON DRIVE | EXISTING PHOTO : 2021-09-09 7:44 AEST

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_8A
REV: -



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT

VP 8 : (PHOTO 8) VIEW LOOKING NNW, ELEVATED VIEW FROM ROSE PAYTON DRIVE | REFERENCE 3D MODEL - CAMERA MATCH

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_8B
REV: -



WAREHOUSE -STAGE 4
(APPROVED SSD 7500 - STAGE 1 WAREHOUSE 1A)
(EXTENT OUTLINED)

**WAREHOUSE
-STAGE 3**
BEHIND WAREHOUSE - STAGE 4

APPROVED SSD 7500
STAGE 3 WAREHOUSE 1D
(EXTENT OUTLINED)

APPROVED SSD 7500
EXTERNAL STORAGE AREA

50MM STANDARD VIEW - REFERENCE

DISTANCE TO PROJECT - 85M
ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW



5-7 CULVERSTON ROAD, MINTO - VISUAL ASSESSMENT
VP 8: (PHOTO 8) VIEW LOOKING NNW, ELEVATED VIEW FROM ROSE PAYTON DRIVE | PHOTO-SIMULATION

DATE: 2021-10-07
JOB NO: P0036022
DWG NO: VP_8C
REV: -

