

LANDSCAPE AND VISUAL IMPACT ASSESSMENT REPORT

GREYSTANES INDUSTRIAL LOGISTICS ESTATE

CLUNIES ROSS STREET, GREYSTANES NSW

Client:



Consultant:



Issue	Description	Author	Date
A	DRAFT	DV	1.5.2020
B	DPIE Submission	DV	2.06.20
C	DPIE Re-Submission	DV	14.11.20

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1.0 - Introduction

1.1 Project Background

The application this Landscape and Visual Impact Assessment (LVIA) relates to seeks approval for the development of warehouse and distribution centre Estate, including warehouse facilities with ancillary office spaces, internal driveway, hard stand areas, and associated earthworks and landscaping.

1.2 This Report and Author

Habit8 have been commissioned by ISPT Pty Ltd.

Habit8 Pty Ltd has also prepared the Landscape Design drawings. These documents detail mitigation and design responses which were formed as a result of this assessment and should be read in conjunction with this report. The report author is a landscape architect with 22 years experience registered with the Australian Institute of Landscape Architects. (AILA)

2.0 – Methodology of Assessment

2.1 Guidelines

The following best practice guidance has been used as the basis for the LVIA:

- Guidelines for Landscape and Visual Impact Assessment (GLVIA) – Third Edition (LI/IEMA 2013);

Landscape assessment is concerned with changes to the physical landscape in terms of features/elements that may give rise to changes in character. Visual appraisal is concerned with the changes that arise in the composition of available views as a result of changes to the landscape, people's responses to the changes and to the overall effects on visual amenity. Changes may result in adverse (negative) or beneficial (positive) effects.

The nature of landscape and visual assessment requires both objective analysis and subjective professional judgement. Accordingly, the following assessment is based on the best practice guidance listed above, information and data analysis techniques, uses subjective professional judgement and quantifiable factors wherever possible, and is based on clearly defined terms (refer to glossary).

As stated in paragraph 1.20 of the GLVIA:

"The guidance concentrates on principles while also seeking to steer specific approaches where there is a general consensus on methods and techniques. It is not intended to be prescriptive, in that it does not follow a detailed 'recipe' that can be followed in every situation. It is always the primary responsibility of any landscape professional carrying out an assessment to ensure that the approach and methodology adopted are appropriate to the particular circumstances."

2.2 Computer Generated Visualizations

Photomontages have been prepared to create "simulated" views of the proposed development. Although these do not claim to exactly replicate what would be seen by the human eye, they provide a useful tool in analyzing potential visual impacts from receptor locations.

These have presented in this report as before and after images on the same sheet for ease of comparison. The computer-generated images also include landscape mitigation at a mature age of 10 years. The assessment undertaken at Year 10 assumes that such proposals have the opportunity to grow and become effective. For the purposes of most LVIAs Year 10 effects are also taken to be the 'residual effects' of the development. Residual effects are those which are likely to remain on completion of the development and are to be given the greatest weight in planning terms.

2.3 Sensitivity of the Landscape Resource

A number of factors influence professional judgement when assessing the degree to which a particular landscape receptor can accommodate change arising from a particular development. Sensitivity is made up of judgements about the value attached to the receptor determined at baseline stage and the susceptibility of the receptor to the type of change arising from the development proposal.

The table below provides an indication of the criteria by which the sensitivity of any landscape receptor is determined by combining judgements of the value of the receptor and its susceptibility to the type of change or development proposed. A degree of professional judgement applies in arriving at the sensitivity for receptors. Wherever sensitivity is judged, the specific combinations of factors that have influenced that judgement are

described. The table has been adapted from the GVLIA with terms used as more appropriate for assessment of Australian landscape.

Table: Landscape Receptor Sensitivity Criteria

Category	Landscape Receptor Criteria
Very High	Nationally designated/valued landscape and landscape features; strong/distinctive landscape characteristics: absence of landscape detractors. Rare receptor in excellent condition. A landscape receptor extremely sensitive to disturbance or change in character due to the development proposals. No potential or very limited potential for substitution or replacement.
High	Locally designated valued landscape and features: many distinctive landscape characteristics: very few landscape detractors. Uncommon receptor in good condition. A landscape receptor sensitive to disturbance or change in character due to the development proposals. Limited potential for substitution or replacement.
Medium	Undesignated landscape and features: some distinctive landscape characteristics: few landscape detractors. A relatively common receptor in fair condition. A landscape receptor with a moderate level of sensitivity to disturbance or change in character due to the development proposals. Some potential for substitution or replacement.
Low	Undesignated landscape and features: few distinctive landscape characteristics: presence of landscape detractors. A common receptor in poor condition. A landscape receptor with limited sensitivity to disturbance or change in character due to the development proposals. Clear potential for substitution or replacement.
Very Low	Undesignated landscape and features: absence of distinctive landscape characteristics: presence of many landscape detractors. A common receptor in very poor condition. A landscape receptor with very limited sensitivity to disturbance or change in character due to the development proposals. Good potential for substitution or replacement.

The magnitude of change is determined through a range of considerations particular to each receptor and effect. In line with the GLVIA, the three main attributes considered are:

1. Scale of Change
2. Geographical Extent
3. Duration and reversibility

The table below provides an indication of the criteria by which the magnitude of change as a result of the development proposed upon a landscape receptor is judged within this assessment. These criteria provide a framework for assessment, and final conclusions are reached through clear and transparent use of reasoned professional judgement, taking into account a range of factors as described above.

Table: Landscape Receptor of Change Criteria

Category	Definition
Very High	Total loss of or major alteration to key elements/features/characteristics of the baseline condition. Addition of elements which strongly conflict with the key characteristics of the existing landscape. Large scale effects influencing several landscape types or character areas.
High	Notable loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that are prominent and may conflict with the key characteristics of the of the existing landscape. Effects at the scale of the landscape type or character areas within which the proposal lies.
Medium	Partial loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that may be evident but do not necessarily conflict with the key characteristics of the of the existing landscape. Effects within the immediate landscape setting of the site.

Low	Minor loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that may not be uncharacteristic within the existing landscape. Effects at the site level (within the development itself)
Very Low	Barely discernible loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements not uncharacteristic within the existing landscape. Effects only experienced on parts of the site at a very localized level.

2.4 Visual Receptor Sensitivity

Factors which influence professional judgment when assessing the degree to which a particular view can accommodate change arising from a particular development, without detrimental effects would typically include:

- Judgements of value attached to views take into account recognition of the value attached to particular views e.g. heritage assets or through planning designations
- Judgements of susceptibility of visual receptors to change is mainly a function of the occupation or activity of people experiencing the view at particular locations; and the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations.

Typically, sensitivity of visual receptors may be judged to be very high, high, medium, low or very low. Definitions of these indicative categories as appropriate to this assessment are set out in the table below.

Table: Visual Receptor Sensitivity

Category	Definition
Very High	Designed view to or from a heritage / protected asset. Key protected viewpoint e.g. interpretive signs. References in literature and art/or guidebooks and tourist maps. Protected view recognized in planning policy designation [LEP, DCP, DOP]. Views from the main living space of residential properties, state public rights of way e.g. bush trails and state designated landscape feature with public access. Visitors to heritage assets of state importance.
High	View of clear value but may not be formally recognized e.g. framed view of high scenic value from an individual private dwelling or garden. It may also be inferred that the view is likely to have value e.g. to local residents. Views from the secondary living space of residential properties and recreational receptors where there is some appreciation of the landscape e.g. golf and fishing. Local public rights of way and access land. Road and rail routes promoted in tourist guides for their scenic value.
Medium	View is not promoted or recorded in any published sources and may be typical of the views experienced from a given receptor. People engaged in outdoor sport where an appreciation of the landscape has little or no importance e.g. football and soccer. Road users on main routes (Motorway/Freeway/Highway) and passengers on trains.
Low	View of clearly lesser value than similar views experienced from nearby visual receptors that may be more accessible. Road users on minor roads. People at their place of work or views from commercial buildings where views of the surrounding landscape may have some importance.
Very Low	View affected by many landscape detractors and unlikely to be valued. People at their place of work or other locations where the views of the wider landscape have little or no importance.

For the visual receptors identified, the factors above are examined and the findings judged in accordance with the indicative categories below in the table to determine the magnitude of change.

Table: Visual Receptor Magnitude of Change Criteria

Category	Definition
Very High	There would be a substantial change to the baseline, with the proposed development creating a new focus and having a defining influence on the view. Direct views at close range with changes over a wide horizontal and vertical extent.
High	The proposed development will be clearly noticeable, and the view would be fundamentally altered by its presence. Direct or oblique views at close range with changes over a noticeable horizontal and or/vertical extent.
Medium	The proposed development will form a new and recognizable element within the view which is likely to be recognized by the receptor. Direct or oblique views at medium range with a moderate horizontal and/or vertical extent of the view affected.
Low	The proposed development will form a minor constituent of the view being partially visible or at sufficient distance to be a small component. Oblique views at medium or long range with a small horizontal/vertical extent of the view affected.
Very Low	The proposed development will form a barely noticeable component of the view, and the view whilst slightly altered would be similar to the baseline situation. Long range views with a negligible part of the view affected.

2.5 Significance of the Impact

For each receptor type, the **sensitivity** of the location is combined with the predicted **magnitude of change** to determine the level of effect on any particular receptor. Having taken such a wide range of factors into account when assessing sensitivity and magnitude at each receptor, the level of effect can be derived by combining the sensitivity and magnitude in accordance with the matrix in the table below:

Receptor Sensitivity	Magnitude of Change					
		Very High	High	Medium	Low	Very Low
	Very High	Substantial	Major	Major / Moderate	Moderate	Moderate/Minor
	High	Major	Major / Moderate	Moderate	Moderate/Minor	Minor
	Medium	Major / Moderate	Moderate	Moderate/Minor	Minor	Minor Negligible
	Low	Moderate	Moderate/Minor	Minor	Minor/Negligible	Negligible
	Very Low	Moderate/Minor	Minor	Minor Negligible	Negligible	Negligible/None

In all cases, where overall effects are predicted to be moderate or higher (shaded grey), this will result in a prediction of a significant effect in impact terms. All other effects will be not significant.

In certain cases, where additional factors may arise, a further degree of professional judgement may be applied when determining whether the overall change in the view or effect upon landscape receptor will be significant or not and, where this occurs, it is explained in the assessment.

Visual effects are more subjective as people's perception of development varies through the spectrum of negative, neutral and positive attitudes. In the assessment of visual effects, Ground Ink will exercise objective professional judgement in assessing the significance of effects and will assume, unless otherwise stated, that all effects are adverse, thus representing the worst-case scenario.

2.6 Site Inspection and Photographic Recording

The consultant team carried out a site inspection to verify the results of desktop study and to evaluate the existing visual character of the area. Locations were identified that would potentially be subject to visual

impacts from the Proposal. **Photographs were taken by Habit8 from key viewpoints. This information was later used to create the photomontages.**

2.7 Visualization of the Development

Habit8 were engaged to create 3D CGI's using the digital three-dimensional model in Trimble SketchUp, this was then rendered using Photoshop. The model included all aspects of the proposed development combined with the landscape design and mitigation proposed by Habit8.

Views were generated from the model that matched the camera positions of photographs taken from the key viewpoints. These were then combined with the photographs to create simulated views of the proposal.

2.8 Assessment of Visual Impact

The visual impact from the key receptors has been assessed on the basis of the criteria described in Section 2.4. This report focuses on the visual receptors judged to have the highest sensitivity to the development, these are:

- **The residential dwellings along the eastern edge of Clunies Ross street.**

Views at a variety of distances from the site have also been considered, however it is noted that the site is surrounded to the north west and north by the Girraween Creek corridor which is vegetated with a large amount of tall native canopy trees. This provides a dense visual screen and separation between the site and the M4 Motorway (North) and Prospect Highway (West). It is expected that for the commercial warehouse properties within these areas behind Girraween Creek the significance of the visual impact will be **negligible/none**.

There are also considerable completed industrial warehouse facilities surrounding the site to the West and the Boral building and car park to the south.

Some residential dwellings at higher elevations may experience glimpses over the Warehouse 1 component of the development and horizon beyond, however the magnitude of change for such dwellings is likely to be **medium** due to the distance from the proposed site and the existing industrial character which exists to the west of the residential lots. The significance of the visual impact from these properties is judged to be **minor**.

Refer to section 8.0 for the visual impact assessment from the key receptors.

3.0 - The Site and Environs

The site is located on multiple parcels of land at Clunies Ross Street, over two suburbs, Prospect in the Blacktown Local Government Area (LGA) and Pemulwuy in the Cumberland LGA. The site is approximately 7 km west of the Parramatta CBD and approximately 26 km west of the Sydney CBD. The site location is shown in Figure 1 and details of each lot within the site are provided in Table 1.



Figure 1: Site location (Source: maps.six.nsw.gov.au)

The site is bounded by existing warehouse and distribution facilities and light industrial development to the west, south and northeast, with the residential development of Pemulwuy to the east. An acoustic wall separates the western boundary of the residential area from Clunies Ross Street and the site. To the north of the site is vacant land which is subject to a Gateway Determination (PP_2018_BLACK_008_00 issued 22 November 2018) to rezone the land under the Blacktown LEP 2015, to establish industrial land in the western portion and maintain the current operation of the eastern portion as a stormwater detention basin. The site in context to the surrounding locality is shown in Figure 2.

Property Address	Legal Description	Area
44 Clunies Ross Street, Prospect NSW 2145	Lot 10 in DP 1022044	123,700m ²
	Lot 216 in DP 1030744	2,751m ²
	Lot 601 in DP 1047403	310.5m ²
	<i>Total</i>	<i>126,761.5 m²</i>
615A Great Western Highway, Pemulwuy NSW 2145	Lot 63 in DP 752051	8,094m ²
Boral House, Clunies Ross Street, Pemulwuy NSW 2145	Lot 107 in DP 1028208	50,800m ²
<i>Total</i>		<i>185,655.5m²</i>

Table 1: Site address, Lot and DP and land area (Source: Aliro Management Pty Ltd)

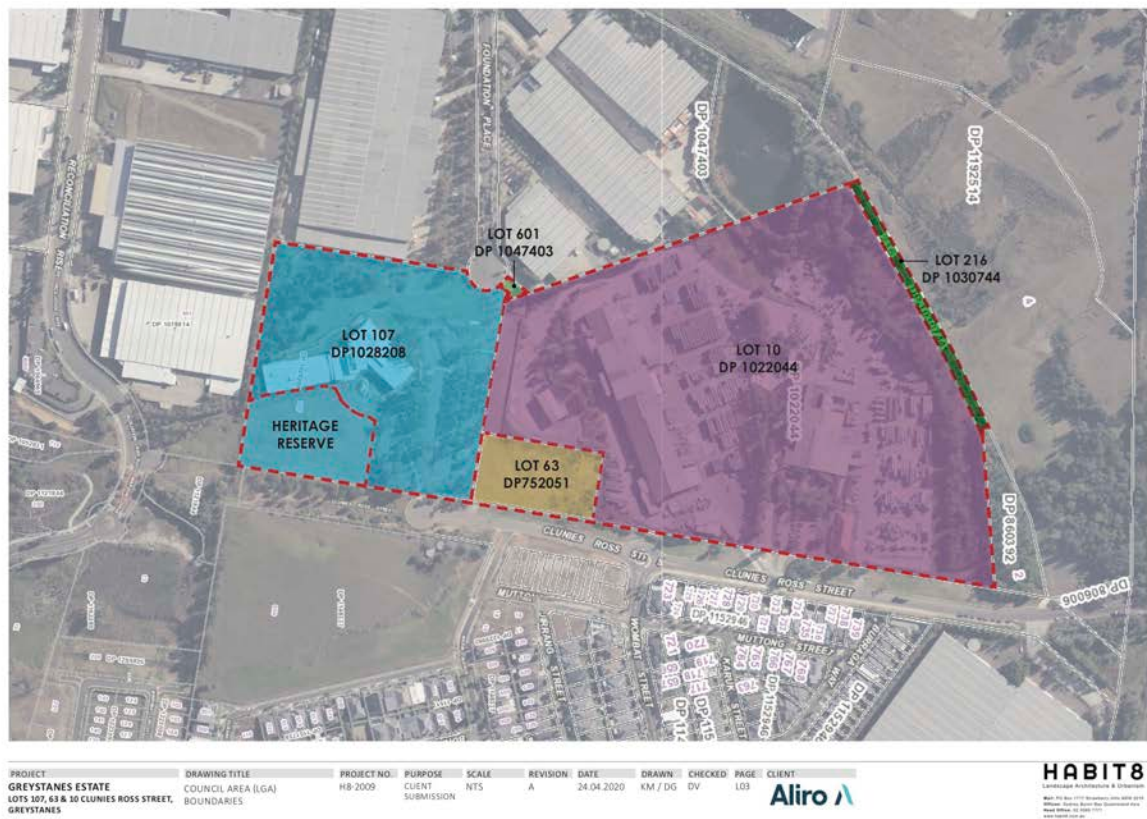


Figure 2: Lots

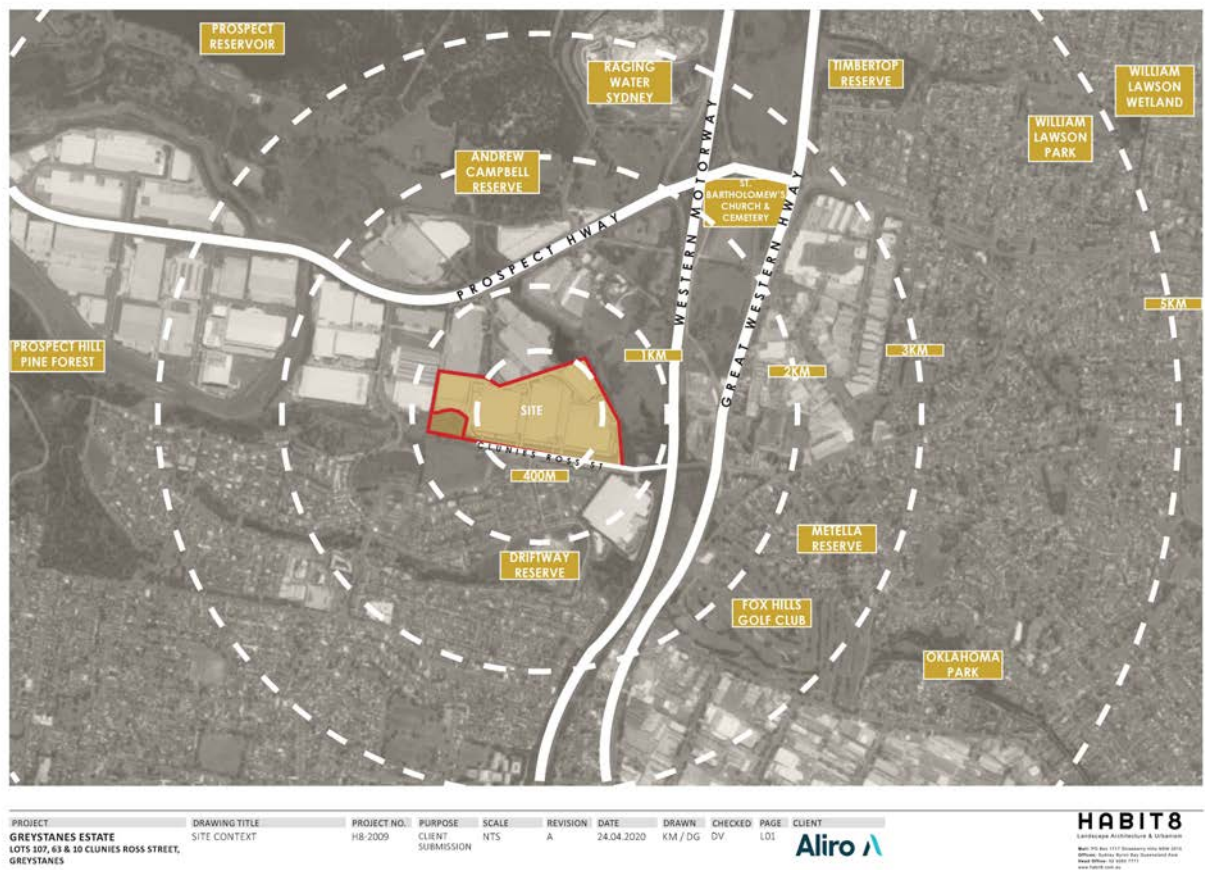


Figure 3: Regional Context

The site slopes moderately from the south near Prospect Hill to the north towards Girraween Creek, with an approximate 45 metre fall over 600 metres (5% slope on average). Parts of the site have been levelled with retaining walls to provide level surfaces for the existing uses. Historical land use included agricultural land uses and material storage and processing associated with nearby quarrying and manufacturing operations. More recently, the Boral site has been redeveloped to facilitate commercial office spaces for commercial/industrial land use.

The northern portion of the site (Lot 10 in DP 1022044) currently operates as the Austral masonry and building products facility. The southern portion of the site (Lot 107 in DP 1028208) is comprised of the former corporate headquarters of Boral Brickworks which includes a large multi- storey office building and carparking areas which have been terraced into the existing landscape.

The site includes an easement for a water supply pipeline managed by Sydney Water, remnant vegetation along the northern boundary, between buildings and hardstand areas and flood retention basin in the north west corner of the site. The site is subject to Positive Covenants under section 88B of the Conveyancing Act 1919 which requires the landowner to establish and maintain the flood detention basin at the north west of the site (Appendix C).

The site is accessed via Clunies Ross Street or from the Prospect Highway via Foundation Place. The Prospect Highway, M4 Motorway and Great Western Highway are State roads and Clunies Ross Street and Foundation Place are within the control of Blacktown City Council or Cumberland Council.

3.1 Context

The development immediately surrounding the site is described in the following table:

Table 2 – Surrounding Development

Lot	Features
South	Laminex Warehouse 3M logistics centre warehouse
North	Girraween Creek corridor M4 Motorway corridor
East	Clunies Ross Street. Acoustic wall, residential housing, residential lots landscaping.
West	Industrial Warehouses and Offices Shelta



Figure 4 – Site Context

4.0 – Baseline Description

4.1 Planning Context

Please refer to the Planning report prepared by Keylan Consulting Pty Ltd dated November 2019.



Figure 5– LGA Boundaries

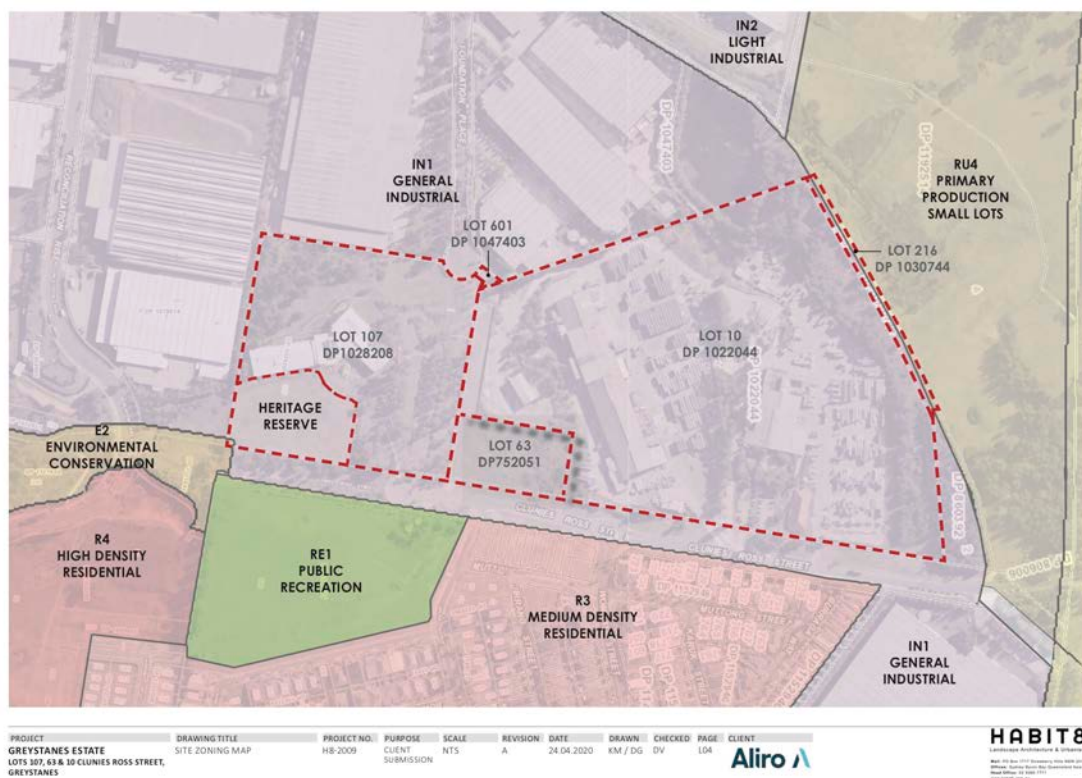


Figure 6 – Site Zoning

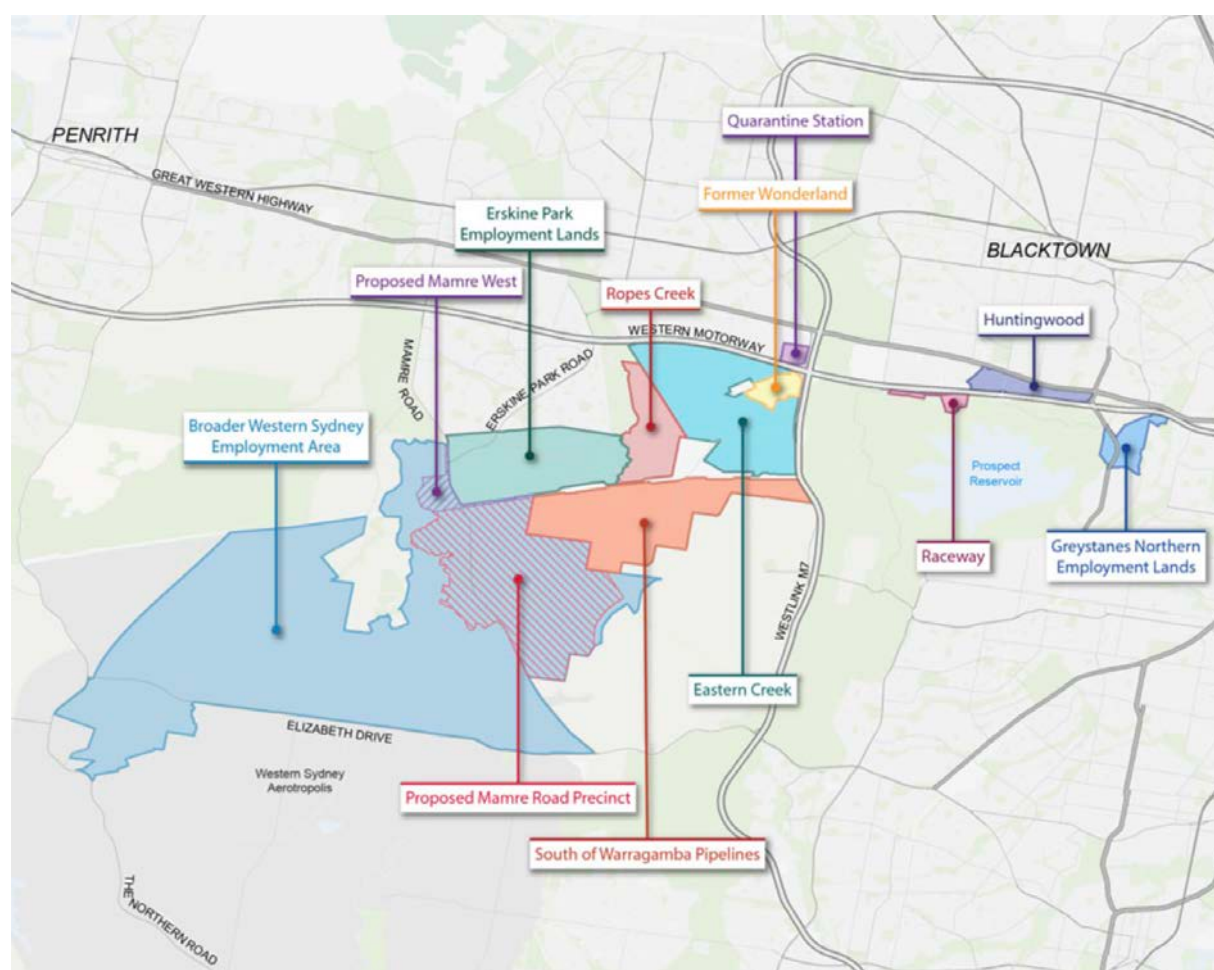
4.2 Landscape Character

The development site's baseline can be described as being an existing manufacturing and distribution facility. The existing site has multiple vehicular entry/exit points, large warehouse storage, a brick manufacturing facility and numerous outdoor yards for raw and refined materials. The site slopes from South to North and is slightly higher than Clunies Ross st to the north and lower than adjacent properties as one heads south along Clunies Ross street. There is no significant Cumberland plain woodland areas. Detractors of the site include several sheds, a tall brick manufacturing facility, large material storage yards, large volumes of dust from the internal truck movements and brick manufacturing processes.

The Boral site to the south sits high on the hill and is surrounded by dense tree planting and car park areas. The land to the north is the Girraween creek corridor consisting of grass areas, tree planting and drainage basins. This area is not accessible for public use or recreation.

4.3 Sensitivity of the Landscape

There are no current statutory designations within the LEP which attribute Landscape or Environmental value to the site but the site falls within the WSEA (Western Sydney employment lands area). This area is called the Greystanes Northern Employment lands as indicated on the figure below. The Western Sydney Employment Area provides businesses in the region with land for industry and employment. This can include transport, logistics, warehousing and office space.



WSEA map.

The heritage listed Prospect Hill is north west of the subject site and views to future development are negligible.

The Prospect Hill area has state significance due to its unique combination of significant landscape feature,

potential archaeological site, and association with important historical phases. As a dolerite outcrop rising to a height of 117 metres above sea level, Prospect Hill is a rare geological and significant topographic feature providing expansive views across the Cumberland Plain (Ashton, 2000).

The site is significant as a major reference point for early explorers from 1788, and as the site of a number of the earliest farms in New South Wales, which were established in 1791 (Higginbotham, 2000). Prospect Hill is also associated with Aboriginal frontier warfare during the early days of the colony, and as the site of one of the first Aboriginal/ European reconciliation meetings held in 1805 involving Samuel Marsden and Prospect Aboriginal groups (Flynn 1997).

Through its ongoing pastoral and rural use, the site has the potential to provide archaeological evidence of early farming practice and settlement (Higginbotham 2000). The landscape of Prospect Hill is likely to be one of the only remaining areas of rural land within the local and regional area that has retained its long-term pastoral use since the earliest days of the colony.

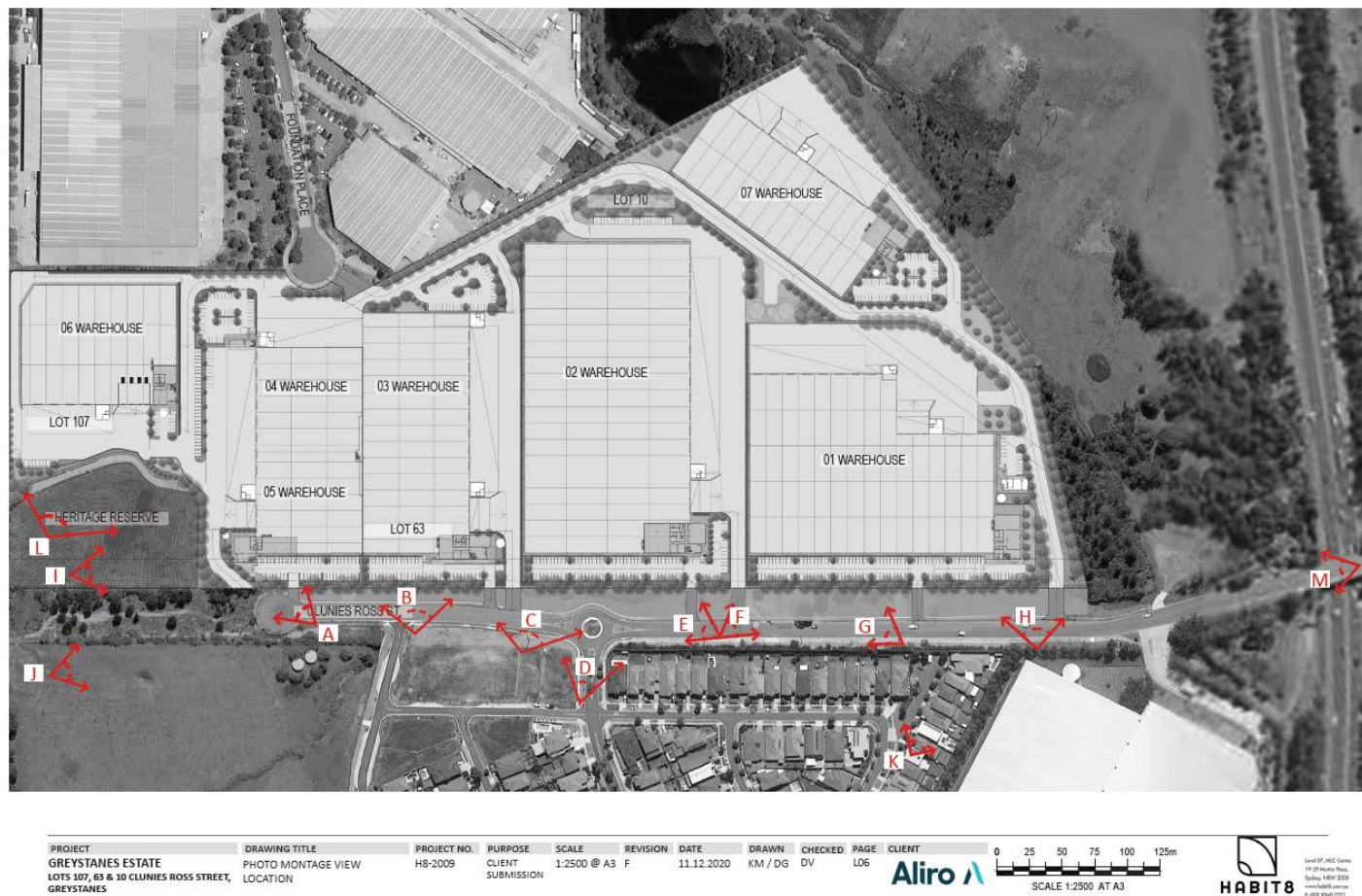
A local value may be held by some visual receptors with high sensitivity to the site along Clunies Ross street and passing pedestrians and motorists of medium sensitivity. These views are likely to be based on perceptual aspects such as wildness, tranquility, land use and green open space. The site is privately owned and therefore does not add any recreational benefit to the community. The character of the adjacent sites to the south and west is industrial and to the north is a creek corridor and the M4 motorway corridor. The landscape in the majority is therefore considered to have a small value.

A large number of native tall canopy trees will be planted in the north, south, western and eastern setbacks. Almost all planting within the development is proposed to be native with a large proportion of endemic species.

The conclusion drawn from the analysis above suggests the sensitivity of the landscape to be **low**.

4.4 Key Views – Receptor Locations

The symbols and numbering on the following map indicate the locations from viewpoints close to nearby sensitive residential receptors and significant vantage points within the surrounding public domain. The most visual sensitive receptors are those properties along Clunies Ross street. Photomontages from eye level and house balcony level have been generated to represent as closely as possible views from these receptor locations. Refer to the visual impact assessment at Section 8.0 of this report and the corresponding viewpoints 1 to 9.

Figure 7 – Visual Receptor Locations

5.0 – Development Proposals

5.1 Built Elements

The proposal consists of warehouse facilities of varying sizes across the site. Building heights have been set at 13.7m top of ridge for each building with height at eaves typically 10 to 12m at the underside of rafter allowing for warehouse storage that is typical for this type of development. Office areas are a mix of one (1) and two (2) storey offices. Warehouse 1 is 25m in height.

5.2 Materials

The following extract has been taken from the Architectural Design drawing package:

External building facades for the main warehouse buildings are mix of precast concrete wall panels and colorbond steel metal claddings. Office areas are a combination of precast concrete panels, fibre cement sheet wall cladding, prefinished aluminium cladding with performance glazing in aluminium framing.

Warehouse facades consist of painted dado panel precast with metal cladding above being the dominant material and utilises alternate colours to form a consistent unifying theme to connect all buildings of the industrial estate.

The use of precast concrete paneling provides a neutrally coloured appearance to the development. This neutral approach has already been incorporated on the LDN distribution centre on Bernera Road, with the use of white and grey paneling.

No dominant bright colours are proposed with the building form which could potentially draw attention to the development from visual receptors. The dominance of the materiality will become less apparent in year 15 when landscape is expected to be at full maturity within the setback zones.

Refer to section 6.0 Visual Assessment for further description of materials and finishes from visual receptor locations.

5.3 Floor Levels

Warehouse 1	RL 57.5
Warehouse 2	RL 67.0
Warehouse 3	RL 74.0
Warehouse 4	RL 74.0
Warehouse 5	RL 85.0
Warehouse 6	RL 84.5
Warehouse 7	RL 60.0

5.3.1 Ridge height Levels

Warehouse 1	RL 82.5
Warehouse 2	RL 80.7
Warehouse 3	RL 87.7
Warehouse 4	RL 85.0
Warehouse 5	RL 98.7
Warehouse 6	RL 98.2
Warehouse 7	RL 73.7

5.4 Site access & parking

Access for heavy vehicles will be predominantly from an internal estate road via Foundation Place, with Warehouses 2, 3, 5 and 6 having secondary access from Clunies Ross Street. Loading hardstand and waste collections areas are screened from street fronts by the building form and landscaping. All Carparking for warehouses is contained behind the setback landscaping area from the western and eastern sides of the development.

5.5 Setbacks

Building setbacks follow or exceed the required setback along street frontages. Side and rear setbacks vary and allow for fire truck access around buildings as required by BCA requirement for Large Isolated buildings. Landscape buffer zones widths for streets are as follows:

Clunies Ross Street
4m

5.6 Lighting

Lighting is to be provided with a combination of light poles and building mounted lighting around the site for on-site security and safety. Lighting is to be positioned to shine inwards onto the site minimizing light spillage onto adjoining properties. The layout of the buildings and internal roads and loading areas along with the topography and distance of the proposed development site will ensure that residential properties to the east of the site will not be affected.

5.7 Signage

Signage will be considered on an Estate wide basis such that there will be consistency in materials and finishes of the signs across the Estate. Signage will be a combination of building mounted signage for individual buildings, and estate and tenant identification signage in landscape setbacks, at access road and driveway entries, and at building entries

6.0 Landscape Strategy, Design and Mitigation

6.1 Potential effects of the development

It has been established in section 4.3 that the sensitivity of the landscape is low and the ability of the site to accept the proposal is judged to be appropriate. From baseline study it is apparent that views close and across the development site are of greater importance than those views from the wider landscape, therefore the greatest impact would be most prominent from the residential properties to the south end of Clunies Ross street.

This northern section of the overall Estate is not adjoining or within the visual corridor of the residences along Clunies Ross st as there is vegetation and an acoustic screen wall separating the residences from the Road corridor. Any visual impacts would affect Lots to the south (predominantly vacant where there is no acoustic screen wall) and West (Existing Industrial warehouses)

The design of the setbacks recognizes the need to provide significant mitigation to surrounding lots in the form of dense canopy tree planting together with a shrub and groundcover understory. This should help to soften the appearance of the development from the most highly sensitive receptors. It can be argued that the landscape will be enhanced by the introduction of new landscape setback areas that currently don't exist and the change of use from production to logistics. Refer to Habit8 documentation for further details.

Photomontages of the development from Clunies Ross street are assessed in section 6.0 of this report. These demonstrate a view at approximately year 10 of the development, this is when planting is expected to maturity and become most effective at screening the development.

6.2 Detailed Landscape Proposals

Please refer to Landscape Design Report – prepared by Habit8 for detailed landscape proposals.



Figure 8: Landscape Masterplan

7.0 Landscape Impact Assessment

The sensitivity of the landscape has been assessed within the baseline to be **low** (see section 4.0). From understanding the development proposals, mitigation and the existing industrial character of adjacent landscape, the magnitude of change is judged to be **medium**. There will be some impact to the existing site character from the higher Warehouse 1 facility, but the introduction of this development typology is not uncharacteristic of the context in which it will sit. The significance of impact therefore is judged to be **minor**.

8.0 Visual Impact Assessment

8.1 Viewpoint A

Viewing Location

Photomontage Figure

South End of Clunies Ross street (looking north west)
Figure

Visual Description

Approx. Viewing Distance from Site Boundary
Prominence of the development

80m

This view has been taken from the on east side of Clunies Ross street-Southern end. The view is south-west. The view is taken from a position where there are no future residential lots. The only visual impact is for vehicles and pedestrians. The pathway system is not a connecting cycleway. It terminates at the Cul-de-sac.

Visual Sensitivity

Motorists, cyclists and pedestrians are considered to have **low** sensitivity. The majority of residential properties from this location are further down the street to the north, Therefore, it can be judged that sensitivity of these receptors is classed as **very low**. The double story properties that do have windows that overlook the estate are also judged to be of **negligible/none** sensitivity.

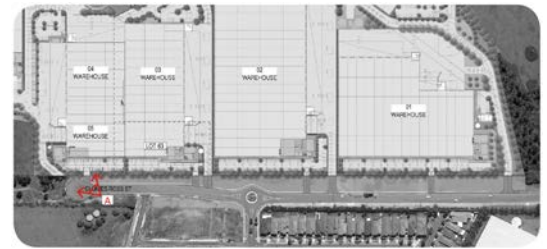
Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **low** magnitude of change. Single story residential dwellings adjacent to Clunies Ross street further to the north would experience a **negligible/none** magnitude of change. For the small number of properties which have second storey windows these would experience a **negligible/none** magnitude of change as there will be some long-distance glimpses of the building entries.

Significance of Impact

The significance of the impact for motorists, cyclists and pedestrians would be **minor/negligible**. Rear facing Single storey dwellings on the north end of Clunies Ross st will be **negligible/none**. The few residential properties with second storey windows overlooking the development would experience a **negligible/none** significance of impact.

Figure 9 – Existing Baseline & Photomontage



KEYPLAN



10 Years



8.2 Viewpoint B

Viewing Location

Cnr Waring Avenue and Clunies Ross street

Visual Description

Approx. Viewing Distance from Site Boundary
Prominence of the development

80m

This view has been taken from the vacant corner block looking south west.

Far reaching views of higher landscape topography are currently visible but not prominent.

The majority of built residential properties along Clunies Ross st are a mix of single storey and 2 storey project homes. The 2 storey homes if constructed on this lot would potentially experience views of the development in but the sunken topography combined with setback planting of the future development reduces the visual impact.

At year 10 of the development, minimal filtered views of Warehouse 3 and 5 will be possible with the corner of warehouse 1 being visible to the north west. The height of planting in proposed vegetation buffers will screen part (first 90%) of the overall height of the higher Warehouse 1 facility.

Visual Sensitivity

Motorists, cyclists and pedestrians are considered to have **low** sensitivity. As the lots are currently undeveloped, future double story properties that do have windows that may see filtered views of Warehouses 3 and 5 and are judged to be of **low** sensitivity. The impact of Warehouse 1 is considered to have a **medium-high** sensitivity.

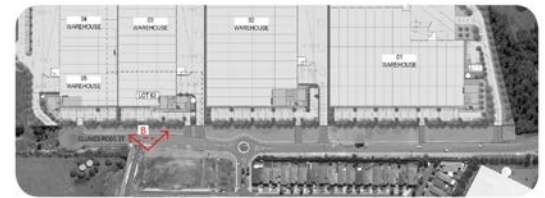
Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **low** magnitude of change. Future double story properties would experience a **high** magnitude of change for Warehouse 1 and Warehouses 3 and 5 would have a **medium** magnitude of change.

Significance of Impact

The significance of the impact for motorists, cyclists and pedestrians would be **minor**. Two storey dwellings on Clunies Ross Street would be **minor**. The few residential properties with second storey windows overlooking the development would experience a **moderate/minor** significance of impact.

Figure 10 – Existing Baseline & Photomontage



KEYPLAN



10 Years



8.3 Viewpoint C

Viewing Location

Photomontage Figure

Clunies Ross Street (Looking west)

Figure 8

Visual Description

Approx. Viewing Distance from Site Boundary

Prominence of the development

80m

This view has been taken from Clunies Ross Street directly in front of the recently constructed 2 storey houses across the road from the development. (eastern side) The photo was taken in line with potential second storey windows.

Visual Sensitivity

Due to the proximity of these lots on Clunies Ross property to the development site and the direct views that it experiences, it would be considered to have **low-medium** sensitivity.

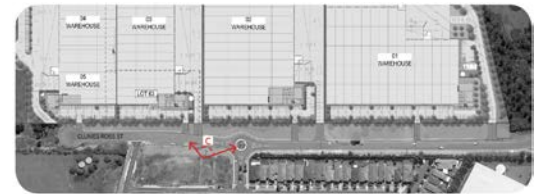
Magnitude of Change

The magnitude of change for this receptor is considered to be **medium-high**. The view of the proposed development will fundamentally change the view both horizontally and vertically, it will create a new focus and have a defining influence on the view. Proposed landscaping and the large street verge shall reduce the impact of new warehouse structures.

Significance of Impact

The significance of the impact to the housing on Clunies Ross street in this location is considered **minor-moderate** due to the large road verge, topography and landscaping in the setback.

Figure 11 – Existing Baseline & Photomontage



KEYPLAN



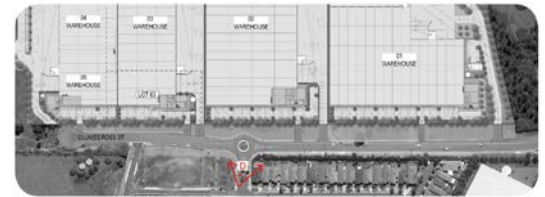
10 Years



8.4 Viewpoint D

Viewing Location	Cnr of Wombat st and Muttong st (no 28 Wombat st)
Photomontage Figure	Figure 9
Visual Description	
Approx. Viewing Distance from Site Boundary	140m
Prominence of the development	This view has been taken from cnr of Wombat Street and Muttong St in front of a 2 storey project home. The dwelling has views up the hill towards the intersection of Wombat st and Muttong street and a far-reaching view towards the development site. Only a small part of the development site shall be in view but building views shall be mitigated by the dense tree planting in the landscape setback. In addition, the higher warehouse 1 facility is shielded by the existing housing that sits on higher levels along Clunies Ross street thus limiting visual impact. Approximate 5m of building will be seen above the existing Clunies Ross st houses from this corner block.
Visual Sensitivity	Due to the distance from this property to the development site it would be considered to have low sensitivity. However, the higher Warehouse 1 facility is mostly covered by built (Clunies Ross st houses) form and has significant landscaped setbacks and car parking areas separating it from the street environment and adjoining properties.
Magnitude of Change	The magnitude of change for this receptor is considered to be medium. The development will form a new recognizable element across the road in the part of the skyline; however, it will be screened partially by existing houses, proposed setback vegetation and the large road verge setback.
Significance of Impact	The significance of the impact 28 Wombat Street is considered minor .
Cumulative Impacts	The corner lot of Wombat and Muttong Street is also surrounded by a relatively new housing estate where housing is still under construction. Although the proposed development will consist of warehouses, the visual impact will be less than the existing site from this location due to the large road verge setback, formalization of landscape setbacks and the buffer planting that reduce any impacts which are considered to be low.

Figure 12 – Existing Baseline & Photomontage



KEYPLAN



10 Years



8.5 Viewpoint E

Viewing Location

Photomontage Figure

Clunies Ross st (looking South West)

Figure 10

Visual Description

Approx. Viewing Distance from Site Boundary
Prominence of the development

80m

This is a view looking towards the south west corner of the site looking over the proposed development. The current RL's for buildings are slightly sunken into the topography that help mitigate the impacts of the warehouse buildings. The large road verge setback combined with densely planted landscape setback shall also reduce the visual prominence of the development (in particular Warehouse 2)

Visual Sensitivity

Motorists, cyclists and pedestrians are considered to have **low sensitivity**. The land use for the site is still industrial and the streetscape is well vegetated through setback planting and future street tree planting. There are 2 storey properties that do have windows but they sit behind the acoustic screen wall so are judged to be of **low sensitivity** as they have no direct views to the development.

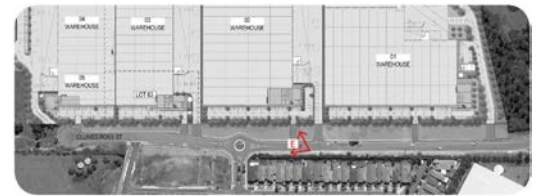
Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **medium-high** magnitude of change. The 2 storey story properties would experience a **low** magnitude of change as they sit behind the existing acoustic screen wall.

Significance of Impact

The significance of the impact for motorists, cyclists and pedestrians would be **minor**. Two storey dwellings on Clunies Ross Street would also be **minor**.

Figure 13 – Existing Baseline & Photomontage



KEYPLAN



10 Years



8.6 Viewpoint F

Viewing Location

Photomontage Figure

Clunies ross street (looking north West)

Figure 12

Visual Description

Approx. Viewing Distance from Site Boundary

80m

Prominence of the development

This is a view to the North West corner of the site looking over Warehouse 1. The topography allows for some of the building to be sunken below street level. Setbacks are densely vegetated and provide screening to the warehouse facility up to 90% of its overall height.

Visual Sensitivity

Motorists, cyclists and pedestrians are considered to have **medium sensitivity**. The land use for the site is still industrial and the streetscape is well vegetated through setback planting, a large road verge and future street tree planting. There are 2 storey properties that do have windows but they sit behind the acoustic screen wall so are judged to be of **low sensitivity** as they have no direct views to the development.

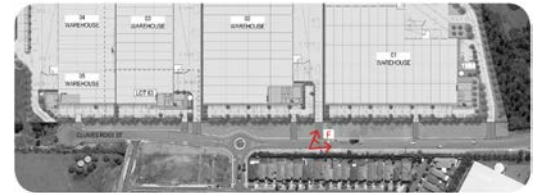
Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **high** magnitude of change. The 2 storey properties would experience a **low** magnitude of change as they sit behind the existing acoustic screen wall.

Significance of Impact

The significance of the impact for motorists, cyclists and pedestrians would be **minor**. The impact on One and Two storey dwellings on Clunies Ross Street would be **minor** as they sit behind an acoustic screen wall.

Figure 14 – Existing Baseline & Photomontage



KEYPLAN



10 Years



8.7 Viewpoint G

Viewing Location

Photomontage Figure

Clunies Ross st North (looking south West)

Figure 13

Visual Description

Approx. Viewing Distance from Site Boundary

80m

Prominence of the development

This view has been taken from Clunies Ross Street north looking south west directly in front of the last house in the housing estate on the eastern side. The acoustic screen wall screens the Warehouse 1 from the one and two storey housing.

Visual Sensitivity

Motorists, cyclists and pedestrians are considered to have **medium** sensitivity. The land use for the site is still industrial and the streetscape is well vegetated through setback planting , a large road verge and future street tree planting. There are 2 storey properties that do have windows but they sit behind the acoustic screen wall so are judged to be of **low** sensitivity as they have no direct views to the development.

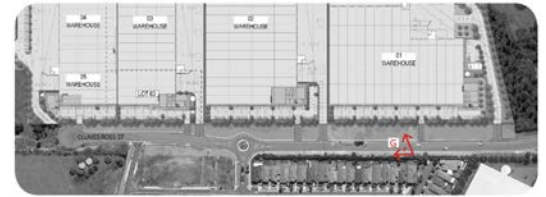
Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **high** magnitude of change. The 2 storey properties would experience a **low** magnitude of change as they sit behind the existing acoustic screen wall.

Significance of Impact

The significance of the impact is considered **minor-moderate**. The significance of the impact for motorists, cyclists and pedestrians would be **minor-moderate**. The impact on One and Two storey dwellings on Clunies Ross Street would be **minor** as they sit behind an acoustic screen wall.

Figure 15 – Existing Baseline & Photomontage



KEYPLAN



10 Years



8.8 Viewpoint H

Viewing Location

Photomontage Figure

Clunies Ross st north (looking west)

Figure 13

Visual Description

Approx. Viewing Distance from Site Boundary

80m

Prominence of the development

This is a view from the North East corner of the site looking over the proposed development. Warehouse dominates this view but its impact reduced due to the lower Floor level and significant landscaping proposed for the setback and the wide road verge. On the Northern side of the site there is the Girraween creek corridor which is heavily vegetated which helps reduce the scale of the warehouse building while providing a vegetated context. The view was taken from the footpath in front of the SWADS warehouse facility.

Visual Sensitivity

Warehouse 1 will dominate the landscape but the dense screen tree planting and levels mitigate the impact of this building on the landscape for those at street level It has been assigned a visual sensitivity of **medium-high**.

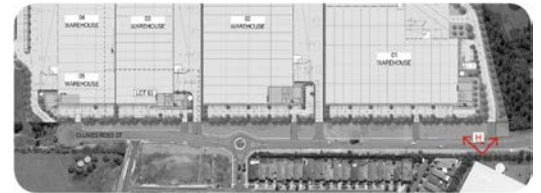
Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **high** magnitude of change. The SWADS property would experience a **low** magnitude of change as it sits well below the footpath level and has no windows in that location, only landscape setback and car parking and heavy vehicular driveways.

Significance of Impact

The significance of the impact is considered **minor**. The view will form a new and recognizable element; however, this is offset by the visual sensitivity at this height and the presence of existing industrial development. It is therefore in keeping with the surrounding character.

Figure 16 – Existing Baseline & Photomontage



KEYPLAN



0 Year



5 Years



10 Years



8.9 Viewpoint I

Viewing Location

Photomontage Figure

Inside Heritage reserve (looking North)

Figure 17

Visual Description

Approx. Viewing Distance from Site Boundary

Prominence of the development

10m inside boundary

This is a view from the South corner of the site looking over the proposed development. Warehouse 1 is far from this view, it's scale blends in with the surrounding proposed buildings its presence together with the new warehouse buildings will fundamentally alter the view from this receptor but shall be mitigated with the proposed landscape. On the Eastern side of the site there is the presence of existing 2-storey properties and the existing SWADS warehouse which helps reduce the scale of the warehouse buildings keeping them in context. The sunken topography helps bring the overall height of the built form well below the green tree covered horizon. Sweeping north views over western Sydney are maintained from this Heritage reserve.

Visual Sensitivity

Warehouse roofing will dominate the view in the first 5 years but the combination of distance from this view and the dense screen tree planting and levels lessen the impact of this building on the landscape for heritage reserve level. It has been assigned a visual sensitivity of **medium**.

Magnitude of Change

The Heritage Reserve property would experience a **medium-high** magnitude of change as it sits higher than property level but will be reduced in 5-10 years due to significant landscaping proposed for the setback and road verge. The view will be altered horizontally and vertically and create a new focus only in the foreground of the view. The distant views and green horizon is maintained. Proposed landscaping and the addition of large street trees along the entrance to warehouse 5 shall reduce the impact of the new warehouse structures from

Significance of Impact

The significance of the impact in this location is considered **moderate-minor**. This is offset by the sunken levels of the development, proposed landscaping and the presence of existing industrial development and 2-storey properties at the Eastern side. It is therefore in keeping with the surrounding the foreground.

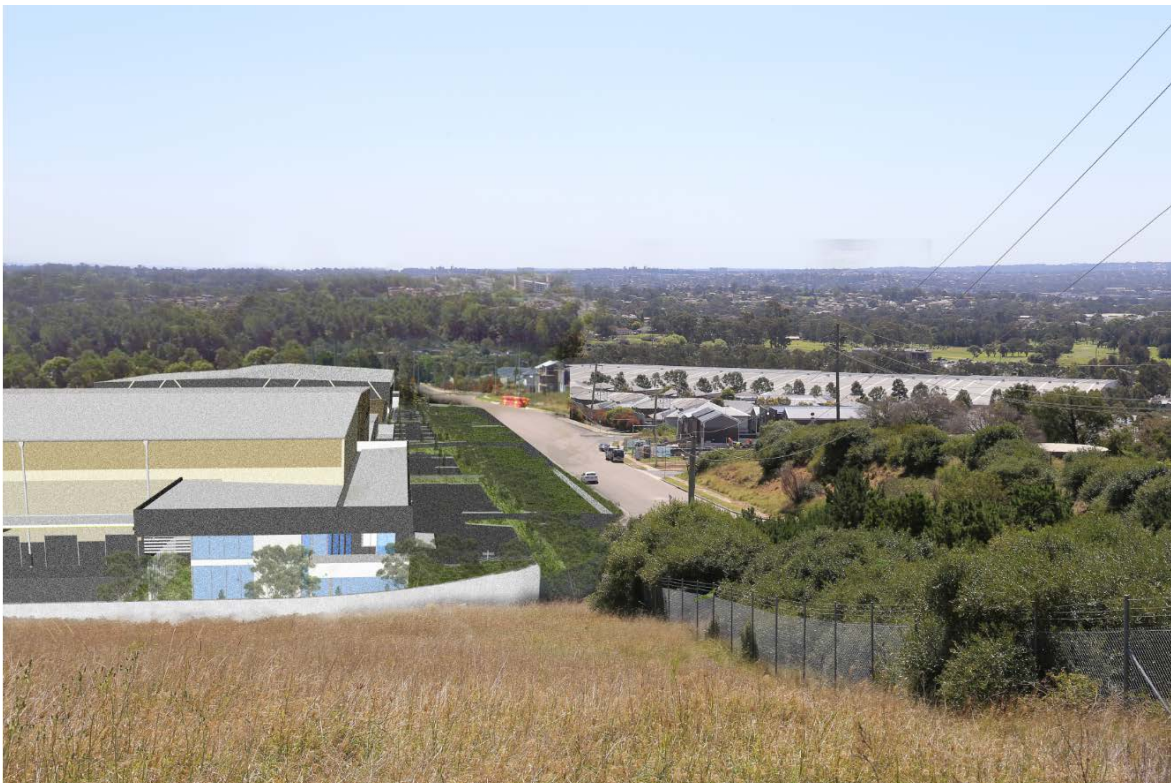
Figure 17 – **Existing Baseline & Photomontage**



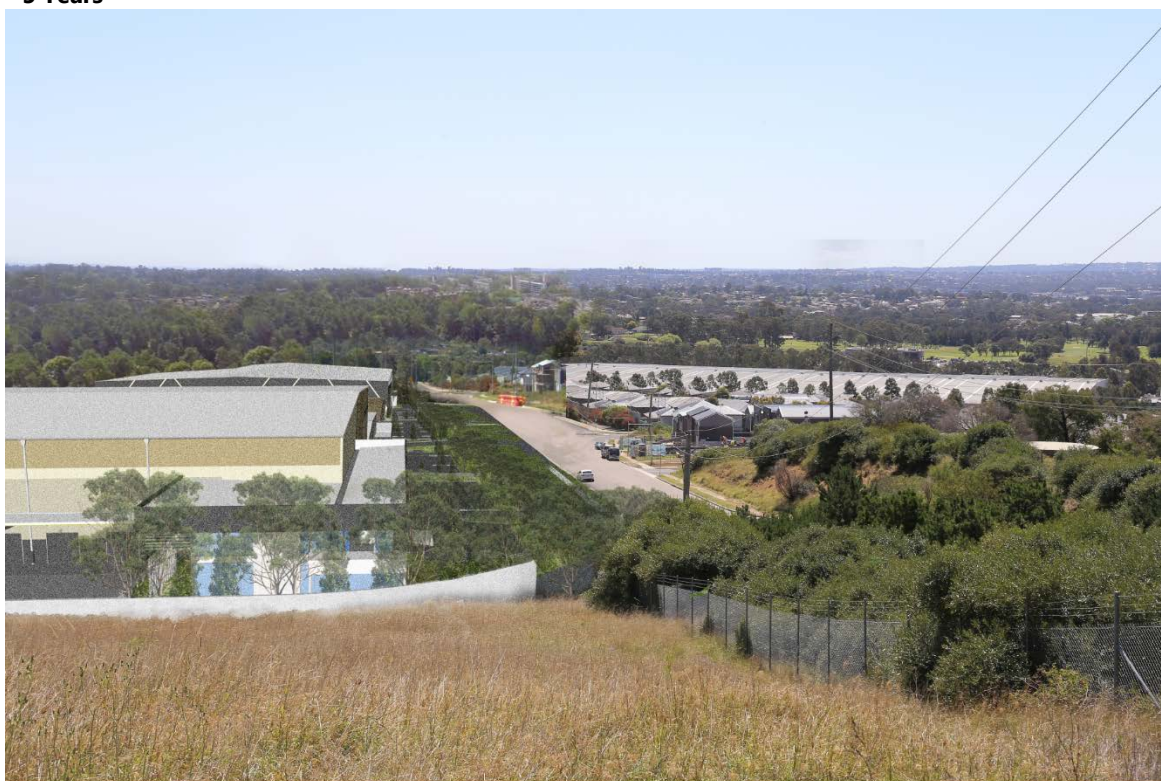
KEYPLAN



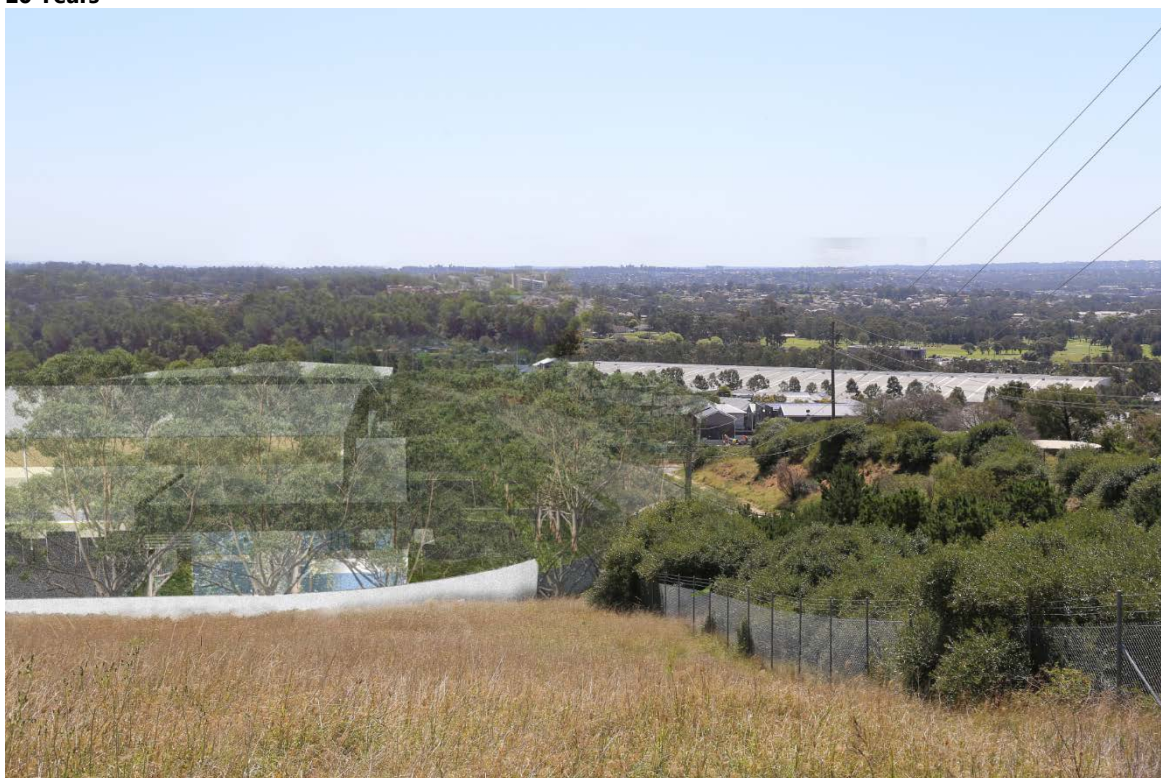
0 Year



5 Years



10 Years



8.10 Viewpoint J**Viewing Location**

Photomontage Figure

Vacant lot (public recreation) RE1 south of Warin Ave (looking North)

Figure 18

Visual Description

Approx. Viewing Distance from Site Boundary

65m

Prominence of the development

This is a view from the South West corner of the site looking over the proposed development. Warehouse 1 and the new warehouse buildings are noticeable from this view. On the Northern side of the site there is the Girraween creek corridor which is heavily vegetated which helps reduce the scale of the warehouse building while providing a vegetated context. The site levels and scale of the development allows the green horizon to be maintained with no impact on district views. This view was taken from a public recreation (RE1) lot south of Warin Ave.

Visual Sensitivity

Due to the distance from this property to the development site, it would be considered to have **low** sensitivity. Warehouse 1 will slightly extend past the other warehouses but levels of the warehouses, the distance from this view and the dense screen tree planting and levels ease the impact of this building on the landscape. The green horizon and district views are not affected. It has been assigned a visual sensitivity of **low-medium**.

Magnitude of Change

The RE1 Public recreation lot would experience a **low-medium** magnitude of change as it sits higher than the development level. The development, viewed from this receptor, will form a new and recognizable element but will be reduced in 5-10 years due to significant landscaping proposed for the setback and road verge. Considering the existing site use, SWADS warehouse and housing, the change is minimal as the proposed development looks like a continuation of this built form precinct.

Significance of Impact

The significance of the impact is considered **minor**. The view will be altered with the development but the impact will be mitigated by the presence of large road verge, topography and the proposed large street trees, the preservation of the green horizon, views and surrounding built form.

Figure 18 – **Existing Baseline & Photomontage**



KEYPLAN



0 Year



5 Years



10 Years



8.11 Viewpoint K**Viewing Location**

Photomontage Figure

Burruga Way (looking North West)

Figure 19

Visual Description

Approx. Viewing Distance from Site Boundary

130m

Prominence of the development

This is a view from the East side of the site looking towards the proposed development. Warehouse 1 dominates this view but its impact reduced due to the lower Floor level and significant landscaping especially the proposed large street trees specified for the setback and the wide road verge. The view was taken from the foot path along Burruga Way.

Visual Sensitivity

Warehouse 1 will dominate the landscape but the dense screen tree planting and levels mitigate the impact of this building on the landscape for those at street level. As this view sits higher in level, the view of the development is almost within the line of sight of the 2-storey properties. It has been assigned a visual sensitivity of **medium**.

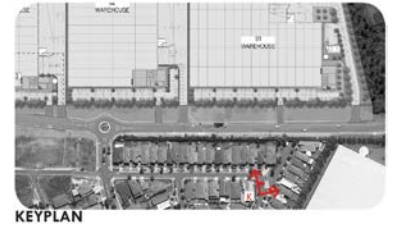
Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **high** magnitude of change. The property along Burruga Way would experience a **high** magnitude of change due to the height of Warehouse 1 but will be reduced in 5-10 years due to significant landscaping proposed for the setback and road verge and the distance from the residential properties.

Significance of Impact

The significance of the impact is considered **moderate**. Warehouse 1 forms a visible vertical element, but this is mitigated partly with side fences and existing landscape as well as proposed landscape which will block a majority of the building façade.

Figure 19 – **Existing Baseline & Photomontage**



0 Year



5 Years



10 Years



8.12 Viewpoint L

Viewing Location

Photomontage Figure

Prospect Hill (looking West)

Figure 20

Visual Description

Approx. Viewing Distance from Site Boundary

250m

Prominence of the development

This is a view from the top of Prospect Hill looking north west towards the proposed development. Warehouses 4, 5 and 6 dominate the foreground of this view but its impact reduced due to the lower Floor levels and surrounding topography while significant existing and proposed landscaping especially the proposed setback trees specified.

Visual Sensitivity

Warehouses dominate the foreground landscape but the dense screen tree planting and the lower levels mitigate the impact of these buildings with no impact on the view to the mountains and horizon. As this view sits higher in level, the view of the development is almost within the line of sight of the existing property. It has been assigned a visual sensitivity of **low**.

Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **low** magnitude of change. The proposed development replaces existing development and sits low in the topography so the change in regional and localized site views is minimal.

Significance of Impact

The significance of the impact is considered **low**. The warehouses form a visible element in the foreground but this is mitigated partly with existing landscape as well as proposed landscape which will block a majority of the building façades and roof surface. All regional horizon views are maintained.

Figure 20 – Existing Baseline & Photomontage



KEYPLAN

Existing Baseline with Building Outline



0 Year



10 Years



8.13 Viewpoint M

Viewing Location

Photomontage Figure

Clunies Ross street bridge (looking South)

Figure 21

Visual Description

Approx. Viewing Distance from Site Boundary

150m

Prominence of the development

This is a view from bridge at Clunies Ross st looking south towards the proposed development. No warehouses are visible due to the creek vegetation and topography which blocks any views towards the warehouse structures.

Visual Sensitivity

Warehouse 1 might be seen through the tops of foliage but the likelihood is very minimal. The creek corridor has dense endemic canopy screen tree planting and levels mitigate the impact of this building on the landscape for those travelling south. at street level. It has been assigned a visual sensitivity of **negligible/low**.

Magnitude of Change

It is believed that motorists, cyclists and pedestrians would experience a **negligible/low** magnitude of change. The proposed development sits behind existing creek corridor vegetation.

Significance of Impact

The significance of the impact is considered **negligible**. Warehouses sit lower in the landscape and are buffered by existing dense and tall creek corridor tree planting.

Figure 21 – Existing Baseline & Photomontage



KEYPLAN

Existing Baseline with Building Outline



Figure 22 – Site Section (East-West.)



PROJECT GREYSTANES ESTATE LOTS 107, 63 & 10 CLUNIES ROSS STREET, GREYSTANES	DRAWING TITLE EXISTING GROUNDLINE	PROJECT NO. HB-2009	PURPOSE CLIENT SUBMISSION	SCALE 1:2000 @ A3	REVISION E	DATE 10.11.2020	DRAWN KM / DG	CHECKED DV	PAGE 1.23	CLIENT 	 SCALE 1:2000 @ A3	 Jared St and The Place Bathurst, NSW 2780 www.habit8.com.au © 2018 Habitat 8 Pty Ltd
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9.0 Conclusions and Non-Technical Summary

The main purpose of this Landscape and Visual Impact Assessment is to address any visual impacts the proposed development may have on surrounding properties.

This Landscape and Visual Impact Assessment is a new report undertaken for the entire industrial subdivision with a focus on the residential properties and lots to the east side of Clunies Ross street.

Although not the main focus of this report, the value of the site itself has been assessed based on the character and context in which it is located. It has been concluded that the significance of the impact upon the landscape at this project development to be **minor**. This is in part due to the surrounding character of the development already being heavily influenced by industrial development and in part due to the industrial zoning designation in the WSEA SEPP.

Through this report it is concluded that the proposed development will cause a change in the view for a very small minority of houses at the southern end of Clunies Ross st due to the termination of an acoustic screen wall. In particular the higher Warehouse One view impacts have been determined through visual analysis. Residential dwellings, road users' pedestrians, and cyclists have been identified as being impacted at a medium level.

Within the Estate, one corner property (cnr Wombat and Muttong street) will have filtered views towards the proposed development site where only part of Warehouse 1 will be visible. This is due to the topography as the house much lower in level than Clunies Ross street and has other houses obstructing the view to the development site.

Views from single houses (without the acoustic screen wall) located across the road from the development (on Clunies Ross street) will be mitigated with a large turf verge creating distance from the development and landscape setback in which tall native canopy trees, screening shrubs and groundcovers are planted. Following maturity, these planted buffers will provide a dense screen to help to soften and screen the development.

The development proposes substantial landscape planting to offset the visual impact in the form of setbacks with dense tree and shrub planting. This will be most effective after 10 years for those receptors who experience direct views.

Passing motorists, cyclists and pedestrians will also experience a change in view. However, Clunies Ross street and Foundation Place are not on the major cycleway route and are not streets where walking is encouraged due to industrial truck movements and the lack of close by services and facilities.

As previously discussed within sections of this report, the development will be heavily landscaped in setbacks surrounding the site helping to soften and screen views for these users. It should also be noted that these users living along and/or traveling in a north -south along Clunies Ross street or are using Foundation Place currently experience views which include the current Austral manufacturing facility.

Wider reaching views to the site from residential areas located in the greater landscape have also been considered, however the site is buffered heavily from the north through a vacant vegetation corridor, topography and the M4 Motorway that makes viewing the site from areas like Prospect Hotel negligible. The topography rises steeply to the south. The Boral site is included in the subject site and the office building will be demolished.

The distant district views shall be maintained from the heritage reserve and Prospect Hill and higher topography to the south and the "green" horizon and Blue Mountains views to the west will not be impacted from this proposed development.

10.0 Glossary of Terms

Term	Definition
SEARs	Secretary's Environmental Assessment Requirements
GVLIA	Guidelines for Landscape and Visual Impact Assessment (UK Landscape Institute)
LVIA	Landscape and Visual Impact Assessment
DPE	Department of Planning and Environment
LEP	Local Environmental Plan
DCP	Development Control Plan
Baseline	The existing condition / character of the landscape or view as its current condition.
Landscape Receptor	The landscape of the development site
Landscape Sensitivity	How sensitive a particular landscape is to change and to ability accept the development proposals.
Visual Receptor	A group or user experiencing views of the development from a particular location.
Visual Sensitivity	The degree to which a particular view can accommodate change arising from a particular development, without detrimental effects.
Magnitude of Change	The magnitude of the change to a landscape receptor or visual receptor.
Significance of Impact	How significant an impact is for a landscape or visual Receptor.
Cumulative Effects	Cumulative landscape or visual effects are the combined effects that arise through the interaction of two or more developments, whether of the same type or not.