CLOUSTON associates

a division of BW Beveridge Williams

MIRVAC
ELIZABETH ENTERPRISE

LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

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Looking West Along Elizabeth Drive

ELIZABETH ENTERPRISE LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

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Note: This document is Preliminary unless Validated.

Elizabeth Drive Looking North Over the Site

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Surrounding Rural Land

EXECUTIVE SUMMARY

CLOUSTON Associates has been engaged to prepare an Landscape Character and Visual Impact Assessment (LCVIA) report for the proposed Elizabeth Enterprise Stage 1 Masterplan.

The proposed development is located at 1669-1723 Elizabeth Drive, Badgerys Creek (Lot 100 DP1283398 and part Lot 741 DP81011) in the local government area of Penrith. The site area is 566,828m^2 and is approximately 41km west of the Sydney CBD, and 21km south-east of Penrith.

The Concept Plan proposes and outlines the framework for the staged development of EEP Stage 1 for an industrial estate, comprising seven (7) industrial buildings (warehouse and distribution centres or general industrial use) including ancillary offices, dock offices, café and associated infrastructure including roads, stormwater and utilities, with landscaping. The Concept Plan applies across Lot 100 DP1283398 and part Lot 741 DP81011.

The LCVIA addresses the possible effects of change in the landscape in relation to views and visual amenity through examining the principal legislative and planning context and applying the relevant methodologies to assessment.

The area immediately surrounding the site can typically be defined as a highly modified landscape as a result of cleared pasture land, with land that has been used for industrial purposes directly to the west and land that has been used for primary production to the south. As a result of this, much of the vegetation on and surrounding the site has been cleared, however patches of remnant vegetation still remain in the wider surrounds and bordering Wianamatta-South Creek to the east of the site. This creates a general landscape character that is rural and open in nature. It is further noted that the site sits within the 'Enterprise' Zone' of the Western Sydney Aerotropolis Plan, which would see a rezoning to ensure land where enterprise uses are supported while mitigating impacts of airport operations and residential development and other noise sensitive uses are not permitted.

After undertaking a visual catchment assessment of the wider context of the site a number of suitable viewpoints were selected to analyse for visual impact. A range of viewpoints were selected at varying distances.

Of the 12 viewpoints selected and analysed the findings are as follows:

- One viewpoint received a Negligible impact rating;
- Two viewpoint received a Low impact rating;
- Eight viewpoints received a Moderate impact rating;
- One viewpoints received a High/Moderate impact rating.

This LCVIA employs a rigorous, best practice methodology to identify levels of visual impacts and potential mitigation measures, based on a professional evaluation.

A range of potential mitigation measures have been considered in order to reduce any visual impacts. After an analysis of the visual impacts the most appropriate form of mitigation would be alleviation, based around new planting, particularly to the boundaries. Appropriate use of building materials to be determined during the detailed design phase would also be appropriate to help minimise any visual impacts.

On balance it is the professional opinion of the authors of this assessment that the visual impacts combined with the overall visual catchment of the Proposal as well as its location within the Western Sydney Priority Growth Area are such that they would not constitute reasons to hinder approval on visual impact grounds.

1.0 Introduction

Looking North Towards the Site from Residential Access Road

1.0 INTRODUCTION

1.1 PROPOSAL INTRODUCTION

The proposed development is located on 1669-1723 Elizabeth Drive, Badgerys Creek (Lot 100 DP1283398 and part Lot 741 DP81011) in the local government area of Penrith. The site area is 566,828m^2 and is approximately 41km west of the Sydney CBD, and 21km south-east of Penrith.

EEP Stage 1 Concept Plan

The Concept Plan proposes and outlines the framework for the staged development of EEP Stage 1 for an industrial estate, comprising seven (7) industrial buildings (warehouse and distribution centres or general industrial use) including ancillary offices, dock offices, café and associated infrastructure including roads, stormwater and utilities, with landscaping. The Concept Plan applies across Lot 100 DP1283398 and part Lot 741 DP81011.

Stage 1A Development Works

The Stage 1A Development, the first development works of the EEP Stage 1 Concept Plan, comprises:

- Site preparation works;
- Site servicing and infrastructure works including stormwater infrastructure and road works;
- Subdivision of Lot 100 DP1283398 and Lot 741 DP81011;
- Construction of warehouse 2 and warehouse 6 for the purpose of warehouse and distribution centres or general industrial use;
- Construction of hardstand areas for loading/unloading and vehicle manoeuvring;
- Construction of on-site car parking;
- Landscaping, including on-lot landscaping and street reserve landscaping;
- Estate signage comprising a main estate entry signage and signage zones; and
- Operation hours of 24 hours, 7 days a week.

1.2 PURPOSE OF THIS REPORT

CLOUSTON Associates has been commissioned by Mirvac to prepare this Landscape Character and Visual Impact Assessment (LCVIA) for the Proposal.

1.3 VISUAL ASSESSMENT RATIONALE

An LCVIA takes into account all effects of change and development in a visual scene that may impact visual amenity. It is concerned with how the surroundings of individuals or groups of people may be specifically affected by change in the visual scene, both quantitatively and qualitatively.

Judgement as to the significance of the effects is arrived at by a process of reasoning, based upon analysis of the baseline conditions, identification of visual receptors (viewers of the scene) and assessment of their sensitivity, as well as the magnitude and nature of the changes that may result from any development.

This assessment is an independent report and is based on a professional analysis of the visual environment and the Proposal at the time of writing. The current and potential future viewers (visual receptors) have not been consulted about their perceptions. The analysis and conclusions are therefore based solely on a professional assessment of the anticipated impacts, based on a best practice methodology.

2.0 Methodology

Elizabeth Drive Looking North Over the Site

2.0 METHODOLOGY

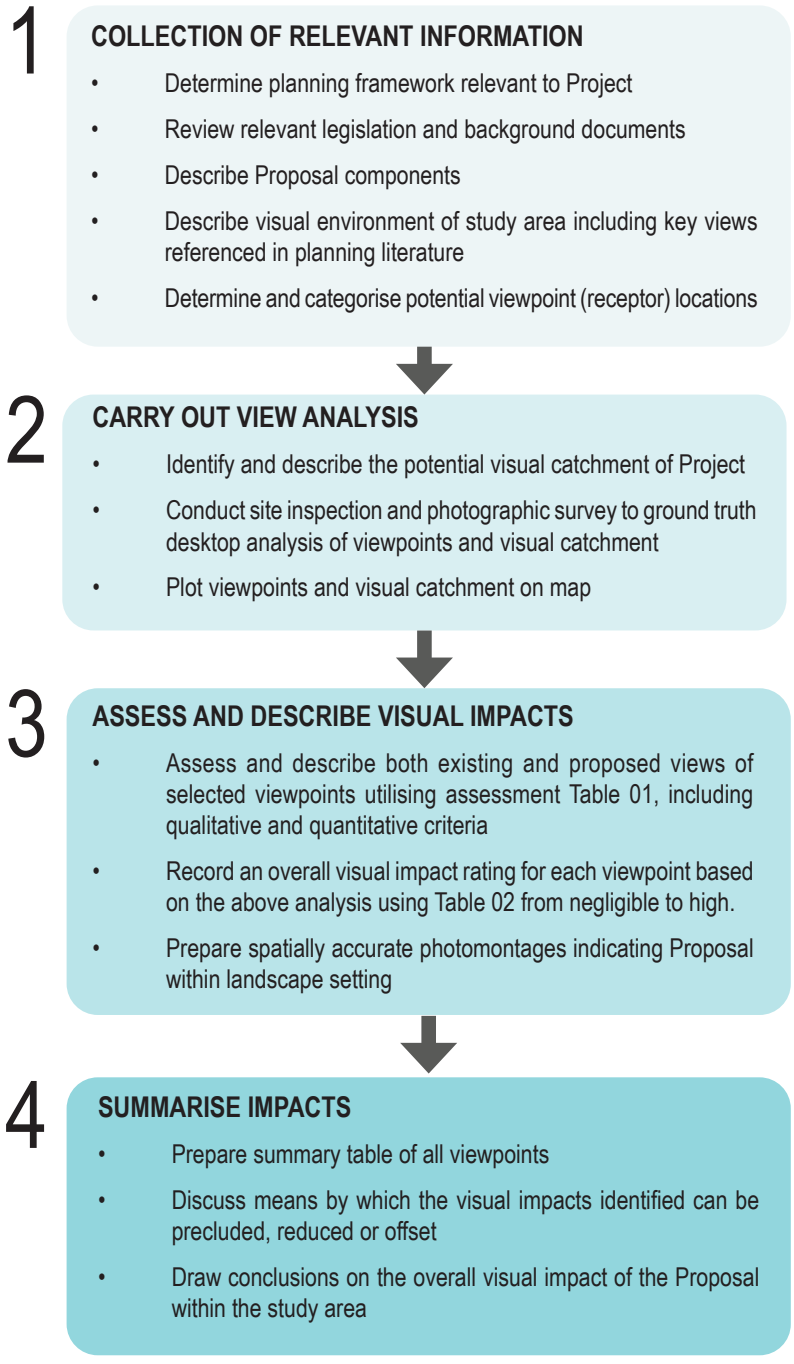

Figure 2.0 - Summary of CLOUSTON methodology

2.0 METHODOLOGY

2.1 METHODOLOGY

Landscape Character and Visual Impact Assessment (LCVIA) aims to ensure that all possible effects of change and development in the landscape, views and visual amenity are taken into account. It is concerned with how the surroundings of individuals or groups of people may be specifically affected by change in the landscape, both quantitatively and qualitatively.

The Commission of the NSW Land and Environment Court has developed Planning Principles that relate to visual impact assessment and has developed assessment steps to be followed:

Step 1: Identify the nature and scope of the existing views from the public domain. This identification should encompass (but is not limited to):

- the nature and extent of any existing obstruction of the view
- relevant compositional elements of the view (such as is it static or dynamic and, if dynamic, the nature and frequency of changes to the view)
- what might not be in the view – such as the absence of human structures in the outlook across a natural area
- is the change permanent or temporary
- what might be the curtilages of important elements within the view

Step 2: Identify the locations in the public domain from which the potentially interrupted view is enjoyed. (Note that the Planning Principles give primacy of views from the public domain over views from private land).

Step 3: Identify the extent of the obstruction at each relevant location.

Step 4: Identify the intensity of public use of those locations where that enjoyment will be obscured, in whole or in part, by the proposed development.

Step 5: Identify whether or not there is any document that identifies the importance of the view to be assessed. The absence of such provisions does not exclude a broad public interest consideration of impacts on public domain views. Heritage items (such as Aboriginal and environmental) should also be considered, as should direct impacts on the local community.

2.2 QUANTITATIVE AND QUALITATIVE VALUES

The visual experience of the area and its landscape setting varies depending on the viewer's standpoint within and outside the site and indeed from the viewer's personal perceptions of what they may appreciate in any given setting.

This requires an assessment to address both the quantitative characteristics of the landscape views (what elements form the scene? What features dominate? What breadth of view is offered – narrow vista or wide panorama?) and the qualitative assessment of the values ascribed to those scenes.

2.0 METHODOLOGY

The quantitative-based strategies are less debatable (can that view still be seen when the new built form is introduced? How much of that view will we lose?) than is establishing the qualitative strategies (which view is more important to retain?); the latter could be perceived differently by every viewer that sees that scene. Such variation of perception is particularly acute around the built form.

2.3 FIELD OF VIEW

The choice of lens, camera format and final presentation has a significant bearing on the understanding of site photos. There is a balance to be struck in matching the human experience of the view with its wider context, so that a project's appearance and its place within its environment can be recognised and understood.

In recognising that no photographic image can exactly replicate the view of the human eye, extensive literature has been published on the nearest equivalent combination of focal length and field of view of a camera that best emulates human vision.

It is important to note that the process of assigning visual impact ratings to viewpoints is undertaken during a site visit and is calculated from a human vision perspective on site. Photographic images should be considered to be representative only.

Viewpoint photos will be taken with a Sony Alpha ILCE-A7 II with the following specification:

- Body type: Compact
- Sensor size: 855.62mm2 (35.80mm x 23.90mm)
- Sensor type: CMOS Full Frame
- ISO: Auto
- Focal length: 50mm

While some of this literature is contradictory (with a further complication to this process being the differing sensor formats of digital cameras which affect the apparent focal length and field of view) the use of a 50mm focal length and a full frame sensor is generally considered the closest achievable replication of the human eye view and is in line with the current guidelines of the Landscape Institute (UK).

2.4 ASSESSMENT METHODOLOGY

CLOUSTON Associates has developed a best practice methodology based on internationally accredited approaches and 20 years of experience in the field of visual assessment. There are several critical dimensions demonstrated through this assessment and evaluation:

- Ensuring all receptors (viewers) have been adequately identified, even at distance, with emphasis on public domain views
- Comprehensive evaluation of context to determine visual catchment of the site from these areas
- Being clear on and separately defining quantitative impacts (distance, magnitude, duration etc) as against qualitative impacts (viewer type and context of view)

2.0 METHODOLOGY

- Providing a clear rationale for how impacts are compared and contrasted
- Ensuring photomontages include views from the highest potential impact locations, identified from analysis above
- Being clear on the differing forms of mitigation options, namely avoidance, amelioration (eg design), mitigation (eg screening) and compensation (on or offsite)

2.5 ASSESSMENT PROCESS

This LCVIA adopts an assessment process as follows:

- The initial step involves the collection of relevant information regarding the Proposal Site, the Proposal and its compatibility with the surrounding landscape. Desktop analysis in undertaken to determine the visual catchment of the Proposal and potential visual receivers through the use of mapping and topography analysis. Site visits are then undertaken to confirm the visual catchment and visual receivers.

- The next step is to carry out a view analysis that identifies the potential visual catchment and areas from which the Proposal Site may be viewed. Viewpoints are analysed and defined into different categories and sensitivities in terms of their land use context and spatial relationship to the Proposal Site and the landscape in which they are located. A photographic inventory from identified key viewpoints is suggested, plotting the viewpoints on a map.

- An evaluation matrix is then completed that summarises the full range of viewer situations identified, assessing the indicative contribution to potential visual impact of key factors for each selected viewpoint. The scores for these key factors are then averaged to determine a High, Moderate or Low impact rating.

2.6 VIEW SELECTION CRITERIA

The selection of views for detailed evaluation for the Proposal is based on the following sources:

- visual assessment policy guidance in particular the NSW Land and Environment Court Planning Principles;
- desktop mapping;
- in-field evaluation;
- SEARS requirements.

Informed by the above considerations, the selection criteria for views to be assessed in detail includes potentially impacted views from:

- the public domain (principally streets, parks and waterways)
- pedestrians and cyclists
- views and vistas identified within local planning documents
- close and direct views
- transport (private and public)
- distant and filtered views
- any impacted heritage areas or items.

2.0 METHODOLOGY

2.7 CHRONOLOGY OF ASSESSMENT

For this LCVIA the sequential assessment steps employed in determining the potential visual impact of the Proposal Site are as follows:

Stage 1:

Establishing the baseline – drawing on background documents and site investigation to document the existing landscape character and visual environment of the study area and its visual catchment. This leads to establishing the most significant views and vistas within and surrounding the Proposal Site.

Stage 2:

Visual Impact Assessment - assessment of the visual impacts of the Proposal Site for the construction and operation stages, set against the planning and design principles. This leads to determining any mitigation measures that may be required to reduce visual impacts from the preferred development option.

2.8 RATING SYSTEM

The overall visual impact rating of a Proposal on any given viewpoint/visual receptor is based on themes of magnitude and sensitivity, recorded using a four band scoring system from negligible to high.

- ***Sensitivity:*** each visual receptor type has an inherent and varied sensitivity to change in the visual scene based on the personal context in which their view is being experienced (ie. At home, on the street, in a park etc). This sensitivity has a direct bearing on the perception of visual impact experienced by the receptor and qualifies the quantitative impacts
- ***Magnitude:*** a measure of the magnitude of the visual effects of the development within the landscape. A series of quantitative assessments are studied, including distance from development, quantum of view, period of view and scale of change
- ***Overall Impact Rating:*** The severity of these impacts is calculated using matrix Table 1 – based on a combination of magnitude and sensitivity.

	HIGH MAGNITUDE	MODERATE MAGNITUDE	LOW MAGNITUDE	NEGLIGIBLE MAGNITUDE
HIGH SENSITIVITY	HIGH	HIGH-MODERATE	MODERATE	NEGLIGIBLE
MODERATE SENSITIVITY	HIGH-MODERATE	MODERATE	MODERATE/LOW	NEGLIGIBLE
LOW SENSITIVITY	MODERATE	MODERATE/LOW	LOW	NEGLIGIBLE
NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

Table 1: Visual Impact Rating as a combination of Sensitivity and Magnitude. Source: Environmental Impact Assessment Practice Note: Guideline for Landscape Character and Visual Impact Assessment (EIA-N04). Roads and Maritime Services.

2.0 METHODOLOGY

	FACTOR		NEGLIGIBLE	LOW IMPACT	MODERATE IMPACT	HIGH IMPACT
QUALITATIVE	**Viewer Sensitivity**	Each visual receptor type has an inherent and varied sensitivity to change in the visual scene based on the personal context in which their view is being experienced. This sensitivity has a direct bearing on the perception of visual impact experienced by the receptor and qualifies the quantitative impacts. Number of viewers also has a bearing on sensitivity. Viewpoints have a varied number of potential receivers depending on whether the viewpoint is public or private, the popularity of the viewing location and its ease of accessibility. Views from public reserves and open space are often given the highest weighting due to the increased number of viewers affected.	Vacant lot, uninhabited building, car park.	Minor roads, service providers.	Residential properties with limited views, commercial properties, scenic public roads (eg official tourist routes).	Public open space, public reserves, living areas or gardens/balconies of residential properties with direct views of Project.
QUANTITATIVE	**Quantum of View**	The quantum of view relates to the openness of the view and the receptor's angle of view to the scene. A development located in the direct line of sight has a higher impact than if it were located obliquely at the edge of the view. Whether the view of the Proposal is filtered by vegetation or built form also affects the impact, as does the nature of the view (panoramic, restricted etc.). A small element within a panoramic view has less impact than the same element within a restricted or narrow view.	Only an insignificant part of the Proposal is discernible.	An oblique, highly filtered or largely obscured view of the Proposal or a view where the Proposal occupies a very small section of the view frame.	A direct view of the Proposal or its presence in a broader view where the Proposal occupies a moderate proportion of the view frame.	A direct view of the Proposal or its presence (sometimes in a very narrow or highly framed view), where the Proposal occupies the greater proportion of the view frame.
	Distance of View	The effect the Proposal has on the view relating to the distance between the Proposal and the visual receptor. The distances are from the approximate boundary of the Proposal Site.	Over 3000m	Viewing distance of between 1000-3000m.	Viewing distance between 100m and 1000m.	Viewing distance between 0 and 100m.
	Period of View	The length of time the visual receptor is exposed to the view. The duration of view affects the impact of the Proposal on the viewer - the longer the exposure the more detailed the impression of the proposed change in terms of visual impact.	Less than 1 second	1 to 10 seconds: often from a road or walking past.	1 to 5 minutes: usually from a road/driveway entrance, walking past.	Significant part of the day: usually residential property.
	Scale of Change	Scale of change is a quantitative assessment of the change in compositional elements of the view. If the proposed development is largely similar in nature and scale to that of existing elements in the vicinity, the scale of change is low. If the development radically changes the nature or composition of the elements in the view, the scale of change is high. Distance from the development would accentuate or moderate the scale and variety of visible elements in the overall view and hence influence this rating.	Proposal barely discernible	Elements and composition of the view would remain largely unaltered.	Elements within the view would be at odds with existing features in the landscape	Elements within the view would greatly dominate existing features in the landscape

Table 2: Sensitivity and Magnitude Rating Criteria.

2.0 METHODOLOGY

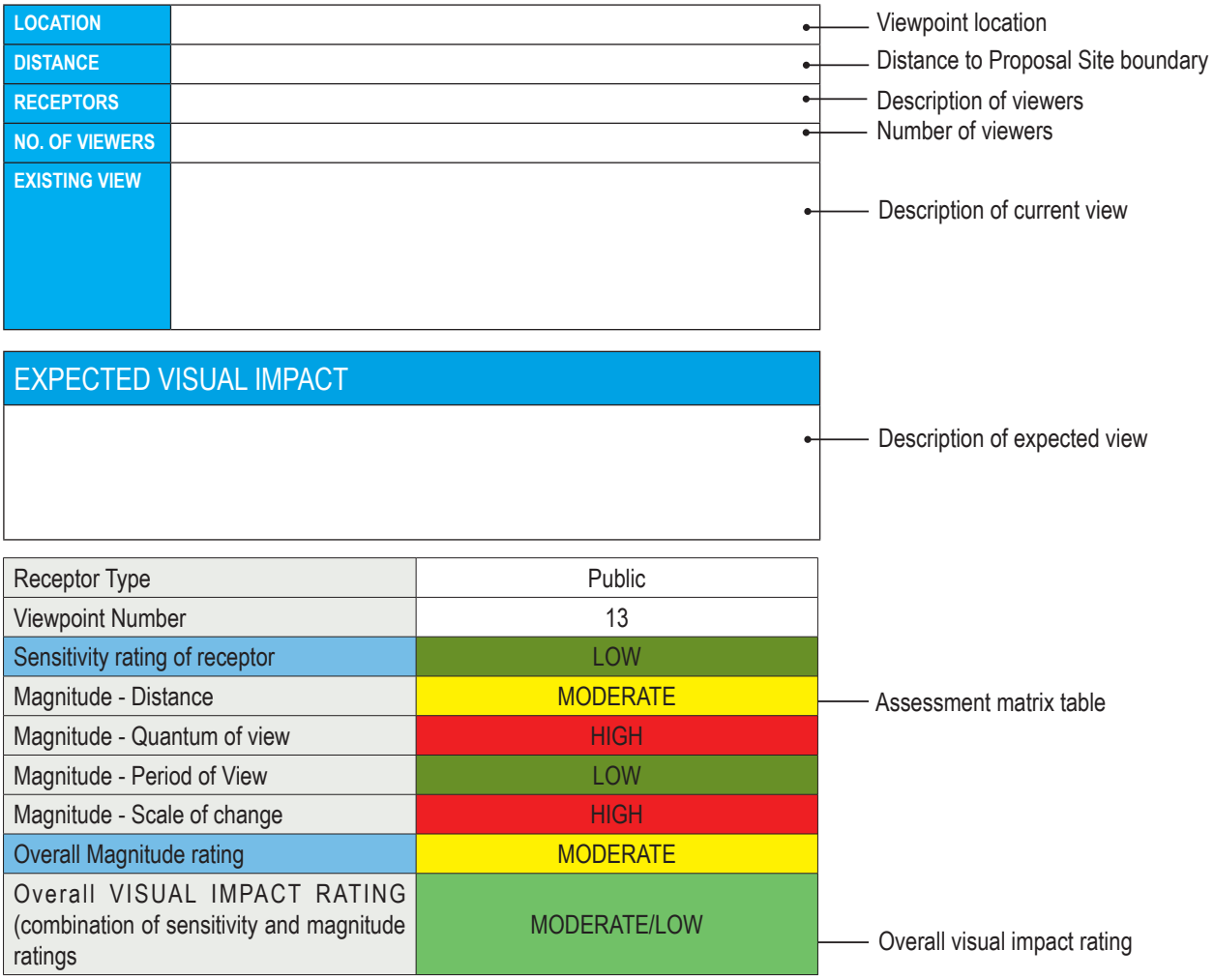

Table 3: Example of Assessment Format Before Mitigation Measures.

2.9 PHOTOMONTAGE PRODUCTION

Virtual Ideas have produced photomontages for this report for Viewpoints 1, 2, 3, 5, 9, 10 & 11 in order to give a representative view of how the Project upon completion will appear in terms of bulk and scale and its relationship to its surroundings when viewed from these viewpoints. Photomontages have not been produced for every viewpoint as they are in relative proximity to ones that are being produced.

A production methodology of the photomontages can be found in Section 11.0 Appendix.

*As a result of the Sydney construction shutdown due to COVID-19, exact survey points for the photograph locations was not possible due to restrictions on surveyors attending site, however the locations have been accurately plotted as best as possible using aerial photography to identify the locations.

3.0 Planning Context

Looking East Towards the Site from Unnamed Access Road.

3.0 PLANNING CONTEXT

3.1 LEGISLATIVE POLICY AND CONTEXT

The key legislative and planning instruments that have a bearing on the visual and amenity assessment and implications for the proposed development include;

i. Environmental Planning and Assessment Act, 1979 (NSW)

ii. The Land and Environment Court's Planning Principles (for assessing views)

iii. Western Sydney Airport Environment Impact Statement, 2016

iv. State Environmental Planning Policy (Precincts—Western Parkland City) 2021

3.2 Environmental Planning and Assessment Act, 1979 (NSW)

The EP&A Act provides the statutory basis for planning and environmental assessment in NSW. Assessment and approvals may be carried out under various parts of the Act, depending on the requirements of environmental planning instruments, and the scale and nature of impacts of the upgrade work.

3.3 The Land and Environment Court Planning Principles

The Land and Environment Court of New South Wales was established in 1980 by the Land and Environment Court Act 1979. Relevant principles have been developed in visual assessment case judgments to guide future decision-making in development appeals. These include separate but related principles for private and public domain views.

The principles set out a process for assessing the acceptability of impact. The two relevant cases are:

- Private views - Tenacity Consulting v Warringah Council (2004)
- Public domain views - Rose Bay Marina Pty Limited v Woollahra Municipal Council (2013)

Planning Principle for Private Views - Tenacity Consulting v Warringah Council (2004)

The key points from this principle include:

Assessment of views to be affected

- Water views are valued more highly than land views.
- Iconic views (eg of the Opera House, the Harbour Bridge or North Head) are valued more highly than views without icons.
- Whole views are valued more highly than partial views, e.g. a water view in which the interface between land and water is visible is more valuable than one in which it is obscured.

What part of the property the views are obtained

- The protection of views across side boundaries is more difficult than the protection of views from front and rear boundaries.
- Sitting views are more difficult to protect than standing views.

3.0 PLANNING CONTEXT

Extent of the impact

- The impact on views from living areas is more significant than from bedrooms or service areas.
- It is usually more useful to assess the view loss qualitatively as negligible, minor, moderate, severe or devastating.

Reasonableness of the proposal

- With a complying proposal, the question should be asked whether a more skilful design could provide the applicant with the same development potential and amenity and reduce the impact on the views of neighbours. If the answer to that question is no, then the view impact of a complying development would probably be considered acceptable and the view sharing reasonable.

Planning Principle for Public Domain Views - Rose Bay Marina Pty Limited v Woollahra Municipal Council (2013)

The assessment process from this principle includes:

Identification Stage

Identify the nature and scope of the existing views from the public domain:

- the nature and extent of any existing obstruction of the view
- relevant compositional elements of the view
- what might not be in the view - such as the absence of human structures in the outlook across a natural area
- is the change permanent or temporary.

This is followed by identifying the locations in the public domain from which the potentially interrupted view is enjoyed and the extent of obstruction at each relevant location. The intensity of use of this locations is also to be recorded. Finally, the existence of any documents that identifies the importance of the view - ie. international, national, state or local heritage recognition is ascertained.

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Analysis of impacts

- The analysis required of a particular development proposal's public domain view impact is both quantitative as well as qualitative.
- A quantitative evaluation of a view requires an assessment of the extent of the present view, the compositional elements within it and the extent to which the view will be obstructed by or have new elements inserted into it by the proposed development.
- In the absence of any planning document objective/aim, the fundamental quantitative question is whether the view that will remain after the development (if permitted) is still sufficient to understand and appreciate the nature of and attractive or significant elements within the presently unobstructed or partially obstructed view. If the view remaining (if the development were to be approved) will be sufficient to understand and appreciate the nature of the existing view, the fundamental quantitative question is likely to be satisfied.

3.0 PLANNING CONTEXT

- The outcome of a qualitative assessment will necessarily be subjective. However, although beauty is inevitably in the eye of the beholder, the framework for how an assessment is undertaken must be clearly articulated. Any qualitative assessment must set out the factors taken into account and the weight attached to them. Whilst minds may differ on outcomes of such an assessment, there should not be issues arising concerning the rigour of the process.
- As with Tenacity, a high value is to be placed on what may be regarded as iconic views (major landmarks or physical features such as land/water interfaces).

Other factors to be considered in undertaking a qualitative assessment of a public domain view impact include:

- Is any significance attached to the view likely to be altered?
- If so, who or what organisation has attributed that significance and why have they done so?
- Is the present view regarded as desirable and would the change make it less so (and why)?
- Should any change to whether the view is a static or dynamic one be regarded as positive or negative and why?
- If the present view attracts the public to specific locations, why and how will that attraction be impacted?
- Is any present obstruction of the view so extensive as to render preservation of the existing view merely tokenistic?
- However, on the other hand, if the present obstruction of the view is extensive, does that which remains nonetheless warrant preservation (it may retain all or part of an iconic feature, for example)?
- If the change to the view is its alteration by the insertion of some new element(s), how does that alter the nature of the present view?

The principles established by the Court from both cases have been integrated into the approach adopted for this evaluation.

3.4 Western Sydney Airport Environment Impact Statement, 2016

Figure 3.0 illustrates the Western Sydney Priority Growth Area including the Proposal Site. This area will guide new infrastructure investment, identify new homes and jobs close to transport and coordinate services in the area.

Furthermore, the New South Wales Government established the Western Sydney Employment Area (WSEA) to provide business in the region with land for industry and employment, including transport and logistics, warehousing and office spaces- refer to Figure 3.0.

3.0 PLANNING CONTEXT

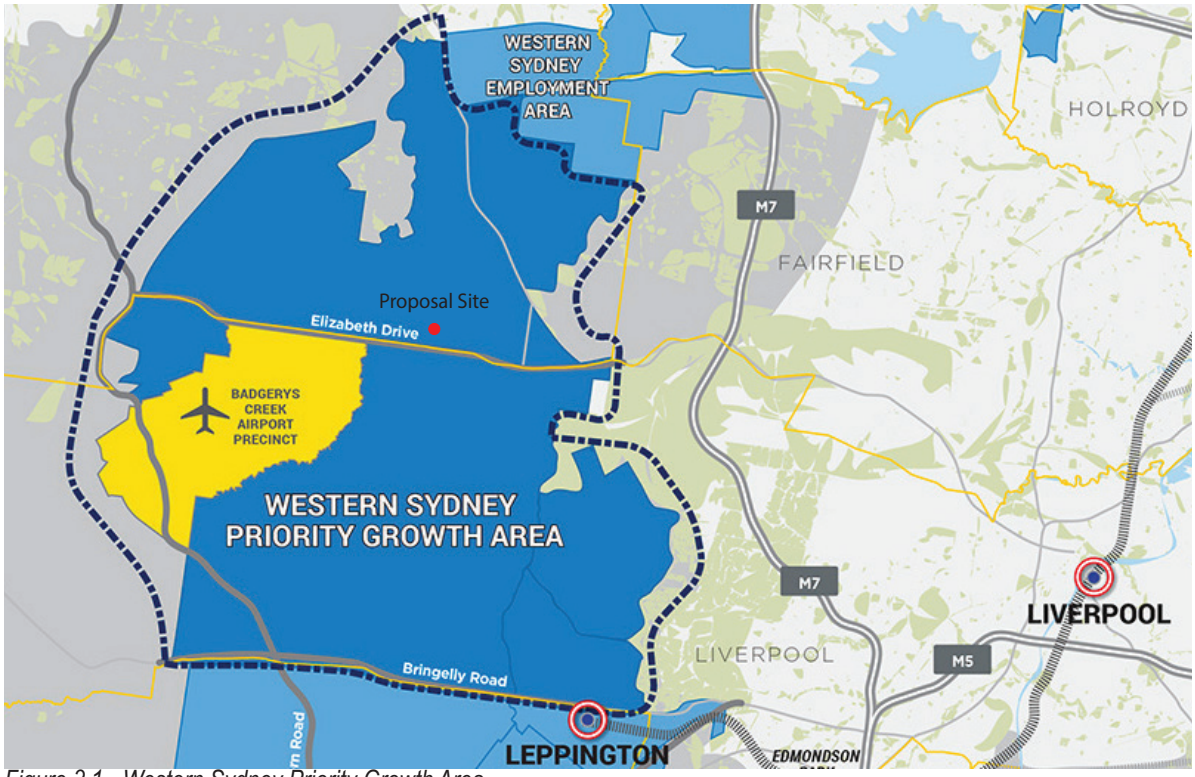


Figure 3.1 - Western Sydney Priority Growth Area.

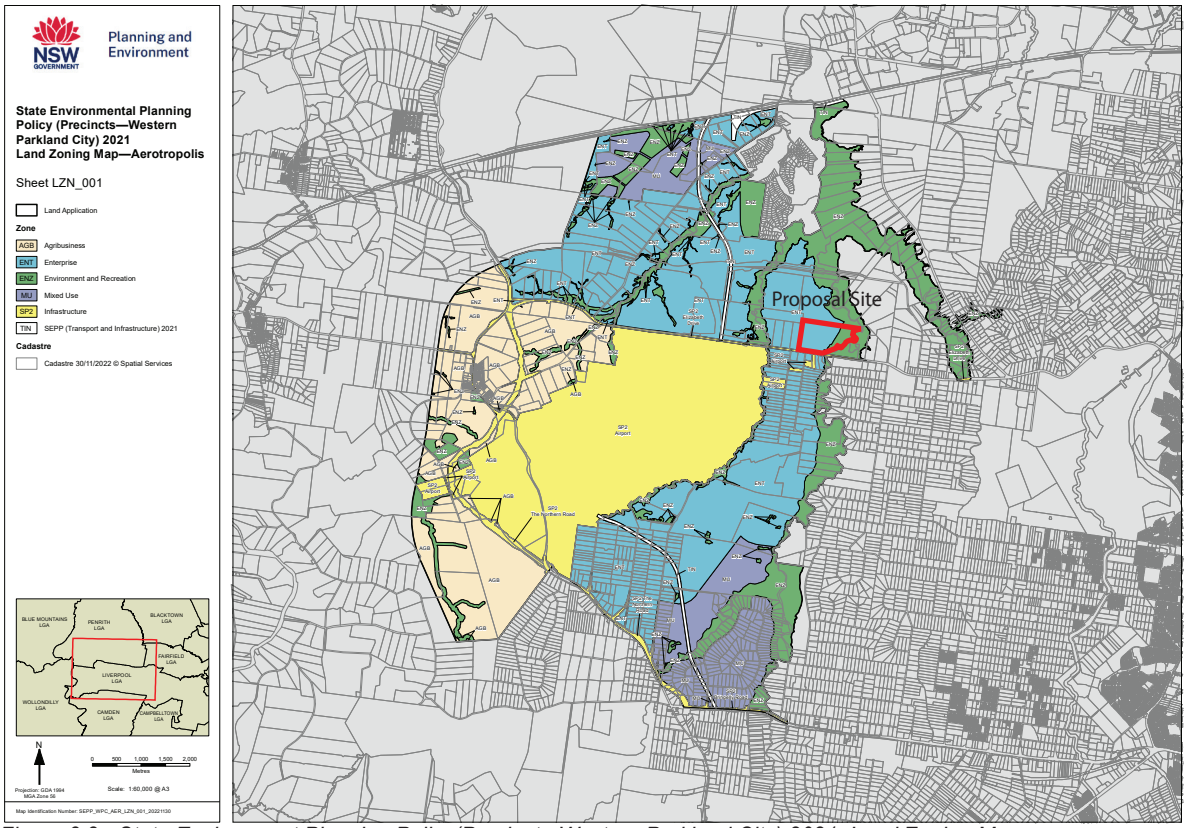


Figure 3.2 - State Environment Planning Policy(Precincts-Western Parkland City) 2021_Land Zoning Map

3.0 PLANNING CONTEXT

3.5 State Environmental Planning Policy (Precincts—Western Parkland City) 2021

The study area is planned under the zoning ENT Enterprise and ENZ Environment and Recreation, illustrated in Figure3.2.

Enterprise Zone, Objectives of zone:

- To encourage employment and businesses related to professional services, high technology, aviation, logistics, food production and processing, health, education and creative industries.
- To provide a range of employment uses (including aerospace and defence industries) that are compatible with future technology and work arrangements.
- To encourage development that promotes the efficient use of resources, through waste minimisation, recycling and re-use.
- To ensure an appropriate transition from non-urban land uses and environmental conservation areas in surrounding areas to employment uses in the zone.
- To prevent development that is not compatible with or that may detract from the future commercial uses of the land.
- To provide facilities and services to meet the needs of businesses and workers.

Environment and Recreation Zone, Objectives of zone:

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To protect the ecological, scenic and recreation values of waterways, including Wianamatta–South Creek and its tributaries.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and conserve the environment, including threatened and other species of native fauna and flora and their habitats, areas of high biodiversity significance and ecological communities.

4.0 Landscape Character & Visual Environment

Surrounding Primary Production Land

4.0 LANDSCAPE CHARACTER AND VISUAL ENVIRONMENT

Figure 4.0 below and the photos that follow broadly illustrate the typical existing land use types around the site that characterise the local landscape.

The geography of the area is largely defined by gentle rolling topography, open pasture, scattered groups of trees (especially along the road), and long views to distant horizons. Wianamatta-South Creek to the east of the site retains the most significant tree canopy.

The project site slopes from west to east towards Wianamatta-South Creek. There is a farm shed and 4 dams on the site.

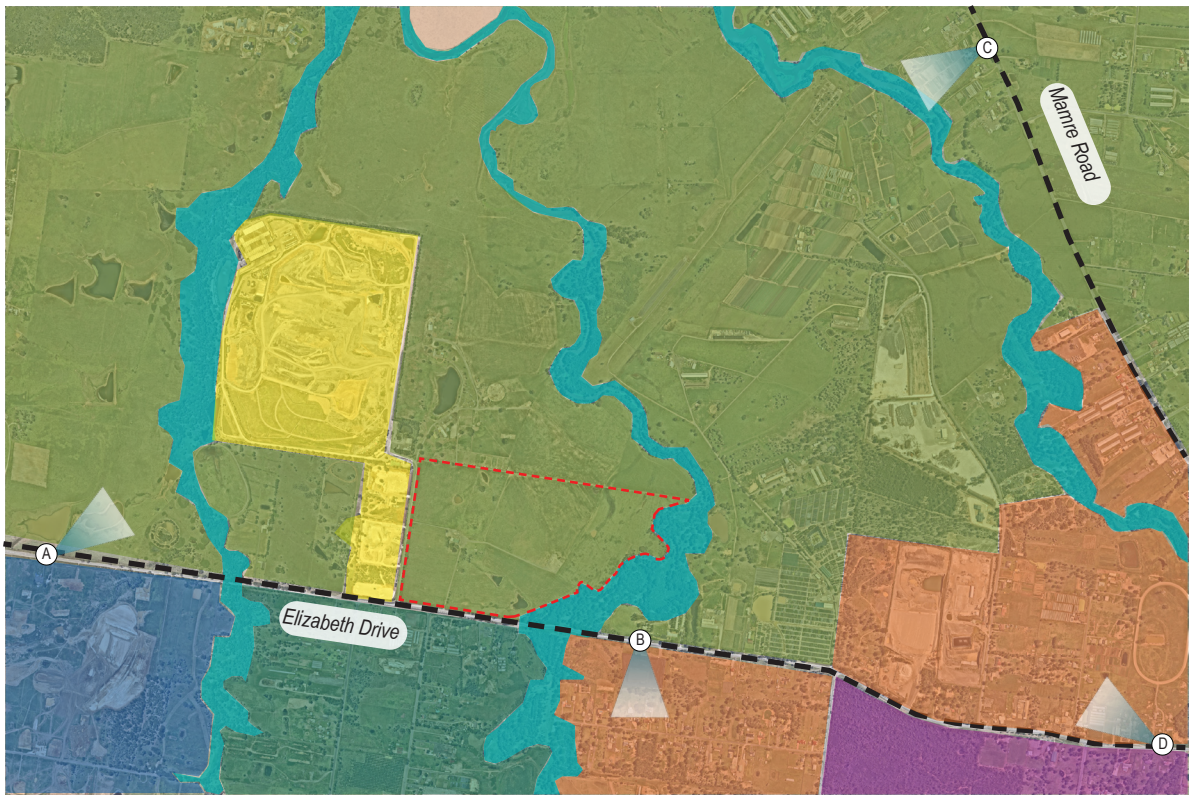


Figure 4.0 Existing Land Uses and Photo Location Points.

Site Boundary

Major Road

Sydney Region Growth Centre

Industrial

Primary Production

Rural Landscape

Creek corridor

Primary Production: Small Lots

Special Activities (Western Sydney Airport)

Ⓐ Photo location (see over)

LANDSCAPE CHARACTER

A - Existing Landscape Character: Rural Landscape and farm dams

B- Existing Landscape Character: Primary Production: Small lots

LANDSCAPE CHARACTER

C - Existing Landscape Character: Rural Landscape with variety of uses, mostly pastural and market gardening.

D - Existing Landscape Character: Small clusters of shops

5.0 Visual catchment & View Selection Criteria

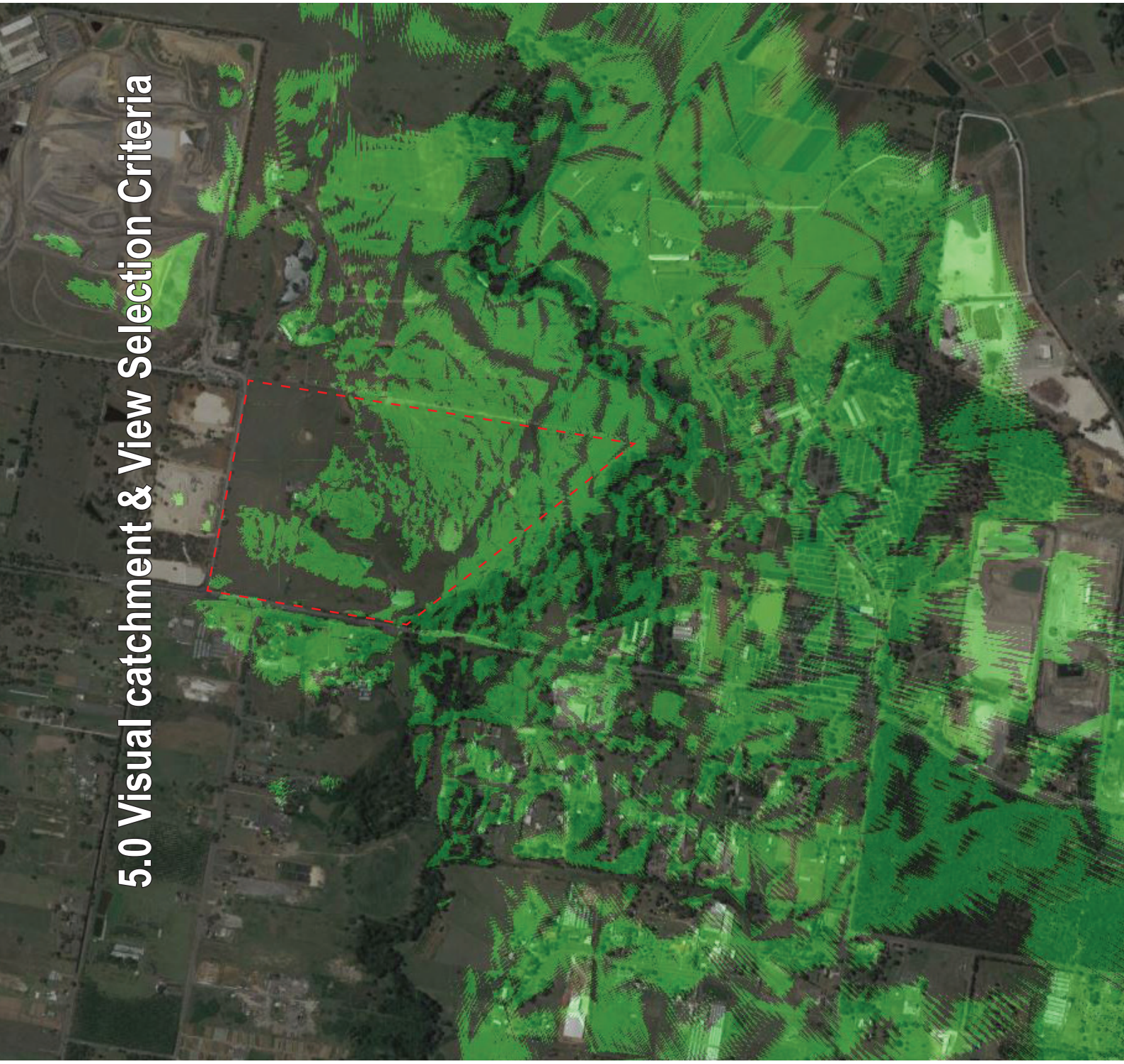


Figure 5.1 - Potential viewshed of the site based solely on topography, excluding existing trees and buildings. (Source Google Earth)

5.0 VISUAL CATCHMENT AND VIEW SELECTION CRITERIA

5.1 VISUAL CATCHMENT ANALYSIS

Visual catchment of a site is the extent the Proposal can be seen from the surrounding landscape, and conversely how much of the landscape can be seen from the Proposal.

Topography, vegetation and land use all contribute to the visual catchment of a Proposal. For example, a location within a heavily urbanised area may have a small visual catchment because of the density of buildings surrounding it. Similarly, a Proposal may have a low visual catchment due to surrounding vegetation providing only highly filtered views.

This desktop topography study (sourced from Google Earth Pro) is limited to an estimated viewshed based on topography only, without taking into account vegetation or building heights. This analysis has been used as a guide only, while significant ground studies have been conducted in and around the site to ascertain the key locations from which the Proposal Site (as it currently is) could potentially be visible from.

5.2 BASIS OF VIEWPOINT SELECTION

The selection of views for detailed evaluation later in this report has been based on the following sources:

- Visual assessment policy guidance in particular the NSW Land and Environment Court Planning Principles;
- Background documents;
- Desktop mapping;
- In field evaluation undertaken for this report.

Figure 6.1 - Project location Source: Google Earth

6.0 THE SITE

The proposed development is located at1669-1723 Elizabeth Drive, Badgerys Creek (Lot 100 DP 1283396) in the local government area of Penrith. The site area is 566,828m^2 and is approximately 41km west of the Sydney CBD, and 21km south-east of Penrith.

The site is a split zoned allotment consisting ENT Enterprise Zone and ENZ Environment and Recreation Zone, with the Proposed Development within the ENT Enterprise Zone. It is bound by Elizabeth Drive to the south,adjoining the low-density residential lots that is zoned for special activities. The site isroughly 800m north-west to the entry of future Western Sydney Airport . To the north of the site is the existing rural land.

To the east of the site is Wianamatta-South Creek and to the west of the site is the Cleanaway Kemps Creek Resource Recovery Park adjacent to Badgerys Creek.

7.0 The Proposal

Rural Land on Eastern Side of the Site

7.0 THE PROPOSAL

EEP Stage 1 Concept Plan

The Concept Plan proposes and outlines the framework for the staged development of EEP Stage 1 for an industrial estate, comprising seven (7) industrial buildings (warehouse and distribution centres or general industrial use) including ancillary offices, dock offices, café and associated infrastructure including roads, stormwater and utilities, with landscaping. The Concept Plan applies across Lot 100 DP1283398 and part Lot 741 DP81011.

Stage 1A Development Works

The Stage 1A Development, the first development works of the EEP Stage 1 Concept Plan, comprises:

- Site preparation works;
- Site servicing and infrastructure works including stormwater infrastructure and road works;
- Subdivision of Lot 100 DP1283398 and Lot 741 DP81011;
- Construction of warehouse 2 and warehouse 6 for the purpose of warehouse and distribution centres or general industrial use;
- Construction of hardstand areas for loading/unloading and vehicle manoeuvring;
- Construction of on-site car parking;
- Landscaping, including on-lot landscaping and street reserve landscaping;
- Estate signage comprising a main estate entry signage and signage zones; and
- Operation hours of 24 hours, 7 days a week.

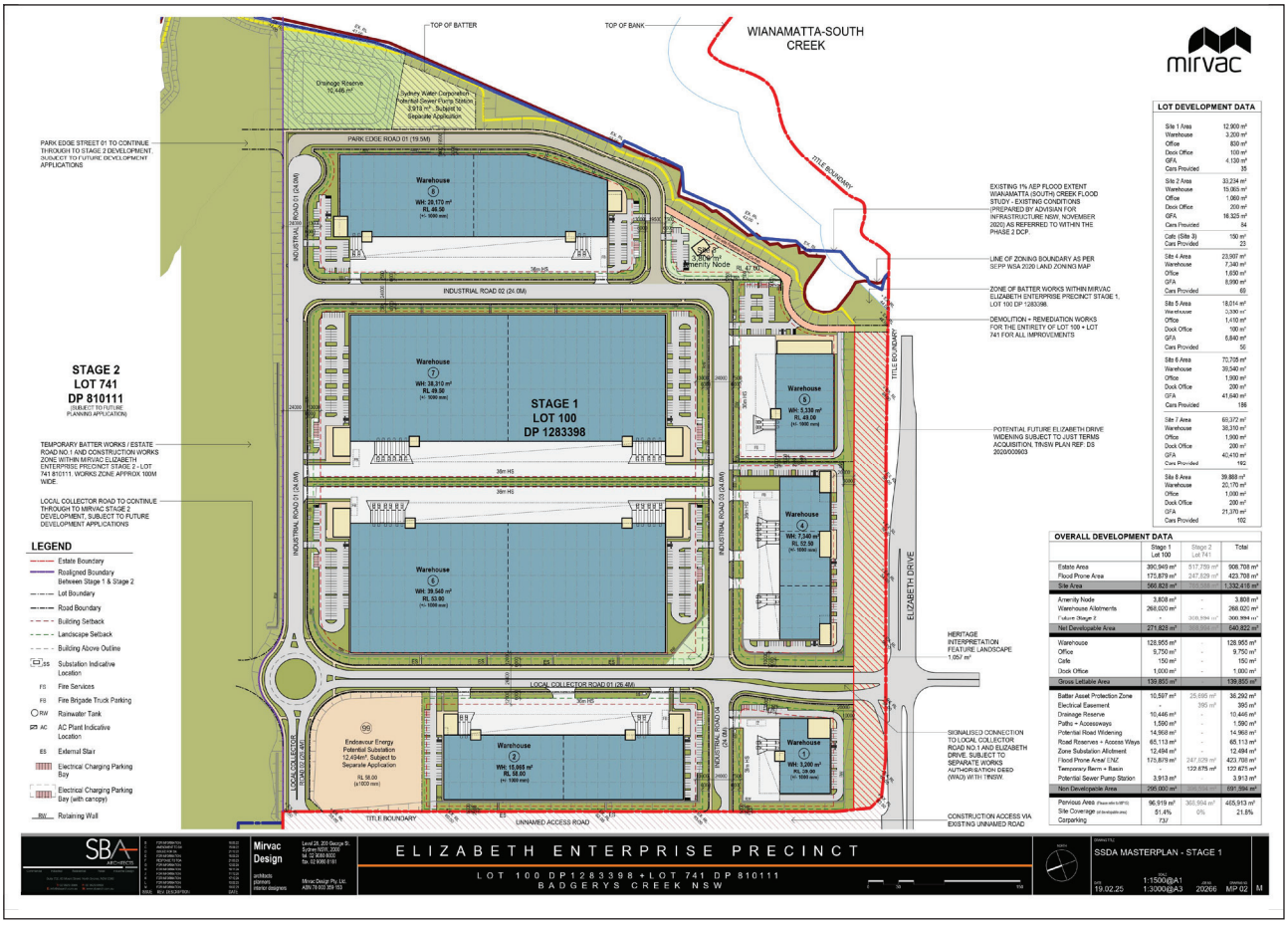


Figure 7.1: SSDA Stage 1 Masterplan, Rev M

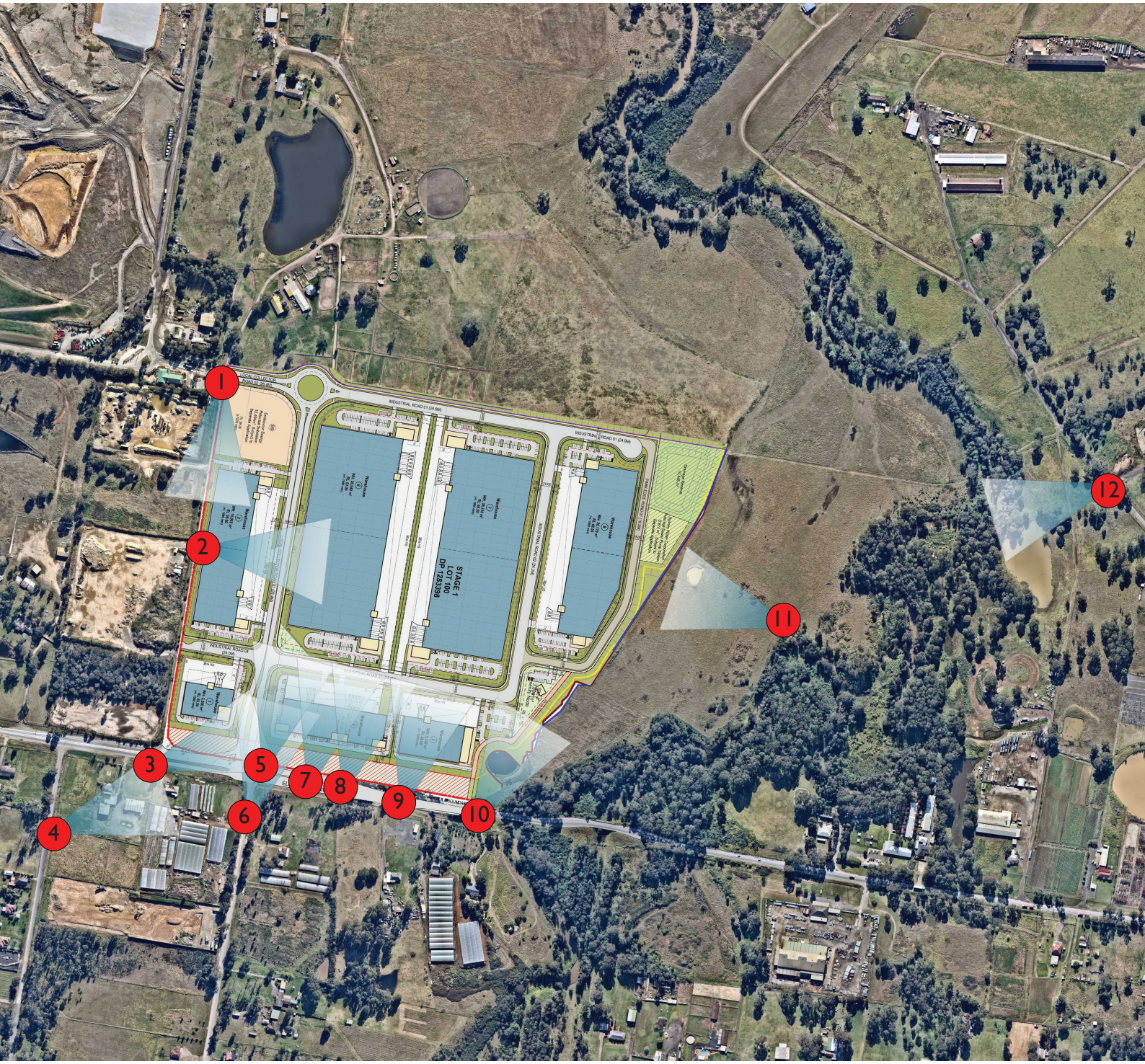


Figure 8.1: Viewpoint Locations

8.0 VISUAL IMPACT ANALYSIS

Based on the foregoing selection criteria this section maps and describes 12 views of the site from a variety of close and more distant viewpoints. A photograph of the existing view of each location is accompanied by a description of the view and the major visual elements within that view as well as an overall rating based on criteria outlined within Section 2.0 Methodology.

A number of viewpoints have been selected to photomontage in order to illustrate the built-form that will be visible from that location. Viewpoints have not been produced for every viewpoint as they are of a similar vantage point to ones that are being produced.

VIEWPOINT 1

Viewpoint 1 Existing

Viewpoint 1 Photomontage

8.0 VISUAL IMPACT ANALYSIS

Viewpoint Location.

LOCATION	Entrance to Cleanaway Kemps Creek Resource Recovery Park
DISTANCE	5m.
RECEPTORS	Vehicles accessing resource recovery park.
NO. OF VIEWERS	Moderate.
EXISTING VIEW	To the right of the visual scene can be seen existing rural land that is predominately open in nature, with a small grouping of mature vegetation to the far left of the view. In the distance can be seen band of existing trees running parallel to Elizabeth Drive. To the right of the view can be seen the unnamed road that is used by vehicles to access the resource recovery park. A mixture of small and taller trees can be seen running parallel to this road which obstructs views of the West Sydney Sand and Soil complex to the south of the access road.

EXPECTED VISUAL IMPACT

Views of the rural land will be replaced by views of Warehouse 2 which will run parallel to the unnamed road, with a grass verge and plantings separating the site and road. Beyond this, Warehouse 6 will be visible until such time as Lot 99, identified on the masterplan as endeavour energy potential substation, is developed. A height difference between Warehouse 2 and the unnamed road ranging from approximately 1–5 metres receding into the distance will also be noticeable (separated by a retaining wall). Views of warehouse 2 and 6 will be filtered by proposed vegetation, consisting of shrubs with a mature height of between 1–5 metres and trees up to 30 metres.

Receptor Type	Public
Viewpoint Number	1
Sensitivity rating of receptor	LOW
Magnitude - Distance	MODERATE
Magnitude - Quantum of view	MODERATE
Magnitude - Period of View	LOW
Magnitude - Scale of change	HIGH
Overall Magnitude rating	HIGH
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 2

Viewpoint 2 Existing

Viewpoint 2 Photomontage

8.0 VISUAL IMPACT ANALYSIS

Viewpoint Location.

LOCATION	1725 Elizabeth Drive
DISTANCE	10m.
RECEPTORS	Vehicles using unnamed road and accessing resource recovery park.
NO. OF VIEWERS	Moderate.
EXISTING VIEW	To visual scene is comprised of largely open rural land in the foreground and mid-ground, with sporadic larger vegetation scattered within it. Beyond this can be seen a continuous 'green band' of mature vegetation, the most visible of this being vegetation that runs parallel to Wianamatta-South Creek to the east of the site. Long distance views to the east are possible as a result in topography changes between the unnamed road and the landform to the east.

EXPECTED VISUAL IMPACT

Long distance views will be replaced by views of Warehouse 2. A difference in levels will also be noticeable between the road and the warehouse as a result of the warehouse being lower than the existing road. Clear views of the warehouse facade will be visible from this location as result of its proximity to the access road. The proposed planting schedule consisting of shrubs with mature heights of between 1–5 metres and trees up to 30 metres will soften the hard edge of the warehouse; however, rural lands in the foreground and mid-ground will no longer be visible, nor will the continuous 'green band' of remnant vegetation in the background.

Receptor Type	Private
Viewpoint Number	2
Sensitivity rating of receptor	LOW
Magnitude - Distance	HIGH
Magnitude - Quantum of view	HIGH
Magnitude - Period of View	LOW
Magnitude Scale of change	HIGH
Overall Magnitude rating	HIGH
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 3

Viewpoint 3 Existing

Viewpoint 3 Photomontage

8.0 VISUAL IMPACT ANALYSIS

Viewpoint Location.

LOCATION	Driveway of 136 Elizabeth Drive.
DISTANCE	75m.
RECEPTORS	Vehicles travelling along Elizabeth Drive (Public) and exiting driveway of private dwelling (Private).
NO. OF VIEWERS	High.
EXISTING VIEW	Elizabeth Drive occupies the foreground receding eastwards until views of it are lost as a result in a change of topography. As a result in the change of topography, long distance views eastwards are possible, with views of distant vegetation. The centre of the view marks the south-western corner of the site which currently has a small grouping of varied vegetation marking the entrance to the unnamed road leading to the resource recovery park. A small portion of open rural land on the site is visible between the existing vegetation.

EXPECTED VISUAL IMPACT

Views of Warehouse 1 and 4 will be visible running parallel to Elizabeth Drive and receding into the distance. The warehouses will be setback from Elizabeth Drive by approximately 30m as a result of land allocated for a potential future widening of Elizabeth Drive, which will consist of a mixture of native grasses.

Between the potential road widening zone and the warehouse hardstand will be the tree planting zone which will consist of native tree groupings of 4–5 trees ranging in height from 15–25 metres with gaps in the groupings ranging from 7–10 metres. Underneath the tree groupings will be a mixture of groundcovers, with gaps between tree groupings consisting of a mixture of shrubs, grasses, and groundcovers. The tree groupings running parallel to the warehouse will create a green band of trees running parallel to Elizabeth Drive which will help to filter views of the new warehouses and prevent what would otherwise be an uninterrupted view of building facades. Long distance views to the right of the view will be maintained as a result of descending pad level heights towards the eastern edge of the site.

Receptor Type	Public / Private
Viewpoint Number	3
Sensitivity rating of receptor	MODERATE
Magnitude - Distance	HIGH
Magnitude - Quantum of view	MODERATE
Magnitude - Period of View	LOW / MODERATE
Magnitude Scale of change	MODERATE
Overall Magnitude rating	MODERATE
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE

VIEWPOINT 4

Viewpoint Location

Viewpoint 4 Existing

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Lawsons Road (approximately number 15)
DISTANCE	225m.
RECEPTORS	Vehicles using Lawson Road, vehicles exiting driveway of private dwelling.
NO. OF VIEWERS	Low.
EXISTING VIEW	The view is comprised of a large grass verge in the foreground. Beyond this is a rural property, with a single storey dwelling in the centre of the view. A number of mature trees of varying species can be seen within and surrounding the property, with a band of trees to the left of the view running parallel to Elizabeth Drive also visible beyond. Above ground power lines that run parallel to Elizabeth Drive can be seen.

EXPECTED VISUAL IMPACT

As a result, in the change in topography between Lawson Road and the site, the majority of the warehouses will be obstructed from view, however as a result of the height of Warehouse 1, a small portion will of the upper level will be visible above the private residence and existing vegetation along Elizabeth Drive. While this will introduce new built-form to the visual scene, the majority of the existing view will remain largely unchanged.

Receptor Type	Public
Viewpoint Number	4
Sensitivity rating of receptor	LOW
Magnitude - Distance	MODERATE
Magnitude - Quantum of view	LOW
Magnitude - Period of View	LOW
Magnitude Scale of change	LOW
Overall Magnitude rating	LOW
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	LOW

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 5

Viewpoint 5 Existing

Viewpoint 5 Photomontage

8.0 VISUAL IMPACT ANALYSIS

Viewpoint Location.

LOCATION	Intersection of Elizabeth Drive and Martin Road.
DISTANCE	28m.
RECEPTORS	Vehicles using Martin Road.
NO. OF VIEWERS	Moderate.
EXISTING VIEW	Elizabeth Drive occupies the foreground of the visual scene. Beyond this is largely open rural land, with a small grouping of mature trees surrounding some shed to the right of the view. In the distance can be seen a mixture of mature trees along the horizon outside of the site.

EXPECTED VISUAL IMPAC

While the foreground view of Elizabeth Drive will remain unchanged, the existing rural view beyond will be replaced by filtered views of the Proposal. To the right of the view the western end of Warehouse 4 will be visible. The centre of the view will allow for clear views down the proposed access road, with views of the eastern side of Warehouse 1 visible to the left of the view.

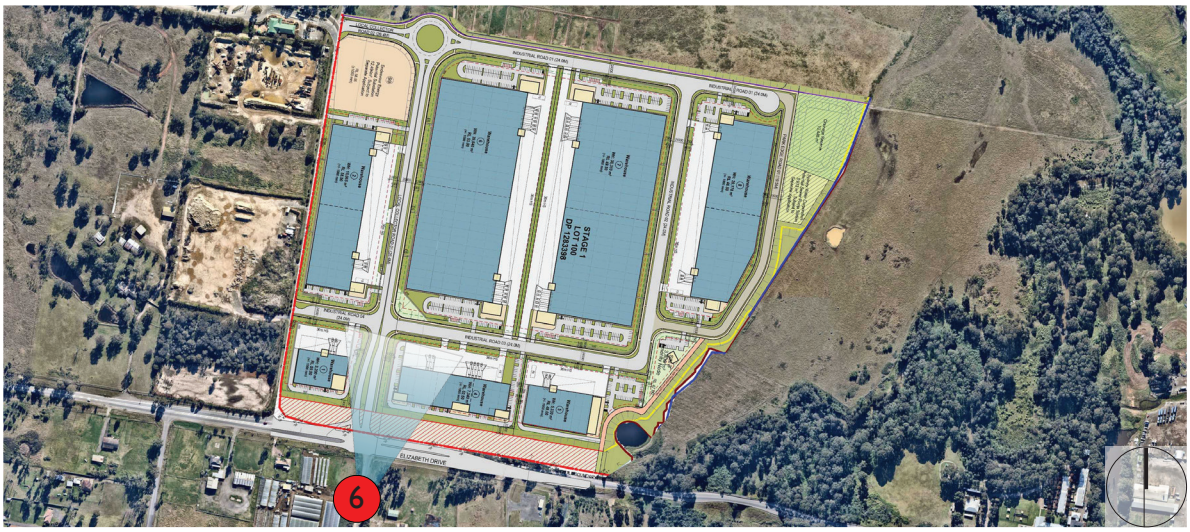
A tree planting zone between the warehouse hardstands and the potential future widening zone of Elizabeth Drive consists of native tree groupings of 4–5 trees with gaps in the groupings ranging from 7–10 metres. Underneath the tree groupings will be a mixture of groundcovers, with gaps between tree groupings consisting of a mixture of shrubs, grasses, and groundcovers.

A significant level of built-form and development will be introduced to the view as a result of the Proposal, however as a result of the proposed tree planting, the warehouse facades will be broken up by tree groupings which will help prevent views of an uninterrupted building facade from resulting. The proposed tree planting running parallel to the access road will help to further break up views of building facades and contribute to the addition of new native vegetation to the site.

Receptor Type	Public
Viewpoint Number	5
Sensitivity rating of receptor	LOW
Magnitude - Distance	HIGH
Magnitude - Quantum of view	HIGH
Magnitude - Period of View	LOW
Magnitude Scale of change	HIGH
Overall Magnitude rating	HIGH
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 6



Viewpoint Location

Viewpoint 6 Existing

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Martin Road (approx.1970 Martin Road)
DISTANCE	100m.
RECEPTORS	Vehicles using Martin Road.
NO. OF VIEWERS	Low.
EXISTING VIEW	Martin Road can be seen in the centre of the foreground, with a grassed verge to the right and a vegetated embankment to the left with a small amount of tree within it. Beyond this is largely open rural land, with a small grouping of mature trees surrounding some shed to the right of the view. In the distance can be seen a mixture of mature trees along the horizon outside of the site. A number of overhead power lines on Martin Road and Elizabeth Drive can be seen.

EXPECTED VISUAL IMPACT

While the foreground view of Martin Road and Elizabeth Drive will remain unchanged, the existing rural view beyond will be replaced by filtered views of the Proposal. To the right of the view the western end of Warehouse 4 will be visible. The centre of the view will allow for clear views down the proposed signalised access road, with views of the eastern side of Warehouse 1 visible to the left of the view.

The potential future widening zone of Elizabeth Drive (approximately 30 metres) will be visible running parallel to Elizabeth Drive and will consist of a mixture of native grass species which will add a low-level landscaping.

Between the widening zone and hardstand of the warehouse will be a tree planting zone. The tree planting zone will consist of native tree groupings of 4-5 trees ranging in height from 15–25 metres with gaps in the groupings ranging from 7–10 metres. Underneath the tree groupings will be a mixture of groundcovers, with gaps between tree groupings consisting of a mixture of shrubs, grasses, and groundcovers.

A significant level of built-form and development will be introduced to the view as a result of the Proposal.

Receptor Type	Public
Viewpoint Number	6
Sensitivity rating of receptor	LOW
Magnitude - Distance	HIGH
Magnitude - Quantum of view	HIGH
Magnitude - Period of View	LOW
Magnitude Scale of change	HIGH
Overall Magnitude rating	HIGH
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

Viewpoint Location.

VIEWPOINT 7

Viewpoint Location

Viewpoint 7 Existing

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Elevated embankments running parallel to Elizabeth Drive.
DISTANCE	30m.
RECEPTORS	Vehicles using Elizabeth Drive, residents on 10 Martin Road.
NO. OF VIEWERS	High.
EXISTING VIEW	Elizabeth drive occupies the foreground of the view. Beyond this is views of the rural land which currently occupies the site, consisting of an unsealed driveway allowing access to a grouping of sheds. A number of mature trees surrounding the shed are visible. As a result of the topography sloping downwards towards Wianamatta-South Creek to the right of the view, rolling topography in the distance is visible.

EXPECTED VISUAL IMPACT

The foreground view of Elizabeth Drive will remain largely unchanged; however, the unsealed driveway will be removed. The potential future widening zone of Elizabeth Drive (approximately 30 metres) will be visible running parallel to Elizabeth Drive and will consist of a mixture of native grass species which will add a low-level landscaping.

Between the widening zone and hardstand of the warehouse will be a tree planting zone. The tree planting zone will consist of native tree groupings of 4–5 trees ranging in height from 15–25 metres with gaps in the groupings ranging from 7–10 metres. Underneath the tree groupings will be a mixture of groundcovers, with gaps between tree groupings consisting of a mixture of shrubs, grasses, and groundcovers.

The proposed tree planting zone will help to filter views of the proposed warehouse; however, the addition of the new built-form will still be discernible from this location and for vehicles using Elizabeth Drive.

As a result of the warehouse height the current long-distance views to the right of the view will be lost.

Receptor Type	Public
Viewpoint Number	7
Sensitivity rating of receptor	LOW
Magnitude - Distance	HIGH
Magnitude - Quantum of view	HIGH
Magnitude - Period of View	LOW
Magnitude Scale of change	HIGH
Overall Magnitude rating	HIGH
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 8

Viewpoint Location

Viewpoint 8 Existing

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Elevated embankment running parallel to Elizabeth Drive.
DISTANCE	30m.
RECEPTORS	Vehicles using Elizabeth Drive, residents on 10 Martin Road.
NO. OF VIEWERS	High.
EXISTING VIEW	The current view is dominated by the open rural land of the site which is devoid of any groupings of large trees. To the right of the view can be seen the edge of a grouping of trees that run parallel to Elizabeth Drive. Next to this can be seen a small grouping of trucks and containers. A continuous green band of mature trees running parallel to Wianamatta-South Creek can be seen, with a small amount of rolling topography visible beyond.

EXPECTED VISUAL IMPACT

While the foreground view of Elizabeth Drive will remain unchanged, the existing rural view beyond will be replaced by clear views of the Proposal. The potential future widening zone of Elizabeth Drive (approximately 30 metres) will be visible running parallel to Elizabeth Drive and will consist of a mixture of native grass species which will add a low-level landscaping.

Between the widening zone and hardstand of the warehouse will be a tree planting zone that will consist of native tree groupings of 4–5 trees ranging in height from 15–25 metres with gaps in the groupings ranging from 7–10 metres. Underneath the tree groupings will be a mixture of groundcovers, with gaps between tree groupings consisting of a mixture of shrubs, grasses, and groundcovers.

While a significant level of new built-form will be introduced to the visual scene, this will be mitigated somewhat with the use of the tree groupings running parallel to the warehouse. This will help to break up and filter views of what would otherwise be a continuous extent of the warehouse facade.

As a result of Warehouse 4 and new tree planting, views of the Wianamatta-South Creek vegetation and distant topography will be obstructed.

Receptor Type	Public
Viewpoint Number	8
Sensitivity rating of receptor	LOW
Magnitude - Distance	HIGH
Magnitude - Quantum of view	HIGH
Magnitude - Period of View	LOW
Magnitude Scale of change	HIGH
Overall Magnitude rating	HIGH
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 9

Viewpoint 9 Existing

Viewpoint 9 Photomontage

8.0 VISUAL IMPACT ANALYSIS

Viewpoint Location.

LOCATION	Driveway of 1930 Elizabeth Drive.
DISTANCE	30m.
RECEPTORS	Vehicles accessing Elizabeth Drive and using unnamed access road.
NO. OF VIEWERS	Low.
EXISTING VIEW	The foreground is comprised of a mixture of vegetation types running parallel to the access road. As a result of the level difference between the access road and Elizabeth Drive, Elizabeth Drive is completely obstructed from view. Long distance views over the largely open land of the site are visible between trees surrounding the access road. Beyond this can be seen mature trees running parallel to Wianamatta-South Creek and a limited view of rolling topography beyond this.

EXPECTED VISUAL IMPACT

The existing vegetation surrounding the access road will remain unchanged, however a significant level of built-form will be introduced to the view as a result of warehouses 4 and 5. This will result in the loss of view of rural land, as well as any long-distance views and Wianamatta-South Creek vegetation. As a result of the proposed landscaping, new groupings of native trees will help to filter views of the warehouse and mitigate the introduction of new significant built-form as will the sporadic tree planting along the access road.

Receptor Type	Public
Viewpoint Number	9
Sensitivity rating of receptor	MODERATE
Magnitude - Distance	HIGH
Magnitude - Quantum of view	MODERATE
Magnitude - Period of View	LOW
Magnitude Scale of change	MODERATE
Overall Magnitude rating	MODERATE
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 10

Viewpoint 10 Exisitng

Viewpoint 10 Photomontage

8.0 VISUAL IMPACT ANALYSIS

Viewpoint Location.

LOCATION	Driveway of 1910 Elizabeth Drive and access road
DISTANCE	20m.
RECEPTORS	Vehicles using access road and Elizabeth Drive.
NO. OF VIEWERS	Moderate.
EXISTING VIEW	Existing mature vegetation surrounding Wianamatta-South Creek to the north of Elizabeth Drive can be seen. Beyond this can be seen the current rural land of the site, with a small grouping of trucks and containers on site. Beyond this can be seen mature trees running parallel to Wianamatta-South Creek in the distance.

EXPECTED VISUAL IMPACT

Existing vegetation in the foreground will filter the eastern edge of Warehouse 5 to the left of the view, with partial views of Warehouse 8. The most prominent feature introduced into the landscape will be the vegetated batter separating the warehouses and the 100-year flood zone, with a small portion of open land to the east of the warehouses running parallel to Wianamatta-South Creek still visible. Long distance views of the Wianamatta-South Creek riparian vegetation in the distance will remain.

Receptor Type	Public
Viewpoint Number	10
Sensitivity rating of receptor	MODERATE
Magnitude - Distance	MODERATE
Magnitude - Quantum of view	LOW
Magnitude - Period of View	LOW
Magnitude Scale of change	LOW
Overall Magnitude rating	LOW
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	LOW

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 11

Viewpoint 11 Existing

Viewpoint 11 Photomontage

8.0 VISUAL IMPACT ANALYSIS

Viewpoint Location.

LOCATION	Eastern Boundary of the Site from Riparian Corridor
DISTANCE	250m.
RECEPTORS	Users accessing site and occasional users tending to grazing horses.
NO. OF VIEWERS	Low
EXISTING VIEW	A wide expanse of the site is visible. In the foreground can be seen the 100 year flood event zone which consists of an open grazing paddock. In the distance to left can be seen a change in topography where a number of trucks are currently stored. The landform continues to gain in elevation as it recedes into the distance towards the western edge of the site. The view is largely devoid of mature vegetation, with mature trees only visible along the western edge of the site and to the left of the view running parallel to Elizabeth Drive.

EXPECTED VISUAL IMPACT

The foreground flood event zone will remain unchanged, maintaining a significant distance (approximately 250 metres) between the riparian vegetation and the new built-form. Long distance views of mature vegetation will be replaced by filtered views of Warehouse 8 with proposed tree plantings to the eastern edge of the warehouses.

Although the foreground will remain a large and open expanse of grassland, a significant level of new built-form will be visible, altering the view from one consisting of mainly rural elements to one that has industrial elements as its primary components.

Receptor Type	Private
Viewpoint Number	11
Sensitivity rating of receptor	MODERATE
Magnitude - Distance	HIGH
Magnitude - Quantum of view	HIGH
Magnitude - Period of View	LOW
Magnitude Scale of change	HIGH
Overall Magnitude rating	HIGH
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	HIGH/MODERATE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

VIEWPOINT 12

Viewpoint Location.

Viewpoint 12 Existing

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Driveway entrance of CR & M Ash & Sons (on Unnamed Access Road).
DISTANCE	320m.
RECEPTORS	Users of Unnamed Access Road
NO. OF VIEWERS	Low
EXISTING VIEW	The view west towards the site consists of rural elements including grazing paddocks in the foreground and a dam to the left of the view. A dense green band of vegetation can be seen occupying a lrge portion of the view, and consists of mature trees within the paddocks as well as dense riparian vegetation bordering Wianamatta-South Creek beyond this.

EXPECTED VISUAL IMPACT
As a result of significant vegetation, no views of the site and warehouses will occur.

Receptor Type	Public
Viewpoint Number	12
Sensitivity rating of receptor	LOW
Magnitude - Distance	MODERATE
Magnitude - Quantum of view	NEGLIGIBLE
Magnitude - Period of View	NEGLIGIBLE
Magnitude Scale of change	NEGLIGIBLE
Overall Magnitude rating	NEGLIGIBLE
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	NEGLIGIBLE

Assessment Rating for EEP - Stage 1 Concept Masterplan.

Bakers Lane.

8.0 VISUAL IMPACT ANALYSIS

VIEWPOINT LOCATIONS	RECEPTOR SENSITIVITY	MAGNITUDE					IMPACT RATING
		DISTANCE	QUANTUM OF VIEW	PERIOD OF VIEW	SCALE OF CHANGE	OVERALL MAGNITUDE RATING	
1. Entrance to Cleanaway Kemps Creek Resource Recovery Park	L	M	M	L	H	H	MODERATE
2. 1725 Elizabeth Drive	L	H	H	L	H	H	MODERATE
3. Driveway of 136 Elizabeth Drive.	M	H	M	L/M	M	M	MODERATE
4. Lawsons Road (approx. number 15)	L	M	L	L	L	L	LOW
5. Intersection of Elizabeth Drive and Martin Road	L	H	H	L	H	H	MODERATE
6. Martin Road (approx.1970 Martin Road)	L	H	H	L	H	H	MODERATE
7. Elevated embankments running parallel to Elizabeth Drive	L	H	H	L	H	H	MODERATE
8. Elevated embankment running parallel to Elizabeth Drive	L	H	H	L	H	H	MODERATE
9. Driveway of 1930 Elizabeth Drive	M	H	M	L	M	M	MODERATE
10. Driveway of 1910 Elizabeth Drive and access road	M	M	L	L	L	L	LOW
11. Eastern Boundary of the Site from Riparian Corridor	M	H	H	L	H	H	HIGH/MODERATE
12. Driveway entrance of CR & M Ash & Sons	L	M	N	N	N	N	NEGLIGIBLE

Summary of Visual Impact Ratings.

9.0 Mitigation Recommendations

Resource Recovery Access Road.

9.0 MITIGATION RECOMMENDATIONS

9.1 APPROACHES TO MITIGATION

There are typically five broad approaches to mitigating the visual impacts of any change to a scene that entails built form development. These are through:

- *Avoidance* – where the visual impact of the proposal is deemed of a scale that cannot be mitigated by any of the approaches outlined below, this approach implies relocating the proposal elsewhere on the site with lesser visual impacts or not proceeding with the proposal on the site at all
- *Reduction* – typically this approach seeks to mitigate impacts through the reduction of some part of the proposed structure or development (ie. reduced height or omission of parts of the built structure/s)
- *Alleviation* – this approach entails design refinements to the proposal to mitigate visual impacts. These refinements might typically include built form articulation, choice of material and colours and/or planting design
- *Off-site Compensation* – where none of the above approaches will provide adequate visual impact mitigation for off-site visual receptors, this approach entails off-site works on the land from which the viewpoint is experienced (eg screening close to the viewpoint).
- *Management* – in this approach the mitigation response typically entails an operational or management action such as construction management.

Set out below are the relevant responses to these approaches with respect to Aspect Industrial Estate.

9.2 RECOMMENDED MITIGATION

Avoidance

The Proposal Site is located within the Western Sydney Priority Growth Area which aims to guide new infrastructure investment, identify new homes and jobs close to transport and coordinate services in the area. Outcomes of the plan are aimed towards creating a productive region by driving opportunities for investment, business and jobs growth to support a metropolis of three cities. Given the objectives around planning for the area, and the already highly modified nature of the landscape, avoiding the Proposal altogether or locating it elsewhere does not appear to be a suitable mitigation option.

Reduction

The scale of the Proposal is linked to the operational requirements, and therefore certain elements are required in order for successful operations, such as building scale, earthworks and access (such as roads). The scope for reduction as the primary form of mitigation is limited given operational constraints, and is therefore not considered to be the most effective form of mitigation.

Alleviation

Consideration of specific building materials and building facades during the detailed design phase in order to minimise the visual impacts of the built-form should be undertaken. This

Looking North Towards the Site From Elizabeth Drive.

9.0 MITIGATION RECOMMENDATIONS

should include the testing of appropriate colour palettes for building materials and ensuring that buildings are designed and finished using low reflective materials.

Proposed Frontage and Boundary Planting will play a significant part in mitigating the visual impacts of the Proposal. Planting will help to filter views of the earthworks and warehouses, which will help limit the impact of new significant built form. The effectiveness of the proposed planting will increase over time as the planting matures, particularly proposed trees which will be more effective after 10-15 years of growth once greater height and density are achieved.

Further landscape development could be undertaken during design development to further explore enhancing the filtering of the building facades which could be particularly effective along the unnamed access road parallel to the substation where no tree planting has been proposed.

Off-site compensation

The number of static visual receivers to the Proposal is limited and as a result the use of off-site compensation through the use of strategic planting is limited, but could provide filtered views of the Proposal for a limited number of receivers if they felt the visual impacts were too intrusive.

Management

An appropriate Construction Environmental Management Plan (CEMP) should be prepared for the construction phase of the Proposal by the responsible construction contractor which outlines management measures for environmental impacts including impacts on sensitive receivers.

Out of the aforementioned mitigation techniques, alleviation would appear to be the most suitable. This will be primarily achieved through appropriate built-form design and materiality as well as the proposed planting which will help lessen the impacts of built-form on the surrounding area.

CONSTRUCTION IMPACTS

The Proposal will involve a construction phase with associated additional visual impacts. The following activities are likely to occur:

- clearing of vegetation
- setting up of site compounds
- stockpiling
- earthworks
- site fencing
- increased site traffic including heavy vehicles

During the construction period, most viewpoints studied within this report are likely to have increased visual impacts. Views of site compounds, storage areas and increased site traffic (including trucks) will lead to a reduction in visual amenity. Impacts will reduce as viewing distance and screening vegetation increase. These visual impacts will be of a temporary nature and will reduce for all viewpoints once the proposal is complete.

10.0 Conclusion

Resource Recovery Access Road.

10.0 CONCLUSION

10.1 FINDINGS

A comprehensive visual impact assessment of the Proposal on the surrounding area has been conducted.

The study has identified and evaluated the existing visual environment, key views and view types before progressing to an assessment of quantitate and qualitative criteria using best practice methodology. A number of mitigation measures have also been proposed to reduce visual impacts of the Proposal to the surrounding area.

10.2 SUMMARY OF FINDINGS

Overall, the following conclusions can be drawn on the Proposal's relationship to visual amenity within the study area:

- the site (and surrounding area) has been identified as a priority growth area which will see the surrounding land uses and visual receivers change in the future;
- the landscape of both the site and the surrounding area has been highly modified as a result of previous land uses (primarily related to agricultural);
- a limited amount of substantial vegetation groupings within the site (and immediately surrounding it to the south, west and north)means that large areas of the site are visually accessible within close proximity;
- Elizabeth Drive provides the most visual access to the site given that it runs parallel to the southern boundary and is used by a high number of vehicles on a daily basis;
- the number of private visual receivers is highly limited and predominantly restricted to properties to the south of the site along Elizabeth Drive;
- topography plays a part in limiting the visual catchment of the site, with landform obscuring views to many visual receivers, particularly to the east of the site;
- substantial mature vegetation that borders Wianamatta-South Creek to the east of the site further obscures views for a number of commercial and residential receivers to the east and south-east of the site;
- while the scale of change rating for most viewpoints falls within the 'High' rating, the sensitivity for most viewpoints is rated as 'Low' given the transitory nature of the viewpoints (vehicles passing by the site);
- sensitivity ratings are higher (moderate) when located in proximity to private dwellings (from driveways) as these views represent potential views from within private land;
- the proposed landscaping will add a significant new level of vegetation and variety of species to the site, particularly along the southern edge running parallel to Elizabeth Drive and help to filter views of the new built-form, as well as internally throughout the site along the collector roads.

10.3 CONCLUSION

This LCVIA employs a rigorous, best practice methodology to identify levels of visual impacts and potential mitigation measures, based on a professional evaluation.

Whilst it is acknowledged that the perceived visual impact of the Proposal will vary from viewer to viewer, the methodology used to evaluate visual impact in this instance is informed by internationally accredited approaches and the author's 20 years of experience in the field of visual impact.

Elizabeth Drive.

10.0 CONCLUSION

Although the majority of viewpoints rate at the moderate to high/moderate rating, it is recognised that the number of current static visual receivers is highly limited as a result of the small number of existing private residences that are located along Elizabeth Drive, with a greater number of transient viewers seeing the site while travelling along Elizabeth Drive and the unnamed access road to the resource recovery facility. Furthermore, topography and existing vegetation highly obstruct or filter views of the site within the surrounding landscape for private dwellings.

It is further noted that although the viewpoints in immediate proximity to the southern boundary of the site rate highly in terms of impacts (changes to the current visual scene), the proposed landscaping introduces significant new levels of planting in terms of numbers and species diversity at these locations (frontage planting) as well as elsewhere throughout the site which helps to filter views of the new built-form as well as add visual amenity for vehicles travelling along Elizabeth Drive.

On balance it is the professional opinion of the authors of this assessment that the visual impacts combined with the overall visual catchment of the Proposal as well as its location within the Western Sydney Priority Growth Area (and restrictions of future land uses) are such that they would not constitute reasons to hinder approval on visual impact grounds.

11.0 Appendix

Elizabeth Drive.