CLOUSTON associates

LENDLEASE
JORDAN SPRINGS BASINS C & V6
LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

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JORDAN SPRINGS BASINS C & V6 LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

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Note: This document is Preliminary unless Validated.

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Jordan Springs Main Lake

EXECUTIVE SUMMARY

CLOUSTON Associates has been engaged to prepare an assessment of the surrounding visual catchment and key views in relation to the proposed Basins C & V6 within the St Marys Development Site that informs a Landscape Character and Visual Impact Assessment (LCVIA) report.

Basins C & V6 will be located on land within the St Marys Development Site in the Penrith Local Government Authority (LGA). The site is located approximately 45 kilometres west of the Sydney central business district, 12 kilometres west of the Blacktown city centre and 5 kilometres north-east of the Penrith city centre. The proposed basins are both located to the immediate south of the existing residential development of Jordan Springs consisting of 1-2 storey detached dwellings.

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 landscape character surrounding the proposed Basins C & V6 is a contrast between the remaining vegetation types of the Wianamatta Regional Park which include weedy Freshwater wetlands, moderate quality River Flat Eucalypt forest and areas of exotic grassland and the surrounding suburban developments of Jordan Springs, Cranebrook, Cambridge Gardens and Werrington Downs.

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.

Of the 8 viewpoints selected and analysed the findings are as follows:

- **negligible** impact ratings - 5
- **low** impact ratings - 1
- **moderate/low** - 1
- **high/moderate** impact ratings - 1

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 plantings if mitigation is required to alter 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 are such that they would not constitute reasons to hinder approval of the proposed basins.

PART A

existing conditions

1.0 Introduction

Maid Lake, Jordan Springs

1.0 INTRODUCTION

1.1 PROPOSAL INTRODUCTION

Basin C and V6 (hereafter referred to as the Proposal) is intended to form part of the stormwater management strategy for the St Marys development site and are critical to achieving the watercycle performance objectives under the Sydney Regional Environmental Plan No. 30 - St Marys (SREP 30). The Proposal will provide stormwater detention and water quality treatment for stormwater runoff received from the Village 3 and Village 6 residential developments in Jordan Springs.

1.2 PURPOSE OF THIS REPORT

CLOUSTON Associates has been commissioned by Lendlease to prepare this Landscape Character and Visual Impact Assessment (LCVIA) for the Proposal in line with the requirements of the Department of Planning and Environment (DP&E) Secretary's Environmental Assessment Requirements (SEARs).

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

Delany Circuit, Jordan Springs.

2.0 METHODOLOGY

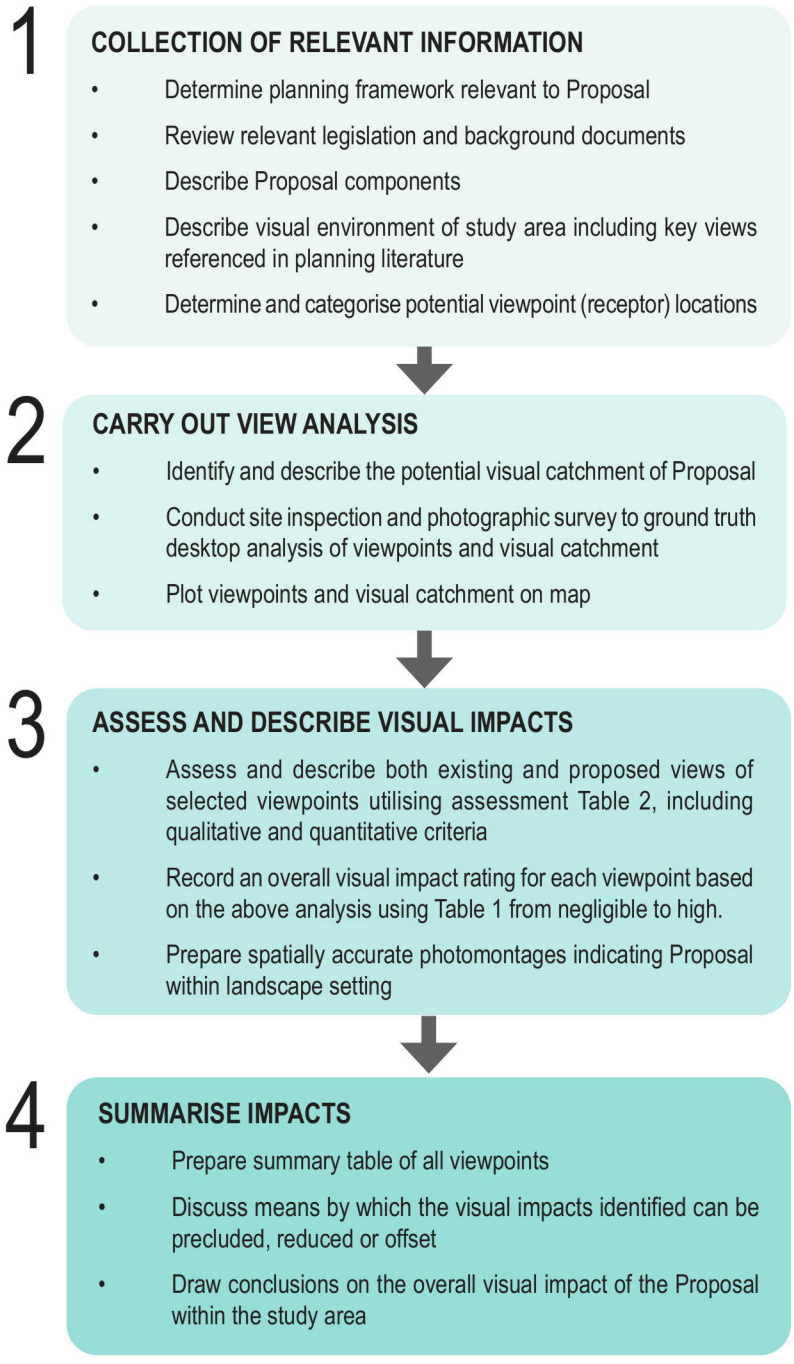


Figure 2.0 - Summary of CLOUSTON methodology

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 if 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 off-site)

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

LOCATION	
DISTANCE	
RECEPTORS	
NO. OF VIEWERS	
EXISTING VIEW	

Viewpoint location
Distance to Proposal site boundary
Description of viewers
Number of viewers
Description of current view

EXPECTED VISUAL IMPACT

Description of expected view

Receptor Type	Public
Viewpoint Number	13
Sensitivity rating of receptor	LOW
Magnitude - Distance	MODERATE
Magnitude - Quantum of view	HIGH
Magnitude - Period of View	LOW
Magnitude Scale of change	HIGH
Overall Magnitude rating	MODERATE
Overall VISUAL IMPACT RATING (combination of sensitivity and magnitude ratings	MODERATE/LOW

Assessment matrix table
Overall visual impact rating

Table 3: Example of Assessment Format Before Mitigation Measures.

3.0 PLANNING CONTEXT

LEGISLATIVE POLICY AND CONTEXT

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

A. The Land and Environment Court Planning Principles;
B. Environmental Planning and Assessment Act 1979;
C. Sydney Regional Environmental Plan No. 30 - St Marys;
D. State Environmental Planning Policy (Infrastructure) 2007;
E. State Environmental Planning Policy No. 19 - Bushland in Urban Areas;
F. State Environmental Planning Policy No. 55 - Remediation of Land;
G. Penrith Local Environmental Plan 2010.

An comprehensive examination of the wider planning context can be found in the EIS.

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.

Extent of the impact

- The impact on views from living areas is more significant than from bedrooms or service areas.

3.0 PLANNING CONTEXT

- 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.

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.
- 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).

3.0 PLANNING CONTEXT

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.

3.2 Environmental Planning and Assessment Act 1979

The EP&A Act provides the statutory framework for planning in NSW. The Act aims to promote the orderly and economic use and development of land, facilitate ecologically sustainable development and integrate economic, environmental and social considerations as part of the decision-making processes for environmental planning and assessment matters.

Section 4.10 of the EP&A Act specifies designated development as development that is declared to be designated development by an EPI or the EP&A Regulation. The development meets the criteria of designated development under Schedule 3, clause 4(1) of the EP&A Act.

3.3 Sydney Regional Environmental Plan No. 30 - St Marys (SREP 30)

SREP 30 is a State Environmental planning Policy under the Environmental Planning and Assessment Act 1979 (EP&A Act) and is the primary statutory planning framework for the redevelopment and management of land across the St Marys Development Site.

SREP 30 outlines the desired performance objectives for all development across the site including, but not limited to, environmental outcomes relating to air quality, heritage, watercycle, soils, transport and waste management.

The zoning arrangement for the St Marys Development Site under SREP 30 consists of 6 zones, including:

- Regional Park;
- Regional Open Space;

3.0 PLANNING CONTEXT

- Employment;
- Urban:
- Road and Road Widening;
- Drainage.

Basins C & V6 are proposed on land currently zoned 'Regional Park' under the SREP 30. Development for the purpose of stormwater drainage is not permissible in the 'Regional Park' zone. However, the basins are permissible under Section 111A of *State Environmental Planning Policy (Infrastructure) 2007.*

Amendments are currently proposed to SREP 30 (draft amendment No. 3) involving revisions to the zoning arrangement for land zoned 'Drainage' to reflect the proposed relocation of drainage infrastructure including on-site detention basins. The proposed amendments to SREP 30, if supported by the Minister of Planning, will result in Basins C & V6 being contained entirely on land zoned 'Drainage' and will therefore be wholly permissible under the SREP.

3.4 State Environmental Planning Policy (Infrastructure) 2007
The Infrastructure SEPP identifies the environmental assessment category into which different types of infrastructure and services development fall.

Section 110 of the Infrastructure SEPP categorises works for the collection, detention and discharge of stormwater (such as detention basins) as a 'stormwater management system'. Under section 111A of the Infrastructure SEPP, development for the purpose of a stormwater management system may be carried out by any person with consent on any land. Accordingly, the construction of the basins is permissible with consent under this clause.

3.5 State Environmental Planning Policy No. 19 - Bushland in Urban Areas
State Environmental Planning Policy No. 19 – Bushland in Urban Areas (SEPP 19) aims to protect and preserve bushland within the urban areas to enable existing plant and animal communities to survive in the long term including rare and endangered flora and fauna species. The Penrith LGA is identified as an area to which SEPP 19 applies.

3.6 State Environmental Planning Policy No.55 - Remediation of Land
State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) applies to the State and aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment by specifying when consent is required, and when it is not required, for a remediation work. In accordance with SEPP 55, a consent authority must not consent to the carrying out of any development on land unless it has considered whether the land is contaminated and, if the land is contaminated, it is satisfied that the land is suitable in its contaminated state for the purpose for which the development is proposed to be carried out.

A contamination assessment will form part of the EIS to inform the consent authority of the contamination status of the site.

3.7 Penrith Local Environmental Plan 2010
The Penrith Local Environmental Plan 2010 (PLEP 2010) regulates development throughout the Penrith LGA. As SREP 30 applies to the St Marys Development Site, the

4.0 Landscape Character and Visual Environment

Delany Circut, Jordan Springs

4.0 LANDSCAPE CHARACTER AND VISUAL ENVIRONMENT

EXISTING LANDSCAPE CHARACTER

Landscape character is a combination of distinctive qualities of a certain area including readily identifiable elements such as landform, vegetation cover, built-form & architecture, as well as history, seasonal changes, human culture, urban grain, wildlife and land use. Together these elements produce a distinctive character that influences how the landscape is perceived and valued by the community.

The predominant landscape character and land uses can be classified into five separate groupings which can be seen in Figure 4.1 and include:

- residential;
- commercial;
- open space and recreation;
- Regional Parks; and
- rural landscapes.

4.1 RESIDENTIAL LANDSCAPE

The Proposal is most closely linked to the Western Precinct of the St Marys Development Site. To the immediate north of the basins a mixture of single and two level detached dwellings are present within Jordan Springs and consist of a varied mixture of building materials and styles, however brick is the most common of building materials used.

These housing styles are found throughout the wider Western Precinct of Jordan Springs, and the detached housing type is found in the surrounding area such as Cambridge Gardens, Werrington Downs and Cranebrook, although these dwellings are more varied in terms of style and construction date.

To the north of the basins and the boundary of the Western Precinct of Jordan Springs is the suburb of Llandilo which is a rural suburb consisting of many small farms of mainly 1-2 acres which is a contrast to the more compact residential living types of Jordan Springs and its western and southern surrounds.

4.2 COMMERCIAL LANDSCAPE

Commercial development within the vicinity of the basins is highly limited. The central Jordan Springs township area is the most significant commercial footprint in proximity to the basins and consists of a mixture of retail activities including dining, fitness and beauty, with Woolworths being the largest of these operations. The Jordan Springs Sales and Information Centre is also located within this area.

Large industrial estates are located to both the south-east and south-west of the basins at approximately 3.5km and 4km respectively.

4.3 OPEN SPACE AND RECREATION

A mixture of active and passive open space and recreation opportunities are in proximity to the basins and include neighbourhood, local and district level parks, playgrounds, a village oval, a golf driving range and golf course, allowing for a diverse mixture of recreation opportunities.

4.0 LANDSCAPE CHARACTER AND VISUAL ENVIRONMENT

Figure 4.1 - Coarse Grain Existing Landscape Character

4.0 LANDSCAPE CHARACTER AND VISUAL ENVIRONMENT

In the wider area a number of reserves and nature reserves are present, as well as significant recreation opportunities including the Sydney International Regatta Centre, Penrith Whitewater Stadium, walking tracks, community centres, off leash dog parks, and a diverse mixture of playing fields catering for a range of sporting codes.

4.4 WIANAMATTA REGIONAL PARK

One of the most dominant features in the immediate vicinity (and the area that the basins are located in) is the Wianamatta Regional Park, which includes heritage listed Cumberland Plain Woodland and provides natural habitat for native wildlife and flora. The Regional Park covers approximately 900 hectares and includes land from the former Australian Defence Industries (ADI) site at St Marys in Western Sydney. The overall ADI site has an area of 1545ha and stretches approximately 7 kilometres east to west and 2 kilometres north to south.

The Regional Park became one of the most significant parks with the handover of privately held land from Lendlease to public ownership, however public access is not currently possible surrounding the basins.

4.5 SURROUNDING RURAL LANDS

To the north of the basins are the rural lands of Llandilo which are comprised of small rural holdings and market gardens. Built form within this area is comprised of mainly low-scale buildings amongst scattered groupings of mature vegetation. Large areas are comprised of cleared grasslands common to rural areas in order to support rural activities.

4.6 FLORA AND FAUNA

Remnants of Cumberland Plain vegetation communities including Alluvial Woodland, Shale Plains Woodland, Cooks River/Castlereagh Ironbark Forest and Shale/Gravel Transition Forest are all located within proximity to the basins, with the majority of these located within the Wianamatta Regional Park.

A number of threatened plant species are also located within the area, including *Dillwynia tenuifolia, Pultenaea parviflora, Micromyrtus minutiflora, Persoonia nutans, Pimelea spicata and Grevillea juniperina subsp. juniperina* (Wianamatta Regional Park Plan of Management, NSW National Parks & Wildlife Service, 2011).

4.7 NATURAL TOPOGRAPHY

The topography of the surrounding area can be broadly described as moving from a lower elevation in the east to a higher one in the west moving closer to the Blue Mountains. Basins C & V6 sit within the relative mid-ground in terms of elevation for the immediate area between 30m-33m.

The broader landscape demonstrates varied topography, with Jordan Springs lying between two slightly more elevated land areas to either side as a result of South Creek in the east and the Nepean River in the west as can be seen in Figure 4.2.

4.0 LANDSCAPE CHARACTER AND VISUAL ENVIRONMENT

View 1 - Typical Residential Development In Surrounding Area. Stitched Using 50mm Focal Length

View 2 - Commercial Centre of Jordan Springs on Lakeside Parade. Stitched Using 50mm Focal Length

View 2 - Mature Vegetation In Wianamatta Regional Park. Stitched Using 50mm Focal Length

View 4 - Surrounding Rural Landscape of Llandilo. Stitched Using 50mm Focal Length

4.0 LANDSCAPE CHARACTER AND VISUAL ENVIRONMENT

4.8 HERITAGE

Both basins sit within the area that belonged to the Mulgoa people prior to European settlement. Shortly after the arrival of the First Fleet in Australia in 1788, an outbreak of smallpox resulted in the decimation of many local indigenous communities.

The first European land grant in the Llandilo area was made to Samuel Terry in 1818, and the landholdings have reduced steadily (and significantly) in size since then.
A significant amount of previous land use disturbance has occurred in the area. The surrounding area was used for grazing and farming for approximately 150 years before construction of factories and munitions storage during the 1940s (on the ADI site) as a result of the war. During the 1950s further construction resulted in storage bunkers, increased road construction, channels and bridges contributing to localised disturbance to potential Aboriginal heritage sites, but these land use disturbances are generally highly localised.

5.0 Visual Catchment Analysis and Viewpoint Selection

Residential Street within Jordan Springs.

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 Basin C (*Figure 5.1: Basin C Potential Viewshed*) and Basin V6 (*Figure 5.2: Basin V6 Potential Viewshed*) 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.

Based on the above, the selection criteria for the views assessed in detail in section 8.0 include, in order of priority:

- Views from the public domain (principally streets, parks and waterways);
- Views of pedestrians and cyclists;
- Close and direct views;
- Views from transport (private and public);
- Distant and filtered views.

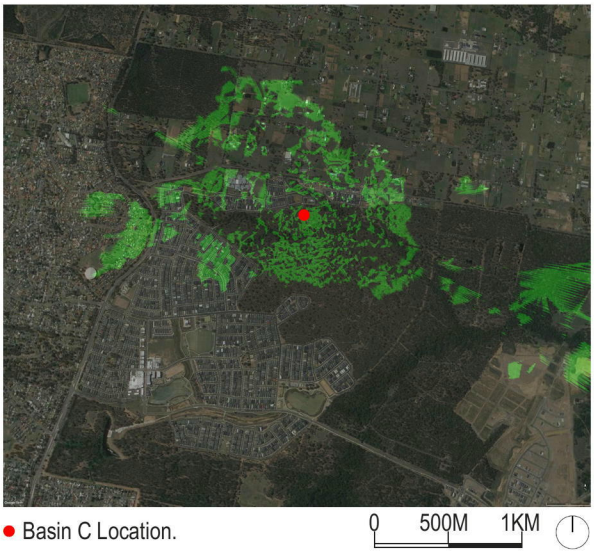


Figure 5.1: Basin C Potential Viewshed.

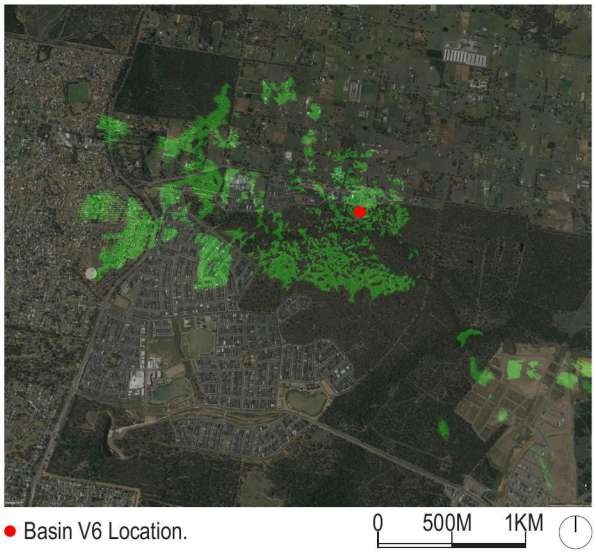


Figure 5.2: Basin V6 Potential Viewshed.

PART B

visual impact assessment

Surrounding Rural Landscape.

Regenerating River-flat Eucalypt forest within Wianamatta Regional Park.

6.0 THE SITE

6.1 SITE LOCATION AND CONTEXT

Basins C & V6 will be located on land within the St Marys Development Site in the Penrith Local Government Authority (LGA). The site is located approximately 45 kilometres west of the Sydney central business district, 12 kilometres west of the Blacktown city centre and 5 kilometres north-east of the Penrith city centre.

The broader St Marys Development Site extends across both the Penrith and Blacktown LGAs and includes the suburbs of Ropes Crossing, Jordan Springs and parts of Llandilo and St Marys. The Penrith and Blacktown LGA boundary bisects the site and generally follows the alignment of South Creek in a north-south direction.

In its entirety, the site comprises 1,545 hectares (ha) and extends approximately 7km from east to west and 2 km from north to south (*Figure 6.1: Basins C & V6 Locations with the St Marys Development Site*). The broader site area is physically bound by:

- Ninth Avenue in Llandilo and Palmyra Avenue in Shanes Park to the north;
- Palmyra Avenue in Willmot and Shalvey and Forrester Road in Lethbridge Park, Tregear and North St Marys to the east;
- Dunheved Golf Club and the suburbs of Werrington County, Werrington Downs and Cambridge Gardens to the south; and
- the Northern Road in Cranebrook to the west.

Basins C & V6 are proposed on land located within the Hawkesbury-Nepean River Catchment and will be positioned approximately 2.5km west of South Creek which traverses the St Marys Development Site. The proposed basins are both located to the immediate south of existing residential development in Jordan Springs consisting of 1-2 storey detached dwellings.

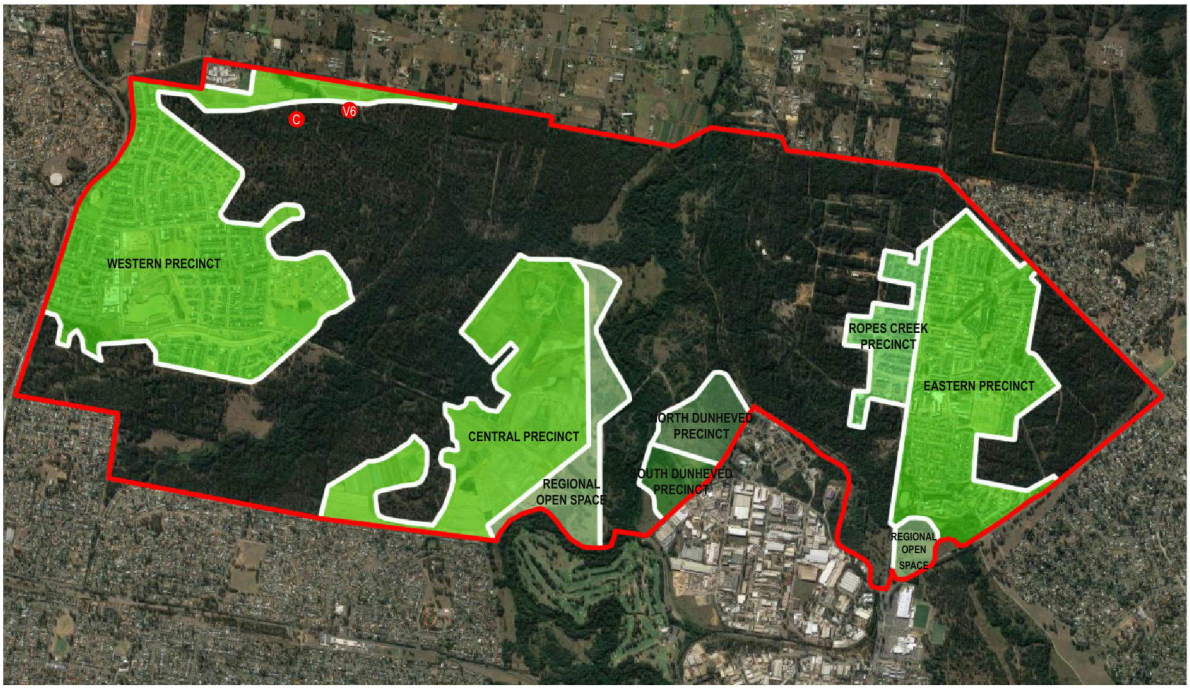
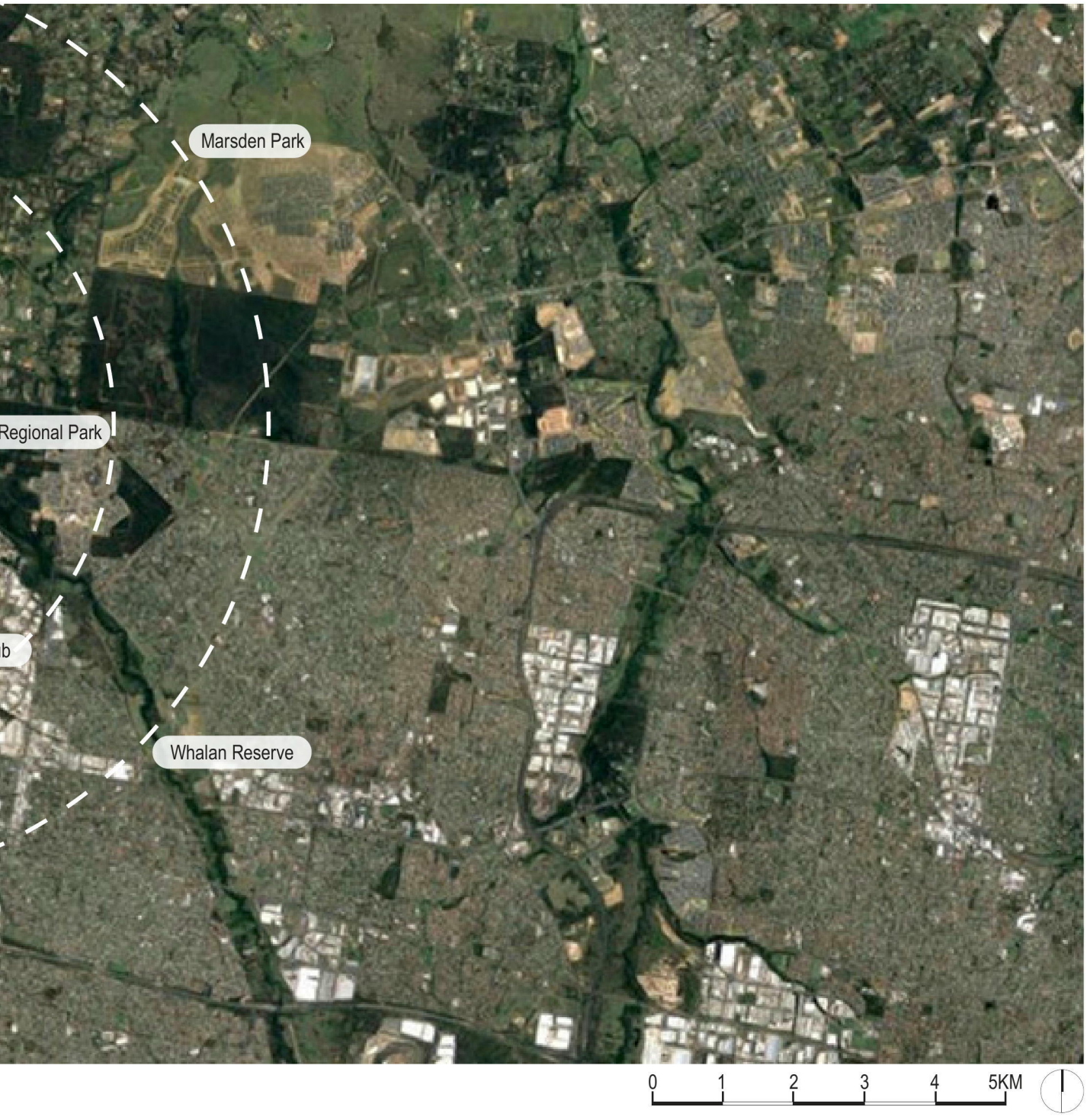


Figure 6.1: Basin C & V6 Locations within the St Marys Development Site.

0 1KM

6.0 THE SITE

Figure 6.1: Surrounding Context of Basins C & V6.



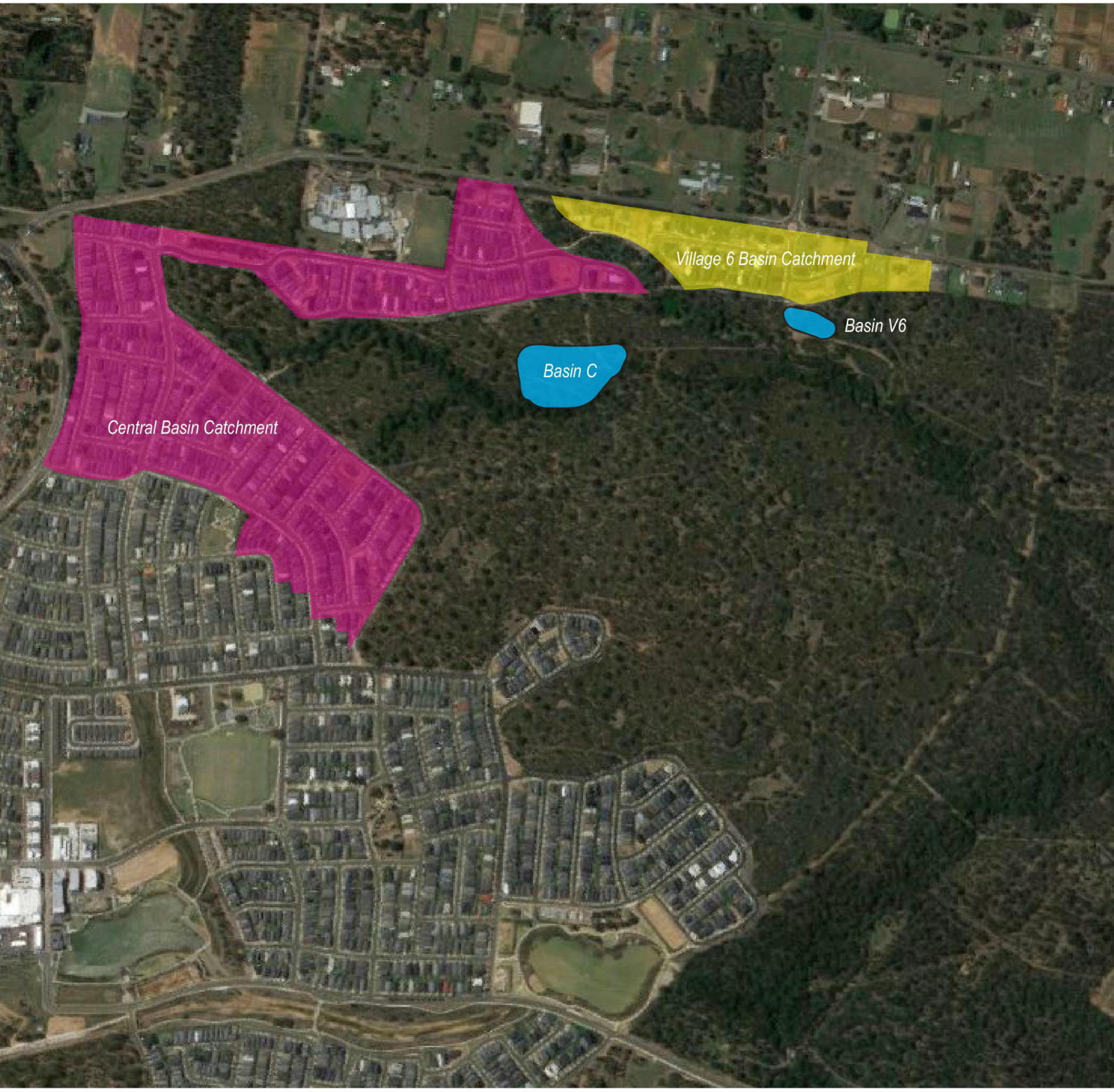


Figure 7.1: Basins C & V6 Locations.

7.0 THE PROPOSAL

The proposal involves the construction of two detention basins (Basins C and V6) to detain, treat and attenuate stormwater runoff from Village 3 and Village 6; the Jordan Springs development. The basins are located within the north-western extent of the St Marys Development Site and within the Wianamatta Regional Park. Basins C and V6 will be constructed wetlands and act as water quality improvement basins with the provision for active stormwater detention during high flows.

Basin C will have a surface area of approximately 1.8 hectares and a notional depth of 1.7m. Whereas Basin V6 approximately 0.3 hectares and a notional depth of 1.6m

Each basin is designed to contribute to the water quantity and quality management objectives under the Sydney Regional Environmental Plan No. 30 – St Marys (SREP 30) and Penrith City Council's (Council) Water Sensitive Urban Design Policy (December 2013). The basins will incorporate the features for both water quality treatment and detention including a drainage inlet point, low level culvert outlet, spillway with erosion protection and vegetated slopes to provide effective nutrient removal. An access track along the side of each basin with access ramps will be constructed for regular inspection and maintenance access.

Figure 7.2: Basins C Concept Design.

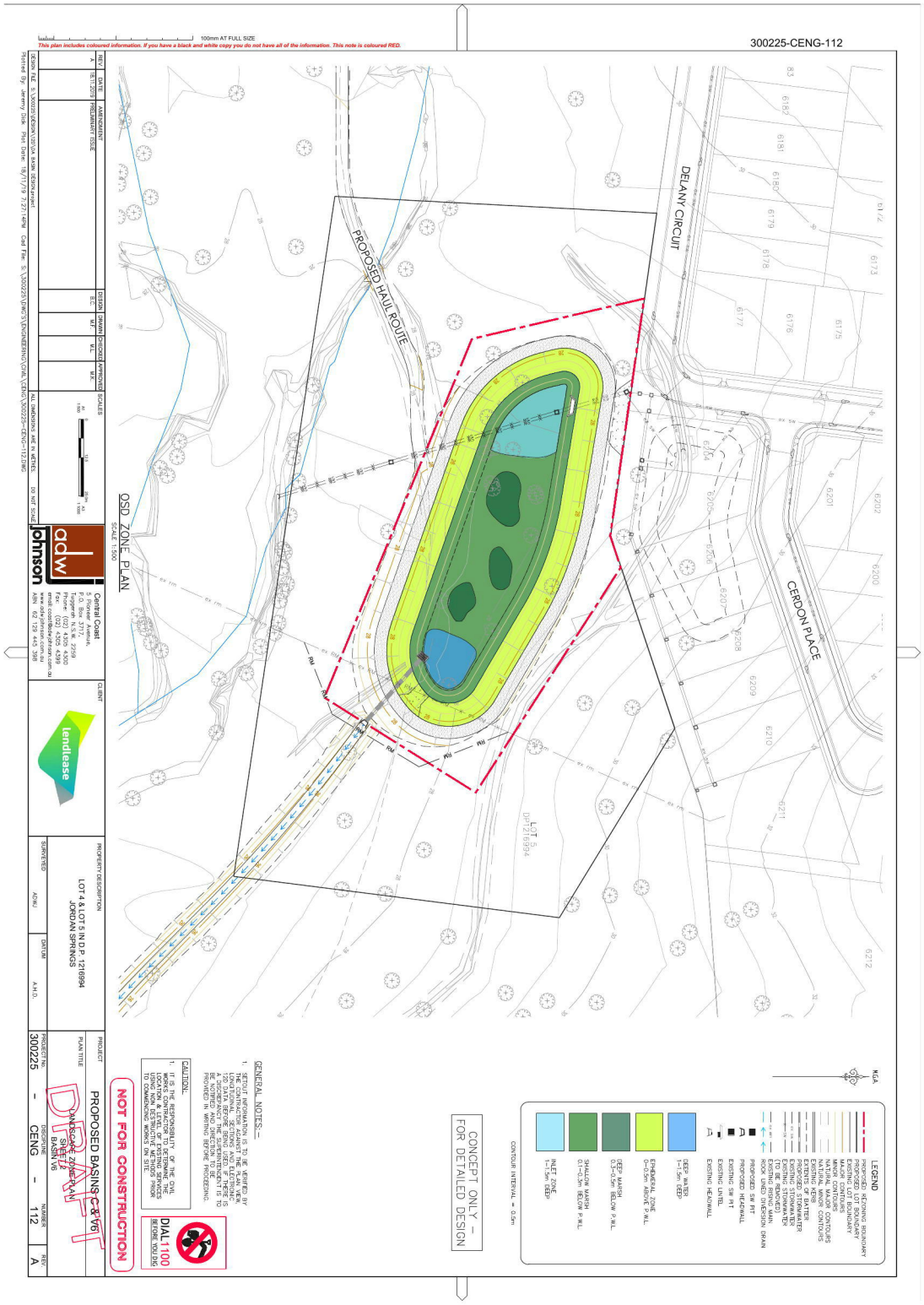


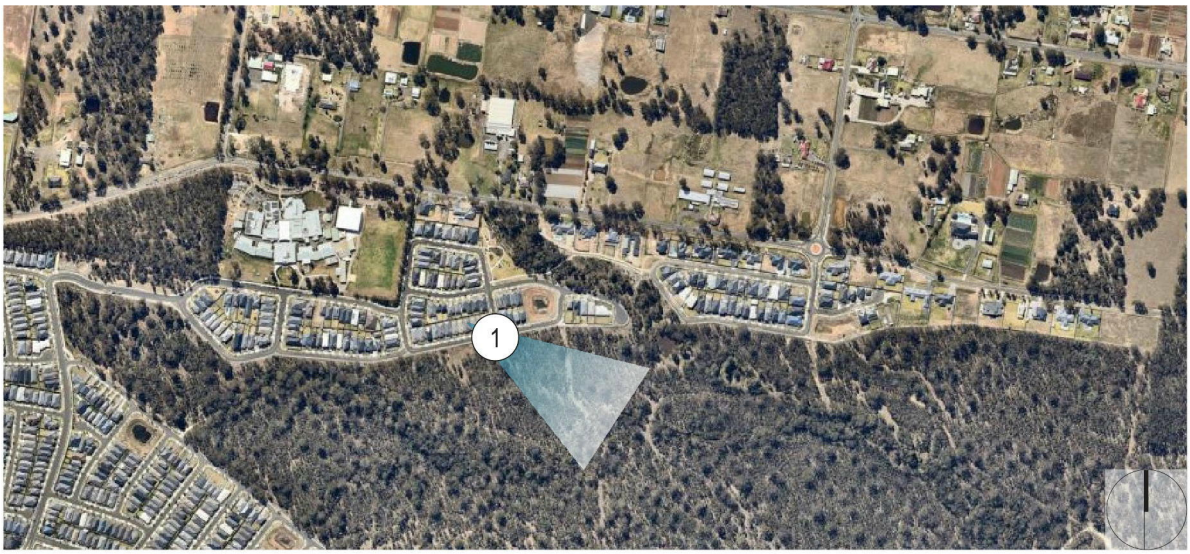
Figure 7.3: Basins V6 Concept Design.

Figure 8.1: Viewpoint Locations.

8.0 VISUAL IMPACT ANALYSIS

Based on the foregoing selection criteria this section maps and describes 8 views of the site from a variety of close and more distant viewpoints. A photograph of each viewpoint is accompanied by a description of the view and the major visual elements within that view.

VIEWPOINT 1



Viewpoint Location.

Viewpoint 1.

8.0 VISUAL IMPACT ANALYSIS

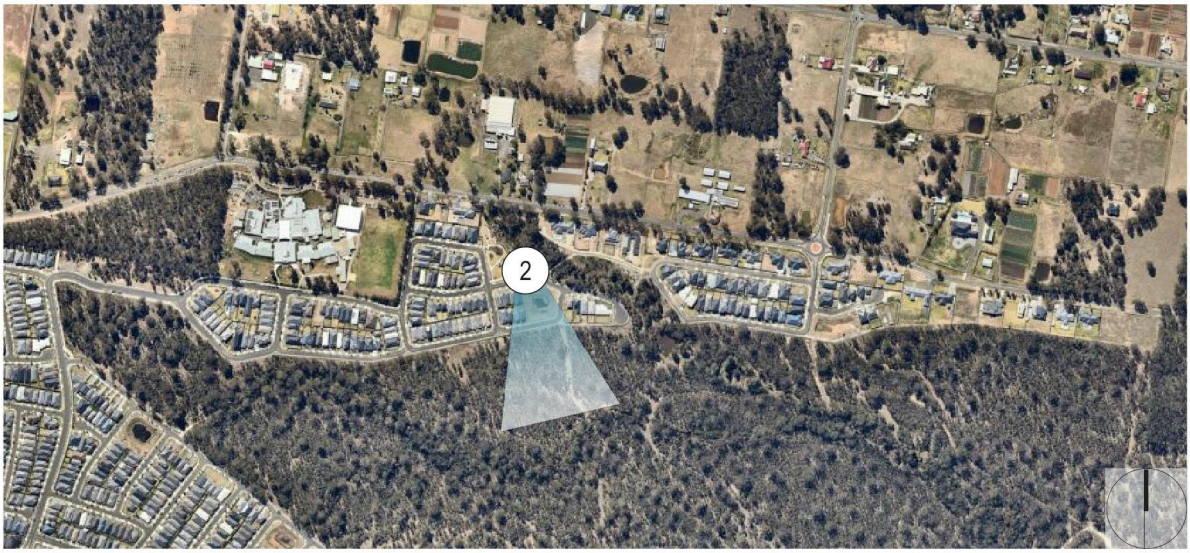
LOCATION	Corner of Bethany Circuit & Agnes Way.
DISTANCE	85m.
RECEPTORS	Road Users, Pedestrians, Private Residences.
NO. OF VIEWERS	Low.
EXISTING VIEW	Mature vegetation on the northern border of Wianamatta Regional Park can be seen running parallel to Agnes Way and is separated by low height metal fencing. Juvenile street tree planting can be seen running along Agnes Way as well as front garden planting for a number of private residences.

EXPECTED VISUAL IMPACT

As a result of significant mature vegetation within Wianamatta Regional Park and the position of Basin C, views of the basin will not be possible and its presence will be indiscernible to either road or footpath users, or occupants of the dwellings facing the direction of the basin.

Receptor Type	Public
Viewpoint Number	1
Sensitivity rating of receptor	LOW
Magnitude - Distance	HIGH
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

VIEWPOINT 2



Viewpoint Location.

Viewpoint 2

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Public Park on Nagle Street.
DISTANCE	170m.
RECEPTORS	Park Users, Pedestrians.
NO. OF VIEWERS	Low.
EXISTING VIEW	In the foreground can be seen the southern edge of the park as well as pedestrian walkway that passes trough the park. Beyond this in the mid-ground can be seen a large open space that is occupied by a detention basin. To either side of this can be seen completed private residences. In the distance can be seen significant mature vegetation of Wianamatta Regional Park.

EXPECTED VISUAL IMPACT
As a result of the mature vegetation within Wianamatta Regional Park views of Basin C will not be possible from this location and its presence will be indiscernible in the wider view.

Receptor Type	Public
Viewpoint Number	2
Sensitivity rating of receptor	MODERATE
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

VIEWPOINT 3

Viewpoint Location.

Viewpoint 3

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Public Walkway on Agnes Way.
DISTANCE	80m.
RECEPTORS	Road Users, Pedestrians.
NO. OF VIEWERS	Low.
EXISTING VIEW	Mature vegetation within Wianamatta Regional Park occupies nearly the entire visual scene. In the immediate foreground can be seen metal fencing that runs along Agnes Way preventing public access to the park as well as a clearing of vegeation which creates an informal track.

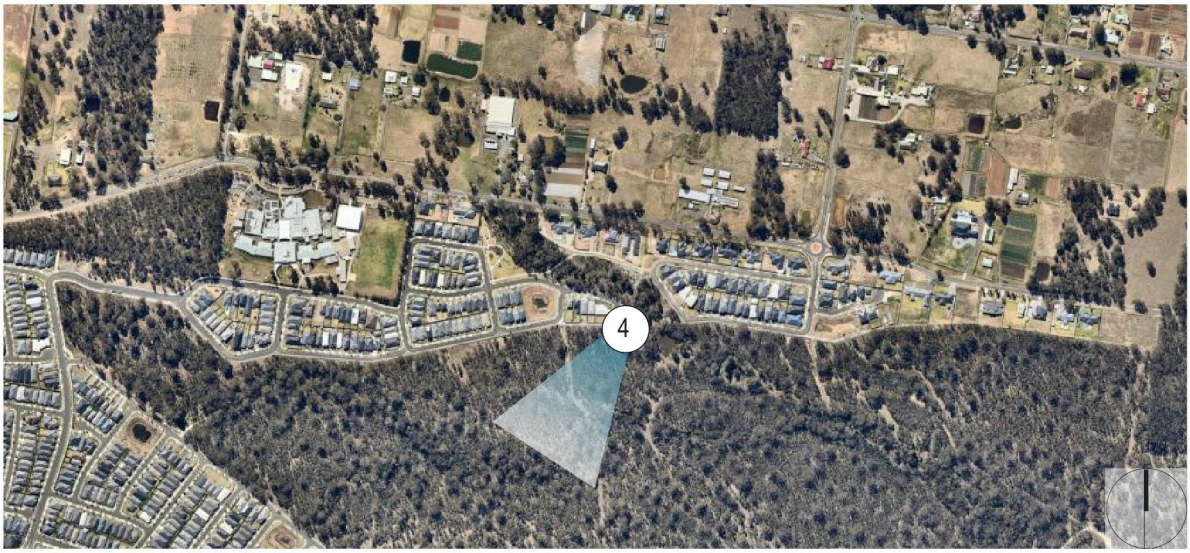
EXPECTED VISUAL IMPACT

The current vegetation clearing which creates an informal access way within Wianamatta Regional Park will become an access point which will result in a highly framed view of Basin C being possible. In order to accommodate the basin a quantum of vegetation will be removed which will result in a number of trees currently visible in the distance being removed.

Although a number of trees will be removed, these will be replaced by views of mature trees beyond the basin which will minimise the visual impact caused by any vegetation removal and maintain the currently unbroken treeline view in the distance.

Receptor Type	Public
Viewpoint Number	3
Sensitivity rating of receptor	LOW
Magnitude - Distance	HIGH
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

VIEWPOINT 4



Viewpoint Location.

Viewpoint 4.

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Nagle Street (eastern end turning head).
DISTANCE	100m.
RECEPTORS	Road Users.
NO. OF VIEWERS	Low
EXISTING VIEW	Mature vegetation within Wianamatta Regional Park occupies the visual scene, with metal fencing running parallel to Agnes Way preventing public access to the park also visible in the foreground.

EXPECTED VISUAL IMPACT
As a result of mature vegetation within Wianamatta Regional Park, views of Basin C will not be possible from this location and its presence will be indiscernible in the wider view.

Receptor Type	Public
Viewpoint Number	4
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

VIEWPOINT 5

Viewpoint Location.

Viewpoint 5.

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Delany Circuit.
DISTANCE	170m.
RECEPTORS	Road Users, Pedestrians, Private Residences.
NO. OF VIEWERS	Low.
EXISTING VIEW	To the right of the view can be seen the northern border of Wianamatta Regional Park with significant mature vegetation that recedes into the distance. A change in level is noticeable between the park and Delany Circuit. To the left of the view can be seen juvenile street tree planting running parallel to Delany Circuit and receding into the distance. A small number of double storey private residences can be seen to the very left of the view.

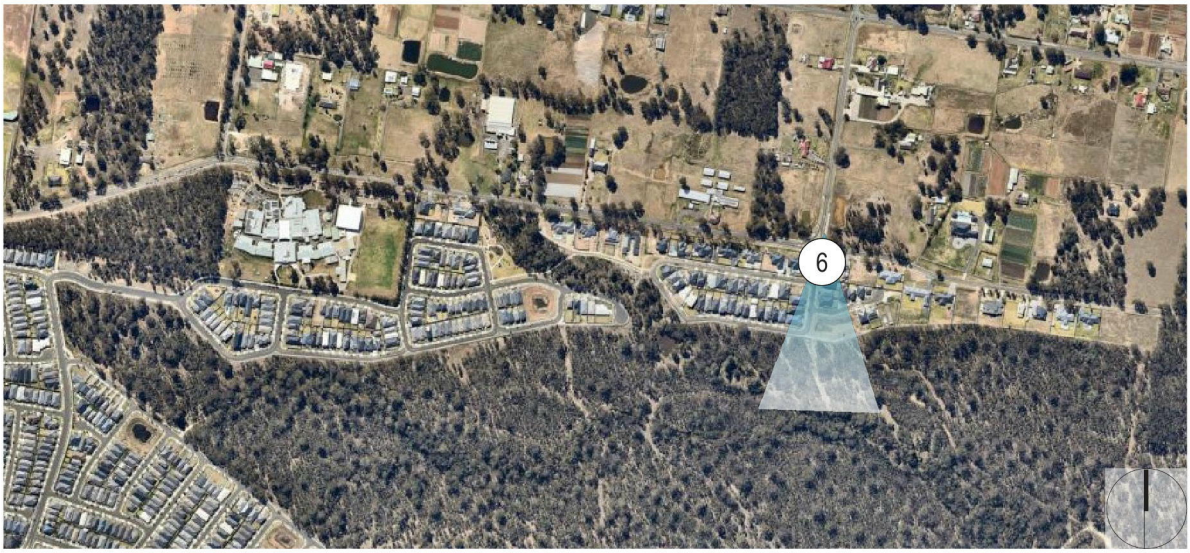
EXPECTED VISUAL IMPACT

As a result of mature vegetation within Wianamatta Regional Park to the right of the view, the presence of Basin V6 will be largely obstructed from this location. In order to accommodate the basin a number of trees will need to be removed, and this will be visible in the far distance (at the end of road in this view).

Although the removal of a small number of trees will occur, views of existing trees beyond this will result in the continued unbroken view of vegetation in the distance and a negligible visual impact.

Receptor Type	Public
Viewpoint Number	5
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

VIEWPOINT 6



Viewpoint Location.

Viewpoint 6.

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Ninth Avenue Roundabout.
DISTANCE	150m.
RECEPTORS	Road Users, Pedestrians.
NO. OF VIEWERS	Low.
EXISTING VIEW	To either side of the view can be seen a small number of single storey private residences on Delany Circuit. In the distance can be seen the northern border of Wianamatta Regional Park with significant mature vegetation that is visible above the roofs of the dwellings.

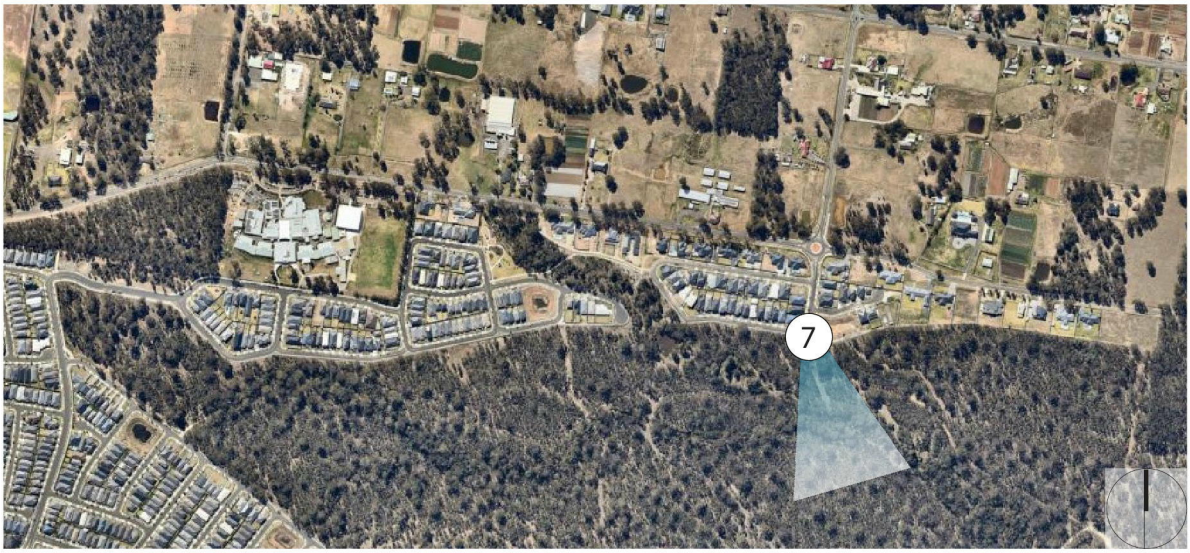
EXPECTED VISUAL IMPACT

A number of mature trees will be removed in order to accommodate Basin V6 and this will be noticeable from this position given the basins position on the very northern edge of Wianamatta Regional Park.

Although a reduction in vegetation in the centre of the view at the edge of the Regional Park will occur, views over the basin to the distance means that vegetation beyond the basin will be visible, therefore maintaining the unbroken band of vegetation currently visible.

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

VIEWPOINT 7



Viewpoint Location.

Viewpoint 7.

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Delany Circuit (approx. Number 10)
DISTANCE	10m.
RECEPTORS	Road Users, Pedestrians.
NO. OF VIEWERS	Low.
EXISTING VIEW	The view is entirely comprised of mature vegetation on the northern border of the Wianamatta Regional Park.

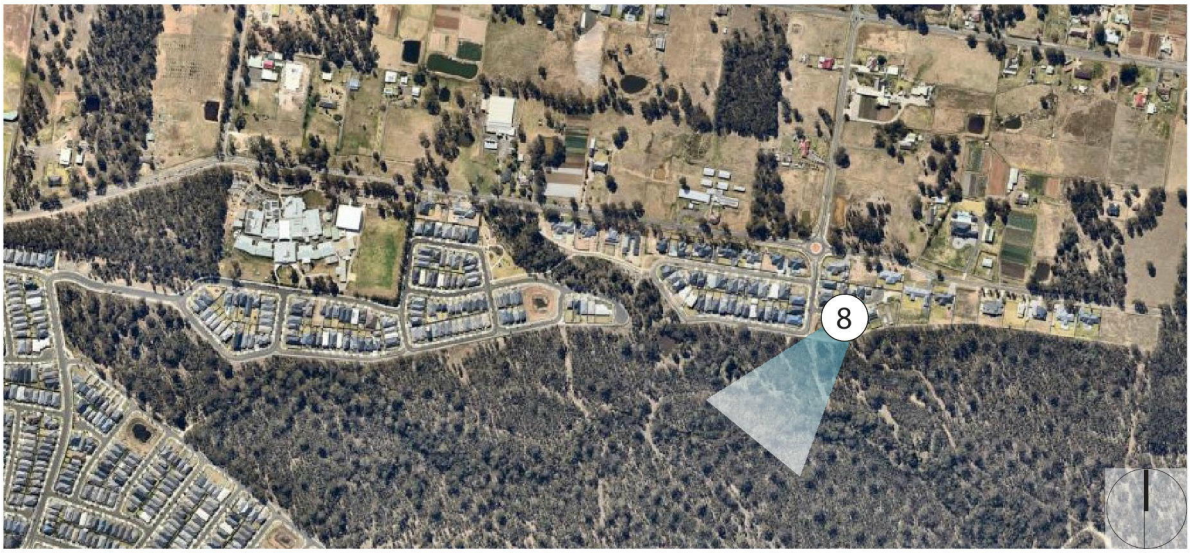
EXPECTED VISUAL IMPACT

As a result of the proximity of the viewpoint to Basin V6, the basin will dominate the view. Existing mature vegetation currently visible will be removed and replaced by the basin resulting in a more open foreground visual scene.

Views over the basin will be possible and will allow for visual access to mature vegetation beyond the basin, helping to lessen the impact of the removal of vegetation in the foreground.

Receptor Type	Public
Viewpoint Number	7
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

VIEWPOINT 8



Viewpoint Location.

Viewpoint 8.

8.0 VISUAL IMPACT ANALYSIS

LOCATION	Cerdon Place.
DISTANCE	70m.
RECEPTORS	Road Users, Pedestrians.
NO. OF VIEWERS	Low.
EXISTING VIEW	In the mid-ground view can be seen a detention basin that is surrounded by metal fencing to prevent access. Beyond this can seen mature vegetation on the northern border of the Wianamatta Regional Park.

EXPECTED VISUAL IMPACT

In order to accommodate Basin V6, a number of mature trees will be removed from the northern border of Wianamatta Regional Park in the mid-ground of the view. This will result in a more open border of the park as opposed to the largely unbroken line of mature trees that currently runs along the border.

Views of mature vegetation beyond the basin will be possible which will maintain the current green band that is visible and minimise the impact of the removal of the existing vegetation in order to accommodate the basin.

Receptor Type	Public
Viewpoint Number	8
Sensitivity rating of receptor	LOW
Magnitude - Distance	HIGH
Magnitude - Quantum of view	LOW
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/LOW

Neighbourhood Park on Nagle Street.

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. Corner of Bethany Circuit & Agnes Way.	L	H	N	N	N	N	NEGLIGIBLE
2. Public Park on Nagle Street.	M	M	N	N	N	N	NEGLIGIBLE
3. Public Walkway on Agnes Way.	L	H	N	N	N	N	NEGLIGIBLE
4. Nagle Street (eastern end turning head).	L	M	N	N	N	N	NEGLIGIBLE
5. Delany Circuit.	L	M	N	N	N	N	NEGLIGIBLE
6. Ninth Avenue Roundabout.	L	M	L	N	L	L	LOW
7. Delany Circuit (approx. Number 10)	M	H	H	L	H	H	HIGH/MODERATE
8. Cerdon Place.	L	H	L	L	M	M	MODERATE/LOW

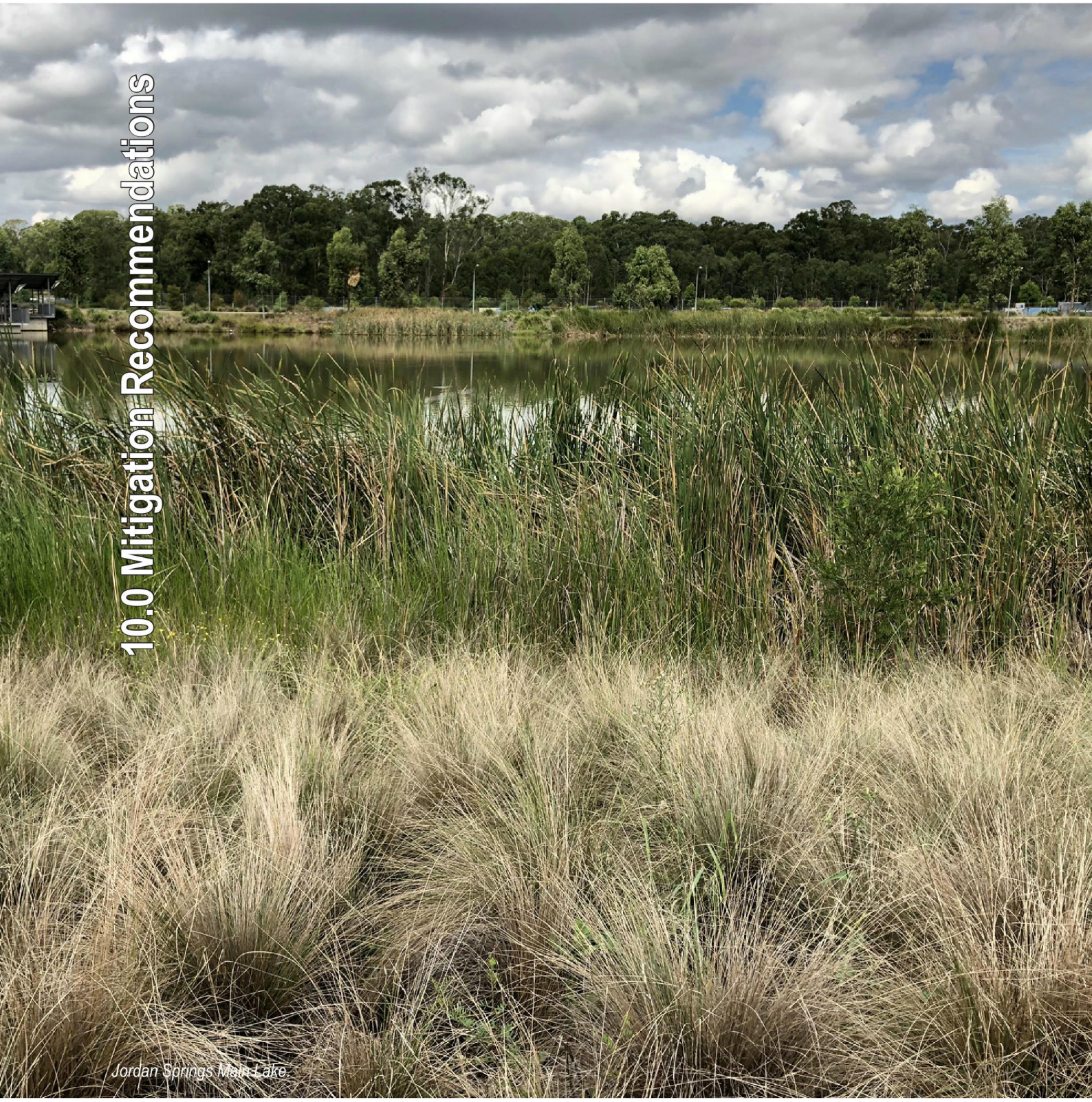
Summary of Visual Impacts of the Proposal Across the Study Area.

8.1 VISUAL IMPACT SUMMARY

The visual impacts of the Proposal on the studied viewpoints range from negligible to high.

- Five viewpoints received an impact rating of Negligible
- One viewpoint received an impact rating of Low
- One viewpoint received an impact rating of Moderate/Low
- No viewpoints received an impact rating of Moderate
- One viewpoint received an impact rating of High/Moderate
- No viewpoint received an impact rating of High

10.0 Mitigation Recommendations



Jordan Springs Main Lake

9.0 MITIGATION RECOMMENDATIONS

9.1 APPROACHES TO MITIGATION

There are typically six broad potential approaches to mitigating the visual impacts of any change to a scene One, or a combination of techniques can be used depending on the Proposal. These are through:

- The Design Brief - typically best practice for visual management of a proposed development entails identification of significant views in planning documents and the integration of these into the Design Brief, also including any specific guidance as to how the design should respond to minimising such impacts
- 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 is the applicable mitigation response in respect to Basin C & V6.

RECOMMENDED MITIGATION

Out of the aforementioned mitigation techniques, **Alleviation** would appear to be the most suitable. This could be achieved primarily through the use of planting around Basin V6 as this is the only basin which will be visible (as current access is not possible to Wianamatta Regional Park and therefore prevents visual access of Basin C).

The use of planting around the basin will help to provide filtered views as well as helping to mitigate the removal of current existing vegetation in order to construct Basin V6.

Furthermore, as the basin will not have any height above ground the adoption of a carefully considered planting plan will help to minimise visual impacts of Basin V6 from both close proximity as well as from more distant views along Delany Circuit.

Although public access to Wianamatta Regional Park is not currently possible and therefore prevents views of Basin C, if in future public access does become possible than the mitigation techniques outlined for Basin V6 would similarly be the most appropriate response to ensure that the basin sits as sympathetically as possible with its surroundings.

Residential Street within Jordan Springs.

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, all 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.

11.0 Conclusion

Surrounding Rural Landscape.

10.0 CONCLUSION

10.1 FINDINGS

A comprehensive landscape character and visual impact assessment of the proposed basins and of 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 quantitative and qualitative criteria using best practice methodology.

Whilst it is acknowledged that the perceived visual impact of the Proposal will vary from person to person, 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.

This methodology takes into consideration the local context and references both international standards and local legislation, policy and Land and Environment Court principles.

In weighing up the overall implications of the visual impacts described in this assessment, we note the following conclusions can be drawn on the impact to the visual amenity of the surrounding area:

- The visual catchment of the proposed basins are very limited in extent; the Proposal will be visible primarily to a small number of residents on Delany Circuit and Cerdon Place as a result of Basin V6 being located on the northern boundary of Wianamatta Regional Park;
- As a result of the Basin C's location within Wianamatta Regional Park views of the basin will not be possible which greatly decreases the overall visual impact of the Proposal;
- As a result of highly limited visual catchment only three viewpoints have registered a visual impact, the highest of which is a **moderate/high impact**, with the other two impacts being a **low** and a **moderate/low**;
- Although visual accessibility of Basin V6 will be possible to a small number of people, the impact on amenity would be minimal as a result of the nature of basins not having an obtrusive vertical element such as buildings;
- The location of a temporary basin between Delany Circuit and Cerdon Place means that the limited number of visual receivers are already familiar with similar infrastructure and as a result Basin V6 would not be an unfamiliar development;

On balance it is therefore the professional opinion of the authors of this assessment that the modest scale, character and catchment of the visual impacts of this Proposal are such that they would not constitute reasons for the proposed basins not to proceed on visual impact grounds.

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