

# ST MARYS RESOURCE RECOVERY FACILITY

## Appendix R: Visual Impact Assessment

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|----------------------|---------------|-----------------|
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| <b>Report No</b>     | A             |                 |
| <b>Date</b>          | 25/07/2017    |                 |
| <b>Revision Text</b> | 2             |                 |

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## REVISIONS

| Revision | Date       | Description                    | Prepared by | Approved by |
|----------|------------|--------------------------------|-------------|-------------|
| 1        | March 2017 | Draft Visual Impact Assessment | FW          | SR          |
| 2        | June 2017  | Final Visual Impact Assessment | FW          | SR          |
| 3        | July 2017  | Final for Adequacy Review      | SR          | SR          |

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## EXECUTIVE SUMMARY

IRIS Visual Planning and Design has conducted a Visual Impact Assessment for the extension of the St Marys Resource Recovery Facility (the Proposal). This report forms part of the Environmental Impact Statement (EIS) for approval of the Proposal.

This visual assessment includes a review relevant planning context documents, identification of the existing visual conditions, description of the Proposal components and their character, a viewpoint assessment, identification of opportunities for mitigation to reduce the identified visual impact.

The Proposal includes an extension to the existing RRF building which is larger in mass and scale to the existing buildings on the Proposal site. This would include an expanded footprint of some 58 metres along Dunheved Circuit, and extending 70 metres northwest into the Proposal site. Despite the height, mass and scale of this building, the visual impacts are expected to be negligible as:

- The Proposal is surrounded by existing industrial warehousing buildings which screen views to the lower portions of the building. The proposed construction and operation of the Proposal would be generally consistent with the existing industrial character of the business park. This character would be extended to the north as the north and south Dunheved precinct development is established (currently under construction).
- The Proposal includes trees and shrub planting located along the south-eastern building and site frontage. This vegetation would filter and screen adverse views to the Proposal, (driveway areas, lower portions of the RRF building and service boxes) in views from Dunheved Circuit and the small park opposite.
- The Proposal site is low lying and the surrounding landform includes a broad river valley to the west and northeast. Potential views from the nearby Dunheved Golf Course are reduced by the low-lying nature of this area, as the landform continues to descend towards the South Creek.
- The landform rises to the west and northeast, beyond the floodplain, at a distance of approximately 2km. This rise in landform is minor. Due to the existing framework of mature vegetation within these residential areas, the heavily vegetated South Creek corridor reserve and Wianamatta Regional Park, views to the business park are enclosed and views towards the Proposal site are limited.
- Mitigation measures would be implemented during construction and operation and further reduce the potential impacts of the project.

The Proposal would exceed the height limits of the Proposal site as determined by the *Penrith Local Environmental Plan 2010* clause 4.3. However, it is expected that the Proposal would not have an adverse visual impact on views to and from the site. Nor would there be an adverse impact on privacy or solar access on adjacent streets and open space due to the industrial nature of the site.

The sensitive heritage views identified in the Wianamatta Regional Park Masterplan and Plan of Management, including the view from the former Dunheved House (demolished), would not be adversely impacted by the Proposal.

## GLOSSARY

**Amenity** - The pleasantness of a place as conveyed by desirable attributes including visual, noise, odour etc.

**Artist's impression** |An indicative visual representation illustrating the appearance of a proposal. Typically to communicate a concept when photomontages are not available and / or when accuracy cannot be assured.

**Character** - A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, and often conveys a distinctive 'sense of place'. This term does not imply a level of value or importance.

**Glare** – the uncomfortable brightness of a light source when viewed against a dark background.

**Landscape** - Landscape is an all-encompassing term that refers to areas of the earth's surface at various scales. It includes those landscapes that are: urban, rural, and natural; combining bio-physical elements with the cultural overlay of human use and values.

**Light trespass** – the spilling of light beyond the boundary of the property or area being lit.

**Magnitude of change** - The extent of change that will be experienced by receptors. This change can be adverse or beneficial. Factors that could be considered in assessing magnitude are: the proportion of the view / landscape affected; extent of the area over which the change occurs; the size and scale of the change; the rate and duration of the change; the level of contrast and compatibility.

**Receptor** - A place, route, viewer audience or interest group which may require assessment.

**Sensitivity** - Susceptibility of a landscape or receptor to accommodate change without losing valued attributes.

**Sky glow** – the brightening of the night sky above our towns, cities and countryside.

**Values** - Any aspect of landscape or views people consider to be important. Landscape and visual values may be reflected in local, state or federal planning regulations, other published documents or be established through community consultation and engagement, or as professionally assessed.

**View** - Any sight, prospect or field of vision as seen from a place, and may be wide or narrow, partial or full, pleasant or unattractive, distinctive or nondescript, and may include background, mid ground and/or foreground elements or features.

**Viewpoint** - The specific location of a view, used for assessment purposes.

**Visual absorption capacity** - is the potential for a landscape or scene to absorb a particular change without a noticeable loss of valued attributes.

**Visual amenity** - The attractiveness of a scene or view.

## 1 INTRODUCTION

IRIS Visual Planning and Design has conducted a Visual Impact Assessment for St Marys Resource Recovery Facility (the Proposal). This report forms part of the Environmental Impact Statement (EIS) for approval of the Proposal.

### 1.1 Proposal Overview

St Mary's Recycling Pty Ltd, a subsidiary of Bingo Industries Limited (Bingo Industries), operates an existing Resource Recovery Facility (RRF) at 25 Dunheved Circuit, St Marys. The RRF operates under development consent (DA01/1034), which was issued by Penrith City Council (Council) in June 2001, development consent (DA15/1042), which was issued by Council in June 2016, and an Environmental Protection Licence (EPL) from the New South Wales (NSW) Environmental Protection Authority (EPA), EPL No. 20621.

Bingo Recycling Pty Ltd (the Applicant), also a subsidiary of Bingo Industries, is seeking approval to extend the existing RRF onto the neighbouring property; 21 Dunheved Circuit (the Proposal). The proposed RRF would extend across 21 Dunheved Circuit and 25 Dunheved Circuit (the Proposal site) in order to optimise operations and facilitate a throughput of 350,000 tonnes per annum (tpa) of general solid waste (non-putrescible).

The EIS is seeking approval, under Part 4, Division 4.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act), for the construction and operation of the Proposal. The key components of the Proposal would include:

- Demolition of all structures, except for electrical substations, at 21 Dunheved Circuit
- Demolition of a section of the eastern wall of the approved processing shed at 25 Dunheved Circuit to provide access between the existing processing shed and the proposed extension to the processing shed
- Extension of the processing shed and external hardstand onto 21 Dunheved Circuit
- Relocation of existing, and provision of additional, on-site car parking spaces
- Extension of the existing site office on 25 Dunheved Circuit
- Widening the existing driveway access to 25 Dunheved Circuit to separate vehicle access and egress
- Provision of a second vehicle egress point along Dunheved Circuit
- Installation of a new 20 m long in-ground weighbridge at the vehicle egress point
- Installation of two in-ground wheel wash bays at the exit weighbridges
- Relocation of four stormwater detention (OSD) tanks and installation of a new rainwater reuse tank
- Relocation of the 30,000 L self-bunded fuel tank
- Extension of a dust suppression and sprinkler system
- Installation of a designated chemical and Liquefied Petroleum Gas (LPG) storage area
- Installation of landscaping
- Upgrade of two intersections comprising minor widening at the intersections of Dunheved Circuit loop to Dunheved Circuit (both the northern and southern legs)

The key operational components of the Proposal would include:

- Increasing operational (including processing and waste delivery and collection) hours to 24 hours per day, Monday to Saturday (no works on Sundays or public holidays would be undertaken)
- Processing of up to 350,000 tpa of non-putrescible waste
- Waste storage of up to 20,000 tonnes of non-putrescible waste at any given time

Waste streams to be received, and processed waste streams, include a range of non-putrescible waste types. Appendix A provides a list types that would be processed.

The key components of the Proposal are shown in Figure 1.1.

# St Mary's Resource Recovery Facility

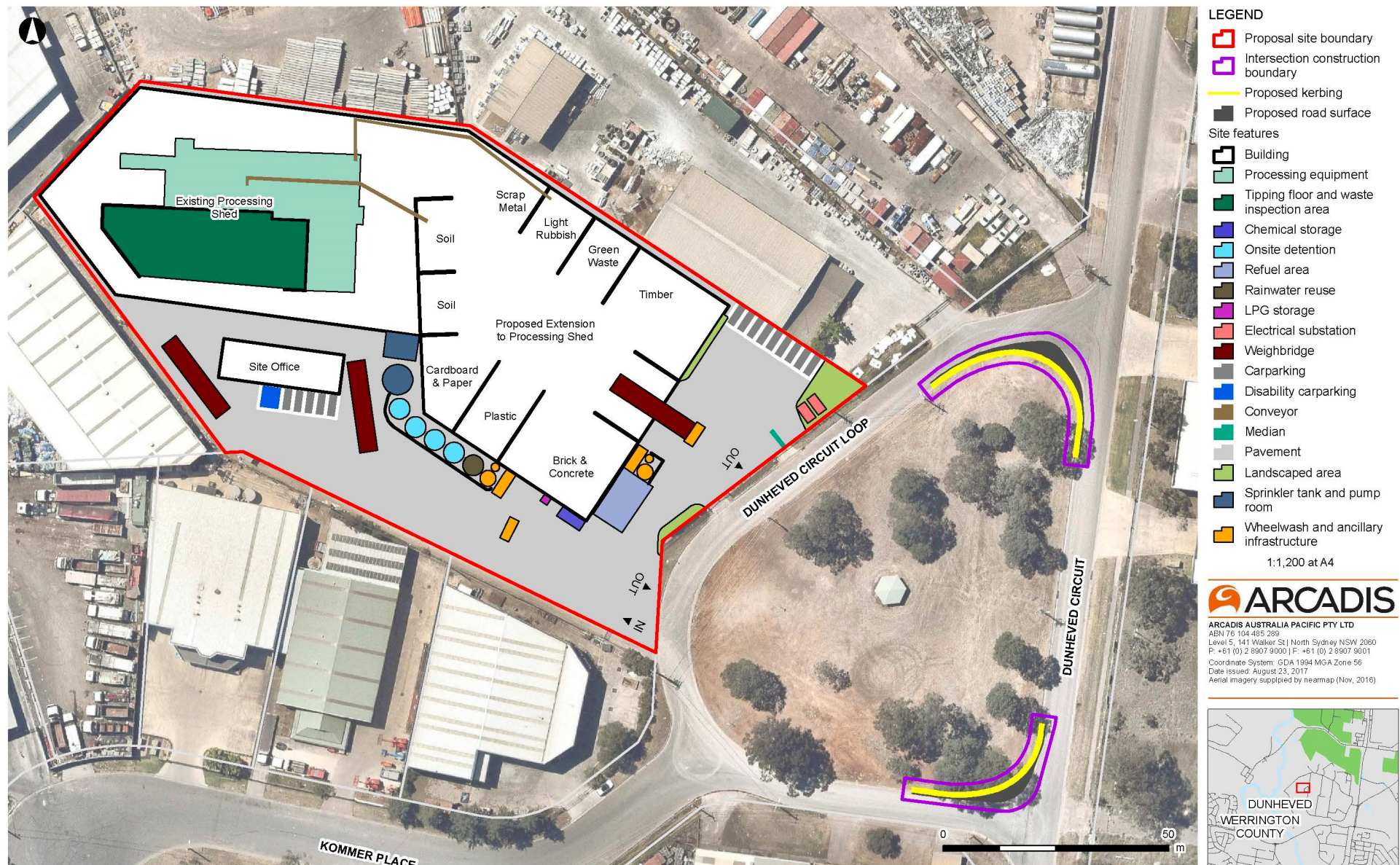


Figure 1-1 Components of the Proposal

## 1.2 Background to the Proposal

Number 25 Dunheved Circuit has operated as a RRF since 2001. Initially the structures consisted of a temporary above-ground weighbridge, small modular cabin and a workshop/storage shed at the rear of the site. The approval allowed for the processing of waste, however waste materials were not permitted to be stored outside buildings (unless within waste bins). Waste was sorted into light and heavy fractions. The light fraction was sent for further recycling at other facilities, with a portion ending up in landfill. The heavy stream was sent to other Bingo recycling facilities for processing and resource recovery.

On 20 June 2016, development consent (DA15/1042) was acquired for the redevelopment of 25 Dunheved Circuit, to construct and operate an enclosed RRF which would substantially improve the resource recovery rate and the environmental performance of the site.

Construction of the RRF at 25 Dunheved Circuit commenced in November 2016 and was completed in April 2017. The RRF at 25 Dunheved Circuit (the existing RRF) has been operational since this time.

## 1.3 Purpose and Scope of this Assessment

This report supports the EIS for the Proposal (refer to Section 1.1 for an overview of the Proposal) and has been prepared as part of a State Significant Development (SSD) Application for which approval is sought under Part 4, Division 4.1 of the EP&A Act.

This report has been prepared to address:

- The Secretary's Environmental Assessment Requirements (SEARs) (SSD 8200) for the Proposal, issued by NSW DP&E on 6 February 2017.

The SEARs relevant to this study, and the section of this report where they have been addressed are provided in Table 1-1

*Table 1-1: Secretary's Environmental Assessment Requirements relevant to this study*

| Section | Environmental Assessment Requirement                                                                 | Where addressed |
|---------|------------------------------------------------------------------------------------------------------|-----------------|
| Visual  | an assessment of the potential visual impacts of the project on the amenity of the surrounding area. | This report     |

## 1.4 Structure of report

This report is structured according to the following:

- Methodology
- Planning context
- Visual impact assessment
- Mitigation measures
- Conclusions

## 2 METHODOLOGY

### 2.1 Guidance for Landscape and Visual Assessment

As there is no applicable guidance for Landscape and Visual Impact Assessment appropriate specifically for this type of development, nor a national standard, the methodology for this assessment is based on several local and international guidance documents. These are:

- Roads and Maritime Guidance note EIA-N04 Guidelines for Landscape Character and Visual Impact Assessment, 2013
- The *Guidance for Landscape and Visual Impact Assessment* (GLVIA), Third Edition (Landscape Institute and Institute of Environmental Management & Assessment UK, 2013)
- *Guidelines for the Visual Impact Assessment of Highway Projects* (U.S. Department of Transportation Federal Highway Administration, 2015).

### 2.2 Assessment Method

This visual assessment was undertaken in the following steps:

- Review relevant **planning context** documents
- Identify **existing visual conditions**
- Identify **project components and character**
- Undertake a **viewpoint assessment**
- Identify opportunities for **mitigation** to reduce identified visual impact.

#### Viewpoint Assessment

The viewpoint assessment was undertaken in the following steps:

- Identify the **sensitivity** of the viewer
- Identify the **modification** to the view created by the project
- Combine these characteristics to assign a level of **likely visual impact**

**Sensitivity** refers to the susceptibility of a view to accommodate change without losing valued attributes. The values of a view refers to any aspect of landscape or views people consider to be important. Visual values may be reflected in local, state or federal planning regulations, other published documents or be established through community consultation and engagement, or as professionally assessed (refer Table 2-1).

Table 2-1 - Visual Sensitivity Levels

| Visual sensitivity level | Description                                                                                                                                                                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regional                 | Heavily experienced view to a feature or landscape that is iconic to a major portion of a city or a non-metropolitan region, or an important view from an area of regional open space.<br>The view is recognised as of value in a regional planning document. |
| Local                    | View of high quality or experienced by concentrations of residents and/or local recreational users, and/or large numbers of road or rail users.<br>The view is recognised as of value in a local planning document.                                           |
| Neighbourhood            | Views where visual amenity is important at a neighbourhood scale, such as views seen from local roads, briefly glimpsed views to landscape features, and views from small groups of residences.                                                               |

**Modification** refers to the extent of change that will be experienced by receptors. This change can be adverse or beneficial. Factors that could be considered in assessing magnitude are (refer Table 2-2):

- The proportion of the view / landscape affected
- Extent of the area over which the change occurs
- The size and scale of the change
- The rate and duration of the change
- The level of contrast and compatibility.

Table 2-2 – Visual Modification Levels

| Visual modification level                               | Description                                                                                                                                                                        |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Considerable reduction in visual amenity                | Changes the amenity of the view fundamentally, a substantial part of the view is altered and / or the change is not visually compatible with the character of the view.            |
| Noticeable reduction in visual amenity                  | Changes the amenity of the view somewhat, the alteration to the view is clearly visible, and / or the change is somewhat visually compatible with the character of the view.       |
| No perceived reduction or improvement in visual amenity | Either the view is unchanged or if it is changed, the change in the view is generally unlikely to be perceived by viewers, and / or it is absorbed into the character of the view. |
| Noticeable improvement in visual amenity                | Changes the amenity of the view somewhat, the alteration to the view is clearly visible, and / or the change somewhat enhances the view.                                           |

**Visual impact** is the combined result of sensitivity together with the magnitude of the change. The visual impact may be adverse or beneficial and at a level of very high through to negligible (refer Table 2-3).

Table 2-3 – Visual impact levels

|                     |                          | Visual sensitivity   |                      |                     |                     |                  |
|---------------------|--------------------------|----------------------|----------------------|---------------------|---------------------|------------------|
|                     |                          | National             | State                | Regional            | Local               | Neighbourhood    |
| Visual modification | Considerable reduction   | Very high adverse    | Very high adverse    | High adverse        | Moderate adverse    | Minor adverse    |
|                     | Noticeable reduction     | Very high adverse    | High adverse         | Moderate adverse    | Minor adverse       | Negligible       |
|                     | No perceived change      | Negligible           | Negligible           | Negligible          | Negligible          | Negligible       |
|                     | Noticeable improvement   | Very high beneficial | High beneficial      | Moderate beneficial | Minor beneficial    | Negligible       |
|                     | Considerable improvement | Very high beneficial | Very high beneficial | High beneficial     | Moderate beneficial | Minor beneficial |

Opportunities for **mitigation** have been identified to reduce the visual impact where possible.

## 2.3 Photography and Photo Simulations

The approach to photography and the preparation of photo simulations has been adapted from the Landscape Institute (UK) guide, Photography and photomontage in landscape and visual impact assessment, (2011). The photographs used in this assessment were taken with a Canon 100D compact SLR with a APS-C sensor. The focal length was adjusted to achieve an approximate 50mm equivalent focal length. The photo simulations prepared for the Proposal are intended to act as artist's impressions, illustrating the general location, layout, scale and relationship of the RRF building to the surrounding landscape. These photomontages were created by using a site photograph, computer modelling and photo editing techniques:

- Photography – A one frame shot is selected to replicate what would be seen by a person in any one view.
- Data interpretation - A 3D model was developed based on a digital terrain model with 5 metre contour data, GPS data with up to +/- 1m accuracy, and 3D design information provided by the Architects
- Photograph alignment - The model was positioned over the existing photograph using known heights and coordinates of the location, and with a minimum of two existing elements within the photograph as reference points.
- Rendering - The model is rendered in the 3D software and superimposed over the photographs using Adobe Photoshop TM software to merge the two together to represent the Proposal elements.

A photo simulation was prepared for views where the project would be seen. As the visibility of the Proposal is limited, a 'wireframe' of the project has been shown on a number of the selected representative views to illustrate the location of the Proposal from sensitive receiver groups. These wireframes are created following the above method, and the effect of landform and distance, and confirm the areas where the Proposal will not be visible. Where the Proposal is beyond 2km, and the project will not be seen, no wireframe has been prepared.

## 3 PLANNING CONTEXT

The following review identifies key documents which provide the planning context for the visual impact assessment of St Marys RRF.

### 3.1 State Planning Considerations

#### 3.1.1 St Marys ADI Release Area Precinct Plans

In response to the requirements of *Sydney Regional Environmental Plan 30 - St Marys* (SREP 30) and the St Marys Environmental Planning Strategy 2000 (the St Marys EPS), precinct plans have been compiled for the St Marys ADI release area, including the north and south Dunheved precinct, immediately north west of the Proposal site.

The purpose of this precinct plan is to establish common planning strategies, development principles and development controls to guide the future development of all land within the north and south Dunheved precinct in an integrated manner (JBA Urban Planning Consultants, 2007).

The maximum building height for this precinct is 8.5 metres, with a setback of 9 metres from the Collector Road alignment.

Although the Proposal site is not located within this precinct, the business park in which it is located will extend into this precinct of the ADI site, converting disused ADI land into a new employment area.

### 3.1 Local Planning Considerations

#### 3.1.1 Penrith Local Environment Plan 2010 (Penrith LEP)

The Proposal site is zoned for General Industrial use. The purpose of this zone is to 'provide a wide range of industrial and warehouse land uses' whilst minimising 'any adverse effect of industry on other land uses' (Part 2, Land Use Table).

Relevant objectives of the building heights clause (clause 4.3) include:

- (b) *to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development and to public areas, including parks, streets and lanes,*
- (c) *to minimise the adverse impact of development on heritage items, heritage conservation areas and areas of scenic or visual importance.*

The maximum building height under the Penrith LEP for the Proposal site is 12 metres.

The Proposal site does not include any land covered by the 'protection of scenic character and landscape values' clause (clause 7.5), there are also no heritage items listed in the LEP within or adjacent to the Proposal site.

The 'design excellence' clause (clause 8.4) only applies to land within the Penrith City Centre and therefore does not apply to the Proposal site.

The objectives of Clause 5.9 (preservation of trees or vegetation) is to 'preserve the amenity of the area' and requires that any tree subject to the Development Control Plan (DCP) should not be damaged or removed without development consent from Council.

The Proposal exceeds the height allowable on the Proposal site. This assessment will consider the potential visual impact of this additional height.

The LEP describes the South Creek corridor reserve, located to the southwest of the Proposal site, as having 'scenic character and landscape values'. (Part 7, s 7.5)

### 3.1.2 Penrith Development Control Plan

The Penrith Development Control Plan 2014 (Penrith DCP) supports the Penrith LEP by providing more detailed controls that apply to the Penrith LGA. As the Proposal is State Significant Development the provisions of the Penrith DCP do not apply.

### 3.1.3 Wianamatta Regional Park Masterplan and Plan of Management

This document (State of NSW Government Office of Environment and Heritage, 2013) provides long term direction for the development and conservation of the former Australian Defence Industries (ADI) site at St Marys, including five development precincts (Eastern / Ropes Crossing, Ropes Creek, Dunheved, Central and Western Precincts) set amongst the Wianamatta Regional Parkland.

This plan indicates that views and vistas are limited due to the natural topography of the site and the presence of regrowth vegetation. However, it identifies the following important historical views:

- View from and to Dunheved house site and the King plantings
- Views between Jordan Hill and House Site
- View from Jordan Hill and House Site to the access track to the west

The Proposal site is adjacent to the 'Dunheved Precinct' within this masterplan, which *'supports employment development only'*. The Proposal site is highly unlikely to affect any of the important views and vistas listed in the masterplan. The potential visual impacts on these views will be considered within this visual impact assessment.

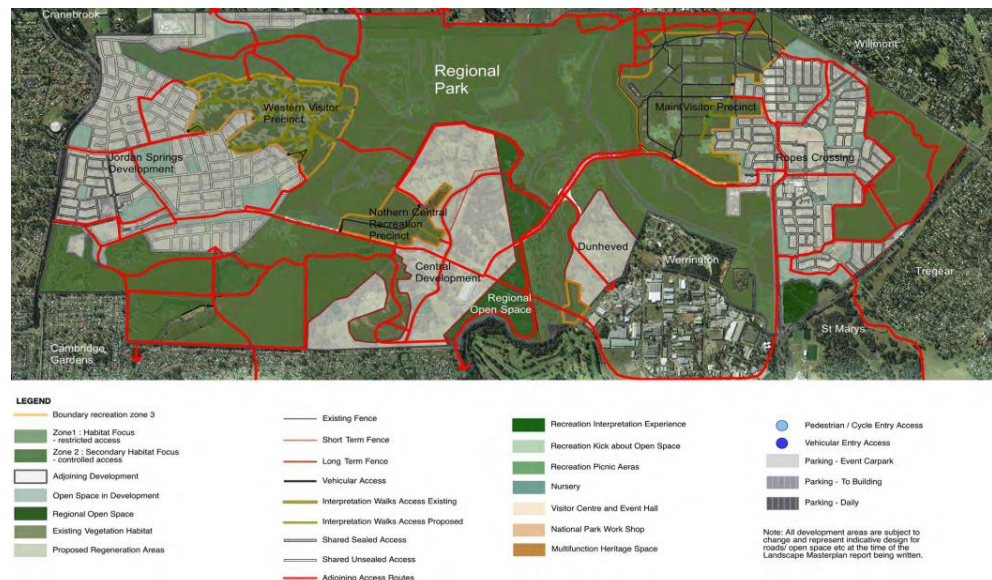


Figure 3-1 Wianamatta Regional Park Masterplan [source: State of NSW Government Office of Environment and Heritage, 2013, Figure 6.0]

### 3.1.4 Dunheved Business Park Revitalisation Strategy

This strategy (Penrith City Council, 2014) has been prepared to guide the ongoing improvement of the infrastructure and public domain of Dunheved Business Park. The vision is for a *'sustainable, attractive and dynamic place of industrial enterprise'* to support existing businesses as well as attract new development and investment by its high *'standard of building and landscape design'* (p.3).

The Dunheved Link Road, providing a new direct access between the northern and southern precincts of DBP, is the centrepiece of the strategy and key priority for stimulating the expansion of the DBP. It will link DBP with the future employment precincts currently owned by Lend Lease (former ADI site) and will enhance the connectivity of both areas to their markets and help grow and sustain jobs.

The strategy also seeks to enhance the streetscape and general appearance of the public domain. A selective and staged program of street tree-planting and landscaping along the major loop roads is proposed, including Links Road and Dunheved Circuit (adjacent to the Proposal site).

## 4 VISUAL IMPACT ASSESSMENT

### 4.1 Existing environment

The Proposal site is located to the north of the St Marys town centre, in the Dunheved Business Park. The Dunheved Business Park is an established industrial precinct and comprises a mix of general, light and storage based industries. It includes steel and sheet metal fabrication workshops, oil and lubricant storage facilities, transport depots, plant and equipment hire facilities and mechanical repair workshops, with a similar built form and typology. Building heights within this area of the business park are predominantly 10-12 metres tall, with large footprints and wide service vehicle access and parking.

The *Sydney Regional Environmental Plan No.30 St Marys* zoning map and South Dunheved Precinct Plan (JBA Urban Planning Consultants, 2007) indicates that the Dunheved Business Park will be extended to the northwest, into the ADI site. It will have a high-quality built form and landscape setting. The landscape vision for this precinct is: *"To develop a sustainable landscape setting that reflects and nurtures its Regional Park context and provides an accessible, integrated, diverse, safe and adaptable network of open space, streets and private allotments with an identifiable character and 'sense of place' (part 3, section 7.0).*

The Dunheved and Ropes Creek railway line (now disused) was built during WWII to serve the ADI site, separating the northern and southern sections of the business park. The business park is serviced by a perimeter road, Links Road. The upgrade of this road is a priority in the Dunheved Business Park Revitalisation Strategy (Penrith City Council, 2014), providing direct access between the northern and southern precincts of DBP across the former railway line. The Proposal site is located off Dunheved Circuit, one of the main internal connector roads.

St Marys sewage treatment works is located to the north of the business park. Dunheved Golf Club is located to the southwest, along the eastern banks of South Creek.

The Proposal site is set within a flat, low lying landscape associated with the Cumberland Plain and South and Ropes Creek floodplains, to the north and west of the site. The Wianamatta Regional Park follows the creek with predominantly vegetated and rural landscapes. The former Dunheved Homestead (demolished) is located immediately north of the golf course, between Links Road and South Creek, including trees and plantings that were associated with the house.

The character of this area is strongly influenced by its history of use by agriculture, defence, and later industrial, residential, environmental, open space uses. The former St Marys ADI site to the north has been redeveloped with 900 hectares of this site being preserved as a regional park (under SREP No. 30, St Marys) and a large part of the remaining site has been developed as a master planned community, called Jordan Springs. Jordan Springs 'Central' is currently under construction, including more than 1,300 new homes with a commercial / retail centre, parks and open space. To the northeast, the suburb of Ropes Crossing is a previously developed stage of the ADI site.

## 4.2 Character and components of the Proposal

In addition to the description of the Proposal in section 1.1 of this report, the following characteristics and components of the Proposal are relevant to this visual impact assessment during the construction and operation phases.

### 4.2.1 Construction phase

It is expected that during construction sources of potential visual impact would include:

- Demolition of all structures, except for electrical substations, at 21 Dunheved Circuit
- Demolition and relocation of the eastern wall of the processing shed at 25 Dunheved Circuit

Works would primarily be undertaken during standard construction hours and would involve the use of construction equipment such as trucks, bulldozers, scrapers, graders, rollers, backhoes, compaction equipment, mobile crane and cherrypickers.

The construction period for the Proposal would be approximately four months.

### 4.2.2 Operation phase

It is expected that the extension to the existing RRF building would be the most visible element of the Proposal during operation, and has been the focus of this visual assessment.

Of particular relevance to this visual assessment, the RRF building would:

- Have a footprint of 7,121 m<sup>2</sup> (increased from 3,619 m<sup>2</sup>)
- Rise to a height of 16.84 metres (increased from 11.87m)
- Incorporate the following materials and finishes:
  - Concrete tilt panel walls (approximately 12 metres high)
  - Alternating translucent polycarbonate panels and colourbond panels along the upper 4 metres
  - Colourbond wall cladding and awnings

The character of the Proposal would be generally consistent with the warehousing built form of the surrounding business park.

Landscape works would include trees and garden areas along Dunheved Circuit including:

- Shrub planting north of the building entry along the eastern building façade
- Garden area north of the driveway with tree and shrub planting (1 - 5 metres wide)
- Planted island within the driveway
- Garden area south of the driveway with trees and shrub planting (2 metres wide)

## 4.3 Assessment of visual impact

### 4.3.1 Topography

The Proposal site is located on a broad floodplain between the South and Ropes Creeks at a level of approximately 20 metres AHD. The landform rises to the west and northeast to minor ridgelines rising to approximately 40 metres AHD, and to the southwest to approximately 30 metres AHD (refer Figure 4-1).

Based on this landform, the key potential areas where the RRF building may be seen are:

- Areas within the business park
- Dunheved Golf course to the southwest
- Residential area of Werrington County, and the Wianamatta Regional Park to the west
- Residential areas of Ropes Crossing to the northeast
- Residential areas of Lethbridge Park to the east.

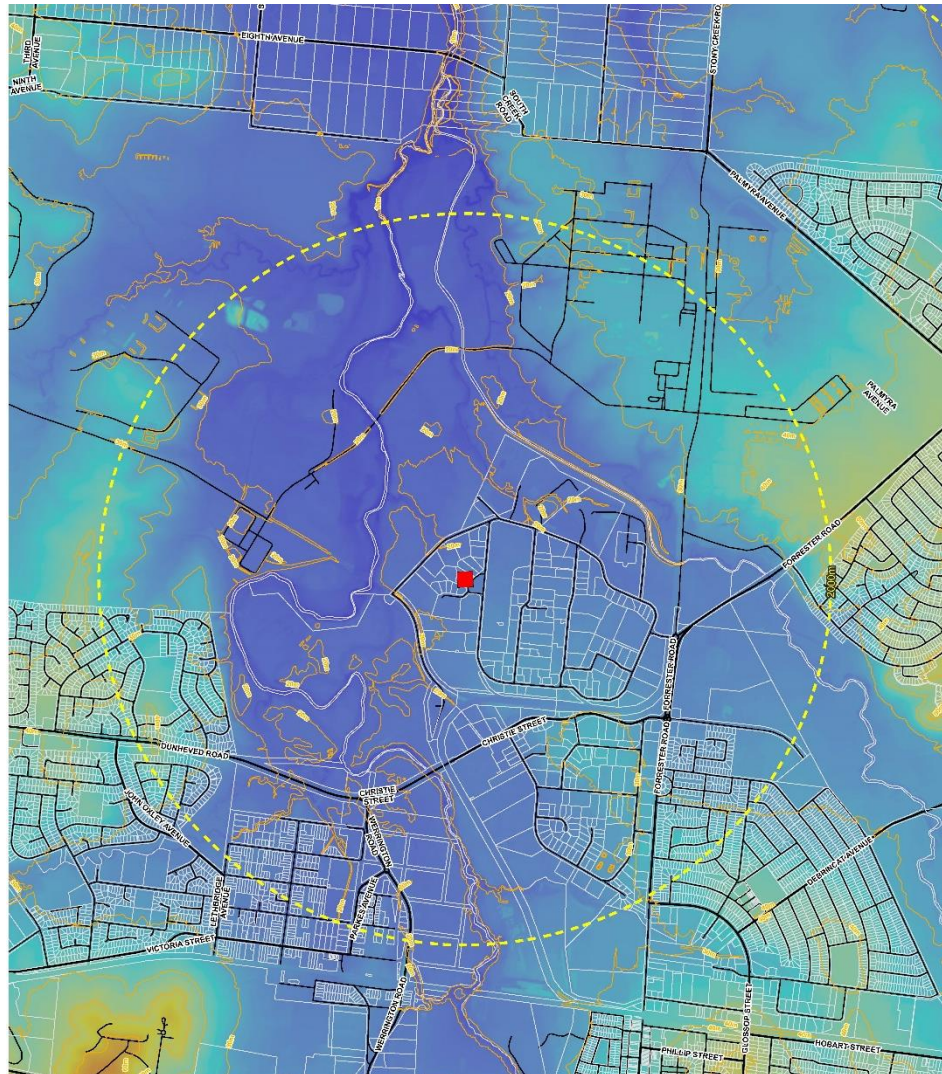


Figure 4-1 - Topography

### 4.3.2 Viewpoint assessment

The following viewpoints were selected to represent views from these the key potential viewing areas:

- Viewpoint 1: View southwest from Dunheved Road
- Viewpoint 2: Dunheved Golf Club, Links Road
- Viewpoint 3: Poole Street, Werrington County
- Viewpoint 4: Paget Street, Ropes Crossing
- Viewpoint 5: Laws Crescent, Lethbridge Park

The location of these views is shown in Figure 4-2 Viewpoint location plan.

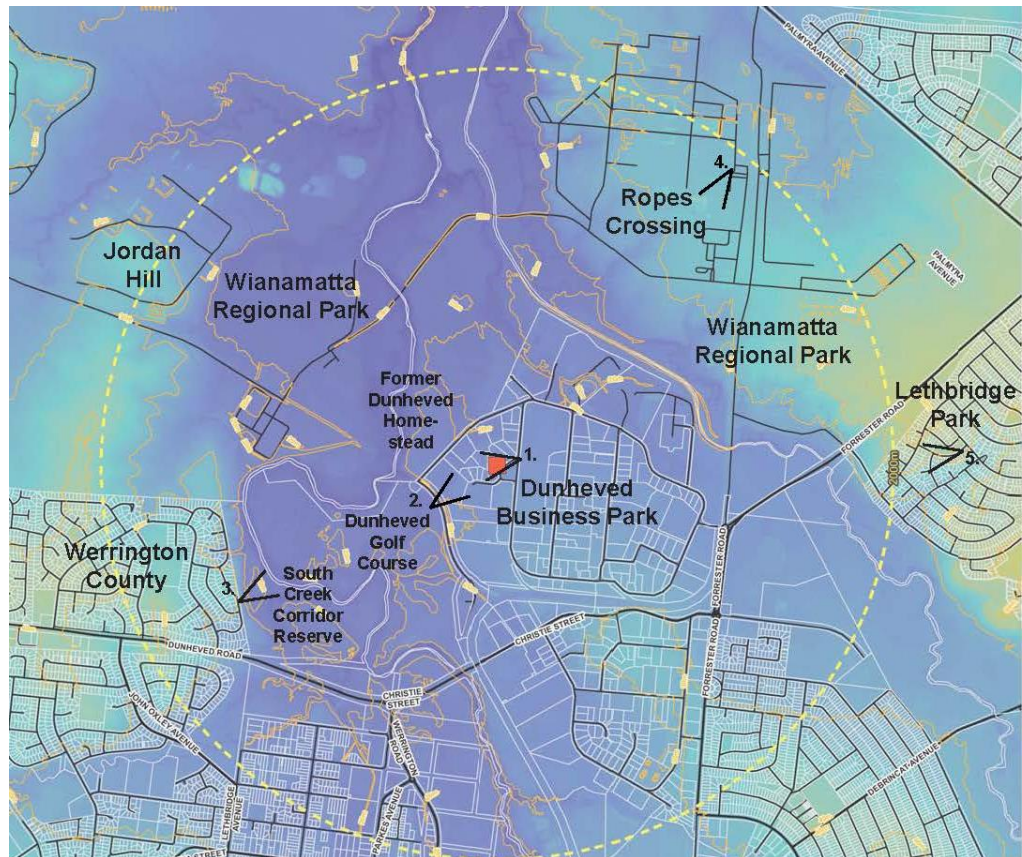


Figure 4-2 - Viewpoint Location Plan

**Viewpoint 1: View southwest from Dunheved Road**



*Figure 4-3 - Viewpoint 1: View southwest from Dunheved Road – Existing*



*Figure 4-4 - Viewpoint 1: View southwest from Dunheved Road - Artists impression (note: excludes intersection works)*

Existing conditions: (distance from Proposal: approximately 140m)

This view from an industrial streetscape is characterised by large-scale storage, production, distribution, and repair buildings and facilities. The street includes large driveways and loading docks, and accommodates large trucks and machinery. The existing RRF building is visible in the centre of view, including a steel-clad portal frame shed which is approximately 11 metres tall, with an office attached to the northern façade. The adjacent storage shed of the plant hire and civil contracting business at 17-19 Dunheved Circuit is of a similar form, scale and materials. Views to

the electrical substations at 21 Dunheved Circuit are obstructed by vegetation within the adjacent property (17-19 Dunheved Circuit). The western side of Dunheved Circuit and road verges are used informally for overflow parking. A picnic shelter in the small park on Dunheved Circuit (left, out of view) is used by for recreation by staff. This view is considered to be of **neighbourhood visual sensitivity**. (refer Figure 4-3)

Construction: There would be demolition and construction works visible in the middle ground of this view. Due to the existing industrial warehousing character, including frequent access by heavy vehicles, the character of the construction activity would be largely absorbed into the surrounding industrial character of the business park. This would result in a noticeable reduction in the amenity of this view, which is of neighbourhood visual sensitivity, and a **negligible visual impact** during construction.

Operation: The southern and eastern façades of the extension to the RRF building would be visible in the middle ground of this view. The RRF building would have a large mass and scale, extending 58 metres along the Dunheved Circuit, and extending to the northeast (right of view) by 70 metres. The RRF building would rise approximately 35% higher than the existing RRF building to a height of 16.94 metres. This overall height would step up from the adjacent building to the south (left of view) and northeast (right of view) by approximately 6 metres. However, the walls of the RRF building would rise to a height of 12 metres, so that the pitch of the roof accommodates much of the height increase, and reducing the perceived mass of the new building overall. The height of the RRF building would consequently be seen as an incremental height increase from the adjacent large scale built form.

The visual scale of the northern façade of the building would be broken up by the use of Colourbond and on the upper portion of the wall, above concrete. Trees and shrubs would also be provided along the Dunheved Circuit façade and adjacent to the streetscape to filter views to the RRF. In particular, shrubs (*Syzygium australe* sp.) would be located along the south-eastern façade of the RRF, north of the driveway, which would grow to a mature height of approximately 8 metres and provide some screening of the concrete panels at the base of the building. Several trees with shrub and groundcover planting would be located: along the site frontage with Dunheved Circuit to the south of the driveway, within an island median in the driveway, and to the north of the driveway, filtering views into the driveway areas and lower portions of the RRF building. The shrubs to the north of the driveway would also partially screen two substations which would be located at the carpark entry.

Works to upgrade the intersection, in the foreground, would also be consistent with the existing character of this view, and provide an improved level of finish to the streetscape.

Overall, although the scale of this building would be larger than the existing built form, the building design uses architectural finishes and lower building walls to reduce the perceived scale of this building. Tree and shrub planting along the building edge and Dunheved Circuit would soften views from the street, and partially screen the driveway areas, lower parts of the RRF building and substations. Works to upgrade the intersection would also be consistent with the character of this view. As the Proposal would be consistent with the scale and character of the surrounding built form it is expected there would not be a perceived change in the amenity of this view, which is of neighbourhood visual sensitivity, and therefore an overall **negligible visual impact** (refer Figure 4-4)

## Viewpoint 2: Dunheved Golf Club, Links Road



Figure 4-5 - Viewpoint 2: Dunheved Golf Club, Links Road

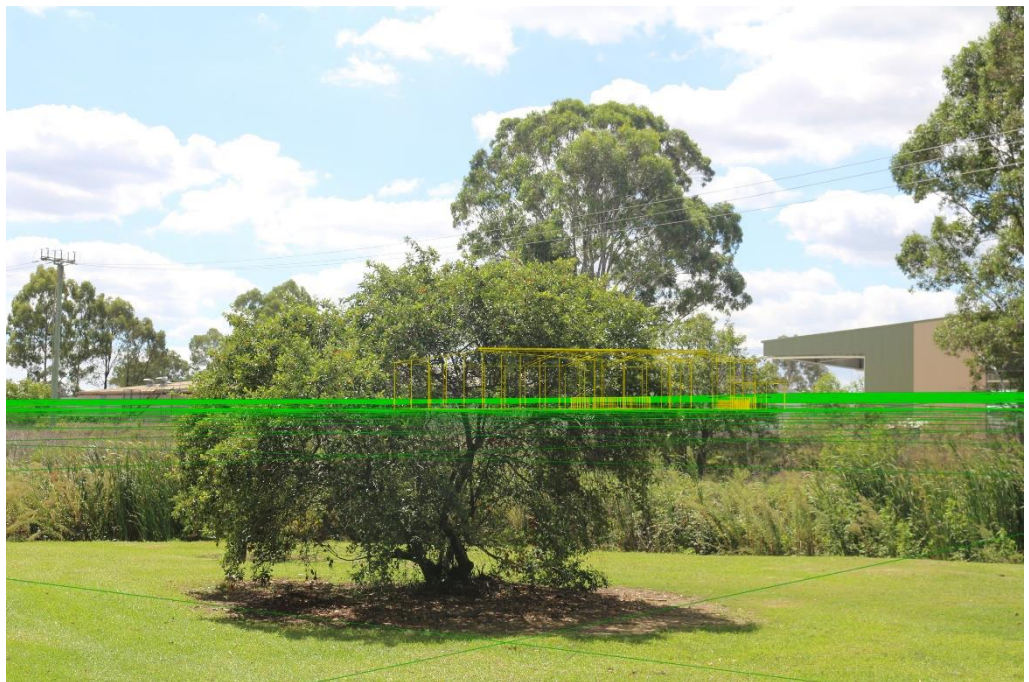


Figure 4-6 - Viewpoint 2: Dunheved Golf Club, Links Road, Wireframe showing location and scale of RRF (green lines show terrain, yellow lines show RRF outline)

Existing conditions: (distance from Proposal: approximately 390m)

This view from the eastern boundary of Dunheved Golf Club, along Links Road, includes vegetation in the middle ground, filtering views to Dunheved Business Park. A major timber supply and distribution business is visible in the middle ground of this view, including large steel storage shed and uncovered outdoor area for storage of timber pallets. Views to the Proposal site are obstructed by intervening vegetation and

buildings. The adjacent golf course is a local recreational asset and this view is of **local visual sensitivity**.

Construction: Demolition activities would not be visible, however, it is likely that glimpses to the Proposal construction may be visible from this location, rising above the surrounding industrial buildings. These elements would be generally consistent with the character of the large scale industrial activities and warehousing activity which comprise the background of this view. Furthermore, these changes would be temporary in nature. It is considered that this change would not create a perceived change in the amenity of this view, resulting in a **negligible visual impact** during construction.

Operation: Glimpses of the extension to the RRF building would be seen in the background of this view. This limited visibility is due to the low-lying location of the Golf Course, intervening vegetation and built form, and distance. The mass and scale of the RRF building would not be apparent from this location as much of the building would be obstructed by the existing intervening industrial buildings. The RRF building would be consistent with the character of the built form seen in the background of this view. It is not expected that there would be a change in the amenity of this view, which is of neighbourhood visual sensitivity, and therefore an overall **negligible visual impact** (refer *Figure 4-6*).

### Viewpoint 3: Poole Street, Werrington County



*Figure 4-7 - Viewpoint 3: Poole Street, Werrington County - Existing*



Figure 4-8 - Viewpoint 3: Poole Street, Werrington County, Wireframe showing location and scale of RRF (green lines show terrain, yellow lines show RFF outline)

Existing conditions: (distance from Proposal: approximately 1.47km)

This view is from the residential community at Werrington County, to the west of the Proposal site. This location in Poole Street is slightly elevated, offering easterly views over the South Creek corridor reserve (noted as having 'scenic character and landscape values' in the Penrith LEP, Part 7, s.7.5) and Dunheved Golf Club, towards Dunheved Business Park. (Note, the Wianamatta Regional Park is to the north, left of view) Electrical transmission towers and lines are visible above the treeline. The DBP and the Proposal site are not visible in this view due to intervening vegetation. This view is considered to be of **neighbourhood visual sensitivity**.

Construction: In views from the residential areas of Werrington County, the construction works would be obstructed by intervening trees of the reserve. There would be no perceived change in amenity of this view, resulting in a **negligible visual impact** during construction.

Operation: Similarly, during operations, views to the Proposal site would be obstructed by intervening trees within the reserve. There would be no perceived change in amenity of this view, resulting in a **negligible visual impact** during operation (refer Figure 4-8).

#### Viewpoint 4: Paget Street, Ropes Crossing



Figure 4-9 - Viewpoint 4: Paget Street, Ropes Crossing



Figure 4-10 - Viewpoint 4: Paget Street, Ropes Crossing, Wireframe showing location and scale of RRF (green lines show terrain, yellow lines show RRF outline)

Existing conditions: (distance from Proposal: approximately 1.5km)

This view is from a recently built residential community at Ropes Crossing, formerly part of the eastern portion of St Marys ADI site, northeast of the Proposal site. This location is slightly elevated, offering westerly views over the Ropes Creek corridor, also part of Wianamatta Regional Park. The dense concentration of woodland within this regional park provides visual separation between the Ropes Crossing community and Dunheved Business Park and adjacent St Marys Sewage Treatment Plant. Views

of the Dunheved Business Park, including the Proposal site, are obstructed by intervening vegetation and built form. Although this viewpoint is adjacent to the eastern part of Wianamatta Regional Park, it is not accessible in this location. This view is therefore considered to be of **neighbourhood visual sensitivity**. (refer Figure 4-9)

Construction: In views from within the Ropes Crossing residential area, the construction works would be obstructed by intervening trees and built form. There would be no perceived change in amenity of this view, resulting in a **negligible visual impact** during construction.

Operation: Similarly, during operations, views to the Proposal site would be obstructed by intervening trees and residential homes within the Ropes Crossing residential area. There would be no perceived change in amenity of this view, resulting in a **negligible visual impact** during operation. (refer Figure 4-10)

#### **Viewpoint 5: Laws Crescent, Lethbridge Park**



*Figure 4-11 - Viewpoint 5: Laws Crescent, Lethbridge Park*

Existing conditions: (distance from Proposal: approximately 2.27km)

This view is from a residential community at Lethbridge Park. Here, the landform is slightly elevated, however the trees and shrubs within the adjacent park (foreground of view) and throughout the residential area, only allow filtered glimpses to the Ropes Creek corridor, part of Wianamatta Regional Park. The dense concentration of woodland within this regional park provides visual separation between the Lethbridge Park community and Dunheved Business Park and nearby major roads such as Forrester Road. Glimpses to the southern areas of the Dunheved Business Park can be seen in the far background, however, the Proposal site is obstructed by intervening vegetation and built form. This view is considered to be of **neighbourhood visual sensitivity**. (refer Figure 4-11)

Construction: The construction works would not be visible from this location. Accordingly, there would be no perceived change in amenity of this view, resulting in a **negligible visual impact** during construction.

Operation: The RRF building would be located in the far distance, out of view. It is unlikely that this building would be seen nor alter the amenity of views from properties

in this area due to intervening elements and distance. Therefore, there would be no perceived change in amenity of this view, resulting in a **negligible visual impact** during operation.

### 4.3.3 Summary of viewpoint impacts

The following table summarises the findings of the viewpoint assessment. (refer Table 4-1)

Table 4-1 - Summary of viewpoint impacts

| Receptor location                                                                        | Viewpoint                                      | Impact level |
|------------------------------------------------------------------------------------------|------------------------------------------------|--------------|
| Areas within the Dunheved Business Park                                                  | Viewpoint 1: View southwest from Dunheved Road | Negligible   |
| Dunheved Golf course to the southwest                                                    | Viewpoint 2: Dunheved Golf Club, Links Road    | Negligible   |
| Residential area of Werrington County, and the Wianamatta Regional Park to the southwest | Viewpoint 3: Poole Street, Werrington County   | Negligible   |
| Residential areas of Ropes Crossing to the northeast                                     | Viewpoint 5: Paget Street, Ropes Crossing      | Negligible   |
| Residential areas of Lethbridge Park to the northeast                                    | Viewpoint 5: Laws Crescent, Lethbridge Park    | Negligible   |

### 4.3.4 Night time visual assessment

The existing setting of the site has a medium level of brightness due to the brightly lit streets and working buildings of the business park. There would be lighting from traffic on the surrounding streets and buildings, creating both direct light sources and a general skyglow around the Proposal site. To the north and west of the site the Golf Course and Wianamatta Regional Park would have low levels of lighting due to the limited night time activity and light sources in this area.

Night time visual impact during construction: It is not expected that night works would be required to construct the project. Any security lighting associated with the construction site would be consistent with the existing medium brightness level environment of the surrounding business park. It is therefore expected that there would not be a perceived change in the amenity of views in this area during construction, which would result in a **negligible visual impact** during evening hours.

Night time setting during approved project operation: Due to the location of the Proposal, within an industrial area, the lighting would be largely contained within this area. There are no residential properties in the vicinity that would have the potential to experience direct light spill. Any light spill on adjacent industrial properties would be minimized and consistent with the business and industry character of this area. There may be some illumination on the upper levels of the RRF due to the use of transparent panels and would contribute somewhat to the skyglow created by the business park as a whole. It is important to note, that the Golf Course and Regional Park are not regularly used at night, and therefore they are not receivers at night. Furthermore, the potential residential receivers are all located at a distance from the site, and would only see the Proposal in the context of the existing business park.

Overall, it is expected that there would not be a perceived change in the amenity of views in this area during operation, which would result in a **negligible visual impact** during evening hours.

#### 4.3.5 Planning considerations

The Proposal is considered to be generally consistent with the controls of the PLEP 2010 with the exception of building height limit clause 4.3. Table 4-2 provides a response to this clause based on the findings of the viewpoint assessment.

Table 4-2 - Penrith Local Environmental Plan (2010) building heights clause 4.3 response

| Relevant clause                                                                                                                                                                     | Conclusion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (b) <i>to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development and to public areas, including parks, streets and lanes</i> | <p><u>Views to existing development:</u></p> <p>The Proposal site is enclosed by an existing, and expanding, area of industrial development which encloses views to the RRF building. The location of the building would not disrupt views to surrounding parks, streets and lanes.</p> <p><u>Views to public areas (including parks, streets and lanes):</u></p> <p>It is not expected that there would be an adverse visual impact on views from the Wianamatta Regional Park, South Creek corridor reserve and Dunheved Golf Courses, to the west (refer assessment of viewpoint 2 and 3).</p> <p>There would, however, be views to the Proposal from adjacent industrial streets and the park at by Dunheved Circuit. These views currently include industrial warehousing buildings and the Proposal would be consistent in character to these existing views. Furthermore, trees and shrub planting would be located on the site boundary adjacent to Dunheved Circuit, and alongside the south-eastern façade of the RFF building, providing some screening of adverse views from the Circuit (refer assessment of viewpoint 1).</p> <p>The open space on Dunheved Circuit is primarily used by workers from adjacent industrial businesses, it is not expected that the Proposal would result in any alteration to the level of privacy within this park, as it is set back from the development, across Dunheved Circuit and the activation of this frontage would be limited.</p> <p>It is expected that there would be some overshadowing of the Dunheved Circuit park by existing industrial buildings. The Proposal, due to its location to the northeast of the park, may result in overshadowing in the morning, when solar access is desirable, creating an adverse effect. Conversely, there would potentially be some overshadowing when the sun is in the west in the afternoon, which is a beneficial effect. Overall, it is not expected that this would result in a material change to the amenity of this park.</p> |

|                                                                                                                                                   |                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (c) <i>to minimise the adverse impact of development on heritage items, heritage conservation areas and areas of scenic or visual importance.</i> | There would be minimal visibility of the Proposal from Dunheved Golf Course (refer Viewpoint 2), areas of the Wianamatta Regional Park (refer Viewpoint 3), and the heritage listed former Dunheved House site due to the low-lying landform, and intervening industrial development. |
| <i>Maximum height of 12 metres</i>                                                                                                                | Although the maximum building height for the Proposal site has been exceeded, it is not expected that there would be an adverse visual impact created by the Proposal as described in the assessment of Viewpoints 1-5.                                                               |

The Wianamatta Regional Park Masterplan and Plan of Management identifies a number of views and vistas which are considered to be sensitive historic views. Views between Dunheved House site and the Jordan Hill and the access track, are both located to the northwest and west, and would not be altered by the Proposal.

The Dunheved House Site and the King plantings are located to the west of the Proposal site, within the Regional Park, on Links Road. Views from the Dunheved House Site and the King plantings are limited due the lack of public access to this location. It is expected, however, that views from this site would be limited due to the natural topography, which drops away, the presence of regrowth vegetation within this portion of the regional park, and existing intervening industrial buildings along Links Road. Any glimpse to the RRF building (similar to Viewpoint 3) would be consistent with the character of the existing view of industrial development, and is not expected to result in an adverse visual impact.

## 5 MITIGATION

To mitigate the visual impact of the Proposal, the following measures would be considered.

### Mitigation measures during construction:

- All works equipment and materials will be contained within designated boundaries of the worksite.
- The spread of stockpiles, waste, and vehicle parking will be minimised during construction.
- The construction area will be left tidy at the end of each day.
- Dust and dirt will be regularly cleaned from the road surface.
- Lighting of construction sites would be oriented to minimise glare and light spill impact on adjacent receivers.
- Any graffiti would be promptly removed.

### Mitigation measures during operation:

- The use of a contrasting colour on the upper sections of the RRF building to break up the visual scale of the building.
- Where reasonable and feasible, exterior light fittings will be installed in such a way that directs the light downwards and minimises impacts on adjacent properties.
- The cladding of the building will be robust and graffiti resistant.
- The Proposal site will be fenced to prevent unauthorised entry of the Proposal site by vandals.
- Appropriate directional signage will be provided at the Proposal site entrances to direct vehicles and pedestrians safely around the Proposal site.
- Signage for the Proposal will be designed to relate, in size and form, to the scale of the RRF building, visibility and other advertisements within the vicinity of the Proposal site.
- The substations on Dunheved Circuit will have a dark, matt finish so that they recede in views from the Circuit.

## 6 CONCLUSIONS

### 6.1 Viewpoint Assessment

The Proposal includes an extension to the existing RRF building which is larger in mass and scale to the existing buildings on the site. This would include an expanded footprint of some 58 metres along Dunheved Circuit, and extending 70 metres northwest into the site. Despite the height, mass and scale of this building, the visual impacts are expected to be **negligible** as:

- The Proposal is surrounded by existing industrial warehousing buildings which screen views to the lower portions of the building. The proposed construction and operation of the Proposal would be generally consistent with the existing industrial character of the business park. This character would be extended to the north as the north and south Dunheved precinct development is established (currently under construction).
- The architectural design of the Proposal reduces the perceived scale of the building by having relatively lower side walls, and using the pitch of the roof to accommodate the additional overall building height. The upper portions of the building would be treated with a different material, colour, and include some transparent panels, to visually break up the mass of the building.
- The Proposal includes trees and shrub planting located along the south-eastern building and site frontage. This vegetation would filter and screen adverse views to the Proposal, (driveway areas, lower portions of the RRF building and service boxes) in views from Dunheved Circuit and the small park opposite.
- The Proposal site is low lying and the surrounding landform includes a broad river valley to the west and northeast. Potential views from the nearby Dunheved Golf Course are reduced by the low-lying nature of this area, as the landform continues to descend towards the South Creek.
- The landform rises to the west and northeast, beyond the floodplain, at a distance of approximately 2km. This rise in landform is minor. Due to the existing framework of mature vegetation within these residential areas, the heavily vegetated South Creek corridor reserve and Wianamatta Regional Park, views to the business park are enclosed and views towards the Proposal site are limited.
- Mitigation measures would be implemented during construction and operation and further mitigate the potential impacts of the project.

The Proposal would exceed the height limits of the Proposal site as determined by the *Penrith Local Environmental Plan 2010* clause 4.3. However, it is expected that the Proposal would not have an adverse visual impact on views to and from the site. Nor would there be an adverse impact on privacy or solar access on adjacent streets and open space due to the industrial nature of the site.

The sensitive heritage views identified in the Wianamatta Regional Park Masterplan and Plan of Management, including the view from the former Dunheved House (demolished), would not be adversely impacted by the Proposal.

## 7 REFERENCE LIST

JBA Urban Planning Consultants, 2007, *St Marys North & South Dunheved Precinct Plan*, URL: <https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/NSW-Planning-Information/> (accessed 01/03/2017).

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Penrith City Council, 2014, *Dunheved Business Park Revitalisation Strategy*, URL: <https://www.penrithcity.nsw.gov.au/Documents/Building-and-Development/Dunheved-Business-Park-Revitalisation-Strategy/> (accessed 28/02/2017).

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Penrith City Council, 2010, *Penrith Local Environmental Plan*, <https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Local-Environmental-Plans/> (accessed 05/03/2017).

State of NSW Government Office of Environment and Heritage, 2013, *Wianamatta Regional Park Masterplan*, URL: <http://www.environment.nsw.gov.au/parkmanagement/wianamattaRPmasterplan.htm> (accessed 05/03/2017).