

Visual Impact Assessment

**First Building – Bradfield City Centre
Advanced Manufacturing Research Facility
215 Badgerys Creek Road, Bringelly
SSD 25452459**



**Prepared for the Western Parkland City Authority
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This report has been prepared by:



Kane Winwood BEng (Civil & Env) MEIANZ
Principal Planner
KEYLAN Consulting Pty Ltd

This report has been reviewed by:



Michael Woodland BTP MPIA
Director
E: michael@keylan.com.au

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1 Introduction

This Visual Impact Assessment (VIA) has been prepared by *Keylan Consulting Pty Ltd* (Keylan) on behalf of *Western Parkland City Authority* (WPCA) to accompany a State Significant Development Application (SSD 25452459) for development of an Advanced Manufacturing Research Facility (AMRF) at the site of 215 Badgerys Creek Road, Bringelly.

The proposal involves construction, fitout and use of the proposed first building in Bradfield City as an AMRF, including site preparation works, site access and parking, utilities infrastructure, landscaping/public domain, signage and other ancillary works.

The AMRF will support the development of the advanced manufacturing sector within the Western Sydney Aerotropolis by housing shared high-tech manufacturing equipment for research and development. Specialised equipment and machinery not normally accessible to individual enterprise will be accommodated within the First Building and made available to a broad range of users to fast-track innovation and business development.

The advanced manufacturing operations of the First Building will be carried out by the AMRF team. As an entity governed by the WPCA, the AMRF will recruit and build a team of advanced manufacturing development engineers who will work with academia and industry to develop and demonstrate innovations, productivity improvements and supply chain capability for industries such as space and defence.

The proposed development comprises:

- proposed building height of 16.7 metres (m)
- combined gross floor area (GFA) of approximately 3,061 square metres (m²), including approximately 1,111 m² GFA of manufacturing space and 1,254 m² GFA of office and meeting space
- provision of 50 parking spaces
- landscaping of resilient native and endemic species
- incorporation of ESD principles to support a green city & address climate change
- use of facility as an advanced manufacturing research facility
- use of facility as an office space
- ancillary use of facility as a function centre
- provision of public and private domain upgrades

The VIA describes, analyses and assesses the potential visual impacts associated with the proposal. The relevant legislation and planning instruments are addressed in detail within the *Environmental Impact Statement* (EIS) that was submitted to the Department of Planning and Environment (DPE). This VIA has been prepared to address the Planning Secretary's Environmental Assessment Requirements (SEARs) and DPE's response to submissions request on SSD 25452459.

1.1 Report Structure

The VIA has been prepared in accordance with the following document structure:

Section	Overview
1 Introduction	Introduction to the VIA and the proposed development.
2 Site and Locality	A description of the site, the context and an assessment of the opportunities and constraints presented by the site.
3 The Proposal	A detailed description of the proposed development application
4 Methodology	A description of the methodology undertaken including any limitations encountered during the assessment.
5 Assessment	An in-depth visual impact assessment of the existing environment, proposal and potential impacts on the surrounding area.
6 Conclusion	A concluding statement taking into account the assessment of the proposal.

Table 1: Report Structure

2 The site and locality

2.1 Site description

The site is irregularly shaped comprising an area of approximately 3.63 hectares (ha) within the larger 114.9 ha Bradfield City Centre site (Figure 1). The site has maximum dimensions of approximately 1 kilometre (km) from east-west and 1.7 km from north to south. At the north-western corner of the site is an 80m wide access handle to Badgerys Creek Road, which is a regional road linking The Northern Road and Elizabeth Drive.



Figure 1: Indicative site boundary (red) within Lot 101 DP 1282949 (Source: Six Maps)

The land generally slopes from high points in the north-west to low points in the east and south-east along Thompsons Creek. The highest point of the site is located at the western end of the access handle near Badgerys Creek Road, with the lowest point adjacent to Thompsons Creek in the eastern edge of the site.

The site is generally cleared of vegetation with small stands of native vegetation along the western edge of the site and within the Thompsons Creek riparian corridor. There are no existing buildings within the site.

2.2 Surrounding locality

The site's current surrounding context is characterised by rural and rural-residential land uses. The area to the east and south-east of Thompsons Creek comprises a series of large-lot rural residential properties accessed from Kelvin Park Drive and The Retreat, which typically comprise single detached dwellings with small-scale rural or lifestyle uses. Immediately to the west of the site are rural residential properties along Badgerys Creek Road.

Further to the east and north-east are the suburbs of Rossmore and Kemps Creek which includes a mix of intensive agricultural uses such as greenhouses and poultry farming.

Additionally, east of the proposed AMRF are two State heritage items known as:

- Kelvin Homestead (Item #00046), at 30 The Retreat, Bringelly
- Church of the Holy Innocents (Item #02005), at 130 Rossmore Avenue West, Rossmore

Kelvin Homestead is located approximately 800 m from the site and the Church of the Holy Innocents is located 4 km to the southeast.

2.3 Future Development Context

The site and surrounding development will be transformed throughout the next 10 years as described in the *Western Sydney Aerotropolis Plan 2020* (WSAP 2020). WSAP 2020 indicates how the surrounding Western Parklands City will be supported through a strong mix of compatible land uses, blue and green infrastructure upgrades, and associated transport infrastructure.

The site is located within the future Bradfield City Centre, which is to be transformed into an Aerotropolis City Centre. The immediate future context involves a city centre which will be supported the future Sydney Metro – Western Sydney Airport. The future Aerotropolis Metro station is located approximately 250m – 300m southeast of the site. Surrounding the site will be a range of mixed-use development, with an emphasis on health, education and research land uses surrounding the AMRF building.

The future built form context surrounding the proposed AMRF will be consistent with a city centre. The maximum height of the AMRF building is at 16.7 m (RL 95.7 m), which provides a human scale structure when compared to the future built form controls outlined within the WSAP 2020 (with the OLS of RL 125.5 m) and the draft Aerotropolis Core Precinct Plan, which indicate building heights in the vicinity may be up to 55 -75 m.

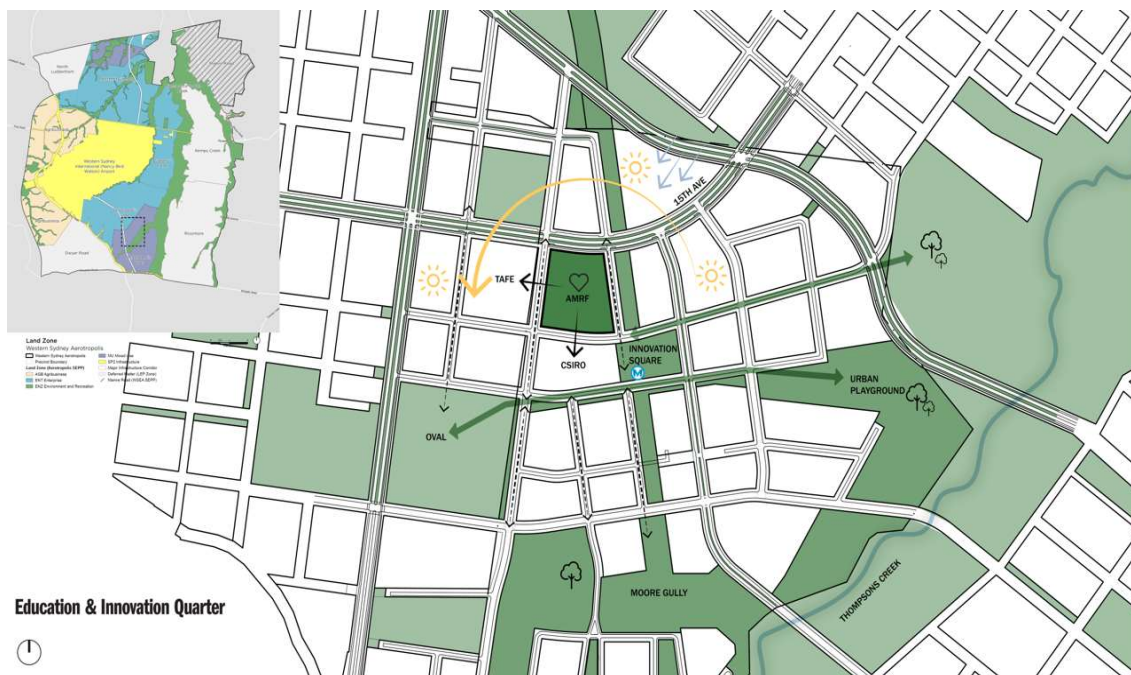


Figure 2: Future context of the site (Source: WSAP 2020)

3 The Proposal

The proposed AMRF building will consist of work separated into two stages, namely site preparation and construction of the First Building.

The proposal is consistent with the existing and future visual character of the area as it has been designed to reflect its initial context within the rural/rural residential character but also as an urban pavilion in the future context of the Bradfield City.

The building's lower scale-built form provides a more human scale structure which is served by public space for relief in the city centre.

The proposed development is described in Table 2.

Proposed First Building Development	
Stage 1	
Site Preparation	<ul style="list-style-type: none"> • vegetation clearing • remediation and bulk earthworks • installation of services and drainage infrastructure • access roads and site drainage • land stabilisation and rehabilitation
Stage 2	
Building works	<ul style="list-style-type: none"> • the AMRF building will comprise a combined gross floor area (GFA) of approximately 2,840m², including approximately 1,009 m² GFA of manufacturing space and 1,054 m² GFA of office and meeting space to support the operation of the facility • building height will be at RL 95.7 m with a height varying from 13.65 m to 16.15 m above the modified ground level • approximate site coverage 55.2%
Equipment	<p>Indicative machinery and equipment to be operated at the AMRF includes:</p> <ul style="list-style-type: none"> • industrial robot/collaborative robot/conveyor and continuous automation • Virtual Reality/Augmented Reality suites • microscopes, metrology and measuring • digital technology (CAD/DM/PLM/MES)
Access and Car Parking	<ul style="list-style-type: none"> • site access from Badgerys Creek Road and preliminary roads to access the site will match the planned formation of city road alignments • operational traffic will be limited to service vehicles, delivery vehicles and private vehicles with equipment delivery and maintenance vehicles would access the site sporadically, at approximately 2-week intervals
Landscaping	<ul style="list-style-type: none"> • detailed landscaping consistent with the objectives of the WSAP 2020 using species endemic to the Cumberland Plain along street frontages and throughout the site • green roof with public viewing platform

Table 2: Proposed development

4 Methodology

This VIA has been informed by the following information:

- the Sectary's Environmental Assessment Requirements (SEARs)
- the Environmental Impact Statement (EIS) prepared by Keylan Consulting
- the Statement of Heritage Impact prepared by Extent Heritage
- Architectural Plans and Design Report (Appendix C of the EIS, prepared by Hassell)
- Photomontages prepared by ARTERRA INTERACTIVE (AI) in Appendix A

The SEARs require:

a visual impact assessment (including photomontages and perspectives) of the development layout and design (buildings and storage areas), including:

- *details of staging, site coverage, setbacks, open space, landscaping, height, colour, scale, building materials and finishes, façade design, signage and lighting, particularly in terms of potential impacts on:*
 - *nearby public and private receivers, including the State Heritage Register items Kelvin and the Church of the Holy Innocents*
 - *significant vantage points in the broader public domain*

This VIA has also been informed by the relevant Land & Environment Court planning principles relating to visual impacts. The relevant case informing the VIA is *Tenacity Consulting v Warringah [2004] NSWLEC 140* (Tenacity). Tenacity identifies four principles for view sharing. These are:

1. Assessment of the views to be affected
2. Consideration from what part of the property the views are obtained
3. Assessment of the extent of the impact
4. Assessment of the reasonableness of the proposal that is causing the impact

The VIA identifies the visual catchment of the proposed AMRF and identifies the existing, emerging, and desired future character of the area to understand any sensitive receivers and likely visual impacts against the Tenacity principles.

The following limitations have been encountered while preparing this VIA:

- the photographs taken cannot replicate the experience of viewing the proposal with the human eye
- photographs have only been able to be taken from public areas and therefore viewpoints cannot provide an exact analysis of impacts to private property

Additionally, as the SSD application is accompanied by a specialist Heritage Impact Statement (HIS) in Appendix K of the EIS, visual impacts on surrounding heritage items have been considered as part of the HIS.

This VIA utilises the following assessment process.

- the collection of relevant information regarding the proposal site, the proposal and its compatibility with the surrounding landscape. Desktop analysis is undertaken to determine the visual catchment of the proposal and potential visual receivers using mapping and topography analysis.
- 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 negligible, minor, moderate, high or extreme impact rating.

This VIA has assessed the proposal against the Tenacity principles in context of the site to determine the sensitivity of the view. This methodology includes:

1. Establish the **visual sensitivity** of the receiver.

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 (e.g. from a residence, from the street, in a park etc).

Consider the aspect of the view from surrounding receivers being impacted, such as views from the receiver's property and whether standing or sitting views are impacted. These views are:

- Side views: Views across property boundaries, which are not direct a view perspective. These views are harder to achieve appropriate view sharing
- Front or rear views: Views lines are direct from the receiver's boundary.

Identify the view perspective of value in the context of the proposal and surrounding receivers. Five view perspectives have been categorised for this VIA. These include:

- **National** - views to a nationally iconic setting such as views to the Sydney Opera House or Sydney Harbour Bridge.
- **State** - views to a feature or landscape that is iconic to the State, such as views towards the Blue Mountains escarpment or a State heritage item.
- **Regional** - views 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, such as views to Nepean River Gorge and views to the ridgelines of the Western Sydney Parklands.
- **Local** - views experienced by concentrations of residents and/or local recreational users, local commercial areas and/or large numbers of road or rail users, to a local landscape feature or oriented specifically towards an area of scenic quality.

- **Neighbourhood** - views where visual amenity is not particularly valued by the wider community. Would include scattered and isolated residences in a working rural landscape or industrial areas.

The visual sensitivity is classified as follows:

- **Negligible**: no views past the property boundary towards the site.
 - **Minor**: partially skewed views from internal spaces towards the site from the receiver or indirect or partially obscured views from external areas of the property.
 - **Moderate**: indirect, distant or partially obstructed views towards the site from internal spaces or direct views from external areas on the property.
 - **High**: direct views towards a sensitive view from internal spaces.
 - **Extreme**: direct views of iconic elements from high use internal areas.
2. establish the **extent of the impact** on the view. This sensitivity has a direct bearing on the perception of visual impact experienced by the receptor and qualifies the quantitative impacts. The extent of impacts includes:
- **quantum of view**: The quantum of view relates to the openness of the view and the receptor's angle of view to the site. 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.
 - **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.
 - **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.
3. establish a rating based on the visual sensitivity and impact of the view loss.

The visual impact assessment is summarised in Table 3.

Rating	Visual Sensitivity	Extent of Impact
Negligible	No views beyond the property boundary or significant distance from the property	<ul style="list-style-type: none"> No visibility of the proposal No change to view quantum Distance to site of 2km and over
Minor	Partially obscured or distant views of neighbourhood views to the subject site from external areas on the property but not the dwelling.	<ul style="list-style-type: none"> Little change to existing views as obstructions or distance to the site alleviates visual impact Scale of change between 0-20% of view Distance to site between 800 m to 2000 m
Moderate	Direct or partially obscured local views (internal to the dwelling) Direct views to the site from external areas of the property	<ul style="list-style-type: none"> Indirect change to view scope as visual aspect remains consistent with existing Scale of change between 21-50% of view Distance to site between 350 m to 800 m
High	Direct Regional or State views from internal living areas	<ul style="list-style-type: none"> Direct change to view scope as visual aspect is obstructed Scale of change between 51-75% of view impacted Distance to site between 100 m to 350 m
Extreme	Unobstructed and near field iconic views to State and National views from internal areas in the dwelling and external	<ul style="list-style-type: none"> Views obstructed as site removes iconic view elements Scale of change between 76-100% of view impacted Distance to site between 0 m to 100 m

Table 3: Visual assessment definitions

Once the visual sensitivity and the extent of impact from each receptor has been determined using **Error! Reference source not found.**, the VIA determines the overall visual impact felt by a receiver in the context of the surroundings using the assessment matrix in Table 4.

		Extent of Impact				
		Extreme	High	Moderate	Minor	Negligible
Sensitivity	Extreme	Extreme	Extreme	High	Moderate	Minor
	High	Extreme	High	Moderate - High	Minor	Negligible
	Moderate	High	Moderate - High	Moderate	Minor	Negligible
	Minor	Moderate	Moderate	Minor	Negligible	Negligible
	Negligible	Minor	Negligible	Negligible	Negligible	Negligible

Table 4: Visual impact assessment matrix

5 Assessment

The assessment within this Section has been undertaken in accordance with the methodology outlined at Section 4.

5.1 Visual Catchment

Existing Context

The AMRF will be facing a rural outlook towards the north, south, east, and west in the immediate context. The immediate context is categorised in Table 5 and shown in Figure 3.

Bearing	Visual setting
North	Towards the north the immediate character is predominately rural landscape with canopy trees. A new access road from Badgerys Creek Road is under construction as part of the Sydney Metro Project as shown in Figure 3.
South	<p>The landscape character to the south is predominately rural. The former site of the Royal Australian Air Force (RAAF) main building and transmission tower is located to the south of the site.</p> <p>Further southeast beyond Thompsons Creek (approximately 900 m from the site) are rural residential allotments. Significant tree screening along the Thompsons Creek corridor disrupts views towards the AMRF from further away.</p>
East	Rural residential allotments including the Kelvin Homestead are located 700 m to 900 m to the east. Land further to the east comprises rural residential development beyond the Thompsons Creek corridor
West	<p>Immediately west of the site are rural residential receivers along Badgerys Creek Road. An existing access road travels in a north south direction from Badgerys Creek Road to the RAAF building.</p> <p>The closest receiver is 175 Badgerys Creek Road immediately to the west of the site. Two properties adjoin 175 Badgerys Creek Road to the north (being 195 and 205 Badgerys Creek Road) and nine properties to the south of 175 Badgerys Creek Road (45A to 155 Badgerys Creek Road).</p> <p>The eastern boundaries of 185 and 155 Badgerys Creek Road include tree screening whilst 175 Badgerys Creek Road has direct view lines towards the AMRF site. Further southwest, views from 155 Badgerys Creek Road will be direct towards the site.</p> <p>Views from the residence at 145 Badgerys Creek Road, which is at the eastern edge of the property, will be indirect towards the site, being skewed by vegetation</p>

Table 5: Existing visual setting

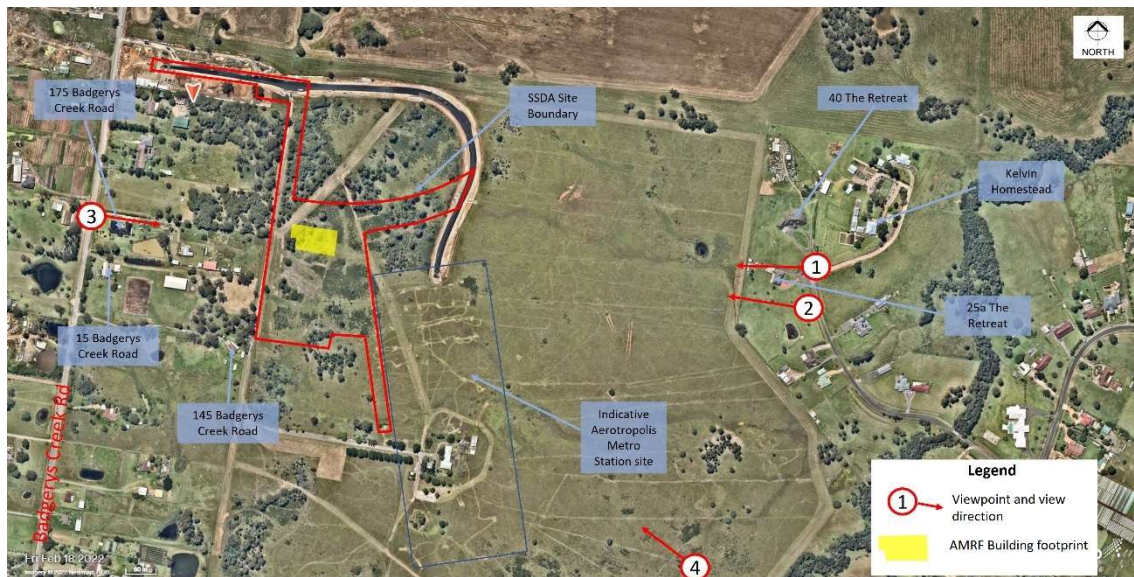


Figure 3: Visual impact assessment viewpoints (Source: Nearmap)

The character of the existing visual catchment can be described as:

- Rural residential
- Rural landscaped plains
- Landscaped outlooks
- Regional views to towards the Kelvin house and the Thompson Creek riparian corridor
- Local High-quality view within the rural plan
- Neighbourhood views towards the rural landscape, forest areas and rural dwellings

Future Context

The proposed AMRF future context as described in the relevant strategic plans for Bradfield City Centre. The future context is categorised as (Figure 4):

- North: The entrance faces towards the future 15th Avenue, which will support a busy active frontage and local road network. Land uses will be enterprise and mixed use enhanced by a landscaped area and open space with access to the future Metro station.
- South: Future public domain is located south proposed under SSD 25452459. Further south is the proposed location of the AMRF expansion site.
- East: For the first 5 years, immediately east of the AMRF will be temporary parking spaces until approximately 2026. The 5 years plus vision is to transform the carpark into Building 4 of the AMRF expansion. The future Aerotropolis Metro Station is approximately 250 m -300 m to the southeast.
- West: An entrance to the site is located off Central Loop West. Future west is the proposed education precinct. This area is planned to be transformed supporting health and education purposes. Figure 2 and Figure 4 shows the land immediately west supporting a health or education precinct.



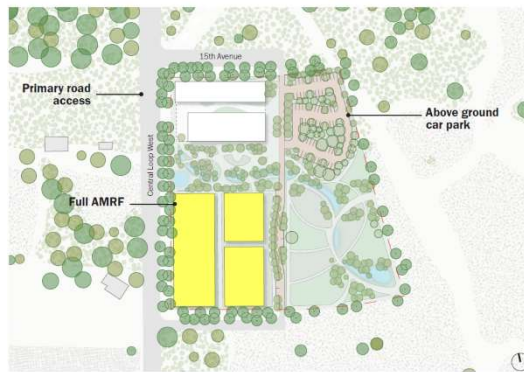
Existing site

- Predominated by wide stretches of grass species
- Clusters of Eucalyptus



SSDA, 2023

- Completion of AMRF, First Building
- Above ground car park (temporary)
- Landscape to the South & East
- Through-site vehicle access
- Completion of primary roadway access



AMRF expansion, 2026

- Completion of Full AMRF
- Retained above ground car park (temporary)



Evolved master plan, 2026+

- Completion of Building 4 and 5

Figure 4: Future context of the AMRF (Source: Hassell Studios)

The character of the future visual catchment can be described as:

- Future city centre
- Expansive public domain improvements with landscaped character
- Large mixed-use buildings supporting an education precinct
- Large enterprise buildings supporting the AMRF expansion
- Transport corridor & expansive road and pedestrian networks

The viewpoints identified in Figure 3 within the existing visual catchment have been used to assess the visual impacts of the development.

The four viewpoints are summarised as follows:

- View 1: Kelvin Homestead and 25b The Retreat
- View 2: 25 The Retreat and surrounding receivers
- View 3: Receivers along Badgerys Creek Road from 145 to 205 Badgerys Creek Road
- View 4: The Church of Holy Innocents

5.2 Assessment of Viewpoints

5.2.1 Views 1 and 2: 40 The Retreat, Kelvin Homestead, 25a and 25b The Retreat, 15 The Retreat and 20 The Retreat

Views 1 and 2 were selected as these represent the closest visual receptors to the east of the site. These receivers are identified as:

- 40 The Retreat
- 25a The Retreat
- 25b The Retreat
- 15 The Retreat
- 30 The Retreat (Kelvin Homestead)
- 20 The Retreat

Existing visual setting

The existing visual setting is described as a rural landscaped setting from all residences on the western side of The Retreat. Views from these receivers to the northwest through to the southwest into an expansive landscaped plain. The rural plain supports scattered trees with dense canopy trees further to the west. The now demolished RAAF structures on Lot 101 DP 1282949, including the communications tower, previously formed the primary landmarks to the southwest.

The closest receivers are 15, 25a, 25b and 40 The Retreat with 30 The Retreat setback further and elevated higher than other receivers. The Kelvin Homestead is located approximately 800 m from the AMRF, whilst 15, 25a, 25b and 40 The Retreat are located between 700m – 800m from the AMRF site. The residence at 20 The Retreat is located approximately 830 m from the AMRF site.

Given 30 The Retreat (Kelvin Homestead) is elevated higher than other receivers on The Retreat, its visual catchment looks directly across the structures on 40 and 25b The Retreat towards the First Building site. The buildings are orientated northwest looking towards the site of the future Western Sydney Airport.

Assessment of Impact

Figure 5 to Figure 10 demonstrate the key views towards the AMRF from View 1 and View 2, showing the existing and future views from the two viewpoints.

Visual Sensitivity

- the views affected will be the rural landscape outlook as shown in Figure 5 (View 1) and Figure 8 (View 2).
- the views from the residential receivers towards the development are classed as local to neighbourhood.
- views are partially obscured by vegetation within the rural plain and due to distance to the site. Residences along the western boundary of The Retreat obscure views from viewpoints on the eastern side of The Retreat.



Figure 5: View 1 - existing view looking west from entry to Kelvin Homestead with entry to 40 The Retreat and 25b The Retreat in foreground (Source: AI)



Figure 6: View 1 - Proposed view of AMRF outlined in white (Source: AI)



Figure 7: View 1 – Proposed view of AMRF showing trees removed (Source: AI)



Figure 8: View 2 – Existing view from 25 The Retreat looking west (Source: AI)



Figure 9: View 2 – Proposed view of AMRF outlined in white (Source: AI)



Figure 10: Proposed view of AMRF showing trees removed (Source: AI)

Consideration from what part of the property the views are obtained

- receivers at 25a and 25b The Retreat would have views to the AMRF from internal living spaces and external areas of the property as the dwelling position faces west
- views from 15 The Retreat towards the site could be obtained from the living areas facing northwest however these would be partially obstructed by structures at the rear of 25b The Retreat. Primary views from this residence are towards the southwest
- 40 The Retreat would have direct views towards the site from external areas including driveways and external areas, with side views from internal living areas which face north
- the views from the main dwelling at 30 The Retreat towards the site would be partially obscured by structures within the site and the buildings on 40 The Retreat and. The site would be visible from external areas including the driveway and buildings on the southwestern corner of the complex.
- views from 20 The Retreat towards the site are at a 45 degree angle from front-facing windows including those on the second level.

The AMRF is located on the top of a rise that slopes east, which will be visible from residences along The Retreat. The development will introduce new structures in the landscape although the building will not protrude over the existing treeline beyond the building. Figure 7 and Figure 10 show the visual impact of the AMRF with trees removed. The impact of removing trees on the landscaped setting is minimal, as significant canopy trees remain behind the AMRF, softening the built form.

Table 6 provides a visual impact assessment for the residential receivers located east of the site.

Address	Visual Sensitivity	Extent of Impact	Visual Impact Rating
40 The Retreat	Minor <ul style="list-style-type: none"> • No internal views towards the southeast as these areas of the dwelling are orientated to the north or south • Views to the site from external area of the property 	Minor <ul style="list-style-type: none"> • Proposal is approximately 700 m away • No change to internal view as existing views remain are not interrupted by the proposal • No change to neighbourhood view • no perceivable change to the landscape as the structure remains below surrounding tree canopies 	Minor
25a The Retreat	Moderate <ul style="list-style-type: none"> • Views towards the site are obtained from internal living areas looking west 	Minor <ul style="list-style-type: none"> • Proposal is approximately 670m away. • Internal views from receiver will be slightly altered looking west towards the ARMF 	Minor

Address	Visual Sensitivity	Extent of Impact	Visual Impact Rating
		<ul style="list-style-type: none"> Distance between the site and receiver ensures small perceivable change to the landscape as the structure remains below surrounding tree canopies 	
25b The Retreat	Moderate <ul style="list-style-type: none"> Indirect views towards the site obtained from internal living areas and covered external areas looking northwest Direct views from external areas on the property towards the site 	Minor <ul style="list-style-type: none"> Proposal is approximately 750m away. Internal views from receiver will be slightly altered looking northwest towards the ARMF Distance between the site and receiver ensures small perceivable change to the landscape as the structure remains below surrounding tree canopies 	Minor
15 The Retreat	Minor <ul style="list-style-type: none"> Partially obscured indirect views towards the site from internal areas of the dwelling 	Minor <ul style="list-style-type: none"> Proposal is approximately 775 m away Minor change to internal view as primary views remain expansive and open Distance between the site and receiver ensures no perceivable change to the landscape as the structure remains below surrounding tree canopies 	Negligible
30 The Retreat (Kelvin Homestead)	Moderate <ul style="list-style-type: none"> The site is a State heritage item it is a moderately sensitive receiver Main residence orientation faces predominately north and east Main internal living areas in Cottage 2 of the estate will have direct view lines towards the ARMF Direct views from external areas of the property 	Minor <ul style="list-style-type: none"> Proposal is approximately 800m away Internal views from receiver will be slightly altered looking west towards the ARMF Distance between the site and receiver ensures small perceivable change to the rural landscape as the AMRF remains below surrounding tree canopies 	Minor
20 The Retreat	Moderate <ul style="list-style-type: none"> Internal views from receiver towards the site are partially 	Minor <ul style="list-style-type: none"> Proposal is approximately 830m from the site 	Minor

Address	Visual Sensitivity	Extent of Impact	Visual Impact Rating
	indirect from internal living areas	<ul style="list-style-type: none"> Internal views will be slightly altered by the AMRF which remains below surrounding tree canopies 	

Table 6: Visual impact assessment summary View 1 and View 2

The design of the AMRF has considered its proximity and orientation towards the residential receivers to the east and includes proposed elements such as natural colours and materials. Additionally, the low-rise structure provides a compatible built form as the AMRF appears human scaled when viewed from the residential receivers to the east. The height of the building is contained below the existing tree lines which reduced bulk and scale impacts and preserves the existing rural landscape outlook from receivers east.

Given the sensitive design, and appropriate use of form, scale and choice of materials proposed for the AMRF, the overall visual impact to or from the eastern residential receivers is considered **Negligible to Minor**.

In future context of the Bradfield City Centre, the AMRF will not be visible to the eastern receivers. This is evident as the metropolitan core will have maximum building heights ranging from 55 -75m and the Aerotropolis Metro Station will also appear in front of the AMRF building from these receivers. The future maximum building heights plus the distance between the site and Kelvin will mean that no visual impacts occur.

In the short term, a minor visual impact will be felt by the eastern receivers, however as the Bradfield City Centre transitions into a Metropolitan Core the visual impact of the AMRF will subside as development expands. The future impact is considered **negligible**.

5.2.2 View 3: 175 Badgerys Creek Road, Bringelly and surrounding residential receivers

View 3 was selected as 175 Badgerys Creek Road is the nearest residential receiver to the west of the proposed AMRF. Further residential receivers located northwest and southwest share a similar aspect. These residential receivers include:

- 175 Badgerys Creek Road approximately 260 m west
- 195 Badgerys Creek Road approximately 265 m northwest
- 205 Badgerys Creek Road approximately 320 m northwest
- 155 Badgerys Creek Road approximately 330 m southwest
- 145 Badgerys Creek Road approximately 200 m southwest

Existing Visual Setting

The visual catchment of these receivers is described as a rural landscape setting to the east with a range of vegetation characteristics. The eastern boundaries of 185 and 155 Badgerys Creek Road include tree screening whilst 175 Badgerys Creek Road has direct view lines towards the AMRF site. Views towards the site from residences at 195 and 205 Badgerys Creek Road are obstructed by dense vegetation.

Views from 155 Badgerys Creek Road towards the site are partially obstructed by existing buildings adjacent to the residence and on the property at 175 Badgerys Creek Road.

The closest receivers are 145 Badgerys Creek Road and the rear dwelling at 175 Badgerys Creek Road, both approximately 170 m from the site. The views from 145 Badgerys Creek Road will be indirect towards the site, being partially screened by vegetation.

A summary of the view setting from each of the receivers along Badgerys Creek Road is provided below:

- 175 Badgerys Creek Road. This receiver looks east into an expansive rural plain with scattered canopy trees. Dense canopy trees can be viewed along the northern boundary of the site. This receiver currently has view lines towards the metro access road under construction.
- 195 Badgerys Creek Road. The visual catchment is described as a rural forest setting. This receiver looks east into dense vegetation on the eastern portion of the property. Dense canopy trees are also present on the neighbouring vacant property at 185 Badgerys Creek Road along the southern and eastern boundary.
- 205 Badgerys Creek Road. The visual catchment is described as a rural forest setting. This receiver looks east into dense vegetation. Dense canopy trees can be viewed long the southern and eastern boundary.
- 155 Badgerys Creek Road. The visual catchment is described as a rural landscape setting. This receiver looks east into an expansive rural plain with sheds within the property interrupting the view towards the east. Scattered canopy trees are viewed at the eastern portion of the site.
- 145 Badgerys Creek Road. The visual catchment is described as a rural landscape setting. This receiver looks east into an expansive rural plain through scattered trees in the northeast corner of the property, adjacent to the dwelling. The rural plan supports canopy trees. The RAAF buildings and tower can be seen to the southeast through scattered trees.

Assessment of Impact

Figure 11 and Figure 12 show the indicative views from 175 Badgerys Creek Road, showing the existing and proposed views from this property.



Figure 11: Existing view of 175 Badgerys Creek Road (Source: Google Maps)



Figure 12: Indicative view of 175 Badgerys Creek Road (Base Source: Google Maps)

Visual Sensitivity

- The view affected will be the rural landscaped outlook
- The views affected by the western residential receivers are classed as local to neighbourhood
- There is minimal to no change to the neighbourhood view outlook at 145, 186/195 and 205 Badgerys Creek Road

- The views afforded to 155 and 175 Badgerys Road will have an indirect change to their view perspective

Consideration from what part of the property the views are obtained

- 175 Badgerys Creek Road will have views looking east, from the eastern aspect of the dwelling affected from a standing and sitting position.
- views from 195 Badgerys Creek Road to the site are obstructed by dense vegetation in the south-eastern area the property
- views from 205 Badgerys Creek Road to the site are obstructed by dense vegetation in the south-eastern area the property
- 155 Badgerys Creek Road will have indirect views looking east and northeast, from the eastern aspect of the dwelling, affected from a standing and sitting position.
- 145 Badgerys Creek Road will have indirect views looking northeast from the dwelling. View lines are partially obstructed by vegetation along the northern boundary of the property

Table 7 provides a visual impact assessment for the residential receivers located west of the site.

Address	Visual Sensitivity	Extent of Impact	Visual Impact Rating
175 Badgerys Creek Road	High <ul style="list-style-type: none"> • Direct views to the site from internal living areas, partially obscured by vegetation and structures within the property 	High <ul style="list-style-type: none"> • Proposal is approximately 260m away from the main dwelling and 170 m from the rear dwelling • High change to internal view aspect looking east • Approximately 25-35% of view aspect looking northeast will be impacted • Impact is short term as the site will be developed 	High
195 Badgerys Creek Road	Negligible <ul style="list-style-type: none"> • Views towards the site are obstructed by dense vegetation 	Negligible <ul style="list-style-type: none"> • Proposal is approximately 265 m away • No perceivable change to view as dense vegetation blocks views outside property boundary 	Negligible
205 Badgerys Creek Road	Negligible <ul style="list-style-type: none"> • Views towards the site are obstructed by dense vegetation 	Negligible <ul style="list-style-type: none"> • Proposal is approximately 320m away • No perceivable change to view as dense vegetation blocks views outside property boundary 	Negligible

Address	Visual Sensitivity	Extent of Impact	Visual Impact Rating
155 Badgerys Creek Road	Minor <ul style="list-style-type: none"> Internal views to the site obstructed by structures on 175 Badgerys Creek Road and vegetation 	Minor <ul style="list-style-type: none"> Proposal is approximately 330m away. Minor change to internal view aspect looking northeast Approximately 10% of view aspect looking northeast will be impacted Impact is short term as site will be developed consistent with WSAP 2020 	Negligible
145 Badgerys Creek Road	Moderate <ul style="list-style-type: none"> internal views to the site partially obstructed by vegetation to the north 	Moderate <ul style="list-style-type: none"> Proposal is approximately 160 m from the site. Minor change to internal view aspect looking northeast Impact is short term as site will be developed consistent with WSAP 2020 	Moderate

Table 7: Visual sensitivity assessment receivers located west

The initial visual impact on 175 Badgerys Creek Road is assessed as **high**, as view lines will be direct to the facility and the impacts on 145 Badgerys Creek Road area assessed as Moderate due to the partial obstruction of the site by vegetation. Visual impacts on 155, 195 and 205 Badgerys Creek Road are **negligible**.

The future context west of the AMRF is currently planned as the future site of the Bradfield City Centre education precinct. Prior to commencing construction of the building, the landowners of occupied residences to the west of the site will be contacted to discuss the upcoming construction activities and preferred measures of visual mitigation will occur.

In the interim, visual relief is provided as canopy trees screen the AMRF during and post construction. Visual relief is also seen in the form of compatible colours and materials proposed, ensuring consistency with the rural landscaped character.

Additionally, the built form provides human scaled structure that does not exceed the existing canopy trees. The design reflects its initial context within the rural/rural residential character but also as an urban pavilion in the future context of the Bradfield City

As the Bradfield City Centre transitions into a metropolitan core and these properties will become part of the Aerotropolis, the visual impact of the AMRF will subside as development expands into a health and education precinct. The future impact is considered **negligible**.

View 4: The Church of Holy Innocents

View 4 was selected as the Church of Holy Innocents is a State Heritage Item and assessment of visual impacts was required by the SEARs.

The Church of the Holy Innocents is located approximately 4km southeast of the site.

Existing Visual Setting

The existing visual catchment consists of rural landscape setting with canopy trees. The surrounding character is a rural residential setting with views towards other dwellings.

Assessment of Impact

Due to the large distance between the site and this location there will be no visual impact to the settings and views of this heritage item. The proposed works present no change to the Church of the Holy Innocents.

Visual Impact Assessment

Table 8 provides a sensitivity assessment against the residential receivers located west of the site.

Address	Sensitivity rating		
	Visual Sensitivity	Extent of Impact	Rating
The Church of the Holy Innocents	Negligible <ul style="list-style-type: none"> No views beyond the property boundary 	Negligible <ul style="list-style-type: none"> Approximately 4km away No change to visual setting 	Negligible

Table 8: Visual sensitivity assessment receivers located east



Figure 13: Existing view



Figure 14: Proposed view markup (Base Source: Google Maps)

5.3 Mitigation measures

The proposed AMRF will present a visual impact to receivers located to the west of the site. To minimise visual impacts the Applicant will undertake the following:

- Prior to construction contact each receiver with impacts assessed as Moderate or higher and discuss potential mitigation measures to minimise visual impact
- As 175 Badgerys Creek Road will be the greatest impacted receiver, the implementation of mitigation steps will reduce the visual impact caused by the proposal to minor

Importantly the locality is identified to be a future Metropolitan Core supported by dense buildings and a metro station. It is anticipated within the next 3-5 years the locality will change drastically. Mitigation measures will be short term, as within the medium term the city will start to transform, consistent with the vision of the WSAP 2020

5.4 Assessment Summary

Using the tenacity methodology outlined in Table 3 and Table 4 this VIA has determined the visual impact of the proposed AMRF on surrounding visual receivers. Four viewpoints have been picked for assessment and within each view point an assessment has been undertaken against nearby receivers.

Table 9 provides a summary against each viewpoint's separation, sensitivity, reasonableness, and impact. Table 10 provides a summary of the sensitivity of the receiver, extent of the impact and total impact rating using the matrix in Table 4.

Viewpoint / Location	Distance of View	Visual Sensitivity	Extent of Impact	Visual Impact Rating
1	800m	Negligible to Moderate	Negligible to Moderate	Negligible to Moderate
2	800m	Negligible to Moderate	Negligible to Moderate	Negligible to Moderate
3	265m	Negligible to High	Negligible to High	Negligible to High
4	4km	Negligible	Negligible	Negligible

Table 9: Assessment summary

Receiver Address	Sensitivity	Extent	Visual Impact
Viewpoints 1 and 2			
40 The Retreat	Minor	Minor	Minor
25a The Retreat	Moderate	Minor	Minor
25b The Retreat	Moderate	Minor	Minor
15 The Retreat	Minor	Minor	Negligible
30 The Retreat	Moderate	Minor	Negligible
20 The Retreat	Moderate	Minor	Minor
Viewpoint 3			
175 Badgerys Creek Road	High	High	High
195 Badgerys Creek	Negligible	Negligible	Negligible
205 Badgerys Creek Road	Negligible	Negligible	Negligible

Receiver Address	Sensitivity	Extent	Visual Impact
155 Badgerys Creek Road	Minor	Minor	Negligible
145 Badgerys Creek Road	Moderate	Moderate	Moderate
Viewpoint 4			
Church of the Holy Innocents	Negligible	Negligible	Negligible

Table 10: Receiver visual impact summary

6 Conclusion

This VIA has assessed the existing and future context of the site and how the proposed AMRF responds to the surrounding context. This VIA followed the visual assessment principles set out in *Tenacity Consulting v Warringah [2004] NSWLEC 140* to determine the extent of visual impact cause by the AMRF.

Following a detailed analysis of the proposal and the surrounding locality, this VIA has found that, during the short term, the visual impact can be categorised as **Negligible to Minor** at all surrounding receivers, with the exception of the following:

175 Badgerys Creek Road – **High**
145 Badgerys Creek Road – **Moderate**

To reduce impacts on these receivers, the Applicant proposes to approach the landowners prior to and during construction of the development to resolve interim visual impacts through the use of visual screening, if requested by the landowner.

Other findings of the VIA include:

- the proposed will result in minor visual impacts on the Kelvin Homestead during the interim stages of the Bradfield City Centre development, however as the city progresses it lessens to negligible impacts
- no visual impacts are predicted for the Church of Holy Innocents as it is approximately 4 km from the site

The assessment found that the future context of the Bradfield City Centre will provide an urban environment consisting of higher building heights and larger built forms that the AMRF will exist within. During the interim stages of developing the Bradfield City Centre, visual impacts will be felt by surrounding receivers, however as the city expands and these lands are developed consistent with the WSAP 2020, visual impacts of the AMRF First Building will subside.

The AMRF has been designed to be sympathetic to the current rural and rural residential character with a vegetated environment but also as an urban pavilion in the future context of the city. The building designs incorporate features to address the initial context of the building's surroundings, with the use of a transparent approach to the building at ground level. This enables the structure to be connected with country and the surrounding landscape.

Following consideration of the above, the proposal is considered to result in acceptable visual impacts. This conclusion is drawn as the structure will appear rectangular in shape with soft curved edges when viewed from the street level. The structure will appear as a single storey when viewed from the street but will accommodate two storeys internally. This is done to soften built form and provide for a structure in tune with the landscape.

Appendix A

Photomontages prepared by ARTERRA INTERACTIVE (AI)