



**PEOPLE
CENTRED
HERITAGE**

8 May 2024

Attention: Alexander Nikolic
Western Parkland City Authority
50 Belmore Street
Penrith NSW 2750

Dear Alexander,

Bradfield City Centre – Non-Aboriginal Heritage Assessment

Scope of works

The proposed activity under this Review of Environmental Factors (REF) relates to the Stage 2A Enabling Works for Bradfield City Centre.

In summary, the proposed activity relates to site clearing, construction of new roads, the provision of service authority utilities, street landscaping, and drainage and stormwater infrastructure.

Specifically, the scope of works for the BCC Stage 2A REF will include the following:

- Construction of new roads, and associated stormwater, earthworks and civil works.
- Provision of waste water, potable water, recycle water infrastructure.
- Provision of electrical services network and reticulation infrastructure.
- Provision of data and telecommunications network infrastructure.
- Streetscape landscape works.

In addition, the BCC Stage 2A REF will also involve several activities which are ancillary to the construction of roads, including:

- Site clearance (including removal of vegetation).
- Provision of service authority utilities within the road corridors.
- Street landscaping.
- Drainage and stormwater infrastructure (including temporary stormwater basins).
- Stockpiling of excess soil.
- Construction of temporary haul roads during construction, (together with the construction of the new roads).
- Road works.

The REF is accompanied by design plans and a range of supporting technical studies which had been prepared to inform the proposed design.



The proposed road alignments and civil infrastructure for the Stage 2A Enabling Works are generally in accordance with the Western Sydney Aerotropolis Precinct Plan and Western Sydney Aerotropolis DCP and are consistent with the BCC Master Plan.

Statement of Historical Impact

Extent Heritage was commissioned by Western Parkland City Authority to prepare a Statement of Heritage Impact (SOHI) to investigate non-Aboriginal/historical archaeology and built heritage within the Bradfield City Centre project site. Through the completion of background research, database searches, and field survey, assessments of archaeological potential and significance and built heritage impacts were produced.

Non-Aboriginal/Historical Archaeology

An analysis of the historical archaeological potential within the Bradfield City Centre study area, inclusive of Stage 2A boundary, has identified a high potential for archaeological remains associated with the RAAF Bringelly Receiving Station (late twentieth century development, 1945-2000). The remains are expected to comprise evidence of earthworks, RAAF infrastructure, and staff houses. However, as these features are expected to have low research potential, they would not meet the criteria for local significance according to the NSW Heritage Division publication 'Assessing Heritage Significance' (2001).

No historical archaeological remains are expected to be associated with Aboriginal occupation or British exploration and survey of the site. As a result, no further assessment is required for these stages.

Table 1: Historical archaeological potential

Phase	Potential features	Level of potential
Phase 1: Aboriginal occupation (pre-1788)	No historical archaeology.	NA
Phase 2: British exploration and survey (1788-1804)	No historical archaeology.	NA
Phase 3: Early settlement (1805-1850)	Postholes associated with fence lines Tracks	Low
Phase 4: Nineteenth century subdivision (1850-1900)	Postholes associated with fence lines Tracks	Low
Phase 5: Early twentieth century development (1900-1945)	Postholes associated with fences Tracks	Low
Phase 6: Late twentieth century developments (1945-2000)	<i>Staff Houses:</i> Postholes associated with fences	High



	Footings Demolition deposits Services Isolated artefacts and artefact scatters associated with occupation	
	<i>RAAF Infrastructure:</i> Footings Demolition deposits Services Isolated artefacts and artefact scatters associated with telecommunications and the military	High
	<i>Aerial infrastructure:</i> Concrete pads Light aerals Guy wires	High
	<i>Earthworks:</i> Dams Landscape modifications and grading Drainage channels	Extant
Phase 7: Post-2000 intensive development	No associated archaeology.	NA

Built Heritage

The Bradfield City Centre study area, inclusive of land within the Stage 2A boundary, is not listed as a heritage item on any statutory or non-statutory register, nor does it meet the criteria for local or State heritage significance. The study area is however, located in the vicinity of the State Heritage Register item Kelvin, an early nineteenth century homestead and farming complex.

The SOHI found that the resulting built form of the Bradfield City Centre Masterplan will have an indirect impact on views west from the homestead and outbuildings of the item. However, key views to the north and east would be retained, supporting the extended visual curtilage and setting of the item. The SOHI found that the proposed Masterplan will not detract from the significance of the item, and provided recommendations to mitigate impacts to the views and setting of the item.

The works contained in the Stage 2A scope are limited to the creation of new roads and associated infrastructure, and form part of the previously approved BCC Masterplan. While these works will constitute a change in the existing landscape in this area, the works are by nature low-scale, and are considered unlikely to impact on significant views of the heritage item. There are no additional impacts to the heritage item from the Stage 2A works beyond those assessed in the SOHI. As such, no further assessment is required for this stage.

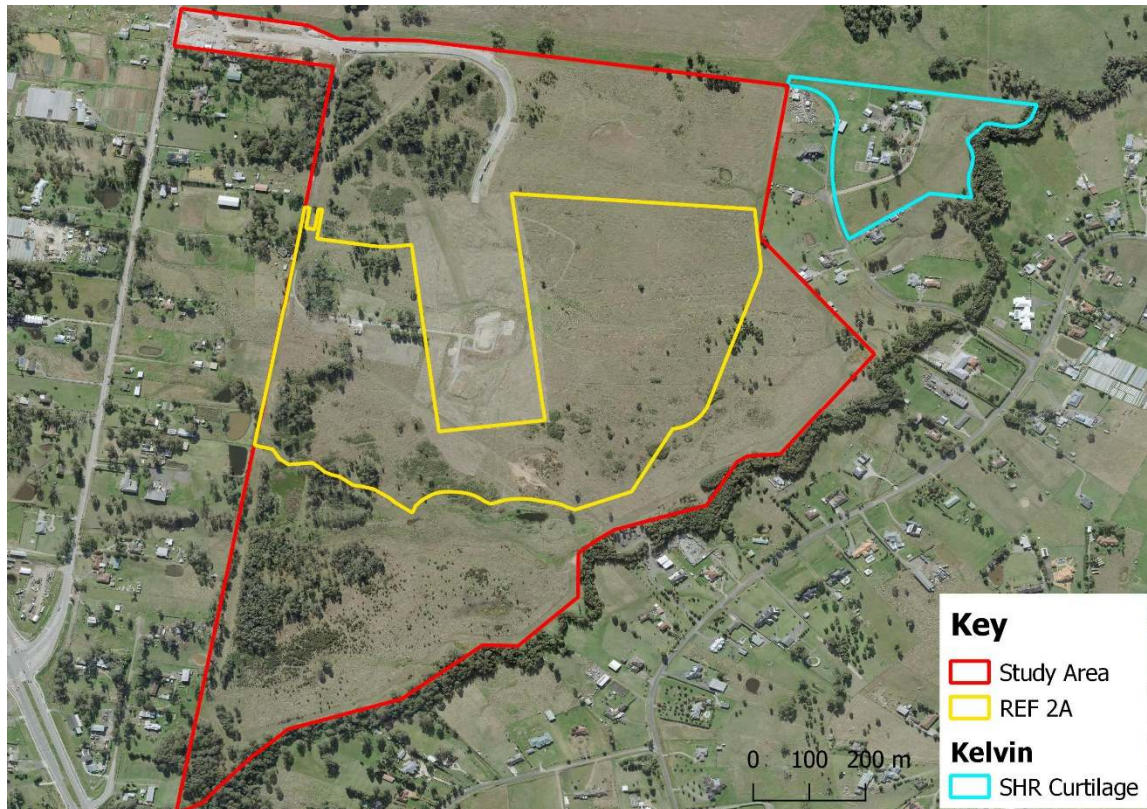


Figure 1: REF Stage 2A and built heritage site Kelvin

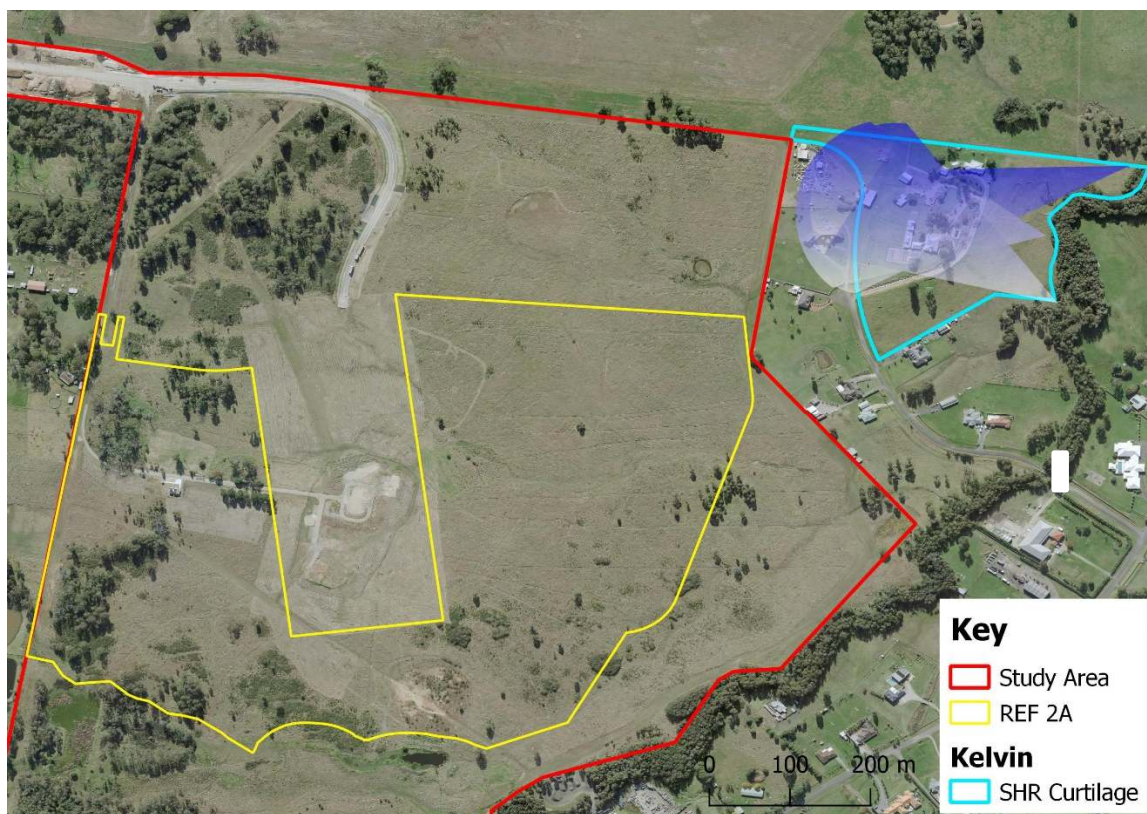


Figure 2: REF Stage 2A and built heritage site Kelvin, with key viewsheds



Mitigation measures

Section 10 of the SOHI provides recommendations for the management of historical archaeology and built heritage within the Bradfield City Centre area. These recommendations should be referred to throughout the Masterplan process. Relevant to the Stage 2A project boundary, these comprise the following:

- With regard to the management of historical archaeological remains, an Unexpected Finds Procedure should be in place prior to the commencement of ground works.
- With regard to the management of built heritage, the SOHI recommends that any new development should consider the SHR heritage item, Kelvin. This letter has found that there are no impacts to the heritage item from the Stage 2A works.

Conclusions

No further assessment or investigation relating to historical archaeology is required within the Stage 2A boundary. Any unexpected relics or features should be managed under an unexpected finds procedure.

No further assessment of built heritage impacts is required within the Stage 2A boundary.

Kind regards,

A handwritten signature in black ink, appearing to read "Hayley Edmonds". The signature is fluid and cursive, with a large initial "H" and "E".

Hayley Edmonds

Heritage Advisor | Extent Heritage

Western Parkland City Authority

Bradfield City Centre
Master Plan Application

Statement of Heritage Impact

Prepared by Extent Heritage

October 2023

wpc.a.sydne.y

Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.



Garungarung Murri Murri Nuru

(Beautiful Grass Country)

Artwork created by Dalmarrri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
1	Draft	24.02.2022	G. Harrington H. Morris	M. North	
2	Draft – in progress	28.04.2022	G. Harrington	G. Harrington	
3	Draft – in progress	20.10.2022	G. Harrington	G. Harrington	
4	Final Draft	10.02.2023	G. Harrington H. Morris	H. Morris	
5	Final	16.06.2023	H. Morris K. Watson	M. North	
6	Final 02	03.08.2023	H. Morris	J. Azucena (WPCA)	
7	Publish	17.08.2023		J. Azucena (WPCA)	
8	Publish	13.09.2023		J. Azucena (WPCA)	Amendment to Table 1
9	Publish	19.10.2023		H. Gilvear (WPCA)	Update Lot and DP

Executive Summary

The Western Parkland City Authority (WPCA) is the NSW Government agency responsible for delivering, coordinating and attracting investment to the Western Parkland City. A key component of the WPCA's work is the delivery of the Bradfield City Centre. The Authority has been granted permission by the NSW Department of Planning and Environment (DPE) to prepare a master plan for the Bradfield City Centre.

Extent Heritage Pty Ltd have been commissioned by the Western Parkland City Authority (WPCA) to provide a Statement of Heritage Impact for the Bradfield City Centre Master Plan. This report addresses the impacts of the Master Plan to non-Aboriginal heritage. The overarching aim of the Master Plan is to develop the study area into the Bradfield City Centre. The area is proposed for mixed-use development comprising industrial, commercial, open space and residential uses for a 115-hectare site centred around a new Sydney Metro station. The Master Plan assessed within this report includes four stages of development. The new development, in particular Stage 1, comprises land located within the central and north-west quadrant of the Master Plan Site, centred around the future Sydney Metro Station. Stages 2-4 have not been fully detailed as yet but will involve a major change to land use and will involve the construction of new buildings and infrastructure within the study area.

The assessment of heritage impacts contained within Section 9 of this report has determined that the proposed Master Plan will have a minor adverse impact on the heritage significance of the State listed homestead, Kelvin. The proposed Master Plan will transform a portion of the rural landscape surrounding this heritage item. Although there will be no direct physical or visual impacts associated with this proposal, the proposed changes will have indirect visual impact. The proposed Master Plan will inevitably impact the views west from the homestead and farm outbuildings, as the retained rural qualities of the wider landscape have contributed to the extended visual curtilage of this item, beyond that which is contained in the SHR curtilage. Impacts, however, are limited to land located at the rear of this heritage item and at a suitable distance from key features of significance. The proposed Master Plan will not detract from the significance of the item, as it will remain legible in the landscape as an early nineteenth century homestead and farming complex. Furthermore, key views to north and east will be retained supporting the extended visual curtilage and setting of an item in a semi-rural setting.

This report has determined that the study area is not identified as a heritage item on any statutory or non-statutory registers, nor does it meet the criteria for local or State significance. The proposed works will not directly impact on any identified built heritage. An analysis of historic plans and historical aerial photographs demonstrates that the site was located within a portion of the former estate referred to as The Retreat and subsequently Kelvin and then Kelvin Grove. The estate operated primarily as a grazing property until the early 1950s at which time it was purchased by the Commonwealth and functioned as the RAAF Bringelly Receiving Station. The assessed potential for the presence of archaeological material associated with all post 1788 occupational phases of the site are low within the works footprint. Any surviving remains are likely to have a low archaeological significance.

While the proposed development will significantly modify the existing rural character of the area, the Master Plan is consistent with the planning objectives projected for the area. Several mitigation measures and recommendations have been provided in this report including the planning controls, sensitive building design, use of green spaces and heritage interpretation which provide opportunities to limit the impact of this Master Plan and provide a positive outcome from a heritage perspective. As such, the impacts to heritage are considered acceptable in understanding the positive outcomes of the proposed development for the wider community.

Approval and Notification Requirements

Heritage Act 1977 – As the works will not directly affect any items on the State Heritage Register and there is low potential for impacting on known or expected relics, no notifications, permits or approvals are required in accordance with the Heritage Act.

Environmental Planning and Assessment Act 1979 – This report fulfils the assessment requirements under the EPA Act.

State Environmental Planning Policy (Precincts – Western Parkland City) (Western Parkland City SEPP). – This report fulfils the assessment requirements under this SEPP.

Recommendations

The following recommendations have been developed to mitigate impacts to non-Aboriginal heritage.

- Any new development should consider the SHR heritage item, Kelvin which is located in the immediate vicinity. Consideration should be given to the height, bulk, scale and material of new buildings. Recessive colours, adequate setbacks, the use of open space and landscaping are ways which the impacts to this heritage item can be mitigated. This consideration is important for the Stage 4 area of the Master Plan, which is the closest to the SHR Item (noting not the subject of this Master Plan application).
- It is recommended future development includes a transitional area between the heritage item and new development to ensure development is of a scale and character suitable to the heritage significance of Kelvin. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing.
- It is recommended that a Photographic Archival Recording be undertaken for the site prior to any changes being made to record the existing site.
- There is the opportunity to develop a Heritage Interpretation Strategy for this project. This will ensure a holistic approach towards the interpretation implementation so that the significant values heritage in the vicinity, ranging from various themes including natural, Aboriginal, colonial, and twentieth-century heritage, are appropriately represented and enhance each other cohesively. The Strategy would typically be subject to internal and external consultation to guide the final implementation.
- In regard to the management of historical archaeological remains an Unexpected Finds Procedure should be in place prior to the commencement of ground works (Appendix 1).

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Glossary of Terms

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHMS	Archaeological and Heritage Management Solutions
AS	Australian Standard
Aerotropolis	Western Sydney Aerotropolis
BC Act	Biodiversity Conservation Act 2016
BP	Before present (AD 1950)
CIV	Capital Investment Value
CMP	Conservation Management Plan
CRM	Cultural Resource Management
DA	Development Application
DP	Deposited Plan
DPC	Department of Premier and Cabinet (NSW)
DPE	Department of Planning and Environment
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instruments
ERS	Eastern Regional Sequence
GPS	Global Positioning System
Growth Centre SEPP	State Environmental Planning Policy (Sydney Region Growth Centres) 2006
HCA	Heritage Conservation Area
Heritage Act	Heritage Act 1977 (NSW)
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List

NPW Act	National Parks and Wildlife Act 1974 (NSW)
NSW Government	State Government for NSW
NTSCorp	Native Title Service Corporation
OEH	Office of Environment and Heritage (formerly DECCW, now Heritage NSW-DPC)
SEPP	State Environmental Planning Policy
SEPP (Infrastructure and Transport)	State Environmental Planning Policy (Infrastructure and Transport) 2021
SHI	State Heritage Inventory, NSW
SHR	State Heritage Register
SoHI	Statement of Heritage Impact
WHL	World Heritage List
WPCA	Western Parkland City Authority

1 Introduction

1.1 Purpose of this report

This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the Department of Planning and Environment (DPE). It addresses the non-Aboriginal heritage requirements for the development of the Bradfield City Centre Master Plan within the heart of the Aerotropolis Core Precinct of the broader Western Sydney Aerotropolis.

The Western Parkland City Authority (WPCA) is seeking to secure Master Plan approval for a mixed-use development, comprising industrial, commercial, open space and residential uses for a 115-hectare site centred around a new Sydney Metro station. This will include a Stage 1 Complying Development Code intended to facilitate development of a variety of land uses including commercial, advanced manufacturing, research and development (R&D), innovation, residential, education, retail and recreation uses.

This report has been prepared to address the non-Aboriginal heritage within the study area and specifically to respond to the relevant Secretary's Master Plan Requirements. The technical report addresses the impacts to built heritage and non-Aboriginal Archaeology and provides relevant information to ensure all considerations are appropriately identified and assessed. The following sections introduce the site, context, and nature of the Bradfield City Centre Master Plan.

All matters were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare region set to become Sydney's third city (the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new Western Sydney (Nancy-Bird Walton) International Airport surrounded by five initial precincts which include the Aerotropolis Core, Wianamatta– South Creek Northern Gateway, Agri-business and Badgerys Creek outlined in **Figure 1** below.

The final Aerotropolis planning package, including the Precinct Plan and State Environmental Planning Policy (SEPP) Amendment, was gazetted by DPE in March 2022 and the Development Control Plan Phase 2 was finalised in November 2022. These documents have been used to inform the preparation of the Bradfield City Centre Master Plan.

The proposed Master Plan Application for the site has also been prepared using the Western Sydney Aerotropolis Master Plan Guideline and Master Plan Requirements.

1.3 Approach and methodology

The methodology used in the preparation of this Statement of Heritage Impact (SOHI) is in accordance with the principles and definitions as set out in the guidelines to *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (the Burra Charter)* (Australia ICOMOS 2013) and the latest version of the *Statement of Heritage Impact Guidelines* (Heritage Office and Department of Urban Affairs and Planning 2002), produced by the former NSW Office of Environment and Heritage (now the Department of Planning and Environment).

This SOHI will review the relevant statutory heritage controls, assess the impact of the proposal on the subject property and make recommendations as to the level of impact.

1.4 Limitations

The site was inspected and photographed by Hannah Morris on 18 October 2021. The inspection was undertaken as a visual study only.

The historical overview provides sufficient historical background to provide an understanding of the place in order to assess the significance and provide relevant recommendations, however, it is not intended as an exhaustive history of the site.

This assessment does not include an assessment of Aboriginal heritage. For information on Aboriginal cultural heritage, please refer to the separate report:

- Bradfield City Centre – Aboriginal Cultural Heritage Assessment Report in preparation by Extent Heritage (October 2021).
- Bradfield City Centre – Master Plan – Aboriginal Archaeological Test Excavation Report (ATER) in preparation by Extent Heritage (February 2022)

1.5 Authorship

The following staff members at Extent Heritage have prepared this statement of heritage impact:

- Hannah Morris, Senior Heritage Advisor,
- Kim Watson, Senior Heritage Advisor, and
- Gabrielle Harrington, Heritage Advisor.

This report was reviewed by Dr MacLaren North, NSW Director.

1.6 Terminology

The terminology in this report follows definitions presented in the Burra Charter (Australia ICOMOS 2013). Article 1 provides the following definitions:

- **Place** means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.
- **Cultural significance** means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations,

meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

- **Fabric** means all the physical material of the place including elements, fixtures, contents and objects.
- **Conservation** means all the processes of looking after a place so as to retain its cultural significance.
- **Maintenance** means the continuous protective care of a place, and its setting. Maintenance is to be distinguished from repair which involves restoration or reconstruction.
- **Preservation** means maintaining a place in its existing state and retarding deterioration.
- **Restoration** means returning a place to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new material.
- **Reconstruction** means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material.
- **Adaptation** means changing a place to suit the existing use or a proposed use.
- **Use** means the functions of a place, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.
- **Compatible use** means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.
- **Setting** means the immediate and extended environment of a place that is part of or contributes to its cultural significance and distinctive character.
- **Related place** means a place that contributes to the cultural significance of another place.
- **Related object** means an object that contributes to the cultural significance of a place but is not at the place.
- **Associations** mean the connections that exist between people and a place.
- **Meanings** denote what a place signifies, indicates, evokes or expresses to people.
- **Interpretation** means all the ways of presenting the cultural significance of a place.

2 Bradfield City Centre

2.1 Strategic Context

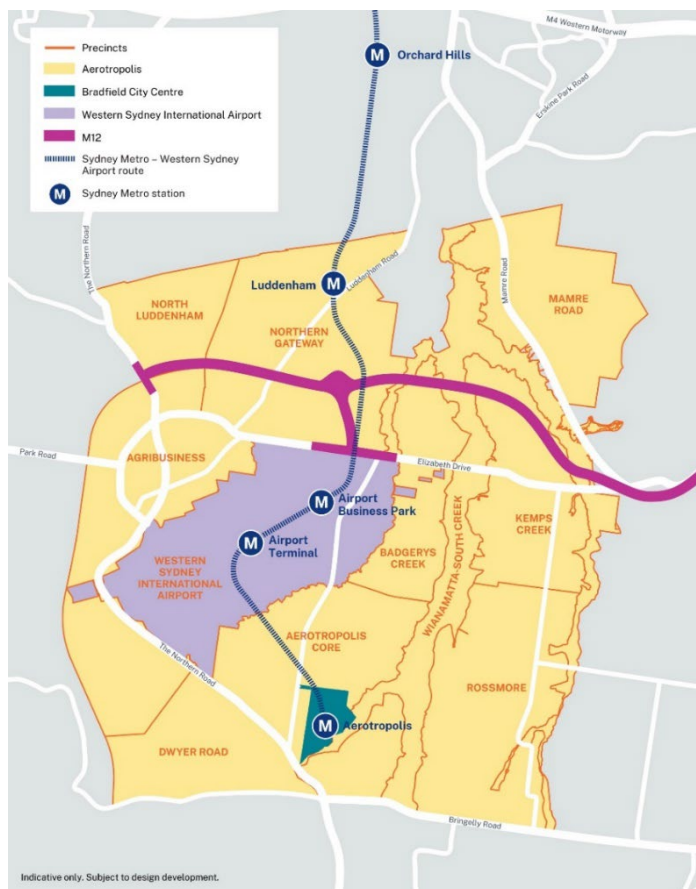
The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 1** below).

The Sydney Metro Western Sydney Airport line runs through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the site.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

Figure 1. Strategic Context



2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool Council Local Government Area (LGA). The site is legally described as Lot 3101 DP 1282964 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Site is outlined in **Figure 2** below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along Thompsons Creek.

Figure 2. Master Plan Site

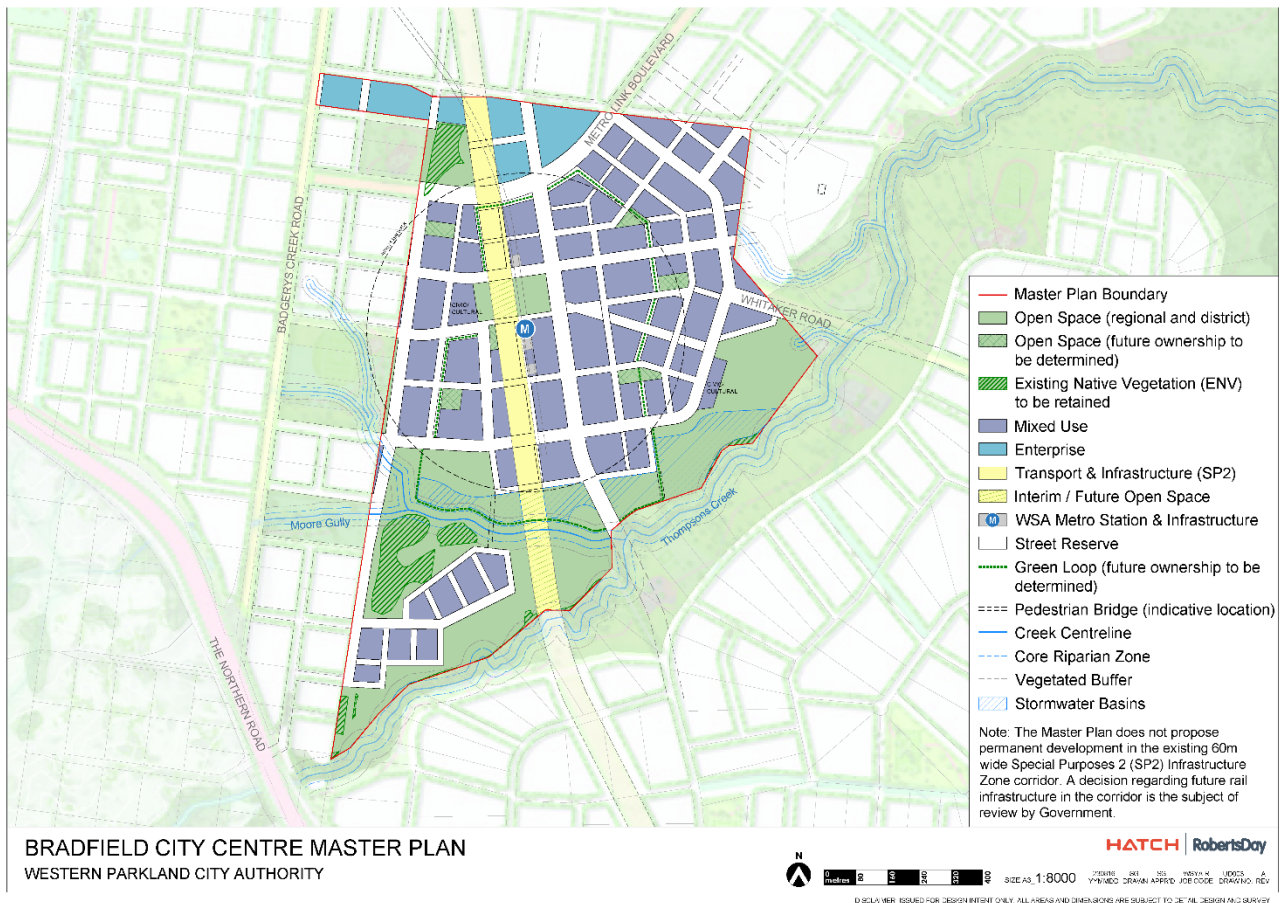


2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority has prepared a Master Plan (**Figure 3** below) in accordance with the DPE Master Plan Requirements. The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3. Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments.

Table 1. Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

3 Planning context

3.1 Heritage status

Within the study area, there are no heritage items identified on any statutory or non-statutory heritage registers. The following table outlines the heritage status of the study area.

Table 2. Summary of heritage status

Register	Item listed (Y/N)	Item name	Item number
Statutory listings			
World Heritage List	N	-	-
National Heritage List	N	-	-
Commonwealth Heritage List	N	-	-
State Heritage Register	N	-	-
State Environmental Planning Policy (Precincts – Western Parkland City) 2021	N	-	-
Non-statutory registers			
Register of the National Trust (NSW)	N	-	-

3.2 Heritage in the vicinity

A review of relevant statutory heritage registers has identified four (4) heritage items in the vicinity of the study area. Two are identified State heritage items on the State Heritage Register, and two are identified local heritage items under Schedule 5 of their respective Local Environmental Plans. The following table summarises the heritage in the vicinity of the study area.

Table 3. Summary of heritage items in the vicinity of the study area

Item name	Address	Register	Significance level	Item number
Bringelly Public School Group, including schoolhouse and former headmaster's residence	101 Wentworth Road, Bringelly	Schedule 5, Liverpool LEP 2008	Local	7
Cottage	1186 The Northern Road, Bringelly	Schedule 5, Camden LEP 2010	Local	12
Kelvin	30 The Retreat, Bringelly	State Heritage Register	State	00046
		Schedule 2 Environmental heritage – Western Sydney Aerotropolis, State Environmental Planning Policy (Precincts – Western Parkland City) 2021	State	13
Church of the Holy Innocent	130 Rossmore Avenue, West Rossmore	State Heritage Register	State	02005
		Schedule 5, Liverpool LEP 2008	State	60

Figure 4. Map showing heritage items in the vicinity of the study area.



4 Historical context

4.1 Introduction

This historical context relies largely on the compilation of primary and secondary historical resources, as well as detailed analysis of historical plans and aerial images. This history has been adapted from the *Bradfield City Centre First Building: Statement of Heritage Impact* prepared by Extent Heritage (2022) for Western Parkland City Authority.

4.2 Aboriginal occupation pre-1788

Aboriginal people have lived in the area known as NSW for at least 45,000 years (NPWS 2003, 14). To date, more than thirty-eight (38) Aboriginal language groups (previously referred to as 'tribes') have been identified within NSW (NPWS 2003, 14). Some examples of this broader cultural-linguistic groups in NSW include the Darug (alternative spellings include 'Dharug,' 'Dharuk' and 'Dharook'), Darkinjung, Gandangara (also spelled as 'Gundungarra'), Tharawal (also referred to as 'Dharawal'), Kuringai, and Awabakal (Attenbrow 2010, 23, 32). Since the 1970s, archaeologists and anthropologists working in the Sydney region have largely adopted the nomenclature for cultural-linguistic groups compiled by Capell (1970) and amended by Eades (1976) (Attenbrow 2010). Based on this research, the study area is considered to have been occupied by Darug-speaking clans.

Generally, the Darug people thought to have lived in clan-based bands of around fifty members each. Each clan retained its own hunting district and moved through Country seasonally (Murray and White 1988). The inland clans, in particular, are also thought to have moved more often according to the season, with summer attracting large numbers of clans to the land around the Nepean and Hawkesbury Rivers, and winter dispersing these clans over the plain and into the mountains (Kohen and Lampert 1987, 357).

4.3 British exploration 1788-1804

Following the arrival of the First Fleet in 1788, life changed irreversibly for the Darug after the invasion of their lands. Theft of Country, dispossession, alienation from resources, violence, and disease became a reality of life for Aboriginal people in the Sydney Region, shaping this next chapter of history profoundly.

The Aboriginal people of the broader Sydney basin who did survive the disease and violence wrought by colonisation were increasingly forced to live on the fringes of colonial society. With limited access to resources, they also became necessarily dependent on the state (see NSW Legislative Council 1845), and therefore subjected to increasing levels of government control. Government allocations of blankets and slop clothing, and the bartering of fish and game for sugar, flour and alcohol also reflect the changes that occurred in Aboriginal economies and lifeways at this time.

In spite of the devastation caused in this period, it is critical to note that while many of their kin had either perished or been forced away from their traditional lands, there are records of Aboriginal people who remained on Country throughout the nineteenth century. Campaigns of resistance were central to this survival and records of them across the broader Western Sydney region illustrate Aboriginal people's experiences of this period.

The rapid expansion of British settlement in the Cumberland Plains from the early nineteenth century led to increasing violence between colonists and Aboriginal people in the region. Between 1814 and 1816, tensions rose dramatically as a result of drought and the increasing numbers of Europeans moving to the area. This encroachment restricted Aboriginal people's access to Country and also resources. The violence escalated, culminating on 17 April 1816 in what is referred to as the Appin Massacre (located 35 km south of the study area). Although these events of conflict did not occur within the study area, they are important in demonstrating the Aboriginal experience of European settlement in Australia.

4.4 Early settlement of the Bringelly District (1805-1850)

The Nepean district was first explored by Europeans approximately a decade before they returned to settle permanently in the area. In 1788, Governor Arthur Phillip led parties to explore the outlying regions of Sydney. From a rise near the present Pennant Hills, Governor Phillip first observed the Blue Mountains and the southern portion of the Lansdowne Hills. From the rise of these mountains, he had no doubt a large river would be found, although at the time this search proved unsuccessful (Murray and White 1988).

In June 1789, Captain Watkin Tench (the marine in charge of the new outpost at Rose Hill) led an expeditionary party to the banks of the Nepean River, 'through a country untrodden before by a European foot' (Power 1983 in RMS 2016, 21). In 1791, Tench undertook a second exploratory journey nearby the study area travelling from Prospect Hill in a south-southwest direction towards the upper Nepean. The course of his outward journey took him through the lowland near the junction of South Creek and Kemps Creek, and then through Bringelly. His return route was east through what is now Leppington and Hoxton Park.

In 1795, Henry Hacking investigated the region of the Upper Nepean to confirm reports locating cattle that had escaped from Sydney Cove in 1788. Hacking's journey south took his party along the line of Tench's return route. The presence of the cattle led to the area being named the Cowpastures. The Cowpastures stretched north to Bringelly Road, east to Wilton Road (through Appin), south to the Stonequarry Creek catchment, and west to Burratorang Valley.

Former convict John Warby received 50 acres at Prospect and in 1803 was appointed stockman of the wild cattle at the Cowpastures. Warby appears to have created a track from Prospect to the Cowpastures. The track passed through country described as the Devil's Back and established the main route for the movement of Europeans between Parramatta and the Camden district, later formalised as the Cowpasture Road.

The area surrounding the study area remained relatively undisturbed until 1805 and 1806 at which time the initial surveys for land grants along South Creek were undertaken by James Meehan. The district was named Bringelly. The first grants of 1805 included 680 acres to Nicholas Bayly, 300 acres to Richard Fitzgerald, and 300 acres to Ezekiel Wood. All were located near the junction of South Creek and Badgerys Creek. During the next five years Meehan would lay out further grants for Anthony Fenn Kemp (Mt Vernon) and John Driver (200 acres) adjacent to Kemps Creek. All these early grants were within 5 km of Cowpasture Road, the only road in the district.

During the interregnum between Bligh's and Macquarie's administration, Colonel Paterson (the interim Governor) granted land to almost every person who asked him (Macmillan 1967). Paterson granted in total 67,000 acres of land to different people. These grants were not affirmed until Governor Macquarie's administration and accounts for why Macquarie's affirmed grants were in excess of 2,200 acres and were backdated to the first day of his administration (1 January 1810). These grants, which were potentially granted by Paterson and affirmed by Macquarie were located in the Badgerys Creek Precinct and the Wianamatta-South Creek Precinct, with frontages to South Creek, Kemps Creek, and Badgerys Creek.

It was not until 1818 that land was first granted within the present-day suburb of Bringelly. Charles Reid, Thomas Laycock, and Penelope Lucas were granted land on 26 November 1818. William Hutchinson was granted land on 30 June 1823. The majority of the study area was utilised for agricultural activities undertaken by Laycock Junior and subsequent landowners including John Thomas Campbell and Alfred Kennerley. These activities most likely revolved around cattle breeding. Campbell, for example, was a successful farmer and pastoralist who bred cattle and horses. The southern portion of the study was part of land 600 acres of land

granted to Charles Reid on 26 November 1818. His holding was known as “Cottage Grove”.

During the mid-to-late 1820s, several grants including Charles Reid’s (at the southern end of the study area) were absorbed and consolidated to create large estates held in the main by absentee landholders. Darcy Wentworth increased his 2,500-acre holdings by absorbing the adjoining properties of Ellis Bent, William Gore, John Piper, John Palmer (Jr), and Mary Birch. At the time of his death in 1827, his Bringelly holdings consisted of 8,515 acres.

By 1821, the Northern Road (‘Bringelly’ road) had been formed connecting the Camden district with Richmond (Sydney Gazette 15 September 1821, 1). This road also crossed the great Western Road in the north providing access to Penrith and St Marys.

A building complex associated with Thomas Laycock’s pastoral estate was constructed during his ownership is the property now known as Kelvin Park (Figure 2). Buildings and structures associated with this Kelvin Park homestead are located outside the study area to the north-east. This includes the main farm complex and homestead. The complex is one of the most important, and only surviving examples of, this type of estate. The site was originally a 600-acre grant made to Thomas Laycock (Jr) on 26 November 1818 and known initially as ‘Cottage Vale’. The adjoining 600-acre grant to the south was made out to Charles Reid on the same date and referred to as ‘Cottage Grove’. Laycock absorbed the Reid property, and the consolidated estate was known as ‘The Retreat’ (HLRV Primary Application No. 769). Laycock unexpectedly died in 1823 and in 1824, the estate was sold to Edward Riley and acquired by Provost Marshal John Thomas Campbell one month later. The property was described in *The Australian* as:

Retreat contains 1200 acres, is all enclosed, has 200 acres and upwards (constituting a beautiful lawn) cleared and fenced in; the remainder of the estate is also divided into several paddocks. On this estate there is a handsome and roomy residence, fit for the immediate reception of a gentleman's family (*The Australian* 1824, 2).

Following Campbell’s purchase of the property he subsequently leased the property to the Australian Agricultural Company in 1825. Campbell died in 1830 and in 1837 the property was purchased by Alfred Kennerley from Campbell’s heir. The estate remained in the hands of the Kennerley family until 1853 at which time Kennerley returned briefly to England.

The early land grants are shown in **Figure 5** and described in **Table 4**.

Figure 5. Early land grants within the Aerotropolis Core Precinct.

Note: Approximate location of the study area (red).

Source: Extent Heritage 2021.

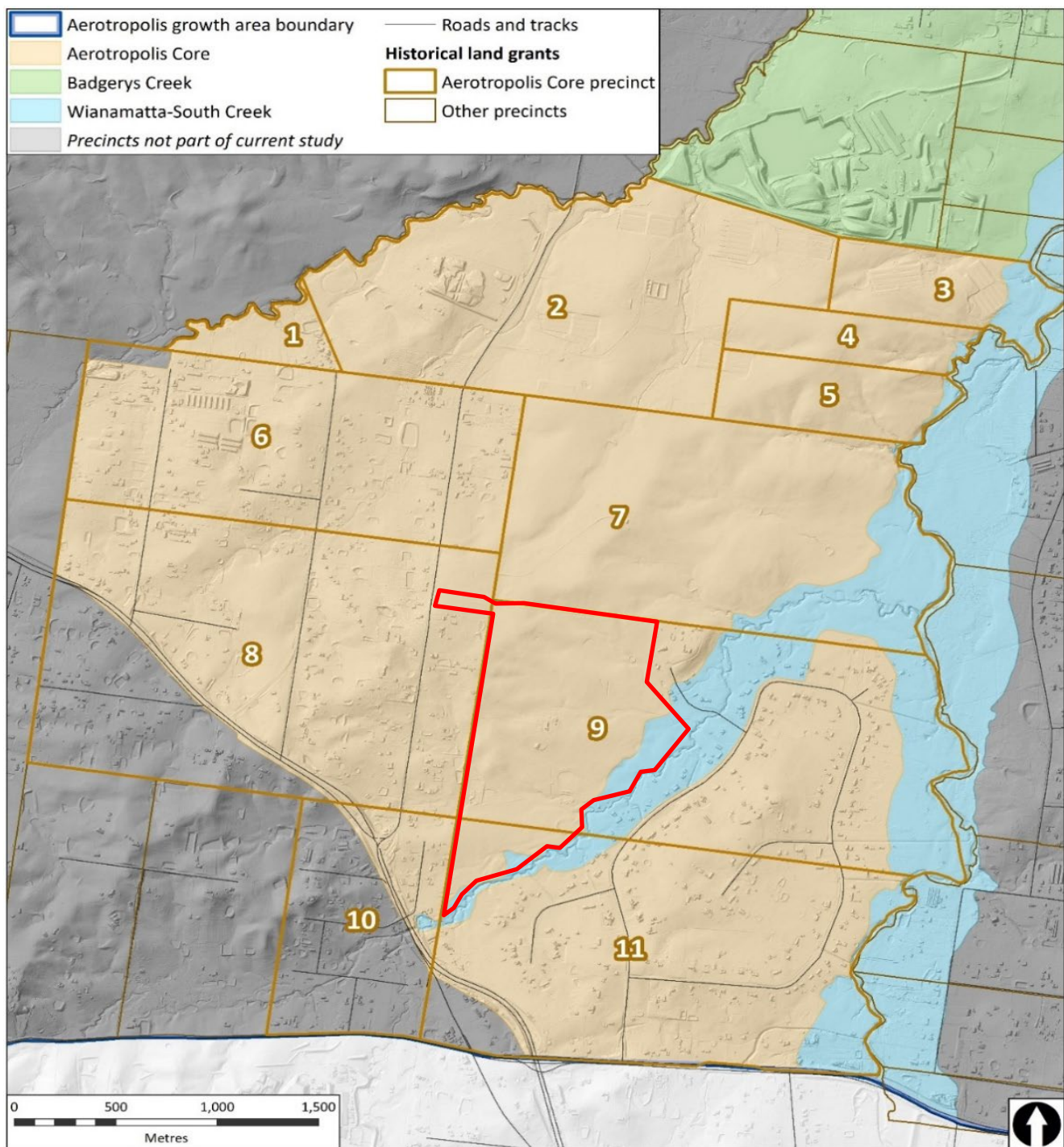


Table 4. Description of early land grants within the Aerotropolis Core Precinct

No	Grantee	Area (acres)	Parish	Portion	Date of grant	Estate name
1	William White	40	Bringelly	36	11 Sep 1817	
2	Michael Robinson	500	Bringelly	35	11 Sep 1817	<i>St Aubyns</i>
3	Gustavus A Low	100	Bringelly	26	11 Sep 1817	<i>Low Brook</i>
4	Matthew Hughes	65	Bringelly	25	8 Oct 1816	
5	William Hayes	100	Bringelly	24	12 Mar 1818	<i>Bally-hayes</i>
6	Edward Wright	350	Bringelly	16	5 Apr 1821	
7	Penelope Lucas	500	Bringelly	23	26 Nov 1818	<i>Lucas Farm</i>
8	William Hutchinson	700	Bringelly	17	30 Jun 1823	
9	Thomas Laycock	600	Bringelly	22	26 Nov 1818	<i>Cottage Vale</i>
10	William Hutchinson	220	Bringelly	20	13 Nov 1818	
11	Charles Reid	600	Bringelly	21	26 Nov 1818	<i>Cottage Grove</i>

Figure 6. Kelvin Park, main homestead with outbuildings visible in the rear, looking north.

Source: Extent Heritage 2020.



Figure 7. Detail of Plan of the allotments of ground, granted from the Crown in New South Wales.

The Bringelly land district is pink (marked 'X'), north at top. Approximate location of study area (red).

Source: J. Burr & G. Ballisat. Burr, J.: London, 1814 SLNSW Z/Cb 81/6

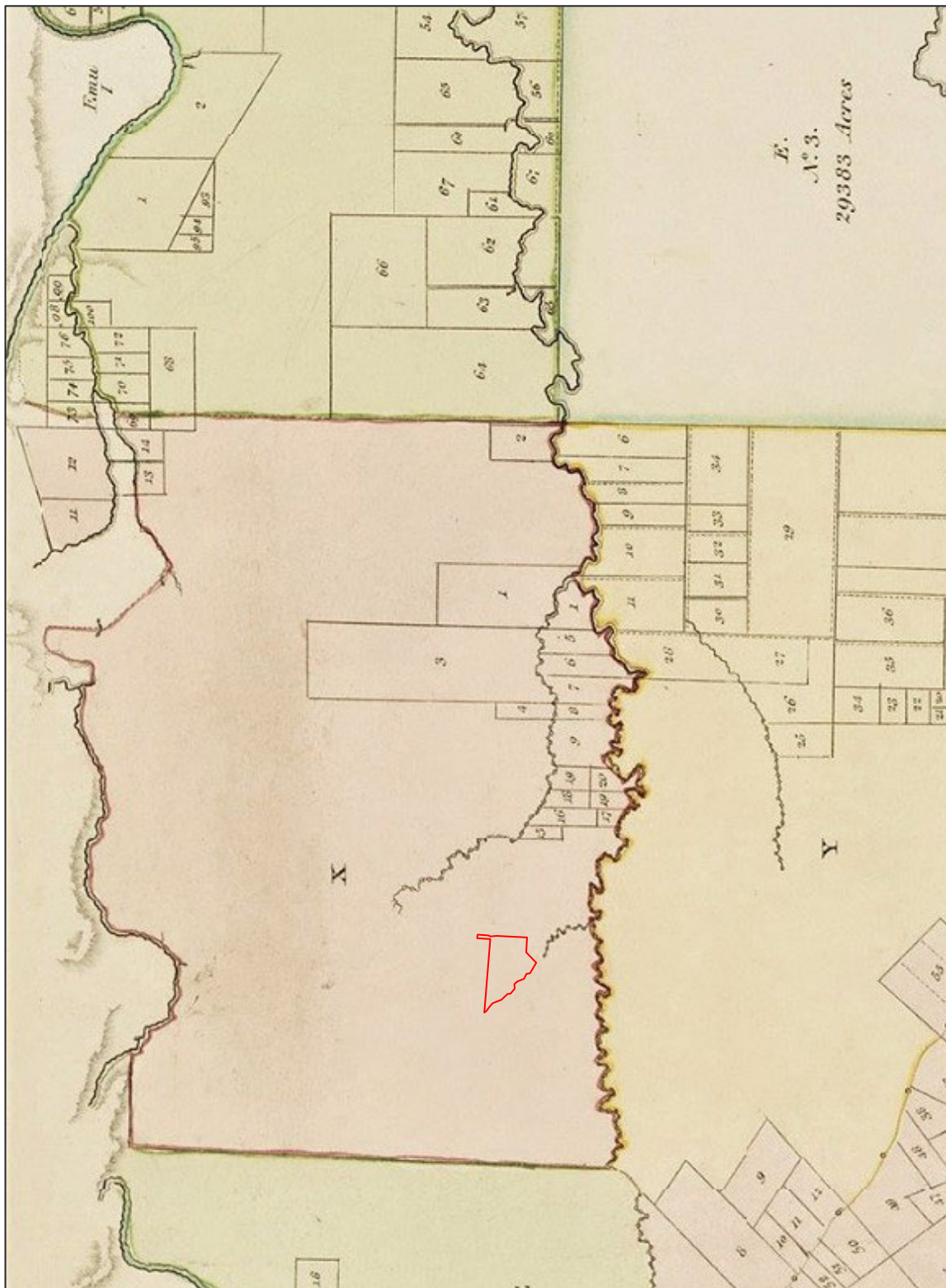
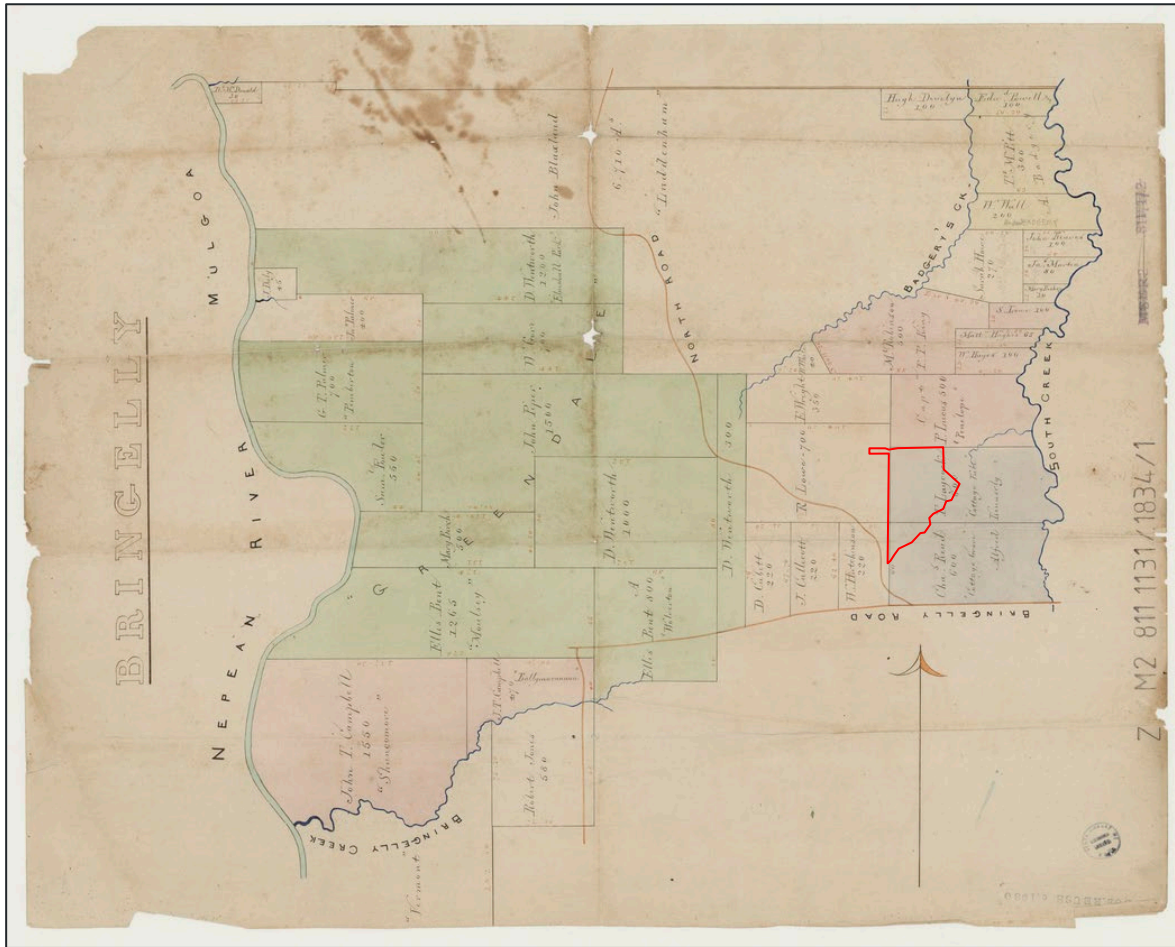


Figure 8. Parish of Bringelly 1834. Approximate location of study area (red).

Source: SLNSW MZ 811.1131/1834/1



The late 1830s and early 1840s saw a convergence of factors that resulted in a decline in the viability of many large estates. The end of transportation, with the resulting loss of cheap labour and severe drought between 1838 and 1840, resulted in extensive crop failures. Falling wool prices contributed to an economic depression during the 1840s. This depression saw capitalists who had borrowed heavily in the 1830s, in order to purchase land, unable to service their debts. Some owners of larger estates sought relief by providing tenancies. The configurations of the tenancies were generally ad hoc in nature.

Most of the large holdings in the Bringelly district survived into the second half of the nineteenth century intact. These included William Hutchinson's 'Hutchinsonian Farm' that was noted for bloodstock breeding. There was no village of Bringelly during this period.

4.5 Nineteenth century subdivision (1850-1900)

During the second half of the nineteenth century many of the large landholders within the study area struggled to maintain their properties as viable concerns. Most grazing properties ceased sheep breeding and moved to agistment and fattening of cattle. There were several attempts to promote the district for dairying, but this form of agricultural pursuit required good pasture and a reliable water supply, both of which were absent. The larger estates that did survive the economic difficulties of the 1840s relied in great part on tenancies. The tenancies were usually small family farms that relied primarily on stock raising. The only form of stock-raising that held any promise was horse breeding.

Bringelly had the potential to develop as a regional service town. It was located at the intersection of The

Northern Road and Bringelly Road. It was however encircled by the 'Hutchinsonian Estate' that remained in private hands until the 1880s. For much of the later nineteenth century the estate lay fallow resulting in significant regrowth. Portions of the estate were cleared, and the property was subdivided and put up for sale. The initial sale failed, and the property was resurveyed and subdivided. It was placed on the market in 1892. By this stage Bringelly had a post office (on The Northern Road, north of Bringelly Road) and a public school. This subdivision was only partially successful, and few lots were taken up. The village of Bringelly failed to develop.

Figure 9. Cowpasture Farms, in 7 and 10-acre blocks, 1892.

This subdivision developed from William Hutchinson's land grant, immediately west of Thomas Laycock's grant (the study area.)

Source: SLNSW DSM/Q981.2/B

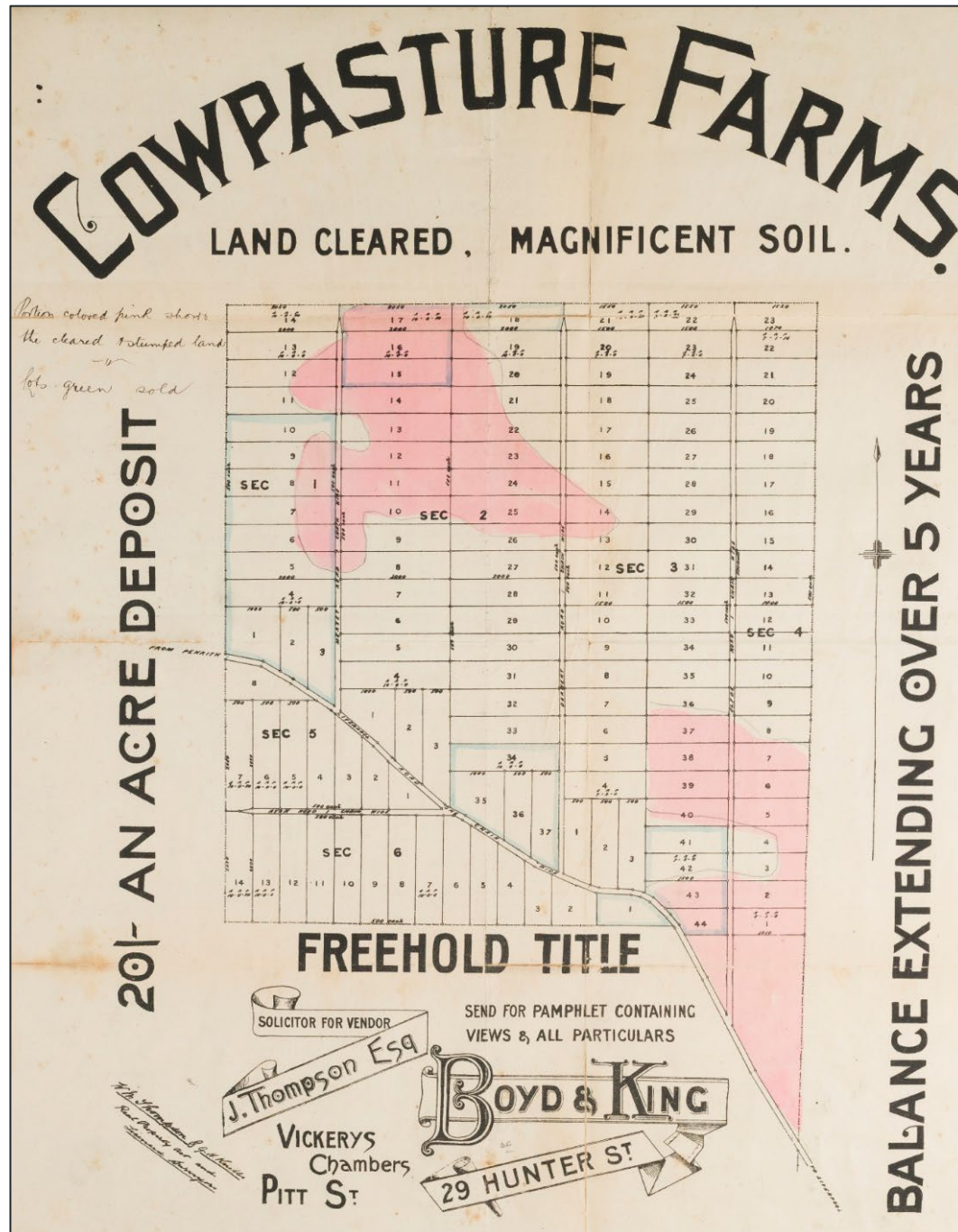


Figure 10. Cowpasture Farms, in 7 and 10-acre blocks, view of property from main road, 1892.

Note: Bringelly Road looking west. Source: SLNSW DSM/Q981.2/B



Figure 11. Cowpasture Farms, in 7 and 10-acre blocks, 1892.

Old homestead [Kelvin Park?] eastern boundary. Source: SLNSW DSM/Q981.2/B

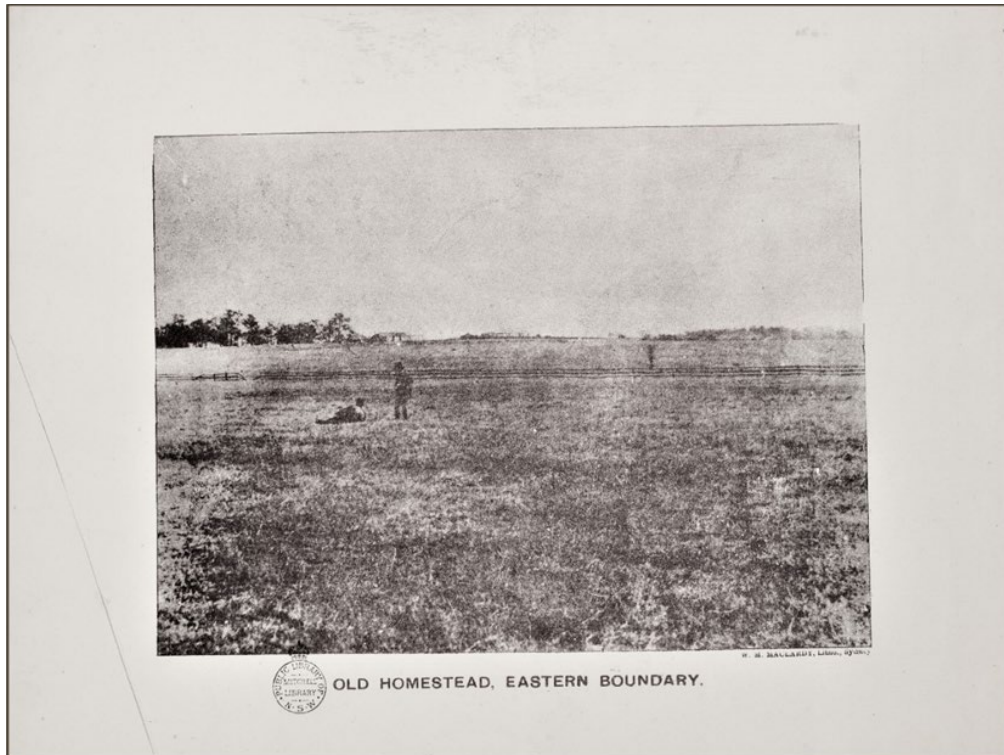
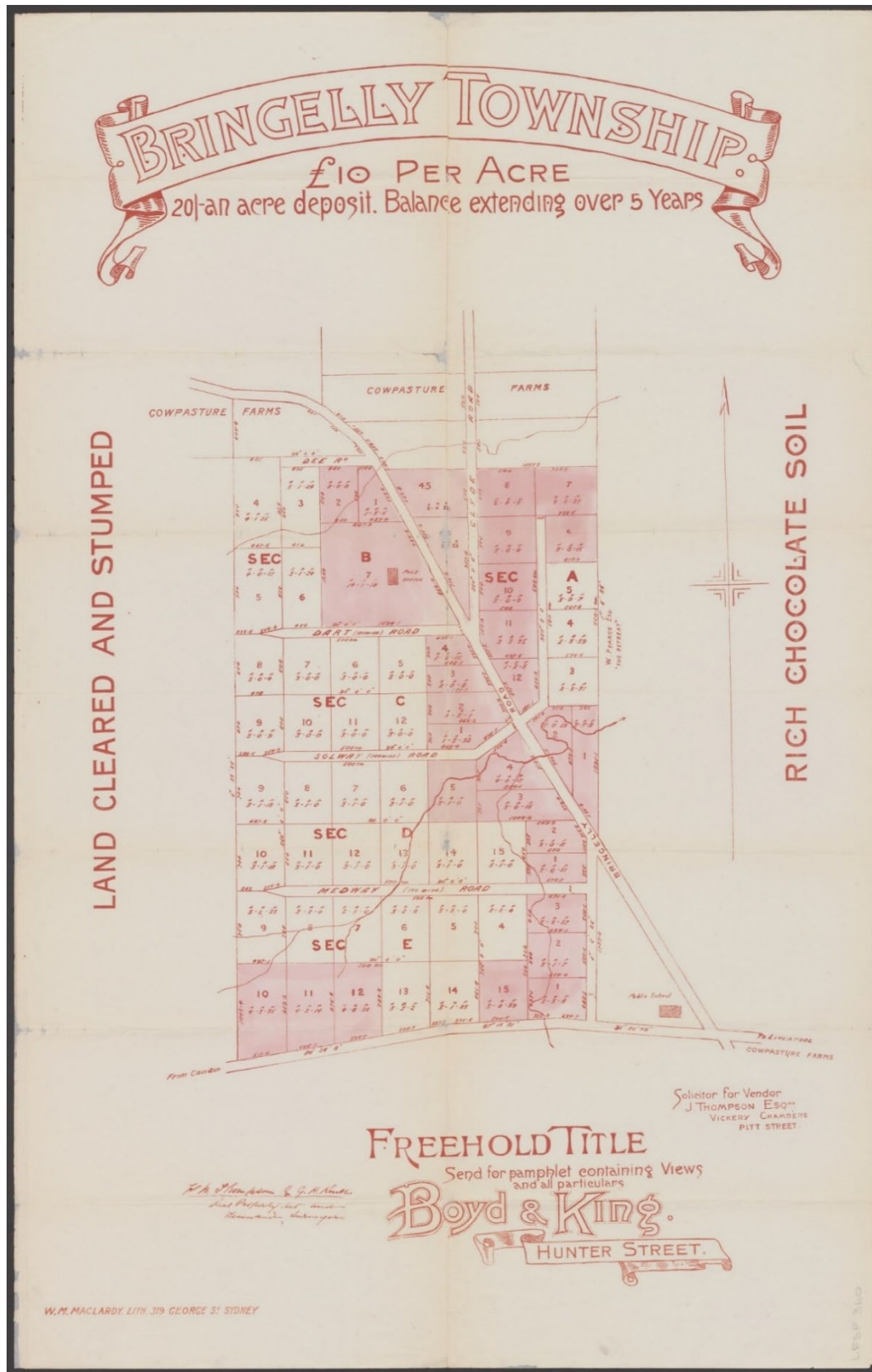


Figure 12. Bringelly Township, 1892.

Note that the study area is located to the north of this map.

Source: NLA MAP LFSP 360, Folder 28



4.6 Early twentieth century development (1900-1945)

By 1900, the second generation of large landowners had subdivided most of their properties. Many of the smaller lots had been purchased by local families who had been former tenants. During this period, these holdings were consolidated and expanded with the names Braithwaite, Adams, Nobbs, McKaughan, Sales, and Hughes.

The principal agricultural activities undertaken within the district included dairying, orcharding, pig-raising, potato-growing, grazing, and grain production. Industrial activities were mainly associated with the processing of agricultural products. One of the principal activities undertaken in the first two decades of the twentieth century was wood-cutting. The dereliction of many of the larger grazing properties during the latter part of the nineteenth century saw regrowth of native timbers suitable for use as firewood. These activities formed the main stay of the local economy until the Second World War.

The presence of large tracts of cleared land close to the main settled district in New South Wales also saw the Commonwealth take notice. From 19 March 1942 to 28 February 1945, the Commonwealth leased a large portion of Kelvin Park (known then as 'Kelvin') from Lorna MacDonald. This would form the RAAF Bringelly Dispersal Area attached to the parent airfield at Fleurs. The land between Thompsons Creek and South Creek (outside the study area) was developed as an Emergency Landing Ground and included new fencing, drainage, aircraft hide-outs, and other infrastructure. Figure 13 illustrates the location of the dispersal area, landing strip, and fence lines. The area to the west of Thompsons Creek (including the study area) remained substantially unchanged since all infrastructure associated with the strip was concealed in the stands of trees immediately surrounding the strip. The main house at Kelvin (also outside the study area) was leased as officer accommodation.

Figure 13. Map of the manoeuvre area Liverpool NSW, 1906.

Approximate location of study area (red). Source: NLA, NLA.OBJ-232733847

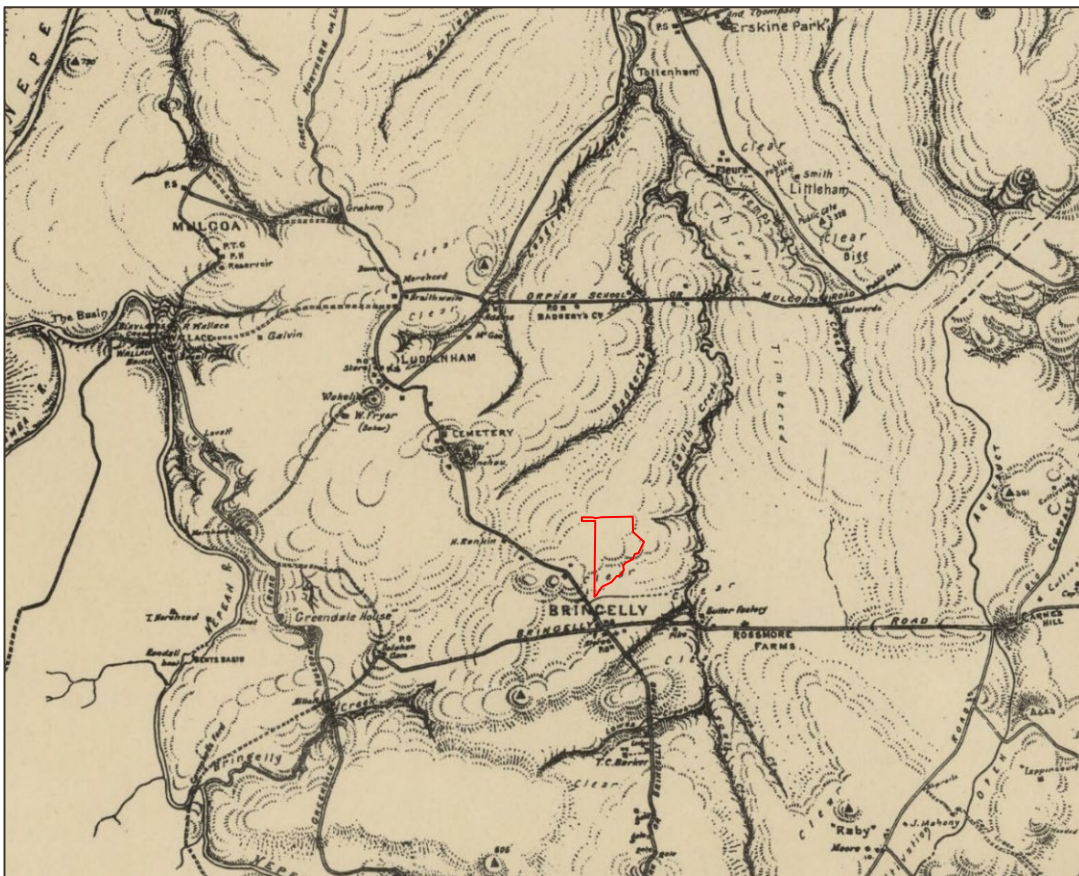
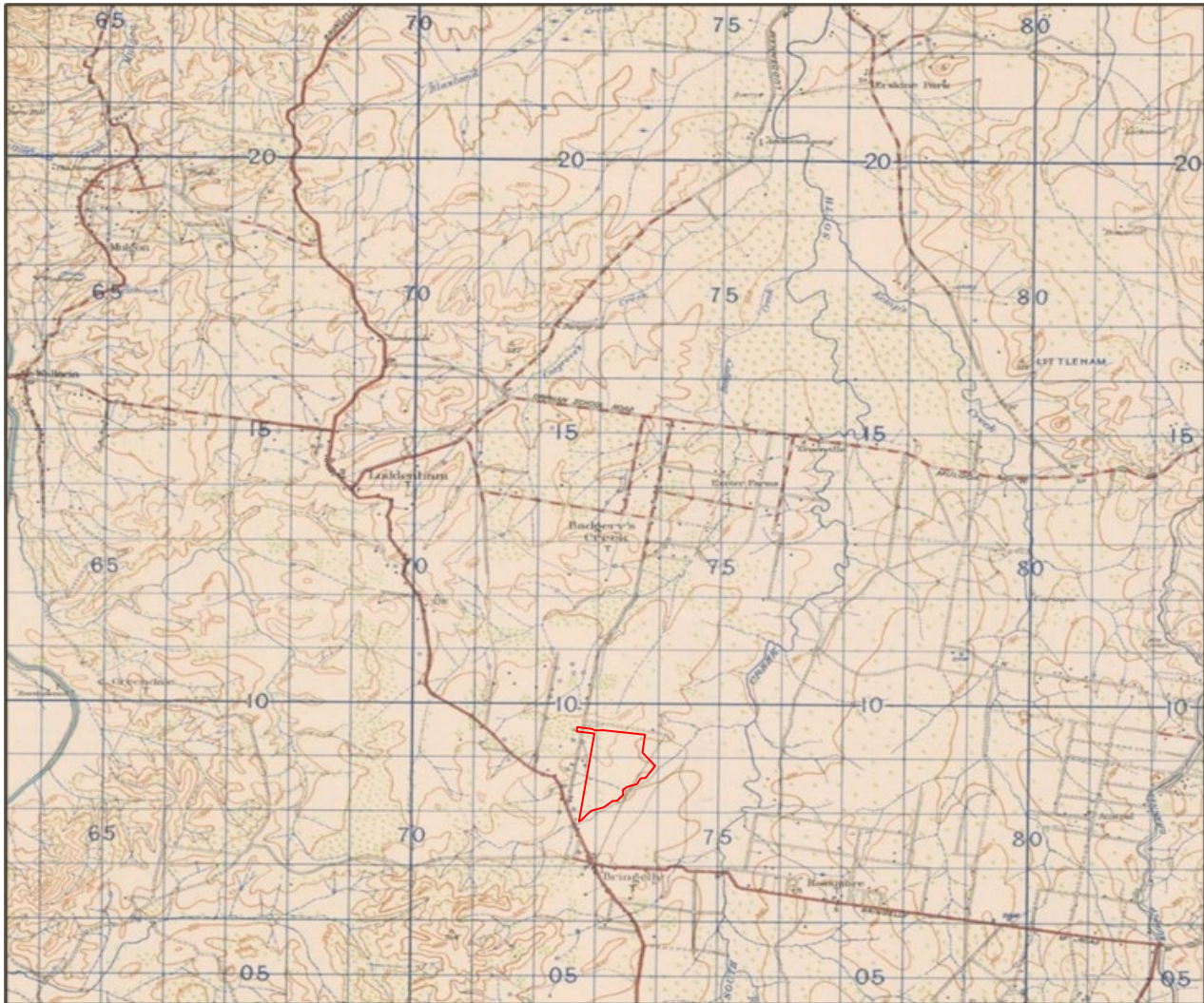


Figure 14. Liverpool NSW, 1935 (Information to 1927) detail.

Source: NLA, NLA.OBJ-446266912



4.7 Late twentieth century development (1945-2000)

Following the Second World War, the region returned to primarily agricultural activities. The introduction of the County of Cumberland Planning Scheme placed the study area within the rural zone adjacent to the green belt that was to encircle Sydney. The County of Cumberland Council, tasked with implementing the scheme, sought to address the problems associated with the rapid development of the County within an unplanned framework. The key problems identified were over-centralisation and congestion of industry, congested traffic, slum housing, conflicting land uses, unregulated residential sprawl, the provision of basic infrastructure, and the destruction of the natural beauty of the County (Abercrombie 2008, 25). The Scheme meant that subdivisions within the study area could not be smaller than 5-acres. This resulted in a spate of 5-acre subdivisions during the early 1950s, many of these lots were taken up by migrant families, with poultry production and market-gardening being the main agricultural enterprises.

4.7.1 RAAF Bringelly Receiving Station

During the Second World War the Royal Australian Air Force (RAAF) developed an area as an Emergency Landing Ground, this was essentially a grass strip with little or no associated infrastructure. In 1954, the

Commonwealth commenced purchasing of land for the construction of a RAAF Radio Receiving Station immediately adjacent to the OTC station. Delays in purchasing the properties resulted in construction commencing in 1959 (Godden Mackay 1997, 5–8). The radio receiving station was designed to receive international radio telegrams and telephone calls and from ships at sea. The station replaced an earlier station at La Perouse and featured thirty-two rhombic aerials on masts from 70 to 120 feet high. The station was to operate in concert with RAAF Londonderry Transmitting Station and subordinate to RAAF Glenbrook (Godden Mackay 1997, 5–8).

The RAAF station comprised several structures. A main receiving tower and receiving station buildings were constructed in the centre of the site. The main receiving building (a T-shaped building at the centre of the site) was constructed between 1959 and 1961. Staff houses were built along the entryway into the complex (Figure 19). Additional structures built included lampposts, water tank and water tower, an incinerator, rain garage, vehicle garages, and two antennas with burial radial lines located within octagonal paddocks. In addition, an array of concrete pads that anchored light aerials were set up across the entirety of the site (Figure 21). Each anchor possessed at least three underground guy-wires. Several of the pads have been mapped but not all (Figure 21). Finally, several roads and tracks through the study area, seen in the 1965, 1986, and present aerials. With the construction of the Metro-Western Sydney Airport line, the core structures and the main aerial at RAAF Bringelly were demolished in 2022 as a part of a State Significant Infrastructure application (SSI-10051).

Figure 15. 1947 aerial of the study area.

Source: Nearmaps with Extent Heritage additions 2021.



Figure 16. 1965 aerial of the study area.

Source: Nearmaps with Extent Heritage additions 2021.



Figure 17. 1986 aerial of the study area

Source: Nearmaps with Extent Heritage additions 2021.



Figure 18. 2021 aerial of the study area.

Source: Nearmaps with Extent Heritage additions 2021.

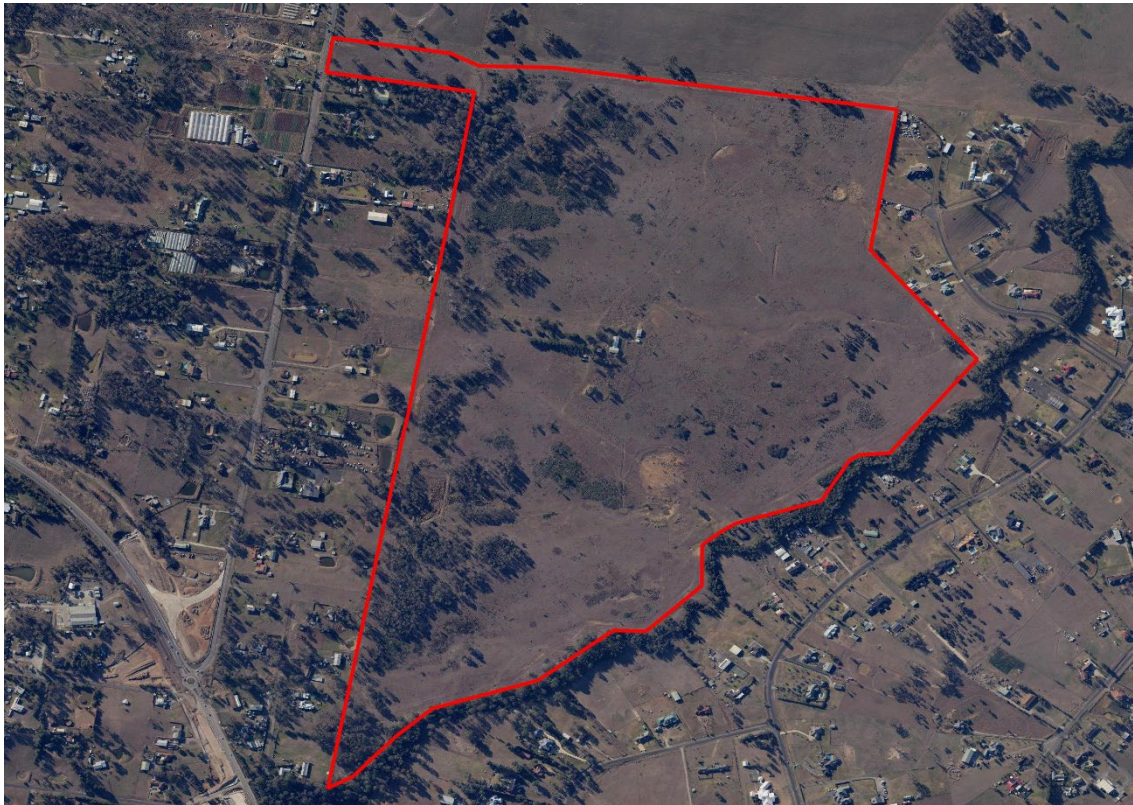


Figure 19. Layout of structures built as part of the RAAF Bringelly site.

Source: ERM 2010, figure 3.5.

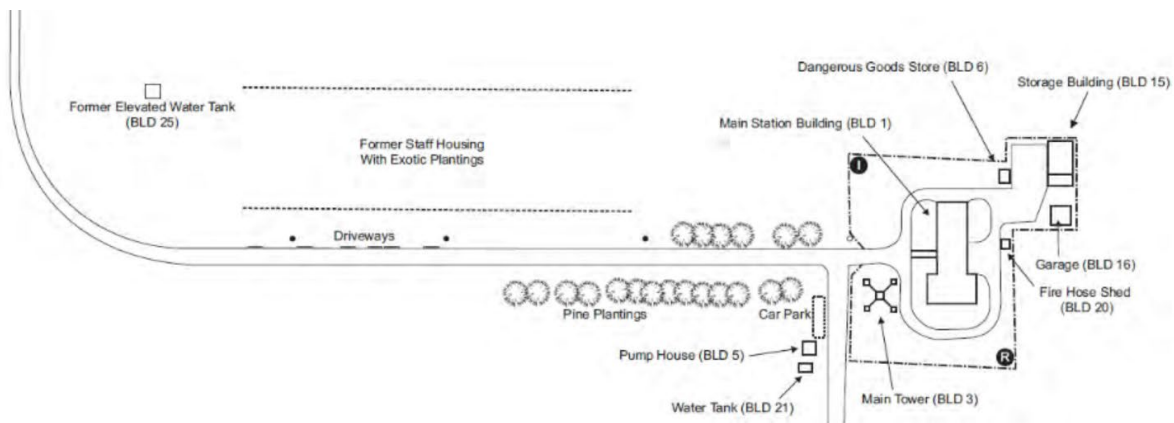


Figure 3.5 RAAF Bringelly Site Layout (ERM 2010)

Figure 20. Layout of structures built as part of the RAAF Bringelly site.

Aerial photograph dated to 1986.

Source: ERM 2010, figure 3.5.

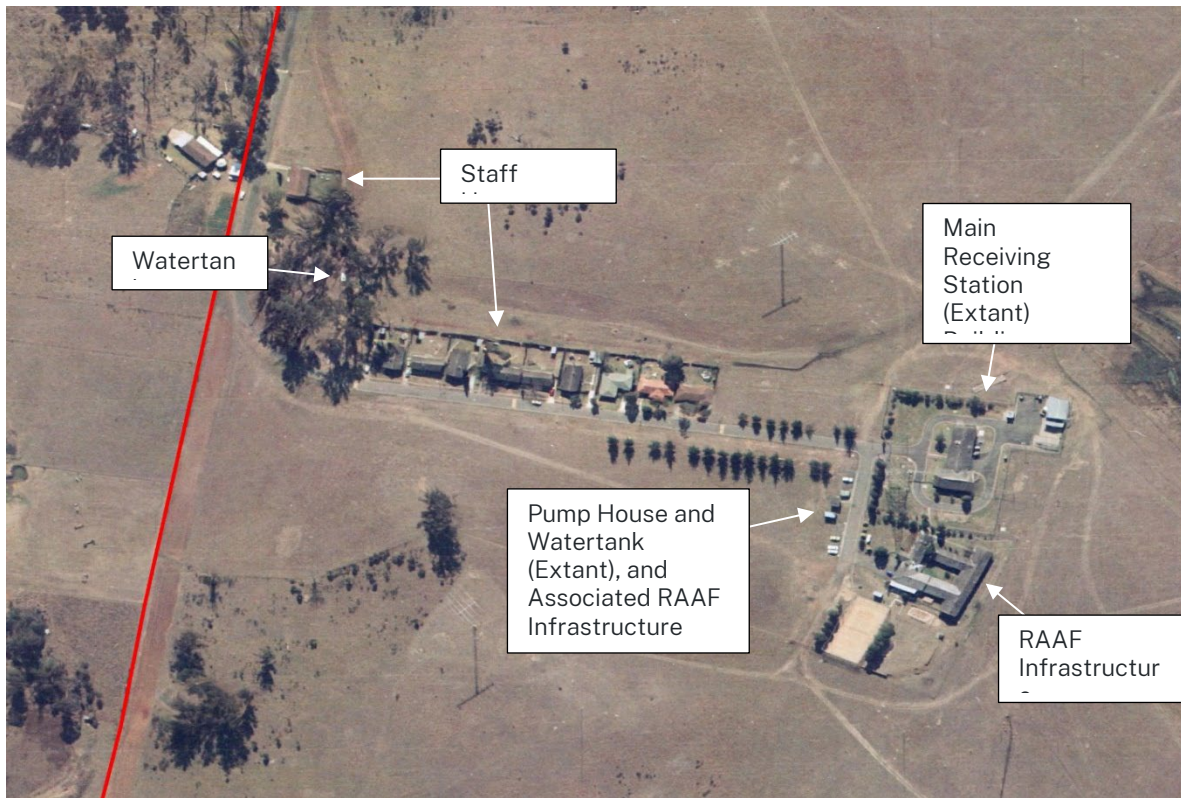


Figure 21. Example of some concrete pads as seen on the 1986 aerial.

Located to the east of the southern antenna. Source: Nearmaps with Extent Heritage additions 2021.



5 Physical description

5.1 Introduction

Extent Heritage carried out a physical assessment of the study area on 18 October 2021. The analysis involved an investigation into the built form and landscape setting. It does not provide a detailed investigation of all fabric but an overview of the elements of the place to assist in determining significance.

Limitations included heavy grass cover across site impeding access, and hot weather causing snake risks. A targeted survey was conducted on foot on exposed sections of the site where vegetation cutbacks had been undertaken to minimise risk.

All terminology for building names is from the ERM Report 'RAAF Bringelly Receiving Station NSW Archival Recording' prepared in 2012.

5.2 The site

The study area is located at 215 Badgerys Creek Road, Bringelly within the Bradfield City Centre of the Western Parkland City. The area is accessed off Badgerys Creek Road via an unsealed road that extends east and bends south towards the main property area. The study area is approximate area of 115 hectares.

The study area consists of an entirely rural area, bounded on the western extent by Thompsons Creek. The area is set on a hill and slopes down towards the south-east. The sites have been largely cleared of vegetation and consists predominately of low-lying dense scrub with several established mature trees.

The main built features within the site include remnants of former staff house sites, lamp posts, a water tank. The landscaping across the study area consists of mature trees, grassed areas and bitumen roads. At the time of reporting, construction for the new Metro Station had begun removing disused RAAF base infrastructure including aerials, antennas, and concrete pads.

5.2.1 Former staff houses

The former staff houses are situated on the north side of the entrance road to the study area. The houses have been removed and the remaining features include concrete driveways, a concrete footpath between driveways with a grass verge, rows of non-native vegetation, lamp posts and communications utilities. The house plots are roughly outlined by exotic plantings that are overgrown and each plot contains remains of building rubble and services.

The concrete driveways and footpaths identified are largely covered by vegetation and are cracking and deteriorating in several places. The grass cover in this section is exceptionally high, with low-visibility.

Figure 22. Overview of remnants of staff houses.**Figure 23. Remnants of concrete footpath.**

5.2.2 Unexpected finds – former staff houses

On 1 February 2023, Extent Heritage was notified by Taylor Constructions (on behalf of Sydney Metro) that archaeological remains associated with the former workers cottages were encountered during works on the First Building project. The remains comprised concrete footings and a terracotta drain (Figure 22 to Figure 27). The resources were photographed and assessed by Extent Heritage as falling within the anticipated archaeology that may be encountered within the study area (see Section 6). Archaeology associated with the staff cottages, however, was assessed in this report as holding no significance. As a result, construction was determined to be able to proceed with caution. Extent Heritage advised the contractors that additional remains, notably large artefact deposits, should also warrant notification to a qualified heritage consultancy.

Taylor Constructions completed an Unexpected Heritage Item Site Recording Form. The archaeological features were not impacted and remain in situ. The slot trench was backfilled.

Figure 24 Remains of terracotta pipe associated with the former staff houses**Figure 25 Remains of footings associated with the former staff houses**

Figure 26 Details of footings associated with the former staff houses



Figure 27 Overview of location of the former staff houses, facing south



5.2.3 Water tank

An elevated water tank was located approximately 300 metres west of the now demolished main receiving station building and directly uphill of the former staff housing. The water tower was removed from the site in 2010 due to safety hazards posed by its deteriorated structural stability. Although the location of water tank was inspected, the area was very overgrown, and visibility was poor.

Figure 28. View to location of water tower (removed in 2010).



5.3 Settings and views

Bradfield City Centre is set within a portion of Western Sydney characterised by its expansive rural setting with low lying scrub and mature trees. This area is currently undergoing a process of major transformation with the construction of the new international airport, metro station, and associated infrastructure. Development in this area will transform the rural landscape into a new city centre.

Within this landscape, the Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and the Northern Road. The study area is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and the Northern Road. Much of the area to the north, south and east of the study area has been cleared. The study area is bisected by Thompsons Creek which meanders through the landscape in the south-eastern and southern portion of the study area. The creek is lined with mature vegetation which obscures views towards this direction.

At the time of reporting, construction for the new Sydney Metro had begun which saw the removal of equipment and structures associated with the Bringelly RAAF Station, formerly located in the centre of the study area. The eastern boundary of the study area adjoins the rear of properties along The Retreat, Bringelly. At present this area is characterised by low density urban space surrounded by large rural residential allotments.

The current landscape character of the area is predominately rural reflecting the history of agricultural and pastoral uses of the area. This is principally evidenced by the 'Kelvin' homestead complex, which is located approximately 100 metres to the east of the study area at 30 The Retreat, Bringelly. The 'Kelvin' homestead complex is set on a rise, overlooking Thompsons Creek to the east, on a remnant of pasture of the original 1200 acres. The current curtilage for the item, a result of progressive land subdivisions between 1812 and 1985, retains all key features that contribute to the heritage significance of the early nineteenth century homestead and various outbuildings. The setting of this item is retained through the retention of a semi-rural landscape to the north and east.

5.3.1 Key views

There are no direct public views to the study area due to its location within a large open, rural landscape surrounded by private land with low scale residential buildings along Badgerys Creek Road and The Retreat. While views to the study area can be observed from Badgerys Creek Road looking east, views are highly obscured by mature trees along the boundary of the study area. Similarly, views from Kelvin Park Drive to the study area are obscured by the mature vegetation along Thompsons Creek. As a result, there are no key views from the study area to the following heritage items in the vicinity:

- Church of the Holy Innocents at 130 Rossmore Avenue, West Rossmore
- Bringelly Public School at 101 Wentworth Road, Bringelly and
- Cottage at 1168 The Northern Road, Bringelly.

The state heritage listed item, 'Kelvin', is in the vicinity of the study area and retains a visual connection to the wider rural landscape, which includes the study area. While key views to this item from the public domain are limited to the cul-de-sac of The Retreat and from within the property itself. The surrounding rural landscape to this heritage item preserves a visual catchment to land that was historically connected to the homestead. The 2006 CMP for Kelvin notes the following:

The homestead of Kelvin retains important historic views to the east from the homestead to Thompsons Creek and beyond towards South Creek. The site also retains views of other historically related rural landscapes beyond the current boundaries such as the pasture and strands of trees to the north. Both views contribute to the site's significance and maintain the context of a semi-rural character for the homestead (Form 2006, 78).

While a visual curtilage to the north, east and west of Kelvin retains the semi-rural character, residential subdivisions to the southeast and southwest have compromised the item's connection to the wider rural setting. The CMP notes that views to the north and east of the item make a greater contribution to the heritage significance and setting of Kelvin.

A views analysis was undertaken in 2006 as part of the preparation of the CMP and has been incorporated into the views and setting assessment of this report. While the land to west of Kelvin contributes to the rural setting, it is not a key contributor to significance. Key views from the surrounding landscape, as supported in the 2006 CMP, include the following:

- View corridor 1: view northeast from bridge;
- View corridor 2: view east from The Retreat to the homestead and various farm buildings;
- View corridor 3: view northwest from Thompsons Creek to the homestead;
- View corridor 4: view west from Thompsons Creek to homestead;
- View corridor 5: view southwest from Thompsons Creek to homestead.

Key views from Kelvin, as supported in the 2006 CMP, include the following:

- view east from Kelvin homestead to Thompsons Creek (view corridor is noted as being 120 degrees).

Figure 29. View corridor adapted from 2006 CMP for Kelvin by FORM Architects.

Map showing key views State heritage listed item.

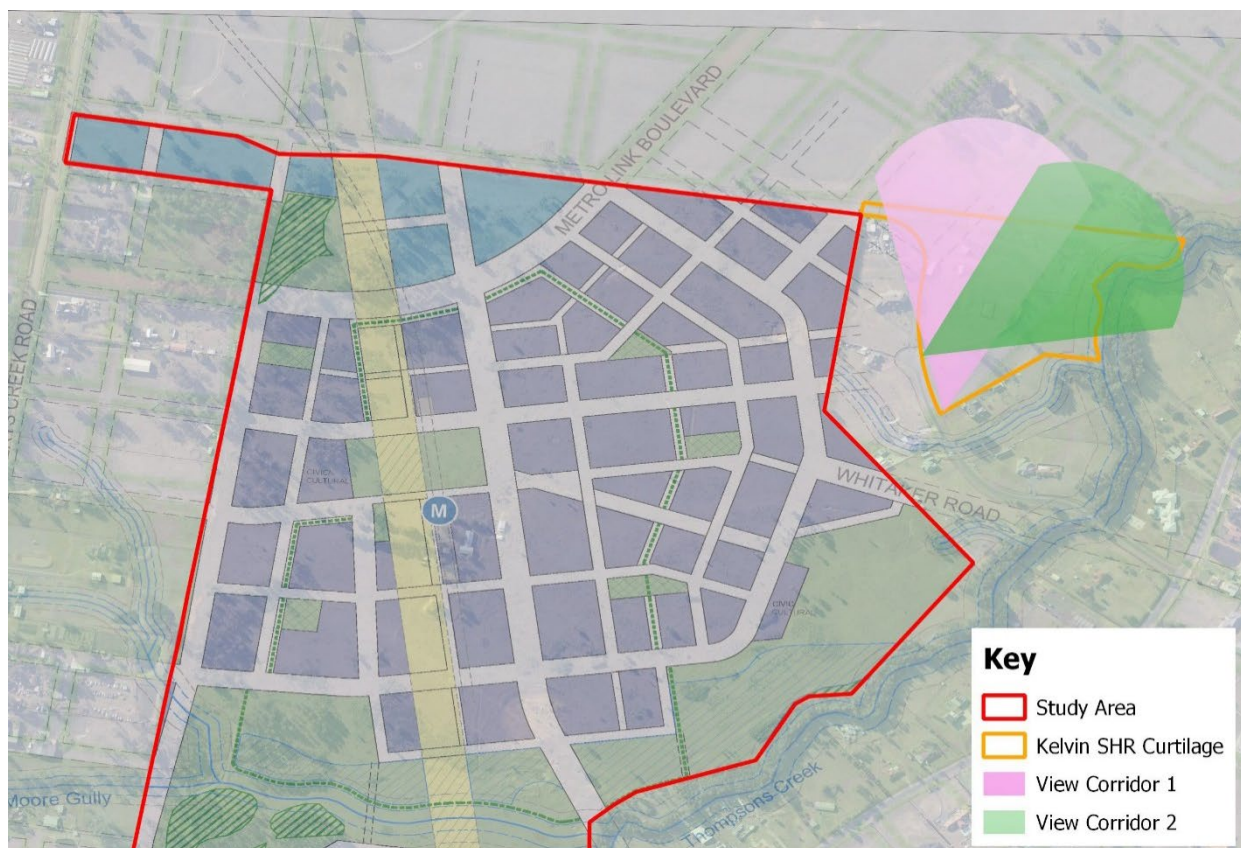


Figure 30. View corridor adapted from 2006 CMP for Kelvin
 Map by FORM Architects showing key views to homestead (marked in black)

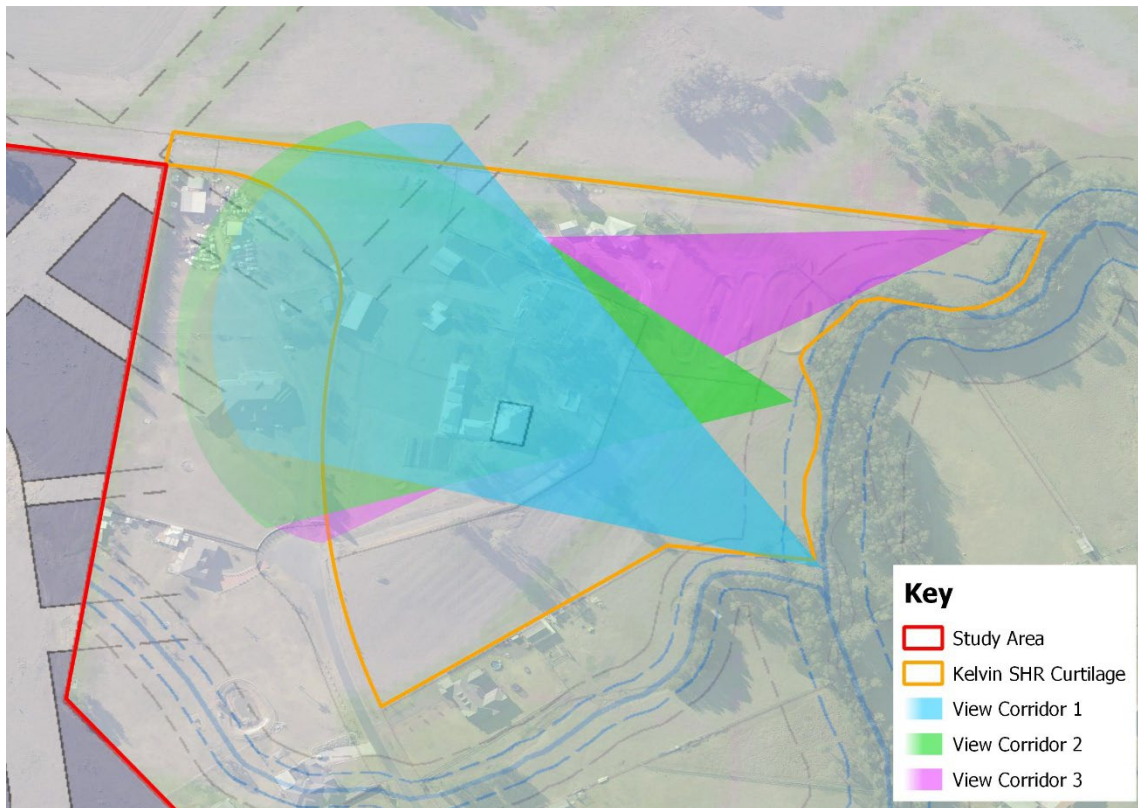


Figure 31. View analysis prepared as part of the 2006 CMP for Kelvin
 Showing views from Kelvin.

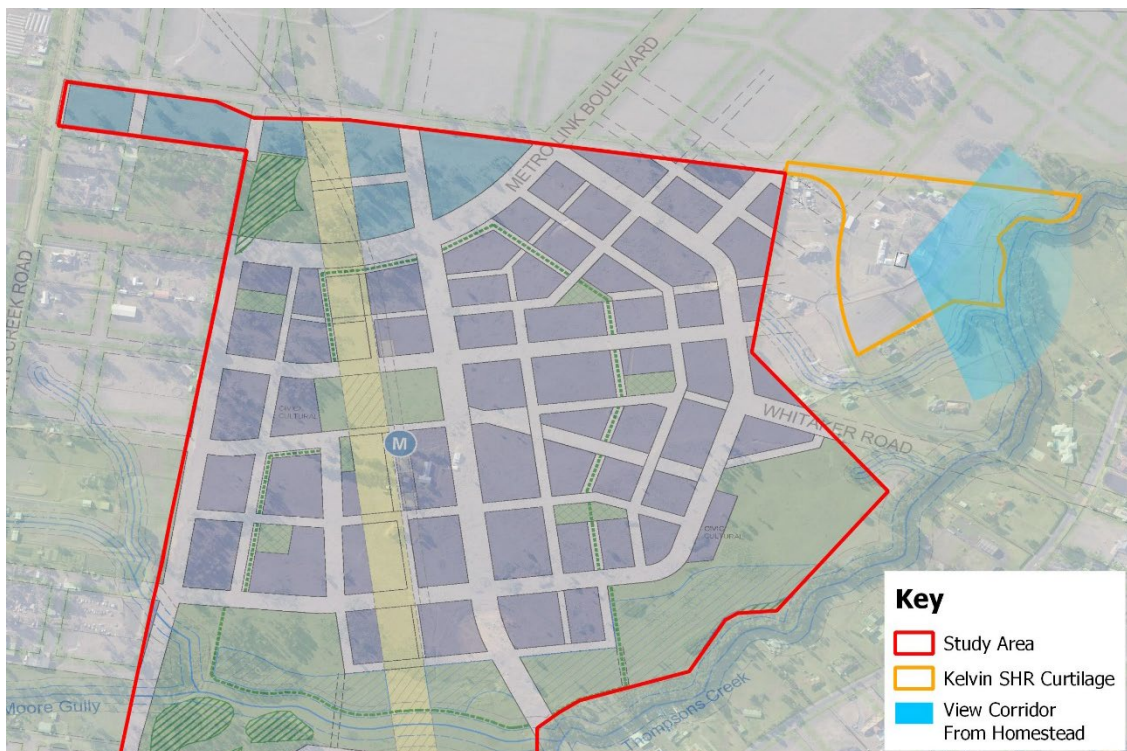


Figure 32. Key views across the study area (see Figures 34-36).

Source: Nearmap 2021 with Extent Heritage additions.

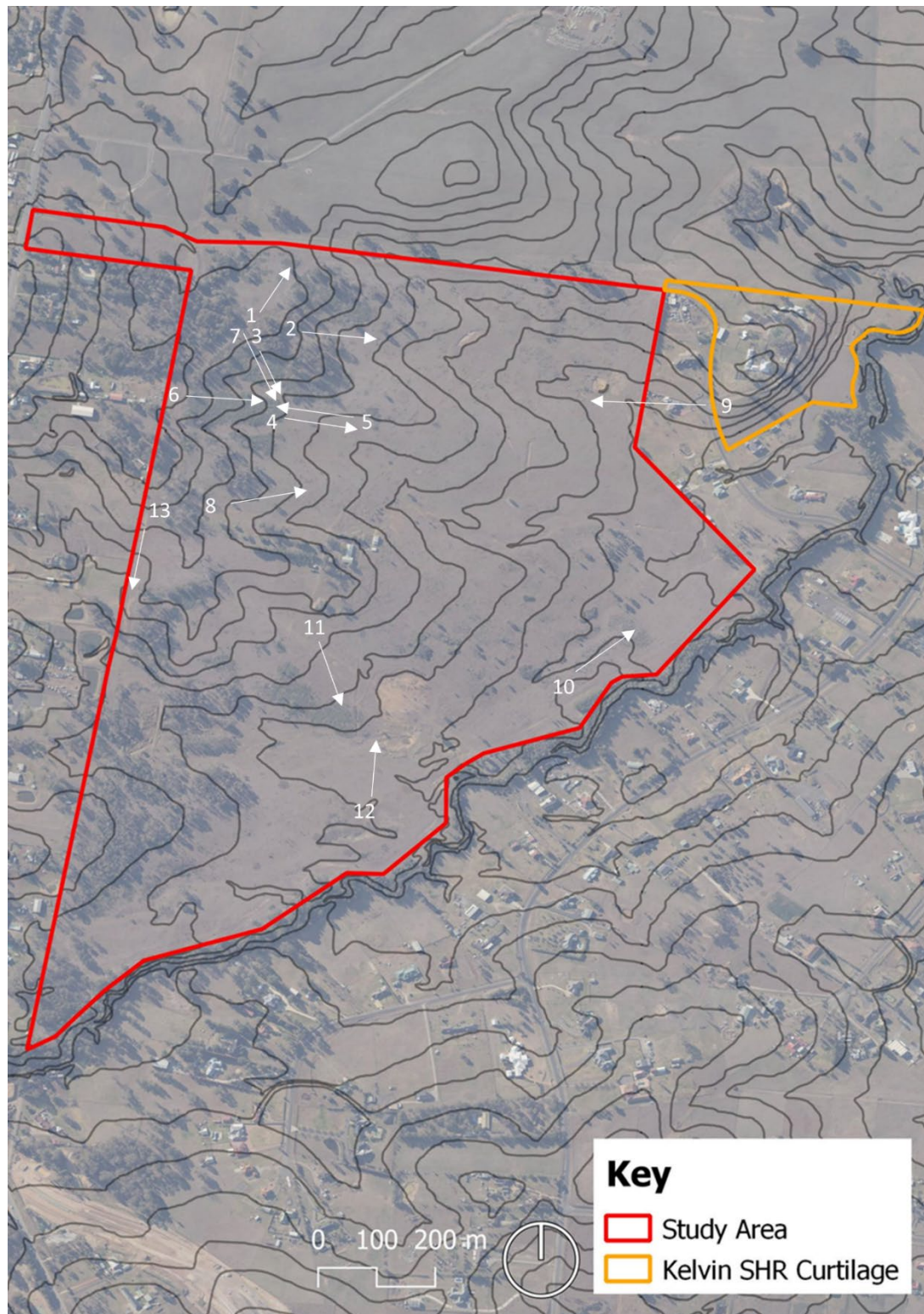


Figure 33. View 1 – northwestern corner of study area looking north



Figure 34. View 2 – northwestern corner of study area, facing Kelvin, looking east



Figure 35. View 3 – northwestern corner of study area looking east



Figure 36. View 4 – northwestern corner of study, facing Kelvin, looking east



Figure 37. View 5 – northwestern corner of study area, looking west



Figure 38. View 6 – northwestern corner of stud area, looking east



Figure 39. View 7 – northwestern corner of study area, looking southeast.



Figure 40. View 8 – northwestern corner of study area, looking east towards Kelvin homestead



Figure 41. View 9 – view from Kelvin looking west towards the study area (shown by green arrow).
Outside study area



Figure 42. View 10 - View west from north-eastern corner of the study area.
General overview of study area



Figure 43. View 11 - View west, south of dam and associated soak

General overview of study area



Figure 44. View 12 - view north from the southern portion of the study area

General overview of study area



Figure 45. View 13 – View northward from south-western portion of the study area



6 Historical archaeological potential

6.1 Introduction

Archaeological potential refers to the likelihood of a site to contain evidence of previous phases of historical occupation. Archaeological features and deposits in the form of structural remains and artefact bearing deposits are tangible evidence of previous occupation and human activities. The study area's archaeological potential is usually presented in accordance with (1) the types of potential archaeological remains associated with features or activities that may survive at the site, (2) a date indicating the year by which the resource is known to have been constructed, (3) the likely extent and integrity of relics, i.e. the predicted level of survival, which is expressed in accordance with the following rankings:

- High: it is likely that archaeological relics associated with a particular historical phase or features survive intact.
- Moderate: it is possible that some archaeological relics associated with a particular historical phase or features survive, but they may have been subject to some disturbance.
- Low: it is unlikely that archaeological relics associated with a particular historical phase or features survive.
- Nil: the degree of ground disturbance indicates that there is no potential for any significant archaeological relics to be preserved.

This section identifies where archaeological evidence is likely to be found at the site, and to what extent it may be preserved.

6.2 Phases of development and historical archaeology

Phase 1: Aboriginal occupation, pre-1788

The archaeological evidence associated with the pre-1788 Aboriginal occupation of the study area has been examined in the Western Parkland City Authority Bradfield City Centre Aboriginal Cultural Heritage Assessment Report (ACHAR) in preparation by Extent Heritage (February 2022).

Phase 2: British exploration and survey, 1788-1804

Activities undertaken during this phase include exploration and first surveys. These activities are unlikely to have left physical traces ('relics') on the site. Survey marks, such as blazed trees have not been located despite an investigation of the site and an examination of mature trees.

Phase 3: Early settlement, 1805-1850

Activities undertaken during this phase of development are primarily associated with the formation and operation of 'The Retreat' ('Kelvin'). The study area was cleared of trees and converted to grazing land. Most developments were concentrated around the homestead itself (outside the study area). Archaeological remains are likely to be restricted to evidence of former fence lines and tracks. These features are expected to be shallow and ephemeral. As a result, they have likely been removed by twentieth century earthworks.

Phase 4: Nineteenth century subdivision, 1850-1900

As for Phase 3.

Phase 5: Early twentieth century development, 1900-1945

During this period, the area surrounding the study area was utilised as the RAAF Bringelly Dispersal Area. However, the study area remained substantially unchanged. The 1947 aerial shows ploughing was undertaken across a majority of the site. Archaeological remains are likely to be restricted to evidence of former fence lines and tracks. These features are expected to be shallow and ephemeral. As a result, they have likely been removed by twentieth century earthworks.

Phase 6: Late twentieth century development, 1945-2000

The main activity associated with this phase of the site's development was the operation of the RAAF Bringelly Receiving Station. The main station building, associated radio tower, buildings, and sheds, in the centre of the study area have now been demolished as a result of construction works for Sydney Metro-Western Sydney Airport line (Figure 19). The driveway connecting the main station to Bringelly Road also remains in use. These features are considered built heritage and not archaeological.

To the south of the demolished main station building, associated infrastructure is first visible on the 1965 aerial. The infrastructure comprises a substantial box-shaped building and smaller, more temporary-looking sheds. The structures were demolished in 2021. Potential archaeological remains associated with the buildings include footings, demolition deposits, services, and isolated artefacts and artefact scatters connected to telecommunications.

Former staff houses, with exotic plantings, were located on the northern boundary of the road leading to the main station building. Nine houses fronting the road can be seen on aerials between 1965 and 2021 (Figure 16-Figure 18). An additional house, constructed fronting the road to the west, is visible on the 1985 aerial (Figure 17). Each house possesses a small backyard enclosed by low fencing. Some trees and plants are visible in the rear yards of the properties. Potential archaeological remains associated with the houses include footings, demolition deposits, services, footings associated with backyard sheds. Isolated artefacts and artefact scatters connected to domestic occupation of the site may be identified.

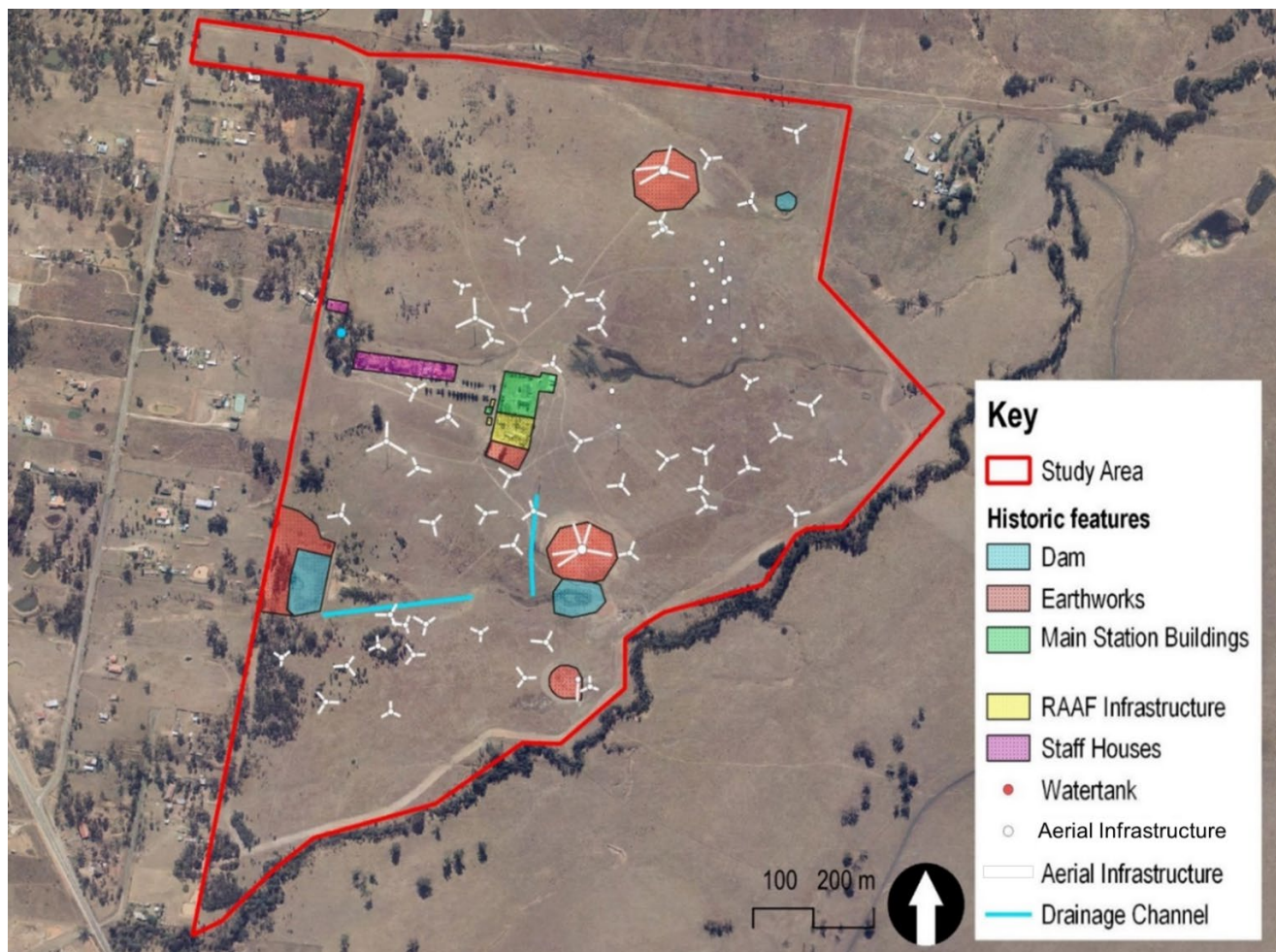
Across the remainder of the study area, RAAF infrastructure include light aerials, underground guy wires, and concrete pads are found (Figure 21). While the aerials themselves have often been removed, all the features are visible in the landscape. Evidence of landscaping is also present. This includes cut drainage channels, grading for the installation of large aerials, installation of dams, and general earth removal for unknown reasons.

No new construction has been built on the top of these demolished RAAF base features. Some, but not all, of the earthworks and aerial infrastructure is shown below.

Phase 7: Intensive Development, 2000-present

Activities associated with this phase of development do not fall within the scope of archaeological investigation.

Figure 46. Plan showing former location of RAAF infrastructure.



6.3 Disturbance

Evidence from the historic aerals and an understanding of the extensive construction program associated with the Bringelly RAAF base has revealed heavy ground disturbance occurred across the entirety of the study area.

Figure 46 identifies several locations of RAAF infrastructure including concrete pads, drainage channels, evidence of light aerals and more, the graphic is not extensive. The main station building, associated radio tower, buildings, and sheds, in the centre of the study area have now been demolished as a result of construction works for Sydney Metro-Western Sydney Airport line.

The results of the Aboriginal test excavation program (Extent Heritage 2021) across the southern and eastern half of the study area revealed intact natural soil profiles. The presence of natural soil horizons supports the potential for subsurface historical archaeological remains. However, the results also showed that the top layer of ground had been previously stripped. The minimal development of the topsoil indicated this stripping occurred relatively recently, likely during the sites use as the RAAF Bringelly Receiving Station (Phase 6). As a result, shallow archaeological features such as paths/tracks and fence lines from Phases 3-5 are likely to have been removed.

No testing was undertaken in the area directly surrounding the main station building and staff houses. In addition, no later developments have been constructed in these areas. As a result, deeper or more substantial archaeological remains have a higher potential for survival in these areas.

Overall, the study area has undergone severe ground disturbance as a result of its use as the Bringelly RAAF base (Phase 6). The significant earthworks will have removed surface and shallow subsurface archaeological remains from earlier periods.

6.4 Summary of historical archaeological potential

Three phases (Phase 1, Phase 2, and Phase 7) have been determined to hold no archaeological potential. Phases 3-5 are expected to possess only shallow archaeological features which are likely to have been impacted by later developments associated with the construction of the Bringelly RAAF base (Phase 6). Regarding Phase 6, much evidence of aerial infrastructure and earthworks is still visible on the ground surface, indicating its presence. Archaeological evidence associated the staff houses and RAAF infrastructure in the vicinity of the Main Station Building is unknown. However, no later developments have been made over their locations which increases the potential for subsurface remains to be identified.

The following table outlines the historical archaeological potential across the study area.

Table 5. Summary of historical archaeological potential

Phase	Potential features	Level of potential
Phase 1: Aboriginal occupation (pre-1788)	No historical archaeology.	NA
Phase 2: British exploration and survey (1788-1804)	No historical archaeology.	NA
Phase 3: Early settlement (1805-1850)	Postholes associated with fence lines Tracks	Low
Phase 4: Nineteenth century subdivision (1850-1900)	Postholes associated with fence lines Tracks	Low
Phase 5: Early twentieth century development (1900-1945)	Postholes associated with fences Tracks	Low
Phase 6: Late twentieth century developments (1945-2000)	<i>Staff Houses:</i> Postholes associated with fences Footings Demolition deposits Services Isolated artefacts and artefact scatters associated with occupation	High
	<i>RAAF Infrastructure:</i> Footings Demolition deposits Services Isolated artefacts and artefact scatters associated with telecommunications and the military	High
	<i>Aerial infrastructure:</i> Concrete pads Light aerals Guy wires	High
	<i>Earthworks:</i> Dams	Extant

	Landscape modifications and grading Drainage channels	
Phase 7: Post-2000 intensive development	No associated archaeology.	NA

7 Assessment of heritage significance

7.1 Built heritage

The NSW Heritage Manual was developed by the Heritage Office and the former NSW Department of Urban Affairs and Planning to provide the basis for an assessment of heritage significance of an item or place. This is achieved by evaluating the place or items significance in reference to specific criteria, which can be applied at a national, state, or local level (Heritage Office 2001). The NSW Assessing Heritage Significance details these specific criteria which are quoted in Section 7.1, below. (Heritage Office 2001, 9). The significance of the study area is assessed against these criteria below.

7.1.1 Assessment criteria

Criterion (a) An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (b) An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (c) An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area);

Criterion (d) An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons;

Criterion (e) An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (f) An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (g) An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments. (or a class of the local area's cultural or natural places; or cultural or natural environments.)

7.2 The site of Bradfield city centre

7.2.1 Heritage assessment

Table 6. Assessment against heritage criteria

Criteria	Assessment
Historic	<p>The site of the Bradfield City Centre (also known as RAAF Bringelly) is of some local historical significance forming a part of 600 acres of land granted to Thomas Laycock on 26 November 1818, initially known as 'Cottage Vale'. This grant was later absorbed with the Charles Reid's adjoining 600-acre grant to the south and the consolidated estate was known as 'The Retreat'. The main farm complex and homestead 'Kelvin' survive substantially intact to the north-east of the study area.</p> <p>The study area is of some local historical significance as a part of the RAAF Bringelly Dispersal Area which developed between 1942 and 1945 and was attached to the parent airfield at Fleurs. The area between South Creek and Thompson's Creek were developed as an Emergency Landing Ground. Although the study area formed a part of this property, it remained substantially unchanged since all infrastructure associated with dispersal area were concealed in the stands of trees immediately surrounding the landing ground.</p> <p>In 1954, the Commonwealth commenced purchasing of land for the construction of a RAAF Radio Receiving Station which included the study area. RAAF Bringelly was one of two high frequency radio telecommunication sites in Sydney. The radio receiving station was designed to receive international radio telegrams and telephone calls and from ships at sea. Advances in technology rendered the radio receiving station obsolete and was downgraded in the late 1980s (AMC 2014, 28). During the 1990s and into the 2000s buildings and infrastructure were progressively removed leaving only the core structures and the main aerial intact, although these were demolished in 2022 to make way for the Sydney Metro-Western Sydney Airport line,</p>
Associative	<p>The study area is historically associated with the Royal Australian Air Force through its use as RAAF Bringelly. This association is not considered a strong or special association in NSW's cultural history.</p> <p>This criterion is not met.</p>
Aesthetic/Technical	<p>The remaining structures with the study area relate to RAAF Bringelly. These structures are purely functional in nature and have limited aesthetic qualities. The landscaping and plantings display some aesthetic qualities as they are indicative of attempts to beautify the main approach to the building complex.</p> <p>Nonetheless, the site has minimal aesthetic qualities and does not meet this criterion.</p>
Social	<p>The study area does not have any established social significance to any particular community or group at a state or local level.</p> <p>This criterion is not met.</p>

Scientific	<p>The layout of the study area dates from its use as the RAAF Bringelly station complex. The layout illustrates some of the spatial requirements associated with the original radio transmitting technology and the social requirements of its operating staff.</p> <p>The site has some historical archaeological potential within the former staff housing area. RAAF Bringelly housed sophisticated state-of-the-art equipment at various times during its operational life, however, none of this equipment remains in the station now.</p> <p>The loss and deterioration of technical equipment and structures relating to the RAAF Bringelly has diminished the site's potential to contribute to an understanding of cultural history.</p> <p>The criterion is not met.</p>
Rarity	<p>RAAF Bringelly is one of a small number of similar high-frequency radio transmitting and receiving stations in Australia (see Comparative analysis of similar sites in ERM 2011, 64-78). The site is an incomplete relic of a specific period of telecommunications technology which was a significant stage in the development of telecommunications but one which has been superseded by later technologies.</p> <p>For these reasons, including the loss of fabric, this criterion is not met.</p>
Representativeness	<p>The study area is an incomplete representative example of a general purpose based military pattern-book building utilised and configured for a singular purpose. The quality is held in common with a large number of other buildings (ERM 2011, 64-78). The surrounding land within the area associated with the Station are representative of the requirements of radio telecommunications facilities for large and isolated sites capable of housing a dispersed antenna network. There are better, more intact representative of these kinds of purpose-built structures.</p> <p>The criterion is not met.</p>

7.2.2 Discussion of significance

ERM prepared a Heritage Assessment for the RAAF Bringelly Receiving station for the Department of Defence in April 2011 (64-84). This assessment determined the historic heritage values of the study area. This statement of significance has been adapted from this report and updated based on the recent physical analysis of the site.

The site of the Bradfield City Centre (also known as RAAF Bringelly) is of some local historical significance forming a part of 600 acres of land granted to Thomas Laycock on 26 November 1818, initially known as 'Cottage Vale'. This grant was later absorbed with the Charles Reid's adjoining 600-acre grant to the south and the consolidated estate was known as 'The Retreat'. The main farm complex and homestead 'Kelvin' survive substantially intact and is located outside of the study area.

The study area is also of some local historical significance as a part of the RAAF Bringelly Dispersal Area which developed between 1942 and 1945 and was attached to the parent airfield at Fleurs. In 1954 the Commonwealth commenced purchasing of land for the construction of a RAAF Radio Receiving Station which included the study area. The radio receiving station was designed to receive international radio telegrams and telephone calls from ships at sea. Advances in technology rendered the radio receiving station obsolete and it was downgraded in the late 1980s (AMC 2014, 28). During the 1990s and into the 2000s buildings and infrastructure were progressively removed leaving only the core structures and the main aerial intact.

The study area is historically associated with the Royal Australian Air Force through its use as RAAF Bringelly, although this association is not considered a strong or special association in NSW's cultural history.

The study area possesses minimal aesthetic qualities. The remaining extant structures and buildings within the study area relate to RAAF Bringelly. These structures are purely functional in nature and have limited aesthetic qualities. The landscaping and plantings display some aesthetic qualities as they are indicative of attempts to beautify the main approach to the building complex.

The study area does not have any established social significance to any particular community or group at a state or local level.

The layout of the study area dates from its use as the RAAF Bringelly station complex. The layout illustrates spatial requirements associated with the original radio transmitting technology and the social requirements of its operating staff. The site has some historical archaeological potential within the former staff housing area. The loss and deterioration of technical equipment and structures relating to the RAAF Bringelly has diminished the site's potential to contribute to an understanding of cultural history.

RAAF Bringelly is a rare but incomplete example of a small number of similar high-frequency radio transmitting and receiving stations in Australia. The site is an incomplete relic of a specific period of telecommunications technology which was a significant stage in the development of telecommunications but one which has been superseded by later technologies. There are better, more intact representative of these kinds of purpose-built structures.

Although the study area has some historical and rarity values within the local area, the loss of important technology and equipment relating to the RAAF Bringelly limits its significance. It is also unlikely that the site will ever be returned to its original function which is a key part of its significance.

The study area is therefore considered to have low heritage significance as a result of the loss of equipment and technology and the as it does not meet any of the above criteria. The study area is not considered to meet the threshold as a site of local or state heritage significance.

7.3 Heritage in the vicinity

7.3.1 Kelvin

The following statement of significance is quoted from the State Heritage Inventory form for 'Kelvin' (Heritage NSW, last updated 2005).

Kelvin Park, formerly known as Cottage-ville or Retreat Farm, is able to demonstrate the pastoral development of Bringelly from 1818. Although there is only a remnant (9.784 ha) of the original 1200 acre site (486ha), the homestead and farm buildings in their current setting with extensive views over rural land, is still able to demonstrate the principles of 19th century farm estate architecture, planning and design.

Kelvin Park is significant for its association with a number of people and organisations of importance in NSW's cultural history, including Thomas Laycock Junior who established the farm at Bringelly, and later owners, John Thomas Campbell and Alfred Kennerley. The lease of the property by the Australian Agricultural Company, the country's oldest agricultural and pastoral development company established in 1824, is of particular significance.

The homestead at Kelvin Park retains its colonial Georgian single-storey form and planning and is representative of a gentleman's rural residence of the 1820s. Despite some modifications it retains the architectural elements and character that make it a good example of its type. The kitchen wing and servants' quarters are modest examples of early colonial Georgian style architecture but similarly retain their original form and planning. All of these buildings are evidence of the establishment of a home and farm by Thomas Laycock.

The brick coach house at Kelvin Park retains its picturesque, early Victorian form, planning and much of its original detailing. It is evidence of the development of the property in the 1850s by Alfred Kennerley, who later became Premier of Tasmania.

The two slab barns are evidence of Kelvin Park as a working farm from 1818 until, at least, the mid-20th century. The structures demonstrate 19th century building methods and farm practice. The buildings at Kelvin Park belong to an important and rare group of colonial Georgian and early Victorian farm buildings that contribute to the historic rural landscape. They are evidence of continuity of land use for farming for 187 years (to 2005).

The form of, and elements within, the garden, courtyard areas and entry to the property are evidence of the planning of the homestead complex by Laycock and subsequent owners and express the status they hoped to convey.

The homestead of Kelvin Park retains important historic views to the east to Thompson's Creek and beyond to South Creek. The site also retains views of other historically related rural landscapes beyond the current boundaries such as the pasture and stands of trees to the north. Both views contribute to the site's significance and maintain the context of the homestead group.

Kelvin Park group, including the homestead complex and remnant of farmland is significant at local, regional, state and national levels. All areas of the site are considered equally significant. (FORM Architects, 12/2006, slightly modified, Read, S., 12/2006)

NB: neither the above nor below statements address the archaeological potential of the site.

The Kelvin Park site landscaping is a significant component of the Kelvin Park group. The early numerous tree plantings contribute to making the site a notable landmark in the area. The remaining details of driveways, fencing and entrances also contribute to the historic and social evidence provided by the site of its original patterns of occupation and use. The site is part of an intact early 19th century farm complex that is now rare within the wider urbanised environs of Liverpool. There is the potential to gain more information on the site from further archaeological and documentary research. (LEP listing/landscape).

The setting of the house on a knoll above a creek, its remnant layout of early buildings and garden, and its fine, mature trees, particularly its variety of old pines, add greatly to the character and significance of the property. The garden and setting are considered to have regional significance (Perumal Murphy Wu, 1990)

Built by Thomas Laycock junior, 1820, having received the Bringelly grant in 1818. He returned to Australia in 1817 after fighting for England in the American War of 1812. An early house of quality and rich historical associations being one of the charming country houses of the 1820s. It is well-sited above Thompson's Creek and is surrounded by a beautifully landscaped garden. (AHC, 1998)

7.3.2 The Church of the Holy Innocents

The following statement of significance is quoted from the State Heritage Inventory form for 'The Church of the Holy Innocents' (Heritage NSW, last updated 2018).

The Church of the Holy Innocents, churchyard, and cemetery is of state heritage significance because of its historical, associative, technical, aesthetic, research, rarity, and representative values. The church is the result of an unusual partnership of two prominent ecclesiastical architects: Richard Cromwell Carpenter, one of the leading English architects of the Cambridge Camden Society, and Edmund Blacket, the most prominent Australian ecclesiastical architect of the nineteenth century. It is the only church in NSW based on a design by Richard Cromwell Carpenter and only one of three in Australia. This church is one of the earliest Gothic Revival churches in NSW recognised as being correct in its medieval detail and thus, an important, rare and representative example of this new wave of church architecture. Its highly detailed, Gothic Revival design renders it remarkable in a state context as a small rural church. The church is also designed according to the principles of the Tractarian Movement, facilitating a change in liturgical emphasis from the pulpit and the spoken word, to the altar and the sacraments associated with a separate choir. The application of a Tractarian design in this small rural church embodies wider debates within the Church of England under Bishop Broughton. The church is also strongly associated with the main group of proponents of the Gothic

Revival and Tractarian Movements operating in, or in association with, the Church of England during the 1840s in NSW: Bishop Broughton, Edmund Blacket, Reverend Horatio Walsh, and Reverend George Vidal.

The church, churchyard, cemetery, and archaeological site are associated with several important pieces of legislation relating to the governance and position of religion, and specifically the Church of England, in colonial society during the early nineteenth century. As such, these original features and the church land is able to tell a story about the changing nature of religion and the position of the Church of England in the early colony. The retention of the semi-rural nature of the church, churchyard, and cemetery into the twenty-first century also demonstrates the historic rural landscape and isolation that made the finely designed Gothic Revival Church of the Holy Innocents a remarkable and rare place of worship.

7.3.3 Bringelly Public School

The following statement of significance is quoted from the State Heritage Inventory form for 'Bringelly Public school, Primary' (Heritage NSW, last updated 2004).

The site demonstrates the history of education and settlement in the region. The classroom is representative of the simple, functional design of educational buildings from the late 19th/early 20th century. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.

7.3.4 Cottage

The following statement of significance is quoted from the State Heritage Inventory form for 'Fibro House (Heritage NSW, last updated 2010).

The dwelling is now a rare 20th Century survivor of the historical growth of Bringelly village, and which would be worthy of further historical research as to its associations with the Village centre.

7.4 Assessment of historical archaeological significance

Archaeological significance refers to the heritage significance of known or potential archaeological remains. While they remain an integral component of the overall significance of a place, it is necessary to assess the archaeological resources of a site independently from aboveground and other heritage elements. Assessment of archaeological significance is more challenging, as the extent and nature of the archaeological features is often unknown and judgment is usually formulated on the basis of expected or potential attributes.

The following significance assessment of the subject area's archaeological resource is carried out by following guidelines expressed in Assessing Significance for Historical Archaeological Sites and 'Relics' (Heritage Branch, Department of Planning, December 2009, now Heritage NSW, Department of Premier and Cabinet.

7.4.1 NSW Heritage Criteria

The NSW heritage criteria are assembled into the following four groups:

- Archaeological research potential (NSW Heritage Criterion E)
- Association with individuals, events, or groups of historical importance (NSW Heritage Criteria A, B & D)

- Aesthetic or technical significance (NSW Heritage Criterion C)
- Ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F & G)

The above assessment criteria are supplemented by the established assessment framework that has been developed by Anne Bickford and Sharon Sullivan (1984), who set three fundamental questions to assist in determining the research potential of an archaeological site. These questions are as follows:

- Can the site contribute knowledge that no other resource can?
- Can the site contribute knowledge that no other site can?
- Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?
- As part of this preliminary assessment, a synthesised evaluation of significance is expressed in the statement below.

7.4.2 Archaeological research potential (NSW Heritage Criterion E)

The background research has indicated that there is a high potential to identify historical archaeological remains associated with Phase 6 (Late twentieth century development, 1945-2000). Evidence of the earthworks and aerial infrastructure across the study area are unlikely to provide additional information regarding the operation of the RAAF Bringelly site as most of the original, functional infrastructure has been removed.

The staff houses and RAAF infrastructure located around the Main Station Building site have the potential to include footing, demolition deposits, and services. These features are unlikely to shed light on the operation and occupation of the RAAF base. The staff houses are expected to have been standard Commonwealth residential buildings, similar to those found on other RAAF sites across New South Wales. Information gleaned from footings can already been gleaned from historic aerials that effectively show the layout of these buildings. Moreover, while these areas also have the potential to include isolated artefacts and artefact scatters associated with occupation and telecommunications, significant equipment and material associated with the military are expected to have been removed from the study area. The remaining artefacts are unlikely to provide significant information about the operation of the RAAF base that cannot be gathered from historical sources.

The archaeological remains associated with Phase 3 (Early settlement, 1805-1850), Phase 4 (Nineteenth century subdivision, 1850-1900), and Phase 5 (Early twentieth century development, 1900-1945) expected to be restricted to postholes and tracks. The research potential and value of identifying fence lines and postholes from these phases is very limited. As a result, archaeological evidence from Phases 3-5 do not meet the threshold of this criterion.

There is no archaeological potential associated with Phase 1, Phase 2, and Phase 7.

Associations with individuals, events, or groups of historical importance (NSW Heritage Criteria A, B & D)

The study area is associated with Australia's military preparedness during World War I and II. During Phase 5, the study area was associated with an Emergency Landing Group. However, there is no significant archaeological remains associated with the military site are expected to be located within the study area as all infrastructure was located to the east of Thompsons Creek.

During Phase 6, the site was occupied by the RAAF Bringelly Receiving Station which operated in tandem with RAAF Londonderry Transmitting Station and RAAF Glenbrook. While the study area is historically associated with the Royal Australian Air Force, this association is not considered a strong or special association in in NSW's cultural history. In addition, the archaeological remains of the RAAF infrastructure are unlikely to shed additional light on the use of the RAAF base during this period. As a result, the study area does not meet the threshold of significance under these criteria.

Aesthetic or technical significance (NSW Heritage Criterion C)

The archaeological features associated with Phase 6 are both known (surface) and unknown (subsurface). The visible archaeological remains primarily comprises earthworks, water management features, and aerial infrastructure. These features are standard for the period and do not show technical achievement or innovation. Moreover, the concrete pads and aerials are purely functional in nature and have limited aesthetic qualities. These features do not meet the threshold of significance under this criterion.

The potential subsurface archaeological features associated with Phase 6 remains comprise the staff houses and RAAF infrastructure adjacent to the Main Station Building. Until investigations have been undertaken, their aesthetic or technical significance cannot be determined. However, as the archaeological remains are likely to be demolition deposits, services, and footings, they are unlikely to meet the threshold for this criterion. It is possible that individual, well preserved artefacts may have aesthetic significance.

The potential subsurface archaeological remains associated with Phases 3-5 comprise postholes and tracks. These features, if they survive, do not meet the threshold of aesthetic or technical significance.

7.4.3 Ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F, & G)

The background research has indicated that there is a high potential to identify historical archaeological remains associated with Phase 6 (Late twentieth century development, 1945-2000). However, the types of archaeological remains are expected to have limited ability to demonstrate the past. Archaeological features from this phase are anticipated to comprise earthworks, aerial infrastructure, RAAF infrastructure, and staff housing. These feature types, namely landscape modifications, footings, demolition deposits, and services, are not expected to provide information that is not already readily available through historic aerials and RAAF records. Moreover, these features are representative of the requirements of radio telecommunications facilities for large and isolated sites capable of housing a dispersed antenna network. There are better, more intact representative of these kinds of purpose-built structures. As a result, the archaeological remains are not expected to meet the threshold of this criterion.

The archaeological remains associated with Phase 3 (Early settlement, 1805-1850), Phase 4 (Nineteenth century subdivision, 1850-1900), and Phase 5 (Early twentieth century development, 1900-1945) expected to be restricted to postholes and tracks. These anticipated archaeological features will not provide information that will assist in the historical understanding of 'Kelvin' or the development of the study area.

There is no archaeological potential associated with Phase 1, Phase 2, and Phase 7. No further assessment is required for these stages.

7.4.4 Summary

No historical archaeological potential has been identified for Phase 1 (Aboriginal occupation, pre-1788), Phase 2 (British exploration and survey, 1788-1804), and Phase 7 (Intensive development, 2000-present). As a result, there is no significance associated with these periods. The archaeological remains associated with Phase 3 (Early settlement, 1805-1850), Phase 4 (Nineteenth century subdivision, 1850-1900), and Phase 5 (Early twentieth century development, 1900-1945) expected to be restricted to postholes and tracks which do not meet the threshold of local significance. The archaeological remains associated with Phase 6 (Late twentieth century development, 1945-2000) are not expected to provide information that is not already readily available through historic aerials, historical records, or other telecommunications facilities. The archaeological evidence from Phase 6 does not meet the threshold of local significance.

8 Assessment of heritage impact

8.1 Built Heritage

The following section assesses the heritage impact of the proposed Master Plan, as outlined in Section 2 of this report.

Demolition / earthworks

To achieve the desired outcomes of the Bradfield City Centre Master Plan, the study area will be subject to demolition and earthworks for the clearing of the site. Much of the land to the north, south and east of the study area consists of green fields and contains no built elements of heritage significance.

Remnant structures associated with the RAAF's historical occupation of the area, notably the Main Station Receiving Building and Receiving Tower, have already been demolished as part of the Sydney Metro Western Sydney Airport Line. As determined in Section 7.2, these elements had some historic and rarity values; however, they did not meet threshold for heritage listing at the state or local level.

As there are no heritage items contained within the study area, the resulting demolition works for the Master Plan will have no direct physical impact to elements of heritage significance. The works are considered acceptable and will have no impact to heritage fabric.

New work

The proposed Master Plan indicates the subdivision pattern and land zone for the Bradfield City Centre. This includes the retention of existing vegetation and open space along the south and southeast of the study area along Thompsons Creek, with medium to high density development proposed for the centre of the study area around the new Metro station. Some smaller open public green spaces are also proposed within the proposed urban landscape.

Although there are no heritage items within the study area, the Bradfield City Centre is located in the vicinity of the State heritage listed homestead, Kelvin. This item will require appropriate planning controls to ensure that future development will not adversely impact its identified heritage values. It is important the setting is understood so that future changes in the area respond sensitively to the existing character and achieve a positive heritage outcome.

The Master Plan has made a considered effort to reduce and limit the potential impacts of this work through the design of a sensitive pattern of subdivision, which incorporates key views to the Kelvin homestead into the road alignments, and retention of public green spaces along Thompsons Creek. The land surrounding Thompsons Creek will be designated a regional parkland for recreational use.

While the limit of the development proposed is at a suitable distance from the state heritage listed homestead, Kelvin, future planning and design stages must consider the bulk, scale and height of buildings within the vicinity of this item. Strong DCP controls will be required to ensure that any future development is of a scale and character suitable to the heritage significance. Planning controls will need to respond to the scale, form, massing, setback, and materiality as the development of the city centre has the potential to

impact on setting, with potential risks arising from overshadowing, scale, and massing along the eastern boundary of the study area.

The proposed Master Plan is assessed as having no direct physical or visual impacts to identified heritage items. However, the resulting development of this Master Plan is likely to have an indirect visual impact on the setting of Kelvin. This is assessed as having a minor adverse impact on the heritage significance of this item. Consideration to detailed design in later phases of development must consider ways in which this impact can be further mitigated and reduced.

8.2 Views and settings

The proposed Master Plan situates the new Bradfield City Centre within an expansive rural setting currently characterised by long grasses, low lying scrub and mature trees conserving remnant vegetation. This landscape is further defined by large rural residential allotments which front Badgerys Creek Road. While the proposed development will significantly modify the existing rural character of the area, the Master Plan is consistent with the planning objectives projected for the area.

The proposed Master Plan has made a considered effort to minimise potential impacts on the character and amenity of the area through a considered approach to the built form. The Master Plan proposes a variety of scale, architectural design, and character in the built form to create an enhanced urban space. This will be crucial to the successful delivery of this project. Creating an enhanced urban space will be supported by a varied height of buildings, consideration to through site links both a mix of pedestrian and vehicular, activated street frontages, inclusion of parkland and incorporation of greenery into building design.

While the impact of the proposed Master Plan on the setting is inevitable, careful consideration for future development within the vicinity of state heritage listed homestead, Kelvin, is required. It is recommended future development includes a transitional area between the heritage item and new development to ensure development is of a scale and character suitable to the heritage significance of Kelvin. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing. This will assist in integrating the new development into the existing heritage landscape, reducing potential impacts to the views and setting that contribute to the broader visual curtilage and setting of Kelvin.

The proposed Master Plan, however, will have no impact on key views associated with the historic homestead. Important historic views which contribute to the significance of Kelvin include views to the east from the homestead to Thompsons Creek and beyond towards South Creek. The rural landscape to the north of the heritage item also contributes to its significance. The Master Plan for the Bradfield City Centre is limited to land west of the historic homestead and does not impede on these identified views illustrated in Section 5.3 (refer to Figure 29 to Figure 32).

Table 7. Summary of impacts to key views

View corridor identified in 2006 CMP	Impact of proposed Master Plan	Recommendation
View corridor 1: view northeast from bridge;	The proposed Master Plan will have no impact on this key view.	Retain and conserve.
View corridor 2: view east from The Retreat to the homestead and various farm buildings;	The proposed Master Plan will have no impact on this key view.	Retain and conserve.
View corridor 3: view northwest from Thompsons Creek to the homestead;	Views west from Thompsons Creek to the homestead may be impacted by the proposed Master Plan, in so much that development along the eastern edge of the	Include transitional areas between heritage items and new development.

View corridor 4: view west from Thompsons Creek to homestead;	study area may be higher than the ridgeline of the historic homestead and various farm outbuildings.	Future stages of detailed design will need to consider height of buildings, scale, setback, massing and materiality of any new development in the vicinity of the State heritage listed homestead, Kelvin.
View corridor 5: view southwest from Thompsons Creek to homestead	However due to the distance and topography, will not detract from the significance of this item. Potential impacts will be further mitigated through the recommendations contained within this report.	
View from homestead to Thompsons Creek	The proposed Master Plan will have no impact on this key view.	Retain and conserve.

8.3 Heritage items in the vicinity

There are four heritage items in the vicinity of the study area, two state heritage items and two locally listed items. They are:

- Kelvin (SHR Item #00046), 30 The Retreat, Bringelly
- Church of the Holy Innocent (SHR Item #02005), 130 Rossmore Avenue West, Rossmore
- Bringelly Public School Group, including schoolhouse and former headmaster's residence (#7 Liverpool LEP 2008), 101 Wentworth Road Bringelly 2556
- Cottage (#12, Camden LEP 2010), 1186 The Northern Road Bringelly

Of the four heritage items, only one item is in the immediate vicinity of the study area and will be impacted by the proposed Master Plan. Due to the distance between the study area and the other heritage items in the vicinity, the proposed Master Plan will have no direct or indirect heritage impacts to the Church of the Holy Innocent, Bringelly Public School and Cottage. The proposed Master Plan is assessed as having no adverse impact on these items.

The historic homestead, Kelvin is located approximately 100 metres to the east of the study area. The proposed Master Plan will inevitably impact the views west from the homestead and farm outbuildings, as the retained rural qualities of the wider landscape have contributed to the extended visual curtilage of this item, beyond that which is contained in the SHR curtilage.

Impacts are limited to land located at the rear of this heritage item and at a suitable distance from key features of significance. The proposed Master Plan will not detract from the significance of the item, as it will remain legible in the landscape as an early nineteenth century homestead and farming complex. Furthermore, key views to north and east will be retained supporting the extended visual curtilage and setting of an item in a semi-rural setting. Several mitigation measures and recommendations have been provided in this report including the planning controls, sensitive building design, use of green spaces and heritage interpretation which provide opportunities to limit the impact of this Master Plan and provide a positive outcome from a heritage perspective. Any future development must be of a scale and character suitable to the heritage significance of Kelvin and supported by planning controls that respond to the scale, form, massing, setback, and materiality as the development of the city centre has the potential to have a moderate visual impact on setting.

The proposed Master Plan is assessed as having a minor adverse impact to the significance of Kelvin. While the wider landscape and rural setting of the heritage item will change, key landscape features that contribute to the setting will be retained and celebrated within the SHR curtilage.

8.4 Curtilage and subdivision

The proposed Master Plan has prepared an approach to the development of the Bradfield City Centre. The future development will result in the subdivision of the study area for the formation of a city centre with a mixed-use character. However, as there are no heritage items located within the study area, the proposed Master Plan would not result in any changes to the heritage curtilage of individual heritage items.

8.5 Historical archaeology

The proposed Master Plan works in Stages 1-3 are expected to impact the potential archaeological resources across the Bradfield City Centre Precinct. However, archaeological remains of the agricultural use of the study area during Phases 3-5 (Early settlement, 1805-1850; Nineteenth century subdivision, 1850-1900; Early twentieth century development, 1900-1945) are expected to be limited to fence postholes and tracks. These feature types are expected to have low research potential and no archaeological significance.

An analysis of the historical archaeological potential within the study area has identified a high potential for archaeological remains associated with the RAAF Bringelly Receiving Station (Late twentieth century development, 1945-2000). The remains, identified across the entire study area, are expected to comprise evidence of earthworks, RAAF infrastructure, and staff houses. The expected archaeological features have been assessed to hold low research potential and are unlikely to meet the threshold of local significance.

No historical archaeological remains are expected to be associated with Phases 1-2 (Aboriginal occupation, pre-1788; British exploration and survey, 1788-1804). No further assessment is required for these stages.

8.6 Compliance with relevant Conservation Management policies

Included below is a summary of CMP policies and their relevance to the project. The policies are quoted from the 2006 CMP for Kelvin Park prepared by FORM Architects.

Policy 5.2.1 Topography and landscape

1. Contours of the land within lots 2711, 2712 and 2713 are not to be altered.
2. The following fabric and attributes are essential to the Kelvin Park Group and should be retained in any future development.
 - a. The relationship between the main homestead and its surrounding various outbuildings
 - b. The Early Colonial Georgian style homestead
 - c. The visually freestanding form of the building unobstructed by adjacent erections
 - d. The open and uncluttered character of its surrounding landscape
 - e. The visual relationship between the homestead and the main road, its garden, the West Thompsons Creek, its paddocks, attached and surrounding buildings and the pasture beyond.
 - f. A palette of materials and finishes for external fabric drawn from the c.19 buildings, in particular reference to the surrounding outbuildings with combination of brick with timber panelling, timber framed windows and doors.

3. Future uses of the site should be compatible with the heritage of the Kelvin Park Group enabling it to retain a vital and important reference point for interpretation of the early settlement and users of the Cumberland Plain.

Extent Heritage comment

The proposed Master Plan will not detract from the relationship between key buildings retained within the SHR curtilage of the site. The homestead and associated outbuildings will remain legible within the evolving landscape as an early nineteenth century farming complex. The proposed Master Plan complies with the objectives outlined in this policy.

Policy 5.2.2 Subdivision

4. Any subdivision and subsequent proposed development must retain and protect the historic rural setting of the Kelvin Park Group and its surrounding views and vistas.
5. The land may be subdivided into four (4) lots to provide amenity and accommodation on 3 lots for the current owner's siblings. The retention of the subdivided land among the family group will facilitate future control over any proposed development. The remaining lot connects the property to Bringelly Road and will remain a connecting corridor for the foreseeable future.
6. No further subdivision shall be permitted. Any future change of ownership would be bound this document's policies.

Extent Heritage comment

The proposed Master Plan makes a considered effort to retain the rural character of the area through the incorporation of public green spaces into the design of the city. This is demonstrated through the retention of significant vegetation along Thompsons Creek into a regional parkland that extends along the southeast and southern border of the study area.

The development and uplift associated with the formation of a new city centre will have an inevitable impact on the rural setting surrounding Kelvin, however, will not detract from key landscape features within the SHR curtilage. While the new city centre will be visible, it is located to the rear of the homestead and does not impede on key views obtained from The Retreat or Thompsons Creek. The rural character of the area will be retained along Thompsons Creek, ensuring a continuous green corridor is maintained.

Policy 5.2.3 Views and Vistas

7. All works involved in planning the continued development of Kelvin Park and the subdivided properties should give consideration to the creation, retention and recovery of views and vistas to and from Kelvin. This objective should be progressively incorporated into any relevant development strategies. Refer to the site analysis Appendix A which highlight the important vistas from the main road, the Western Thompsons Creek as well as the views from the homestead to its surrounding.
8. No work on any of the lots created to impede or obstruct views or vistas to or from the homestead and the group of farm buildings.
9. Any proposed structure should be simple in form, maximum 2-storey high with minimal decoration, coloured to merge with the landscape, shielded with vegetation and plantings as low key as possible. Any second storey should be wholly contained within the roof space.
10. For visual catchment which lies beyond the property boundaries, the topography and trees should be maintained. Screen plantings shall be placed among future development to conceal any structure from the visual catchment of Kelvin Park.

Extent Heritage comment

The view analysis included in Appendix A of the 2006 CMP has been considered in the views and setting assessment for Kelvin homestead as outlined in this report. The proposed Master Plan will see no change to key views identified within that assessment, as shown in Figure 29 and Figure 31. The visual catchment of the proposed Master Plan is limited to the west of the homestead complex, outside of any identified key views. The proposed development will transform this rural landscape, however, has made a considered effort to ensure the new city centre retains open green spaces and buildings of varied height and architectural character. Street trees and various screen plants are proposed and will support the greening of the new city. Recommendations and mitigation measures related to building height, material, scale, form and character are considered in this report to minimise and reduce the visual impacts and are for consideration in later phases of detailed planning and design.

9 Assessment requirements and policy context

9.1 Master Plan Requirements

The DPE have issued Secretary's Master Plan Requirements (MPRs) to the Authority for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the following MPRs.

Table 8. Master Plan Requirements

Reference	Master Plan Requirement	Where addressed
Part A.12.	The draft master plan is to be accompanied by a Statement of Heritage Impact (SOHI), prepared in accordance with relevant guidelines and policies and must address the requirements outlined by Heritage NSW (Attachment A). The SOHI is to also consider the impact specifically on State Heritage listed 'Kelvin' and associated curtilage.	This report satisfies the requirements in MPR Part A.12.
Part A.14	The draft master plan is to consider the submissions from DPE - Environment and Heritage Group and Liverpool City Council (Attachment A).	Section 11.1 Table 9
Part A.16	The draft master plan must be prepared with consideration of the comments provided by DPE Environment and Heritage Group (Attachment A).	Section 11.1 Table 9
Part B. Reports and further information for the lodgement of the master plan	Statement of Heritage Impact, including the preparation of a heritage interpretation strategy; detail on view corridors/sight lines to and from Kelvin Park, and detail on Unexpected Finds Protocol, and protocol on if burial sites or skeletal material is uncovered during construction (Appendix 1).	This report satisfies the requirements of MPR Part B.

Table 9. Agency and Council Comments

Reference	Agency and Council Comment	Where addressed
Master Plan Request	<i>Liverpool City Council</i> Council acknowledges the following:	This report satisfies Council's request for a

	<ul style="list-style-type: none"> The proposal includes the requirement to prepare a statement of heritage impact, an Aboriginal Cultural Heritage Assessment and a response to the Design for Country guidelines. The statement of heritage impact will be required to include an assessment of the impact on Kelvin Park and the curtilage. <p>Council would additionally request:</p> <ul style="list-style-type: none"> Ensure the masterplan and SoHI considers view corridors/sight lines from Kelvin Park as well as overshadowing impacts (if any). Key sightlines should be identified and maintained through the development of the development controls. 	Statement of Heritage Impact which includes an assessment of the impact on the historic homestead, Kelvin.
Master Plan Request	<p><i>Heritage NSW</i></p> <p>As delegate of the Heritage Council, Heritage NSW notes that a Statement of Heritage Impacts (SOHI) has been prepared for the Master Plan (Addendum to Master Plan Request; 1 July 2022). We support the Department's requirement that a SOHI accompany the Master Plan, and recommend that this includes:</p> <ul style="list-style-type: none"> 1. A study of the history of the place or site to identify potential heritage items or relics in the proposed Master Plan area. 2. A review of local historical sources and maps to assess the potential for archaeological relics. 3. The investigation of heritage significance within the site and surrounding areas (e.g., built heritage, conservation areas, landscapes, settings and views, and potential archaeological sites or relics). Heritage NSW provides the following as a guide https://www.heritage.nsw.gov.au/assets/Investigating-heritage-significance-2021-v2.pdf; <ul style="list-style-type: none"> a. This investigation should assess and include the relationship between the proposed project area and the State Heritage Register listed 'Kelvin Park Homestead' (SHR 00046) which is in close proximity to the east boundary of the site. 4. A description and maps of the proposed works or activities including Reduced Levels according to Australian Height Datum (AHD). 5. An assessment of the impact the Master Plan and any potential future proposed works will have on the identified significance of the site, its surrounding area and potential relics. <ul style="list-style-type: none"> a. The impact assessment should consider the tangible and intangible built heritage and broader landscape impacts to the surrounding area, including to the State Heritage Register listed 'Kelvin' (SHR 00046) and its curtilage area. 6. Recommendations and measures to reduce or mitigate potential negative impacts of the proposed works. 7. A strategy to manage the proposed works which takes into consideration: <ul style="list-style-type: none"> a. the overall nature of the site. b. the likelihood of relics. c. the nature and degree of impact from the proposed works. 	This report satisfies the requirements of Heritage NSW.

d. the built heritage impacts to items in the surrounding areas such as the 'Kelvin' homestead (SHR 00046).

e. the visual and landscape impacts to the surrounding environment, heritage items and heritage views and vistas.

f. any opportunities for conservation and protection of environmental heritage values.

g. any opportunities for heritage interpretation at a broader landscape level, and at a localised level (e.g., views to the 'Kelvin' homestead (SHR 00046); and

h. any relevant conservation management plans (if applicable) that may be in place.

- 8. An Unexpected Finds Protocol that takes into consideration the unexpected discovery of heritage items or relics during works.
- 9. An outline of procedures to be followed if burials or skeletal material is uncovered during construction.

9.2 Environmental planning and assessment act 1979 (NSW)

The Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act) requires that consideration is given to environmental impacts as part of the land use planning process. In NSW, environmental impacts are interpreted as including cultural heritage impact. Proposed activities and development are considered under different parts of the EP&A Act, including:

- Major projects (State Significant Development under Part 4.1 and State Significant Infrastructure under part 5.1), requiring the approval of the Minister for Planning.
- Minor or routine development requiring local council consent, are usually undertaken under part 4. In limited circumstances, projects may require the minister's consent.
- Part 5 activities which do not require development consent. These are often infrastructure projects approved by local councils or the State agency undertaking the project.

The EP&A Act also controls the making of environmental planning instruments (EPIs) such as Local Environmental Plans (LEPs) and State Environmental Planning Policies (SEPPs). LEPs commonly identify, and have provisions for the protection of, local heritage items and heritage conservation areas.

Extent Heritage comment

This assessment forms part of the supporting documentation for the Master Plan and meets the requirements for assessment of State significant development under part 4.1 of the Act.

9.3 Heritage Act 1977 (NSW)

The *Heritage Act 1977 (NSW)* (Heritage Act) was enacted to conserve the environmental heritage of NSW. Under section 32, places, buildings, works, relics, moveable objects, and precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the State Heritage Register (SHR), the statutory register under part 3A of the Heritage Act. Items that are assessed as having State heritage significance can be listed on the SHR by the Minister on the recommendation of the NSW Heritage Council.

The Relics Provision

Archaeological features and deposits are afforded statutory protection by the ‘relics provision’. section 4(1) of the Heritage Act (as amended 2009) defines ‘relic’ as follows:

any deposit, artefact, object or material evidence that:

- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
- (b) is of State or local heritage significance.

The ‘relics provisions’ requires that no archaeological relics be disturbed or destroyed without prior consent from the Heritage Council of NSW. Therefore, no ground disturbance works may proceed in areas identified as having archaeological potential without first obtaining an Excavation Permit pursuant to section 140 of the Heritage Act, or an archaeological exception, or in the case of places listed on the SHR, an approval under section 60, or an exemption under section 57 of the Heritage Act from the NSW Heritage Council.

Extent Heritage comment

The proposal does not involve any works, impacts or changes to items listed on the State Heritage Register, nor is there any substantial potential to impact significant historic archaeological relics. Therefore, no approval by the Heritage Council of NSW or its delegates is required.

Although the proposed works are not expected to excavate or disturb land that will result in a relic being discovered, and do not require a permit, a stop works protocol should be implemented in the event of unexpected discovery.

9.4 State Environmental Planning Policy (Precincts-Western Parkland City) 2021

The *State Environmental Planning Policy (Western Sydney Aerotropolis)* was gazetted in September 2020 and came into effect on 1 October 2020. It applies to the land within the study area and provides statutory weight to the planning and development of land within the Aerotropolis. On 1 March 2022, the Western Sydney Aerotropolis SEPP was consolidated into the Western Parkland City SEPP. The Precinct SEPPs are based on the strategic planning vision in Sydney outlined in the ‘Greater Sydney Regional Plan – A Metropolis of Three Cities’. The 1,382-hectare Aerotropolis Core Precinct is one of six (6) precincts identified for early activation. Within this precinct, the first stage of city building, and the focus of this Master Plan, is the 115-hectare Bradfield City Centre.

With specific reference to heritage, section 26 of Chapter 4 of this SEPP includes objectives and controls for heritage conservation. In addition, the SEPP includes a list of heritage items within the initial Aerotropolis precincts in schedule 2 and an associated map. Of the items in the vicinity of the study area, two items, ‘Kelvin’ and ‘The Church of the Holy Innocents’ are listed as State-significant.

The objectives of the Aerotropolis SEPP pertaining to heritage conservation as per Clause 1 of Part 4, Section 28 are:

- to conserve the environmental heritage of the land to which this Policy applies,
- to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- to conserve archaeological sites, and

to conserve Aboriginal objects and Aboriginal places of heritage significance.

Extent Heritage comment

Two items in the vicinity of the study area, Kelvin (Item #00046) and the Church of the Holy Innocents (Item #02005) are listed as state significant heritage items on the Aerotropolis SEPP 2020. This report, its assessment and recommendations fulfill the requirement of Clause 6, part 4, Section 28 of this SEPP and should be submitted as part of the Environmental Impact Statement for consideration by the Minister.

9.5 Western Sydney Aerotropolis Development Control Plan – Phase 2

The *Western Sydney Aerotropolis Development Control Plan– Phase 2* (DCP Phase 2) provides controls to supplement the Western Sydney Aerotropolis Plan (WSAP), the Aerotropolis SEPP, the Western Sydney Aerotropolis Precinct Plan (Aerotropolis Precinct Plan) and inform the preparation and assessment of master plans and development applications (DAs). The DCP Phase 2 supersedes the *Western Sydney Aerotropolis Development Control Plan 2020 – Phase 1*.

The proposed works require assessment against the heritage controls set out in the DCP Phase 2. The Performance Outcomes and Benchmark Solutions outlined in the table below are the controls taken from Section 2.2.2 Non-Aboriginal and European Heritage of the DCP. The objectives of the DCP for matters relating to non-Aboriginal and European heritage are as follows:

- 01.** Ensure that development in the vicinity of heritage items is designed and sited to protect the heritage significance of the item and its setting.
- 02.** Ensure adequate protection and appropriate management of archaeological resources.
- 03.** Ensure that as much archaeology of Local, State, and potential National heritage significance is retained on site and interpreted within the new developments.
- 04.** Ensure the continued relevance of historic values through long-term heritage conservation outcomes that reflect the history of the Aerotropolis area.

This report has included and responds only to controls that are relevant to the Bradfield City Centre Master Plan.

Table 10. Summary of relevant heritage policies from the Western Sydney Aerotropolis Development Control Plan Phase 2

Relevant Performance Outcome	Benchmark solution	Extent Heritage comment
P02. The impact of new development adjacent to or within the vicinity of a heritage item is minimised.	<ul style="list-style-type: none"> 1. Development in the vicinity of a heritage item minimises the impact on the setting of the item by: <ul style="list-style-type: none"> a. Providing an adequate area around the building to allow interpretation of the heritage item; b. Retaining original or significant landscaping (including plantings with direct links or association with the heritage item); 	The proposed Master Plan has made a considered effort to minimise potential impacts on the character and amenity of the area through a measured approach to the built form. The Master Plan proposes a variety of scale, architectural design, and character in the built form to create an enhanced urban space. Creating an enhanced urban space will be supported by a varied height of buildings, consideration to through site links both a mix of

- c. Protecting (where possible) and allowing the interpretation of archaeological features; and
- d. Retaining and respecting significant views to and from the heritage item.

pedestrian and vehicular, activated street frontages, inclusion of parkland and incorporation of greenery into building design.

The State listed homestead, Kelvin is approximately 100 metres east of the study area's eastern boundary. The proposed Master Plan will see no impact to original or significant landscaping associated with the heritage item.

Although there are no key views to Kelvin from within the study area, views have been incorporated into the subdivision pattern and road alignment, enabling views east to the rear of the heritage item. Key views from the east and west of Kelvin will not be impacted by the proposed Master Plan.

- 2. Design of new buildings in the vicinity of heritage items should be of a contemporary design in recessive colours and materials that do not overwhelm any adjacent heritage items.

The Master Plan for the new Bradfield City Centre indicates the built form of the new city centre will showcase excellence in design, innovation and sustainability.

Future development adjoining Kelvin Park will need to take into consideration the heritage sensitivities of the landscape in future planning stages. In later stages of design, consideration must be given to the significance of the State listed homestead Kelvin, to ensure any new development in the vicinity of the item is appropriate in terms of material, massing and scale. This includes the appropriate use of a material palette that includes sympathetic materials, colours and that do not detract or overwhelm the item.

- 3. Open spaces should be planned around heritage items to ensure it maintains its prominent siting and encourages opportunities for active and passive interaction with the place.

At this stage the Master Plan consists of ample open space which encourages opportunities for active and passive interaction with the place. As the closest heritage item in the vicinity is 100 metres from the proposed new development, the siting of the heritage items has been thoughtfully considered is not impacted by this development.

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- 4. Highly activated urban areas in the vicinity of a heritage item must be carefully and respectfully sited, designed and landscaped to ensure protection of the heritage values of the heritage item.
- The location and siting of Kelvin on a rise overlooking Thompsons Creek must be considered in the future detailed design of the Bradfield City Centre. The interface between the new development and heritage item must be consistent with the identified heritage values of the place. It is recommended transitional areas between the heritage item and development are designed so that the heritage values are protected. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing. This will assist in integrating the new development into the existing heritage landscape, reducing potential impacts to the views and setting that contribute to the broader visual curtilage and setting of Kelvin.
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9.6 Summary of Key Implications for Master Plan

The key implications for the Master Plan in relation to Non-Aboriginal heritage include:

- The study area is not identified as a heritage item on any statutory or non-statutory registers, nor does it meet the criteria for local or State significance.
- The proposed works will not directly impact on any identified built heritage.
- The assessed potential for the presence of archaeological material associated with all post 1788 occupational phases of the site are low within the works footprint. Any surviving remains are likely to have a low archaeological significance.
- There will be no direct or indirect visual or physical impacts to the Church of the Holy Innocent, Bringelly Public School and Cottage. The proposed Master Plan is assessed as having no adverse impact on these items.
- The proposed Master Plan is assessed as having a minor adverse impact on the setting and views for the State heritage listed homestead, Kelvin.
 - A transitional area between the heritage item and new development must be established to ensure development is of a scale and character suitable to the heritage significance of Kelvin. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing.
 - Strong DCP controls will be required to manage development in the vicinity of the historic homestead, Kelvin. Strong planning controls will ensure that any future development is of a scale and character suitable to the heritage significance, and responds to the scale, form, massing, setback, and materiality.

10 Recommendations

The following recommendations have been prepared for the proposed Master Plan phase.

- Any new development should consider the SHR heritage item, Kelvin which is located in the immediate vicinity. Consideration should be given to the height, bulk, scale and material of new buildings. Recessive colours, adequate setbacks, the use of open space and landscaping are ways which the impacts to this heritage item can be mitigated. This consideration is important for the Stage 4 area of the Master Plan, which is the closest to the SHR Item (noting not the subject of this Master Plan application).
- It is recommended future development includes a transitional area between the heritage item and new development to ensure development is of a scale and character suitable to the heritage significance of Kelvin. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing.
- It is recommended that a Photographic Archival Recording be undertaken for the site prior to any changes being made to record the existing site.
- There is the opportunity to develop a Heritage Interpretation Strategy for this project. This will ensure a holistic approach towards to the interpretation implementation so that the significant values heritage in the vicinity, ranging from various themes including natural, Aboriginal, colonial, and twentieth-century heritage, are appropriately represented and enhance each other cohesively. The Strategy would typically be subject to internal and external consultation to guide the final implementation.
- In regard to the management of historical archaeological remains an Unexpected Finds Procedure should be in place prior to the commencement of ground works (refer to Appendix 1 – Unexpected Finds Protocol).

10.1 Mitigation measures

Table 11. Summary of mitigation measures for the project.

Ref	Recommendation	Timeframe	Responsible
1	Any new development should consider the SHR heritage item, Kelvin which is in the immediate vicinity. Consideration should be given to the height, bulk, scale and material of new buildings. Recessive colours, adequate setbacks, the use of open space and landscaping are ways which the impacts to this heritage item can be mitigated. This consideration is important for Stage 4 area the Master Plan, which is the closest to the SHR Item.	During detailed design	WPCA
2	Undertake a Photographic Archival Recording of the study area prior to record the existing site.	Prior to commencement of works	WPCA
3	Develop a Heritage Interpretation Strategy for this project.	As soon as possible	WPCA

4	With regard to the management of historical archaeological remains an Unexpected Finds Procedure should be in place prior to the commencement of ground works (Appendix 1).	Prior to commencement of ground works	WPCA
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11 Conclusions

This Statement of Heritage Impact has considered the potential impacts of the proposed Master Plan for the Bradfield City Centre on the known and potential heritage significance of heritage items in the vicinity of the study area. This report has addressed non-Aboriginal heritage matters only. The proposed Master Plan assessed within this report includes four stages of development. The subject of this application, Stage 1, comprises land located within the central and north-west quadrant of the Master Plan Site, centred around the future Sydney Metro Station.

The assessment of heritage impacts contained within Section 8 of this report has determined that the proposed Master Plan will have a minor adverse impact on the heritage significance of the State listed homestead, Kelvin. The proposed Master Plan will transform a portion of the rural landscape surrounding this heritage item. Although there will be no direct physical or visual impacts associated with this proposal, the proposed changes will have indirect visual impact. The proposed Master Plan will inevitably impact the views west from the homestead and farm outbuildings, as the retained rural qualities of the wider landscape have contributed to the extended visual curtilage of this item, beyond that which is contained in the SHR curtilage. Impacts, however, are limited to land located at the rear of this heritage item and at a suitable distance from key features of significance. The proposed Master Plan will not detract from the significance of the item, as it will remain legible in the landscape as an early nineteenth century homestead and farming complex. Furthermore, key views to north and east will be retained supporting the extended visual curtilage and setting of an item in a semi-rural setting.

This report has determined that the study area is not identified as a heritage item on any statutory or non-statutory registers, nor does it meet the criteria for local or State significance. The proposed works will not directly impact on any identified built heritage. An analysis of historic plans and historical aerial photographs demonstrates that the site was located within a portion of the former estate referred to as The Retreat and subsequently Kelvin and then Kelvin Grove. The estate operated primarily as a grazing property until the early 1950s at which time it was purchased by the Commonwealth and functioned as the RAAF Bringelly Receiving Station. The assessed potential for the presence of archaeological material associated with all post 1788 occupational phases of the site are low within the works footprint. Any surviving remains are likely to have a low archaeological significance.

While the proposed development will significantly modify the existing rural character of the area, the Master Plan is consistent with the planning objectives projected for the area. Several mitigation measures and recommendations have been provided in this report including the planning controls, sensitive building design, use of green spaces and heritage interpretation which provide opportunities to limit the impact of this Master Plan and provide a positive outcome from a heritage perspective. As such, the impacts to heritage are considered acceptable in understanding the positive outcomes of the proposed development for the wider community.

11.1 Approval and Notification Requirements

Heritage Act 1977 – As the works will not directly affect any items on the State Heritage Register and there is low potential for impacting on known or expected relics, no notifications, permits or approvals are required in accordance with the Heritage Act.

Environmental Planning and Assessment Act 1979 – This report fulfils the assessment requirements under the EP&A Act.

SEPP (Western Parkland City) 2021 – This report fulfils the assessment requirements under this SEPP.

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Appendix 1 – Unexpected Finds Protocol

Unexpected finds procedure

In the event that potential archaeological object(s) are encountered during construction, the following steps must be taken.

- **STOP ALL WORK** in the immediate vicinity of the archaeological object(s) and notify the Project Manager.
- Protect the archaeological object(s) using fencing to establish a 'no-go zone' around the object.
- Contact and engage a Heritage Professional (qualified archaeologist) who will carry out a preliminary assessment and recording of the potential archaeological object(s)
- If the Heritage Professional advises the object is not a potential Aboriginal object or significant historical relic, works will recommence in consultation with the Project Manager.
- If the Heritage Professional advises that the object is a significant historical archaeological relic, the affected area will remain protected from any further ground disturbance.
- The Heritage Professional will notify Heritage NSW about the discovery under s146 of the Heritage Act. No further ground disturbance work would be allowed in the location of the discovery until a response from Heritage NSW has been received.

Procedure for discovery of possible human skeletal remains

- If human skeletal remains are discovered, all works must cease, the area must be protected, and the NSW Police and Heritage NSW must be contacted. Any human remains must be assumed to be protected heritage items or a crime scene.
- Interpreting the age and nature of skeletal remains is a specialist field and therefore, an appropriately skilled archaeologist or physical anthropologist should be contacted to inspect the discovery site and recommend an appropriate course of action.
- Should Heritage NSW determine the remains to be of historic ancestry, the most appropriate course of action, which may include deviation of the construction works, or the careful removal of the remains and reburial elsewhere, would be decided in consultation with the Project Manager and the Heritage Professional (qualified archaeologist)
- Should the skeletal material prove to be of Aboriginal ancestry, notification of Heritage NSW (DPC) and the Local Aboriginal Land Council will be required. Notification should also be made to the Commonwealth Minister for the Environment, under the provisions of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*
- Should the remains determined to be of non-human origin, construction works may proceed.