

## 20. European heritage

The assessment of European heritage identified 19 European heritage items at the airport site and an additional 22 heritage items in the surrounding area. The identified European heritage items were largely locally significant but would also trigger potential inclusion on the Commonwealth Heritage List given their presence on Commonwealth land.

The identified items reflect the historical context of the airport site and European settlement more generally, including early attempts to develop local agricultural and pastoral economies and the emergence of settled village communities.

Construction of the proposed Stage 1 development would involve large-scale clearing and earthworks, which would preclude the preservation of European heritage items in situ. The identified European heritage items at the airport site are all within the area of the Stage 1 development and would therefore be documented and salvaged, where feasible and prudent, before construction. Other measures to preserve the European heritage of the airport site would include the preparation of an oral history of the site. Measures to mitigate and manage impacts on European heritage would be collated in environmental management plans before construction and operation.

### 20.1. Introduction

This chapter provides a review of the European heritage values in localities potentially affected by the development of the proposed Western Sydney Airport. The chapter draws on a comprehensive assessment of European heritage (see Appendix M2).

European heritage investigations were undertaken at the airport site as part of preparation of two previous environmental impact statements for the development of a second Sydney airport at Badgerys Creek. These investigations identified a number of items of local significance within or in the vicinity of the airport site. The identified European heritage items at the airport site would also trigger potential inclusion on the Commonwealth Heritage List.

This assessment of European heritage draws upon the results of all previous assessments and documentation for the airport site and augments this information with further research, site investigations, test excavation and analysis.

The assessment addresses the Australian Government's environmental assessment requirements in relation to the project for European and other heritage. Comments and recommendations on the scope of the environmental assessment from the Heritage Division of the NSW Office of Environment and Heritage are also addressed in this assessment.

The assessment considers the significance of all heritage items located within and around the airport site and recommends mitigation and management measures for all items potentially affected by the proposal.

## 20.2. Methodology

### 20.2.1. Historical sites

The overall approach to the assessment involved the identification of heritage items within and around the airport site through a review of previous heritage studies, searches of relevant heritage registers and schedules, and a field survey informed by a predictive landscape model.

The significance of each heritage item was assessed in accordance with Commonwealth Heritage criteria and the potential for direct and indirect impacts associated with the proposed airport were considered for each item.

The following tasks were undertaken to describe the existing environment at the airport site and to assess the impact of the proposed airport with regard to European heritage:

- review of relevant heritage legislation;
- review of background information including previous thematic studies, field surveys and assessments undertaken during previous assessments of the airport site;
- searches of all available historic heritage registers, including the World Heritage List, National Heritage List, Commonwealth Heritage List, State Heritage Register, Heritage and Conservation registers for State government agencies (known as Section 170 registers), local environmental plans, National Trust of Australia List, Register of the National Estate, Historic Heritage Information Management System and the Australian Institute of Architects Register of Significant Architecture in NSW;
- collation of known heritage curtilage;
- e (boundary) information as part of the heritage searches;
- literature review including previous archaeological reports, heritage studies, conservation management plans and regional and local history documents and maps;
- preparation of a thematic history for the site and surrounds;
- field survey of the airport site to identify known historic heritage items, unrecorded historic heritage items and to assess the potential for any unrecorded historic heritage items, as informed by a predictive landscape model;
- consultation with relevant local councils and the NSW Office of Environment and Heritage;
- further targeted surveys and test excavation of selected areas to record identified historic heritage items and determine heritage curtilage of the items;
- assessment of the significance of identified European heritage items including cumulative impacts on historic heritage and cultural landscapes; and
- development of mitigation and management measures for affected items.

### 20.2.2. Archaeological assessment

Evaluation of the historical archaeological potential of the airport site was based on a consideration of historical information about the development and occupation of the airport site, physical evidence observed during field surveys and identified areas of previous disturbance. A broad approach to the identification of potential archaeological evidence was adopted based on a predictive model, which assumes that historical archaeological remains are generally located close to occupation and activity areas.

The assessment of archaeological impacts was prepared based on historical research, a field survey and the results of test excavation. Background information and the assessed significance of identified sites were primarily based on historical research. Field survey results were used to assess the condition of the historical archaeological sites.

### 20.2.3. Assessment of significance

Statements of significance for the assessed heritage items were drawn from Commonwealth and State statutory and non-statutory heritage registers and supplemented with additional historical research.

European heritage items identified at the airport site were assessed against Commonwealth Heritage criteria (Department of the Environment and Water Resources 2007), which align closely with State heritage criteria (NSW Heritage Office 2001). The criteria are shown in Table 20–1.

The criteria were considered with regard to the history and physical evidence of each identified heritage item. The criteria detailed in the International Council on Monuments and Sites *Burra Charter* (2013) are very similar to the Commonwealth Heritage criteria and, as such, they are not considered separately. Each identified heritage item within the airport site was also considered with regard to the *Australian Historic Themes Framework* (Australian Heritage Commission 2000).

**Table 20–1 – Commonwealth and State heritage criteria**

Category	Commonwealth criteria	State criteria
Events and processes	<b>Criterion (a)</b> the place has significant heritage value because of the place's importance in the course, or pattern, of Australia's natural or cultural history.	<b>Criterion (a)</b> 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).
Rarity	<b>Criterion (b)</b> the place has significant heritage value because of the place's possession of uncommon, rare or endangered aspects of Australia's cultural or natural history.	<b>Criterion (f)</b> 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).
Research	<b>Criterion (c)</b> the place has significant heritage value because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history.	<b>Criterion (e)</b> 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).
Principal characteristics of a class	<b>Criterion (d)</b> the place has significant heritage value because of the place's importance in demonstrating the principal characteristics of: <ol style="list-style-type: none"> <li>i. a class of Australia's natural or cultural places, or</li> <li>ii. a class of Australia's natural or cultural environments.</li> </ol>	<b>Criterion (g)</b> an item is important in demonstrating the principal characteristics of a class of NSW's: <ol style="list-style-type: none"> <li>iii. Cultural or natural places; or</li> <li>iv. Cultural or natural environments.</li> </ol>

Category	Commonwealth criteria	State criteria
Aesthetic	<b>Criterion (e)</b> the place has significant heritage value because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group.	<b>Criterion (c)</b> an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).
Creative or technical achievement	<b>Criterion (f)</b> the place has significant heritage value because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.	<b>Criterion (c)</b> an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).
Social	<b>Criterion (g)</b> the place has significant heritage value because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.	<b>Criterion (d)</b> An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.
Associative	<b>Criterion (h)</b> the place has significant heritage value because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.	<b>Criterion (b)</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).
Indigenous tradition	<b>Criterion (i)</b> the place has significant heritage value because of the place's importance as part of indigenous tradition.	NSW law provides separately for indigenous heritage (see <i>National Parks and Wildlife Act 1974</i> ).

#### 20.2.4. Legislative and policy framework

The assessment has been completed in the context of the Commonwealth legislative framework with reference to the principles and objectives of NSW policy, where appropriate.

##### 20.2.4.1. Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework for the protection of matters of national environmental significance. These matters include World Heritage properties, National Heritage places and Commonwealth Heritage places. The EPBC Act also provides for the protection of the environment generally, where actions are undertaken by the Commonwealth or on Commonwealth land.

World Heritage properties are listed on the World Heritage List administered by the UNESCO. National Heritage places are places of outstanding value to the nation and are listed on the National Heritage List. Commonwealth Heritage places are places owned or controlled by Commonwealth entities that have Commonwealth Heritage values and are listed on the Commonwealth Heritage List.

A heritage value of a place is defined under the EPBC Act as including the place's natural and cultural environment having aesthetic, historic, scientific or social significance, or other significance, for current and future generations of Australians.

Approval from the Minister for the Environment is required for controlled actions which will, or are likely to, have a significant impact on items and places included on the World Heritage List, National Heritage List or Commonwealth Heritage List. Approval is also required for an action undertaken by the Commonwealth or on Commonwealth land which is likely to have a significant impact on heritage values, even if those values are not included in one of these lists.



The EPBC Act also prescribes obligations for Commonwealth agencies that own or control properties that have, or might have, one or more Commonwealth or National Heritage values. Obligations include taking all reasonable steps to assist in the identification, assessment and monitoring of values and preparation of management plans for any identified values in line with the Commonwealth Heritage management principles and National Heritage management principles. Commonwealth agencies must similarly take all reasonable steps to ensure their actions are not inconsistent with the *Australian World Heritage management principles* or any plans in force for a World Heritage property. The EPBC Act prescribes various heritage management principles and guidelines for managing heritage properties protected under the EPBC Act.

#### 20.2.4.2. Environmental Planning and Assessment Act 1979

The NSW *Environmental Planning and Assessment Act 1979* is the main law regulating land use, planning and development in NSW. The Act enables the making of local environmental plans, which commonly provide for the protection of locally significant heritage items and heritage conservation areas. The local environmental plans that apply to the airport site or surrounds are the *Liverpool Local Environmental Plan 2008* and the *Penrith Local Environmental Plan 2010*. Both plans contain lists of items of European heritage significance.

#### 20.2.4.3. Heritage Act 1977

The NSW *Heritage Act 1977* (Heritage Act) provides protection for heritage places, buildings, works, relics, moveable objects, precincts and archaeological sites that are important to the people of NSW. These include items of Aboriginal and non-Aboriginal heritage significance. Where these items have particular importance to the people of NSW, they are listed on the State Heritage Register.

Section 170 of the Heritage Act requires NSW Government departments and agencies to maintain a Heritage and Conservation Register, commonly known as a Section 170 Register. These registers include items of Aboriginal and non-Aboriginal heritage significance.

## 20.3. Existing environment

### 20.3.1. Historical context

European settlement around Badgerys Creek, including Luddenham and Bringelly, began with land grants to settlers for the purpose of establishing large rural estates in 1809. It was intended that these rural estates would contribute crops and livestock to feed the colony's growing population. Grantees included James Badgery (804 acres in 1809 at South Creek), Robert Lowe (1,000 acres in 1812 at Bringelly) and John Blaxland (6,710 acres of land in 1813 which he named 'Luddenham Estate'). Smaller grants were made to Sarah Howe, Edward Powell, Ellis Bent, D'Arcy Wentworth and Thomas Laycock (Keating 1996). These rural estates were highly successful, producing wheat and breeding cattle, sheep and horses.



The end of transportation and the consequent withdrawal of convict labour signaled the start of a decline in the fortune for the area. A severe drought from 1838 to 1840 resulted in wheat crop failure for two consecutive years. This was followed in 1841 by an economic depression due in part to a crash in wool prices and a reduction in British investment capital (Keating 1996). The increasing demand for land close to the growing population centres, the collapse of viable wheat farms after an outbreak of rust, and the de-population of the area as small tenant farmers moved in search of better land, culminated in the subdivision of many large estates into smaller allotments.

The most obvious effect of the downturn in the area was the sale and subsequent subdivision of Luddenham Estate. The breakup and sale of Luddenham Estate between 1859 and 1864 has been identified as the beginning of the next phase in the area, which saw the subdivision of the original grants.

Subdivisions of the mid-nineteenth century changed the pattern of land settlement in the region by breaking up the larger estates into much smaller farming lots and laying out uniform streets and allotments in a regular grid. In many instances, this supplanted an existing irregular alignment of informal roads and paddock fence lines. The subdivisions were set out by private surveyors often working on different estates.

As a result of subdivision, small farmers were attracted to the area. Improvements were made, orchards and vineyards planted, and cottages built (Paul Davies Pty Ltd 2007). For instance, Franz Anschau and his family established a 200 acre vineyard south of Luddenham village in the late 1850s, complete with wine cellars, a substantial home and a working farm with sheep (*Camden News* 1954).

Land advertised as 'Luddenham Village' was offered for sale in 1859. Luddenham Village was located along the eastern boundary of The Northern Road and featured one acre and half acre blocks. In 1859, the central and western portions of Luddenham Estate had been surveyed (3,515 acres) and the survey of the eastern district (within the airport site), which represented the balance of the estate at 4,158 acres, followed in 1862. At the time of the 1859 survey, 2000 acres of the Estate were under cultivation, which over the following decades appears to have been managed by tenant farmers (*Sydney Morning Herald* 25 May 1859; Paul Davies Pty Ltd 2007).

Population figures at Luddenham are difficult to determine but by 1860, the local community warranted the establishment of a local school (*Sydney Morning Herald* 2 October 1860), and a post office followed in 1872. The village was close to Lawson's Thistle Inn and provisions were made for a church and a public reserve (Neustein and Associates 1992). Immediately surrounding the village, allotments of no more than 75 acres were offered, while lots of 100 – 300 acres were offered further east to the boundary of Badgerys Creek (AMC 2014). In 1862, the remainder of the western and central divisions around Lawson's Thistle Inn was also auctioned (Kinhill Stearns 1985, Keating 1996).

By 1872 there were 29 residents, and the village offered a range of services including two blacksmiths, a bootmaker, a butcher and an inn (Lawson's Thistle Inn). Rural life revolved around farming, but Anschau had established his winery at his property 'Steinberg' and five local people were employed in the timber trade as sawyers and wood splitters (Paul Davies Pty Ltd 2007).



In 1885, Luddenham Estate was purchased by a syndicate of Sydney land developers and re-subdivided to form a patchwork of semi-rural allotments in freehold title. From this time, the village of Luddenham developed as a centre for civic services.

The small rural Luddenham Village provided the surrounding estates with a focal point and Luddenham soon established itself as a viable settlement. A small weatherboard Methodist school was established in 1857 and was replaced with a more substantial brick school in 1862 (Keating 1996, Godden Mackay 1997). Luddenham Post Office was opened on 1 March 1872 and played an important role in the village, serving as a money order office from January 1885, acquiring a telephone and telegraph service from August 1905, and creating a Commonwealth Savings Bank Office in April 1914 (Hopson and Tobin 1995). Both the Luddenham Uniting Church and Progress Hall were established in the 1880s (AMC 2014).

In comparison to Luddenham, neither Bringelly nor Badgerys Creek developed well defined village centres, despite being offered for sale on similar terms.

Around the turn of the century, the main alternative land use to grazing and cropping in the area was orchards. City families, displaced by the depression of the 1890s, were attracted by the subdivision of the large estates into smaller manageable land parcels. The subdivisions, many between three and 10 acres, were designed to encourage settlement in the area. Reasonable deposits and easy repayments belied the trouble that many of these new farmers were to face. Inexperience, seasonal changes and small lots combined to make life difficult on the land.

Roads to Sydney such as Mulgoa Road (now Elizabeth Drive) and Bringelly Road were in poor condition, while the closest railway station was located 12 miles away at St Marys (Donald and Gulson 1996:9, Godden Mackay 1997). There was no easy access to waterways for taking perishable goods to market, so the area tended to be used for fruit growing, grazing, and for the production of milk for the local Liverpool area. Small orchards dominated land use on the smaller properties, while dairy farms and some vine growing occupied other farms (Godden Mackay 1997, Neustein and Associates 1992, Kinhill Stearns 1985).

William Longley was one such farmer in the Badgerys Creek district who established an extensive and well-known fruit orchard after purchasing land during the first Luddenham subdivision of 1859. The Longley family grew fruit in the district for over 50 years before their estate was sold, together with their home and household furniture, in 1912 (*Camden News* 1912). Other orchards of the period include those belonging to the Anschaus, Booths, Outridges, Leggos and Smiths.

Often, farmers in the area supplemented their farm income with a trade such as carting, shoemaking, coach building or stints at the local brick pits (Keating 1996). To service the small Badgerys Creek community, a butcher's shop operated from 1886, a public school was opened on Badgerys Creek Road in 1895, and a post office was established in 1896 (Paul Davies Pty Ltd 2007; Liverpool City Council 2012). St John's Anglican Church and Badgerys Creek Uniting (Methodist) Church serviced local residents and were constructed in the early 1900s (AMC 2014). Despite the modest development in the area, Badgerys Creek remained essentially rural and sparsely populated throughout the nineteenth century.



By 1904, the areas of Badgerys Creek, Luddenham and Bringelly were moderately settled and a Parliamentary Standing Committee was established for the purpose of determining the viability of a railway between Mulgoa and Liverpool (AMC 2014). The proposed railway never eventuated and the districts of Badgerys Creek and Bringelly remained sparsely populated, retaining their rural character. It was noted that in the 1900s, there were still large areas available for purchase around Badgerys Creek and Nicholson Park Estate in Luddenham (Donald and Gulson 1996).

Local government representation was forced on Badgerys Creek by the NSW Government in 1906 through the establishment of Nepean Shire.

In 1916, Cecil Vicary purchased a portion of D'Arcy Wentworth's Greendale estate for the purpose of establishing a dairy, grazing land and a vineyard (AS11). The property on the south-western side of The Northern Road, opposite Anschau's vineyard, had served as a working farm from the 1880s and featured a slab homestead, a woolshed and shearers' quarters. Originally a sideline to running the sheep and dairy farm, the first grapes were planted in 1917 and commercial production began in 1923, though dairy cows were reared until the early 1940s (AMC 2014). In the 1930s at the height of production, 65 hectares of land were cultivated, though production began declining from the late 1930s (AMC 2014).

From the 1920s, further settlement occurred in Badgerys Creek when portions of James Badger's early grant were subdivided under the provisions of the *Soldier Settlement Act 1919*. Exeter House was at that time in the ownership of the Stevens family, who later sold a portion of the Exeter estate to Ern Kent (AMC 2014). In the 1930s, Kent sold his property to Peter Nobbs, who moved into the homestead with his family to pursue dairying (Donald and Gulson 1996). In 1936, a large area with frontage to South Creek was acquired by the Commonwealth of Australia for a CSIRO animal health research station, known as McMaster's Field Station, which was also used for a short time as a field station for research into radio astronomy. The site was sold by the CSIRO in 1996 (Paul Davies Pty Ltd 2007). Also in 1936, the Veterinary Department of the University of Sydney (in association with the McGarvie Smith Institute) purchased and developed a 160 hectare property at Badgerys Creek for the training of veterinary students in animal husbandry (Paul Davies Pty Ltd 2007).

A number of research facilities were established at Badgerys Creek and its surrounds in the 1950s, including the Overseas Telecommunication Commissions's Bringelly Radio Receiving Station Complex and the Australian Air Force Radio Receiving Station in 1952–55. Rural land use intensified in the 1960s with the establishment of dairy and poultry farming, beekeeping, timber and market gardening operations, and horse and dog training, but the district saw little development thereafter.

The districts of Badgerys Creek, Luddenham and Bringelly retain a great deal of their former rural character. Though subdivision and development of large estates has occurred, early slab cottages, substantial homesteads, cisterns, sheds, vineyards and small rural allotments remain. Market gardens, working farms, vineyards and close knit village communities reflect the district's rural development.

### 20.3.2. European heritage items

A review of prior assessments, heritage listings and a field survey identified 19 European heritage items at the airport site and an additional 22 heritage items in the surrounding area. The identified European heritage items within the airport site are listed in Table 20–2 while the identified European heritage items in the vicinity of the airport site are listed in Table 20–3. All of the identified items are mapped in Figure 20–1.

#### 20.3.2.1. Prior assessments

The airport site has been subject to a number of past European heritage assessments including the *Second Sydney Airport Site Selection Programme: Draft Environmental Impact Statement* (Kinhill Stearns 1985) and subsequently *Technical Paper 12: Non-Aboriginal Cultural Heritage* (Godden Mackay 1997) for inclusion in the *Draft Environmental Impact Statement: Second Sydney Airport Proposal* (PPK, 1997). Twenty-one of the identified European heritage items within and around the airport site were considered in these prior assessments. These European heritage items are listed and described in Table 20–2 and Table 20–3 and are mapped in Figure 20–1.

Preliminary field investigations undertaken to inform the referral of the proposed airport under the EPBC Act (AMC 2014) reflected these earlier findings and identified an additional eight European heritage items within and around the airport site. These European heritage items are listed and described in Table 20–2 and Table 20–3 and are mapped in Figure 20–1.

#### 20.3.2.2. Commonwealth listings

None of the European heritage items identified within and around the airport site are inscribed on the World Heritage List, National Heritage List or Commonwealth Heritage List.

The Greater Blue Mountains Area is about seven kilometres north-west of the airport site at its closest point. The area is inscribed on the World Heritage List and on National Heritage List (for its World Heritage values) and is therefore a matter of national environmental significance under the EPBC Act. The one million hectare area was inscribed on the World Heritage List for its outstanding universal value, which is characterised by examples of the evolution of Australia's diverse ecosystem and the in situ conservation of biological diversity. Potential impacts on the Greater Blue Mountains World Heritage Area are assessed in Chapter 26.

The Greater Blue Mountains Area also contains various European heritage items including evidence of rural settlement, mining and transportation. The proposed airport is not expected to impact on these European heritage items, directly or indirectly.

#### 20.3.2.3. NSW listings

No European heritage items of State significance were identified within the airport site; however, a State significant farmhouse complex is situated near the airport site. The site is described in Table 20–3 and mapped in Figure 20–1.

#### 20.3.2.4. Local listings

A total of 14 European heritage items identified within and around the airport site are listed on the *Liverpool Local Environmental Plan 2008*. The following three items are within the airport site:

- St John's Anglican Church group;
- Badgerys Creek Public School; and
- Vicary's Winery group.

Another eight European heritage items listed on the *Penrith Local Environmental Plan 2010* are situated in the vicinity of the airport site. These and the other sites in the vicinity of the airport site are listed and described in Table 20–3 and are mapped on Figure 20–1.

A brick cottage at 406 Park Road, Luddenham listed on the *Penrith Local Environmental Plan 2010* is not included in Table 20–3 as it is demolished and is not of archaeological significance. There is therefore negligible potential for impacts and this European heritage item is not assessed further.

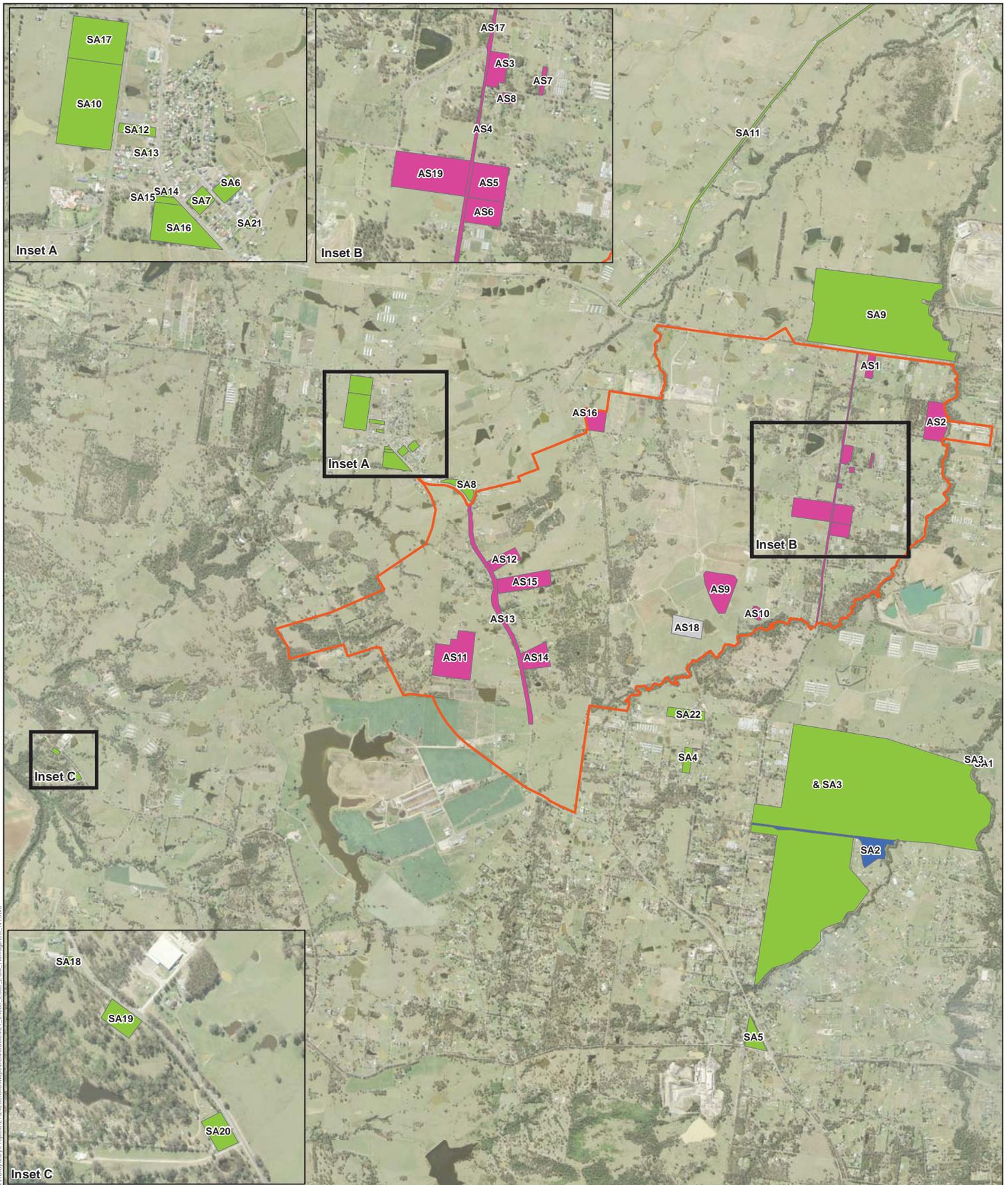
#### 20.3.2.5. Field survey

A field survey of the airport site was undertaken to validate and build on the information from prior assessments and in various European heritage registers. The survey approach was informed by a predictive landscape model that considered the types of sites identified in prior research as well as the historic context of the area (see Section 20.3.1).

Evidence of early land grants and associated development were predicted, in line with the researched historical context of Badgerys Creek and Luddenham (see Section 20.3.1). This included evidence of the development of farms, orchards, vineyards, cottages, roads, schools and churches. These predictions were consistent with prior assessments and were validated through the field survey. The potential for evidence of convict settlement and Aboriginal–European contact at the airport site was recognised, however, no such evidence was observed.

The previously identified European heritage items within the airport site were included in the survey. Archaeological excavation was necessary at Orange Hill to characterise subsurface structural features and other remains. The excavation initially revealed a scattering of bricks; some whole, mostly broken. Following the removal of the bricks, an arranged course of sandstone blocks was uncovered, thought to be flagging or foundations of a building. Other evidence of occupation, including ceramics, glass, metal, a bead and a brass button with a military-style insignia was also recovered during the test excavation at Orange Hill.

The results of the field survey and archaeological excavation, in conjunction with the review of prior research and listings, informed the assessment of heritage significance included in Table 20–2.



- LEGEND
- Airport site
  - European heritage items**
  - Commonwealth significance
  - Local significance
  - State significance
  - Undetermined significance

Data Source: Please refer to "Digital Data Sources" on the second page of the EIS

Figure 20-1 - European heritage items within and surrounding the airport site

**Table 20–2 – European heritage items within the airport site**

Item	Map ID	Location	Description	Significance	Listing	Reference
Pennell's property	AS1	2170 Elizabeth Drive, Badgerys Creek	Pennell's property is likely to contain subsurface remains of an early farm homestead.	Local (Commonwealth)	–	<i>1859 Map of the Eastern Division of Luddenham Estate</i> Field survey
Gardiner Road farm complex	AS2	5 Gardiner Road, Badgerys Creek	Gardiner Road farm complex comprises an early twentieth century farm cottage and outbuildings.	Local (Commonwealth)	–	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014), Field survey
Badgerys Creek Public School	AS3	Corner of Pitt Street and Badgerys Creek Road, Badgerys Creek	Badgerys Creek Public School is a small rural school containing elements from the early twentieth century. The school has been damaged by vandalism following its closure in 2014.	Local (Commonwealth)	<i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014) Field survey
Badgerys Creek butchery	AS4	Lot 51A Badgerys Creek Road, Badgerys Creek	Badgerys Creek butchery was one of two retail outlets in Badgerys Creek and had been operating for over a hundred years prior to its demolition in the 1990s.	Local (Commonwealth)	–	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014) Field survey
Badgerys Creek post office	AS5	Lot 52 Badgerys Creek Road, Badgerys Creek	Badgerys Creek post office operated between 1894 and 1989. No surface elements of the post office remain however subsurface remains are likely.	Local (Commonwealth)	–	Historic research Field survey
Saw pit	AS6	61 Badgerys Creek Road, Badgerys Creek	Although marked on the 1859 map of Luddenham, there is very little observable evidence of the saw pit due to overgrowth and use of the site as a dam.	Local (Commonwealth)	–	<i>1859 Map of the Eastern Division of Luddenham Estate</i> Field survey

Item	Map ID	Location	Description	Significance	Listing	Reference
Badgerys Creek Uniting Church and cemetery	AS7	15 Pitt Street, Badgerys Creek	Badgerys Creek Uniting Church was the first formal place of worship at Badgerys Creek, opening in 1898 followed by the cemetery in 1927. The church was removed from the site in the early 1990s. The cemetery has two marked graves and could contain further unmarked graves.	Local (Commonwealth)	–	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014) Field survey
St John's Anglican Church and cemetery	AS8	30 Pitt Street, Badgerys Creek	St John's Anglican Church was built in the early 1900s. The church was removed or demolished after 1992. The cemetery contains at least 27 graves, while the church yard retains a small monument comprising a plaque, small brick base and corrugated iron roof.	Local (Commonwealth)	<i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014) Field survey
Braeburn homestead	AS9	55 Longleys Road, Badgerys Creek	Braeburn was a farm homestead circa 1910. The homestead and associated shed were demolished in the late 1990s.	Local (Commonwealth)	–	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014) Field survey
Orange Hill homestead	AS10	5 Jagelman Street, Badgerys Creek	Orange Hill was a farm homestead thought to be a predecessor to Braeburn. Two wells and a number of subsurface sandstone bricks were identified by text excavation at the site.	Local (Commonwealth)	–	<i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014) Field survey
Vicary's Winery	AS11	1935 The Northern Road, Luddenham	Vicary's Winery was a farm property in the late 19th century. The site features a slab homestead circa 1860s and woolshed circa 1880s. The site was converted to a dairy and vineyard in the early 20th century and at the time of writing remains in operation as a winery.	Local (Commonwealth)	<i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014) Field survey

Item	Map ID	Location	Description	Significance	Listing	Reference
Well	AS12	1972 The Northern Road, Luddenham	The undated sandstone well sits within a more recently constructed homestead. The presence of such a well is rare in the local area.	Local (Commonwealth)	–	Field survey (personal communication)
The Northern Road alignment within the airport site	AS13	The Northern Road, Luddenham	The Northern Road is a very early road alignment. The route is recorded in an edition of the <i>Sydney Gazette</i> dated 1821 and a map of Bringelly dated 1834. The alignment of The Northern Road has deviated in some areas of the airport site since that time.	Local (Commonwealth)	–	Historic research <i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014), Field survey
Anschau Vineyard, Steinberg and grave(s)	AS14	1845–1875 The Northern Road, Luddenham	Anschau Vineyard operated from the late 1800s. No evidence of the vineyard remains; however, blacksmith tools and remains of a homestead have been identified. A grave suspected to belong to a member of the Anschau family is also present at the site.	Local (Commonwealth)	–	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014), Field survey
St Francis Xavier Church and cemetery	AS15	1966 The Northern Road, Luddenham	St Francis Xavier Church was built in 1912 while it is probable that the associated cemetery was established earlier. The contents of the church and a number of graves were relocated to a new site at Greendale in the 1990s. Unmarked graves may exist at the site.	Local (Commonwealth)	–	Historic research Field survey
Jackson Road cottage	AS16	Lot 2 Jackson Road, Luddenham	Jackson Road hosted a farm cottage and several ancillary structures circa 1890. The cottage and structures remain at the site.	Local (Commonwealth)	–	Field survey
Badgerys Creek Road alignment within the airport site	AS17	Badgerys Creek Road, Badgerys Creek	Badgerys Creek road alignment has been noted on maps since the 1850s and has not changed substantially since that time.	Local (Commonwealth)	–	Field survey Historic research

Item	Map ID	Location	Description	Significance	Listing	Reference
Spredenber	AS18	55 Longleys Road, Badgerys Creek	Spredenber features in a map of Luddenham Estate dated 1859 with a house visible in an aerial photograph dated 1947. The site is overgrown, confounding validation of its heritage.	Unknown	-	<i>1859 Map of the Eastern Division of Luddenham Estate</i> Field survey
Howe residence	AS19	Corner Badgerys Creek Road and Longleys Road, Badgerys Creek	The Howe residence is thought to have been occupied from the early 19th century. Potential homestead remains were identified at the site including wooden posts, bricks, corrugated iron and a potential well site.	Local (Commonwealth)	-	Field survey Personal communication

**Table 20–3 – European heritage items in the vicinity of the airport site**

Item	Map ID	Location	Significance	Listing	Reference
Former Overseas Telecommunications Commission site group	SA1	Badgerys Creek Road, Bringelly	Local	<i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Kelvin Park complex	SA2	30 The Retreat, Bringelly	State	State heritage register <i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Two RAAF water tanks	SA3	Badgerys Creek Road, Bringelly	Local	<i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Mount Pleasant homestead	SA4	3 Shannon Road, Bringelly	Local	<i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Bringelly Public School group	SA5	1205 The Northern Road, Bringelly	Local	<i>Liverpool Local Environmental Plan 2008</i>	<i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Willmington Reserve	SA6	17 Jamison Street, Luddenham	Local	<i>Liverpool Local Environmental Plan 2008</i>	<i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Luddenham Public School	SA7	The Northern Road, Luddenham	Local	<i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)

Item	Map ID	Location	Significance	Listing	Reference
Lawson's Inn <sup>a</sup>	SA8	Lot 2 DP 623457	Local	<i>Liverpool Local Environmental Plan 2008</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
McGarvie Smith University Farm	SA9	124 Elizabeth Drive, Badgerys Creek	Local	–	National Heritage List <sup>b</sup>
Brick cottage	SA10	21–55 Campbell Street, Luddenham	Local	<i>Penrith Local Environmental Plan 2010</i>	<i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Luddenham Road alignment	SA11	Luddenham Road, Luddenham	Local	<i>Penrith Local Environmental Plan 2010</i>	–
Weatherboard cottage	SA12	3065–3067 The Northern Road, Luddenham	Local	<i>Penrith Local Environmental Plan 2010</i>	<i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Weatherboard cottage	SA13	3075 The Northern Road, Luddenham	Local	<i>Penrith Local Environmental Plan 2010</i>	<i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Luddenham Progress Hall	SA14	3091–3095 The Northern Road, Luddenham	Local	<i>Penrith Local Environmental Plan 2010</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997), <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Luddenham Uniting Church and cemetery	SA15	3097–3099 The Northern Road, Luddenham	Local	<i>Penrith Local Environmental Plan 2010</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997), <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
St James Anglican Church and cemetery	SA16	3101–3125 The Northern Road, Luddenham	Local	<i>Penrith Local Environmental Plan 2010</i>	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997), <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)

Item	Map ID	Location	Significance	Listing	Reference
Showground	SA17	428–452 Park Road, Luddenham	Local	<i>Penrith Local Environmental Plan 2010</i>	<i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Shadforth Monument	SA18	Greendale Road, Greendale	Local	<i>Liverpool Local Environmental Plan 2008</i>	–
Private dwelling (former St Mark's Anglican Church Group, including church cemetery)	SA19	Greendale Road, Greendale	Local	<i>Liverpool Local Environmental Plan 2008</i>	–
Greendale Roman Catholic Cemetery	SA20	Greendale Road, Greendale	Local	<i>Liverpool Local Environmental Plan 2008</i>	–
Vertical slab dairy	SA21	Lot 10, Adams Road, Badgerys Creek	Local	–	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)
Evergreen homestead	SA22	Off Derwent Road, Bringelly	Local	–	<i>Technical Paper 12: Non-Aboriginal Cultural Heritage</i> (Godden Mackay 1997) <i>Badgerys Creek Initial Environmental Survey: Historic Heritage</i> (AMC 2014)

<sup>a</sup> Lawson's Inn is incorrectly recorded in the *Liverpool Local Environmental Plan 2010* as occurring within the airport site.

<sup>b</sup> McGarvie Smith University Farm was nominated for the National Heritage List, however the nomination is now ineligible. This European heritage item is nonetheless considered to have local significance.

### 20.3.3. Summary

The review of prior reports, historical studies, databases and the surveys undertaken as part of the assessment identified 19 European heritage items within the airport site and an additional 22 European heritage items around the site.

The identified European heritage items reflect the historical context of the airport site and European settlement more generally, including early attempts to develop local agricultural and pastoral economies and the emergence of settled village communities. The identified items are considered to be of Commonwealth Heritage significance, excluding Spredenberg which was not classifiable. The location of all identified items is shown in Figure 20–1.

The cultural significance of the airport site as a whole is characterised by the following.

- The region developed as a centre of agricultural production in the nineteenth century. The site was associated with cropping and later vineyards and orchards.
- The site includes Blaxland's early land grant, Luddenham Estate. This land grant and subsequent subdivision represent some of the early attempts to develop an agricultural and pastoral economy in Australia. These farmlands have continued in rural use and, due to the integrity of subdivision patterns, provide insight into early agricultural production.
- The site is crossed by The Northern Road and Badgerys Creek Road, which have historic associations with development in Badgerys Creek and the region.
- The site retains longstanding historic associations with nineteenth and early twentieth century markets for the supply of meat and livestock for metropolitan Sydney. Remnant tracts of cleared grazing land at Badgerys Creek continue to provide insight into this economic activity.
- The site includes a public school which demonstrates the development of public education from the late 1800s. The scale, material and design of the school buildings reflect the evolving fortunes of Badgerys Creek, education reform, the local community and architectural styles.
- The emergence of a settled village and farm community at Badgerys Creek in the last half of the nineteenth century is historically associated with the breakup of the large estates for closer settlement. This is demonstrated in street alignments, subdivision patterns, dwellings, churches and cemeteries, community gathering places, recreation grounds, park reserves, and places for education.

## 20.4. Assessment of impacts during construction

Site preparation activities would take place prior to construction of the proposed Stage 1 development. Site preparation activities would require the removal of structures from the airport site, thereby precluding the in situ preservation of European heritage items.

A range of measures is proposed to mitigate and manage potential impacts to particular European heritage items at the airport site (see Section 20.6).

Indirect impacts of construction on European heritage items surrounding the airport site would be limited to altered landscapes, views and ambience. These impacts are not expected to be significant and would not require implementation of management and mitigation measures.

## 20.5. Assessment of impacts during operation

European heritage items at the airport site would be removed before the start of operation. As such, operation of the proposed Stage 1 development would not directly impact European heritage items. Indirect impacts to European heritage items surrounding the airport site would be limited to altered landscapes, views and ambience. These impacts are not expected to be significant and would not require implementation of management and mitigation measures.

## 20.6. Mitigation and management measures

A European heritage management plan would be developed prior to construction of the proposed airport as part of the construction environmental management framework. The plan would collate measures to mitigate and manage potential impacts on European cultural heritage values. Measures proposed to be considered in the plan are included in Table 20–4.

**Table 20–4 – Mitigation and management measures**

ID	Issue	Measure	Timing
20.1	European heritage management plan	<p>A European and other heritage management plan would be developed prior to construction of the proposed airport as part of the construction environmental management framework. The plan would collate measures to mitigate and manage potential impacts on European cultural heritage values. Measures proposed to be considered in the plan include:</p> <ul style="list-style-type: none"> <li>• further targeted archaeological investigation – to record subsurface remains and infer the layout, occupants and activities of certain European heritage places;</li> <li>• archival recording – including photographic records and measured drawings in their local context for future reference, having regard to the guidelines How to Prepare Archival Records of Heritage Items (NSW Heritage Office 1998) and Guidelines for Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office 2006);</li> <li>• inventory of moveable items – to record information such as location, designer, creator, use and owner of items such as tools of trade or machinery;</li> <li>• cultural planting investigation – to identify and collect samples of local or historic plant varieties that are characteristic of the area or not otherwise broadly planted;</li> <li>• exploration of options for potential relocation of identified European heritage structures – to preserve intact surface structures;</li> <li>• relocation of cemeteries in accordance with the Cemeteries Relocation Management Plan; and</li> <li>• staged demolition – to deconstruct identified European heritage structures in a careful manner that reveals information about their construction, renovation, finishes and so on, which would be recorded.</li> </ul>	Pre-construction Construction
20.2	Heritage awareness	Heritage awareness training would be provided to all workers involved in site preparation and construction of the proposed airport.	Pre-construction
20.3	Unexpected finds	A procedure would be developed to be followed in the event that European heritage items are discovered during site preparation or construction.	Pre-construction

ID	Issue	Measure	Timing
20.4	Cultural significance of the airport site	The preparation of an oral history would be considered as a measure to preserve the heritage value of the airport site. This could include descriptions and reminiscences by people closely associated with the site.	Pre-construction
20.5	Cultural significance of the airport site	The European heritage value of the airport site would also be considered through detailed design.	Pre-construction
20.6	Management of European and other heritage items	A procedure would be developed to be followed in the event that European heritage items are discovered during site preparation or construction.	Pre-construction
20.7		A procedure would be developed to be followed in the event that human remains are discovered, given the potential presence of unmarked graves at the airport site.	Pre-construction

## 20.7. Conclusion

The assessment of European heritage identified 19 European heritage items at the airport site and an additional 22 heritage items in the surrounding area. All of the identified European heritage items at the airport site would be directly affected by site preparation for the construction of the proposed Stage 1 development. The mitigation and management of European heritage would ensure, as far as practicable, that the heritage values of the airport site would be preserved.



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