

CrossRiver*Rail*



19. Non-Indigenous Cultural Heritage

Cross River Rail

CHAPTER 19

NON-INDIGENOUS CULTURAL HERITAGE

JULY 2011

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19 Non-Indigenous cultural heritage

19.1 Introduction

This chapter describes the existing non-Indigenous cultural heritage present within the study corridor and assesses the potential benefits and impacts on non-Indigenous cultural heritage attributable to the Project. Section 3.11 of the Terms of Reference for the EIS identifies the requirements for the cultural heritage study for the Project as it applies to non-Indigenous cultural heritage sites and places and their values. Further information is provided in *Technical Report No. 9 – Cultural Heritage*.

19.1.1 Study area

For the purposes of the non-Indigenous cultural heritage assessment an 800 m buffer was applied around the study corridor to ensure that all places that may be affected by the Project were captured. This area is referred to in this chapter as the study area.

19.1.2 Methodology

The following methodology was adopted for the purposes of this study:

- review of relevant heritage registers (Australian Heritage Places Inventory, Queensland Heritage Register, Brisbane City Plan 2000 (City Plan) heritage register), and other information relating to the heritage of the study area
- liaison with relevant community groups/organisations, for example local historical societies, concerning places of non-Indigenous historical significance
- mapping of locations of culturally and historically significant sites
- constraints analysis of the study corridor and areas affected by the Project to identify and record non-Indigenous cultural heritage places potentially affected by the Project
- assessment of any likely effects on sites of non-Indigenous cultural heritage values, including a description of these values
- identification of recommended mitigations for any negative impacts on these values and enhancements of any positive impacts
- identification of policies, guidelines and legislation, including any development approvals relating to cultural heritage
- strategies to manage places of historical heritage significance.

Cultural heritage focuses on aspects of the past which people value and which are important in identifying who we are. Cultural heritage incorporates places, objects, artefacts, documents, beliefs, skills and practices. Although there is obvious overlap and connections, legislatively Indigenous and non-Indigenous cultural heritage is addressed through separate pieces of legislation. This division is also used in this study and Indigenous cultural heritage is addressed in **Chapter 18 Indigenous Cultural Heritage**.

19.1.3 Cultural heritage significance

The Burra Charter (Australia ICOMOS 1999) sets the standard of practice in Australia for places of cultural heritage significance. It defines heritage significance as 'aesthetic, historic, scientific, social or spiritual value for past, present or future generations'. Heritage significance is 'embodied in the place itself, its fabric, setting, use, associations, meaning, records, related places and related objects'. Cultural heritage significance is not static and can change over time as a result of continuing history or use of a place, or if new information comes to light. Identifying and assessing cultural heritage significance helps to estimate the value of places to improve our understanding of the past, to enrich the present and provide for future generations. Heritage significance is assessed at a number of levels and is subject to certain legislative criteria.

19.1.4 Heritage legislation, registers and significance criteria

National legislation

In 2004, a new national heritage system was established under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This legislation is administered by the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC, formerly Department of Environment, Water, Heritage and the Arts (DEWHA)).

The EPBC Act established the National Heritage List, which recognises and protects places of outstanding heritage value to the nation, and the Commonwealth Heritage List, which protects Commonwealth owned or leased places of significant heritage value.

The project was referred to the Commonwealth Minister for DEWHA on 30 March 2010 for a decision as to whether the Project was a 'controlled action' under the EPBC Act (Referral Reference No. 2010/5427).

In August 2010, the delegate of the Minister determined that the Project is not a 'controlled action' provided it is undertaken in a particular manner. Specific requirements for cultural heritage were that:

- the tunnel alignment must not be closer than 200 m from the boundary of the following buildings
 - Commonwealth Law Courts, situated at 119 North Quay, Brisbane
 - Victoria Barracks, situated at 83-119 Petrie Terrace, Brisbane (Commonwealth Heritage Place ID: 105226)
 - General Post Office, situated at 261 Queen Street, Brisbane (Commonwealth Heritage Place ID: 105521)
 - Naval Offices, situated at 3 Edward Street, Brisbane (Commonwealth Heritage Place ID: 105225).

State legislation

Non-Indigenous cultural heritage in Queensland is administered under the *Queensland Heritage Act 1992* (Heritage Act), by the Department of Environment and Resource Management (DERM). The Queensland Heritage Register is established under the Heritage Act and is a list of places assessed as being of State level significance. Once a place is entered in the Register, the Queensland Heritage Council would assess any changes made to that place.

A place is entered in the Queensland Heritage Register if it satisfies one or more of the following criteria:

- a) the place is important in demonstrating the evolution or pattern of Queensland's history
- b) the place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage

- c) the place has potential to yield information that will contribute to an understanding of Queensland's history
- d) the place is important in demonstrating the principal characteristics of a particular class of cultural places
- e) the place is important because of its aesthetic significance
- f) the place is important in demonstrating a high degree of creative or technical achievement at a particular period
- g) the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
- h) the place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history (Queensland Heritage Council 2010).

19.1.5 Local legislation

The City Plan is a planning instrument under the *Sustainable Planning Act 2009* which sets out the requirements for planning and development assessment in Queensland. City Plan is Brisbane City Council's (BCC's) planning scheme which describes its intentions and outcomes for the future development of the city. The City Plan heritage register is contained within the planning scheme in the Heritage Register Planning Scheme Policy. The register contains places and precincts of cultural heritage significance at a Brisbane or local level, places of special cultural significance to Indigenous people, and places of natural heritage significance. All places contained in the Register require the City Plan's Heritage Place Code to be applied when an application for development is made.

A place may be entered in the City Plan heritage register if it meets one of the following cultural heritage significance criteria:

- it is important in demonstrating the evolution or pattern of Brisbane's or local area's history
- it demonstrates rare, uncommon or endangered aspects of the Brisbane's or local area's cultural heritage
- it has potential to yield information that will contribute to the knowledge and understanding of the Brisbane's or local area's history
- it is important in demonstrating the principal characteristics of a particular class or classes of cultural places
- it is important because of its aesthetic significance
- it is important in demonstrating a high degree of creative or technological achievement at a particular period
- it has a strong or special association with the life or work of a particular community or cultural group for social, cultural or spiritual reasons
- it has a special association with the life or work of a particular person, group or organisation of importance in the Brisbane's or local area's history (Brisbane City Council 2000).

Character places and local plans

City Plan identifies and provides guidance in relation to traditional character buildings (residential and non-residential) and commercial character buildings. The *Residential Design – Character Code* and *Commercial Character Building Code* apply to such places. Traditional character is defined by a number of criteria including building form and scale, street context, materials and detailing, and setting. Commercial character buildings are identified by specific characteristics such as pre-1946 construction, front boundary alignment and an incorporated awning over the footpath.

Character residential areas are included in the demolition control precinct requirements for planning approval for demolition or relocation under City Plan.

19.1.6 Study methods

Heritage register searches

Searches were undertaken at the national, state and local level for registered heritage places within the study area. Searches were undertaken of the National Heritage List and the Commonwealth Heritage List at the national level. At the State level, searches were conducted of the Queensland Heritage Register (DERM) and the Queensland Rail Heritage Register. The Queensland Rail Heritage Register is an internal asset management tool used by Queensland Rail. A search of various Queensland Rail heritage survey reports was also conducted. At the local level a search of the City Plan heritage register and a review of Geographic Information Systems (GIS) were undertaken to determine local registered heritage places.

Literature review

Existing literature on the history and cultural heritage of the study area was consulted. Historical research was undertaken accessing resources at The University of Queensland Culture and Heritage Unit (UQCHU), The University of Queensland Social Sciences and Humanities Library, The University of Queensland Fryer Library, State Library of Queensland, the John Oxley Library and online sources. Heritage register citations for individual places on the Queensland Heritage Register and Brisbane City Plan Heritage Register were consulted. Unpublished heritage consultancy reports held by the DERM were also reviewed.

Survey

Multiple surveys of the study area were undertaken during May and June 2010 to locate and record non-Indigenous cultural heritage. Places located, recorded and photographed included all places on the Commonwealth Heritage List, National Heritage List, Queensland Heritage Register and City Plan Heritage Register. Additional site visits were undertaken in August and September 2010, to identify and further investigate specific impacts.

Community consultation

A program of community consultation with local heritage and historical associations was developed. Invitations seeking involvement in the consultation process were sent to:

- Brisbane History Group
- Australian Railway Historical Society (Queensland Division)
- Windsor and Districts Historical Society
- Royal Historical Society of Queensland
- Boggo Road Gaol Historical Society
- Victoria Barracks Historical Society
- New Farm and Districts Historical Society
- National Trust of Queensland
- Queensland Women's Historical Association.

Responses received have been incorporated into the results of this study.

Mapping

The location of all heritage places recorded during the non-Indigenous heritage register searches and surveys have been identified and mapped in a GIS. The GIS has been developed from data supplied by BCC and the State government, combining heritage data and Digital Cadastral Database (DCDB) data of the study area. Modifications and updates have been made to the data as a result of the survey process.

19.2 Description of existing environment

19.2.1 Northern section

This section contains the suburbs of Albion, Bowen Hills, Fortitude Valley, Herston, Kelvin Grove, Windsor and Woolloowin. There are 34 registered heritage places within the northern section, as shown in **Figure 19-1**.

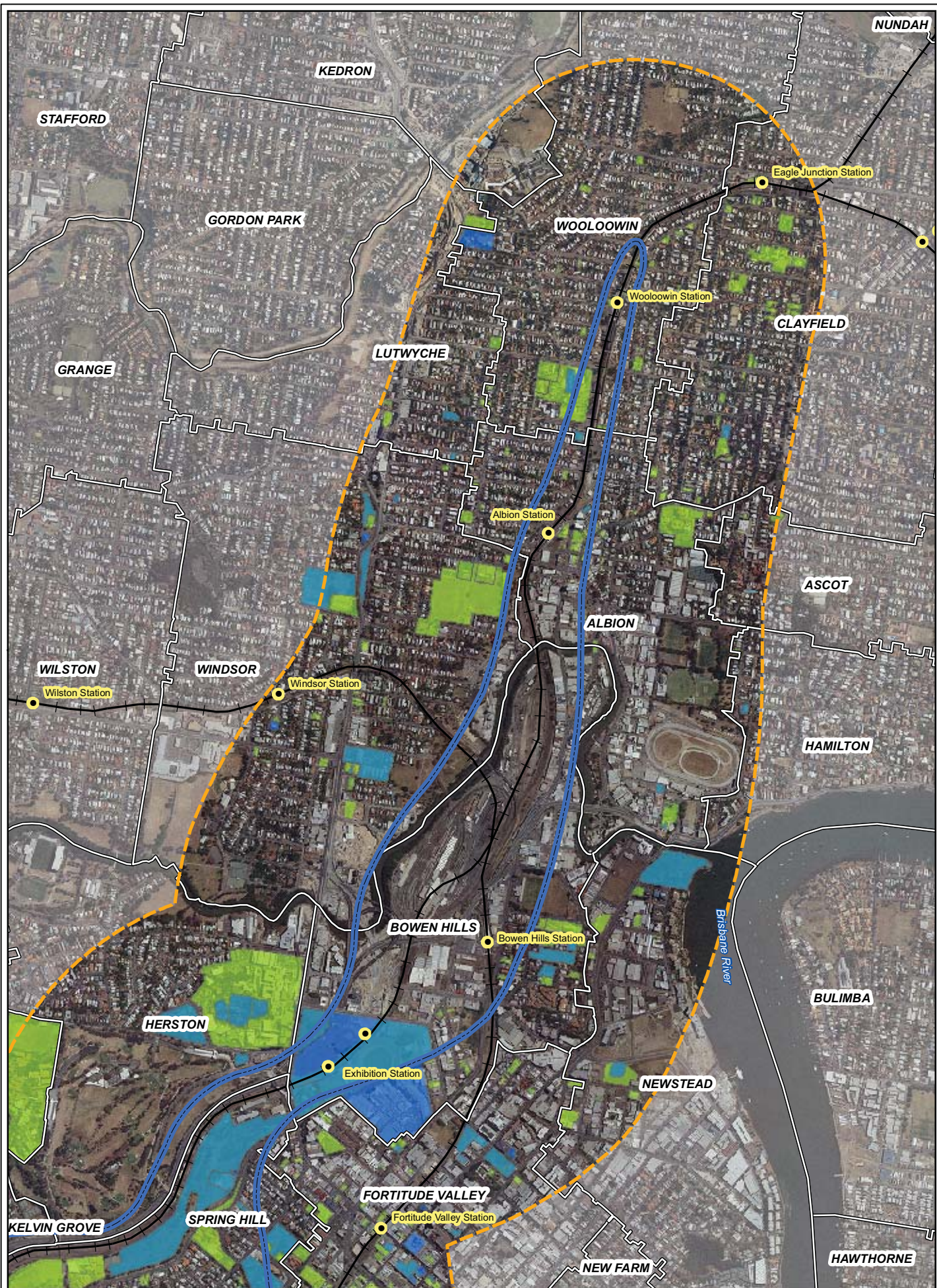
Prominent heritage sites

The prominent heritage sites within the northern section of the study corridor are described as follows. Refer to the *Technical Report No.9 – Cultural Heritage* for the complete list of heritage registered properties within the study area.

The following excerpt from the Queensland State heritage listing for the Royal National Association (RNA) Showgrounds provides an overview of the relevant heritage components.

Bowen Hills – Brisbane Exhibition Grounds (RNA Showgrounds)

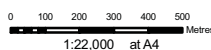
In August 1876, the Queensland Intercolonial Exhibition was held on the grounds of the Acclimatisation Society of Queensland. This society had been set up to 'introduce, propagate and distribute useful plants from overseas countries'. In 1863, the Society was granted 32 acres (13 hectares) of land for its work. Only a fragment of the original gardens survive today as Bowen Park (QHR 601709).



- LEGEND**
- Study Corridor
 - Cultural Heritage Study Area
 - Suburbs
 - Federal Heritage
 - Station
 - QLD Heritage Register
 - Track
 - Local Heritage

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Figure 19-1
Registered Heritage Places
(Northern Section)



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The first Exhibition was intended to promote both local industries and the agricultural, pastoral and industrial resources of the whole state. Since it was first held, the grounds (refer to **Figure 19-2**) have increased to 22 hectares and have numerous structures and facilities associated with the annual August Exhibition which continues to the present. The Exhibition has only been cancelled twice; in 1919 due to the influenza epidemic and in 1942 when the ground was occupied by military personnel (QHR 601709).



Figure 19-2 Brisbane Exhibition Grounds and surroundings c1925

Source: State Library of Queensland

The rail line through the grounds was constructed in 1881 (refer to **Figure 19-3**).

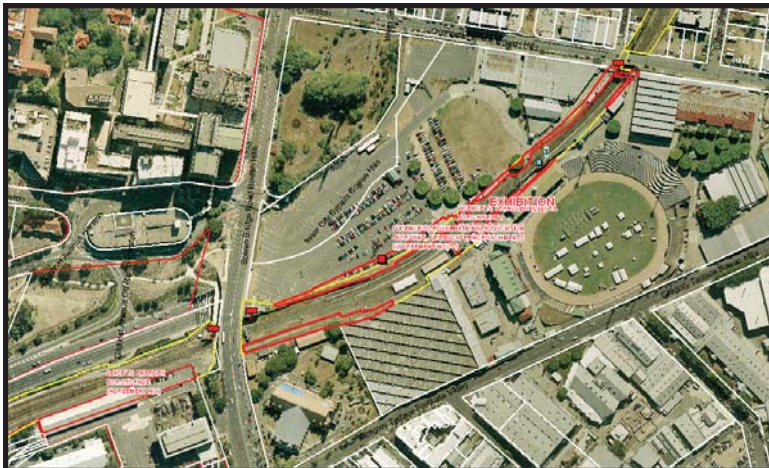


Figure 19-3 Rail corridor through the Brisbane Exhibition Grounds

Source: Queensland Rail

The RNA Showgrounds are registered on the Queensland Heritage Register [601709] and are located north of the Brisbane central business district (CBD), in Bowen Hills and Fortitude Valley. The grounds are bounded on the north by O'Connell Terrace, on the west by Bowen Park and Bowen Bridge Road, on the south by Gregory Terrace and Costin Street, on the south-east by St Paul's Terrace, and on the east by Exhibition Street and Brookes Street. Gregory Terrace transects the grounds, but is closed to traffic during the Ekka. A rail corridor and the Inner City Bypass (ICB) tunnel traverse the grounds in a south-west to north-east direction. The Clem Jones tunnel traverses the grounds from south to north.

The RNA Showgrounds contain an extensive number of buildings and structures which, along with the layout of the grounds and plantings, including numerous mature Weeping Fig trees, contribute to the cultural heritage significance of the place. Individual building numbers are those identified in the RNA Showground master plan prepared by Bligh Voller Nield in 2000. Following is a description of prominent features within the RNA Showgrounds that sit within the study area adjacent to the existing rail corridor.

For the purpose of description, the showgrounds has been divided into eight areas, with Areas 3 and 4 most relevant for the study corridor. Area 3 encompasses the area to the west of the rail corridor which traverses the RNA Showgrounds. Area 4 encompasses the area east of the dairy pavilions and the rail corridor, in the area to the northeast of Show Ring No.1 and bounded by O'Connell Terrace, Brookes Street and Gregory Terrace, in which are located the main livestock facilities. Individual building numbers are those identified in the Royal National Association Masterplan Report prepared by Bligh Voller Nield in 2000. The heritage values within Areas 1, 2, 5, 6, 7 and 8 and detailed descriptions of individual buildings or structures are contained within *Technical Report No. 9 – Cultural Heritage, Section 6.3.1.2.3 to Section 6.3.1.2.4.*

Area 3

2. Show Ring No.2 (c1924)

Show Ring No. 2 is located on the western side of the rail corridor, at the north-east end of the bitumen pavement to Side Show Alley, and separates the amusement section of the site from the Dairy, Pig and Goat pavilions. It is a circular grassed area surrounded by a concrete apron. Seven mature fig trees pruned into cylindrical forms line the southern boundary of the show ring and one fig tree of a similar form is located to the north of the ring. Timber bench seats are located around the base of each tree.

The visibility of Show Ring 2 from Bowen Park is an important existing relationship between these cultural heritage elements.

Located on the south-east side of the show ring and set into the earth bank which rises up to the rail corridor is a toilet building. This houses female amenities and a baby change room. The walls are a combination of face brickwork and rendered masonry with high level fixed vent glass louvres. The roof is comprised of two intersecting gables and is clad with metal custom orb roof sheeting.

13. Side Show Alley

Side Show Alley is located in the north-west corner of the RNA Showgrounds and is bounded by Bowen Bridge Road on the west, Bowen Park on the north-west, Show Ring No.2 to the north-east, and the rail corridor to the south-east. Side Show Alley is predominantly used for rides and other amusements and is comprised of a large expanse of open, level bitumen pavement. The only permanent fixtures within this space are the ferris wheel frame, the chair lift house, a food stall structure and a series of new toilet blocks.

Bowen Park Entry Building. (interwar)

Located in the western corner of the site adjacent to Bowen Park the building is a single-storeyed structure comprised of two smaller elements separated by a vehicular access gate. The walls of the buildings are face brick and each has a hipped roof clad with metal custom orb sheeting. Recent additions to these structures appear to include the cement rendering of the brickwork to the Bowen Bridge Street facade and the installation of metal roller doors to the ticket issuing areas.

30. Dairy Cattle Pavilion

The Dairy Cattle Pavilion is located at the northern boundary of the exhibition grounds fronting O'Connell Terrace. It is a timber framed single-storey structure, essentially comprised of two rectilinear building masses, which gently follow the slope of the site. A saw-tooth roof structure, clad with corrugated iron, covers the full extent of the building. Externally, the walls are clad with timber weatherboards while the individual ends to the skillion roof forms are clad with a combination of FC sheeting and timber lattice. A concrete apron surrounds the whole building.

31. Dairy Goat Pavilion

The Dairy Goat Pavilion is located to the south of the Dairy Cattle Pavilion and to the north of Show Ring No.2. It is an elevated two-storeyed structure with an associated open concrete deck which overlooks the show ring and side show alley beyond. Storage areas and public amenities are located at the lower ground show ring level under the raised concrete deck whilst the structure itself is sited at the upper deck level. The building is of a simple rectilinear plan with a gable roof extending the full length of the building and being supported at its ends by concrete and steel columns.

Area 4

32. Beef Cattle Pavilion (1950)

This is a large, rectangular, single-storeyed brick pavilion with sub-floor and a saw-tooth roof, located to the north of the Machinery Hill stands, with the rear wall erected along O'Connell Terrace. The front elevation, which faces south, has a centrally-positioned entrance with steel roller door on the upper level, accessed via a double stair. To either side of the front entrance are banks of hopper windows on both levels. The side and rear walls have less fenestration, and there is a large rear entrance (another steel roller door) to O'Connell Terrace.

33. Stock Pavilion

The Stock Pavilion abuts the eastern side of the Beef Cattle Pavilion. It has a series of skillion roofs set in a saw-tooth pattern as the building follows the slope. They are clad with corrugated iron. The walls are weatherboard and the upper section is timber lattice. Doors on eastern side are sheet metal double doors, but two central doors now have steel roller doors.

10. Stockman's Rest

To the south of the Stock Pavilion is a small park known as The Stockman's Rest. It has topiaried trees with slat benches around them. On one of the benches is located a figure of a seated swagman from Expo 88. Two modern telephone booths are situated across from the stockman's bar. There is a small pavilion which appears to be an earlier structure, with later cladding. It has had about a third of the area partitioned off by a wall towards the rear which has metal wall cladding made to look like weatherboard. The park is very popular for weddings and the stockman's bar is used for receptions. There is a small pond and fountain behind the pavilion and a plaque commemorating that the area was redeveloped as an initiative of the ground staff in 1994.

15. Exercise Yard

In the north-east corner of the site there is an open area which functions as an exercise yard.

34. Horse Stables

Lining the perimeter walls to Brookes Street and Gregory Terrace are horse stables. The stables are in long timber buildings with skillion roofs clad with corrugated iron. The buildings comprise back to back stalls and are arranged with narrow 'lanes' between them. The holding capacity is over a hundred horses and the individual accommodation is fairly standard - each has a concrete floor, single door and window space filled with a metal grille.

The concrete has been roughed up by stamping a rough lattice pattern into it over most areas. There is a horse washing area against the wall where the floor is rough concrete and pebble and the bays are divided by vertical corrugated metal panels.

46. Stock Agents' Offices (1936)

The Stock Agents' Offices is a single-storeyed, rectangular building with sub-floor, constructed in dark brick with stepped parapets. Three sides of the building are freestanding and these each have an entrance. The windows are casements in timber frames on the upper level. Panels of fixed timber louveres at ground level provide light and ventilation to the basement. The offices have long term lessees such as Primac/Elders and LJ Hooker Rural. The Department of Employment, Economic Development and Innovation (Primary Industries) is present at every event where there are animals, including dairy and horse shows. Sales agents also have offices at the grounds for the yearling sales.

48. Stockman's Bar and Grille (1936)

The Stockman's Bar and Grill abuts the Stock Agents' Offices. It is a brick structure with a saw-tooth roof in three bays which run at right angles to the street. The facade has been painted and the roof is concealed at the front by a very plain stepped brick parapet. In the centre of the front elevation is a large roller door flanked by two similar smaller doors on the left hand side and a standard sized door and a pair of triple projecting windows on the right hand side. These are supported on small brackets and are shaded by sun hoods. A timber verandah has been added to the rear of the building on the upper section and has a wheelchair access ramp. The verandah roof is supported on timber posts and has a timber handrail and dowel balustrading. The wall to the rear of the verandah is clad with weatherboards and there is a door leading to the horse doctor's office.

Queensland Rail Heritage Places

Within the northern section Queensland Rail have two entries on their Queensland Rail Heritage Register. These are:

- Breakfast Creek Bridge
- Exhibition Station.

Exhibition Station is included in the Queensland Heritage Register entry for the RNA Showgrounds, as is the rail corridor, which dates to 1881, the stone cuttings on the north-west side of the line, near Side Show Alley and the bridge/subway giving access from the John MacDonald Stand to Show Ring No. 2 and the associated masonry viaduct. This is part of Area 8.

RNA Master Plan

The Master Plan and development application for material change of use for the redevelopment of the RNA Showgrounds was approved by the ULDA in December 2010. The master plan identified a number of heritage elements that would be impacted upon for the redevelopment, which is being jointly undertaken by the RNA and Lend Lease.

The RNA's development application included 20,000m² of retail space and 340,000m² of commercial and residential space. New development will be in line with the approved Bowen Hills Urban Development Area (UDA) Development Scheme. Further details of the RNA redevelopment are available in **Chapter 9 Land Use and Tenure**.

The RNA Development Scheme Strategy was released in April 2008 and included the initial assessment of cultural heritage values on the site. The Strategy aims to preserve the character and experience of the Ekka and to identify where redevelopment can occur without detracting from the RNA Showgrounds. In addition, the Strategy aims to retain those buildings and spaces which are of high heritage value, identify new revenue generating opportunities and to take account of the changes associated with new transport and traffic infrastructure (Cox Rayner 2010).

Further cultural heritage assessment was undertaken by Riddell Architects (July 2010) through their Heritage Impact Report, which formed part of the Master Plan and development application. From a heritage point of view, the Development Approval lists which buildings are to be retained (27 heritage elements), which are to be removed (111 heritage elements) and which are to be adaptively re-used (9 heritage elements) (The Royal National Agricultural and Industrial Association of Queensland and Lend Lease 2010).

19.2.2 Central section

This section contains the suburbs of Brisbane Central Business District (CBD), Dutton Park, Kangaroo Point, South Brisbane, Spring Hill and Woolloongabba.

There are 279 registered heritage places within the central section of the study area, as shown in **Figure 19-4**.

A summary of information on prominent heritage sites within the central section is provided below. Further detailed information on the history of the central section, including detailed heritage listings, is contained in *Technical Report No.9 – Cultural Heritage*.

Archaeological potential of Brisbane City

In 2009, UQCHU conducted a study of the historical archaeological research potential of the Brisbane CBD for DERM in collaboration with the BCC. That study divided the historical development of Brisbane CBD into five time periods:

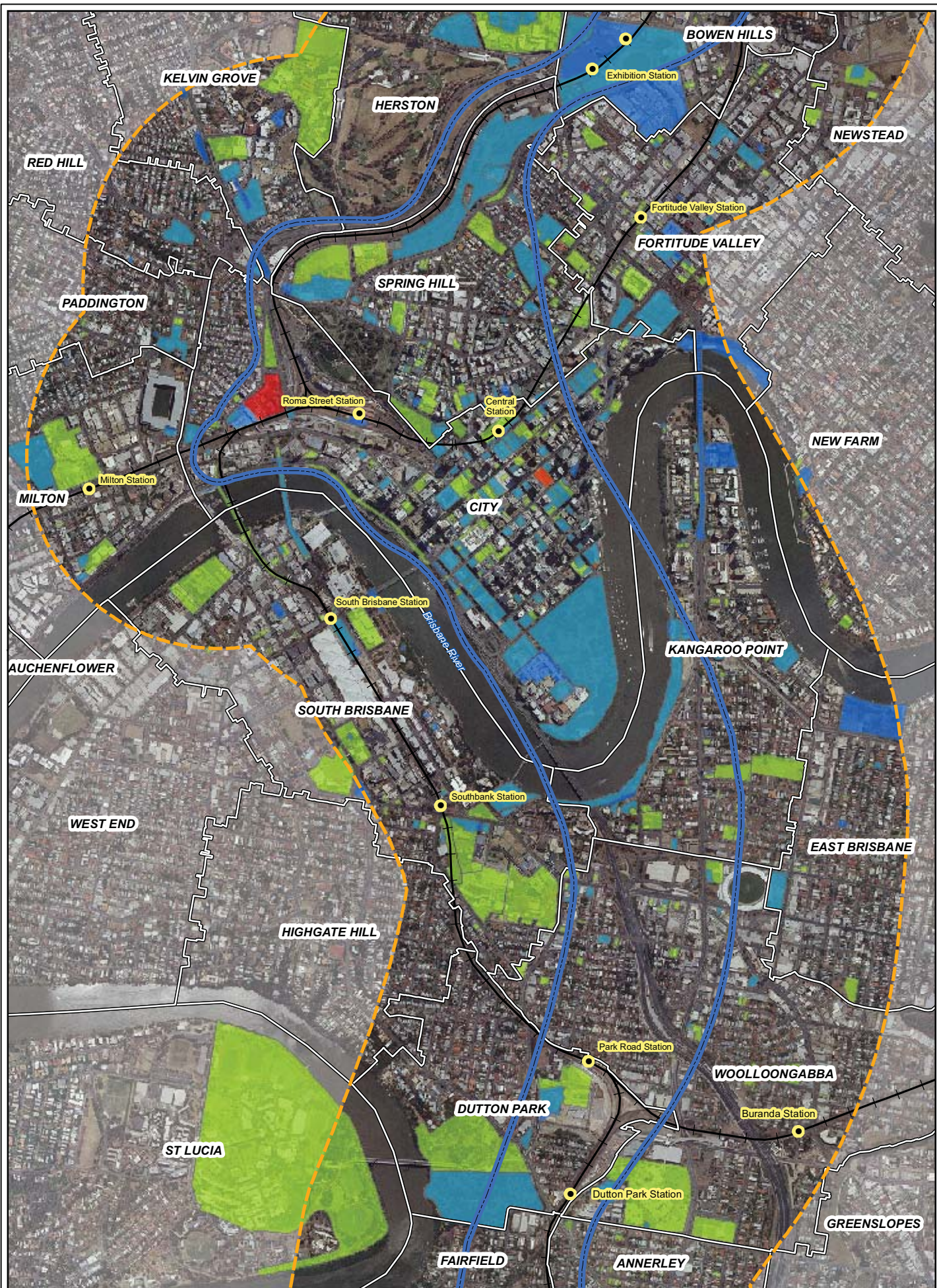
- the penal settlement (1825-1839)
- the growth of the colony (1839-1885)
- a boom and bust period (1885-1939)
- World War Two (1939-1945)
- the post war development (1945 to the present).

Based on historical and register research and survey, the five phases were allocated a rarity category. It was determined that the chances of archaeological evidence surviving from the penal settlement and World War Two was exceedingly rare, from the growth of the colony period as very rare, the boom and bust period as rare and the post war as common. In Brisbane CBD, all land parcels, roads and reserves were surveyed and assessed for the level of ground surface and subsurface disturbance that has occurred over the past 180 years. The level of disturbance is a measure of the degree to which the archaeological record of a particular period has been affected by more recent developments. As the level of disturbance increases there is less likelihood that archaeological resources survive in-situ.

Four levels of disturbance were used:

- intact
- minor disturbance
- major disturbance
- total disturbance.

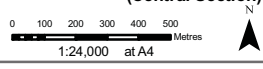
The level of disturbance and the rarity were mapped on a matrix of archaeological research potential such that places with total disturbance had no archaeological research potential while places from the exceedingly rare category that were intact had exceptional archaeological research potential.



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Figure 19-4
Registered Heritage Places
(Central Section)



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Figure 19-5 shows all parts of the CBD that have some archaeological research potential and **Figure 19-6** colour codes that potential between none and exceptional. Eight places were assessed as having exceptional archaeological potential (refer to **Figure 19-7**) (three of which are not on the Queensland Heritage Register):

- City Botanic Gardens
- the Mansions in George Street
- the Commissariat Store
- King Edward Park
- the area of the Skew Street Cemetery
- part of Wickham Terrace adjoining the Tower Mill
- Miller Park
- the location of the convict period water reservoir between George and Roma streets. In 2010 this area had had extensive ground surface disturbance due to the construction of a new court complex.

None of these sites would experience direct impacts from the Project. Potential indirect impacts to the City Botanic Gardens are described in **Section 19.3.3**.

In addition, parts of the roadways of Burnett Lane, North Quay, William Street, George Street, Elizabeth Street and Alice Street were considered to have exceptional archaeological potential.



Figure 19-5. Areas of Archaeological Research Potential (ARP)

Note: All parts of the CBD with some archaeological potential are marked in green.



Figure 19-6. Level of ARP

Note: (green = exceptional ARP, light blue = outstanding ARP, yellow = high ARP, pink = moderate ARP, purple = low ARP and red = no ARP).

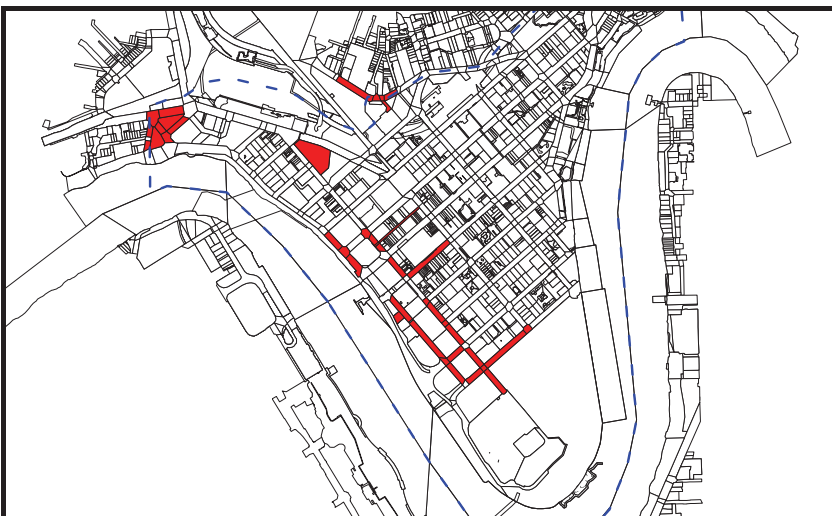


Figure 19-7. Areas of Exceptional ARP (jn red)

Prominent heritage sites

The sites described below are the prominent heritage sites within the central section of the study corridor. *Technical Report No. 9 – Cultural Heritage* provides a complete list of heritage registered properties within the study area.

Victoria Park

Victoria Park is bounded by Bowen Bridge Road, Gregory Terrace, Royal Brisbane and Women's Hospital and Breakfast Creek. At the time of European settlement the area, a series of lagoons and wetlands, was known as York's Hollow and was a significant site for the Indigenous people of the region. In 1895, the park reserve extended southward across the rail corridor. Prior to its formal designation as a public recreational park, the creek and waterholes of the York's Hollow area were reserved as the 'Brisbane Water Reserve' (Hacker *et al.* 1995:6).

In 1862, a tent camp was created on York's Hollow to house recent immigrants. This arrangement soon led to sanitation problems, and by late 1865 the temporary housing had been removed from the area and the land set aside for public use. Despite this, a military and police rifle range that was established in mid-1864 remained operative until 1883 (Hacker *et al.* 1995:66). The area was formally gazetted as the Victoria Park Recreation Reserve in 1875 and the park's trustees embarked on a beautification program planting large numbers of trees and reclaiming low-lying areas such as the creek, waterholes and swampy banks for sports-fields. This led to the creek-side areas of the park being used as a dump for municipal and domestic rubbish (ARCHAEO 2000:34).

In 1909, a large portion of Victoria Park was set aside to build a new residence for the Governor and, although £6,000 was spent levelling the area for the house, no construction was commenced. The government instead purchased 'Fernberg' in Bardon as the permanent Government House (Hacker *et al.* 1995:6).

During the Great Depression of the 1930s, a single-men's camp was located on the upper section of the park (Hacker *et al.* 1995:67). In 1931, Gilchrist Avenue was built through the eastern section and in the mid-1930s a large portion of Victoria Park was developed as golf course (University of Queensland Archaeological Services Unit 2001:15). The original Victoria Park Golf Clubhouse was constructed in two stages in 1931 and 1939 on Herston Road adjoining Gilchrist Avenue (University of Queensland Archaeological Services Unit 2001:15).

Between 1942 and 1945, army barracks were constructed by the United States Army to accommodate troops and from August 1943 until September 1944 Victoria Park was Headquarters of the United States Army Services of Supply South Pacific Area (USASOS) Camp Victoria Park (Hacker *et al.* 1995:67). After World War Two these buildings were initially used to accommodate war brides. The buildings then provided emergency accommodation for hundreds of homeless people who lived in the huts until the Queensland Housing Commission could erect sufficient housing to meet the needs. This use as temporary housing did not cease until the 1960s. Some of the army buildings also served as classrooms for the Intermediate School, an Education Department Film Centre, lecture and arts rooms for the Teachers College, and the facilities for the Queensland Institute of Medical Research. The last building was eventually demolished in 1974 (Hacker *et al.* 1995:67).

Centenary Pool Complex

The Centenary Pool complex is historically significant as BCC's principal contribution to the Brisbane and Queensland 1959 centenary celebrations. Its construction also reflects the enormous popularity of competitive swimming in Australia following the successful 1956 Melbourne Olympic Games. It demonstrates the details, materials, and construction methods of a sculptural variant of Post-War International style. Nationally, Centenary Pool is a significant example of a 1950s Olympic-standard pool and diving pool complex, and can be ranked in importance with the Melbourne and Canberra Olympic pools.

It is sophisticated in its design conception, and inventive in its sculptural and decorative detailing. The original plantings complement the buildings. Its social significance lies in its contribution to the development of competitive swimming in Brisbane, having been the city's principal aquatic sports centre from 1959 to 1980. The complex is also important as one of the major civic works designed by prominent Queensland architect James Birrell.

Lokarlton, 173 Gregory Terrace

Lokarlton is a City Plan heritage registered residential property that is located at 173 Gregory Terrace, Spring Hill. Constructed in 1876, the property's character has been primarily retained.

Brisbane Girls Grammar School

The Brisbane Girls Grammar School is a City Plan heritage registered property that is located on Gregory Terrace adjacent to Victoria Park. The school was founded in 1875 under the *Grammar Schools Act of 1860* and relocated to its present location in 1884.

Cliveden Mansions

Cliveden Mansions is a heritage listed residential property on Gregory Terrace, Spring Hill. It is important in demonstrating the evolution of Queensland's history as an illustration of late nineteenth and twentieth century housing patterns in inner Brisbane. The 1888-89 section demonstrates a characteristic of Brisbane residential development whereby the wealthy built along hilltops and ridgelines, surrounded on the lower slopes and hollows by the less wealthy members of the community. It also demonstrates the expansion of residential development beyond the city centre in the later nineteenth century. The 1915 boarding house extension illustrates another housing pattern whereby inner-city suburbs such as Spring Hill had the highest concentration of boarding houses in Brisbane in the early twentieth century.

Roma Street Station, including Roma Street Platform Shelter

The Roma Street Station demonstrates the principal characteristics of major rail stations in Queensland. The building in its form and layout provides evidence of its former use, with evidence of waiting halls, ticket offices, public facilities and offices. The building has architectural value as a substantial example of the public work of prominent Queensland architect, FDG Stanley.

The Roma Street Station has social value as an important remnant of an inner city rail station in public use for over 120 years. Because the context of the building has been gradually changed and the building is no longer appreciated as a discrete structure, the surviving rail station contributes to an understanding of the development of the site.

The original Roma Street Station building was constructed in 1873-75 (refer to **Figure 19-8**) as the first Brisbane Terminal Station prior to the construction of the Brisbane Central Station on the Brisbane end of the South-Western Rail Line from Toowoomba. The building was designed by FDG Stanley, the Superintendent of Public Buildings in 1873 and built over the next two years by Brisbane builder, John Petrie. At the opening, the platform at Brisbane Passenger Station was half-paved and the rooms and corridors incomplete, the roofing over the platform in progress and the place lit temporarily. The station was designed to house staff and facilities associated with rail traffic, including the station master, booking office and waiting rooms. A large goods shed was erected at Roma Street in 1875-6 and sidings were introduced to incorporate the new building. The next major addition to the station was a rail bridge over Countess Street also planned in 1876 when Parliament voted £19,600 for construction of this and other improvements at the station. The bridge measured 66 feet and was an iron-plate girder span on brick abutments and was constructed to avoid disturbing road traffic.



Figure 19-8 Heritage listed Roma Street Station

Other improvements at this time include construction of a number of cattle yards. Roma Street Station and the surrounding rail yard have been dramatically altered over the years of its use. In 1911, a rail yard was established at Roma Street and the entire site was replanned.

The next major change occurred in the early 1940s when the Country Station was constructed between the original Terminal Station and Roma Street. The most recent and most significant change to the station occurred in the 1980s when the transit centre, incorporating the Travelodge Hotel, was constructed.

Albert Street Uniting Church

The Albert Street Uniting Church is a heritage registered property that was established in 1888-89. It is an example of a Victorian Gothic Revival church, climatically adapted with side colonnades and front porch; and internally a good example of the major attributes of the Methodist tradition.

Brisbane City Hall

Brisbane City Hall is a heritage registered property that was constructed between 1920 and 1930. It is historically significant as the BCC chambers and offices since 1930 and the symbolic focus of the municipality; it provides a sense of place for the Brisbane community.

King George Square

King George Square is a heritage listed property that was first established in its current location after the death of King George V in 1936. The square contains statues of King George and a number of notable Queenslanders.

Former Queensland Deposit Bank

The former Queensland Deposit Bank is a City Plan heritage registered property that is located at 245 Albert Street.

William Cairncross Building

The William Cairncross Building (refer to **Figure 19-9**) is a heritage registered property located at 188-196 Albert Street. This building is the oldest remaining commercial building in Brisbane City and is known to have a number of existing structural issues. A development application is current for this building which will involve either the retention of part of the existing façade or reconstruction of the façade to maintain the heritage values.



Figure 19-9 William Cairncross Building

Perry House – Royal Albert Apartments

Perry House is a heritage registered property that was established between 1911 and 1923. It demonstrates the evolution of a method of merchandising where retailing firms grew into large wholesaling enterprises.

Corner of Charlotte Street, Albert Street and Alice Street

The Albert Street road corridor between Margaret Street and Alice Street, including the Alice Street intersection, is registered on the Queensland Heritage Register as an Archaeological Place. Charlotte Street between George Street and Albert Street is also part of this listing.

Alice Street, north of the Albert Street intersection, and Albert Street, between Margaret Street and Charlotte Street, have also been previously assessed as having high to outstanding historical archaeological research potential.

Camelot Court Carriageway in Beatrice Lane

The Camelot Court Carriageway was constructed c1887 and is recognised as a historical rarity on the City Plan heritage register.

City Botanic Gardens

The City Botanic Gardens are historically important as the most significant, non-Indigenous cultural landscape in Queensland, having a continuous horticultural history since 1828, without any significant loss of land area or change in use over that time. It remains the premier public park and recreational facility for the capital of Queensland, which role it has performed since the early 1840s.

Plant collections date to the 1850s, many having been planted by Walter Hill, the first Director of the City Botanic Gardens. Many of the specimens are either rare in cultivation or of great maturity or both. Many important plant introductions to Queensland, of both an agricultural and ornamental nature, can be traced directly to the Gardens and the work of its early curators.

These gardens are important in demonstrating the principal characteristics of an evolving public and botanical garden dating from the mid-19th century, containing the most extensive mature gardens in Queensland. There are a number of historic structures in the gardens, including the Walter Hill Drinking Fountain (1867), the former band pavilion (1878), the boundary stone walls, gates and cast iron railings (1865-85), the former bear pit shelter (1905), the former curator's residence (1909) (now the kiosk), the river wall from Edward Street to the Domain (1918), the southern stone staircase on the riverbank (1918-19) and the middle and northern stone staircases (both 1923-24). The place also contains a number of historically significant early engineering projects, including the storm water drainage system (1865 onwards), and reticulated water supply from Enoggera Dam (1867) and underground electricity supply for lighting purposes (1907).

The City Botanic Gardens are significant as a Brisbane landmark and for their visual amenity and natural wildlife values as the major verdant landscaped area in the city's CBD. Many important social events have taken place within the gardens, and the place is generally held in high regard by the local community and is a popular destination for visitors to Brisbane.

The place has a special association with the pioneering work of curators Walter Hill (1855-81), Philip MacMahon (1886-1905), JF Bailey (1905-1917) and Ernest Walter Bick (1917-1939).

56 Llewellyn Street, Kangaroo Point

56 Llewellyn Street, is a nineteenth century property that is on the City Plan Heritage Register.

Former St Joseph Convent, Kangaroo Point

The former St Joseph Convent at Leopard Street, is on the City Plan Heritage Register.

St Joseph's School, Church and Presbytery, Kangaroo Point

The St Joseph's School, Church and Presbytery at Leopard Street, is on the City Plan Heritage Register. The school was founded in 1870 by Mary MacKillop and is one of the oldest primary schools in Brisbane.

Chalk Hotel

The Chalk Hotel at Stanley Street, Woolloongabba, is on the City Plan Heritage Register. The building was originally constructed in 1889.

Boggo Road Gaol

The gaol reserve at Boggo Road was proclaimed in October 1880. The first prison that opened there in 1883 was a male prison, known colloquially as Boggo Road Gaol (Dawson and Olivieri 2009:11). The early hard-labour prisoners were employed in the development of the reserve, clearing and levelling the land in preparation for the construction of the State Prison for Women which opened in 1903 (Dawson and Olivieri 2009:12). The original 1883 prison became known as No.1 Division and the 1903 prison as No.2 Division (Dawson and Wood 2005:18) (refer to **Figure 19-10**).

During the 1970s, the original No.1 Division was demolished and replaced with a new building (Dawson and Wood 2005:24). This new prison closed in 1996 and was demolished shortly afterwards (Dawson 2008:37), with only remnants remaining of No. 1 Division (adjacent to the intact structure of No. 2 Division, between No. 2 Division and the Ecosciences Precinct).

Conditions deteriorated during the 1980s and the prison complex became notorious, with riots and escapes a common occurrence (Dawson and Wood 2005:25). No.2 Division was closed in 1989 and was later heritage listed as the only intact 19th century style prison in Queensland (Dawson 2007:25).



Figure 19-10 Boggo Road Gaol in 1936

Source: State Library of Queensland

South Brisbane Cemetery

The heritage listed South Brisbane Cemetery, also known as Dutton Park Cemetery, was established in 1866 as a general cemetery and is the oldest surviving municipal cemetery in Brisbane. The first recorded burial took place in 1870. The entrance gates, featuring two sandstone pillars were built in 1888. BCC assumed the management of the cemetery in 1928 and in 1939 embarked on an extensive program of works at the site (Dawson 2007:27). The cemetery contains the graves of many local

residents and also prisoners from Boggo Road Gaol (Olivieri 2008:3). South Brisbane Cemetery was closed to new burials in 1961 (QHR 602406).

Queensland Rail Heritage Places

Within the central section Queensland Rail have five entries on their Queensland Rail Heritage Register. These are:

- Central Station
- Roma Street Station
- Roma Street Platform Shelter
- Countess Street Bridges
- Petrie Terrace Road Bridge.

The Central Station, Roma Street Station and Platform Shelter are also registered on the Queensland Heritage Register.

19.2.3 Southern section

This section contains the suburbs of Annerley, Coopers Plains, Fairfield, Moorooka, Salisbury, Tennyson, Rocklea, Yeronga and Yeerongpilly.

Registered places

There are 22 registered places in the southern section as shown in **Figure 19-11**.

Further information on the history of the southern section, including detailed heritage listings, is contained in *Technical Report No.9 – Cultural Heritage*.

Prominent heritage sites

The sites described below are prominent heritage sites within the southern section of the study area.

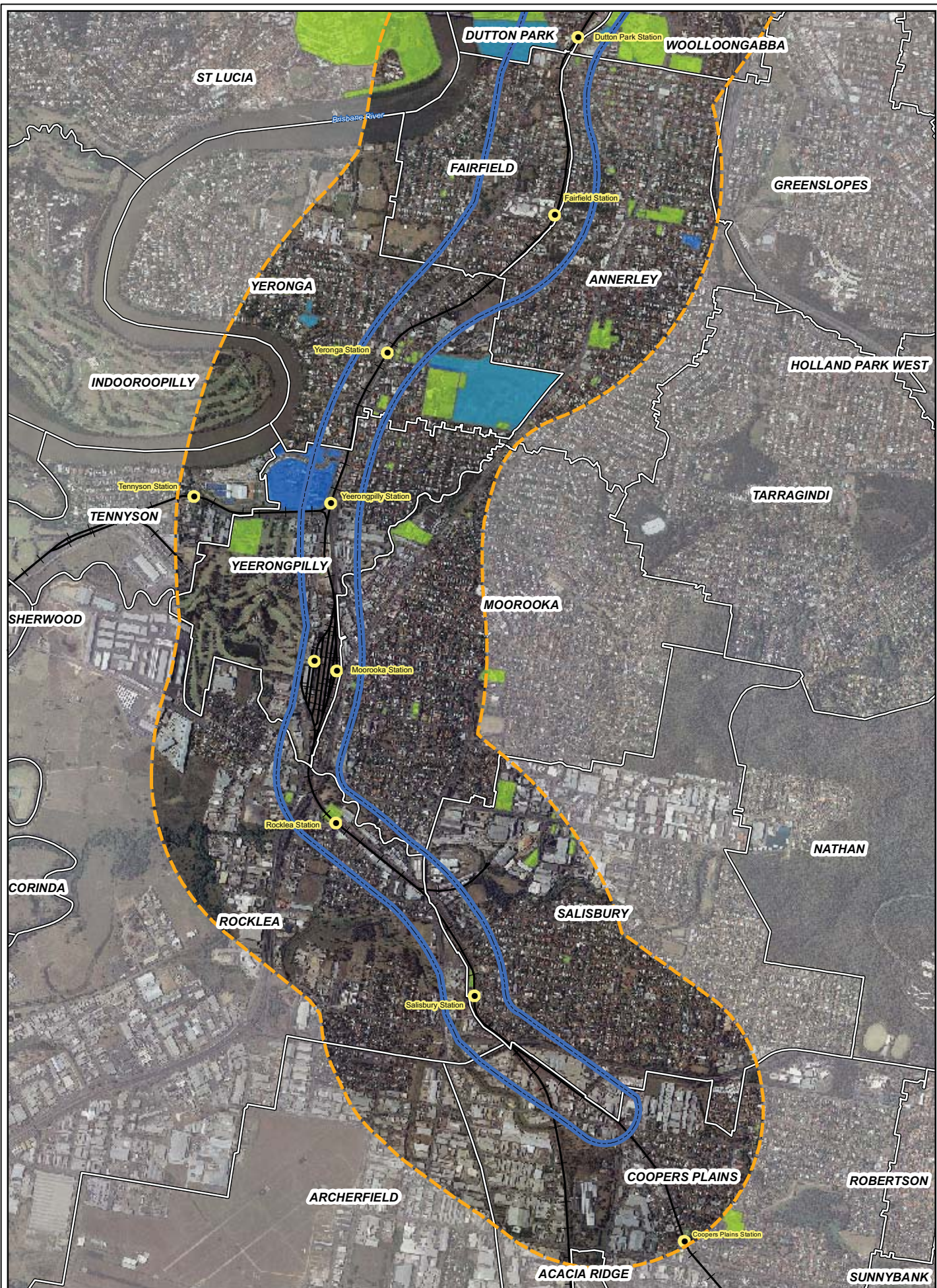
Animal Research Institute

The Animal Research Institute at 681 Fairfield Road, Yeerongpilly, is listed on the Queensland Heritage Register. A reserve for the 'Refuge of Aged and Starving Horses and Lost and Strayed Dogs' was established in 1920 on Fairfield Road close to the suburb boundaries of Annerley and Yeronga. From the 1950s, extra accommodation and facilities were added to provide care for all types of domestic pets, farm animals and wildlife.









Local Heritage Registered Places

The following places are on the Brisbane City Plan Heritage Register:

- 10 Kilarney Street, Yeronga, a residential property that was constructed c1880
- 5 Dublin Street, Yeronga, a residential property that was constructed c1889
- 6 Dublin Street, Yeronga, a residential property that was constructed c1889
- 156 School Road, a former Congregational Church and Hall
- Yeerongpilly Station
- Rocklea Station and footbridge
- Salisbury Station and footbridge.



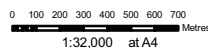
LEGEND

-  Study Corridor
-  Cultural Heritage Study Area
-  Suburbs
-  Federal Heritage
-  Station
-  QLD Heritage Register
-  Track
-  Local Heritage

CROSS RIVER RAIL
ENVIRONMENTAL IMPACT STATEMENT

Figure 19-11

**Registered Heritage Places
(Southern Section)**



CrossRiverRail

SKM aurecon
CONTRIBUTORS

Queensland Rail Heritage Places

Within the southern section, Queensland Rail has 11 entries on their Queensland Rail Heritage Register as shown in **Figure 19-12**. These are:

- Fairfield Station
- Fairfield platform shelter
- Fairfield footbridge
- Yeronga footbridge
- Yeerongpilly Station
- Yeerongpilly trainmen's quarters
- Rocklea platform shelter
- Rocklea footbridge
- Salisbury Station and
- Salisbury footbridge.

None of these places are on the Queensland Heritage Register. Yeronga footbridge, Yeerongpilly trainmen's quarters, Rocklea platform shelter and footbridge and Salisbury Station and footbridge are all on the local Brisbane City Council heritage register.

19.2.4 Character houses

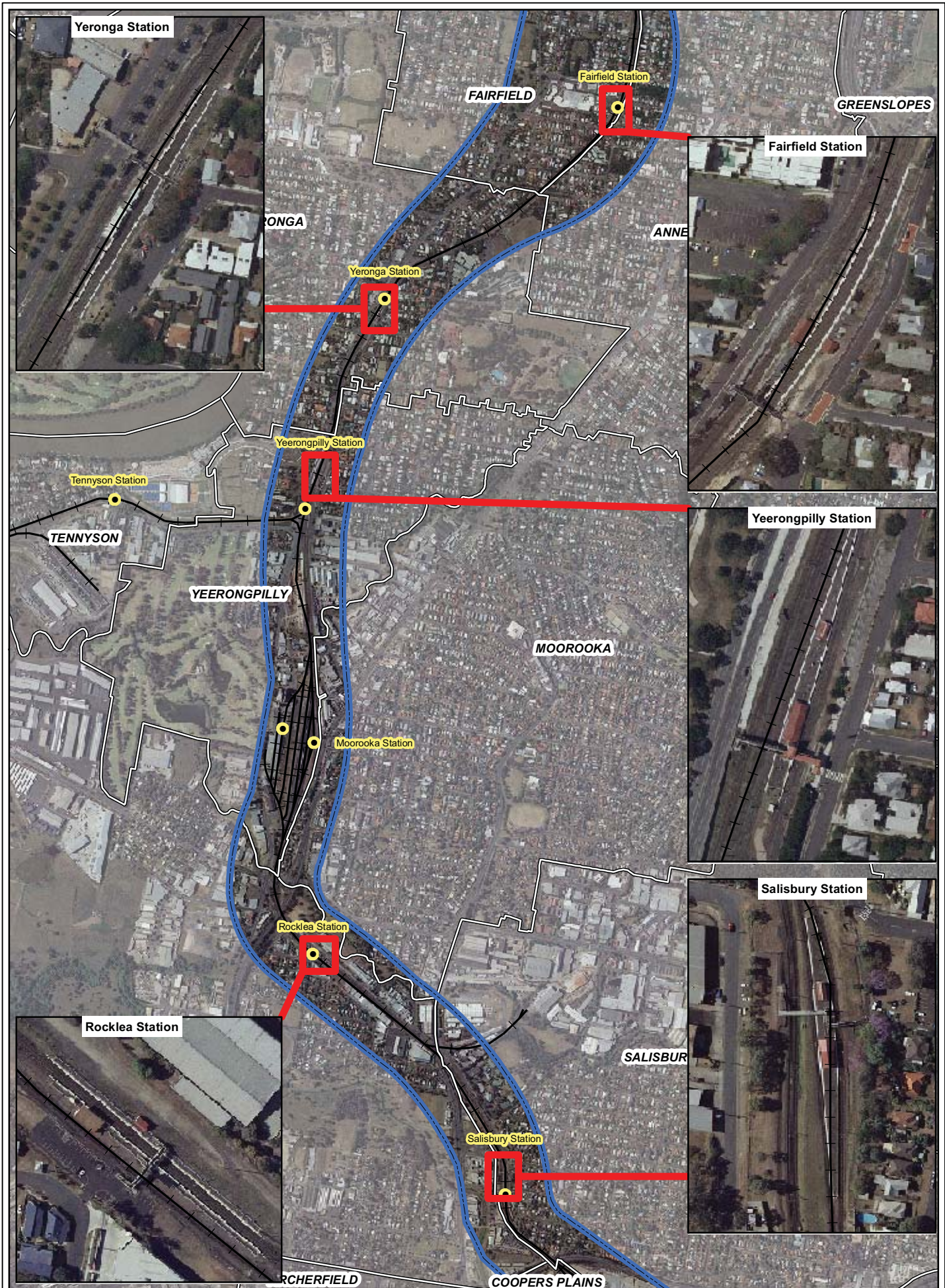
In addition to the heritage listed items identified above, there are a number of properties in Wilkie, Green and Crichton streets, Yeerongpilly, located within the BCC Demolition Control Precinct (DCP). Character houses are described further in **Chapter 9 Land Use and Tenure**.

19.2.5 Heritage precincts and vistas

A number of precincts and vistas important to Brisbane's cultural heritage are located within the study corridor. These precincts and vistas are in addition to the heritage places identified on the Commonwealth, State and BCC heritage registers. The character and views of these precincts and vistas would not be affected by this Project.

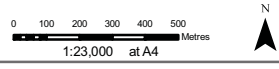
The identified Commonwealth heritage precincts and vistas within the study corridor include:

- Anzac Square and GPO Precincts, Adelaide Street
- Lower Edward Street Precinct, 3-39, 32 Edward Street
- Lower George Street Precinct, 69 - 216 Alice Street
- Queens Park Precinct, William Street
- Queen Street Mall Group, 92 - 122 Queen Street Mall
- Queensland University of Technology Precinct, 2 George Street
- Vista towards the Story Bridge, 399-515 Queen Street, Petrie Bight.



- LEGEND**
- Study Corridor
 - Suburbs
 - Station
 - Track

CROSS RIVER RAIL
 ENVIRONMENTAL IMPACT STATEMENT
Figure 19-12
 Queensland Rail Cultural Heritage



The important heritage precincts within the study corridor identified within the BCC local plans include:

- Pancake Manor and adjacent buildings, Charlotte Street, Brisbane
- General Post Office and surrounding heritage buildings, including Central rail station, Anzac Square, Post Office Square and St Stephens Cathedral, Brisbane
- Edward Street warehouses, Brisbane
- Detached House Precincts, Spring Hill and Petrie Terrace
- Albion Village Precinct, Albion
- Stanley Street Corridor and Logan Road Corridor precincts, Woolloongabba.

These heritage precincts and vistas would not be impacted by the Project.

19.2.6 Summary

A total of 335 registered non-Indigenous heritage places are located within the study area, being entered on the Commonwealth Heritage List (4), the Queensland Heritage Register (173) or City Plan Heritage Register (158), or a combination of these. All places that are entered on the Queensland Heritage Register are also listed on the City Plan Heritage Register except the Workshop Buildings, Queensland Blind Deaf and Dumb Institute (former) and the Animal Research Institute. The places on the National Heritage List are the Commissariat Store and Old Government House, both in the Central Section. The four places on the Commonwealth Heritage List are the Brisbane General Post Office, the Queensland Postal Honour Board, the Naval Offices, and Victoria Barracks.

Queensland Rail maintains an internal heritage register. Within the study area there are 19 places listed on the Queensland Rail Heritage Register. Of these, 10 places are on the BCC City Plan Heritage Register, four of which are on the Queensland Heritage Register.

19.3 Potential impacts

19.3.1 Corridor-wide considerations

There are a number of cultural heritage issues that would be considered in the delivery of the Cross River Rail. These relate to best practice cultural heritage management as well as legislative requirements for the management of cultural heritage.

Direct impacts

A number of heritage places would be required to accommodate Project elements on the surface and as a result, may be subject to direct impacts. The impacts are described in **Section 19.3.2** to **Section 19.3.4**. Mitigation measures to minimise or avoid these impacts are described in **Section 19.4.2**, **Section 19.4.3** and **Section 19.4.4**. Heritage places that are potentially affected by the Project include:

- RNA Showgrounds
- Victoria Park
- Roma Street Station
- Boggo Road Gaol Division 1 and 2
- Yeerongpilly Station
- Rocklea Station
- Salisbury Station.

Vibration and drill and blast

The impact on heritage places of vibration and drill and blast during construction would need to be monitored throughout the Project. Continuous monitoring devices would be located at least at the following places that are on the Queensland Heritage Register and City Plan Heritage Register:

- Roma Street Station
- Boggo Road Gaol Division 1 and 2.

Further details of the requirements for vibration and drill and blast monitoring are found in **Chapter 16 Noise and Vibration**.

Settlement

A preliminary estimate of the settlement effects of construction has been undertaken. This indicates the need for dilapidation surveys prior to construction for “sensitive structures” near the tunnel alignment. Where necessary, dilapidation surveys and settlement monitoring would be undertaken for heritage listed buildings above tunnelling works and adjacent to worksites. Further detail on the issues relating to settlement can be found in **Chapter 7 Topography, Geology, Geomorphology and Soils**. In addition to the Project-wide mitigation strategies, a number of specific strategies are required to manage the impacts on the cultural heritage of specific places throughout the study area.

19.3.2 Northern section

RNA Showgrounds

The Project would have impacts on the fabric of the Queensland Heritage Registered RNA Showgrounds. The RNA Showgrounds contain an extensive number of buildings and structures which, along with the layout of the grounds and plantings (including numerous mature Weeping Fig trees), contribute to the cultural heritage significance of the place. The Project would involve a series of surface works that would substantially alter parts of the Showgrounds, including outside the existing rail corridor. Changes are proposed to the rail alignment to allow for the inclusion of platforms to accommodate nine-car trains and changes would be required to the height and alignment of O’Connell Terrace to accommodate an increase in the clearance of the rail bridge.

The potential impacts by the Project on the structures within the Queensland Heritage Registered RNA Showgrounds are as follows:

- demolition of the brick rail viaduct
- demolition of Dairy Cattle, Dairy Goat, Pig and Deer and Beef Cattle pavilions
- removal of part of Showring No. 2
- removal of up to four mature trees around Showring No. 2
- removal of part of Side Show Alley
- loss of existing form of subways
- loss of the toilet block adjacent to the rail embankment
- loss of the existing pedestrian bridge near O’Connell Terrace
- potential impact on sight lines from Bowen Park across the RNA towards John MacDonald Stand.

The Project would result in an impact to the physical cultural heritage values of the RNA Showgrounds. However, the Queensland heritage listing for the RNA Showgrounds (Brisbane Exhibition Grounds) identifies significant cultural heritage values beyond the values provided solely by the physical structures.

In addition to the cultural heritage values provided by the existing buildings, other, non-physical, cultural heritage values of the RNA Showgrounds include:

- use as a showground since 1876
- example of a large operating exhibition grounds in a capital city, and as Queensland's premier showgrounds
- the dynamic to the place, including the constantly evolving form and composition
- social significance for the generations of Queenslanders who have attended the annual exhibition (the Ekka).

As the RNA Showgrounds would be retained as the primary exhibition grounds for Brisbane, the Project would not have a long-term impact on these non-physical, cultural heritage values. The site would retain its history and significance amongst Queenslanders. The Project would support the evolving form and composition of the site by providing modern buildings that would be situated next to the retained historical significant features.

RNA Master Plan

Heritage elements that will be removed for the RNA Showgrounds redevelopment that would also be impacted by Cross River Rail include:

- the Dairy Cattle Pavilion
- the Pig and Deer Pavilion
- the Dairy Goat Pavilion
- the Beef Cattle Pavilion.

Heritage elements that would be impacted by the Project that are not proposed to be removed or adapted by the RNA redevelopment are identified in **Table 19-1**.

Table 19-1 Additional heritage elements impacted by the Project

Heritage elements	Description of Project impact
Show Ring Two	Small impact to south-eastern edge, including partial loss of trees. RNA development would also have some minor impacts. The function of Show Ring Two would be retained.
Subway (south-west)	Access would be maintained. Existing form of the subway would be lost.
Subway (north-east)	Access would be maintained. Existing form of the subway would be lost.
Sideshow Alley	Area abutting the existing rail corridor would be occupied by construction activities and part of the new rail corridor.
Pedestrian Bridge	Would be removed for the Ekka Station plaza.
Toilets (near O'Connell Terrace)	Would be removed for the Ekka Station plaza.
Retaining Wall	Would be impacted by works for the Ekka Station and rail corridor.
Toilets (near Show Ring Two)	Would be impacted by works for the Ekka Station and rail corridor.

Source: The Royal National Agricultural and Industrial Association of Queensland and Lend Lease (2010), RNA Showgrounds Development Application, Volume 2

The RNA Development Scheme Strategy was released in April 2008 and included the initial assessment of cultural heritage values on the site. The Strategy aims to preserve the character and experience of the Ekka and to identify where redevelopment can occur without detracting from the showgrounds.

In addition, the Strategy aims to retain those buildings and spaces which are of high heritage value, identify new revenue generating opportunities and to take account of the changes associated with new transport and traffic infrastructure (Cox Rayner 2010).

Additional consultation with the RNA, Lend Lease and the ULDA is required to determine the nature and extent of impacts on the heritage values of the RNA Showgrounds, as well as the potential for mitigation treatments. This consultation has been ongoing during the development of the EIS and would continue through the detailed design stage, to enable the best solution for the layout of the site from a cultural heritage perspective.

The impact of the reference design for the Project on the RNA Showgrounds, in particular the new Ekka Station and associated rail and bridge works impacts on existing cultural heritage, will need to be further considered in the detailed design process.

A key issue for the Project is the sequencing of proposed redevelopment on the site, particularly as a result of the construction delay for the Project. The demolition of the existing Dairy Cattle, Dairy Goat, Pig and Deer and Beef Cattle pavilions and the construction of the new pavilion adjacent to Show Ring No. 2 is currently dependent on other works within the site being completed, as well as market demand for the new commercial buildings planned for O'Connell Terrace. Cross River Rail would continue to work with the RNA, Lend Lease and the ULDA to identify scheduling opportunities relating to the timing of demolition of the existing pavilions, the construction of the new cattle pavilion and the realignment of Show Ring No. 2 to accommodate both the planned new cattle pavilion and the additional works for the Project. This would include an assessment of the impact of the Project and of the planned new cattle pavilion/carpark on both the cultural heritage values of Show Ring No. 2 and on existing sight lines from Bowen Park to the John MacDonald Stand.

Queensland Rail heritage places

The Project would impact on the Queensland Rail heritage listed Exhibition Station, with the existing station proposed to be demolished, along with the brick rail viaduct and the pedestrian subway adjacent to the station. The rail corridor dates to 1881, although the existing station building above the subway was constructed in the 1990s, with Platform 1 constructed in the 1980s. The rail corridor is illustrated in **Figure 19-3**.

19.3.3 Central section

Victoria Park

Tunnelling, portal and surface works would be undertaken within Victoria Park resulting in impacts on the park south of the ICB. Much of this construction activity would occur outside the existing rail easement. Previous development, including ICB and Inner Northern Busway, has reduced the amount of publicly available land in Victoria Park. Works undertaken for the Legacy Way will also result in some further reductions to publicly available land in Victoria Park.

Due to the location of the proposed works within Victoria Park, it is unlikely that there would be a significant impact on the cultural heritage values of the location. The Project would not impact on any of the culturally sensitive structures within the park. As the Project would primarily occupy areas of open space within Victoria Park, some of the aesthetic and recreational values would be impacted. However, as the majority of the open space would be retained and available to the public, the overall impacts to the cultural values of the park are expected to be negligible.

Archaeological investigations undertaken during the construction of the ICB revealed an extensive Indigenous and non-Indigenous historical archaeological record. Earthmoving in Victoria Park has the potential to unearth archaeological materials.

Table 19-2 provides a summary of other potential impacts resulting from the Project within the Central section. Further details on these potential impacts are available in *Technical Report No.9 – Cultural Heritage*.

Table 19-2 Potential Impacts Central Section

Place	Potential Impacts	Reference within EIS for more information
Lokarlton	Lokarlton is located at 173 Gregory Terrace (Lot 32 on RP10465) and is on the Brisbane City Plan Heritage Register. The Project tunnel would be located within 15 m of the building; however this property is not expected to be subject to vibration or settlement effects, as the tunnel is between 30 – 35m deep at this point.	Vibration implications are described in Chapter 16 Noise and Vibration and settlement issues are discussed in Chapter 7 Topography, Geology, Geomorphology and Soils.
Brisbane Girls Grammar School	The Project tunnel would be located within 20 m of some of the buildings associated with the Brisbane Girls Grammar School; however this property is not expected to be subject to vibration or settlement effects, due to the depth of tunnel at this point.	Vibration implications are described in Chapter 16 Noise and Vibration and settlement issues are discussed in Chapter 7 Topography, Geology, Geomorphology and Soils
Cliveden Mansions	The Queensland Heritage Registered Cliveden Mansions are located at 17-23 Gregory Terrace. This building was constructed in 1888. The Project's tunnels would be located directly under this building however this property is not expected to be subject to vibration or settlement effects, due to the depth of tunnel at this point.	Vibration implications are described in Chapter 16 Noise and Vibration and settlement issues are discussed in Chapter 7 Topography, Geology, Geomorphology and Soils
Roma Street Station	Project works proposed to be undertaken at Roma Street Station would require the demolition of the car park situated immediately adjacent to the heritage listed building and platform. It would also involve TBM and possible drill and blast methods in proximity to the building.	Vibration implications for these works are described in Chapter 16 Noise and Vibration and settlement implications are discussed in Chapter 7 Topography, Geology, Geomorphology and Soils
	<p>The expected vibration levels on the ground surface resulting from tunnel construction using TBM excavation is expected to be less than 2 mm/sec. A level of 2 mm/sec is the cultural heritage vibration goal for minimum risk of damage. At this level, vibration is highly unlikely to disturb the fabric of the station building and the platform.</p> <p>However, the use of drill and blast construction methodologies at this location could result in an exceedance of the cultural heritage vibration goal.</p> <p>This property is identified as having a low risk of settlement effects, with a maximum ground movement of 10 – 25mm.</p> <p>It is envisaged that changes would be made within the Queensland Heritage Registered boundary of the place. In particular, the Project would involve the creation of emergency vehicle access to the heritage listed platform and the connection of the access to the new platforms with the existing Roma Street subway would require excavation beneath the heritage place.</p>	
Albert Street Uniting Church	The Project's tunnels would be located within 50 m of the Queensland Heritage Registered Albert Street Uniting Church. However this property is not expected to be subject to vibration or settlement effects.	Vibration implications are described in Chapter 16 Noise and Vibration and settlement issues are discussed in Chapter 7 Topography, Geology, Geomorphology and Soils

Place	Potential Impacts	Reference within EIS for more information
Brisbane City Hall	The Project's tunnels would be located beneath the north-western corner of Brisbane City Hall. City Hall is a major Brisbane heritage icon and is currently undergoing major restoration. The expected vibration levels on the ground surface resulting from tunnel construction using TBM excavation is expected to be less than 2mm/sec. At this level, vibration is highly unlikely to disturb the fabric of City Hall. This property is identified as having a low risk of significant effects from settlement, with an estimated maximum ground movement of 10mm, based on information extracted from boreholes during the construction of King George Square busway station.	Vibration implications are described in Chapter 16 Noise and Vibration and settlement issues are discussed in Chapter 7 Topography, Geology, Geomorphology and Soils
King George Square	The Project's tunnels would be located beneath King George Square. This area has been identified as having a low risk of significant settlement effects, with a maximum ground movement of 10mm, based on information extracted from boreholes during the construction of King George Square busway station.	Settlement implications are further described in Chapter 7 Topography, Geology, Geomorphology and Soils.
Former Queensland Deposit Bank	The Project's eastern tunnel would be located beneath or immediately adjacent to the City Plan Heritage Registered Former Queensland Deposit Bank located at 245 Albert Street however this property is not expected to be subject to vibration or settlement effects.	Vibration implications are described in Chapter 16 Noise and Vibration and settlement issues are discussed in Chapter 7 Topography, Geology, Geomorphology and Soils
William Cairncross Building	The Project's western tunnel would be located beneath or immediately adjacent to the City Plan Heritage Registered William Cairncross Building located at 188-196 Albert Street. This building is the oldest remaining commercial building in Brisbane City and is known to have a number of existing structural issues. A development application has been approved for the property, which would involve either the retention of part of the existing façade or reconstruction of the façade to maintain the heritage values. Potential issues from vibration and settlement during construction may therefore arise, depending on the stage of construction and the stability of the facade.	Vibration implications are described in Chapter 16 Noise and Vibration and settlement issues are discussed in Chapter 7 Topography, Geology, Geomorphology and Soils
Perry House – Royal Albert Hotel	The Project's eastern tunnel would be located beneath or immediately adjacent to the Queensland Heritage Registered 1910 built Perry House located at 167 Albert Street and potential settlement issues may arise due to its vicinity to the northern shaft of the tunnel.	Settlement implications are further described in Chapter 7 Topography, Geology, Geomorphology and Soils.
Charlotte Street, Albert Street and Alice Street	Surface works, including alterations to the road and footpath pavements, around the Albert Street station entrances would be required. These works would require excavations that could potentially disturb archeologically significant items.	
Camelot Court Carriageway, Beatrice Lane	The Project's tunnels would be located within 40 m of the City Plan heritage registered Camelot Court Carriageway in Beatrice Land and potential issues from settlement during construction could arise.	Settlement implications are described in Chapter 7 Topography, Geology, Geomorphology and Soils.

Place	Potential Impacts	Reference within EIS for more information
Brisbane Botanic Gardens	<p>The Project's tunnels would be located beneath the City Botanic Gardens, potentially resulting in settlement and groundwater drawdown within the gardens. The establishment of a passenger entrance on the south-eastern side of Alice Street may impact on the Botanic Gardens fence and two historic fig trees located nearby.</p> <p>Impact on these fig trees would result in an impact to the aesthetic and natural wildlife cultural heritage values of the City Botanic Gardens.</p>	<p>Settlement implications are described in Chapter 7 Topography, Geology, Geomorphology and Soils. Implications for the fig trees are further described in Chapter 11 Nature Conservation.</p>
56 Llewellyn Street Kangaroo Point	<p>The Project's tunnels pass directly beneath the City Plan Heritage Registered nineteenth century residence located at 56 Llewellyn Street, Kangaroo Point however this property is not expected to be subject to vibration effects. The estimated surface vibration at 56 Llewellyn Street is 0.3mm/sec. This figure is well below the established heritage threshold of 2mm/sec. The tunnel is up to 40m deep at this point and the maximum settlement at this point is expected to be 0 – 10mm.</p>	<p>Vibration implications are described in Chapter 16 Noise and Vibration and settlement implications are described in Chapter 7 Topography, Geology, Geomorphology and Soils.</p>
Former St Joseph's Convent	<p>The Project's tunnels would be located beneath or immediately adjacent to the City Plan Heritage Registered Former St Joseph Convent building located at 24 Leopard Street, Kangaroo Point. The estimated maximum ground surface vibration at the former St Joseph's Convent is 0.4mm/sec. This is well below the established heritage threshold of 2mm/sec. Ongoing vibration monitoring is not necessary at this place. However ongoing monitoring for settlement would occur.</p>	<p>Vibration implications are described in Chapter 16 Noise and Vibration and settlement implications are described in Chapter 7 Topography, Geology, Geomorphology and Soils.</p>
St Joseph's School, Church and Presbytery	<p>The Project's tunnels would be located beneath or immediately adjacent to the City Plan heritage registered St Joseph School, Church and Presbytery buildings located at 44 Leopard Street, Kangaroo Point however this property is not expected to be subject to vibration effects. The estimated maximum ground surface vibration at St Joseph's is 0.4mm/sec. This is well below the established heritage threshold of 2mm/sec. Ongoing vibration monitoring is not necessary at this place, however ongoing monitoring for settlement would occur.</p>	<p>Vibration implications are described in Chapter 16 Noise and Vibration and settlement implications are described in Chapter 7 Topography, Geology, Geomorphology and Soils.</p>
Chalk Hotel	<p>The Project's tunnels would be located within 25 m of the City Plan heritage registered Chalk Hotel located at 735 Stanley Street, Woolloongabba however this property is not expected to be subject to vibration or settlement effects. Estimated ground surface vibration at the Chalk Hotel is 0.3mm/sec. This is well below the established cultural heritage threshold of 2mm/sec. Ongoing vibration monitoring would not be required at this place.</p>	<p>Vibration implications are described in Chapter 16 Noise and Vibration and settlement implications are described in Chapter 7 Topography, Geology, Geomorphology and Soils.</p>

Place	Potential Impacts	Reference within EIS for more information
Boggo Road Gaol Division 1 and 2	<p>The Boggo Road station would be located adjacent to the heritage listed remnants of Division 1 and Division 2 of Boggo Road Gaol. Construction of the station cavity, the tunnels and surface infrastructure has the potential to impact on the heritage listed fabric.</p> <p>The expected vibration levels on the ground surface resulting from tunnel construction using TBM excavation is expected to be less than the cultural heritage goal of 2mm/sec. At this level vibration is highly unlikely to disturb the remaining fabric of Division 1 and Division 2.</p> <p>However, as the fabric of Division 1 has already been partially demolished and that it would be located within 2 m of the station cavity, it could potentially be susceptible to damage. The brick wall of Division 2 would be located 8 m from the Project.</p> <p>In addition, the use of drill and blast construction methodologies at this location could result in an exceedance of the cultural heritage vibration goal.</p> <p>Finally, the construction of the proposed southern station entry, with associated plant attached to this entry, may impact on existing sight lines from the Southern and South Western Towers of the Division 2 structure. This potential impact would need to be further considered as part of the detailed design process.</p>	Vibration implications are described in Chapter 16 Noise and Vibration and settlement implications are described in Chapter 7 Topography, Geology, Geomorphology and Soils.
South Brisbane Cemetery	<p>The Project's tunnels would be located beneath the south eastern corner of the South Brisbane Cemetery at a depth of approximately 29 to 30 m below existing levels. The expected vibration levels on the ground surface in the south eastern corner of the South Brisbane Cemetery resulting from tunnel construction using TBM excavation is expected to be below 2 mm/sec. At this level, vibration is unlikely to disturb monuments in this section of the cemetery.</p> <p>The construction of a tunnel under the cemetery is not expected to result in any settlement of the ground surface.</p>	Vibration implications are described in Chapter 16 Noise and Vibration and settlement implications are described in Chapter 7 Topography, Geology, Geomorphology and Soils.

Queensland Rail Heritage Places

The Project would impact on the Queensland Rail heritage listed Roma Street Station. The impacts are described in **Table 19-1** above.

19.3.4 Southern section

Table 19-3 provides a summary of other potential impacts resulting from the Project within the southern section. Further details on these potential impacts are available in *Technical Report No.9 – Cultural Heritage*.

Table 19-3 Potential Impacts Southern Section

Place	Potential Impacts	Reference within EIS for more information
10 Kilarney Street Yeronga	The Project's tunnels would be located within 50 m of this residence however this property is not expected to be subject to vibration or settlement impacts, due to the distance from the tunnels. The estimated vibration level at 10 Killarney Street is 0.2mm/sec. This is well below the heritage threshold and ongoing vibration monitoring would not be required at this place.	Vibration implications are described in Chapter 16 Noise and Vibration
5 Dublin Street Yeronga	The Project's tunnels would be located within 30 m of this residence however this property is not expected to be subject to vibration or settlement impacts, due to the distance from the tunnels. The estimated vibration level at 5 Dublin Street is 0.3mm/sec. This is well below the heritage threshold and ongoing vibration monitoring would not be required at this place.	Vibration implications are described in Chapter 16 Noise and Vibration
6 Dublin Street Yeronga	The Project's tunnels would be located within 40 m of this residence however this property is not expected to be subject to vibration or settlement impacts, due to the distance from the tunnels. The estimated vibration level at 6 Dublin Street is 0.3mm/sec. This is well below the heritage threshold and ongoing vibration monitoring would not be required at this place.	Vibration implications are described in Chapter 16 Noise and Vibration
156 School Road Yeronga	The Project's southern portal and tunnels would be located within 50m of this former Congregational Church and Hall (now a daycare centre).	Vibration implications are described in Chapter 16 Noise and Vibration
Yeerongpilly Station	A new station would be constructed south of the existing station. While the existing station would be retained during construction, it would be decommissioned at the end of the construction process as this would be replaced with the new Yeerongpilly Station.	
Rocklea Station	Structural changes proposed for this station include a new footbridge, lifts and wheelchair access. This work is not expected to result in major impacts to the existing station fabric.	
Salisbury Station	Structural changes proposed for this station include a new footbridge, lifts and wheelchair access. This work is not expected to result in major impacts to the existing station fabric.	

Queensland Rail heritage places

The Project would impact the Queensland Rail heritage listed Yeerongpilly, Rocklea and Salisbury stations. The impacts for Yeerongpilly, Rocklea and Salisbury stations are described in **Table 19-3**. These stations are also shown in **Figure 19-11** and **Figure 19-12**.

19.4 Mitigation strategies

This section provides a range of mitigation measures to minimise or avoid the potential impacts to heritage places described in **Section 19.3**. These mitigation measures are further described in **Chapter 24 Draft Outline EMP**.

Legislative requirements

All work would conform to the requirements of the Heritage Act where applicable.

Burra Charter

Except where demolition of heritage registered places would be required, all work would conform to the principles of the Burra Charter. Article 2.4 of the Burra Charter states that all 'places of cultural significance should be safeguarded and not put at risk or left in a vulnerable state' (Australia ICOMOS 1999). All reasonable steps would be taken to safeguard the significance of all cultural heritage places affected by this proposed development. Mitigation measures would be implemented in accordance with the principles of the Burra Charter to manage demolition activities on heritage registered places.

Cultural heritage awareness training

As part of the workplace induction process undertaken prior to the commencement of any on-site construction activities all personnel involved would undergo a cultural heritage induction session conducted by representatives of the Aboriginal parties and an appropriately qualified consultant. The training would ensure that participants are aware of the heritage planning for the Project, the cultural heritage value of the places listed on the Queensland Heritage Register and City Plan heritage registered places, the impacts caused by the works, the mitigation strategies in place and the potential for archaeological deposits. Participants would be made aware of their legal obligations and the penalties that exist under the Heritage Act.

Public access

Wherever possible, existing safe public access to all Queensland Heritage Register and City Plan 2000 Heritage Register places would be maintained throughout construction.

Construction access

State and City Plan heritage registered places would not be used for the storage of construction materials or equipment beyond the essential requirements for worksites.

19.4.2 Northern section

RNA Showgrounds

Assessment of the cultural heritage impacts resulting from this Project require a delicate balance between retaining enough of the core heritage spaces and structures of the RNA Showgrounds to maintain the legibility of the Ekka for future generations, while allowing enough development of the site to assure the continued viability of the RNA Showgrounds in its traditional home. In view of the cumulative impact of Cross River Rail on the RNA Showgrounds site, in conjunction with the RNA redevelopment, the following measures are suggested.

Demolition of the brick rail viaduct

In order to preserve some of the historical values of the rail viaduct, a full photographic and descriptive report would be completed by a consultant heritage professional on this structure prior to its demolition.

Removal of part of Show Ring No. 2

As Show Ring No. 2 is considered to be of high cultural heritage significance within the overall site, engineering options developed through detailed design would consider opportunities to reduce or remove impacts to it.

If the detailed design phase is unable to refine designs to further minimise the Project's impacts on Show Ring 2, a consultant heritage professional would be engaged as part of continuing negotiations and discussions with the RNA, Lend Lease and the ULDA.

Removal of trees around Show Ring No. 2

Up to four mature fig trees lining the eastern side of Show Ring No. 2 would be removed for the Project. Specialist heritage arborist advice, in consultation with the RNA, would be sought to advise on the potential relocation of these trees within the broader Show Ring No. 2 area.

Impact on sight lines from Bowen Park towards John MacDonald Stand

The development of the RNA Showgrounds redevelopment activities, including the construction of a new cattle pavilion/carpark, when combined with the Project's changes to the rail alignment and footprint and the new Ekka Station, would potentially result in impacts on sight lines from Bowen Park towards John MacDonald Stand. If the detailed design phase is unable to refine designs to further minimise the Project's impacts on these sight lines, a consultant heritage professional would be engaged as part of continuing negotiations and discussions with the RNA, Lend Lease and the ULDA to determine approaches to addressing the potential impacts.

Removal of part of Side Show Alley

The RNA Development Scheme Strategy determines that Side Show Alley has some heritage value and is an integral component of the Ekka experience. In detailed design, engineering strategies would be developed to reduce impacts on Side Show Alley. A full photographic and descriptive archive would be completed on this area prior to any partial demolition.

Demolition of Sheep and Goat Pavilion, Dairy Cattle Pavilion and the Beef Cattle Pavilion

In order to preserve some of the historical values of these structures, a full photographic and descriptive report would be completed by a consultant heritage professional prior to demolition. It should be noted that Riddell Architecture has already completed an assessment of these buildings as they are envisaged to be removed as part of the RNA redevelopment.

Construction Storage

No part of RNA Showgrounds would be used for the storage of construction materials, except for that part specifically identified as a construction worksite. No part of Bowen Park would be used for the storage of construction materials or for construction activities.

Queensland Rail heritage places

While Exhibition Station is currently identified as a Queensland Rail heritage place, it should be noted that the structures for the station date to the 1980s and 1990s. The cultural heritage significance of the use would be maintained through the development and use of the new Ekka Station. No other mitigations are proposed.

19.4.3 Central section

Victoria Park

Archaeological investigations undertaken during the construction of the ICB revealed an extensive Aboriginal and historical archaeological record. Earthmoving in Victoria Park has the potential to unearth archaeological materials.

Should a non-Indigenous artefact or place be identified that could be considered an important source of information concerning Queensland's history then:

- under Part 9 of the Heritage Act, the site or object would be reported to the Chief Executive of DERM
- consultant archaeologists would assess the archaeological potential of the deposit and determine any required follow-up archaeological activities.

Roma Street Station

Vibration and settlement

Prior to the commencement of construction, a photographic record and a structural audit of the station structure would be undertaken and a condition report prepared.

There are a range of possible mitigation measures that could be applied to prevent damage to the station building. The actual strategies used would be dependent on the results of the structural audit and are likely to include any or all of the following:

- construction of pier supports beneath the structure
- erection of permanent support structures or temporary shoring
- use of continuous vibration monitoring devices located within the building during construction.

Current estimates of the impact of drill and blast activities suggest that these should be limited (to start) below 0.5 kg MIC, with ongoing monitoring and investigation to determine allowable blast size limits. Further details on blast size limits proposed are provided in **Chapter 16 Noise and Vibration**.

At the completion of Project construction, a further structural audit and condition report would be prepared and any resultant damage repaired.

During the detailed design phase, engineering solutions for the driven tunnel and platform cavity would be refined and documented in the Construction Environmental Management Plan (EMP) to ensure vibrations reaching the surface do not significantly impact on cultural heritage values.

Connections to existing fabric

Any Project activities that would directly damage the existing fabric of the building or platform would be avoided. All permanent connections to the existing fabric would be sympathetic in character and design.

Construction storage

The heritage listed building and platform would not be used for the storage of any construction materials.

Heritage opportunities

Currently, there is no public access to the heritage listed building and platform resulting in a low level of public appreciation for the heritage values. The project work associated with the Roma Street station provides the opportunity to enhance the public appreciation of the heritage values of the station by improving site lines and access to the heritage listed station building. This opportunity would be further explored in the detailed design phase.

William Cairncross Building

To ensure that vibration and settlement levels do not exceed levels that would compromise the heritage place, ongoing vibration and settlement monitoring would occur at this place. It is likely that the provision of engineering solutions within the building would be required given the existing structural issues and the need to retain part of the existing façade.

However, in the event that the approved redevelopment of the property has commenced prior to Cross River Rail works being undertaken within the vicinity, these measures would likely be required for the redevelopment and would not be required by Cross River Rail.

Charlotte, Albert Street and Alice Streets

Historical archaeological monitoring of all surface earthworks conducted in Albert Street, Charlotte Street and Alice Street would be undertaken. Should nineteenth century, particularly convict period, remains be identified, the construction program would be amended to allow for complete archaeological investigations to be carried out.

Camelot Court Carriageway in Beatrice Lane

To ensure that vibration and settlement levels do not exceed levels that would compromise this heritage place, regular vibration and settlement monitoring would occur at this place during all active periods of construction in or near the Albert Street Station.

City Botanical Gardens

Fig trees

The two figs near the proposed Alice Street entrance to the Albert Street Station are a Weeping Fig planted in 1864 and a Moreton Bay Fig planted in 1884 (refer to **Figure 19-13**). Both have extensive buttress root structures that have been truncated by the existing infrastructure in Alice Street. A consultant heritage arborist would provide advice concerning any proposed impacts to these trees.

Where possible, impacts on these trees would be avoided. Mitigation measures for avoiding or minimising impacts to vegetation, including these fig trees, is provided in **Chapter 11 Nature Conservation**.



Figure 19-13 Fig trees and railing along Alice Street

Settlement

Short and long term settlement effects within the City Botanic Gardens would need to be monitored. Paths, fountains, trees or garden beds affected by settlement would be restored or reconstructed.

Entrance gates

Public access to the City Botanic Gardens from the Alice Street gates would be maintained.

Construction storage

The City Botanic Gardens would not be used for the storage of construction materials.

Former St Joseph's Convent

To ensure that settlement levels do not exceed levels that would compromise this heritage place, monitoring for settlement would occur during construction.

St Joseph's School, Church and Presbytery

To ensure that settlement levels do not exceed levels that would compromise this heritage place, monitoring for settlement would occur during construction.

Boggo Road Precinct

Drill and blast

Where possible, drill and blast construction methods would be avoided. Current estimates of the impact of drill and blast activities suggest that these would be limited (to start) below 0.5kg MIC, with ongoing monitoring and investigation to determine blast size limits.

Demolition

The existing fabric of Division 1 or Division 2 would be retained during construction and operation of the Project.

Vibration

Prior to the commencement of the construction a photographic record and a structural audit of Division 1 remnants and Division 2 would be undertaken and a condition report prepared.

There are a range of possible mitigation measures that would be applied to prevent damage to the building. The actual strategies used would be dependent on the results of the structural audit and are likely to include any or all of the following:

- construction of pier supports beneath the structures
- erection of permanent support structures or temporary shoring
- use of continuous vibration monitoring devices located within the Division 1 remnants, at the Division 2 wall and throughout the Division 2 buildings during construction.

At the completion of the construction, a further structural audit and condition report would be prepared and any resultant damage repaired.

During the detailed design phase, engineering solutions for the driven tunnel and platform cavity would be refined and documented in the Construction EMP to ensure vibrations reaching the surface do not significantly impact on cultural heritage values.

Settlement

As the remnants of Division 1 and the Division 2 wall could easily be damaged by ground settlement, ongoing settlement monitoring should occur during construction. In addition, this site potentially requires ground treatment to limit settlement, with intensive instrumentation required at this location. During the detailed design phase, engineering solutions including ground treatment would be refined and documented in the Construction EMP to ensure settlement does not significantly impact on cultural heritage values.

Location of ancillary structures - sightlines

Any proposed station entrances, mechanical and/or service buildings associated with the Project need to be considerate of sightlines to the heritage listed gaol buildings. Proposed structures for the Project do not currently impact on sightlines to the heritage buildings. Detailed design should consider the relocation of any Project structures that impede sightlines to the heritage buildings.

Gair Park

The storage of construction material for the Project in Gair Park would be avoided.

Dutton Park parkland

The storage of construction material for the Project in Dutton Park parkland would be avoided.

South Brisbane Cemetery

Prior to the commencement of construction, a photographic record and a structural audit of all graves, monuments and other structures located along the route of the driven tunnel would be undertaken and a condition report prepared.

While this location is not expected to be subject to vibration or settlement effects, existing structures above the tunnel alignment could be regarded as “sensitive structures” for the purpose of monitoring, to quantify any movement or damage that might occur during construction. Any graves and associated monumental masonry affected by settlement would need to be restored or reconstructed.

Construction storage

The storage of construction material for Project in South Brisbane Cemetery would be avoided.

Queensland Rail heritage places

Mitigation measures for Roma Street Station are described in a previous section.

19.4.4 Southern section

156 School Road Yeronga

The Project's southern portal and tunnels would be located within 50 m of this former Congregational Church and Hall (now a daycare centre).

Yeerongpilly Station

The existing Yeerongpilly Station would be decommissioned once the new station is constructed. The station building would be retained. Where possible, the design of the new Yeerongpilly Station would consider the heritage values of existing station.

Rocklea Station

The existing heritage components of the station would be disturbed by the Project.

In order to preserve some of the historical values of the place, a full photographic and descriptive report would be completed by a consultant heritage professional prior to commencement of any works.

Salisbury Station

The existing heritage components of the station would be disturbed by the Project.

In order to preserve some of the historical values of the place, a full photographic and descriptive report would be completed by a consultant heritage prior to commencement of any works.

Queensland Rail heritage places

Mitigation measures for Yeerongpilly, Rocklea and Salisbury Stations are described in the previous section.

Character Housing

Within the DCP, four affected properties have been identified as Character Housing (constructed prior to 1946). Further information on the potential impacts to these properties is provided in **Chapter 9 Land Use and Tenure**.

No mitigation measures have been identified that would allow for these four residences to be retained in situ. However, relocating these properties or at minimum, salvaging the materials, would be considered in the detailed design process as part of the demolition stage.

19.5 Cultural heritage risks and management

The Project has a number of potential cultural heritage impacts and this would necessitate the implementation of a number of mitigation strategies. The risks and strategies are summarised in **Table 19-4**.

Table 19-4 Risks and management strategies

Cultural Heritage Risks	Management Strategies
Legislative requirements	All work would conform to the requirements of the Heritage Act Except where demolition of heritage registered places would be required, all work would conform to the principles of the Burra Charter. Mitigation measures would be implemented in accordance with the principles of the Burra Charter to manage demolition activities on heritage registered places.
Demolition or damage of heritage listed structures	No demolition or damage of National, State or BCC heritage listed places is to occur outside the RNA Showgrounds. Full photographic and descriptive report would be prepared on the following structures within the RNA Showgrounds: <ul style="list-style-type: none"> • Brick rail viaduct • Side Show Alley • Dairy Cattle Pavilion¹ • Pig and Deer Pavilion¹ • Dairy Goat Pavilion¹ • Beef Cattle Pavilion¹ Design solutions would be sought to avoid impacts on Show Ring No. 2 and the sightlines from Bowen Park. Alternatively, Show Ring No. 2 would be re-aligned and existing fig trees transplanted to a new location. Options would need to be determined in conjunction with the RNA, Lend Lease and the ULDA.
Potential for the discovery of historical archaeological places in Victoria Park, Albert Street, Charlotte Street, Alice Street	All work would conform to the requirements of the Heritage Act Consultant archaeologists would monitor all surface earthworks in Albert, Charlotte and Alice streets Consultant archaeologists would assess any archaeological discoveries and determine any follow-up archaeological activity Information about historical archaeological potential and cultural heritage legislation needs to be included in the workplace induction program
Access to State and City heritage registered places	Except where access restrictions are required to ensure essential Project works can be undertaken and to ensure public safety, public access to State and City heritage registered places would be maintained throughout the entire Project. Except where no suitable alternatives are available, State and City heritage registered places would not be used as access routes to construction zones
Storage of Project related materials	No State or BCC heritage listed place is to be used for the storage of any Project related equipment or materials beyond the essential requirements for proposed work sites.
Vibration from tunnel construction	The vibration goal for cultural heritage is 2mm/second. To ensure that this is not exceeded, vibration monitoring and potential limiting of blast sizes to 0.5kg MIC during periods of construction would need to occur at: <ul style="list-style-type: none"> • Roma Street Station • William Cairncross Building • Camelot Court Carriageway • Division 1 and 2, Boggo Road Gaol • 156 School Rd, Yeronga Further information on management strategies for vibration impacts are provided in Chapter 16 Noise and Vibration .

Cultural Heritage Risks	Management Strategies
Settlement	<p>Short and long term settlement monitoring would need to occur at:</p> <ul style="list-style-type: none"> • Roma Street Station • William Cairncross Building • City Botanic Gardens • Former St Joseph’s Convent • St Joseph’s School, Church and Presbytery • Division 1 and 2, Boggo Road Gaol • South Brisbane Cemetery <p>Other “sensitive” structures would need to be identified during the detailed design process, which would also identify all structures requiring a condition report prior to construction commencing. Any structures damaged as a result of settlement attributed to the Project would be repaired.</p> <p>Further information on management strategies for settlement impacts are provided in Chapter 7 Topography, Geology, Geomorphology and Soils.</p>
Impact on heritage trees	<p>Mature trees in the City Botanic Gardens and the RNA Showgrounds would be impacted by the Project</p> <p>Specialist heritage arborist advice would be sought to relocate up to four trees at Show Ring No. 2 at the RNA Showgrounds</p> <p>Specialist heritage arborist advice would be sought to minimise impacts on the root structures of two 19th century fig trees on the Alice Street boundary of the City Botanic Gardens.</p> <p>Further information on management strategies for vibration impacts are provided in Chapter 11 Nature Conservation.</p>
Connecting to existing heritage fabric at Roma Street Station	<p>Any construction activities would not damage the existing fabric of the building or platform.</p> <p>All connections to the existing fabric would be sympathetic in character and design.</p>

Note: 1: Management strategies would not be required by the Project for these heritage elements if they are already removed by the RNA redevelopment.

19.6 Summary

As the study corridor traverses some of Brisbane’s oldest developed areas, it contains a large proportion of Brisbane’s registered non-Indigenous cultural heritage places. The majority of these places are located within the Brisbane CBD and Spring Hill areas.

Technical investigations have identified that the Project would have a direct impact at the surface level within a number of registered heritage places including:

- RNA Showgrounds
- Victoria Park
- Roma Street Station
- Boggo Road Gaol Division 1 and 2
- Rocklea Station
- Salisbury Station.

While works would be undertaken within these registered heritage places, the identified heritage elements of these places are expected to only be impacted at RNA Showgrounds, Boggo Road Gaol, Yeerongpilly, Rocklea and Salisbury stations.

The residual impact on non-Indigenous cultural heritage would be low, except at the RNA Showgrounds where, pending specific mitigations to be identified in consultation with the RNA and Lend Lease regarding cultural heritage elements, the residual impact is identified as moderate.

Victoria Park and the work areas around the Albert Street station site have been identified as potentially containing non-Indigenous artefacts. Although heritage elements may not be currently evident within the identified worksite area, they may be discovered during excavation activities.

Project works would be undertaken near to, either at surface or underground, a number of registered heritage places and as a result, potential vibration and settlement implications have been identified. Mitigation measures for the monitoring and management of these impacts on places potentially at risk have been identified. These mitigation measures would enable the residual impacts on these places to be low.

As per the particular manner requirements of the Australian Government Minister responsible for the EPBC Act decision that the Project is not a 'Controlled Action', no Project works would be undertaken within 200 m of Commonwealth registered heritage places.