

*Cardell*

**Submission No. 1**  
(RBA Craigieburn)  
Date: 10/12/13



RESERVE BANK  
OF AUSTRALIA

# National Banknote Site

## Statement of Evidence to the Parliamentary Standing Committee on Public Works

Submission 1

November 2013

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## Glossary of Terms

- **Ambulatory Passage** – a secondary building perimeter to support surveillance of the area immediately surrounding a strongroom.
- **Cash-in-Transit companies (CITs)** – companies that transport banknotes.
- **Facilities Management** – the department within the Reserve Bank responsible for the management of facilities owned by the Reserve Bank.
- **Fit banknotes** – processed banknotes that are determined to be of a quality suitable for reissue.
- **Information Technology** – the department within the Reserve Bank responsible for overseeing information technology.
- **Innovia Films** – the firm which manufactures base film which forms the foundation of the Guardian® polymer banknote substrate produced by Innovia Security.
- **Innovia Security** – the firm which produces the Guardian® polymer banknote substrate used in the manufacture of Australian banknotes.
- **Secure Loading Dock** – a secure area for issuing banknotes to Cash-in-Transit companies.
- **National Note Processing and Distribution Centre (NNPDC)** – a function of the Reserve Bank responsible for the distribution of banknotes to and from circulation and the processing of banknotes returned from circulation.
- **Next Generation Banknote (NGB)** – an upgraded banknote series that will incorporate a number of new security features.
- **Note Issue** – the department within the Reserve Bank which oversees all aspects of the production and issuance of Australia's banknotes.
- **Note Printing Australia (NPA)** – a wholly-owned subsidiary of the Reserve Bank responsible for the printing of banknotes.
- **Processing** – operations of NNPDC to determine the quality and authenticity of circulating banknotes.
- **Strongroom** – a secure area for holding banknotes.
- **Unfit banknotes** – processed banknotes returned from circulation that are determined to be of a quality that is unsuitable for re-circulation. These banknotes are destroyed.
- **Validate** – determining a banknote's authenticity.

## Executive Summary

1. The Reserve Bank of Australia (“the Bank”) is the sole issuing authority for Australian banknotes. A key objective of the Bank in meeting this legislative responsibility is to maintain public confidence in Australia's banknotes. There are three facets to this: ensuring that there are **sufficient banknotes** to meet demand, minimising the risk of **counterfeiting** and ensuring that the banknotes in circulation meet the **functional requirements** of the public.
2. To continue to achieve this objective, the Bank has embarked on a program to upgrade the security of Australia's banknotes. The Next Generation Banknote (NGB) project will see the currently circulating banknotes progressively replaced with new upgraded banknotes over the next decade.
3. The current storage, distribution and processing capacity at the Bank's Sydney, Melbourne and Craigieburn sites is insufficient to enable the Bank to store and issue the new series of banknotes or to accommodate banknote growth in the medium term.
4. A preliminary study by the Bank in 2011 identified the Craigieburn site as the most appropriate location for the expanded requirements. A further master plan study was undertaken in 2013 in conjunction with the development of the facility brief to determine the most appropriate approach to develop the site. This study included a broad range of options, including alterations and additions to the existing facility and a stand-alone building on the property.
5. Based on the outcome of the study, the Bank is seeking to build a National Banknote Site (NBS) on vacant land owned by the Bank in Craigieburn, Victoria. The objective is to deliver a fit-for-purpose facility that will be fully operational by early 2017 to enable the transition to the NGB series and meet the Bank's banknote storage, distribution and processing requirements for the next 25 years.
6. The NBS will allow for relocation and expansion of the existing National Note Processing and Distribution Centre currently located within the Note Printing Australia Main Production Building on the same site, and will include storage capacity to accommodate the Bank's banknote holdings that are currently held in the Bank's Melbourne site.
7. The limit of cost of the building will be \$72 million (excluding GST). This cost will be funded internally by the Bank.
8. The Bank is required to refer this proposal to the Parliamentary Standing Committee on Public Works (PWC) and obtain approval from Parliament for the project to proceed.

## Need for Works

### Introduction

9. The Bank is a Commonwealth authority under the *Commonwealth Authorities and Companies Act 1997 (CAC Act)* (to 30 June 2014). In addition to its core responsibility for monetary policy, the Bank is also responsible for the issue, reissue and cancellation of Australia's banknotes in accordance with the *Reserve Bank Act 1959*. The *Public Governance, Performance and Accountability Act 2013* (from 1 July 2014) is also applicable to the Bank in its role as a Commonwealth entity.

10. The Bank's banknote operation includes the following functions and locations:
  - a) Production – Banknotes are printed by the Bank's wholly-owned subsidiary, Note Printing Australia Limited (NPA), at Craigieburn, Victoria.
  - b) Storage – Banknotes are stored at three Bank sites: Craigieburn, Sydney CBD and Melbourne CBD.
  - c) Distribution – Banknotes are distributed to commercial banks from two Bank sites: Craigieburn and Sydney CBD.
  - d) Processing – Banknotes are authenticated and fitness checked at the National Note Processing and Distribution Centre (NNPDC) in Craigieburn.
11. The Bank has established a project to upgrade the security of Australia's banknotes. This Next Generation Banknote (NGB) project will progressively replace the currently circulating banknotes with new upgraded banknotes over the next decade.
12. To meet the demands of the NGB project and the Bank's future operational requirements, the Bank's banknote storage, distribution and processing capacity needs to be substantially increased.
13. The banknote growth rate for the past 20 years has been around 5 per cent per annum and no roll-out of a new banknote series has occurred during this time.
14. A project team, comprising of in-house and external service providers, was established to assess the most effective solution to accommodate the Bank's projected operational requirements. The Project Team developed a functional brief of requirements and assessed the most appropriate approach.
15. The current manual handling techniques are unsuitable for the increased banknote volumes over the NGB period and beyond. As a consequence, the Bank is undertaking a separate, but related, project involving the modernisation of the storage, distribution and processing functions for the handling of banknotes. This includes a reliance on automation, which will be integrated into the NBS.

## Background

16. The Bank has responsibility for the issue, reissue and cancellation of Australia's banknotes. A key objective of this legislative responsibility is to maintain public confidence in Australia's banknotes. There are three facets to this: ensuring that there are **sufficient banknotes** to meet demand, minimising the risk of **counterfeiting** and ensuring that the banknotes in circulation meet the **functional requirements** of the public.
17. Australia's banknotes are amongst the safest and most secure in the world. Australia has experienced relatively low levels of counterfeiting for many years. To ensure that this remains the case, the Bank continually evaluates and develops new anti-counterfeit technologies and banknote designs. In 2012, the Bank announced its intention to upgrade the security of Australia's banknotes. While the upgraded banknotes will retain many of the key design elements of the current banknote series, such as the colour, size and portraits, some design changes will be necessary to accommodate new security features.

18. In the late 1990's, organisational change within the Bank led to the centralisation of Banking Services and the establishment of new Note Issue arrangements in Sydney, Melbourne and Craigieburn, which contributed to the closure of branches in certain states including Brisbane, Hobart, Perth and Adelaide.
19. At the end of October 2013 there were 1.2 billion banknotes in circulation worth \$59 billion. Each year banknotes are purchased from Note Printing Australia to maintain quality and meet public demand. In 2012/13, this equated to the purchase of 197 million banknotes which was slightly above the average number purchased per year since the current series was introduced.
20. In the late 1990s, a number of forces saw the Bank contract in size, as technology was applied, and better practices adopted, resulting in major efficiencies in the Bank's operations. As a result, the Bank's staffing fell from about 3,300 to 800, resulting in large cost reductions. These efficiencies were concentrated in banking (including for State governments), registry and currency operations, which were the staple activities of the Bank's branches. As these activities were reduced in scale, or eliminated, in the branches there was no case to retain the branches in most States or Territories or to continue to own the buildings in which the branches were located. Accordingly, the premises in Adelaide, Brisbane, Darwin, Hobart and Perth were sold. This considerably reduced operational costs, realised capital for other purposes and increased the Bank's dividend, by the extent of the realised gains, paid to the Commonwealth. This, however, also resulted in five of the eight currency distribution and storage locations being closed, with these activities now occurring only in Sydney, Melbourne and Craigieburn.
21. As a result, the Bank has considerably less banknote storage space than it had when polymer banknotes were introduced from 1992 to 1997. The Bank holds banknotes in three locations: Sydney CBD, Melbourne CBD and Craigieburn, Victoria. The three locations have approximately 7,600m<sup>3</sup> of high-security strongrooms suitable for storing approximately 1 billion banknotes. This capacity has been sufficient for the Bank's normal operational requirements. This capacity will be insufficient, however, for the withdrawal of old banknotes and the issuing of the NGB series. The method for storage of banknotes is 30 years old.
22. Established in 2000, the NNPDC, located in NPA's Main Production Building at Craigieburn, validates and fitness checks all banknotes that are withdrawn from circulation. Banknotes that are designated as being fit are reissued while unfit banknotes are destroyed. The NNPDC processes approximately 170 million banknotes per year.

## **The Need**

23. While the Bank's storage capacity has declined over the past 20 years, the number of banknotes in circulation has increased by almost 5 per cent per annum over the same period. As a result, the Bank has insufficient storage capacity to accommodate the storage of the NGB that will have been printed and await issue and the current series banknotes that will have been withdrawn from circulation and scheduled for verification and destruction. Over the NGB issuance period, approximately 5 billion banknotes will be handled by the Bank.
24. It is estimated that banknote storage requirements will exceed current capacity by early 2017, and peak well over current capacity during the issuance of the NGB. Beyond NGB, the Bank's strongroom capacity will need to accommodate the projected increase of

banknotes in circulation and provision for future banknote upgrade programs. The Bank aims to meet its banknote storage requirements for a minimum of 10 years, and to include provision for a future strongroom expansion if required.

25. The existing processing capacity at the NNPDC consists of four high-speed processing machines working one shift. This allows the processing of 170 million banknotes a year. During the issuance of the NGB, over 1.7 billion banknotes will be withdrawn from circulation and returned to the Bank for validation and destruction.
26. The current labour-intensive banknote storage and handling practices are also in need of modernisation and automation. These practices were established over 30 years ago to make the best use of the Bank's strongrooms available at that time. A separate, but related, project will result in the upgrade of processes and procedures, including packaging, handling, storage and IT systems to improve efficiency, security control and reduce WHS risk. The NBS will be designed to accommodate the associated space requirements.
27. The Bank has secondary objectives to segregate its distribution and processing operations from the NPA printing functions, to improve workflow efficiency and security, to consolidate its banknote holdings in Victoria, to minimise banknote movements and costs, and to improve the work environment.

## **Options considered**

28. An evaluation of the existing Bank premises in Sydney, Melbourne and Craigieburn was undertaken to assess if any of these sites could fulfil the Bank's expansion requirements. Broadly, the Sydney and Melbourne buildings were discounted due to space and access restrictions to these CBD locations. The Craigieburn site was identified as the most suitable location. The Craigieburn site has the benefit that it includes a parcel of surplus land adjacent to the NPA printing works that reduces the risks and costs of banknote transportation, facilitates retention of existing staff, is within an appropriate industrial zone, and is adjacent to transportation corridors.
29. While it is recognised the Bank could establish a new facility in a new location, this option was discounted due to the advantages and availability of the unused land at the Craigieburn site and is in line with the Bank's property strategy.
30. Three options were considered on the Craigieburn site:

### **Option 1 – Upgrade and extend the existing facility**

This option involved modifying NPA's main production building to suit the new requirements by adding a new banknote strongroom and loading dock. This option has inherent limitations due to constraints of the current aging facility, life cycle issues, the current security grade of construction and the risk of the construction works to the adjacent banknote printing operation, at a time when these operations will have to perform at peak efficiency.

### **Option 2 – New building inside existing secure site perimeter**

This option identified a parcel of land within NPA's security zone that was large enough to locate a new building. The land is located to the north of the main production building and is currently occupied by the staff centre that includes the site's canteen, gym and training facilities.



**Option 3 - New building outside existing secure site perimeter**

This option locates a new building on a vacant portion of land outside the existing high-security perimeter and adjacent to the car park at the north of the existing site.

**Reason for adopting the proposed course of action**

31. An initial project objective involved optimising existing infrastructure. However, as investigation of Option 1 evolved, it became evident that the inherent constraints of the existing facility and the risks to NPA's printing operations were not acceptable, and the cost / benefit of this option were unfavourable. The existing building was designed and constructed primarily as a bespoke printing facility, not for banknote processing and storage. The additions to this building could not be accommodated within the available adjacent land. Our analysis identified considerable compromises and significant costs associated with retrofitting the existing facility to meet the high-security requirements.

This option would also involve significant disruption to site operations during the lead up to the NGB roll-out, as construction work would be carried out adjacent to the Print Hall that would be running at full capacity; this is also an area that is very sensitive to dust and vibration. Similarly, the option did not address other secondary objectives such as the segregation of the Bank's and NPA's operations and consolidation of the Bank's Victorian banknote holdings.

It was concluded that Option 1 was not feasible within the available space constraints of the existing facility, as it represented a high operational risk to the printing function during construction and provided a poor value-for-money outcome in terms of meeting the Bank's longer term needs. This option was discounted from further consideration.

32. A number of locations for a new building were identified. Options 2 and 3 became the most cost effective of the considered locations. The new building approach was based on a two-storey, relatively square, module designed to accommodate the storage, distribution and processing functions, with the potential to extend the strongroom capacity at a later date. Other primary objectives included the ability to integrate automated storage solutions, adopt high-security standards for the construction of storage and processing areas, minimise disruption to site operations and optimise efficiency and workflow.

Option 2 satisfies the Bank's key functional objectives of providing a facility for the Bank's storage, distribution and processing functions during the NGB issuance and into the future. The option is sized to consolidate the Bank's Victorian banknote holdings and also allows for expansion of the storage capacity at a later date if this proves necessary.

Option 2, however, involves additional costs to demolish and relocate the staff centre, and involves risk to the program due to the additional scope of works and the time it would routinely take to access the site for construction. Construction within the secure site perimeter would result in additional security and contractor management risks and considerable disruption to the ongoing banknote operations and staff access on the site during construction.

It was concluded that Option 2 exposes the Bank to higher risks and costs than Option 3.

33. Option 3 provides more benefits to the Bank in relation to minimising disruption to the site operations, reduced security risks during construction and long-term site optimisation. The proposed location in the north-west corner of the property provides the Bank with the flexibility for the future, effectively unencumbered by the other functions on the site. This approach satisfies the Bank's key functional objectives and provides a stronger approach than the other options for the Bank's storage, distribution and processing operations during the NGB issuance and into the future. With a total storage capacity of almost 2 billion banknotes, the option is sized to consolidate the Bank's Victorian banknote holdings and also allows potential for expansion of the storage capacity at a later date.

As Option 3 involves construction outside the secure perimeter, the impact on existing operations, security and the production of the NGB will be minimised. Once the building is complete, this option provides full segregation of the Bank's and NPA's processing and distribution operations.

The new build option offers the best value for money for the long-term and is the preferred solution.

34. The new, purpose-built, National Banknote Site (NBS) provides an efficient layout for the Bank's storage, distribution and processing functions and integrates automated technology to store and handle banknotes within the facility. The facility has been designed to accommodate the Bank's requirements for at least 25 years and is expected to serve as the Bank's primary banknote operations centre beyond this timeframe. Its proximity to the NPA printing works is cost-effective, logistically efficient and promotes security.
35. The processing function's activities have been reviewed to meet the increased demand of the NGB and future projected growth. The existing four processing machines will be insufficient for this work and would lead to backlog and storage capacity issues. The engagement of a second shift to increase processing capacity was considered, however this was discounted for the following reasons:
- a) The increased management of the security risk associated with handing over the highly secure function from one shift to the next;
  - b) Difficulty in achieving a balance of experienced and newly recruited workforce to operate the specialised processing and administration functions;
  - c) Limited redundancy as any significant processing machine downtime would have an increased impact; and
  - d) The requirement for doubling the amenities, such as lockers and secure storage.

To meet the processing demand the Bank will require two additional banknote processing machines to provide sufficient capacity. Space will be provided for a further two machines, to enable the replacement of existing machines at the end of their life without affecting processing capacity, and to accommodate growth in banknotes in circulation.

## Historical background

36. A 26 hectare site at Craigieburn was acquired by the Bank as a green field site in 1972. The Main Production Building and associated buildings were designed by the Australian Department of Housing and Construction and completed in 1981.
37. A brief for the original building in 1975 noted that the new complex was expected to satisfy the demand for banknotes up to the 1990s. Importantly, the print hall was designed as a high, column-free space to cater for future developments in printing techniques.
38. Other buildings completed in 1981 included a staff centre, located within a landscaped courtyard to provide staff amenity, and a services building, providing central plant for the site, linked to the Main Production Building via an underground tunnel.
39. In 1997, a portion of land to the north of the car park (approximately 4.2 hectares), was sold to UCB Films Pty Ltd, now operating as Innovia Films Pty Ltd.
40. To the west of the Main Production Building is a manufacturing plant that produces the polymer substrate used in Australian banknotes. This building was initially constructed in the late 1990s and enlarged in 2007. A complementary research and development building adjacent was added in 2009. These buildings and associated site are leased by Innovia Security.
41. Externally, the original buildings on the site have remained virtually unchanged. Internally, the Main Production Building was adapted in 2000 to include the Bank's requirement for the NNPDC.

## Heritage considerations

42. A heritage assessment of the site was undertaken by Robyn Riddett of Anthemion Consultancies in 2009. The outcomes of the report included:
  - a) The Main Production Building is of interest for its use of precast components and techniques of the period but does not warrant inclusion in Commonwealth heritage listings.
  - b) The landscaped courtyard is considered as being potentially of local significance within the City of Hume by the consultant, but it is not listed by either local or state authorities. Designed by Robert Boyle, planting in the courtyard drew inspiration from an array of Australian plants featured in the original paper \$5 banknote, which were specimens noted by Sir Joseph Banks at Botany Bay in 1770. It is described in the heritage report as being a fine, relatively intact example of late 20<sup>th</sup> century bush landscape design.
  - c) Local plans indicate that the northern edge of the Bank's Craigieburn site is within a zone of potential Indigenous Cultural Heritage Sensitivity surrounding Aitkin Creek. An assessment of the site by Andrew Long and Associates has advised that the site is of no significance, particularly due to the site being disturbed during the initial and subsequent developments undertaken in adjacent sites. Monitoring of excavation activities will be undertaken during construction.

## Environmental assessments

43. An environmental assessment has been conducted by a specialist consultant, BIOSIS. BIOSIS has advised that there are remnants of native grasslands on the site and potentially a habitat for the Golden Sun Moth. A Referral under the Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) may be required for this proposal. Further studies will be undertaken to determine an appropriate course of action in order to comply with the EPBC Act.

## Key legislation

44. Legislation relevant to the need for, and advisability of the proposed development of the site is listed below:
- a) *Reserve Bank Act 1959;*
  - b) *Commonwealth Authorities and Companies Act 1997 (to 30 June 2014);*
  - c) *Public Governance, Performance and Accountability Act 2013 (from 1 July 2014);*
  - d) *National Construction Code of Australia (NCC) 2013;*
  - e) *Disability Discrimination Act 1992;*
  - f) *Environmental Protection and Biodiversity Act 1999;*
  - g) *Privacy Act 1988;*
  - h) *Auditor General Act 1997 (Cth);*
  - i) *Crimes Act 1914 (Cth) and the Criminal Code Act 1995 (Cth);*
  - j) *Freedom of Information Act 1982 (Cth);*
  - k) *WHS Act 2011 (Cth); and*
  - l) *WHS Act Victoria 2012.*

## Consultations with relevant stakeholders and key issues of concern

### Consultation with internal stakeholders

45. During the development of the project, extensive consultation has been undertaken with the Bank's Note Issue Department, Note Printing Australia and other Bank stakeholders including Facilities Management and Information Technology. In addition, consultation has occurred with Innovia Security as a tenant on the site.

### Staff consultation

46. Drawing on their years of experience, regular consultation has taken place with the current banknote processing and distribution staff throughout the design process. The staff has contributed to the functional design of the NBS as well as identifying the

personal requirements and safety requirements of the building. The discussions have been conducted in an open and informal fashion with participation encouraged.

47. As the building progresses to fit-out, the Bank will continue to consult with processing and distribution staff on issues such as the kitchen layout and equipment, amenities and office space requirements.

#### External consultation

48. The following authorities, departments and boards have been contacted and/ or consulted by the Bank and its consultants during the preparation of this submission:
- a) Department of Finance;
  - b) Public Works Committee Secretariat;
  - c) Hume City Council;
  - d) Victoria Roads;
  - e) Victoria Police;
  - f) Energy and Utility Authorities;
  - g) Country Fire Authority;
  - h) Victoria Rail;
  - i) Local Residents Association including neighbouring landowners and tenants;
  - j) State Emergency Services; and
  - k) Innovia Films.

#### Impact on local community

49. The proposal will have a positive economic and social impact on the Craigieburn Community. The continuity of the presence of a prestigious institution such as the Bank is seen by the local community as a significant benefit for the area. In addition, the project will increase employment and benefit local suppliers and service providers.
50. There will be minimal disruption to the local community activities either during, or post, construction. Construction traffic will have minimal impact on the local traffic networks being confined to the major arterial roads and the industrial precinct.
51. There is no significant change in the types of activities on the site and no adverse environment impacts to neighbours.
52. Actions to address concerns by key stakeholders, if applicable, will include the following:
- a) Creation of a Stakeholder Management Plan including a point of contact for liaison for external stakeholders, such as neighbours, local residents and Hume City Council; and

- b) Creation of a Construction Management Plan that will also include an Environmental Management component to control noise, dust, and water quality during construction.

## Purpose of the Works

### Project objectives

53. The Bank proposes to deliver a modern, purpose-built, highly-secure facility that supports its operational needs associated with its legislative mandate for note issue over an estimated 25-year horizon. The project aims to achieve the following objectives:
- a) Meet the additional banknote storage, distribution and processing requirements for the transition to NGB, future banknote upgrades and the projected growth of banknotes in circulation;
  - b) Integration of a new logistics system including automated storage and handling;
  - c) Implement the Bank's physical security standards to achieve international security benchmarks;
  - d) Manage potential disruption to the existing operations on the site; and
  - e) Develop a long-term strategy to optimise the site to allow flexibility for the Bank's operations associated with banknote storage and distribution.
54. The NBS is to be constructed to a high standard of quality, within budget and to be operational in early 2017.

### Project location

55. A site location map of the Bank's Craigieburn site is shown in Attachment 2.
56. Immediately to the north of the site is a property owned and occupied by Innovia Films. This area was originally part of the Bank's site and sold to Innovia in 1997. The Innovia Films factory supplies the film that is then used by Innovia Security to produce the substrate used for the production of banknotes.
57. Immediately to the east of the site lies the Hume Highway. To the west is a rail line and to the south is industrial zoned land.
58. The Craigieburn site is approximately 1.2 km south of the town centre of the suburb of Craigieburn.

### Relevant local facilities

59. Craigieburn is a suburb of Melbourne, 26 km north of Melbourne CBD. The local government area is the City of Hume. At the 2011 Census, Craigieburn had a population of 32,757. It incorporates community, residential, industrial, retail and ecological areas.
60. The suburb is part of a growth corridor to the north of Melbourne. This has been aided by the recent addition of Craigieburn Station to the suburban rail network. It is

gradually becoming more urbanised and expanding to the north and west. Most of the area is greater than 200 metres above sea level, with Mount Ridley being the northernmost hill in north-western metropolitan Melbourne, giving it clear views of Melbourne CBD.

61. The suburb is located 11 km north east of Tullamarine Airport, although the shortest travel distance by road to the airport is approximately 22 km. Craigieburn is located on the Hume Highway, a major distributor that runs north-south to Melbourne CBD. It has been supplemented by the construction of the Melbourne ring road that joins with the Hume Highway 5 km to the north.

### **Local road access and public transport**

62. Vehicular access to the site is via Potter Street, an 8 metre wide local road servicing the industrial uses along its length. To the north, Potter Street provides access to Hume Highway and the Craigieburn Bypass.
63. Potter Street crosses Aitken Creek to the north of the site. The creek has flooded on at least one occasion in the past 30 years, restricting access to the site. This is not considered a long term major risk.
64. Additional traffic generated by the NBS is expected to be in the order of 80 vehicles per day at the height of issuance of the NGB series. The surrounding road network has sufficient capacity to accommodate these additional volumes.
65. This additional traffic includes:
  - a) Staff vehicles – 45 (estimate). Total staff for the new site is approximately 60 including approximately 15 existing staff.
  - b) Cash in Transit (CIT) vehicles – 25. Total CIT deliveries will reach 28. There are currently three deliveries per day.
  - c) Other vehicles - up to 10. This caters for visitors and service vehicles.
66. Craigieburn station is approximately a 1 kilometre walk from the site and was recently added to the suburban rail network. Pedestrian access to and from the railway is only via Potter Street but rail patronage by staff working on the site remains low.
67. The site is not directly served by buses, although several local bus routes connect to Craigieburn railway station. Bus route 532 runs close to the site along the Hume Highway.

### **Site zoning**

68. The site is classified as Industrial Zone 3 under Hume City Council's planning instruments. The proposed use is acceptable in this zone.
69. The town planning assessment report prepared by Meredith Withers and Associates demonstrates that the project meets the requirements of the Hume Planning Scheme. It concludes that if a planning permit was required under the Hume Planning Scheme for the new Bank facility, there is no reason why it would not be granted. Discussions with Hume City Council to date, suggest that the Council is satisfied that the building is an appropriate use and development of the balance of the Bank site and that any

potential impacts on neighbour's amenity have been addressed in the design and siting process.

70. The report confirms that the facility would satisfy expected permit conditions for Warehouse use and development.

### **Master and site planning**

71. The site area is approximately 21 hectares. Approximately 4 hectares is contained within an existing dual-fenced perimeter sterile zone and approximately 10 hectares is contained within the secured site.
72. The northern portion of the site contains an unsecured staff car park with approximately 420 car spaces. Vehicular access to the car park and the secure site is from Potter Street.
73. Within the current secure site fencing there are a number of separate buildings containing staff facilities, building services, the main printing works and other production and support facilities. There is a heavily landscaped courtyard adjacent to the staff facilities building.
74. The NBS will be located to the north of the existing facility and to the west of the existing car park. It will, therefore be located outside the current security perimeter.
75. A new security sterile zone will be established around the site with a gatehouse facing east allowing the complex to address the direction of arrival. The site will not be accessible to the public.
76. The site has a low gradient with rock close to ground level. Along the western boundary of the site, the land is graded to provide a two metre high retaining wall between the site and the rail line.
77. Pedestrians and vehicles will enter the site from the east. Pedestrians will pass directly to the building entry via a covered walkway. Vehicles will circulate to the south of the NBS to access the secure Sallyport and service points.
78. The NBS is capable of expanding to the north on the site to accommodate growth in banknote storage or other functions, if required.

### **Planning and design approach**

79. In translating the Bank's vision and objectives into the built form, the following project principles were adopted to inform and drive the design concept:
- a) Provide a facility that reflects the quality and conservative nature of the Bank without drawing attention to its function;
  - b) Establish a hierarchy of physical security appropriate to the various zones within the site and facility to meet the Bank's standards and deter attack;
  - c) Optimise the workflow for the efficient and secure handling of banknotes within the building;
  - d) Establish a facility capable of meeting future expansion;



- e) Provide a suitable work environment within the confines of a high security operation; and
- f) Deliver a safe, functional and cost effective facility of sustainable design suitable for the local climate, and of a style in keeping with the local landscape.

## Design concept

- 80. The concept for the NBS expresses the high-security nature of the facility in a contemporary, yet conservative, manner. The materials and systems required to meet the defence, ballistic and surveillance requirements are being used in the architectural expression of the building in conjunction with a simple and efficient footprint. It will provide an imposing and uniform appearance that gives no indication of the function within the building.
- 81. The operational functions will be established over two levels, providing segregation of the main functions from the strongrooms that are located close by. Distribution and security control functions will be located on the Ground Floor. This area will be highly automated.
- 82. The processing, administration and staff amenity areas will be located on the First Floor.

## Scope of works

- 83. The scope of the proposed works will include the construction of the two-storey NBS including the supporting services infrastructure and other site works. The facility will include the following functional spaces:
  - a) **Banknote strongroom** - Modelling undertaken by the Bank to project the capacity at the peak of the NGB has determined that a total volume of 14,400m<sup>3</sup> of high security banknote storage is required in the new building (refer Table 1). The new strongroom will have an internal height of around 11 metres to suit the automated storage system and will be surrounded by an ambulatory passage.

Table 1: Banknote Storage Capacity

Location	Current (m <sup>3</sup> )	New (m <sup>3</sup> )
Craigieburn Holding Point (CHP)	4,000	-
Sydney Holding Point (SHP)	2,400	2,400
Melbourne Holding Point (MHP)	1,200	-
New Building	-	14,400
<b>Total storage capacity</b>	<b>7,600</b>	<b>16,800</b>

- b) **Banknote processing facility** - The NBS will be designed to accommodate six processing machines at start-up with scope to accommodate up to eight machines.
- c) **Secure loading dock** – A new secure loading dock with secure controlled entryway will be located adjacent to the banknote strongroom and will accommodate and segregate up to four CIT vehicles. Specialised security locks will securely manage banknote movements, which will exceed 150 million banknotes per month at the peak.

- d) **Integration of logistics system** – The NBS is designed to modernise the Bank’s banknote packaging, storage, handling and IT systems. The modernised system will provide the link between the strongroom, processing area and secure loading dock and will feature a new packaging container, automated racking, automated guided vehicles and associated conveyors.
- e) **Security control room** – This room will be configured to independently monitor and control the security alarm, access control and CCTV systems on the new site. It will also have the capacity to monitor and control critical building services such as the fire alarm and emergency warning systems. The security control room will be constructed as a Grade A Security Monitoring Centre as defined in AS/NZ 2201.2-2004.
- f) **Data centre** – The data centre is located on Level 1 with a maximum 600mm under-floor void for reticulation of services. Its construction will be based on the cold aisle containment principle for high-energy efficiency. It will be sized to accommodate the technology requirements of the site, which includes a high level of digital CCTV recording. Some spare capacity will be available for future growth and a separate carrier room and plant space will be located adjacent to the centre. The data centre will be constructed to achieve the ASIO Server Room 1 standard.
- g) **Administration** – A small administration area will accommodate up to eight staff responsible for managing the banknote operation, the facility itself and IT systems.
- h) **Support facilities** – The NBS is expected to have around 60 full-time staff. Functions of the building will be supported by an entry, lunch facilities, meeting room, change rooms and toilets, medical room, goods dock and store. Staff will also have access to the existing staff centre and gym at the NPA site.
- i) **Services building** – Located to the south west corner of the site, a separate services building will house some central plant including electrical sub-station, generator and water tanks and pumps. Other plant will be located on the roof of the building.
- j) **Perimeter security** - A combined vehicle and pedestrian entry point, internal and external security fencing, sterile (no-go) zone and high intensity lighting will be key security treatments located on the perimeter.

### Future use of vacated space

84. Once the NBS is delivered, three existing spaces will no longer be used by the Bank. The proposed use of these spaces is:

- a) Craigieburn Holding Point 4000m<sup>3</sup>. Secure strongroom space within the NPA Main Production Building will be leased to NPA as a secure space for the storage of substrate material and product associated with their international banknote operations.
- b) NNPDC. Also located in the Main Production Building, this will be leased to NPA as a secure space for other secure materials.
- c) Melbourne Holding Point 1200m<sup>3</sup>. The guarding costs associated with securing this strongroom space are not cost effective because this space is small and

inefficient. It is therefore proposed to offer this space to the market as non-secure storage space.

## **Materials and furnishings**

85. Precast concrete elements are proposed as the major external façade element. These provide the opportunity to meet the security ratings and achieve a high quality, low maintenance and robust finish. These elements will be shaped so that they will form structural elements that can span from the ground to the roof, providing an uninterrupted secure internal walkway inside. Their shape will assist in the diffraction of light and noise to minimise any impact to nearby neighbours.
86. Internally the finishes will be simple and robust to suit the industrial nature of the NBS. Spaces have been open planned, where possible, to improve connection and communication with staff in the facility. The palate will be light and colourful to create a suitable ambience for workers.

## **Physical security and security services**

87. Security treatments will be integral in the design of the facility and developed in response to a site security plan and to comply with the Protective Security Policy Framework. The site security plan incorporates a security objective, standards, risk assessment, security zones, workflows and security countermeasures.
88. The Bank's overall security objective is to manage the risk of harm to people and prevent loss, damage or compromise to assets, information and functions by establishing and maintaining appropriate, cost-effective systems and procedures.
89. Physical security countermeasures will be developed utilising a "defence-in-depth" (layered) approach adopting the principles of deter, detect, delay and respond. Wherever possible barriers and technology will be used as the primary method of control. Proposed workflows and security countermeasures have been reviewed as part of a safety-in-design process and tested during day-in-the-life desktop exercises to ensure controls minimise security and emergency control risks, have the ability to move to a heightened level of security and do not breach relevant work health safety obligations.
90. The NBS will be considered a high-security facility with restricted access. Standards have been developed from applicable Australian and international standards, and processes observed at other central bank banknote storage, distribution and processing facilities. These facilities include the Bank of England, US Bureau of Engraving and Printing and the Monetary Authority of Singapore.
91. A security risk assessment has been developed in conjunction with professional security providers with advice from Victoria Police. The risk of undesirable outcomes will be managed by the application of countermeasures in the form of people (management and guarding), infrastructure (barriers and technology), procedures and external response arrangements. A Type 1 Security Alarm System, detection devices, card and biometric access control and CCTV will be used extensively throughout the site.
92. Detailed design and construction documentation will be closely protected, and access to it tightly controlled, to maintain a high level of confidentiality. During construction, security countermeasures such as fencing, access control, guarding and detection will

be employed to manage access to and monitor the site. All contractors will be required to submit to a criminal records check.

93. Site specific protective security roles and responsibilities, procedures and security instructions will be developed in conjunction with key stakeholders during the detailed design phase.

### **Civil works**

94. The earthworks for the NBS will be shaped to create a level pad for the building with surrounding areas graded away to the perimeter of the site.
95. Internal access roads have been laid out to allow vehicles to circulate through the NBS with sufficient clearances to new infrastructure. This includes an internal link road from the existing NPA secure site to the proposed site via secure access gates.
96. Pavements consisting of concrete and asphalt surfacing are designed to withstand the traffic volumes over their design life.
97. Stormwater drainage collection points will be located around the NBS to alleviate localised ponding. Discharge will be to the existing drainage network within the car park and include a single isolation pit with automatic shutoff capacity operable from the control room and pit itself.
98. The runoff discharged off-site will be treated to meet the water quality targets set by the drainage authority.

### **Internal traffic and parking**

99. The current car park serving the entire Craigieburn site has a capacity of 420 vehicles. The expanded staffing numbers required to deliver the NGB will require some expansion of the car park capacity with an estimated addition of 80 spaces for staff and visitors. These spaces can be built within the existing car park area. The NBS component of these additional spaces is approximately 55 spaces.
100. To accommodate the CIT delivery schedule, provision of four vehicle queuing spaces will be required.

### **Structure**

101. The main building will be constructed using a reinforced concrete frame supported on pad or strip footings which will extend down to the existing rock shelf, approximately 2 metres below the existing ground surface. Stability will be provided by reinforced concrete walls around the strong room and stair/lift cores. The concrete frame will support the required loading and has inherent robustness and durability.
102. The building's structural elements will be designed to meet the requirements of the Security Plan, in particular for attack resistance.

### **Mechanical services**

103. Central Plant will comprise air cooled chillers and gas fired boilers and will be located in a secure enclosure on the roof of the main building. The central plant will incorporate an appropriate level of redundancy and will be sized to ensure optimum performance at

both high and part load and will operate independently of the adjacent NPA site. Free space will be allowed for the installation of plant to serve future building expansion.

104. Compressed air and vacuum plant which will feed the note processing machines and workshops in the vault auxiliary spaces also be located on the roof.
105. Dedicated refrigeration plant serving the gate house building will be located in a secure enclosure on the roof off the gate house building.
106. Air handling units combined with a variety of air distribution systems will be used to deliver conditioned air to each zone. The air handling units will be housed in the main roof top plant room and will connect to the spaces below via a network of vertical risers. Systems will comprise a mix of constant volume, variable air volume and fan coil unit systems. System selection will vary depending on the function and security level of the space served.
107. The central plant will be provided with approximately 50 per cent redundancy to allow maintenance of machines to be carried out without major building disruption. Pumps, including those serving the compressed air systems will be designed for duty/standby configuration.
108. Areas integral to maintaining the security and communications capability of the building will be provided with 100 per cent redundancy on air handling systems. These spaces will be provided with a secondary means of maintaining internal conditions in the event of major, central plant failure. Back-up systems include, dedicated refrigeration equipment and supplementary exhaust fans. All plant serving these areas will be on standby power.
109. The central data centre and the communications room in the security area will be provided with Computer Room Air Conditioners with redundancy provision. In the unlikely event of both CRAC units failing, heat will be removed from the space by a local exhaust fan until one of the air conditioning units can be brought back on line.
110. The building will be controlled by a building management system with an interface to the existing NPA building to allow for remote control and monitoring.

### **Hydraulic services**

111. The hydraulic systems for the proposed development will be in accordance with the requirements of the standards and codes having jurisdiction. Connections will be made by extending the existing Craigieburn site infrastructure for water, sewer and gas.
112. Provisional connections for future stages will be made in the proposed services as well as allowance for the site to connect directly to mains.

### **Fire protection**

113. Fire services within the new facility will be designed in accordance with the National Construction Code (NCC), Fire and Rescue Victoria requirements and the Fire Engineering recommendations as an autonomous system with totally independent fire hydrant, hose reels, sprinklers and supplementary fire suppression systems.
114. Due to the secure nature of the facility, it is not possible to comply with all 'deemed to satisfy' requirements of the National Construction Code and a fire engineered

alternative solution is required. As part of these alternate solutions, it has been decided that sprinklers will be installed through the entire facility for safety reasons.

### **Electrical services**

115. The electrical services includes the supply and distribution of electrical power. The new building incorporates a new power supply from the local supply authority reticulated underground from Potter Street and a second supply from the local authority network adjacent.

116. Power will be supplied from new local supply authority substations and distributed through new switchboards and cabling systems throughout the building.

117. The local supply authority power will also be combined with a standby generation system and an Uninterruptible Power Supply (UPS) system providing 'no break' power supply to critical services loads.

118. The power will be monitored via electrical meters. Energy sub-metering will be provided to Building Code requirements, including for lighting and power in all major spaces on each floor. This will provide management with appropriate information on energy consumption to provide potential for improved energy efficiency.

### **Vertical transport**

119. A pedestrian lift and separate goods lift are proposed for the facility. The lifts will be designed, manufactured, installed and tested in accordance with Australian and AS/NZ Standards. Passenger lifts will provide suitable accessible facilities to meet the requirements of the Disability Discrimination Act.

### **Lighting design**

120. Lighting design will be specific to the requirements for each functional space and also address the security and safety requirements determined for this facility.

121. Lamp selection and the switching control strategy will be based on reducing energy consumption.

122. Emergency, Exit and Security Lighting is included in the design, to meet the requirements of AS 2293.

### **Information and communication technology services**

123. The ICT Services incorporates the supply and distribution of telecommunications to, and throughout, the building. The new building will include new lead-in services from telecommunications carriers reticulating underground from Potter Street.

124. The System will be provided in accordance with the following:

- a) The Bank design guidelines;
- b) Relevant Australian and International Standards; and
- c) The Australian Government Information Security Manual (ISM).

## **Furniture and equipment**

125. Loose furniture to offices, open work points and office support spaces, including meeting rooms, will be modular and flexible.
126. Four specialist processing machines will be relocated from the existing NNPDC within the Main Production Building to the NBS, supplemented by two new machines. The design incorporates the specific spatial requirements, service connections and optimal environmental conditions while this equipment is operating to facilitate its efficient and safe use.
127. Specific proprietary loose items, including compactus, open metal shelving, lockers and cabinets, will be procured and installed during the course of the project.

## **Acoustics**

128. Noise and reverberation criteria for internal spaces will be specified in accordance with Australian Standards AS2107:2000 Acoustics and AS1469 Acoustics – Methods for the Determination of Noise Rating Numbers.

## **Landscaping**

129. A landscape plan has been developed to reflect and extend the existing environmental features and character of the Bank's Craigieburn site. The design responds to the proposed facility by providing context to soften and moderate the visual impact of development, allow for efficient security surveillance and provide usable external spaces for staff.

## **Environmental sustainability**

130. The Bank is committed to an integrated and sustainable design. The sustainability objectives for the building place a strong emphasis on reducing net energy use through efficient design principles, the promotion of water efficiency, reduced waste through on-site recycling, storm water management, intelligent building management systems, materials that are locally sourced and are of high recycled content, and the promotion of low carbon transportation.
131. In accordance with good design practice, sensible and appropriate levels of technology and design will be applied from both a financial and environmental perspective without reducing the functional and secure standards required by a building of this type. Due to the specialised nature and core functional requirements of the building, some sustainable design opportunities such as opening the building to natural light and ventilation are to a degree restricted in application. The design philosophy is to provide both appropriate and sensible initiatives for the project that align with and support the functional and operational requirements of a highly secure building, taking account of sustainability considerations to the extent possible.

## **Energy targets**

132. Buildings of this nature are considered bespoke; as such, energy and water consumption data are not readily available for comparative or benchmarking purposes. In the absence of benchmarks, the design has drawn guidance on relevant sustainability criteria from both national and international environmental rating systems such as

Green Star, BREEAM and LEED. Greenstar is an Australian voluntary environmental assessment system whilst BREEAM and LEED are both international rating systems. Utilising these environmental rating tools combined with the experience of the project team and the ESD consultant, the design will target the following key ESD objectives to ensure a sustainable outcome for the building:

- a) Incorporate good design and management initiatives to encourage sustainable practices during the buildings construction and operation;
- b) Achieve a high level of Indoor Environment Quality with emphasis on day lighting, views and indoor air quality in occupied zones;
- c) Achieve high levels of energy performance to reduce environmental and economic impacts associated with excessive energy use;
- d) Promote and provide facilities to encourage a shift towards sustainable transport;
- e) Reduce demand on potable water through water conservation initiatives;
- f) Encourage the use of environmentally preferable and low-impact materials;
- g) Encourage reduction of waste disposal to land, air and water through prevention, reuse and recycling;
- h) Stormwater quantity and quality control; and
- i) Encourage the protection and enhancement of the site's biodiversity.

133. In the absence of comparative energy data, the design is targeting a 10 per cent improvement on NCC 2013 Section J minimum energy performance requirements. This is an industry standard benchmark and a recognized approach to quantifying improvements in energy performance in buildings. In order to achieve the energy performance targets along with the key sustainable objectives noted previously, the following measures are being considered.

### **Measures to reduce energy and water use**

134. In combination with local, state and Commonwealth policies, a series of ESD initiatives are being considered.

135. For energy, these measures will include:

- a) Climate-responsive design strategies to be incorporated to minimise overall building energy consumption;
- b) Incorporate passive conditioning techniques where applicable to reduce the overall air conditioning loads. Techniques being considered include:
  - Shading of windows to prevent solar penetration in summer but allow passive heating in winter;
  - Building thermal mass and insulation combinations; and
  - High performance building envelope.



- c) An intelligent building envelope will provide a balance between shading, views, natural lighting, passive heating and solar control;
- d) Preference would be given to energy efficient equipment, with consideration of cost, suitability and maintenance;
- e) Maximise efficiency of full and part load performance of HVAC systems;
- f) Incorporate recovery of waste heat from the exhaust air to pre-temper outdoor air supply;
- g) The air-conditioning system is designed to either shut down or be set to a wider temperature control band, when a space is unoccupied;
- h) Control of outside air supply via a clock, occupancy sensors, and CO2 sensors, to minimise air conditioning requirements when spaces are not fully utilised;
- i) Building Management System (BMS) to schedule and optimise plant efficiency;
- j) Energy sub-metering to separately monitor consumption of mechanical plant, general power and lighting;
- k) Motion sensors, timers and daylight sensors, where appropriate, to control internal artificial lighting;
- l) Lighting circuits to provide high flexibility, (i.e. large/multiple areas are not to be controlled with one switch). This facilitates turning off the lights when the zones are unoccupied;
- m) The lighting system incorporates energy efficient lamps, use of luminaires with high light output ratios, coupled with controls to reduce energy consumption;
- n) External artificial lighting designed to minimise light spillage and incorporate day light sensors; and
- o) Emergency lighting within the building to use long life LED fittings.

136. For water, these measures will include:

- a) Aim to reduce potable water consumption by installing low flow fixtures and fittings;
- b) Incorporate sub-metering of all major water uses within the facility, to facilitate monitoring of water usage;
- c) Install a leak detection system on the building's supply for all major water uses within the building;
- d) Reduce landscape irrigation demand, through planting local and native species, suited to local climatic conditions;
- e) Further reducing irrigation demand by installing a high efficiency drip irrigation system and moisture sensors; and

- f) Collect rainwater and re-use for stormwater management and reduce demand for potable water.

137. Additional measures will include:

- a) Encourage the use of efficient refrigerants that have low ozone depletion potential (ODP) and low global warming potential;
- b) Where possible all timber and composite timber products will be sourced from sustainable timber supplies;
- c) The design team will consider and evaluate the appropriateness of using rapidly-renewable materials;
- d) Seek to use materials and products of recycled content;
- e) Use of standard material sizes for building fabric and fittings to avoid waste;
- f) Recycled materials are being considered in the use of structural concrete and metals;
- g) Main contractor to operate an environmental management system and implement best practice policies to minimise construction site impacts;
- h) Develop a comprehensive building user guide to improve occupant awareness on how to efficiently operate systems;
- i) Provide allowance for bicycle storage and changing facilities;
- j) Porous external surfaces to provide natural filtration of stormwater runoff; and
- k) Implement efficient management procedures to reduce, reuse and recycle secure and non-secure documents.

138. Specific water and energy-use targets for the project are determined on the basis of local, state and Commonwealth policies and regulations as listed below:

- a) Hume City Council: Pathways to Sustainability – An Environmental Framework;
- a) Climate change adaptation strategy, City of Melbourne;
- b) Commissioner for Environmental Sustainability Victoria (Part 2);
- c) State Planning Policy Framework 15: Built Environment & Heritage;
- d) The Australian Government ICT Sustainability Plan 2010-2015;
- e) NCC Section-J 2013; and
- f) Hume Council Local Water Action Plan 2007.

## **Provisions for people with disabilities**

139. Access and facilities for persons with disabilities will be provided where required in accordance with the Disability Discrimination Act (DDA), the relevant technical requirements of the National Construction Code – Building Code of Australia, Access to Premises Standard (2010) and associated Australian Standards. Accordingly, the following facilities will be provided where required:

- a) The appropriate number of self-contained accessible toilets per floor;
- b) Accessible shower facilities;
- c) All passenger lifts accessible and other facilities provided in accordance with AS 1735.12;
- d) Lifts, access-ways, doorways and accessible toilets and showers will be sized to conform to National Construction Code – Building Code of Australia; and
- e) In addition, where possible joinery and furniture items such as kitchenettes and reception desks will be provided in accordance with the enhanced design requirements of AS 1428.2.

## **Childcare provisions**

140. There are currently no childcare facilities on the existing site. Given the high secure nature of the new building, no childcare facilities will be provided as part of this project.

141. The Bank has investigated the childcare facilities currently available within or close to Craigieburn and confirms that several facilities have spaces available for enrolment. Prior to completion of the new facility, the Bank will assist staff with information on the location of childcare facilities and available options.

## **Work Health and Safety**

142. The proposed facility will comply with the requirements of the Work Health and Safety Act 2011 (Commonwealth) and the Occupational Health and Safety Act 2004 (Victoria).

143. The Bank is committed to improving work health and safety outcomes in the building and construction industry. In accordance with Section 35(4) of the Building and Construction Industry Improvement Act 2005 (Commonwealth), contractors will be required to hold full occupational health and safety accreditation from the Office of the Federal Safety Commissioner under the Australian Government Building Construction Occupational Health and Safety Accreditation Scheme.

144. The construction site is within the Bank's Craigieburn boundaries and no special or unusual public safety risks have been identified.

145. The Safety in Design risk assessment process is being undertaken in accordance with the Bank's Safety in Design – Major Works Procedure. The first workshop has been held and the remaining workshops will be undertaken through design development and documentation.

## Cost Effectiveness

### Project budget

146. A professional Quantity Surveyor has estimated that the current project budget is \$72 million (excluding GST). This cost is inclusive of all construction costs, site preparation, infrastructure, management and design fees, contingencies and escalation. A detailed breakdown of this cost estimate and cost exclusions is provided in Submission 1.1.

### Project delivery methodology

147. An internal project management team has been established to manage the project and administration. An external Project Manager, reporting to the Bank, will be engaged to manage the delivery of the works. While the Bank is considering procurement strategy options, the Bank's preferred delivery approach is the traditional full design followed by a construct-only head contractor.

148. In this approach the head contractor is engaged on a lump sum contract following a two-stage procurement process, including a public Expression of Interest followed by a select Request for Tender. The procurement strategy will conform to the Commonwealth Procurement Rules as the construction value will exceed the \$9 million threshold.

149. Managing confidentiality will be a key consideration of the procurement and delivery strategy, to mitigate the loss of sensitive documentation.

### Project schedule

150. A professional programmer has assessed the construction duration of the project to be 26 months inclusive of contingencies and relevant commissioning. Subject to Parliamentary approval, it is expected that the NBS will be operational in February 2017.

### Public value

151. The public value associated with this project will be realised by the Bank fulfilling its legislative obligation to issue Australia's banknotes. The facility is necessary for the Bank to pursue the NGB project, the aim of which is to ensure Australians have a secure banknote, which is largely free of the threat of counterfeiting. The community can continue to have confidence in the integrity of the currency and enjoy the benefits of a banknote that can be trusted.

152. The investment in a new, purpose built, National Banknote Site supports the objectives of the NGB project by providing the capacity necessary to increase the Bank's banknote storage and distribution capabilities securely and efficiently. The asset is expected to provide a platform for these operations for 25 years or more.

153. The new facility will ensure that the major security risks associated with the NGB project are managed appropriately. Failure to address these inherent risks could potentially result in a much higher cost to the public purse than the costs associated with the proposed project.

## Revenue

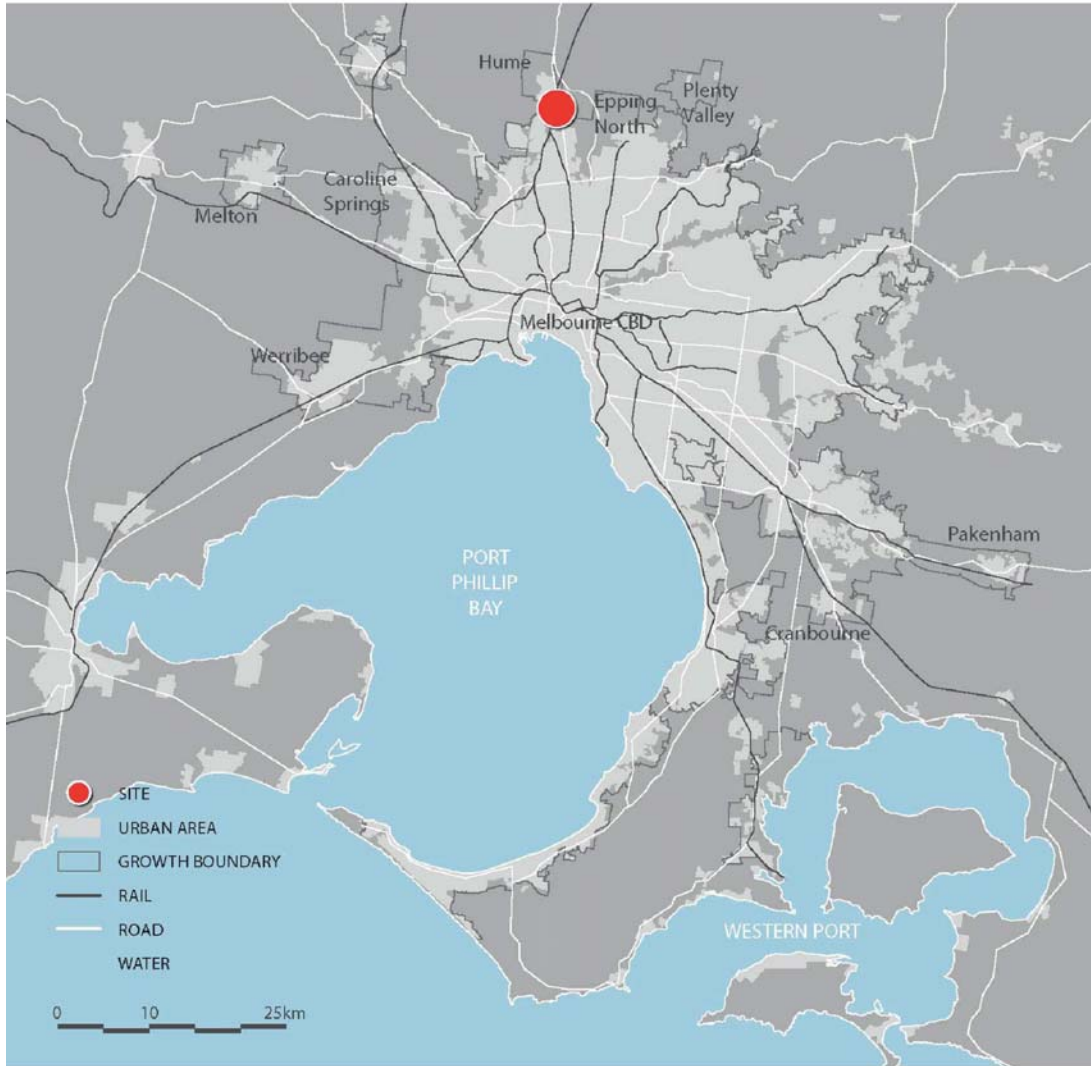
154. There will be no revenue derived from this project. However, some off-sets in costs will include:

- a) The Bank's current secure storage and processing areas within the Craigieburn Main Production Building will be vacated by the Bank and leased to Note Printing Australia for NPA's future secure storage needs;
- b) Guarding services at the Bank's Melbourne CBD storage facility will no longer be required once the new facility is complete, thereby reducing the costs at that facility. This storage space will be offered to the market for lease as non-secure space; and
- c) Banknote movements between the Melbourne CBD storage facility and Craigieburn will cease once the new facility is complete resulting in cost savings in the order of \$200,000 per annum.

## Attachments

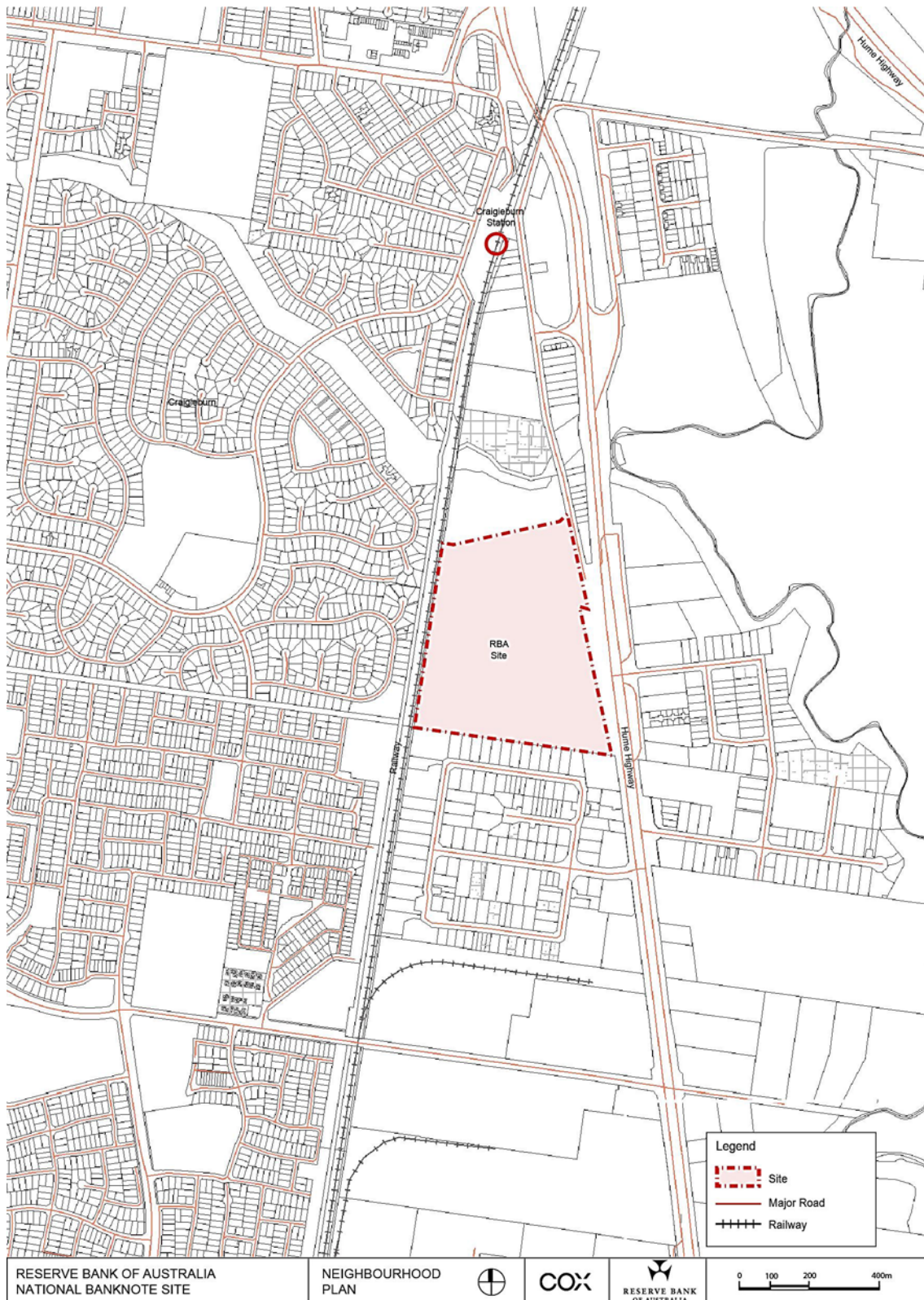
1. Regional Plan.
2. Site Location.
3. Site Plan.
4. Perspective View.
5. Elevations.
6. List of Professional Service Providers.

# 1. Regional Plan



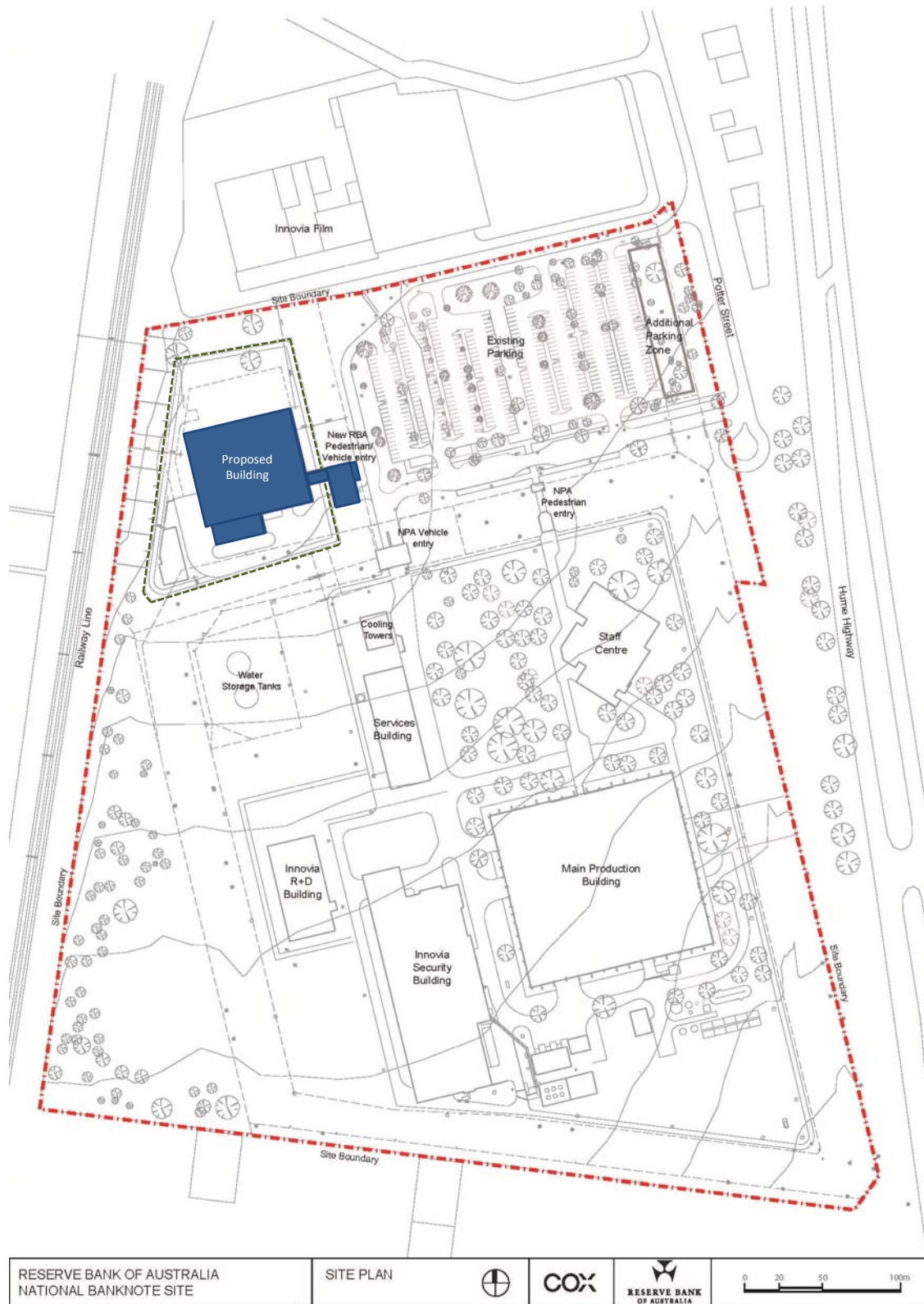
RESERVE BANK OF AUSTRALIA NATIONAL BANKNOTE SITE	REGIONAL CONTEXT		COX	 RESERVE BANK OF AUSTRALIA	
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## 2. Site Location





### 3. Site Plan

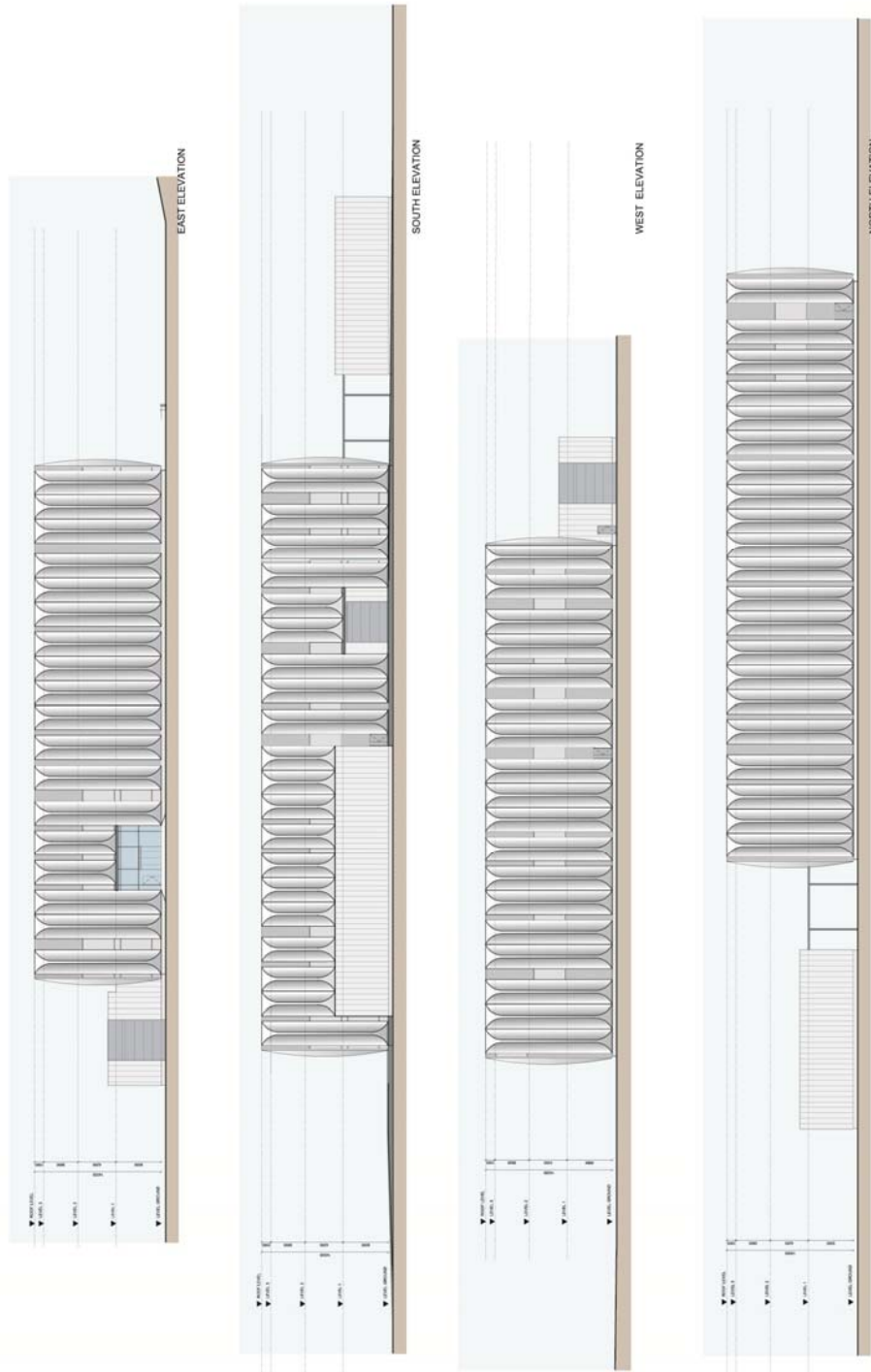


## 4. Perspective View



RESERVE BANK OF AUSTRALIA NATIONAL BANKNOTE SITE	PERSPECTIVE VIEW		COX	 RESERVE BANK OF AUSTRALIA
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# 5. Elevations



RESERVE BANK OF AUSTRALIA NATIONAL BANKNOTE SITE	ELEVATIONS				
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## 6. List of Professional Service Providers

<b>Andrew Long and Associates</b>	Undertake indigenous cultural heritage assessment of the site.
<b>Anthemion Consultancies</b>	Undertake heritage assessment of the site.
<b>Biosis</b>	Undertake flora and fauna assessment of the site.
<b>Cox Richardson Architects</b>	Lead consultant and provide architectural design services.
<b>CPM Consulting Services</b>	Provide specialist programming services; undertake risk analysis and provide advice on the project delivery method.
<b>Dematic</b>	Provide specialist advice on logistics.
<b>JR Edwards</b>	Provide land surveying services.
<b>MBM Quantity Surveyors</b>	Provide quantity surveying services.
<b>Meredith Withers and Associates</b>	Provide a strategy report regarding the current statutory planning provisions for development in the Hume Council Area.
<b>Morris Goding Accessibility Consulting</b>	Provide accessibility consultancy services to ensure compliance with DDA legislation.
<b>Norman Disney and Young</b>	Provide specialist advice on acoustics and fire engineering.
<b>Oculus</b>	Provide landscape design consultancy services.
<b>PLP Building Surveyors and Consultants</b>	Provide advice on building compliance and certification.
<b>Sinclair Knight Merz</b>	Provide structural and civil engineering design, traffic planning, geotechnical and site contamination assessment services.
<b>Steensen Varming</b>	Provide consultancy for building services, including mechanical, electrical, lifts, communications, lighting and environmental objectives and targets.
<b>Woolacotts Consulting Engineers</b>	Provide hydraulics and fire services design consultancy services.