

Appendix D

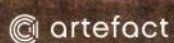
Non-Aboriginal heritage assessment

Sydney Harbour Bridge: Southern Cycleway

Statement of Heritage Impact

Report to Roads and Maritime
Services

November 2017



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EXECUTIVE SUMMARY

Roads and Maritime Services (Roads and Maritime) propose to upgrade the existing cycleway facility along the Sydney Harbour Bridge (SHB) southern approaches between the Kent Street Cycleway and the SHB Cycleway. The cycle provision on the western side of the SHB is the primary route for cyclists travelling between North Sydney and the Sydney CBD. The number of cyclist trips taken across the SHB is expected to grow in the long term.

Roads and Maritime propose to establish a separated bi-directional cycleway, approximately 500 metres in length and generally three metres in width, alongside Bradfield Highway to upgrade the cycle link between the existing Kent Street cycleway and SHB cycleway (the proposal). The proposal is intended to improve safety and accessibility for cyclists, pedestrians and road vehicles, support future growth in cycling between the Sydney CBD and Lower North Shore, and to enhance public engagement and connectivity with the local Millers Point and Dawes Point precincts.

Artefact has been engaged by Roads and Maritime to prepare a SoHI for the proposed works. While the proposal is outside the National Heritage List (NHL) and State Heritage Register (SHR) curtilages of the SHB, the implications of these listings are still considered in this Statement of Heritage Impact (SoHI) in order to maintain the overall heritage value of the SHB and its southern approaches. Additionally, numerous heritage items and heritage conservation areas are located within or near the project area, which are addressed in this report.

Overview of findings

The proposal would involve construction of an on-grade cycleway at the northern end of the study area, which would require removal of a section of non-original concrete parapet and retaining wall to Bradfield Highway, construction of a new retaining wall, landscaping modifications and reconfiguration of the existing fitness area in Observatory Hill. Further south, the existing shared-use bridge over the Cahill Expressway cutting would be demolished and replaced with an elevated spiral ramp and bridge. At the southern end of the study area, the existing shared-use pathway alongside the Clarence Street and Kent Street vehicle on-ramp that extends along Bradfield Highway would be upgraded. The proposal would also require removal and relocation of several significant trees.

This report has assessed that the potential physical impact of the proposal to the SHB southern approaches would be negligible to moderate, and potential visual impact to the SHB southern approaches would be negligible to moderate. Due to the highly disturbed nature of the study area, there is a low likelihood of archaeological relics being impacted by the proposal.

Given that the SHB southern approaches comprise a small proportion of the SHB, the potential physical and visual impacts of the proposal need to be assessed against the SHB as a whole. Due to its relatively small scale, as well as the location of the proposed works being outside the NHL and SHR curtilages and away from areas of exceptional significance, the proposal would not degrade, damage, obscure or diminish the national or state heritage values of the SHB. Overall, the impact of the proposal on the SHB would be minor.

The proposed SHB southern cycleway, involving provision of upgraded pedestrian and cyclist amenities and improved connectivity with the Millers Point and Dawes Point precincts, is considered essential to enhance and improve accessibility of the SHB. This would provide an opportunity to strengthen public engagement and understanding of the national and state heritage values of SHB and nearby heritage items and heritage conservation areas. The proposal, as such, is consistent with the policies contained in the endorsed CMP 2007.

The proposal would indirectly and directly affect heritage items in the vicinity. The proposal would result in a minor physical impact and minor visual impact to the SHR listed Millers Point & Dawes Point Village Precinct. The proposal would result in neutral to high potential physical and visual impacts on other nearby heritage items listed on the City of Sydney Local Environmental Plan 2015 (LEP 2015) including the Millers Point Heritage Conservation Area, National Trust Centre/S.H. Ervin Gallery, Fort Street Primary School site, Messenger's Cottage for Sydney Observatory, Observatory Hill Park and Sydney Observatory. These impacts, however, are restricted to localised areas surrounding the proposed elevated spiral ramp and bridge and on-grade cycleway, and could be offset by the mitigation measures outlined in the recommendations below. The proposal is not within the Sydney Opera House World Heritage Buffer Zone.

Recommendations & mitigation measures

The recommendations set out below will aid in mitigating the impact of the proposal on the SHB and nearby heritage items and heritage conservation areas.

Approvals

As the proposal has been assessed as resulting in a minor physical impact and minor visual impact to the SHR listed Millers Point & Dawes Point Village Precinct, the proposal would be exempt from the requirement to obtain approval under Section 60 of the Heritage Act. Under Section 57(2) of the Heritage Act, the proposed work falls within the definition of Standard Exemption No.7.

A Section 57(2) notification under Standard Exemption No. 2 and Exemption No. 7 requires a statement be provided to the Heritage Division demonstrating that the activity is of a minor nature. This statement of heritage impact included in this SoHI can be used to demonstrate the minor impact of the proposal.

Referral for Commonwealth consent not required

The project area is outside the NHL curtilages of the SHB. The potential physical and visual impact of the proposal to the SHB overall, as captured in an assessment of impact within the study area (50 metre buffer), has been assessed as being minor and would not impact or diminish the national heritage values of the SHB. The proposal is not within the Sydney Opera House World Heritage Buffer Zone. As such, it is understood that a referral in accordance with the EPBC Act will not be required.

Consultation with City of Sydney

As the proposal has been assessed as potentially resulting in a high visual impact to the locally listed 'National Trust Centre Inc Buildings & Their Interiors, Retaining Walls & Ground' (LEP #1876) and moderate visual impact to the locally listed 'Messenger's Cottage for Sydney Observatory including interior' (LEP #1937), consultation with City of Sydney would be required under the ISEPP.

Removed concrete parapet and retaining wall

Although this fabric does not relate to the original construction of the SHB, the concrete parapet and retaining wall on the west side of the SHB southern approaches are of high significance as per the CMP 2007 and therefore should be retained wherever possible. The design of the proposal should be developed as far as possible to minimise the length of the proposed section to be removed.

In order to mitigate the impact of the proposal on the significant heritage fabric of the SHB, the proposed removed section of concrete parapet should be retained and adaptively re-used within the project area. This could potentially involve retention and reuse of the parapet in landscaping works or furniture including for seating, or for interpretation.

It is understood the proposal would involve interpretive inlay in the ground surface indicating the location of the proposed section of retaining wall and parapet to be demolished in order to make way for the on-grade cycleway. This interpretation would further assist in balancing potential impact of the project, and further consideration should be given for the design detail and resolution of this aspect of the proposal.

Design of elements to minimise visual impact

The design and placement of the various elements within the proposal should be developed to minimise visual impact on nearby heritage items affected by the proposed works including the National Trust Centre/S.H. Ervin Gallery, Fort Street Primary School site, Observatory Hill Park, and the Millers Point & Dawes Point Village Precinct and Millers Point Heritage Conservation Area.

As much as possible, the proposal should be designed to reduce the visual prominence of new elements within the existing cultural landscape, and be sympathetic with the surrounding setting and context of nearby heritage items. This involves employment of appropriate modern and lightweight designs that seek to reduce the visual 'bulk' of new structures. Screens and balustrades of proposed elements including the elevated cycleway/pedestrian spiral ramp and on-grade cycleway should be lightweight and where possible transparent to reduce potential visual impact to surrounding heritage items and upon significant views.

Material palette

The materials utilised in new works as part of the proposal should be congruent with the aesthetic character of the SHB while also sympathetic to the context of surrounding heritage items and heritage conservation areas. As discussed above, this includes selection of modern and lightweight materials that reduce visual prominence of new structures. Where appropriate, new materials could be coloured to match the existing fabric of the SHB including the concrete rendered retaining walls and concrete floor of the SHB south west stairs. The material palette of the proposal should be consistent with other SHB related projects.

Interpretation strategy

Given the location of the proposal at an entry/exit point to the SHB, there is an opportunity for provision of interpretation measures outlining the history, evolution and significance of the SHB and surrounding heritage items and heritage conservation areas. An Interpretation Strategy would therefore be prepared for the project. The Interpretation Strategy would consider interpretation opportunities in the context of other relevant SHB projects in order to avoid a 'piecemeal' approach.

Retention and relocation of trees

If the proposal design cannot be altered to avoid trees, those slated for removal by the proposed works should, where possible, be relocated and retained within the project area or nearby locality in order to maintain the existing cultural landscape qualities of the Millers Point & Dawes Point Village Precinct and Millers Point Heritage Conservation Area. Remaining trees should be protected from potential harm. This is considered particularly important for the significant Moreton Bay Fig tree listed on the City of Sydney Significant Tree Register that is located adjacent to the proposed elevated spiral ramp.

Decisions as to whether to salvage and move particular trees should be guided by the advice of a suitably qualified arborist, which takes into account factors such as relative significance, historical appropriateness, condition, public safety risk, amenity value, biological diversity, disease resistance and contribution to the landscape character as a whole. The Arborist is to recommend the best method of conservation of the trees, and protection of remaining trees.

Protection of SHB south west stairs

The proposal involves works in close proximity to significant fabric of the SHB southern approaches. In particular, this includes the proposed on-grade cycleway, which adjoins the significant SHB south west stairs. This significant component of the SHB should be appropriately protected for the duration of the project to minimise potential physical impact or inadvertent damage.

Cumulative impact

The cumulative impact of the proposal in relation to other SHB related projects should be considered. This includes ensuring minimisation of physical impact to significant fabric of SHB, consistency in the design, style, aesthetic character and material palette of works relating to the SHB, and a coordinated approach to provision of interpretation.

Compliance of projects with the *Sydney Harbour Bridge Conservation Management Plan* will assist in ensuring consistency across SHB projects and retention and potential enhancement of the significant values of this item.

Heritage induction for workers

In order to retain and respect the national and state heritage values of the SHB, a heritage induction should be provided for all workers prior to works commencing.

Unexpected Finds Procedure

If unexpected archaeological finds are discovered during the proposed works the Roads and Maritime Standard Procedure for Unexpected Finds should be followed.

Protection of National Trust Centre sandstone retaining wall

The proposal involves regrading works to the stairs that are adjacent to the sandstone retaining wall at the eastern boundary of the National Trust Centre/S.H. Ervin Gallery site to the south of the existing entry stairs. As this is a significant landscape feature of the National Trust Centre/S.H. Ervin Gallery site, impact should be avoided as far as possible. For the duration of the project, the wall should be appropriately protected to minimise potential impact or inadvertent damage.

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1.0 INTRODUCTION

1.1 Background

Roads and Maritime Services (Roads and Maritime) propose to upgrade the existing cycleway facility along the Sydney Harbour Bridge (SHB) southern approaches between the Kent Street Cycleway and the SHB Cycleway. The cycle provision on the western side of the SHB is the primary route for cyclists travelling between North Sydney and the Sydney CBD. The number of cyclist trips taken across the SHB is expected to grow in the long term.

The existing cycle provision along the SHB southern approaches between the Kent Street Cycleway and the SHB cycleway encompasses mixed traffic along Upper Fort Street and a shared-use pedestrian and cyclist path alongside the Clarence and Kent Street vehicle on-ramp to the Bradfield Highway. These existing provisions present a range of safety risks and accessibility issues.

The nearby SHB Southern Toll Plaza Precinct Upgrade that is currently underway and associated lane realignments present an opportunity to realign the existing Roads and Maritime Incident Response Area (IRA) to the east. This action will create available space for a separated cycleway between Upper Fort Street and relocated IRA.

Artefact has been engaged by Roads and Maritime to prepare a SoHI for the proposed works. The aim of this SoHI is to identify heritage items which may be impacted by the proposed works, determine the level of heritage significance of each item, assess the potential impacts to those items, recommend mitigation measures to reduce the level of heritage impact and identify other management or statutory obligations.

While the proposal is outside the National Heritage List (NHL) and State Heritage Register (SHR) curtilages of the SHB, the implications of these listings are still considered in this SoHI in order to maintain the heritage value of the SHB and its southern approaches. Additionally, numerous heritage items and heritage conservation areas are located within or near the project area.

1.2 Proposal

Roads and Maritime propose to establish a separated bi-directional cycleway, approximately 500 metres in length and generally 3 metres in width, alongside Bradfield Highway to upgrade the cycle link between the existing Kent Street cycleway and SHB cycleway (the proposal). The proposal is intended to improve safety and accessibility for cyclists, pedestrians and road vehicles, support future growth in cycling between the Sydney CBD and Lower North Shore, and to enhance public engagement and connectivity with the local Millers Point and Dawes Point precincts.

The proposal would involve upgrade works and widening of the existing shared-use pathway provisions alongside the Clarence Street and Kent Street vehicle on-ramp and Bradfield Highway, demolition of the existing shared-use bridge over the Cahill Expressway cutting and replacement with a new elevated cycleway/pedestrian spiral ramp and bridge, reconfiguration of the existing entry stairs and retaining wall of the S.H. Ervin Gallery, removal of a section of the concrete parapet and retaining wall of the SHB southern approaches, construction of a new retaining wall, removal and relocation of several significant trees, and construction of an on-grade cycleway and associated reconfiguration of the existing fitness area in Observatory Hill.

A detailed scope of works is provided in Section 6.

1.3 Site location

1.3.1 Project area

The project area covers a strip of land comprising existing shared-use paths and shared traffic lanes alongside Bradfield Highway on the southern approach to the SHB (Figure 1). This area is bound to the north by the SHB NHL and SHR curtilages and the existing SHB cycleway commencing at the south west bridge stairs, Bradfield Highway to the east, Kent Street to the south, and to the west by the Millers Point & Dawes Point Village Precinct and Millers Point Heritage Conservation Area. Specifically relating to the proposal, this heritage conservation area encompasses the National Trust Centre/S.H. Ervin Gallery, Fort Street Primary School, Bureau of Meteorology, Messenger's Cottage, Observatory Hill Park and the Sydney Observatory. Located in Millers Point, the project area is within the City of Sydney Local Government Area (LGA).

1.3.2 Study area

For the purpose of this investigation, a study area has been defined as a 50-metre buffer around the proposal (Figure 1). The application of a buffer helps to identify heritage items within the visual catchment of the project where potential visual impacts on that item may occur. It also supports assessment of other potential indirect impacts on heritage fabric (for example, as a result of vibration). Any reference to the 'study area' in this chapter includes reference to the 50-metre buffer, unless otherwise stated.

Figure 1: Location of project area.



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1.4 Methodology

This SoHI has been prepared with reference to the following:

- a) *Statement of Heritage Impact* 2002, NSW Heritage Manual 2002 (NSW Heritage Office)
- b) Roads and Maritime requirements for preparation of SoHI reports
- c) *Sydney Harbour Bridge Conservation Management Plan* (SHB CMP) 2007
- d) *Assessing Significance for Historical Archaeological Sites and 'Relics'* 2009 (NSW Heritage Office, Department of Planning).

Statements of significance from existing heritage assessments and registers, such as the State Heritage Inventory (SHI), have been included and additional heritage assessment was not necessary for this report. Details of the existing heritage assessments for each item are provided as an appendix.

1.4.1 Significance criteria

NSW Heritage Assessment Criteria

Heritage significance for heritage items in New South Wales are assessed using the NSW Heritage Assessment Criteria, presented in Table 1.

Table 1: NSW heritage assessment criteria

Criteria	Description
A – Historical Significance	An item is important in the course or pattern of the local area's cultural or natural history.
B – Associative Significance	An item has strong or special associations with the life or works of a person, or group of persons, of importance in the local area's cultural or natural history.
C – Aesthetic or Technical Significance	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.
D – Social Significance	An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons.
E – Research Potential	An item has potential to yield information that will contribute to an understanding of the local area's cultural or natural history.
F – Rarity	An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history.
G – Representative	An item is important in demonstrating the principal characteristics of a class of NSWs (or the local area's): <ul style="list-style-type: none">• cultural or natural places; or• cultural or natural environments.

1.4.2 Significance grading

This report includes an assessment of the relative contributions of individual components of the SHB, nearby heritage items and heritage conservation areas, to the heritage value of the item, as outlined below in Table 2.

Table 2: Standard grades of significance

Grading	Justification	Status
Exceptional (E)	Rare or outstanding element directly contributing to an item's local and state significance.	Fulfils criteria for local or state listing
High (H)	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for local or state listing
Moderate (M)	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or state listing
Little (L)	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or state listing
Intrusive (I)	Damaging to the item's heritage significance.	Does not fulfil criteria for local or state listing

1.4.3 Impact assessment

In order to consistently identify the potential impact of the proposed works, the terminology contained in Table 3 has been referenced throughout this document.

Table 3: Terminology for assessing the magnitude of heritage impact

Grading	Definition
Major	Actions that would have a long-term and substantial impact on the significance of a heritage item. Actions that would remove key historic building elements, key historic landscape features, or significant archaeological materials, thereby resulting in a change of historic character, or altering of a historical resource. These actions cannot be fully mitigated.
Moderate	Actions involving the modification of a heritage item, including altering the setting of a heritage item or landscape, partially removing archaeological resources, or the alteration of significant elements of fabric from historic structures. The impacts arising from such actions may be able to be partially mitigated.
Minor	Actions that would result in the slight alteration of heritage buildings, archaeological resources, or the setting of an historical item. The impacts arising from such actions can usually be mitigated.
Negligible	Actions that would result in very minor changes to heritage items.
Neutral	Actions that would have no heritage impact.

1.5 Report Authorship

This report was prepared by Charlotte Simons (Heritage Consultant). The project manager was Dr Sandra Wallace (Director) who provided input and reviewed the report.

2.0 STATUTORY CONTEXT

A number of planning and legislative documents govern how heritage is managed in NSW and Australia. The following section provides an overview of the requirements under each as they apply to the proposal.

2.1 The World Heritage Convention

The Convention Concerning the Protection of World Cultural and National Heritage (the World Heritage Convention) was adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) on 16 November 1972, and came into force on 17 December 1975. The World Heritage Convention aims to promote international cooperation to protect heritage that is of such outstanding universal value that its conservation is important for current and future generations. It sets out the criteria that a site must meet to be inscribed on the World Heritage List (WHL) and the role of State Parties in the protection and preservation of world and their own national heritage.

The concept of a buffer zone was first included in the Operational Guidelines for the Implementation of the World Heritage Convention in 1977 and recognises the value of the environment that surrounds a site. The buffer zone acts as an additional layer of protection for World Heritage sites. It is a space that is itself not of outstanding universal value, but that influences the value of a World Heritage site.

World Heritage List

The Sydney Opera House is listed on the WHL. The buffer for this heritage item covers areas north and south of the harbour due to the visual prominence of the Opera House itself. The study area falls within this buffer zone (Figure 3).

2.2 Commonwealth legislation

2.2.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legislative framework for the protection and management of matters of national environmental significance, that is, flora, fauna, ecological communities and heritage places of national and international importance. Heritage items are protected through their inscription on the World Heritage List (WHL), Commonwealth Heritage List (CHL) or the National Heritage List (NHL).

Under Part 9 of the EPBC Act, approval under the EPBC Act is required for any action occurring within, or outside, a Heritage place that has, will have, or is likely to have a 'significant impact' on the heritage values of a World, National or Commonwealth heritage listed property (referred to as a 'controlled action' under the Act). A 'significant impact' is defined as:

an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.

The EPBC Act stipulates that a person who has proposed an action that will, or is likely to, have a significant impact on a site that is listed on the WHL, National Heritage List or Commonwealth Heritage List must refer the action to the Minister for Sustainability, Environment, Water, Population

and Communities (hereafter Minister). The Minister will then determine if the action requires approval under the EPBC Act. If approval is required, an environmental assessment would need to be prepared. The Minister would approve or decline the action based on this assessment.

2.2.1.1 National Heritage List

The NHL was established under the EPBC Act, which provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. Under the EPBC Act, nationally significant heritage items are protected through listing on the NHL or the Commonwealth Heritage List.

- The SHB was included on the NHL in 2007. The listing includes the bridge, pylons, constructed approaches, and parts of Bradfield and Dawes Point Parks. The NHL curtilage is the same as the SHR curtilage (Figure 2), except that the northern extent of the NHL listing ends at Lavender Street, Milsons Point, while the SHR curtilage ends at Blues Street, North Sydney.

While the project area is outside the NHL and SHR curtilages of the SHB, these curtilages are within the study area (50 metre buffer) of this report. The implications of these listings are subsequently considered and assessed in this SoHI in order to maintain the heritage value of the SHB and its southern approaches.

2.3 State legislation

2.3.1 Heritage Act 1977

The NSW *Heritage Act 1977* (Heritage Act) is the primary piece of State legislation affording protection to heritage items (natural and cultural) in New South Wales. Under the Heritage Act, 'items of environmental heritage' include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. State significant items can be listed on the NSW State Heritage Register (SHR) and are given automatic protection under the Heritage Act against any activities that may damage an item or affect its heritage significance. The Heritage Act also protects 'relics', which can include archaeological material, features and deposits.

In some circumstances a Section 60 permit may not be required if works are undertaken in accordance with the Standard Exemptions for Works Requiring Heritage Council Approval or in accordance with agency specific exemptions.

The following SHR items are located within the project area:

- Millers Point & Dawes Point Village Precinct (SHR No. 01682).

The following SHR items are located within the study area:

- Sydney Harbour Bridge, approaches and viaducts (road and rail) (SHR No. 00781)
- Sydney Observatory (SHR No. 01449)
- Argyle Cut (SHR No. 01523)
- Argyle Bridge (SHR No. 01522)
- Garrison Anglican Church Precinct (SHR No. 00644).

2.3.2 Section 170 registers

The Heritage Act requires all government agencies to identify and manage heritage assets under their ownership and control. Under Section 170 of the Heritage Act, government instrumentalities must establish and keep a register which includes all items of environmental heritage listed on the SHR, environmental planning instruments or which may be subject to an interim heritage order that are owned, occupied or managed by that government body. Government agencies must also ensure that all items entered on its register are maintained with due diligence in accordance with State Owned Heritage Management Principles approved by the Minister on advice of the NSW Heritage Council. These principles serve to protect and conserve the heritage significance of identified sites, items and objects and are based on relevant NSW heritage legislation and statutory guidelines.

2.3.2.1 Roads and Maritime Section 170 Register

The 'Sydney Harbour Bridge, Approaches and Viaducts' are included in the Roads and Maritime s170 Register. The curtilage incorporates Dawes Point tar ra Park. Items of moveable heritage associated with the SHB are also included in the Roads and Maritime s170 Register, under the listing for 'Roads and Maritime Moveable Heritage Collection (SHI 4311604).

The following items listed on the Roads and Maritime Section 170 Register are located within the study area:

- Sydney Harbour Bridge, including Dawes Point tar ra Park (Roads and Maritime Section 170 Register No. 4301067).

2.3.2.2 RailCorp (Sydney Trains) Section 170 Register

The following items listed on the Railcorp Section 170 Register are located within the study area:

- Sydney Harbour Bridge (Rail Property Only) (Railcorp Section 170 Register No. 4801059)
- Argyle Street Railway Substation (Railcorp Section 170 Register No. 4800006).

2.3.3 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) establishes the framework for cultural heritage values to be formally assessed in the land use planning and development consent process. The EP&A Act requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The proposal is subject to assessment under Part 5 of the EP&A Act.

The EP&A Act also requires that local governments prepare planning instruments (such as Local Environmental Plans [LEPs] and Development Control Plans [DCPs]) in accordance with the EP&A Act to provide guidance on the level of environmental assessment required.

The current proposal location falls within the boundaries of the City of Sydney LGA. Schedule 5 of the Sydney LEP 2012 includes a list of items/sites of heritage significance within the City of Sydney LGA (refer to Section 2.4 below).

Sydney Regional Environmental Plan (REP) (Sydney Harbour Catchment) 2005

The Sydney REP (Sydney Harbour Catchment) 2005 was prepared under the EP&A Act and includes the 'Sydney Harbour Bridge, including approaches and viaducts (road and rail)' in its schedule of heritage items. It also includes the buffer zone for the Sydney Opera House.

2.3.4 State Environmental Planning Policy (Infrastructure) [ISEPP] 2007

State Environmental Planning Policy (Infrastructure) 2007 (the Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across the State.

Clause 94 of the Infrastructure SEPP permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

The definition of road infrastructure facilities of Infrastructure SEPP includes vehicle or pedestrian bridges.

As the proposal is for a road infrastructure facility and is to be carried out by Roads and Maritime, it can be assessed under Part 5 of the EP&A Act. Development consent is not required.

The proposal is not located on land reserved under the *National Parks and Wildlife Act 1974* and does not affect land or development regulated by State Environmental Planning Policy No. 14 - Coastal Wetlands, State Environmental Planning Policy No. 26 - Littoral Rainforests. The proposal does not affect land or development regulated by State Environmental Planning Policy (State and Regional Development) 2011 or State Environmental Planning Policy (Major Development) 2005.

Part 2 of the Infrastructure SEPP contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development.

2.4 Local legislation

2.4.1 Sydney Local Environmental Plan 2012

Clause 5.10 of the Sydney LEP 2012 has been prepared in accordance with the NSW Government's Standard Instrument—Principal Local Environmental Plan, and is consistent with current heritage best practice guidelines, providing for protection of heritage buildings, places, works and trees, Heritage Conservation Areas (HCAs), and archaeological relics. Schedule 5 of the LEP provides a list of identified heritage items, which has been consulted.

The project area contains one locally listed heritage item and one locally listed heritage conservation area. These items are summarised in Table 4. The study area contains several locally listed heritage items within the 50 metre buffer. These items are summarised in Table 5.

2.4.2 Development Control Plans

Development Control Plans (DCPs) support the provisions of LEPs and the heritage environment. DCPs generally contain detailed development controls which aim to facilitate quality development and protect the amenity of adjoining development. In particular, a DCP may set requirements for site amalgamations, setbacks, building envelopes, landscape treatments, privacy and parking. In town centres, the controls promote design quality, housing choice and more attracted public spaces.

2.4.3 Non statutory registers

Register of the National Estate

The register of the National Estate is a list of natural, Aboriginal and historic heritage places throughout Australia. It was originally established under the Australian Heritage Commission Act 1975. Under the Act, the Australian Heritage Commission entered more than 13,000 places on the register. Following amendments to the *Australian Heritage Council Act 2003*, the Register of the National Estate (RNE) was frozen on 19 February 2007 and ceased to be a statutory register in

February 2012. The RNE is now maintained on a non-statutory basis as a publicly available archive and educational resource.

Register of the National Trust

The National Trust of Australia is a community-based, non-government organisation committed to promoting and conserving Australia's Indigenous, natural and historic heritage. The Register of the National Trust (RNT) was established in 1949. It is a non-statutory register.

City of Sydney Register of Significant Trees 2013

The City of Sydney Register of Significant Trees is a list of the trees within the City of Sydney which are deemed to have environmental, cultural or heritage value based on their historical, cultural, social, ecological or outstanding visual elements.

2.5 Summary of heritage listings

A search of all relevant registers for items within the study area was undertaken on 17 February 2017. The results for heritage items and heritage conservation areas within the project area are displayed below in Table 4. The results for heritage items and heritage conservation areas within the study area are provided in Table 5.

The SHB curtilages of the entries for the NHL and SHR, as well as the curtilages for the heritage items listed within the project area and study area are illustrated in Figure 2 to Figure 5.

Table 4: Listed heritage items within the project area

Item Name	Address	Significance	Item/Listing Number
Millers Point & Dawes Point Village Precinct	Upper Fort Street, Millers Point	State	SHR 01682
Millers Point Heritage Conservation Area	Millers Point	Local	LEP C35
National Trust Centre Incl Buildings & Their Interiors, Retaining Walls & Ground	1001 Bradfield Highway, Millers Point	Local	LEP I876

Table 5: Listed heritage items within or near the study area (50 metre buffer)

Item Name	Address	Significance	Item/Listing Number
Sydney Harbour Bridge, approaches and viaducts	Bradfield Highway and North Shore Railway, Milsons Point/Dawes Point	National State Local	NHL 105888 SHR 5045703 RMS Section 170 4301067 Railcorp Section 170 4801059 City of Sydney LEP 2012 I539 RNE 1857 NTA 6088
Sydney Observatory	1003 Upper Fort Street, Millers Point	State	SHR 01449 LEP I934
Argyle Cut	Argyle Street, The Rocks	State	SHR 01523, SHFA Section 170 4500461

Item Name	Address	Significance	Item/Listing Number
Argyle Bridge	Cumberland Street, The Rocks	State	SHR 01522, SHFA Section 170 4500475
Garrison Anglican Church Precinct	Argyle Street, Millers Point	State	SHR 00644 LEP I609
The Rocks (Argyle Street) Railway Substation and Switchhouse	Trinity Avenue, Dawes Point	State	SHR, Railcorp Section 170 4800006
Observatory Park Incl Boer War Memorial, Bandstand, Fences and Landscaping	Upper Fort Street, Millers Point	Local	LEP I935
Fort Street Primary School Site including buildings and their interiors, fig trees and grounds	1005 Upper Fort Street, Millers Point	Local	LEP I938
Bureau of Meteorology including interior	9 Upper Fort Street, Millers Point	Local	LEP I936
Messenger's Cottage for Sydney Observatory including interior	9A Upper Fort Street, Millers Point	Local	LEP I937
Lane off Gas Lane Including Sandstone Walls and Wrought Iron Street Light	Jenkins Street, Millers Point	Local	LEP I890
Sydney Opera House (buffer zone)	2 Circular Quay east, Sydney (buffer zone extends to Argyle Street)	National World	WHLt NHL 105738 SHR 01685 City of Sydney LEP 2012 1064 RNE 2353 NTA 6088

2.6 Sydney Harbour Bridge Conservation Management Plan

An endorsed Conservation Management Plan (CMP) for SHB prepared by GML in 2007 (CMP 2007) provides a framework for its ongoing care and management, including decisions about its conservation, use and development, and to provide a reference for future applications for works to the bridge. At the time of this report a 2015 version of the CMP was being drafted but has yet to be endorsed by the Heritage Council. The CMP 2007, including relevant policies, has been referenced in this report to guide conservation and heritage approaches for this assessment.

Figure 2: National Heritage List curtilage boundary of the SHB, with the indicative location of the project area marked in purple.

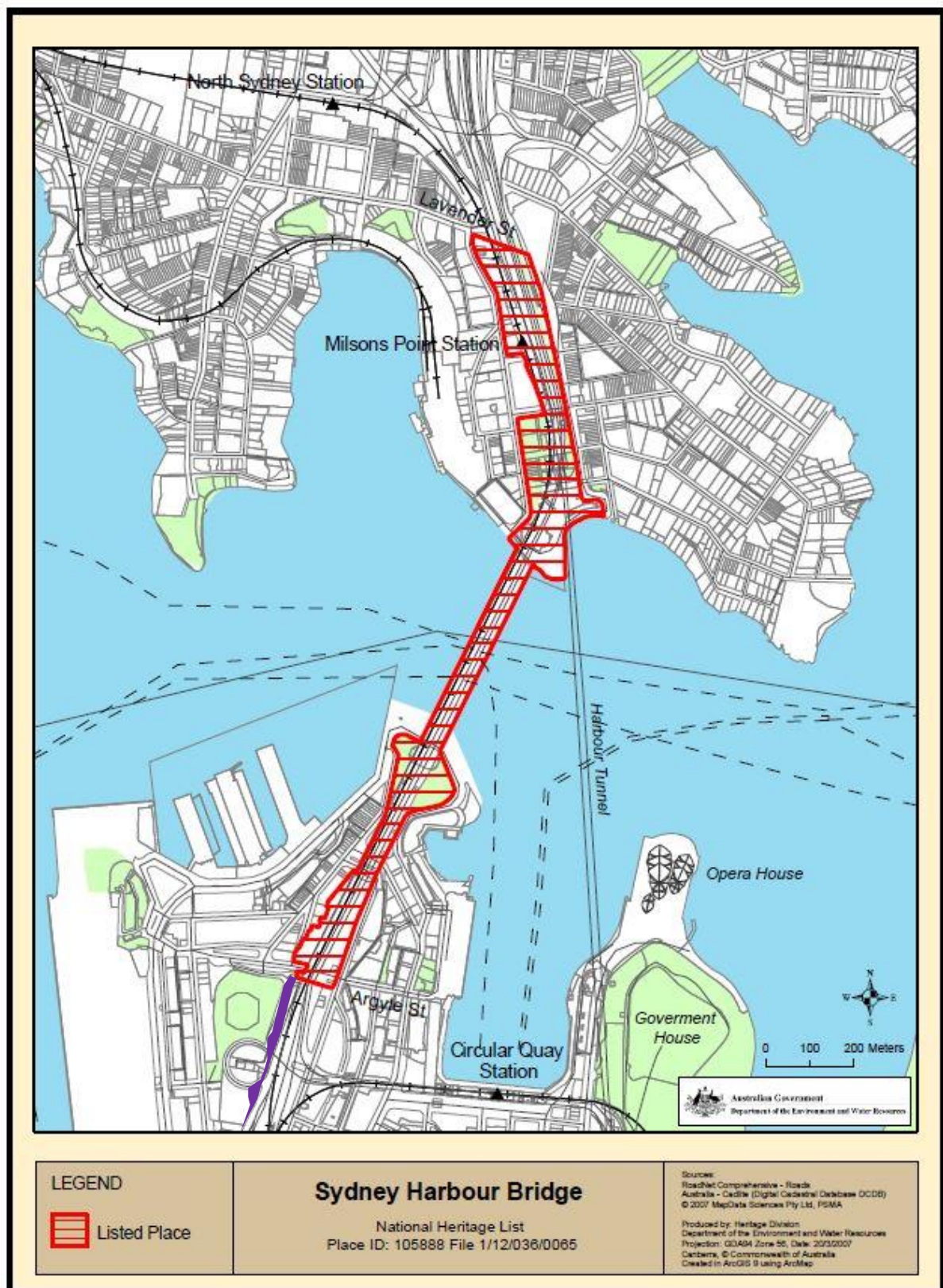


Figure 3: World and National heritage curtilages within study area.

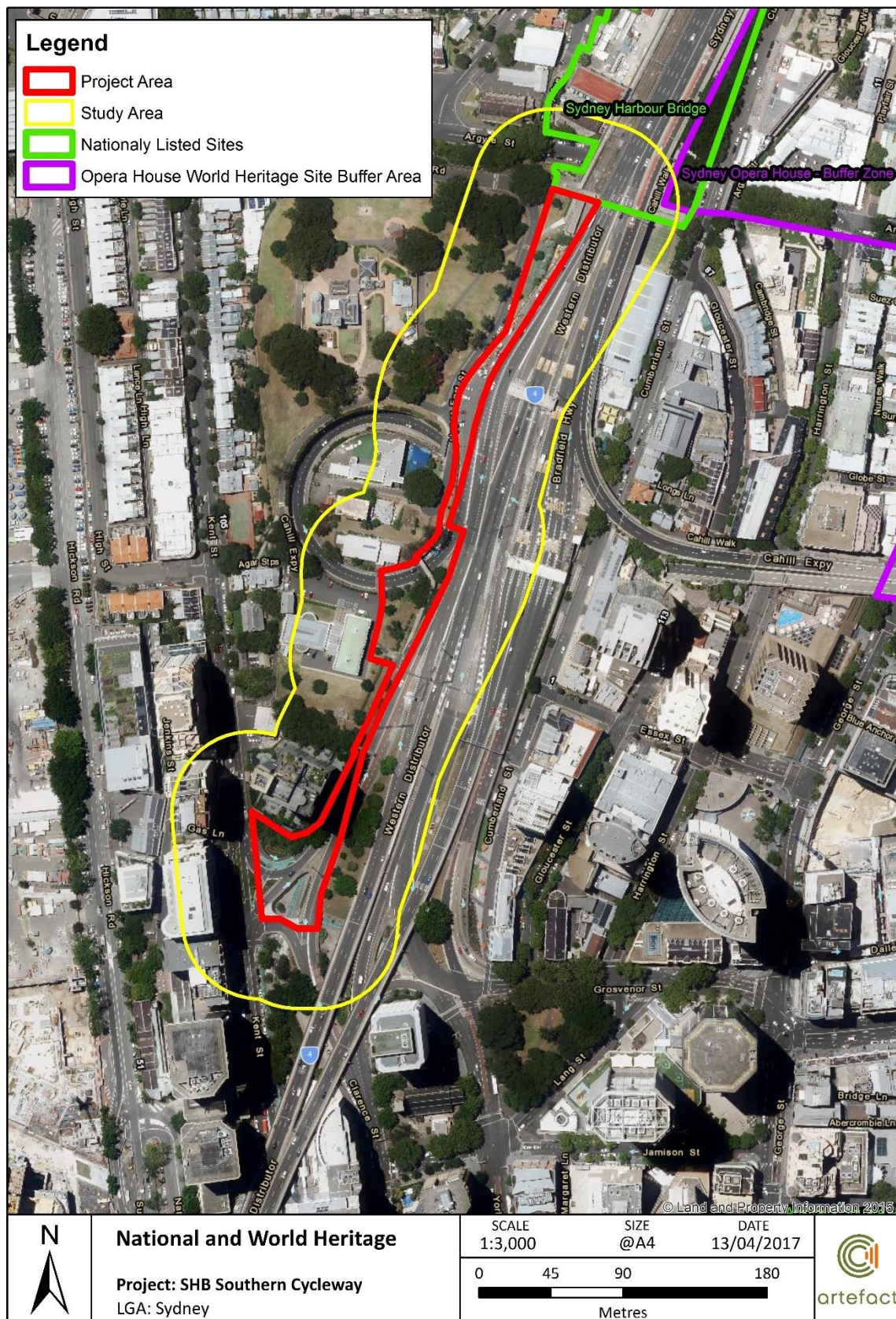


Figure 4: Curtilages of state heritage items located within project area and study area.



Document Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\170122_SHB_Southern_Cycleway\MXD\State_Sites.mxd

Figure 5: Curtilages of local heritage items located within project area and study area.



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3.0 HISTORICAL BACKGROUND

3.1 Sydney Harbour Bridge

As early as 1815, Francis Greenway had suggested to Governor Macquarie that a bridge be constructed across the harbour, and throughout the 19th century various proposals were made.

Tenders were eventually called for the design of a bridge in 1923, with specifications set out by J.J.C Bradfield, who had been appointed as Chief Engineer, Sydney Harbour Bridge, City Transit and Metropolitan Railway Construction. Bradfield recommended the arch design of the English firm Dorman Long & Co Ltd, which was accepted by the Government in March 1924.¹

During the early 1920s, hundreds of buildings on either side of the harbour were resumed and demolished to make room for the bridge and approaches (Figure 6 and Figure 7). The first sod was turned on 28 July 1923, and work on the approach spans was carried out during 1923 and 1924. In January 1925, excavation began at Dawes Point and the foundation stone for the southern abutment towers was laid in March. By the end of March, the first shipment of steel had arrived from England and fabrication workshops were built at Lavender Bay.²

Figure 6: View of Princes, Cumberland & Upper Fort Streets, before demolition for the southern approaches, 1927. The study area including Observatory Hill is seen on right. (Source: Roads and Maritime)



In 1928, open excavation and flat top construction for roadways at Wynyard Station heralded the beginning of works on the southern approaches of the bridge.³ Demolitions in The Rocks, however, had been underway for some years prior to this. An arch bridge built to cross the Argyle Cut was the only span within the southern approach.⁴ Construction of the bridge continued until 1932.

¹ GML, *Sydney Harbour Bridge Conservation Management Plan 2007*:12.

² GML 2007:12-4.

³ GML 2007: 14.

⁴ GML 2007: 14.

Figure 7: Aerial view of construction of the SHB and its southern approaches, c1920s.
(Source: National Library Australia)



In February 1932, the bridge was test loaded. At the time of its completion, the SHB was the largest structure in Sydney. It was officially opened on 19 March 1932 by Premier Jack Lang, followed by a parade over the bridge (Figure 8).⁵ It was at the top of the south bridge stairs that the famous incident when Captain F.E. de Groot prematurely slashed the blue ribbon with his sword at the Bridge opening occurred.

Figure 8: Opening of the SHB in 1932 with crowds gathered at Observatory Hill.
(Source: National Museum Australia)



⁵ GML 2007:17-8.

Various changes have been made to the SHB since its construction, generally in response to changes in transport and traffic management (such as the closure of the tram line and the construction of the Cahill and Warringah Expressways) which have involved modifications of the northern and southern approaches.

Figure 9: Upper Fort Street and Observatory Hill c1937 showing original SHB retaining wall and park space prior to realignment of Bradfield Highway.
(Source: City of Sydney Archives)

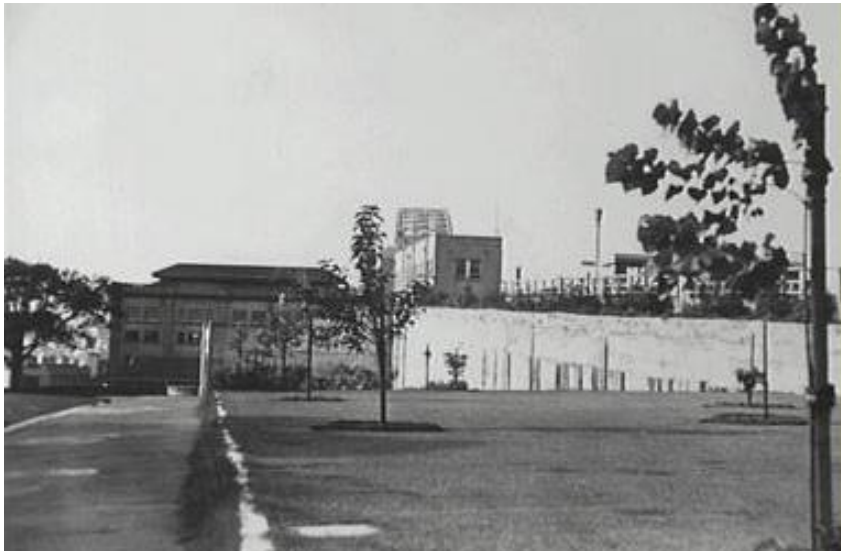
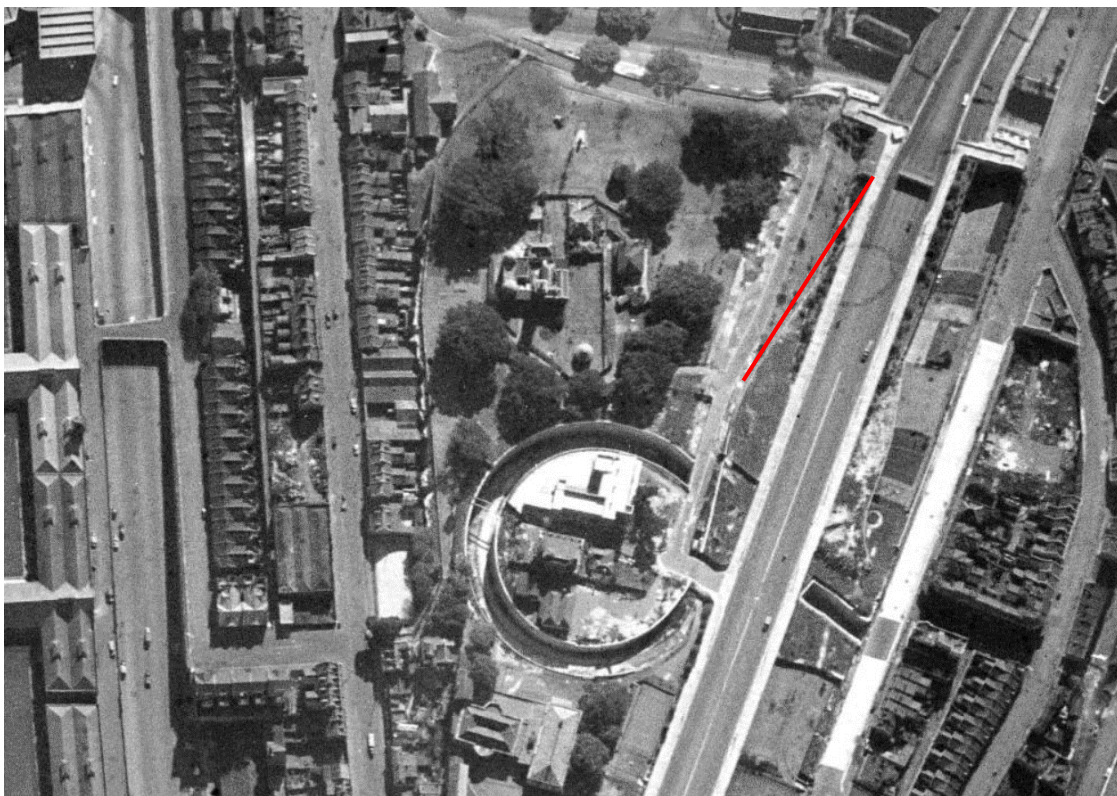


Figure 10: Historical aerial photograph showing original alignment of Bradfield Highway (alignment of existing non-original SHB retaining wall indicated by red line), 1943.
(Source: SIX Maps 2017)



By the mid 1950s, works to construct the controversial Cahill Expressway on the southern side of the bridge had begun. This created a significant physical change to the bridge and its surrounds. In 1958, the first section of the overhead roadway across Circular Quay to Conservatorium Place was opened. In 1962, the Cahill Expressway was extended to Woolloomooloo. In 1972, a new southern approach was opened with the completion of the Western Distributor, involving alteration and realignment of the original retaining wall on the western side of the SHB southern approaches (Figure 10).

3.2 Millers Point & the Observatory Hill Precinct

From the early days of European settlement Observatory Hill has been used for signalling and defence due to its elevated position.⁶ In July 1788, a flagstaff was erected on the high ground to the west of Sydney Cove. It was at this location that the first government windmill was built in 1797. For military purposes, work commenced on the construction of a fort at the locality in 1804. Thereafter, the hill was variously known as Flagstaff Hill, Windmill Hill or Fort Philip, until the adoption of its current name Observatory Hill following the construction of a new observatory in the footprint of the preceding fort in 1858.⁷

Figure 11: Observatory and the signalling station, Observatory Hill c1870-1875.
(Source: State Library NSW)



These initial structures were soon accompanied by dwellings and early industries in the area. In 1815 a new government military hospital, one of the area's first substantial buildings, was constructed at the rear of Flagstaff Hill. By the early 1820s, quarrying was an established industry that exploited local stone resources for the construction of housing and early services in Sydney. The waterfront location of Millers Point, ideally suited for shipping purposes, resulted in the erection of private jetties, wharves and storage for goods.⁸

⁶ Shirley Fitzgerald, 'Millers Point' Dictionary of Sydney, 2008. Accessed online 21 February 2017 at: http://dictionaryofsydney.org/entry/millers_point

⁷ Office of Environment & Heritage, 'Millers Point & Dawes Point Village Precinct' Inventory Listing. Accessed online 22 February 2017 at: <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5054725>

⁸ OEH, op cit.

By the early 1830s, the village of Millers Point had been consolidated as an integral part in coastal and international trade and shipping, shipbuilding and associated activities. Increasing colonial interest in whaling and maritime enterprises fostered local prosperity during the 1830s and 1840s.⁹ Residential development at the base of the hill commenced in the 1840s, populating the area with workers cottages built alongside the fine houses of wharf owners and merchants.¹⁰

The area's association with shipping and related patterns of activity and industry produced a highly transient community which, despite its mobility, was able to act as a self-contained village. This characteristic was accentuated by its ongoing topographical isolation from the town of Sydney.¹¹ In 1843, the Argyle Cut project was commenced, cutting through Argyle Street to facilitate greater access to the Millers Point area. Despite the intention to reduce the segregation of Millers Point from the rest of Sydney, the unique character of Millers Point was maintained.

Figure 12: Millers Point and harbour beyond, c1874-1885.
(Source: Mitchell Library)



Following the gold rush of the 1850s, Millers Point was established as the most intensely populated maritime area in Sydney. In 1850, the military hospital at Flagstaff Hill was reopened as Fort Street School. In 1858, the new observatory was completed. During the economic boom that extended between the 1860s until the depression of the 1890s, Millers Point prospered. This coincided with an increase in large-scale exports, primarily wool, coal and flour, to international markets. Following improvements to Sydney's port facilities, many of the larger homes in the area were converted to boarding houses, or were otherwise replaced by maritime stores.¹²

In 1870, the Agar Steps were constructed to provide pedestrian access to Observatory Hill. This was followed by the establishment of an iron palisade fence enclosure and landscaping works.¹³ In 1884, Flagstaff Hill was dedicated as a public park, and was renamed Observatory Park in 1887. The economic depression of the 1890s and associated international trade slump resulted in the stagnation of the economic prosperity of Millers Point, and increasing financial hardship for its residents.

⁹ OEH, op cit.

¹⁰ Fitzgerald 2008

¹¹ OEH, op cit.

¹² Fitzgerald 2008

¹³ Fitzgerald 2008

In January 1900, an outbreak of the bubonic plague resulted in the resumption and quarantining of the area by authorities. Observatory Hill was included in the resumption, and was initially under the control of City Improvement Advisory Board. The hysteria that surrounded the epidemic ultimately permitted the government to take control of the Sydney waterfront and nearby areas to undertake a major re-planning and redevelopment project. The opinion that the private sector was unable to efficiently manage the infrastructure of the port facilitated some of the greatest public works undertaken in Sydney including the establishment of modern wharves from Woolloomooloo to White Bay, and the construction of the Sydney Harbour Bridge.¹⁴

Figure 13: Steelwork of the southern approach viewed from Observatory Hill, c1930-1932.
(Source: State Library NSW)



When the SHB opened in 1932, the Millers Point maritime precinct was once again isolated from the central business district. The approaches to the Sydney Harbour Bridge segregated Observatory Hill from the central business district, and parts of The Rocks and Millers Point. The construction of the circular cutting at Observatory Hill between 1938 and 1940, and construction of Cahill Expressway in 1958 separated the major elements of Observatory Hill and isolated the Fort Street Primary School site (then Fort Street High School) on a traffic island. In 1974, the high school buildings were vacated, and subsequently leased to the National Trust of Australia (NSW).

Figure 14: Construction of Cahill Expressway cutting at Observatory Hill, 1939.
(Source: City of Sydney Archives)



¹⁴ Fitzgerald, op cit.

4.0 SITE ANALYSIS

4.1 Introduction

A site inspection of the study area was conducted on 15 February 2017 by Charlotte Simons (Heritage Consultant) and Dr Sandra Wallace (Director). The aim of the survey was to inspect the study area to assess the current condition of heritage items and areas that may be impacted by the proposal. The inspection was undertaken on foot and a photographic record was made.

4.2 Site description

The study area comprises a large area within the Millers Point & Dawes Point Village Precinct extending from the Kent Street cycleway to the south, alongside Bradfield Highway at Observatory Hill past the National Trust Centre/S.H. Ervin Gallery, Fort Street Public School, Sydney Observatory and Observatory Hill Park, towards the existing SHB cycleway to the north.

At the southern end of the study area is an existing shared cyclist and pedestrian path from Kent Street, which ranges from three to four metres in width. Heading north, the path is bordered by Bradfield Highway to the east, and to the west by a concrete retaining wall with mature trees and further north by the historic sandstone retaining wall and entry stairs at the National Trust Centre/S.H. Ervin Gallery (Figure 15 to Figure 20).

North of the entrance to the National Trust Centre, the existing shared cyclist and pedestrian path ascends to a steep ramp that is near existing historic plantings including a significant mature Moreton Bay Fig tree and other smaller fig trees, and reaches an existing bridge over the Cahill Expressway. The shared path bridge crossing is approximately 2.4 metres wide, and features tight corners with limited visibility (Figure 21 to Figure 25).

The shared path along the bridge over Cahill Expressway descends to a shared cyclist and vehicle path on Upper Fort Street that begins opposite Fort Street Public School, bordered by Bradfield Highway and a Roads and Maritime Incident Response Area to the east. A pedestrian path is located on the west side of the Upper Fort Street (Figure 26 to Figure 29).

Heading north, the shared path along Upper Fort Street follows a shallow descent along the edge of the SHB southern approach. To the west of Upper Fort Street is the pedestrian path, Observatory Hill Park and the Sydney Observatory beyond. To the east of Upper Fort Street is street parking and an fitness area parallel to the concrete rendered SHB southern approach retaining wall. The fitness area features gym equipment and seven significant Jelly Palm trees at the northern end (Figure 30 to Figure 35).

The northern end of the study area features a recent cycle path that connects the shared cyclist and vehicle path at Upper Fort Street with the existing Sydney Harbour Bridge cycleway. This cycle path travels east across the fitness area alongside Upper Fort Street and then runs parallel to the concrete rendered retaining wall of the SHB southern approach below the southern toll house, along a ramp that reaches the cycleway commencing within the SHB south west stairs (Figure 35 to Figure 38).

Figure 15: Looking southwest along existing shared-use path at southern end of project area, mature plantings seen on right.



Figure 16: Looking west to sandstone retaining wall on boundary of the National Trust Centre site.



Figure 17: Looking northeast along SHB southern approach showing existing shared-use path.



Figure 18: Looking southwest along existing shared-use path at southern end of project area, sandstone retaining wall on boundary of National Trust Centre seen on right.

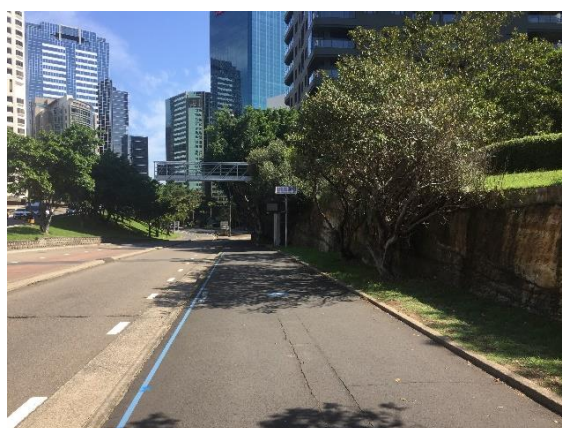


Figure 19: Looking southwest from existing shared-use path to sandstone retaining wall and entrance stairs to National Trust Centre.



Figure 20: Looking northwest from existing shared-use path to entry stairs to National Trust Centre (concrete retaining wall seen on right).

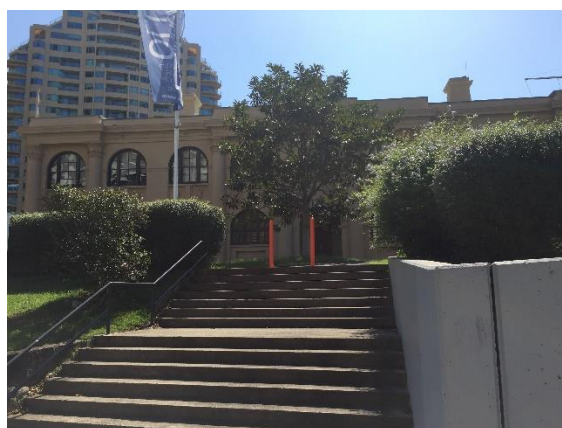


Figure 21: Looking northeast from National Trust Centre entrance to fig trees near existing footbridge over Cahill Expressway.



Figure 22: Looking northeast from outside National Trust Centre entrance towards SHB southern approach and existing shared-use path.



Figure 23: Looking north to existing pedestrian/cycle bridge over Cahill Expressway showing nearby tree plantings.



Figure 24: Looking southwest from existing pedestrian/cycle bridge over Cahill Expressway towards the National Trust Centre showing fig trees.



Figure 25: View southeast across existing pedestrian/cycle bridge over Cahill Expressway towards Sydney CBD.

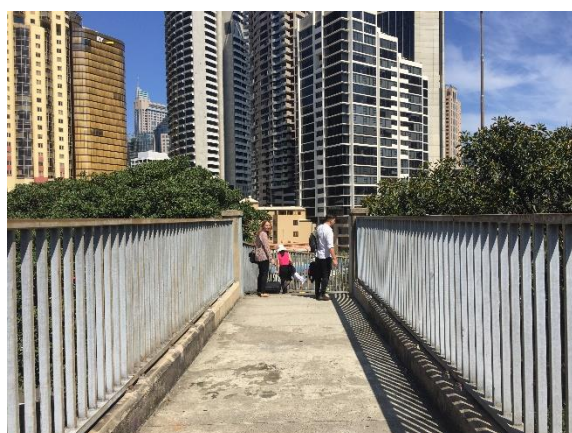


Figure 26: Looking southwest along existing pedestrian/cycle bridge over Cahill Expressway towards Sydney CBD.

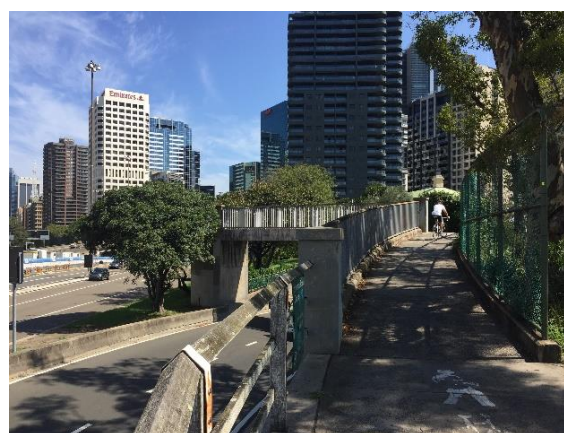


Figure 27: Looking north from near Fort Street Public School towards Upper Fort Street, existing vegetation seen in foreground.



Figure 28: Looking south from Upper Fort Street near Fort Street Public School towards existing bridge over Cahill Expressway.



Figure 29: Looking north along Upper Fort Street from Fort Street Public School showing narrow shared vehicle/cycle road.



Figure 30: Looking west from Upper Fort Street across Observatory Hill Park, Sydney Observatory in distance.



Figure 31: Looking south along Upper Fort Street towards Fort Street Public School, RMS Incident Response Area seen on left.



Figure 32: Detail shot of plaque commemorating 50th Anniversary of SHB on retaining wall alongside Bradfield Highway.



Figure 33: Looking north along Upper Fort Street towards retaining walls of the SHB southern approach, pedestrian path on left.



Figure 34: Looking south along Upper Fort Street towards the Sydney CBD, fitness area and gym equipment seen to left.



Figure 35: Looking east to retaining walls on west side of SHB southern approach, significant Jelly Palms seen on right.



Figure 36: Looking southwest along area to west of bridge approach showing cycleway, fitness area and Jelly Palms in distance.



Figure 37: Looking northeast towards SHB southern approach showing existing cycleway adjoining Upper Fort Street and toll house in distance.



Figure 38: Looking north along cycle ramp at northern end of the study area towards existing SHB cycleway at south west stairs.



5.0 HERITAGE SIGNIFICANCE

5.1 Introduction

This section identifies the significance of the SHB and listed heritage items adjacent to and in proximity to the site location. Full significance assessments for nearby heritage listed items are included in Appendix A at the end of this document.

5.2 Sydney Harbour Bridge

The SHB is a monumental landmark in the centre of the city of Sydney, and one of the most globally recognised bridges. It is an important visual element in the Sydney cityscape which can be viewed from many key points around the harbour. The steel arched form, Art Deco inspired granite pylons and composite approach spans create an iconic and dramatic composition that consistently evokes a positive response from observers.

The SHB is listed on several registers and has heritage value at a local, state and national level. The statement of significance included in the NHL and SHR listings are provided below. The assessments of the SHB against the national and NSW heritage assessment criteria is provided in the Appendix of this report.

5.2.1 National heritage values

The NHL database contains the following statement of significance:¹⁵

The building of the Sydney Harbour Bridge was a major event in Australia's history, representing a pivotal step in the development of modern Sydney and one of Australia's most important cities. The bridge is significant as a symbol of the aspirations of the nation, a focus for the optimistic forecast of a better future following the Great Depression. With the construction of the Sydney Harbour Bridge, Australia was felt to have truly joined the modern age, and the bridge was significant in fostering a sense of collective national pride in the achievement.

The Sydney Harbour Bridge was an important economic and industrial feat in Australia's history and is part of the nationally important story of the development of transport in Australia. The bridge is significant as the most costly engineering achievement in the history of modern Australia, and this was extraordinary feat given that it occurred at the severest point of the Great Depression in Australia.

The bridge is also significant for its aesthetic values. Since its opening in 1932, the Sydney Harbour Bridge has become a famous and enduring national icon, and remains Australia's most identifiable symbol. In its harbour setting, it has been the subject for many of Australia's foremost artists, and has inspired a rich and diverse range of images in a variety of mediums – paintings, etchings, drawings, linocuts, photographs, film, poems, posters, stained glass - from its construction phase through to the present.

¹⁵ Department of Environment and Energy Australian Heritage Database 2007, "Sydney Harbour Bridge, Bradfield Hwy, Dawes Point – Milsons Point, NSW, Australia".

The Sydney Harbour Bridge is also significant as one of the world's greatest arch bridges. Although not the longest arch span in the world, its mass and load capacity are greater than other major arch bridges, and no other bridge in Australia compares with the Sydney Harbour Bridge in its technical significance. In comparing Sydney Harbour Bridge with overseas arch bridges, Engineers Australia has drawn attention to its complexity in combining length of span with width and load carrying capacity. The construction of Sydney Harbour Bridge combined available technology with natural advantages provided by the site. The designers took advantage of the sandstone base on which Sydney was built, which enabled them to tie back the support cables during construction of the arch, and to experiment with massive structures. Although designed more than 80 years ago, the bridge has still not reached its loading capacity.

The bridge is also significant for its important association with the work of John Job Crew Bradfield, principal design engineer for the New South Wales Public Works Department, who ranks as one of Australia's greatest civil, structural and transport engineers.

5.2.2 State heritage significance

SHB, approaches and viaducts (road and rail) is listed on the SHR and has historical, aesthetic or technical, social and research potential heritage values. The State Heritage Inventory (SHI) database contains the following statement on the significance:

The bridge is one of the most remarkable feats of bridge construction. At the time of construction and until recently it was the longest single span steel arch bridge in the world and is still in a general sense the largest. The bridge, its pylons and its approaches are all important elements in townscape of areas both near and distant from it. The curved northern approach gives a grand sweeping entrance to the bridge with continually changing views of the bridge and harbour. The bridge has been an important factor in the pattern of growth of metropolitan Sydney, particularly in residential development in post World War II years. In the 1960s and 1970s the Central Business District had extended to the northern side of the bridge at North Sydney which has been due in part to the easy access provided by the bridge and also to the increasing traffic problems associated with the bridge (Walker and Kerr 1974).

5.2.3 Project area components

Table 6 below lists the individual elements of the SHB which are associated with the Sydney Harbour Bridge Approaches and Viaducts and provides a significance grading for each.

Table 6: Grades of significance for SHB southern approaches components¹⁶

Component	Description	Grading
Views of the SHB end-on from the northern and southern approach roads	The study area features views of the SHB end on from existing shared-use paths alongside Bradfield Highway and from the existing shared-use bridge over the Cahill Expressway cutting.	Exceptional
Views of the bridge from ground level nearby and from the water	The study area features views of the SHB from the existing shared-use paths alongside Bradfield Highway and along Upper Fort Street, from Observatory Hill Park and from the existing shared-use bridge over the Cahill Expressway cutting.	Exceptional
Rendered architectural elements (eg walls, parapets, pilasters and spandrels).	<p>The northern end of the study area borders the concrete rendered retaining wall and parapets of the SHB southern approach.</p> <p>Historical aerial photography indicates that the alignment of this approach changed with upgrades to the southern approaches, and that this wall is not part of the original construction.</p>	High
Old toll house near Argyle Street	The old toll house near Argyle Street is located near the northern end of the study area, above the existing cycle path that connects the existing SHB cycleway with the shared-use road on Upper Fort Street.	High
Bridge stairs in Cumberland Street, Observatory Hill, Ennis Road and Alfred Street	<p>The northern end of the study area borders the south-western bridge stairs. The rendered reinforced concrete structure of these bridge stairs features numerous arches, a design element noted by Bradfield:</p> <p>“The semi-circular arch forms the basis of the design, and stairways, tunnel portals, and the Argyle Street arch were designed as a whole and harmonize with the general aspect of the southern approach.”¹⁷</p> <p>From the Upper Fort Street level, one flights of stairs leads to the bridge footway to Cumberland Street over the Argyle Street Arch, and a further two flights of stairs lead up to the existing SHB cycleway.</p>	High
Bronze plaques	A Sydney City Council commemorative plaque is located on the concrete rendered retaining wall of the SHB southern approach near the Roads and Maritime Incident Response Area. The plaque was mounted in 1982 and unveiled by then Premier of NSW the Hon. Neville Wran to commemorate the fiftieth anniversary of the opening of the Sydney Harbour Bridge.	High
Overall form of the approaches, including: the rendered retaining walls divided into bays	The northern portion of the study area borders the concrete rendered retaining wall of the SHB southern approach. Historical aerial photography indicates that the alignment of this approach changed with upgrades to the southern approaches, and that this wall is not part of the original construction.	High

¹⁶ The schedule of significant fabric is based on the SHB CMP (2015) and items noted during site inspections and historical research conducted in 2016.

¹⁷ Bradfield, J.J.C., ‘The Sydney Harbour Bridge and Approaches’, Proceedings of Institute of Civil Engineers, Vol.238.

Component	Description	Grading
The whole of the rendered reinforced concrete structure of the southern and northern stairs on both eastern and western sides, pilasters, arches, parapets, ornamentation and lettering, carborundum cement treads, risers and landings	<p>The northern end of the study area borders the south-western bridge stairs. The rendered reinforced concrete structure of these bridge stairs features numerous arches, a design element noted by Bradfield:</p> <p>“The semi-circular arch forms the basis of the design, and stairways, tunnel portals, and the Argyle Street arch were designed as a whole and harmonize with the general aspect of the southern approach.”¹⁸</p> <p>From the Upper Fort Street level, one flights of stairs leads to the bridge footway to Cumberland Street over the Argyle Street Arch, and a further two flights of stairs lead up to the existing SHB cycleway.</p>	High
Wearing surfaces of road, rail, foot and cycle ways	There is an asphalt covered ramp at the northern end of the study area that connects to the existing SBH cycleway.	Little

5.3 Millers Point & Dawes Point Village Precinct (SHR No. 01682)

The Millers Point & Dawes Point Village Precinct comprises a Conservation Area that is bound to the north by the Walsh Bay SHR listed precinct, on the far-north beyond by the Sydney Harbour near Ives Steps on Dawes Point/Tar-ra, to the north-east by the Bradfield Highway (SHB southern approaches) and the SHB, to the south by existing high-rise apartments, to the west by the edge of the Darling Harbour wharf aprons, and to the north west by the cliff-edges of Old Millers Point.

The Millers Point & Dawes Point Village Precinct is listed as a state significant heritage item due to its historical, associative, aesthetic, research potential, rarity and representativeness heritage values.

Figure 39: View across Millers Point and Dawes Point from Observatory Hill Park.



¹⁸ Bradfield, J.J.C., 'The Sydney Harbour Bridge and Approaches', Proceedings of Institute of Civil Engineers, Vol.238.

5.4 Sydney Observatory (SHR No. 01449)

Constructed between 1857 and 1859, Sydney Observatory is a two storey sandstone building designed in the Florentine Renaissance style with two telescope domes on octagonal towers and a four storey timeball tower. Having once contained offices, instruments, library and an astronomer's residence, it is now a public observatory and museum of astronomy and meteorology.

Sydney Observatory is listed as a state significant heritage item due to its historical, aesthetic and research potential heritage values.

Figure 40: Looking south to Sydney Observatory from Observatory Hill Park.



5.5 Argyle Bridge (SHR No. 5053137)

Argyle Bridge consists of a road bridge, along with abutments and pylons, at Cumberland Street which was constructed in 1911. The original Argyle Bridges for Gloucester Street and Cumberland Street were built in 1862 and 1864 respectively.

As part of the improvements undertaken by the Sydney Harbour Trust, Gloucester and Cumberland Streets were realigned and the two road bridges over the Argyle Cut were replaced by the current single bridge at Cumberland Street. The current bridge incorporates evidence of the earlier bridge in the form of its abutments.

Argyle Bridge is listed as a state significant heritage item due to its historical, social and research potential heritage values.

Figure 41: Looking east to Argyle Bridge from Argyle Street.



5.6 Argyle Cut (SHR No. 5053138)

The Argyle Cut is a deep rock cutting which provides direct connection between Millers Point and the Rocks. The cut is covered by the Cumberland Street Bridge of c1911 and the Bradfield Highway of c1930. The cutting of the sandstone by chain gangs of convicts began in 1843, however the project was abandoned before it was finished and was not completed until the late 1850s. During the construction of the SHB southern approaches the Argyle Cut was widened and the walls straightened, creating an even footpath to both sides. Today the Argyle Cut largely retains its 1930s alignment.

Argyle Cut is listed as a state significant heritage item due to its historical, associative, aesthetic, technical, social, research potential and representativeness and rarity heritage values.

Figure 42: Looking east through Argyle Cut from Argyle Street.



5.7 The Rocks (Argyle Street) Railway Sub-station and Switchhouse (SHR No. 01022, RailCorp s170 No. 4800006)

Constructed in 1932 as an original feature of the SHB construction, this item was part of the electrification of the Sydney suburban railway network. The sub-station and switchhouse, designed in an inter-war stripped classical style, continues to convert electrical power for use on the network.

The Rocks (Argyle Street) Railway Sub-station and Switchhouse is listed as a state significant heritage item due to its historical, aesthetic, social, research potential, rarity and representativeness heritage values.

Figure 43: View of the Rocks Railway Sub-station and Switchhouse from Upper Fort Street.



5.8 Garrison Anglican Church Precinct (SHR 00644)

Located at the intersection of Argyle Street and Lower Fort Street in Millers Point, the site includes a church and parish hall and is defined by the 'village square' of the surrounding Argyle Place public reserve. The church was constructed between 1840 and 1846 from locally quarried sandstone.

Garrison Anglican Church Precinct is listed as a state significant heritage item due to its historical, associative, aesthetic, social and rarity heritage values.

Figure 44: View of Garrison Anglican Church Precinct from Argyle Street.



5.9 Sydney Opera House Buffer Zone

The Sydney Opera House is a building recognised worldwide as an iconic landmark overlooking the waters of Sydney Harbour. In acknowledgement of its cultural significance, the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 has inserted buffer zone controls for the Sydney Opera House.

The buffer is intended to give additional protection to the world heritage values of the Sydney Opera House. The buffer intends to protect views of the site from public places on the foreshores that contribute to its world heritage significance balanced against the need for orderly and economic development of the land. The study area is outside the Sydney Opera House buffer zone.

5.10 Millers Point Heritage Conservation Area

- Sydney Local Environment Plan 2012, Item No. 1876.

The Millers Point Heritage Conservation area encompasses residential and commercial area that is bound on the north by Sydney Harbour, to the north-east by the SHB, to the east by Bradfield Highway, to the south by existing high-rise apartment buildings, to the west by Hickson Road and to the northwest by the cliff edges of Old Millers Point.

The Millers Point Heritage Conservation Area is listed as a heritage conservation area due to its historical, associative, aesthetic, social, research potential, rarity and representativeness heritage values.

Figure 45: View north to terraces and park within Millers Point Heritage Conservation Area.



5.11 National Trust Centre Incl Buildings & Their Interiors, Retaining Walls & Ground

- Sydney Local Environment Plan 2012, Item No. 1876.

Constructed between 1815 and 1849, the main building at the National Trust Centre, originally designed in the Old Colonial Georgian style but later modified to Victorian Mannerist, was constructed as the colony's first purpose built hospital and later converted to a school. The National Trust Centre main administration building, formerly the military hospital, is a two storey rendered brick and stone building. The original main entry is located centrally on the eastern elevation facing the Bradfield Highway, featuring a set of stairs and sandstone retaining wall at the perimeter.

The National Trust Centre is listed as a local heritage item due to its historical, associative, aesthetic, social, research potential, rarity and representativeness heritage values.

Figure 46: View of the main east elevation of the National Trust Centre.



5.12 Fort Street Primary School Site Including Buildings and Their Interiors, Fig Trees and Grounds

- Sydney Local Environment Plan 2012, Item No. 1938.

The Fort Street Primary School site features a complex of buildings containing a two storey face brick classroom block constructed in 1941 in the immediate post-war modernist style, along with a single storey hall block and an attached amenity block that has been modified. The site, which was separated from the existing school site by two buildings occupied by the Weather Bureau, was established as a small high school to serve the area. The construction of the Cahill Expressway in 1962 and associated Cahill Expressway cutting isolated the site, with the excavation for the road severing Fort Street Primary School from Observatory Hill.

Fort Street Primary School site is listed as a local heritage item due to its historical, associative, aesthetic, and rarity heritage values.

Figure 47: View to Fort Street Primary School site from Upper Fort Street.



5.13 Observatory Park Incl Boer War Memorial, Bandstand, Fences and Landscaping

- Sydney Local Environment Plan 2012, Item No. 1935.

Bound by Kent Street, Watson Road, Upper Fort Street and Bradfield Highway in Millers Point, Observatory Park is the highest hill overlooking the settlement of Sydney. The elevated park remains as a rare urban space that has remained in its open form, and features open grassland with mature trees including large fig plantings, and a small number of built structures including a bandstand and an enclosed observatory garden.

Observatory Park is listed as a heritage item due to its historical, associative, aesthetic, social, research potential and rarity heritage values.

Figure 48: View southwest from Upper Fort Street to Observatory Hill Park.



5.14 Messenger's Cottage for Sydney Observatory Including Interior

- Sydney Local Environment Plan 2012, Item No. 1937.

The Messenger's Cottage for Sydney Observatory was constructed circa 1862 in response to the commencement of an electric telegraph line operating from South Head to the city and on to Liverpool. The single storey non-symmetrical rendered brick cottage retains much of its original form and fabric externally. The cottage has been modified and refurbished internally. The cottage grounds and setting are considerably changed in character and extent.

The Messenger's Cottage for Sydney Observatory is listed as a local heritage item due to its historical, associative and aesthetic heritage values.

Figure 49: View of Messenger's Cottage for Sydney Observatory from Upper Fort Street.



5.15 Bureau of Meteorology Including Interior

- Sydney Local Environment Plan 2012, Item No. 1936.

Constructed in 1922, the Bureau of Meteorology is a three storeyed face-brick building with a hipped tiled roof designed in a restrained Georgian Revival style. The building provided an essentially scientific establishment that provided forecasts of Sydney's weather for seventy years. The Bureau has almost no grounds surrounding the building. Its relative scale, design and position make it a dominant physical element in its immediate setting. The building is currently vacant.

The Bureau of Meteorology is listed as a local heritage item due to its historical, aesthetic, social, research potential, rarity and representativeness heritage values.

Figure 50: Bureau of Meteorology.



5.16 Lane off Gas Lane including sandstone walls and wrought iron street light

- Sydney Local Environment Plan 2012, Item No. 1890.

Located at Jenkins Street, Millers Point, the Lane off Gas Lane features remnant sandstone walls and a decorative wrought iron street light.

Lane off Gas Lane including sandstone walls and wrought iron street light is listed as a local heritage item. At the time of this report, the SHI database inventory listing for Lane off Gas Lane including sandstone walls and wrought iron street light, did not contain an assessment of significance.

Figure 51: View of Lane off Gas Lane (street light seen in foreground).



5.17 Jelly Palms, Upper Fort Street

This small group of exotic, ornamental trees comprising seven Jelly Palms is located at the northern end of the fitness area alongside the west side of the SHB southern approaches. The palms are civic plantings dating from the Inter-War period, and are believed to have been part of the landscaping program associated with the SHB opening in 1932. These trees are understood to have been transplanted from the north-east corner of Observatory Hill Park to their current location.¹⁹

Jelly Palms, Upper Fort Street, are listed on the City of Sydney Register of Significant Trees as being of local significance for their historic, aesthetic, visual, commemorative and rarity values.

Figure 52: The group of Jelly Palms along the retaining wall of the SHB southern approaches.



¹⁹ Tree IQ, 'Arboricultural Impact Assessment: Harbour Village North Cycleway', June 2016: 5

5.18 Moreton Bay Figs, National Trust Centre/S.H. Ervin Gallery site

These significant trees comprise two mature Moreton Bay fig trees that are located within the site of the National Trust Centre/S.H. Ervin Gallery. One fig tree is located near the front of the National Trust Centre building, and is the only remaining specimen of a former large group of figs. The second fig tree is located in the car parking area adjacent to the S.H. Ervin Gallery. The two mature fig trees, which are likely to date from the mid-nineteenth century, are identified as being in very poor condition.

The Moreton Bay Fig trees located at the National Trust Centre site are listed on the City of Sydney Register of Significant Trees as being of local significance for their historic value.

Figure 53: Photograph showing the mature fig tree located near the front of the National Trust Centre building (tree on left).

(Source: City of Sydney)



5.19 Archaeological potential and significance of the study area

Archaeological potential is defined by the NSW Heritage Division Archaeological Assessment Guidelines as 'the degree of physical evidence present on an archaeological site'.

The archaeological potential of the project footprint was assessed using early plans of the area in conjunction with photographs, historical descriptions and an assessment of previous subsurface impacts.

5.19.1 Overview development of the study area

There are three identifiable phases of development for the study area, which may be present in the archaeological record:

- Phase 1: Initial European Settlement (1788-c.1850)
- Phase 2: Late Nineteenth Century Development (c.1850-c.1900)
- Phase 3: Early Twentieth Century (c.1900-1930).

Phase 1 relates to the earliest European developments in the area and the early development of Millers Point for military and government purposes, as well as the early period of settlement.

Phase 2 relates to the expanding development of Millers Point and the development of the wider area as part of the mercantile development of Sydney Harbour, and the expansion of settlement within the Millers Point area, as it developed into a waterfront settlement close to the centre of Sydney.

Phase 3 relates to the developments within Millers Point following government resumption and demolition and the changes as a result of construction of new roads and building works under the direction of the government.

Based on the known historical development of the study area, the following types of archaeological resources may be located within the study area:

- Historic building envelopes
These archaeological resources may consist of stone or brick building footings and occupation deposits, or in refuse pits and former privies, as would a background scatter of items associated with the study area
- Potential to be on historic lot borders
These archaeological resources may consist of stone or brick wall footings, or more ephemeral remains of timber fencing, such as post holes
- Within historic road corridors
Former road surfaces and drainage works, such as drains and culverts, associated with former road alignments and associated stone kerbs and gutters.

Figure 54. City of Sydney, Survey Plans 1833, showing extent of development along what was then Cumberland and Princess Streets. Study area outlined in red.
(Source: City of Sydney Archives)

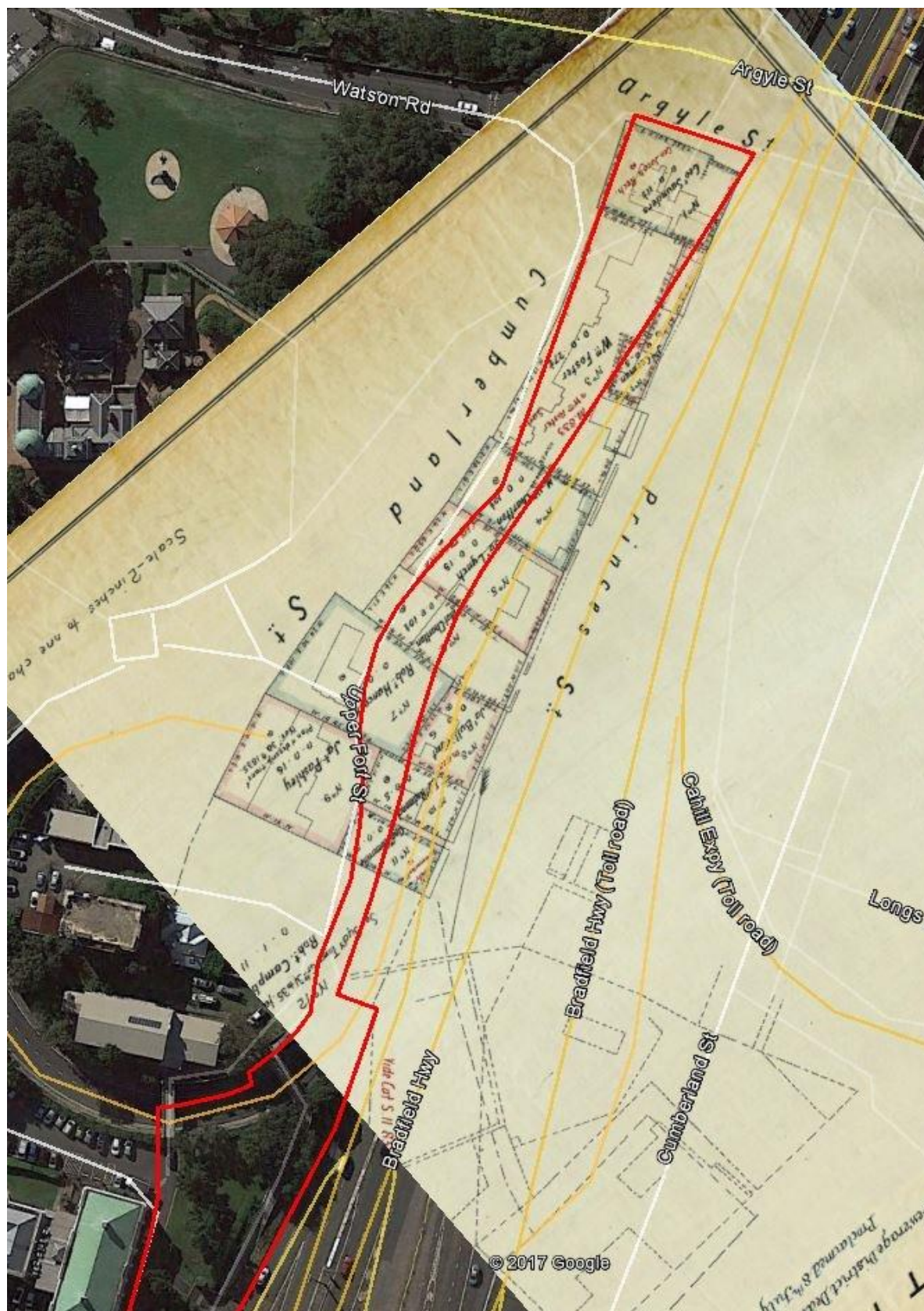


Figure 55. City of Sydney – Detail Plans, 1855, showing extent of development along Upper Fort Street. Study area outlined in red.
(Source: City of Sydney Archives)

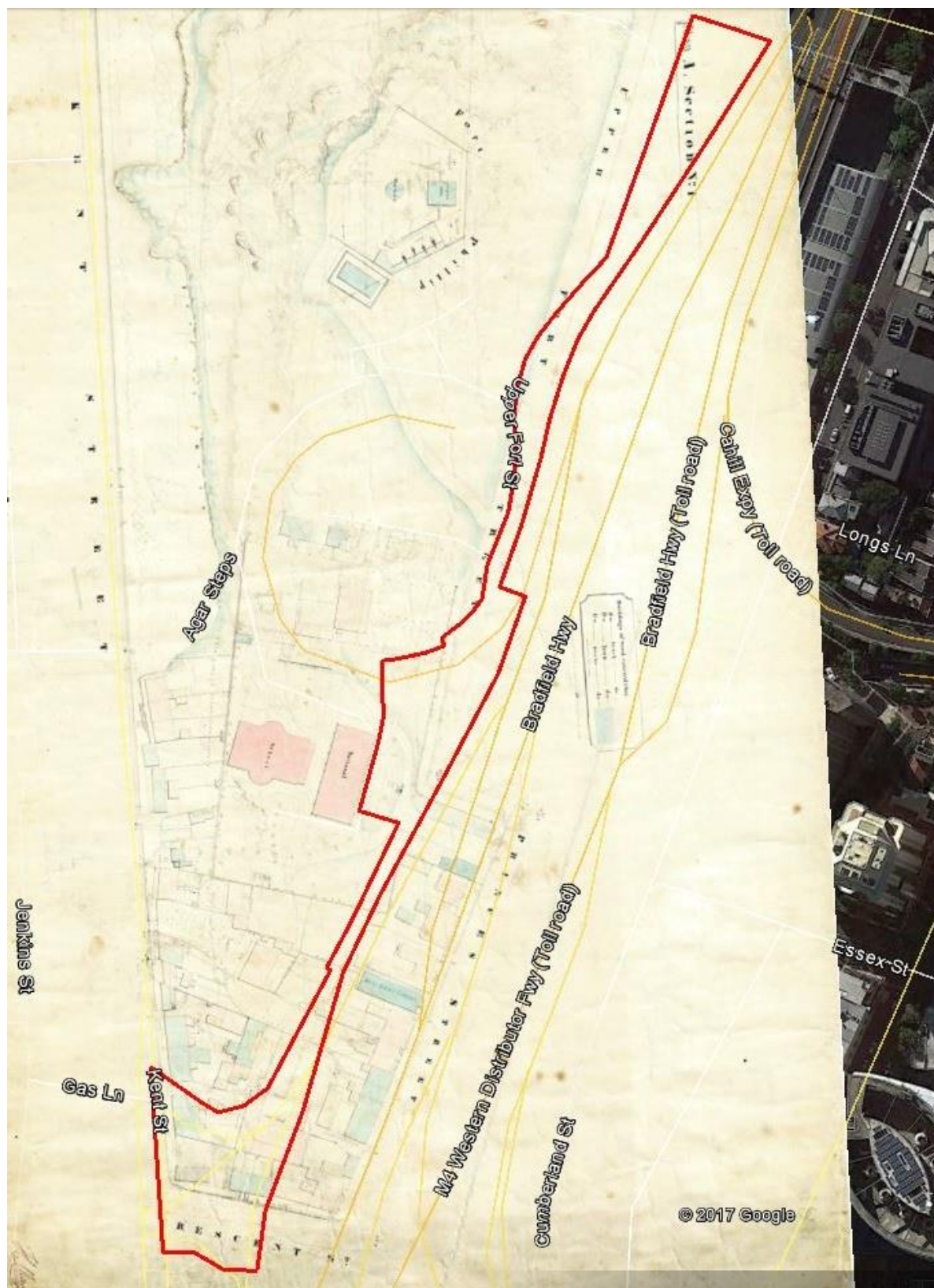


Figure 56. City of Sydney Trigonometrical Survey, 1855-1865 showing extent of development along Upper Fort Street. Study area outlined in red.
(Source: City of Sydney Archives)

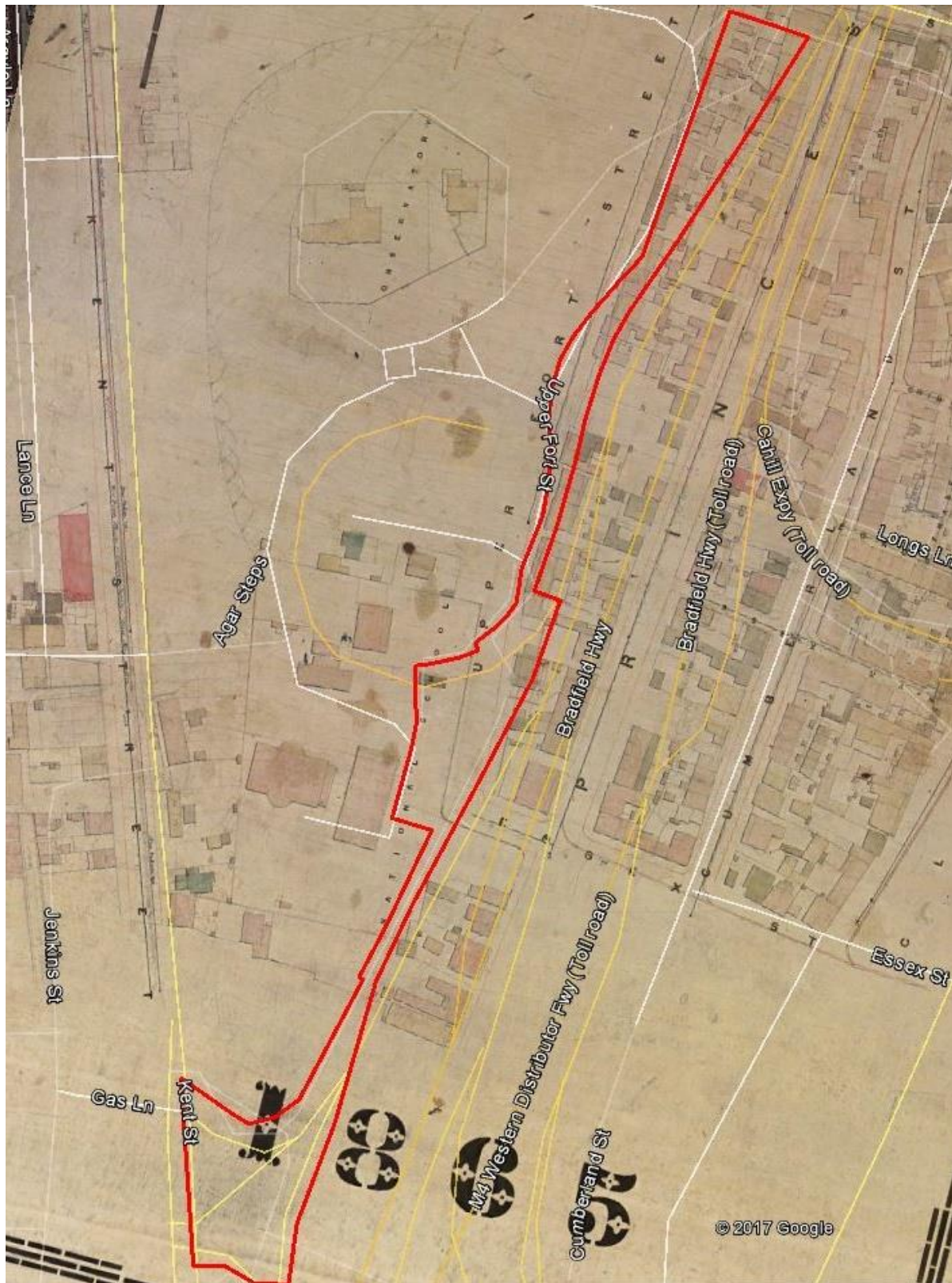
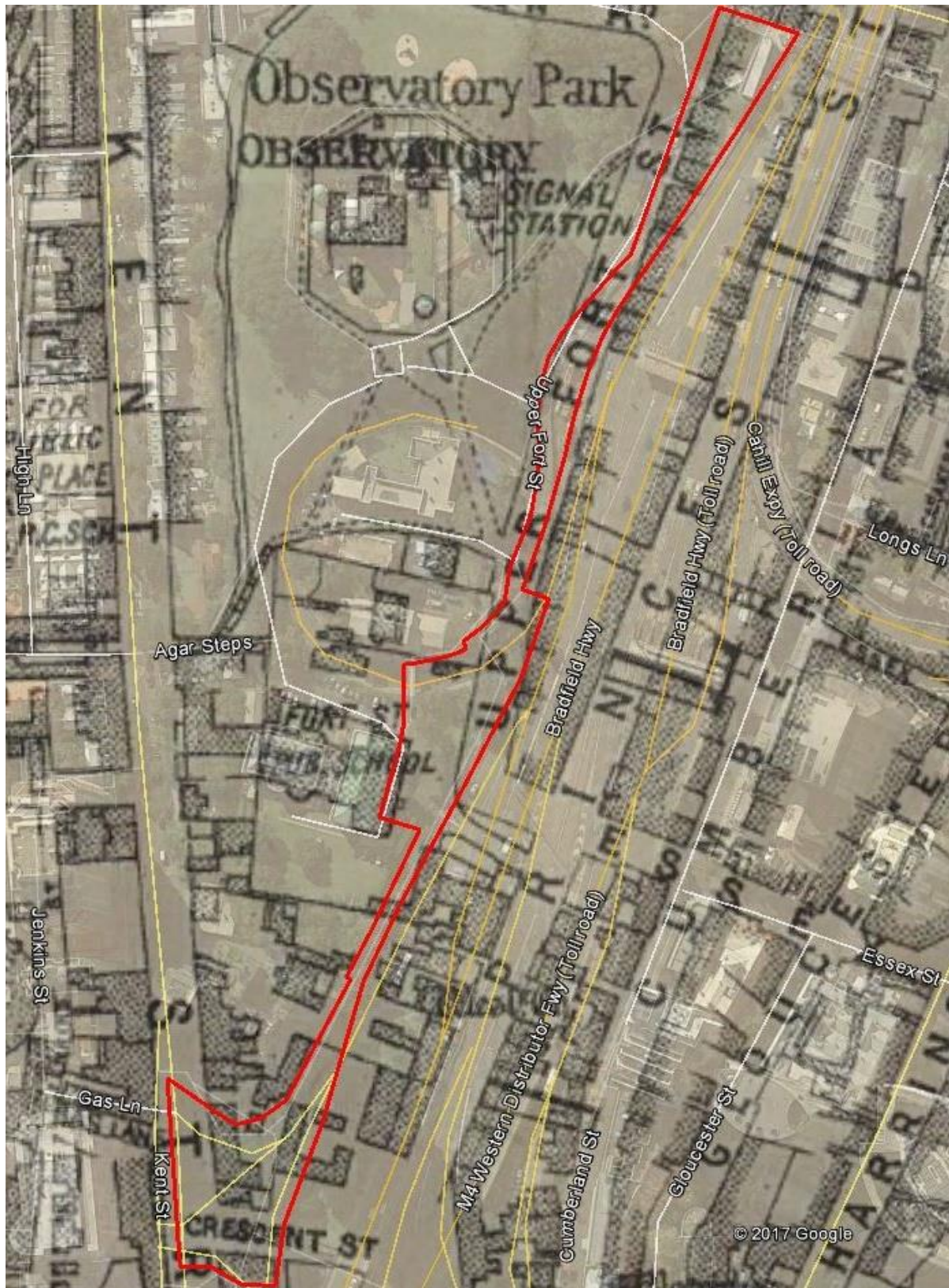


Figure 57. City of Sydney Plans, 1903 showing extent of development along Upper Fort Street. Study area outlined in red.
(Source: City of Sydney Archives)



5.19.2 Archaeological potential assessment

The SHR listing for the Precinct notes that much of Millers Point retains high archaeological potential, notably in areas such as '*Observatory Hill, Fort Street School and its immediate environment, and under all c. 1900 buildings, external spaces and asphalted areas. Archaeological significance and potential to reveal items of historical merit is considerably higher than elsewhere in the Sydney CBD. Its potential archaeological integrity has been protected through the lack of extensive redevelopment of the Millers Point area during the twentieth century.*'²⁰

The archaeological potential of the study area is not specifically referenced in this listing. Construction of the SHB will have significantly impacted archaeological resources adjacent to the SHB abutments and approaches. Archaeological remains are also likely to have been disturbed by later development within the study area, such as the establishment and redevelopment of road corridors, installation of services and construction of later buildings.

Overall, the study area between Observatory Hill and The National Trust building is likely to have undergone significant disturbance from the construction of the SHB, whilst the areas north and south of these locations would have undergone less disturbance but still have been impacted by construction of roads and infrastructure.

The areas of proposed impacts for the geotechnical works have a low archaeological potential overall.

5.19.3 Archaeological significance

The potential significance of each of the phases described above is outlined below:

Intact archaeological resources associated with Phase 1 would reach the threshold for State significance, as any archaeology from this period could provide information directly related to the earliest settlement periods in Australia and the early expansion and government works of the colony of New South Wales.

Intact archaeological resources associated with Phase 2 would reach the threshold for local significance. Intact archaeological remains associated with this period could provide information directly related to development of mid-nineteenth century residential life, which was directly related to the mercantile development of Sydney Harbour and the larger town of Sydney at the time.

Intact archaeological resources associated with Phase 3 may reach the threshold for local significance, as any archaeology from this period would provide information directly related to the impact of government resumptions and the changes in the community brought on by these resumptions, through the material record and changes to the built environment.

²⁰ Office of Environment and Heritage SHR listing for Millers Point & Dawes Point Village Precinct. Accessed online at: <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5054725> on 28/07/2017.

6.0 PROPOSED WORKS

6.1 Proposed works

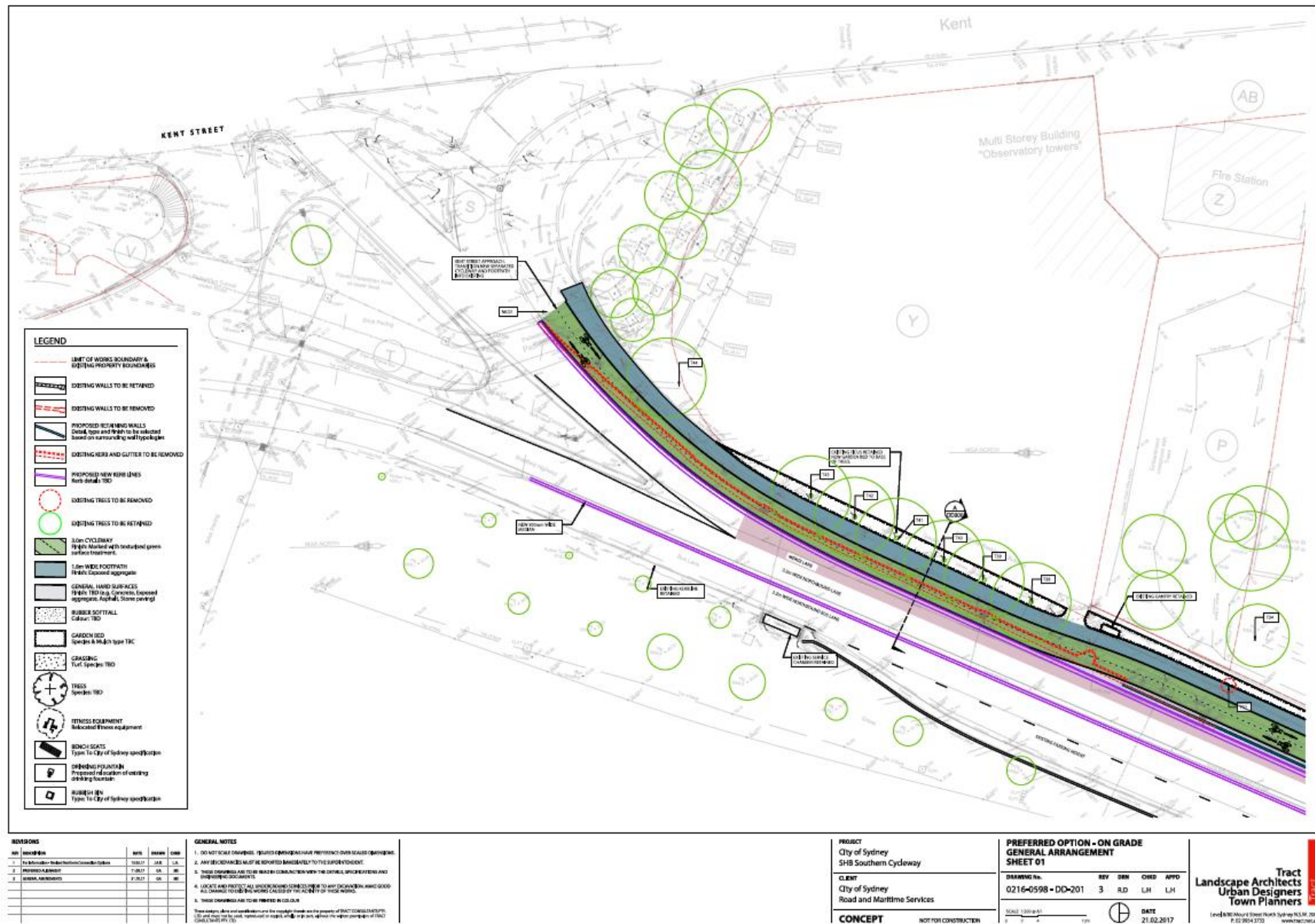
The proposal consists of a series of works which are detailed below. These works are illustrated in the drawings that follow.

6.1.1 Work activities

The proposed works for the SHB Southern Cycleway involve the following:

- Provision of a dedicated bi-directional cycleway from Kent St cycleway to Sydney Harbour Bridge cycleway, with effective width of three metres
- Upgrade of the existing pedestrian footpath from Kent St to Fort Street Public School, with width varying from 1.5m to 2.2m. Cyclists and pedestrians will be separated through delineation and contrasting surface treatments
- Removal of existing footbridge crossing the Cahill Expressway, including approach ramps. This bridge is within the SHR curtilage of the Millers Point and Dawes Point Village Precinct.
- Replacement of existing footbridge crossing the Cahill Expressway with a new cyclist and pedestrian bridge crossing with a new alignment and an effective width of 4.5 metres
- Removal of existing pedestrian and cyclist ramp on the southern approach to the Cahill Expressway footbridge. This will be replaced with a new elevated spiral ramp for cyclists and pedestrians with an improved gradient and an effective width of 4.5 metres, within the curtilage of the National Trust Centre/S.H. Ervin Gallery
- Removal of a 60 metres section of existing concrete retaining wall and concrete parapet adjacent to the Incident Response Area (IRA) to accommodate the proposed cycleway alignment
- Construction of a 62 metres section of new concrete retaining wall with a maximum height of 4.5 metres between the proposed cycleway alignment and the IRA
- Reconfiguration of existing fitness area in Observatory Hill to accommodate proposed cycleway alignment
- Provision of a 1.8 metres wide pedestrian footpath from Fort Street Public School to Watson Road
- Modification of merge treatment between Kent St and Clarence St on-ramps from general lane change to a zipper merge
- Ancillary works for construction including construction compounds and stockpile sites
- Utility relocations, including water, sewer mains, telecommunication, electricity and gas services
- Removal and relocation of several tree plantings.

Figure 58: Plan of proposed SHB southern cycleway. (Source: Tract)



REVISIONS

REV	DESCRIPTION	DATE	BY	CHK
1	As per client comments: layout changes to include pedestrian down stairs (downstairs)	10/01/21	AS	AS
2	As per client comments: layout changes to include pedestrian down stairs (downstairs)	10/01/21	AS	AS
3	As per client comments: layout changes to include pedestrian down stairs (downstairs)	10/01/21	AS	AS
4	As per client comments: layout changes to include pedestrian down stairs (downstairs)	10/01/21	AS	AS

GENERAL NOTES

1. SEE ALL NOTES ON DRAWINGS. VISUALISATION IS FOR INFORMATION ONLY AND DOES NOT REPRESENT A GUARANTEE OF RESULTS.
2. ANY DESIGN CHANGES MUST BE APPROVED BY THE CLIENT BEFORE PROCEEDING.
3. DESIGN CHANGES MUST BE MADE IN CONSTRUCTION WITH THE DESIGNER'S APPROVAL.
4. LOCATE AND PROTECT ALL UNDERGROUND SERVICES PRIOR TO ANY EXCAVATION WORK. ALL CHANGES TO THE DESIGN CAUSED BY THE ACTIVITY OF THESE WORKS.
5. DESIGN CHANGES MUST BE APPROVED BY THE CLIENT BEFORE PROCEEDING.

PROJECT
City of Sydney
Shih Southern Cycleway

CLIENT
City of Sydney
Road and Maritime Services

CONCEPT NOT FOR CONSTRUCTION

PREFERRED OPTION - ON GRADE GENERAL ARRANGEMENT SHEET 02

DRAWING No. 0216-0598 • DD-202

REV 3 **SEN** RLD **CHKD** LHM **APPRO** LHM

DATE 21.02.2017

Tract
Landscape Architects
Urban Designers
Town Planners

Tract is not responsible for the accuracy of the information provided on this drawing. It is the responsibility of the client to ensure that the information is accurate and up to date.

Figure 60: Plan of proposed SHB southern cycleway. (Source: Tract)

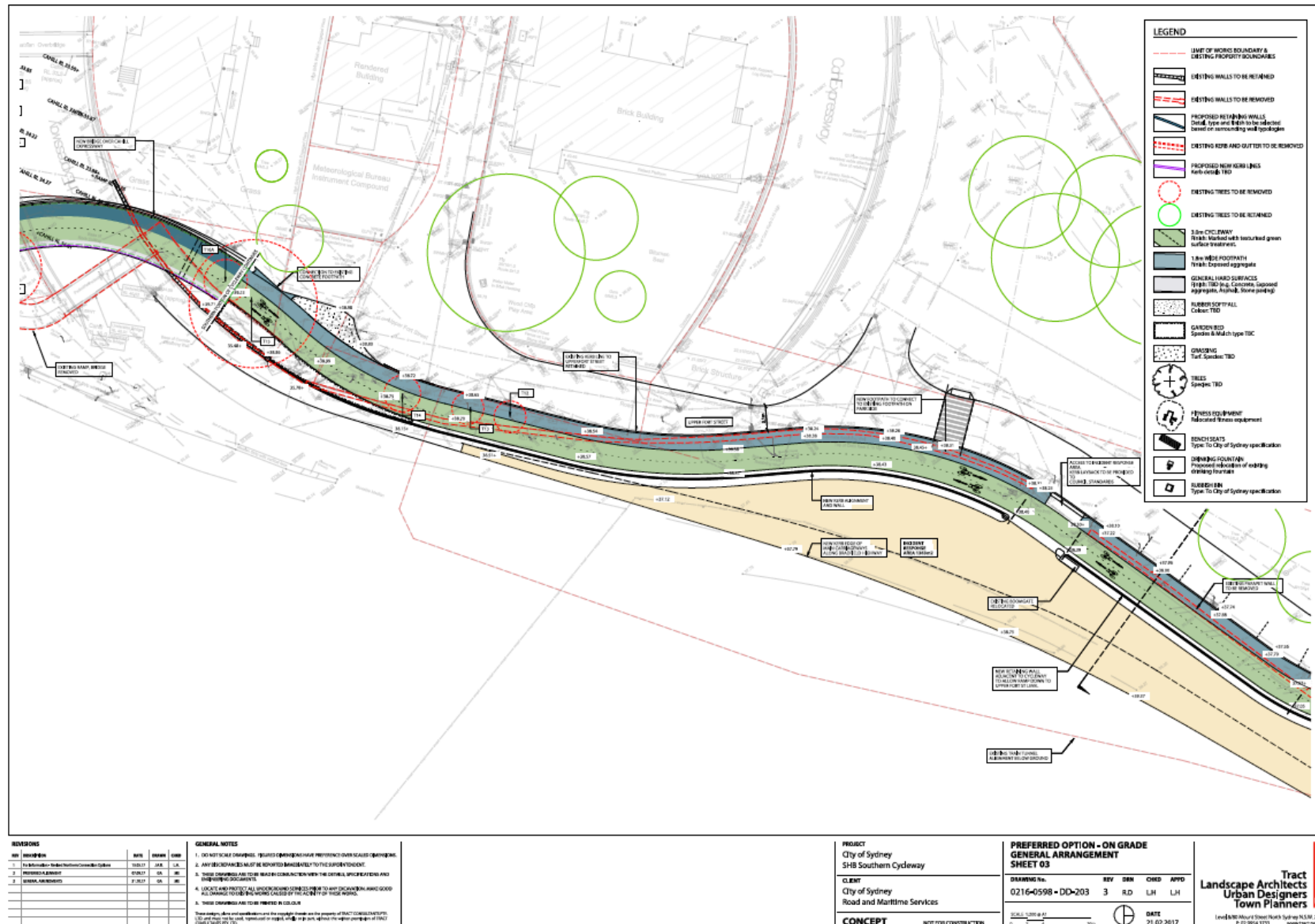


Figure 61: Plan of proposed SHB southern cycleway. (Source: Tract)

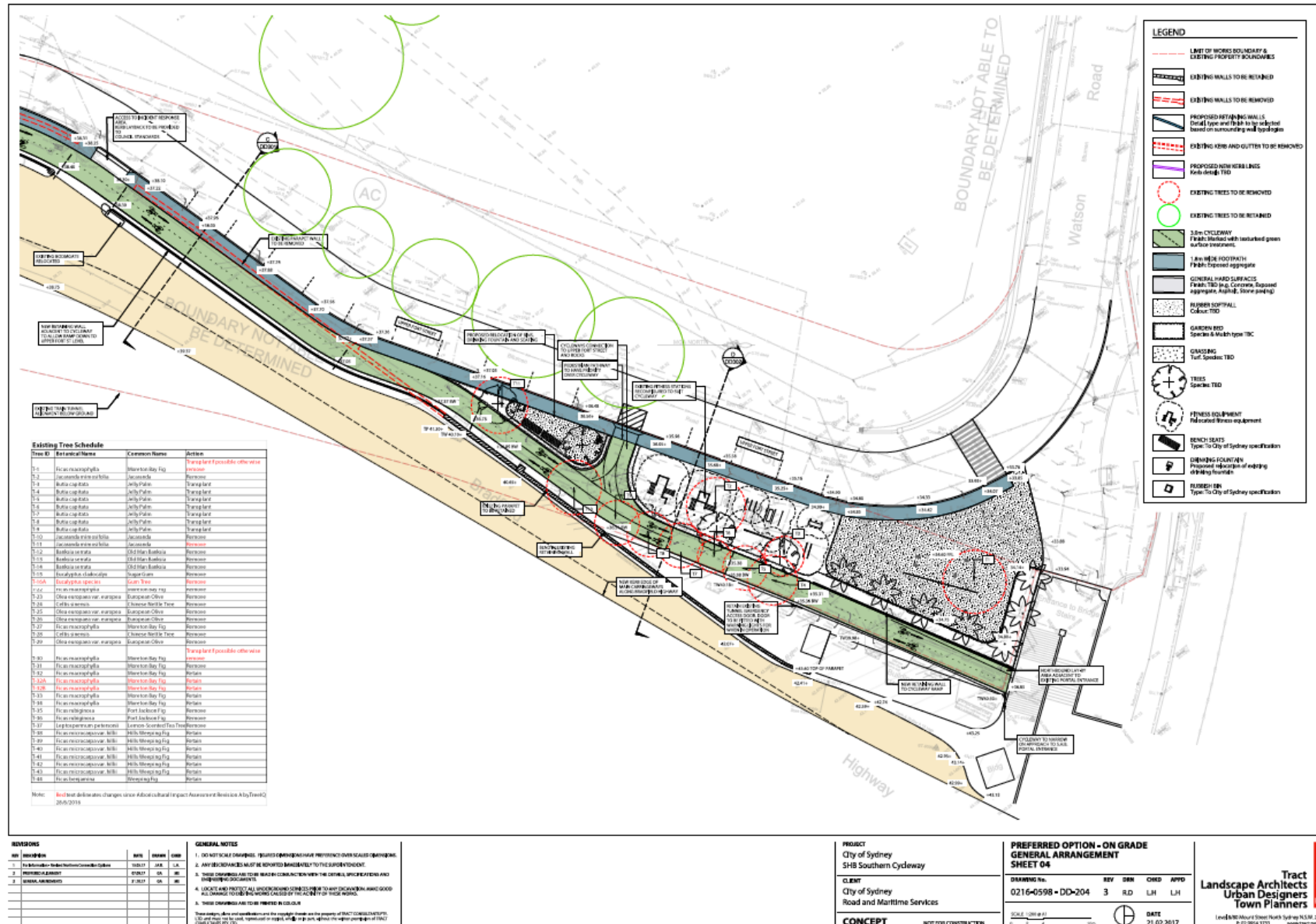


Figure 62: Sections of proposed SHB southern cycleway. (Source: Tract)

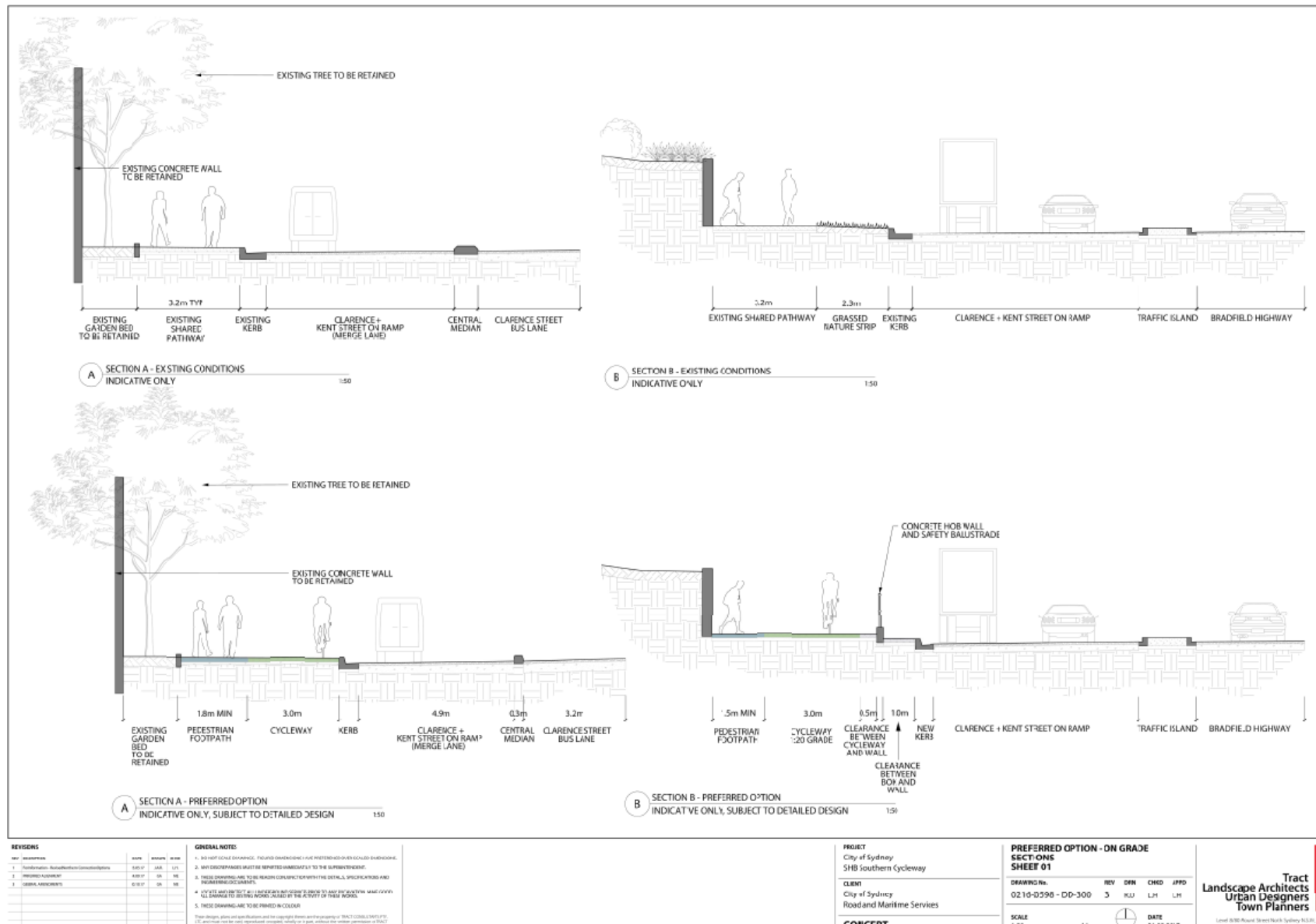


Figure 63: Sections of proposed SHB southern cycleway. (Source: Tract)

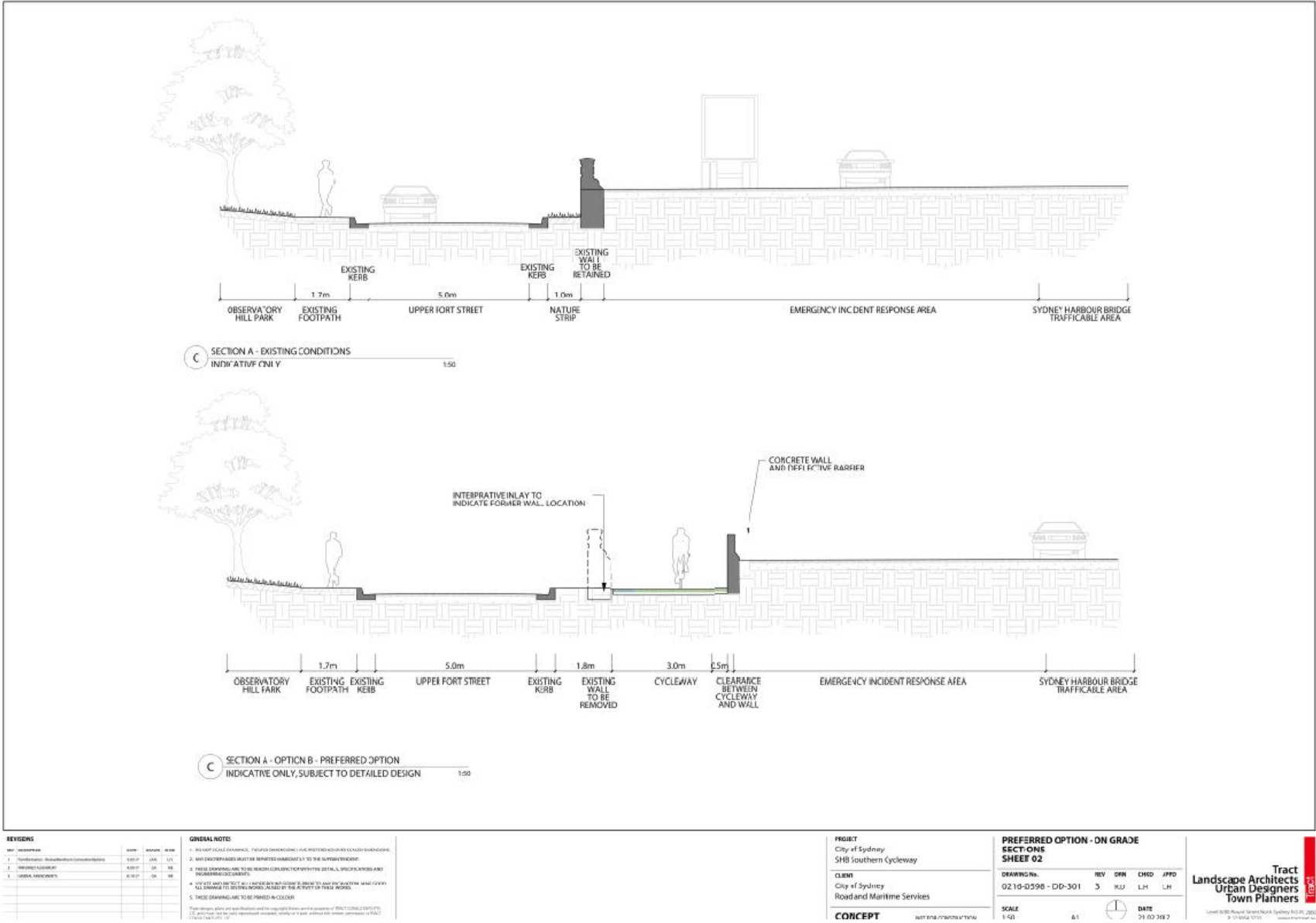


Figure 64: Sections of proposed SHB southern cycleway. (Source: Tract)

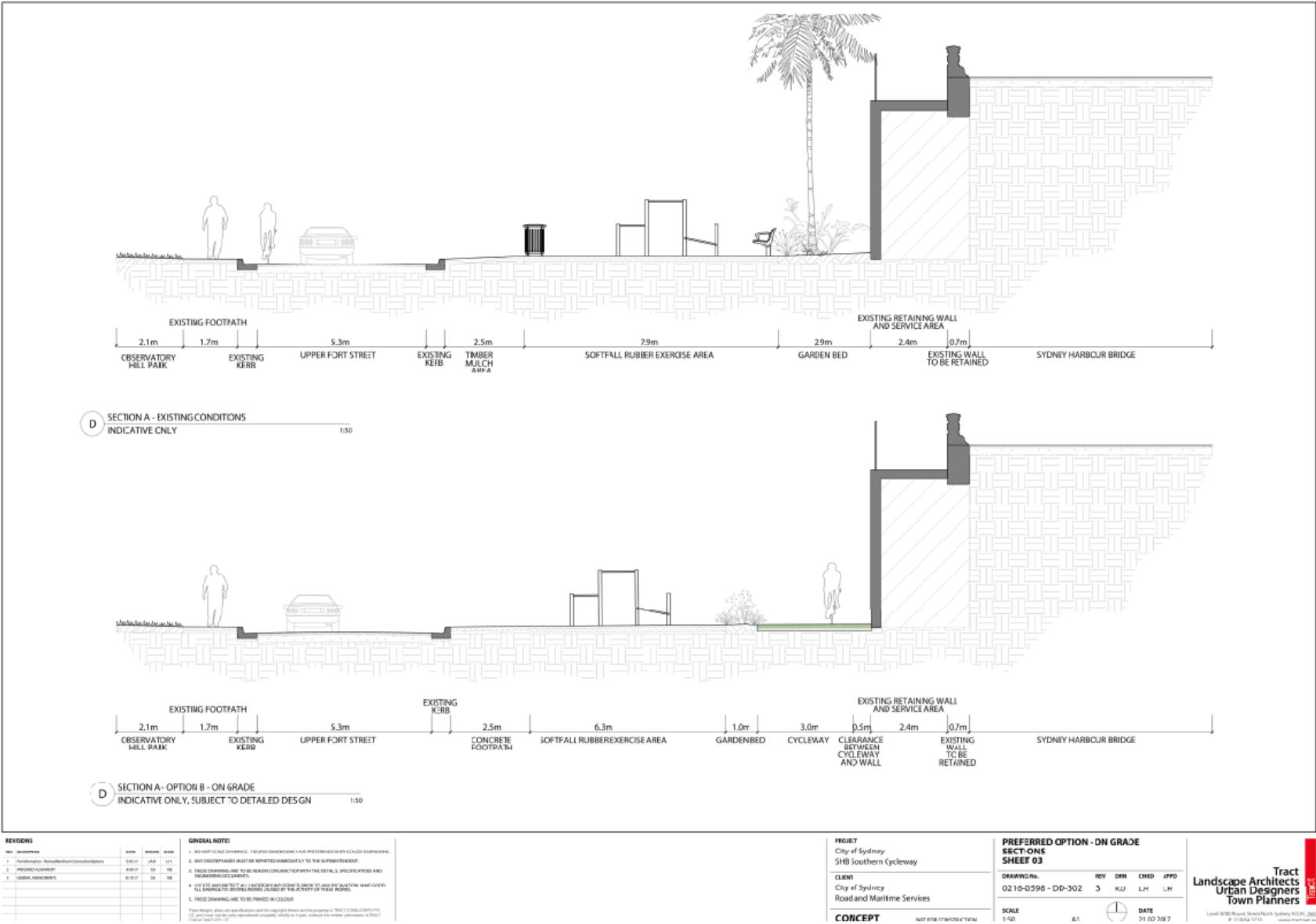


Figure 65: Render of proposed spiral ramp and bridge over Cahill Expressway, demonstrating height of new element to Fort Street School and surrounding conservation area. (Source: Tract)



Figure 66: Render of proposed spiral ramp and bridge over Cahill Expressway, demonstrating height of new element in relation to National Trust Centre/S.H. Ervin Gallery. (Source: Tract)



6.2 Proposal options

Since commencement of this SoHI, a number of options have been considered for the design of the proposal. Prior to Roads and Maritime involvement with the SHB Southern Cycleway, the project was managed by City of Sydney. In collaboration with Group GSA, City of Sydney explored a number of concept design options. In collaboration with Tract, Roads and Maritime further refined the preferred concept design and developed several variations around the proposal. A summary of proposal options is provided in Appendix B.

6.2.1 Justification for preferred option

The development of design options for the proposal has involved a complex process that has required consideration of and navigation around competing demands across the project area. The aim of the proposal is to address current safety concerns and access limitations to the shared-use paths on the SHB southern approaches connecting to the existing SHB cycleway. Options assessment meetings and workshops aimed to evaluate the design proposal based on the following primary criteria:

- Maximise integration with existing uses
- Minimise impacts on the heritage values of the SHB and the surrounding environment
- Minimise impacts to the operation of Upper Fort Street
- Maximise safety for users
- Provide a cost-effective solution and minimise construction impacts.

The majority of the impacts that would result from the preferred option, such as the construction of the elevated cycleway/pedestrian spiral ramp and on-grade cycleway that would require removal of a section of the existing parapet and retaining wall, are required to achieve the aims of the proposal and to be consistent with the requirements of the Austroads *Guide to Road Design Part 6A – Paths for Walking and Cycling* (2017).

The advantages of the preferred option (on-grade cycleway) are:

- Increased safety for cyclists
- Retention of street parking on Upper Fort Street
- Retention of existing street conditions on Upper Fort Street (road width maintained).

The disadvantages of the preferred option (on-grade cycleway) are:

- Increased physical impact to fabric of SHB, i.e. removed section of parapet and retaining wall
- Increased visual impact to overall form of SHB southern approach retaining wall.

The advantages of the preferred option's pedestrian and cyclist bridge to the National Trust Centre/S.H. Ervin Gallery frontage (elevated spiral ramp) are:

- Marginally reduced height of elevated structure
- Marginally reduced length of elevated structure.

The disadvantages of the preferred option (elevated spiral ramp) are:

- Reduced setback distance from National Trust Centre/S.H. Ervin Gallery main view corridor.

7.0 HERITAGE IMPACT ASSESSMENT

7.1 Introduction

This section assesses heritage impacts to the listed items within and adjacent to the study area. Impact to the SHB will be assessed in terms of its NHL and SHR significance.

7.2 Assessment of impact to SHB

7.2.1 Impact to fabric

Construction of on-grade cycleway along Upper Fort Street

The proposed works include the construction of an on-grade cycleway alongside Upper Fort Street and the proposed new alignment of the retaining wall to the west of Bradfield Highway. While this area falls outside the NHL and SHR curtilages of the SHB, it is associated with and supports the significance of the SHB southern approaches. The proposed new on-grade cycleway would extend from the north of the proposed bridge over the Cahill Expressway and extend through the existing fitness area alongside Upper Fort Street until connecting to the existing SHB cycleway in the south west bridge stairs.

The location and configuration of the proposed on-grade cycleway would only be achieved by removing and realigning a section of parapet and retaining wall. While this fabric is not part of the original 1930s construction of the SHB, nor is it within the NHL or SHR heritage curtilages of the SHB, it is considered a key component in supporting the overall form and configuration of the bridge's southern approaches comprising concrete parapet and concrete rendered retaining walls.

The removal of a 60 metre section of concrete parapet and retaining wall would undermine the legibility and intactness of the SHB southern approaches. The detail design of this aspect of the proposal is not yet apparent. Works to remove the existing wall and the design of the new retaining wall alignment would require further investigation and careful planning to minimise potential physical impact to significant fabric and ensure quality of design that is commensurate with the significant role of this component of the SHB southern approaches.

It is understood the proposal would involve interpretation of the existing alignment of the retaining wall by way of an interpretive inlay in the ground surface. This measure would help ameliorate potential impact of this component of the proposal on the significant values of the SHB, and could be further strengthened through additional interpretive or adaptive re-use measures.

The on-grade cycleway along Upper Fort Street would also involve reconfiguration of the fitness area in Observatory Hill, and relocation of the significant Jelly Palm plantings associated with the SHB (see discussion below). The construction of an on-grade cycleway along Upper Fort Street would involve associated landscaping works and establishment of a temporary site compound for the project.

The construction of an on-grade cycleway along Upper Fort Street would have a moderate physical impact to the heritage significant fabric of the SHB southern approaches.

Construction of elevated cycleway/pedestrian spiral ramp

The proposed elevated cycleway/pedestrian spiral ramp is located to the north of the National Trust Centre/S.H. Ervin Gallery site. The footprint of the proposed spiral ramp, which has been configured to achieve compliance, borders the main heritage view corridor to the National Trust Centre/S.H. Ervin Gallery, and would require removal of several trees within the item's heritage curtilage. Impact

of the proposed elevated spiral ramp on the National Trust Centre/S.H. Ervin Gallery and surrounding heritage items is discussed in Section 7.4.

The construction of the elevated cycleway/pedestrian spiral ramp would have a negligible physical impact to the heritage significant fabric of the SHB southern approaches.

Construction of cycleway/pedestrian bridge over Cahill Expressway

The proposed cycleway/pedestrian bridge over Cahill Expressway is located to the north of the National Trust Centre/S.H. Ervin Gallery site and south of the Fort Street Public School site. The proposal would involve removal of the existing bridge in this locality. The footprint of the proposed bridge would require removal of a mature Sugar Gum (*Eucalyptus cladocalyx*) within the Millers Point & Dawes Point Village Precinct and Millers Point Heritage Conservation Area, as discussed below. Physical impact of the proposed cycleway/pedestrian bridge on the National Trust Centre/S.H. Ervin Gallery and surrounding heritage items is covered in Section 7.4.

The construction of a new cycleway/pedestrian bridge over Cahill Expressway would have a negligible physical impact to the heritage significant fabric of the SHB southern approaches.

Widening/resurfacing of existing shared-use paths

The proposed works include widening/resurfacing of the existing shared-use path between the Kent Street cycleway and the proposed cycleway/pedestrian spiral ramp in the northeast corner of the National Trust Centre/S.H. Ervin Gallery site. This would involve removal of the grassed nature strip between the shared-use path and Clarence and Kent Street vehicle on-ramp.

It is anticipated that regrading of the shared-use path would involve reconfiguration of the entrance stairs and sandstone retaining wall to the National Trust Centre/S.H. Ervin Gallery, including a number of steps in this locality being built over to suit new cycleway and footpath grades. Physical impact of these works on nearby items, including National Trust Centre/S.H. Ervin Gallery, is covered in Section 7.4.

The proposed widening/resurfacing of shared-use paths would have negligible physical impact to the heritage significant fabric of the SHB southern approaches.

7.2.2 Visual impact

Construction of on-grade cycleway along Upper Fort Street

While the on-grade cycleway in itself would be a discrete element at ground level, the alignment of the cycleway would remove a large section of the existing concrete parapet and retaining wall alongside the west of Bradfield Highway. This aspect of the proposal would also involve construction of a new retaining wall between the cycleway alignment and IRA, with a maximum height of 4.5 metres. Although the existing parapet and retaining wall are not original, nor are they within the NHL or SHR curtilage of the SHB, their removal would interrupt the form and symmetry of the overall SHB southern approaches to which they play a supporting role. As the design detail of the new retaining wall is not yet known, sensitive design and careful planning would assist in minimising potential visual impact.

The construction of a new retaining wall, reconfiguration of the existing gym equipment located at the northern end of the fitness area in Observatory Hill, proposed removal of trees, relocation of the significant Jelly Palm plantings associated with the SHB (see discussion below) and associated landscaping works would change the cultural landscape setting and visual appearance of this area of the parkland.

The proposed works associated with the construction of an on-grade cycleway along Upper Fort Street would be visible from a number of sightlines within the Millers Point & Dawes Point Village Precinct, in particular from Observatory Hill Park and Sydney Observatory. Visual impact of these works on the nearby heritage items is covered in Section 7.3 and Section 7.4.

The proposed on-grade cycleway would have a moderate visual impact to the heritage views and setting of the SHB southern approaches.

Construction of elevated cycleway/pedestrian spiral ramp

Located in the northeast corner of the National Trust Centre/S.H. Ervin Gallery site to the west of the main view corridor towards the SHB from the southern approaches, it is considered the proposed spiral ramp would not directly impact significant end-on views of the SHB from Bradfield Highway, the Clarence and Kent Street vehicle on-ramp or the existing shared-use pedestrian/cycle route.

In order to achieve a design that meets Austroads guidelines for bicycle paths, the proposed footprint of the spiral ramp is considerably larger than previously explored options. While this has, to some extent, resulted in a positive visual impact by slightly reducing the height of the new ramp and length of its elevated sections, the proposed spiral ramp is wider and subsequently more closely borders the main heritage view corridor to/from the National Trust Centre/S.H. Ervin Gallery.

Although the height of the spiral ramp is understood to not exceed the height of the nearby National Trust Centre building, the overall form and size of the ramp would make it a prominent visual feature in the local area. The spiral ramp would be visible from several sightlines in the Millers Point & Dawes Point Village Precinct. Visual impact of these works on the nearby heritage items, including Millers Point & Dawes Point Village Precinct and National Trust Centre/S.H. Ervin Gallery, is covered in Section 7.3 and Section 7.4.

As discussed below, the footprint of the proposed spiral ramp would require removal of several trees in this locality. It is understood the significant Moreton Bay Fig tree near the front of the National Trust Centre building that is listed on the City of Sydney Significant Tree Register would be retained. Along with retaining an element of cultural significance, this would assist in screening the new spiral ramp and minimise its visual prominence within the Millers Point & Dawes Point Village Precinct.

The proposed elevated cycleway/pedestrian spiral ramp would have a minor visual impact to the heritage views and setting of the SHB southern approaches.

Construction of cycleway/pedestrian bridge over Cahill Expressway

In order to achieve compliance, the proposed cycleway/pedestrian bridge over Cahill Expressway requires a minimum clearance of 5.5 metres over the expressway. Although this represents an increase in height from the existing bridge structure, the proposed bridge over the Cahill Expressway has been realigned and is located further west of the existing bridge structure. This increased setback from Bradfield Highway and the existing/proposed shared-use pedestrian and cycleway path would reduce the visual prominence of the new bridge over Cahill Expressway on the significant end-on views of the SHB from the southern approaches.

The new bridge would introduce a new visual feature in the surrounding setting, and would affect several views in the Millers Point & Dawes Point Village Precinct. Visual impact of these works on the nearby heritage items, including Millers Point & Dawes Point Village Precinct, National Trust Centre/S.H. Ervin Gallery, Fort Street Primary School site and Messenger's Cottage for Sydney Observatory, is covered in Section 7.3 and Section 7.4.

As discussed below, the footprint of the proposed cycleway/pedestrian bridge would require removal of a mature Sugar Gum (*Eucalyptus cladocalyx*). This would further change the setting and cultural landscape of the Millers Point & Dawes Point Village Precinct.

The proposed cycleway/pedestrian bridge over Cahill Expressway would have a minor visual impact to the heritage views and setting of the SHB southern approaches.

Widening/resurfacing of existing shared-use paths

The widening and resurfacing works of shared-use paths, including the existing shared-use path between the Kent Street cycleway and the proposed cycleway and pedestrian spiral ramp would involve removal of the grassed nature strip between the shared-use path and Clarence and Kent Street vehicle on-ramp.

Detailing regarding materiality, gradient and the finishes of the widened and resurfaced walkways will be resolved in the final stages of concept design and during detailed design. The visual impact of these proposed works would be dependent on the final material and colour palette, as well as the presence or absence of tactile surfaces, which should be developed to reflect and complement the existing design language and significant character of the SHB.

It is also anticipated that regrading of the shared-use paths would involve reconfiguration of the stairs and sandstone retaining wall at the entry point to the National Trust/S.H. Ervin Gallery, including several steps being built over. Visual impact of these works on nearby items, including National Trust Centre/S.H. Ervin Gallery, is covered in Section 7.4.

Dependent on detail design, the widening/resurfacing of shared-use paths would have a negligible to minor visual impact to the heritage views and setting of the SHB southern approaches.

Relocation of Jelly Palms

The proposed on-grade cycleway alongside Upper Fort Street and the proposed new alignment of the retaining wall to the west of Bradfield Highway would require relocation of seven Jelly Palms (*Butia capitata*) listed locally on the City of Sydney Register of Significant Trees (2013). These palms, which were planted in the 1930s following completion of the SHB, were recently transplanted from the north-east corner of Observatory Hill Park to their current location.

The Jelly Palms are directly associated with the history and development of the SHB. The Aboricultural Impact Assessment assesses the trees as having high landscape significance, and recommends investigation into the viability of transplanting these trees by an experienced Tree Transplanting Contractor.

Visual impact of the proposed relocation of these trees on the cultural landscape and setting of nearby heritage items, including Millers Point & Dawes Point Village Precinct and Observatory Hill Park, is covered in Section 7.4.

The relocation of the Jelly Palms would result in a minor impact to the heritage views and setting of the SHB southern approaches.

7.2.3 Summary of impact to SHB

The proposed works would result in a number of negligible to moderate impacts, both physical and visual, to the heritage significance of the SHB southern approaches. The proposed works fall outside the NHL and SHR curtilages, and as such would not directly impact the national, state and local heritage values of the SHB.

While the proposed works would cause moderate physical impact and moderate visual impact to the west side of the area which supports the significance of the SHB southern approaches, the impacts are generally restricted to localised areas that are relatively small in comparison to the overall size of the bridge and its components. The overall level of impact to the Sydney Harbour Bridge Approaches and Viaducts, and by extension to the SHB as a whole, would therefore be considered minor.

Given the scope of projects that are currently underway or otherwise envisaged for the SHB, it is important to consider the cumulative impact of the proposed SHB southern cycleway in the context of other projects on the significant values of the SHB. This cumulative impact assessment is covered in Section 7.2.6.

The proposed works would result in a number of minor to high impacts, both physical and visual, to surrounding heritage items. These impacts are discussed and summarised in Section 7.4.

A summary of the various proposed works and associated heritage impact assessment for the SHB is provided in Table 6 below.

Table 6: Summary of impact to SHB southern approaches

Proposed work	Impact to fabric	Visual impact
Construction of on-grade cycleway	Moderate	Moderate
Construction of elevated cycleway/pedestrian spiral ramp	Negligible	Minor
Construction of cycleway/pedestrian bridge over Cahill Expressway	Negligible	Minor
Widening/resurfacing of shared-use paths	Negligible	Negligible - Minor
Relocation of Jelly Palms	Minor	Minor
Overall impact to SHB	Minor	Minor

7.2.4 Justification

The proposed works to construct a bidirectional separated cycleway alongside Bradfield Highway and Upper Fort Street are considered necessary to maintain the existing functionality, accessibility and amenity of the SHB for pedestrians and cyclists. The proposed works would improve safety along the existing shared-use paths and roads that currently present a safety hazard to pedestrians, cyclists and drivers alike including the shared-use path from Kent Street cycleway to the bridge over the Cahill Expressway cutting and the mixed traffic zone on Upper Fort Street.

Enhancement of pedestrian and cyclist accessibility of the SHB in future projects is an issue that is strongly endorsed by the policies and accompanying discussion contained in the CMP 2007 (refer to Section 7.2.5 below).

7.2.5 Conservation Management Plan policies

A number of conservation policies have been established for the management of the SHB in the CMP 2007. Policies relevant for the proposal are described below, with an assessment of the project impacts against each of these policies.

Policy 9—Management Objectives

9.1— *Ongoing management of the bridge should provide for:*

- *retention of the fundamental cultural heritage values and attributes of the bridge;*
 - *conservation (including ongoing maintenance) of significant elements;*
 - *enhanced opportunities for presentation and interpretation of the bridge and its history for public appreciation; and*
 - *continued and enhanced linkage with associated elements adjacent to the bridge, including Bradfield Park and Plaza, Dawes Point and other foreshore areas within the view lines of the bridge (via interpretation, related activities, transport routes etc).*
-

The proposal provides for enhanced linkages with Dawes Point and the broader Millers Point & Dawes Point Village Precinct. This includes direct linkage from the proposed cycleway/pedestrian spiral ramp to the National Trust Centre/S.H. Ervin Gallery and Observatory Hill Park. Given that the proposal is located at the SHB southern approaches, the proposal represents an opportunity for enhanced presentation and interpretation of the bridge and its history for public appreciation.

Policy 11—Maintaining Key Views of the Sydney Harbour Bridge in its Setting

11.1— *The significant physical and visual character of the Sydney Harbour Bridge within its harbour setting should be appropriately conserved.*

11.2— *Views and vistas to and from Sydney Harbour Bridge to the north, south, east and west should be maintained.*

The proposal maintains significant views and vistas to and from SHB to the south, along with the significant physical and visual character of the bridge within its harbour setting.

Policy 12—Retention of Existing Open Space for Public Use/Recreation

12.1— *The existing park areas adjacent to the Sydney Harbour Bridge should remain public parks for passive recreation and unimpeded views to the bridge.*

12.2— *The future management of the Sydney Harbour Bridge, approaches and parklands should appropriately conserve its character and the scale whilst retaining the existing open spaces historic viewing areas.*

The proposal has been designed to maintain, as far as possible, the existing open space to the west of Bradfield Highway between Upper Fort Street. This space, which is used for recreational purposes and features gym equipment, would be retained and reconfigured as open space in the proposal.

Policy 13—Integrity of Original Design

13.1—The existing park areas adjacent to the Sydney Harbour Bridge should remain public parks for passive recreation and unimpeded views to the bridge.

13.2—The future management of the Sydney Harbour Bridge, approaches and parklands should appropriately conserve its character and the scale whilst retaining the existing open spaces historic viewing areas.

13.3—Views of the original form of the rendered masonry approaches should be maintained and not obscured.

13.4—The fabric and design integrity of the main components of the bridge, comprising the arch, hangers, roadway, pylons, approach spans, piers and approaches including tunnels, tenancy spaces and Milsons Point railway station, should be conserved.

13.6—The arrangement of internal spaces in the abutment towers, pylons and approach structures should be conserved.

The proposal, including the proposed on-grade cycleway alongside the 1970s retaining wall to the west of Bradfield Highway, has been designed in a way that minimises impact on the existing recreation area and park space.

The proposed on-grade cycleway and involve removal of a section of the parapet and retaining wall and construction of a new retaining wall further to the east to allow for the alignment of the cycleway. The design of the new retaining wall should be developed as far as possible to ensure the appropriateness and visual compatibility of this new visual element, and should interpret or adaptively re-use the proposed removed section of parapet wall.

Policy 15—Use Appropriate Specialist Personnel

15.2 A conservation specialist should be involved in work affecting the granite or concrete structures.

15.4 Significant fabric should be retained in situ and in its current state and form, and be maintained.

A conservation specialist should be engaged to advise on best practice technique for the removal, conservation and re-use of the concrete parapet section. The retention of the removed concrete parapet section on site would assist in the conservation of these materials.

Policy 18—Management of Adaptation and Change

18.1—All decisions for intervention and change should be evaluated in terms of the nature of the proposal, its purpose, long term context and how this relates to the identified cultural heritage values of the bridge. Protection and enhancement of the fundamental significant elements of the place through appropriate adaptation and change for new or additional necessary functions should be a key management goal.

The provision of improved cyclist and pedestrian access to the SHB is consistent with the heritage significance of the bridge as a transportation route of significant public utility. While impacts to physical fabric and setting would occur from the proposed works, they would be localised to small areas of the overall bridge structure. It is considered that increased traffic on the bridge, including pedestrians and cyclists, would enhance the iconic role of the SHB as the main transportation route across Sydney Harbour.

Policy 19—New Development

19.1—New development should enhance the function and use of the bridge without obscuring or damaging the integrity of the original design or significant fabric.

19.2—New work should be designed to respond to the character of the existing significant design and fabric.

The proposed SHB southern cycleway, in addition to addressing policies for the management of adaptation and change for the bridge, enhances the function of the SHB as a major public transportation route. While significant fabric (i.e. the retaining wall and concrete parapet) would be physically impacted and visually altered by the construction of an on-grade cycleway, the area impacted is relatively minor compared to the total expanse of the bridge. Impact to fabric of exceptional significance has been avoided by the proposed works.

Policy 34—Existing Access Provisions

34.1—The current circulation functions of the bridge, including roads, rail tracks, cycleways, and pedestrian paths and stairs, should be retained for use by the public.

34.2—Entry/exit points for access to and across the bridge (particularly for pedestrian and cyclists) should be used to focus interpretation of both its tangible and intangible heritage values, including historic or other associational links between different circulation routes and/or components.

34.3—Interpretation measures should inform public users of the bridge (particularly for pedestrian and cyclists) of changes in its circulation functions since its opening in 1932, particularly the removal of the tram route and associated tunnels and other infrastructure.

The proposed SHB southern cycleway would strongly enhance pedestrian and cyclist circulation on the SHB. The location of the SHB southern cycleway near the existing SHB cycleway and south west bridge stairs would allow opportunities for increased interpretation, heritage signage and information presentations, as discussed below.

Policy 36—Interpretation Requirements

36.1—Measures to appropriately interpret the major aspects of significance of the bridge should be considered in conjunction with all future proposals for change and development.

The location of the SHB southern cycleway at an entry/exit point for access to the bridge (i.e. near the existing SHB cycleway and south west bridge stairs) would allow opportunities for increased interpretation, heritage signage and information presentations to the cyclists and pedestrians using this route. It is noted, however, that a 'piecemeal' approach to the provision of interpretation for the proposed works along with other current/envisaged projects on the SHB should be avoided.

Summary

The proposed works represent an opportunity to enhance the accessibility and functionality of the existing pedestrian and cycleway provisions on the SHB in accordance with the policies and recommendations contained in the endorsed CMP 2007.

The proposal is anticipated to cater for the increased number of cyclists travelling between the Lower North Shore and Sydney CBD in the future. The assessment of impact to the heritage fabric of the SHB southern approaches has determined the impact to be negligible to moderate. The overall impact on the significance of the SHB would be minor.

7.2.6 Cumulative impact assessment

The proposal forms part of a suite of projects that are underway or otherwise planned for the SHB. These projects, involving upgrades to provide step free access for pedestrians, improved facilities for cyclists and maintenance and upgrades for increased vehicle traffic safety and efficiency, seek to support and enhance the accessibility and functionality of the SHB as the main transportation route across Sydney Harbour.

The context of the proposal in relation to these other projects is an important consideration to understand its cumulative impact on the significant values of the SHB. Key projects to consider include the SHB Step Free Access project, and the planned SHB Northern Cycle Ramp. The cumulative impact assessment of these projects is covered in the discussion that follows.

Impact to fabric

As covered in the assessment above, the proposal involves interventions to the fabric of the SHB southern approaches including removal of a section of parapet and retaining wall, construction of an on-grade cycleway, widening/resurfacing works to existing shared-use paths, removal of significant trees and the construction of the elevated spiral ramp. These interventions have been assessed as having a negligible to moderate physical impact on the SHB southern approaches and a minor impact to the overall significance of the SHB. Other projects relating to the SHB may have similar potential impacts to the fabric of the SHB.

The SHB Step Free Access project that is currently underway aims to provide step free access to the SHB walkway from the southern and northern approaches through the provision of passenger lifts. Notably, this project involves removal of two sections of parapet wall at localised areas along the SHB walkway on the northern and southern approaches. It is anticipated the removed parapet sections are to be adaptively re-used into the street-level design of the lift shaft entrances and pavement areas for interpretive, seating and wayfinding uses.

The concept design for a northern ramp connecting to the existing SHB cycleway is in early stages of development. This project seeks to improve cyclist access to the SHB cycleway at the northern approach in Milsons Point. Consistent with the aims of the proposal, this project aims to improve cyclist safety on the SHB and to support future growth in cyclist activity between the Lower North Shore and the CBD. As with the proposed SHB southern cycleway, the project would involve removal of a section of parapet and introduction of a new structural element along the northern retaining wall.

While these projects, independently, are considered to involve relatively minor impact to the physical fabric of the SHB, their collective impact is greater. Numerous interventions to the retaining walls and concrete parapets of the northern and southern approaches could potentially undermine the integrity and intactness of these significant elements of the SHB.

In order to avoid the cumulative impact of these works, physical impact to the fabric of the SHB southern approaches including retaining wall and concrete parapet should, wherever possible, be minimised and restricted to localised areas. In keeping with the works for the Step Free Access Project, removed fabric as part of the SHB southern cycleway, specifically the proposed removed section of concrete parapet, could be retained on site for interpretive, landscaping or other wayfinding purposes.

Visual impact

The proposal involves interventions that would have a visual impact on the setting of the SHB southern approaches and surrounding heritage items including the construction of a new retaining wall alongside the proposed on-grade cycleway, removal of significant trees and the construction of an elevated spiral ramp. These interventions have been assessed as having a negligible to moderate impact on the setting of the SHB southern approaches and a relatively minor visual impact on the overall significance of the SHB. It is noted the impact on surrounding heritage items is negligible to high. Other projects relating to the SHB would result in similar potential impacts to the significant visual character and setting of the SHB.

The SHB Step Free Access project that is currently underway involves provision of passenger lifts on the SHB walkway at the northern and southern approaches. These lifts would introduce a new visual element that could potentially obscure views to the SHB and undermine the legibility and appreciation of the significant retaining walls. In order to reduce potential visual impact, the passenger lifts have employed a lightweight design, and feature unobtrusive materials including steel and glass that are consistent with the existing material palette and character of the SHB. These features of the design would assist in reducing the visual bulk and prominence of the new element. Utilisation of transparent surfaces including glass screens would assist in minimising impact on views and the setting of the SHB.

The planned SHB Northern Cycle Ramp is in early stages of design development. This includes preparation of concept design options that indicate the style, materiality and overall appearance of the proposed elevated cycleway extending from the north of the existing SHB cycleway overhead the Milsons Point train station entrance on Alfred Street. These design options have been developed in response to the existing material palette and character of the SHB, and aim to reduce the visual 'bulk' and prominence of the new element against the SHB northern approach retaining wall.

While these other projects relating to the SHB have respectively sought to minimise potential visual impact, their collective visual impact must also be considered. Should the designs be developed in isolation of one another, there is a risk of potential cumulative impact whereby the visual clarity and character of the SHB and its southern and northern approaches is diminished by projects of conflicting or contrasting designs.

In order to avoid this potential impact, it is important that the design of the proposal be consistent, where feasible, with the design of other related SHB projects. This is considered particularly important in relation to the planned SHB Northern Cycle Ramp. In order to retain the visual clarity and character of the SHB southern and northern approaches, the materiality, finishes, style and interpretation of any works should be compatible with the existing material palette and character of the SHB and be consistent with other SHB projects. This will assist in maintaining and enhancing appreciation and legibility of the SHB and its significant values.

Justification

The proposal forms part of a suite of current or otherwise planned projects relating to the SHB that seek to support and enhance the accessibility and functionality of the SHB as the main transportation route across Sydney Harbour. The overall combined impact of these projects will maintain the key function of the SHB and support its ongoing use and longevity.

While the cumulative impact of these projects could potentially affect the fabric and visual character and setting of the SHB including the northern and southern approaches, it is considered this impact can be mitigated with careful coordination and consideration of design consistency across the projects. Key recommendations to mitigate or reduce potential impact are outlined in Section 8.

7.3 Impact to Millers Point & Dawes Point Village Precinct

The impact to SHR listed Millers Point & Dawes Point Village Precinct is generally restricted to heritage items within and near the project area including Observatory Hill Park, Sydney Observatory, the Fort Street Primary School site, National Trust Centre/S.H. Ervin Gallery and Messengers Cottage. The assessment of impact to these particular heritage items is outlined below in Section 7.4.

As discussed in Section 5.3, the significance of Millers Point & Dawes Point Village Precinct is derived primarily from the intactness of its cultural landscape which, in its physical form, provides historical layering that demonstrates the colonial and post-colonial phases of development. The significance of the post-colonial phase is connected to the landmark SHB approaches on the heights of Millers Point and the open park spaces that define the edges of this precinct.

The proposal involves interventions that would potentially have a physical and visual impact on the SHR listed Millers Point & Dawes Point Village Precinct, involving the introduction of prominent visual elements and the removal of several tree plantings within and also in the vicinity of the item's curtilage. The proposal also involves interventions that would potentially have a positive impact on the Millers Point and Dawes Point Village Precinct including improved pedestrian and cyclist connectivity, enhanced public engagement, and opportunities for interpretation provisions. The impact of these proposed works is outlined in the assessment that follows.

Introduction of new elements & impact to curtilage

The proposal includes introduction of prominent visual elements within the item's curtilage that would potentially impact the cultural landscape and setting of the Millers Point & Dawes Point Village Precinct, including views and vistas. This primarily relates to the elevated cycleway/pedestrian spiral ramp at the southern end of the study area and the on-grade cycleway at the northern end of the study area, both of which fall within the heritage curtilage of the state listed conservation area.

The proposed elevated cycleway/pedestrian spiral ramp would be a dominant visual element in that locality, which at present is open green space defining the edge of the conservation area. While it is understood the spiral ramp and bridge would not exceed the height of the adjacent National Trust Centre, they would be visible along the vehicular approaches of the Bradfield Highway, and from numerous pedestrian vantage points. This includes views north from the footpath opposite the National Trust Centre, views north from the S.H. Ervin Gallery, and views south from outside the Fort Street Primary School site. The proposed retention of the significant Moreton Bay Fig tree listed on the City of Sydney Significant Tree Register that is located within the National Trust Centre/S.H. Ervin Gallery site would assist in screening and reducing the visual prominence of the elevated spiral ramp and bridge.

The proposed on-grade cycleway along Upper Fort Street would be a relatively discrete visual element, being located at ground level and involving minor associated landscaping. Removal of a 60

metre section of existing parapet and retaining wall associated with the SHB southern approaches and construction of a new wall further east, however, would change the immediate cultural landscape setting of the conservation area and impact historic associations with the SHB. Interpretive measures would assist in balancing this impact.

The visual impact of the on-grade cycleway within the conservation area would be restricted to views looking east from the Observatory Hill Park directly opposite, distant views from Sydney Observatory, and views east from the Fort Street Primary School site. Due to the topographical features of the sloped site, views from Watson Road Steps, the Bureau of Meteorology and Messenger's Cottage, are not anticipated to be directly affected.

While the introduction of new elements would occur within the curtilage of the SHR listed Millers Point & Dawes Point Village Precinct and would have a direct localised impact, the area to be affected both physically and visually would be relatively small (refer to Figure 67). The proposal would involve works within only a small proportion of the overall area of the item's heritage curtilage. As such, the proposal would not diminish or undermine the state heritage values of the wider conservation area.

The introduction of visual prominent elements within the heritage curtilage of the Millers Point & Dawes Point Village Precinct would result in a minor visual impact and minor physical impact to this item.

Removal of trees

The footprint of the proposed elevated cycleway/pedestrian spiral ramp would require removal of several existing trees in the north-east corner of the National Trust Centre/S.H. Ervin Gallery site. This includes three small Moreton Bay Fig trees (*Ficus macrophylla*). It is understood the significant Moreton Bay Fig tree near the front of the National Trust Centre building that is listed on the City of Sydney Significant Tree Register would be retained. The proposal would involve removal of other non-significant plantings in this locality including several European Olive trees and Chinese Nettle trees.

The footprint of the proposed cycleway/pedestrian bridge over the Cahill Expressway would require removal of a mature Sugar Gum (*Eucalyptus cladocalyx*) to the east of the Bureau of Meteorology and Messenger's Cottage site. This tree is identified in the Aborigicultural Impact Assessment prepared by Tree IQ in 2016 as being in fair health and having high landscape significance. The report recommends allowing for its retention.

Although the proposal would potentially involve the removal of a small number of trees within the Millers Point & Dawes Point Village Precinct, this would be relatively minor within the overall setting and cultural landscape of the heritage conservation area. Potential impact could be balanced by opportunities for replanting/relocating the trees slated for removal. The Jelly Palms, which are listed on the City of Sydney Significant Tree Register, would be relocated within the existing fitness area.

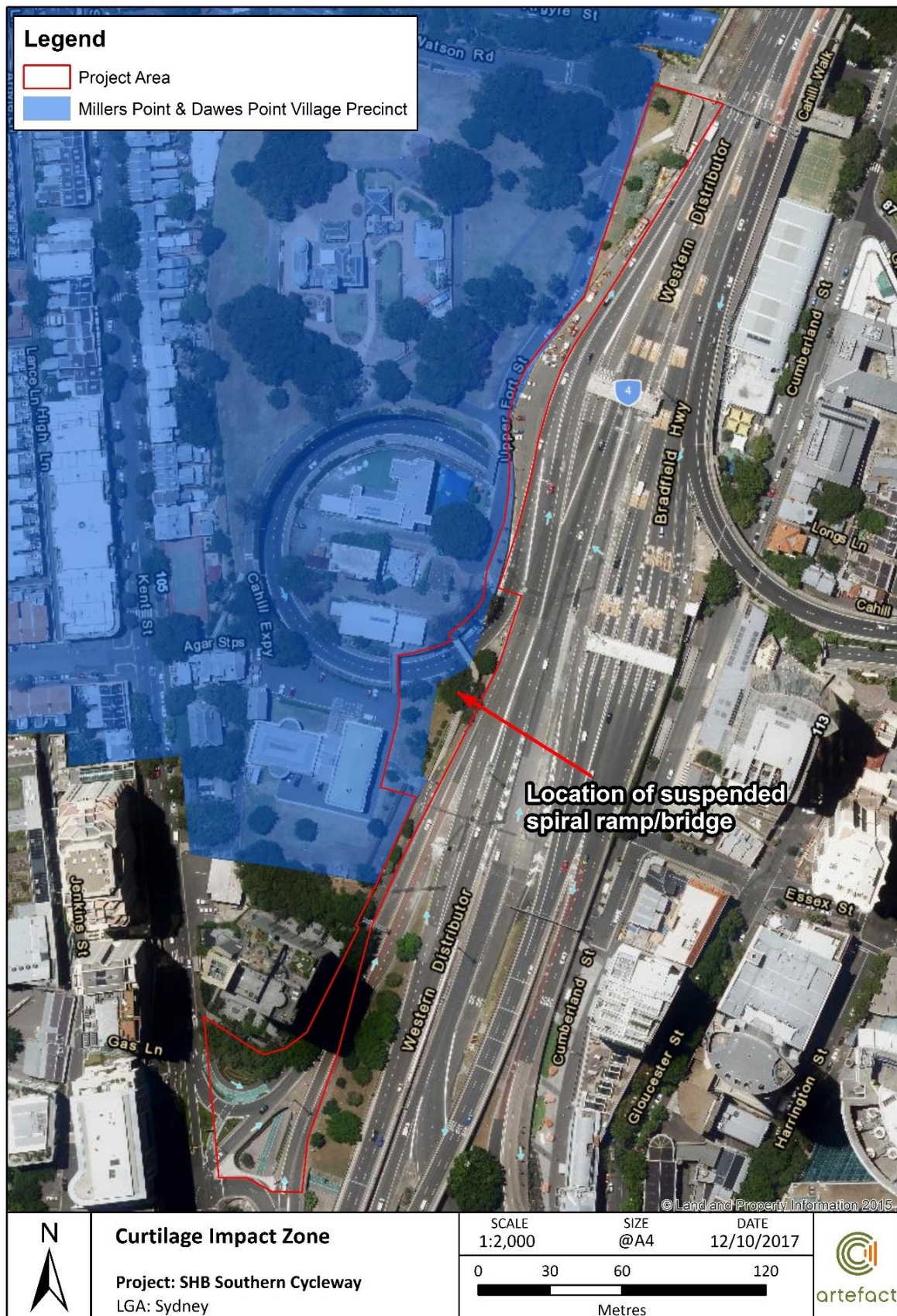
The proposed removal of a small number of trees within the Millers Point & Dawes Point Village Precinct, as described above, would result in a minor visual impact and minor physical impact to this item.

Improved accessibility and enhanced interpretation

The proposal offers opportunities that are considered positive for the Millers Point & Dawes Point Village Precinct. The proposal features a number of pedestrian pathways that directly connect the proposed SHB southern cycleway with nearby heritage properties. This includes the proposed cycleway/pedestrian spiral ramp, which features a direct pedestrian connection to the National Trust Centre/S.H. Ervin Gallery, and connections from the cycleway at the northern end of the project area to Observatory Hill Park.

Located at an entry/exit point to the SHB, the proposal would also provide an opportunity for enhanced interpretation to explain the history of the SHB and the broader history and significance, both Aboriginal and non-Aboriginal, of the Millers Point and Dawes Point area. Improvements in pedestrian and cyclist provisions may encourage increased usage and engagement with the Millers Point & Dawes Point Village Precinct, and appreciation of its significant values and associations.

Figure 67: Plan showing the proposal impact on the curtilage of the SHR listed Millers Point & Dawes Point Village Precinct



Document Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\170122_SHB_Southern_Cycleway\MXD\CA Only.mxd

Summary of impact

Overall, the proposal would result in a minor physical impact and minor visual impact to the SHR listed Millers Point & Dawes Point Village Precinct. The introduction of an elevated spiral ramp and bridge over the Cahill Expressway, construction of an on-grade cycleway and removal of several trees would result in changes to the cultural landscape of this part of the conservation area and would introduce visually prominent elements in the immediate setting. While the proposal would have a direct localised impact, the area to be affected both physically and visually, however, would be relatively small. The proposal would involve works within only a small proportion of the overall area of the item's heritage curtilage. It is therefore anticipated that the proposal would not diminish or undermine the state significant values of the Millers Point & Dawes Point Village Precinct.

7.4 Impact to nearby heritage items

The physical and visual impact of the proposal to heritage items located within the project area are outlined Table 7 below. The physical and visual impact of the proposal to heritage items located within the study area are outlined in Table 8 below.

Table 7: Summary of impacts to heritage items within project area

Item name	Physical impact	Visual impact
National Trust Centre Incl. Buildings and Their Interiors, Retaining Walls & Ground	The proposed spiral ramp would result in the removal of several tree plantings in the north east corner of the site, including three small Moreton Bay Figs. It is understood the significant Moreton Bay Fig tree near the front of the National Trust Centre building that is listed on the City of Sydney Significant Tree Register would be retained.	The proposed spiral ramp would introduce a prominent visual feature in the northeast corner of the item's curtilage. While not exceeding the height of the National Trust Centre, the ramp would closely border the main heritage view corridor to the National Trust Centre/S.H Ervin Gallery, and would affect views to and from this heritage item.
	Proposed widening/resurfacing of existing shared-use paths and associated regrading works would result in minor reconfiguration of the stairs at the entry point to the National Trust Centre/S.H. Ervin Gallery. This would involve several stairs being built over. The stairs are not identified as a significant component of the site, however they are the principal entry point and are adjacent to the significant sandstone retaining wall to the south.	The spiral ramp would impact on other views towards the site from both the northern and southern approaches (both pedestrian and vehicle), as well as views out towards Sydney CBD. The proposed pedestrian and cycle spiral ramp would result in the removal of several tree plantings in the northeast corner of the site, including three small Moreton Bay Figs. This would diminish the visual setting of the site and cultural landscape of the National Trust Centre/S.H. Ervin Gallery.
	The concrete retaining wall to the north of the entry stairs would be impacted by the proposal, although it is noted this is not a significant component of the site.	The proposal would involve establishment of a temporary site compound within the National Trust Centre/S.H. Ervin site. Visual impact associated with the site compound would be temporary in nature and restricted to a relatively localised area.
	The design of the proposed spiral ramp may consider provision of a possible step-free connection to the National Trust Centre/S.H. Ervin Gallery. This would improve pedestrian connectivity within the Millers Point & Dawes Point Village Precinct.	It is noted the retention of the Moreton Bay Fig tree that is listed on the City of Sydney Significant Tree Register, which is located within the National Trust Centre site, would assist in screening and reducing the visual prominence of the new elevated structures.
	The proposal would result in a <u>minor</u> physical impact to the National Trust Centre/S.H. Ervin Gallery.	The proposal would result in a <u>high</u> visual impact to the National Trust Centre/S.H. Ervin Gallery.

**Millers Point
Heritage
Conservation
Area**

The proposal would involve works that would result in direct localised impacts within the curtilage of the Millers Point Heritage Conservation Area and physical impacts to the components of this item.

The proposed works include construction of new elements within the conservation area including the elevated spiral ramp/bridge, proposed on-grade cycleway alongside Upper Fort Street, reconfiguration of the existing fitness area, and the removal of several trees.

The proposed on-grade cycleway alongside Upper Fort Street would require relocation of seven locally listed Jelly Palms, which are identified in the Aboricultural Impact Assessment as having high landscape significance. These trees have been previously relocated by City of Sydney. The proposal would also involve removal of a small immature Moreton Bay Fig tree that is located between the fitness area and SHB south west stair portal to accommodate a temporary site compound. This small tree could potentially be relocated as part of the proposed landscaping work.

As covered above, the proposed spiral ramp in the north east corner of the National Trust Centre/S.H. Ervin Gallery site would be within the curtilage of the conservation area, and would result in the removal of several tree plantings, including three small Moreton Bay Figs. This would impact the cultural landscape of the immediate area. It is understood the significant Moreton Bay Fig tree near the front of the National Trust Centre building that is listed on the City of Sydney Significant Tree Register would be retained.

While the proposal would result in changes within the heritage conservation area, the amount of the item's heritage curtilage to be directly affected is relatively small. The proposal would only impact on a small proportion of the item's curtilage.

The proposal would result in a minor physical impact to the Millers Point Heritage Conservation Area.

The proposal would involve works that would result in visual impacts within and surrounding the curtilage of the Millers Point Heritage Conservation Area.

The proposed elevated spiral ramp would be a dominant visual element in the locality. While it is understood the spiral ramp and bridge would not exceed the height of the adjacent National Trust Centre, they would be visible along the vehicular approaches of the Bradfield Highway. The ramp would also be seen from numerous pedestrian vantage points within the conservation area. This includes views north from the footpath opposite the National Trust Centre, views north-east from the S.H. Ervin Gallery, and views south from outside the Fort Street Primary School site and Upper Fort Street.

The visual impact of the on-grade cycleway within the conservation area would be restricted to views looking east from the Observatory Hill Park directly opposite, distant views from Sydney Observatory, and views east from the Fort Street Primary School site. Due to the topographical features of the sloped site, views from Watson Road Steps, the Bureau of Meteorology and Messenger's Cottage, are not anticipated to be directly affected within the conservation area.

The removal of several trees within the project area would change the visual setting of the immediate landscape within the Millers Point Heritage Conservation Area. It is noted the retention of the Moreton Bay Fig tree that is listed on the City of Sydney Significant Tree Register, which is located within the National Trust Centre site, would assist in screening and reducing the visual prominence of the new elevated structures within the conservation area.

The proposal would involve establishment of temporary site compounds within the Millers Point Heritage Conservation Area, including within the National Trust Centre/S.H. Ervin Site and in the area between the existing fitness area alongside Upper Fort Street and the SHB south west stair portal. Visual impact associated with the site compounds would be temporary in nature and restricted to relatively localised areas.

While the proposal would result in conspicuous changes to the cultural landscape of the conservation area and would introduce visually prominent elements in the immediate setting, the overall impact to the broader conservation area as a whole would be relatively minor.

The proposal would result in a minor visual impact to the Millers Point Heritage Conservation Area.

Table 8: Summary of impacts to heritage items within study area

Item name	Physical impact	Visual impact
Fort Street Primary School Site including buildings and their interiors, fig trees and grounds	<p>The proposal does not involve any works that directly affect physical fabric of the Fort Street Primary School site.</p> <p>The proposal would result in a <u>neutral</u> physical impact to the Fort Street Primary School Site.</p>	<p>The proposed separated cycleway would extend along the east side of Upper Fort Street between Bradfield Highway, directly opposite the Fort Street Primary School site. This is not anticipated to directly affect the Fort Street Primary School site.</p> <p>The proposed on-grade cycleway and elevated cycleway/pedestrian spiral ramp and bridge would not impact the setting of this item.</p> <p>The proposal would result in a <u>negligible</u> visual impact to the Fort Street Primary School Site.</p>
Messenger's Cottage for Sydney Observatory Including Interiors	<p>The proposal does not involve any works that directly affect physical fabric of the Messenger's Cottage for Sydney Observatory.</p> <p>The proposal would result in a <u>neutral</u> physical impact to the Messenger's Cottage for Sydney Observatory.</p>	<p>The proposed cycleway/pedestrian bridge over the Cahill Expressway would result in the removal of the mature Sugar Gum (<i>Eucalyptus cladocalyx</i>) to east of the Messenger's Cottage (outside curtilage). This tree is a prominent landscape feature and considered a local landmark in the area.</p> <p>The proposal would result in a <u>moderate</u> visual impact to the Messenger's Cottage for Sydney Observatory.</p>
Sydney Observatory	<p>The proposal does not involve any works that directly affect physical fabric of Sydney Observatory.</p> <p>The proposal would result in a <u>neutral</u> physical impact to Sydney Observatory.</p>	<p>The proposed on-grade cycleway between Upper Fort Street and Bradfield Highway, requiring removal of the existing retaining wall and parapet, would introduce a new retaining wall and associated landscaping that would be discernible from Sydney Observatory including views from the path around the observatory complex down the slopes of Observatory Hill.</p> <p>The proposal would result in a <u>minor</u> visual impact to Sydney Observatory.</p>
Observatory Park Incl Boer War Memorial, Bandstand, Fences and Landscaping	<p>The proposal does not involve any works that directly affect physical fabric of Observatory Hill Park.</p> <p>The proposal would result in a <u>neutral</u> physical impact to Observatory Hill Park.</p>	<p>The proposed on-grade cycleway between Upper Fort Street and Bradfield Highway, requiring removal of the existing retaining wall and parapet, would introduce a new retaining wall and associated landscaping that would be discernible from Observatory Hill Park.</p> <p>The proposal would result in a <u>minor</u> visual impact to Observatory Hill Park.</p>

Item name	Physical impact	Visual impact
Sydney Opera House buffer zone	<p>The proposal is located beyond the western extent of the World Heritage buffer zone of the Sydney Opera House. The buffer zone aims to preserve the significant views and settings of the Opera House.</p> <p>The proposal would result in a <u>neutral</u> impact to the Sydney Opera House World Heritage Buffer Zone.</p>	<p>The proposal is located beyond the western extent of the Sydney Opera House World Heritage Buffer Zone. The buffer zone aims to preserve the significant views and settings of the Opera House.</p> <p>At the southern end of the study area, the proposed spiral ramp and bridge over Cahill Expressway would create a prominent feature in the local visual catchment. This feature, however, would not extend above the height of the National Trust Centre, and would be obscured by surrounding high rise development to the east of Bradfield Highway.</p> <p>As there would be no clear sightlines between the Sydney Opera House and the proposed spiral ramp, impacts to the views and setting of the Opera House are not anticipated.</p> <p>The proposal would result in a <u>neutral</u> visual impact to the Sydney Opera House World Heritage Buffer Zone.</p>

7.4.1 Other nearby heritage items

Other heritage items within the study area (50 metre buffer) were assessed to have no, or extremely limited, sight lines to and from the proposed works. As such, the impacts to the heritage views and settings of these items has been assessed as neutral. These items with neutral impacts are:

- The Rocks (Argyle Street) Railway Sub-Station and Switchhouse
- Argyle Cut
- Argyle Bridge
- Bureau of Meteorology
- Garrison Anglican Church Precinct
- Lane off Gas Lane including Wrought Iron Street Light.

7.5 Potential archaeological impact

Historical maps indicate that while potential nineteenth century remains are located near the proposed project area, there is a low potential to encounter them within the excavation for these proposed works. The proposed works are unlikely to impact on archaeological remains of state or local significance. Should intact archaeological remains survive in the study area, due to the limited size of the proposed excavation areas, the overall significance of any surviving archaeological resource would not be affected. Impact to any surviving archaeological fabric would be negligible and should any archaeological investigation in these locations take place in the future, it is not anticipated that the proposed works would impact on the legibility of any remains or their ability to be interpreted.

No impacts to relics are anticipated.

7.6 Statement of heritage impact

Development	Discussion
What aspects of the proposal respect or enhance the heritage significance of the SHB as well as nearby heritage items?	<p>Accessibility of the SHB by pedestrians and cyclists is outlined in the CMP 2007 as being an opportunity to be pursued in future works. This includes improved access for wheelchairs and prams.</p> <p>The proposal is aimed at fulfilling this opportunity for improved accessibility and functionality of the SHB. This would enhance the significant historic function of the SHB as the primary connection road between Sydney CBD and North Sydney and reinforce this role for cyclists and pedestrians.</p> <p>By making the SHB southern approaches compliant with the Commonwealth Disability Discrimination Act 1992 (DDA), the proposal would facilitate increased public access to the bridge and therefore allow more members of the public to appreciate the history and significant heritage values and associations of the SHB and nearby heritage items.</p> <p>The proposal presents an opportunity to enhance connectivity of the SHB with the Millers Point and Dawes Point Village Precinct. This would be strengthened with provision of appropriate and coordinated interpretation.</p>
What aspects of the proposal could have a detrimental impact on the heritage significance of the SHB including SHB southern approaches and nearby heritage items?	<p>The construction of the proposed on-grade cycleway along Upper Fort Street would require removal of a section of the parapet and retaining wall at the west side of Bradfield Highway along the SHB southern approaches. Although this fabric is not part of the original construction of the bridge, nor is it within the NHL or SHR curtilages, it plays an important role in supporting the overall form and configuration of the SHB southern approaches. This would result in a moderate impact to the fabric and visual setting of the SHB southern approaches, and minor impact on the overall significance of the SHB.</p> <p>The proposed elevated spiral ramp/bridge over Cahill Expressway would not have a significant impact on the visual setting of the SHB and its southern approaches. These elements of the proposal, however, would introduce visually prominent features within the existing cultural landscape and require removal of several trees. This would impact on views and vistas to and from nearby heritage items and heritage conservation areas including the National Trust Centre/S.H. Ervin Gallery and the Millers Point & Dawes Point Village Precinct.</p>
Have more sympathetic options been considered and discounted?	<p>The proposal has involved a complex and ongoing process that has explored numerous design options for the SHB southern cycleway. Overview and discussion of proposal options are included as Appendix B in this report.</p> <p>In summary, the main other proposal options that were considered for the proposal include the following variations:</p> <p>Option 1 considered an asymmetrical cycleway/pedestrian spiral ramp at an increased setback distance from the National Trust Centre/S.H. Ervin Gallery site. This option, while having a reduced impact on the main heritage view corridor of the National Trust Centre, was discounted as the chosen 'circular' spiral ramp design allowed for a reduction in the height of the ramp and a reduction in length of the elevated sections of ramp.</p> <p>Option 2 considered an elevated cycleway provision between the Fort Street Primary School site and the existing SHB cycleway. This option, while arguably offering a lower physical impact (requiring a small portion of parapet/retaining wall to be removed), would potentially result in higher visual impacts. This option was discounted due to safety concerns.</p>

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

The proposal would involve construction of an on-grade cycleway at the northern end of the study area, which would require removal of a section of non-original concrete parapet and retaining wall to Bradfield Highway, construction of a new retaining wall, landscaping modifications and reconfiguration of the existing fitness area in Observatory Hill. Further south, the existing shared-use bridge over the Cahill Expressway cutting would be demolished and replaced with an elevated spiral ramp and bridge. At the southern end of the study area, the existing shared-use pathway alongside the Clarence Street and Kent Street vehicle on-ramp that extends along Bradfield Highway would be upgraded. The proposal would also require removal and relocation of several significant trees.

This report has assessed that the potential physical impact of the proposal to the SHB southern approaches would be negligible to moderate, and potential visual impact to the SHB southern approaches would be negligible to moderate. Due to the highly disturbed nature of the study area, there is a low likelihood of archaeological relics being impacted by the proposal.

Given that the SHB southern approaches comprise a small proportion of the SHB, the potential physical and visual impacts of the proposal need to be assessed against the SHB as a whole. Due to its relatively small scale, as well as the location of the proposed works being outside the NHL and SHR curtilages and away from areas of exceptional significance, the proposal would not degrade, damage, obscure or diminish the national or state heritage values of the SHB. Overall, the impact of the proposal on the SHB would be minor.

The proposed SHB southern cycleway, involving provision of upgraded pedestrian and cyclist amenities and improved connectivity with the Millers Point and Dawes Point precincts, is considered essential to enhance and improve accessibility of the SHB. This would provide an opportunity to strengthen public engagement and understanding of the national and state heritage values of SHB and nearby heritage items and heritage conservation areas. The proposal, as such, is consistent with the policies contained in the endorsed CMP 2007.

The proposal would indirectly and directly affect heritage items in the vicinity. The proposal would result in a minor physical impact and minor visual impact to the SHR listed Millers Point & Dawes Point Village Precinct. The proposal would result in neutral to high potential physical and visual impacts on other nearby heritage items listed on the City of Sydney Local Environmental Plan 2015 (LEP 2015) including the Millers Point Heritage Conservation Area, National Trust Centre/S.H. Ervin Gallery, Fort Street Primary School site, Messenger's Cottage for Sydney Observatory, Observatory Hill Park and Sydney Observatory. These impacts, however, are restricted to localised areas surrounding the proposed elevated spiral ramp and bridge and on-grade cycleway, and could be offset by the mitigation measures outlined in the recommendations below. The proposal is not within the Sydney Opera House World Heritage Buffer Zone.

8.2 Recommendations & mitigation measures

The recommendations set out below will aid in mitigating the impact of the proposal on the SHB and nearby heritage items and heritage conservation areas.

Approvals

As the proposal has been assessed as resulting in a minor physical impact and minor visual impact to the SHR listed Millers Point & Dawes Point Village Precinct, the proposal would be exempt from the

requirement to obtain approval under Section 60 of the Heritage Act. Under Section 57(2) of the Heritage Act, the proposed work falls within the definition of Standard Exemption No.7.

A Section 57(2) notification under Standard Exemption No. 7 requires a statement be provided to the Heritage Division demonstrating that the activity is of a minor nature. This statement of heritage impact can be used to demonstrate the minor impact of the proposal.

Referral for Commonwealth consent not required

The project area is outside the NHL curtilages of the SHB. The potential physical and visual impact of the proposal to the SHB overall, as captured in an assessment of impact within the study area (50 metre buffer), has been assessed as being minor and would not impact or diminish the national heritage values of the SHB. The proposal is not within the Sydney Opera House World Heritage Buffer Zone. As such, it is understood that a referral in accordance with the EPBC Act will not be required.

Consultation with City of Sydney

As the proposal has been assessed as potentially resulting in a high visual impact to the locally listed 'National Trust Centre Inc Buildings & Their Interiors, Retaining Walls & Ground' (LEP #1876) and moderate visual impact to the locally listed 'Messenger's Cottage for Sydney Observatory including interior' (LEP #1937), consultation with City of Sydney would be required under the ISEPP.

Removed concrete parapet and retaining wall

Although this fabric does not relate to the original construction of the SHB, the concrete parapet and retaining wall on the west side of the SHB southern approaches are of high significance as per the CMP 2007 and therefore should be retained wherever possible. The design of the proposal should be developed as far as possible to minimise the length of the proposed section to be removed.

In order to mitigate the impact of the proposal on the significant heritage fabric of the SHB, the proposed removed section of concrete parapet should be retained and adaptively re-used within the project area. This could potentially involve retention and reuse of the parapet in landscaping works or furniture including for seating, or for interpretation.

It is understood the proposal would involve interpretive inlay in the ground surface indicating the location of the proposed section of retaining wall and parapet to be demolished in order to make way for the on-grade cycleway. This interpretation would further assist in balancing potential impact of the project, and further consideration should be given for the design detail and resolution of this aspect of the proposal.

Design of elements to minimise visual impact

The design and placement of the various elements within the proposal should be developed to minimise visual impact on nearby heritage items affected by the proposed works including the National Trust Centre/S.H. Ervin Gallery, Fort Street Primary School site, Observatory Hill Park, and the Millers Point & Dawes Point Village Precinct and Millers Point Heritage Conservation Area.

As much as possible, the proposal should be designed to reduce the visual prominence of new elements within the existing cultural landscape, and be sympathetic with the surrounding setting and context of nearby heritage items. This involves employment of appropriate modern and lightweight designs that seek to reduce the visual 'bulk' of new structures. Screens and balustrades of proposed elements including the elevated cycleway/pedestrian spiral ramp and on-grade cycleway should be lightweight and where possible transparent to reduce potential visual impact to surrounding heritage items and upon significant views.

Material palette

The materials utilised in new works as part of the proposal should be congruent with the aesthetic character of the SHB while also sympathetic to the context of surrounding heritage items and heritage conservation areas. As discussed above, this includes selection of modern and lightweight materials that reduce visual prominence of new structures. Where appropriate, new materials could be coloured to match the existing fabric of the SHB including the concrete rendered retaining walls and concrete floor of the SHB south west stairs. The material palette of the proposal should be consistent with other SHB related projects.

Interpretation strategy

Given the location of the proposal at an entry/exit point to the SHB, there is an opportunity for provision of interpretation measures outlining the history, evolution and significance of the SHB and surrounding heritage items and heritage conservation areas. An Interpretation Strategy would therefore be prepared for the project. The Interpretation Strategy would consider interpretation opportunities in the context of other relevant SHB projects in order to avoid a 'piecemeal' approach.

Retention and relocation of trees

If the proposal design cannot be altered to avoid significant trees, those slated for removal by the proposed works should, where possible, be relocated and retained within the project area or nearby locality in order to maintain the existing cultural landscape qualities of the Millers Point & Dawes Point Village Precinct and Millers Point Heritage Conservation Area. Remaining trees should be protected from potential harm. This is considered particularly important for the significant Moreton Bay Fig tree listed on the City of Sydney Significant Tree Register that is located adjacent to the proposed elevated spiral ramp.

Decisions as to whether to salvage and move particular trees should be guided by the advice of a suitably qualified arborist, which takes into account factors such as relative significance, historical appropriateness, condition, public safety risk, amenity value, biological diversity, disease resistance and contribution to the landscape character as a whole. The Arborist is to recommend the best method of conservation of the trees, and protection of remaining trees.

Protection of SHB south west stairs

The proposal involves works in close proximity to significant fabric of the SHB southern approaches. In particular, this includes the proposed on-grade cycleway, which adjoins the significant SHB south west stairs. This significant component of the SHB should be appropriately protected for the duration of the project to minimise potential physical impact or inadvertent damage.

Cumulative impact

The cumulative impact of the proposal in relation to other SHB related projects should be considered. This includes ensuring minimisation of physical impact to significant fabric of SHB, consistency in the design, style, aesthetic character and material palette of works relating to the SHB, and a coordinated approach to provision of interpretation.

Compliance of projects with the *Sydney Harbour Bridge Conservation Management Plan* will assist in ensuring consistency across SHB projects and retention and potential enhancement of the significant values of this item.

Heritage induction for workers

In order to retain and respect the national and state heritage values of the SHB, a heritage induction should be provided for all workers prior to works commencing.

Unexpected Finds Procedure

If unexpected archaeological finds are discovered during the proposed works, the Roads and Maritime Standard Procedure for Unexpected Finds should be followed.

Protection of National Trust Centre sandstone retaining wall

The proposal involves regrading works to the stairs that are adjacent to the sandstone retaining wall at the eastern boundary of the National Trust Centre/S.H. Ervin Gallery site to the south of the existing entry stairs. As this is a significant landscape feature of the National Trust Centre/S.H. Ervin Gallery site, impact should be avoided as far as possible. For the duration of the project, the wall should be appropriately protected to minimise potential impact or inadvertent damage.

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10.0 APPENDICES

Appendix A

Heritage Items Assessment of Significance tables and Statement of Significance

Sydney Harbour Bridge, approaches and viaducts (National Heritage List)

Significance assessment for the Sydney Harbour Bridge against the National heritage assessment criteria

Criterion	Explanation
A – Events, Processes	<p>The building of the Sydney Harbour Bridge as a transport facility linking the city with the north shore was a major event in Australia's history, and represented a pivotal step in the development of modern Sydney and one of Australia's most important cities. The bridge became a symbol for the aspirations of the nation, a focus for 'optimistic prognostications of a better future' following the Depression. The bridge represented an important step in transforming the city of Sydney into a modern metropolis. Internationally, the bridge was recognised as a symbol of progress and a vision of a splendid future.</p>
	<p>The building of the Sydney Harbour Bridge was an important part of the technical revolution of the 1930s and seen as evidence of Australia's industrial maturity. The bridge represented the mechanical age displacing the pastoral and agricultural way of life on which Australia's economy had been based. The scale of the operations was enormous and at the time of its construction, it was the widest long-span bridge in the world.</p>
	<p>The Sydney Harbour Bridge includes a steel arch spanning the harbour between Milsons Point on the north side and Dawes Point on the south side, and elevated approaches to the arch from both the north and south sides. The arch is made up of two 28-panel arch trusses set in vertical planes, 30 metres apart centre to centre, and braced together laterally. Two granite-faced concrete pylons, with a height of 89 metres above mean sea level, are located at each end of the arch. A deck carrying road and rail traffic is suspended from the arch. Pairs of hangers, ranging in length from 7.3 metres to 58.8 metres, support cross-girders, each weighing 110 tonnes, which support the deck. The northern and southern approaches each contain five spans, constructed as pairs of parallel-chord, six-panel steel trusses. The spans are supported by pairs of concrete piers faced with granite. The combined length of the approach spans is 646 metres.</p>
	<p>The Sydney Harbour Bridge is an outstanding cultural landmark for the nation and represents a highly significant place in Australia's cultural history. The opening of the Sydney Harbour Bridge was a momentous occasion, drawing remarkable crowds estimated at nearly one million people.</p>
	<p>Since its opening in 1932, the Sydney Harbour Bridge has become a famous and enduring national icon and symbol of Australia. The bridge remains one of Australia's most identifiable symbols.</p>

Criterion	Explanation
E – Aesthetic characteristics	<p>Sydney Harbour Bridge is an integral component of the Sydney Harbour vista and represents one of the most recognisable and iconic images in the world. It is the picturesque blending of the natural environment and man-made structures around the harbour foreshores that has proved an inspiration for generations of artists and writers. In its harbour setting, it has inspired a rich and diverse range of images in a variety of mediums – paintings, etchings, drawings, linocuts, photographs, film, poems, posters, stained glass - from the date of its construction through to the present day.</p> <p>The bridge is conceivably one of Australia's most-photographed cultural landmarks, and striking images of the bridge have been captured by some of Australia's best-known photographers</p> <p>The Sydney Harbour Bridge has also been replicated in tourist posters, postcards, crafts and the folk arts, its image reproduced in media including glass, ceramic, metal, shells and crochet cotton, embroidery and etchings in a huge array of objects.</p>
F – Creative or technical achievement	<p>The Sydney Harbour Bridge may be considered the world's greatest arch bridge. Although not the longest arch span in the world, its mass and load capacity are greater than other major arch bridges. No other bridge in Australia compares in its technical significance with the structure of the Sydney Harbour Bridge and its pylons and constructed approaches between Argyle Street in the south and Arthur Street in the north.</p> <p>The construction of Sydney Harbour Bridge combined available technology with natural advantages provided by the site. The bridge is an outstanding technical and construction achievement of the Twentieth Century. The designers took advantage of the sandstone base on which Sydney was built - which enabled them to tie back the cables during construction of the arch and to experiment with massive structures. Although designed during the 1920s and 1930s the bridge has still not reached its loading capacity.</p>
G – Social value	<p>It was part of John Job Crew Bradfield's vision for the bridge that it be used at times of national rejoicing. Since its opening it has regularly supported flags, banners, and especially fireworks, becoming a focus for national and local celebrations. Community ceremonial and celebratory occasions centred on Sydney Harbour Bridge, either for the people of Sydney or the broad Australian community, are well recognised and have been widely noted. Since 1932, the broad Australian community has identified the Sydney Harbour Bridge as one of the most nationally and internationally recognised symbol of Australia and the bridge in its harbour setting represents a composite national symbolic image.</p>
H – Significant people	<p>John Job Crew Bradfield ranks with other engineers whose close involvement in a broad range of projects contributed to Australia's national development. As principal design engineer for the New South Wales Public Works Department, Bradfield was largely responsible for finally bringing the Sydney Harbour Bridge to fruition. As Chief Engineer, he prepared the general design specification and supervised the whole project on behalf of the Government of New South Wales, also integrating the bridge into the Sydney road, tram and rail system.</p> <p>Bradfield was nationally recognised through his appointments to the Australian National Research Council and the Australian Commonwealth Standards Advisory Committee. The Institution of Engineers, Australia awarded him the Peter Nicol Russell Memorial Medal in 1932, and he also received the Kernot Memorial Medal from the University of Melbourne in 1933, and the Telford Gold Medal from the Institution of Civil Engineers, London in 1934.</p>

Sydney Harbour Bridge, approaches and viaducts (road and rail)

Significance assessment for Sydney Harbour Bridge, approaches and viaducts (road and rail)

Criterion	Explanation
	The bridge is one of the most remarkable feats of bridge construction. At the time of construction and until recently it was the longest single span steel arch bridge in the world and is still in a general sense the largest. (Walker and Kerr 1974)
A – Historical Significance	BRADFIELD PARK NORTH (SANDSTONE WALLS): "The archaeological remains are demonstrative of an earlier phase of urban development within Milsons Point and the wider North Sydney precinct. The walls are physical evidence that a number of 19th century residences existed on the site which were resumed and demolished as part of the Sydney Harbour Bridge construction" [Statement of Heritage Impact - Sandstone Walls: Bradfield Park North, Milsons Point (2003: 8), McFadyen and Stuart, HLA Envirosciences].
C – Aesthetic or Technical Significance	The bridge, its pylons and its approaches are all important elements in townscape of areas both near and distant from it. The curved northern approach gives a grand sweeping entrance to the bridge with continually changing views of the bridge and harbour. (Walker and Kerr 1974)
D – Social Significance	The bridge has been an important factor in the pattern of growth of metropolitan Sydney, particularly in residential development in post World War II years. In the 1960s and 1970s the Central Business District had extended to the northern side of the bridge at North Sydney which has been due in part to the easy access provided by the bridge and also to the increasing traffic problems associated with the bridge. (Walker and Kerr 1974)
E – Research Potential	BRADFIELD PARK NORTH (SANDSTONE WALLS): "The archaeological remains have some potential to yield information about the previous residential and commercial occupation of Milsons Point prior to the construction of the Sydney Harbour Bridge transport link" [Statement of Heritage Impact - Sandstone Walls: Bradfield Park North, Milsons Point (2003: 8), McFadyen and Stuart, HLA Envirosciences].

Argyle Cut

Significance assessment for the Argyle Cut against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	<p>Argyle Cut has historical significance as an early east-west route across The Rocks, as an imposing example of convict public works, and as evidence, in its ongoing changes, crossings and widenings, of improvements in the provision of access and infrastructure, including the work of the Sydney Harbour Trust and that for the construction of the Sydney Harbour Bridge and its approaches. It has aesthetic significance with the deep cutting providing a dramatic feature in Argyle Street.</p> <p>It has been ranked along with Busby's Bore and the building of Circular Quay as one of the most impressive engineering feats in early Sydney.</p>
B – Associative Significance	The Argyle Cut has significance in that it is identified with the changing labour market in Sydney. It has associations with convict labour and the acceptance of responsibility of urban growth and public works by the Sydney Council
C – Aesthetic or Technical Significance	It has been ranked along with Busby's Bore and the building of Circular Quay as one of the most impressive engineering feats in early Sydney.

Criterion	Explanation
D – Social Significance	<p>The Argyle Cut has social significance as an important feature in The Rocks conservation area, and contributes strongly to the character of The Rocks. The Argyle cut is held in high esteem as indicated by its listings on the National Trust register and the Register of National estate, and thus is recognised by an identifiable group and has importance to the broader community.</p> <p>The Argyle Cut has significance from the links it derives with and support function associated with the development of a society in which it has sat for more than 150 years</p>
E – Research Potential	<p>The Argyle Cut has research potential for its association with town planning and street and urban development in early Sydney, and with the ongoing development of transportation systems within the city.</p>
F - Rarity	<p>The Argyle Cut is a rare example of early responses to the geographical difficulties presented to urban growth. The large spine of rock which cut the area into two was a barrier to the ease of transportation between two important and growing maritime and mercantile precincts.</p>

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

Argyle Cut is of State heritage significance for its historical and scientific cultural values. The site is also of State heritage significance for its contribution to The Rocks area which is of State Heritage significance in its own right.

The Argyle Cut has significance in that it is identified with the changing labour market in Sydney. It has associations with convict labour and the acceptance of responsibility of urban growth and public works by the Sydney Council. Argyle Cut has historical significance as an early east-west route across The Rocks, as an imposing example of convict public works, and as evidence, in its ongoing changes, crossings and widening, of improvements in the provision of access and infrastructure, including the work of the Sydney Harbour Trust and that for the construction of the Sydney Harbour Bridge and its approaches. It has aesthetic significance with the deep cutting providing a dramatic feature in Argyle Street.

It has been ranked along with Busby's Bore and the building of Circular Quay as one of the most impressive engineering feats in early Sydney.

The Argyle Cut has social significance as an important feature in The Rocks conservation area, and contributes strongly to the character of The Rocks. The Argyle cut is held in high esteem as indicated by its listings on the National Trust register and the Register of National estate, and thus is recognised by an identifiable group and has importance to the broader community.

The Argyle Cut has significance from the links it derives with and support function associated with the development of a society in which it has sat for more than 150 years.

The Argyle Cut has research potential for its association with town planning and street and urban development in early Sydney, and with the ongoing development of transportation systems within the city.

The Argyle Cut is a rare example of early responses to the geographical difficulties presented to urban growth. The large spine of rock which cut the area into two was a barrier to the ease of transportation between two important and growing maritime and mercantile precincts.

Argyle Bridge

Significance assessment for Argyle Bridge against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	The Argyle Bridge is of historical significance as evidence of the town planning initiatives to improve the provision of access and infrastructure including the urban improvements of the Sydney Harbour Trust in the early 1900s, and of the changes to the road pattern and surrounds involved in the construction of the Sydney Harbour Bridge in the 1920s-30s.
D – Social Significance	The Argyle Bridge has social significance as part of the Rocks Conservation area. The Argyle Bridge at Cumberland St is held in high esteem by the residents and visitors to Sydney, and contributes strongly to the character of The Rocks.
E – Research Potential	The Argyle Bridge has research potential for its association with town planning, street and urban development in early Sydney, and with the ongoing development of transportation systems in The Rocks

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

The Argyle Bridge and site are of State heritage significance for their historical and scientific cultural values. The site and building are also of State heritage significance for their contribution to The Rocks area which is of State Heritage significance in its own right.

The Argyle Bridge has research potential for its association with town planning, street and urban development in early Sydney, and with the ongoing development of transportation systems in The Rocks. The Argyle Bridge is of historical significance as evidence of the town planning initiatives and urban improvements of the Sydney Harbour Trust in the early 1900s, and of the changes to the road pattern and surrounds involved in the construction of the Sydney Harbour Bridge in the 1920s-30s.

The Argyle Bridge at Cumberland St is held in high esteem by the residents and visitors to Sydney, and contributes strongly to the character of The Rocks.

The Rocks (Argyle Street) Railway Sub-Station and Switchhouse

Significance assessment for The Rocks (Argyle Street) Railway Sub-Station and Switchhouse against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	The Argyle Street substation is significant as an integral part of the southern approaches of the Sydney Harbour Bridge and as a vital working component of the electrification of Sydney's suburban train system. It was constructed as part of the wider Sydney Harbour Bridge and suburban electrification project. The building is significant for its part in supplying electricity for the new rail network across the Sydney Harbour Bridge and is therefore associated with the social changes and effects which the bridge had in opening up Sydney's north shore.
C – Aesthetic or Technical Significance	The Substation building has significance as a relatively intact and fine example of an Inter-War Stripped Classical industrial building that forms a prominent feature on the approach to the Sydney Harbour Bridge, Rocks and Millers Point areas. The building is significant for its rendered facades matching the Sydney Harbour Bridge approach ways. The Substation's prominent location emphasises its role in the service of the bridge and the railway, and acts as a landmark in the Millers Point urban landscape.
D – Social Significance	The place has the potential to contribute to the local community's sense of place and can provide a connection to the local community's history.
E – Research Potential	Recent archaeological finds indicate the site is significant for its research potential and has high archaeological potential.
F - Rarity	The Argyle Street substation is a unique feature of the Sydney Harbour Bridge construction and infrastructure. Of the fifteen substations constructed between 1926 and 1932 it is the only one of its type in terms of design style and rendered finish to match the Sydney Harbour Bridge which it was built to service. The Reyrolle Oil Bath Motorised Switches are a rare surviving example of a once standard switch type.
G - Representativeness	The Argyle Street substation is representative of the Inter-War Stripped Classical style used in an industrial building and of the standard design layout of the NSW Railways substations built between 1926 and 1932.

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

The Argyle Street substation is of state significance as a unique and original feature of the Sydney Harbour Bridge construction. It was constructed as part of the electrification of the Sydney suburban railway network, one of 15 built between 1926 and 1932, and it continues to convert electrical power for use on the network. The building is a good example of the Inter-War Stripped Classical style and stands as a landmark industrial building in the Millers Point area. Its unpainted, cement render façade is in keeping with the approach ways of the Sydney Harbour Bridge which it abuts. The substation retains a rare example of original switchgear (non-operational) in the switch house.

Sydney Observatory

Significance assessment for Sydney Observatory against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	<p>The Observatory's dominant location beside and above the port town, and later, city of Sydney, made it the site for a range of changing uses. All of these were important to, and reflected changes in the development of the colony.</p> <p>The place has an association with an extensive array of historical figures, most of whom have helped shape its fabric. These include colonial governors, military officers and engineers, convicts, architects and astronomers</p>
C – Aesthetic Significance	<p>The elevation of the site with its harbour and city views and vistas framed by the mature fig trees of the surrounding park, make it one of the most pleasant and spectacular locations.</p> <p>The picturesque Italianate character and stylistic interest of the observatory and residence building, together with the high level of competence of the masonry (both stone and brick) of all major structures on the site, combine to create a precinct of unusual quality.</p>
E – Research Potential	<p>The surviving structures, both above and below ground, are themselves physical documentary evidence of 195 years of changes of use, technical development and ways of living. As such they are a continuing resource for investigation and public interpretation.</p>

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

The Observatory is of exceptional significance in terms of European culture. Its dominant location beside and above the port town and, later, City of Sydney made it the site for a range of changing uses, all of which were important to, and reflected, stages in the development of the colony. These uses included: milling (the first windmill); defence (the first, and still extant, fort fabric); communications (the flagstaffs, first semaphore and first electric telegraph connection); astronomy, meteorology and time keeping;

The surviving structures, both above and below ground, are themselves physical documentary evidence of 195 years changes of use, technical development and ways of living. As such they are a continuing resource for investigation and public interpretation;

The place has an association with an extensive array of historical figures most of whom have helped shape its fabric. These include: colonial Governors Hunter, Bligh, Macquarie & Denison; military officers and engineers Macarthur; Barrallier; Bellasis and Minchin; convicts: the as yet unnamed constructors of the mill and fort; architects: Greenway (also a convict), Lewis, Blacket, Weaver, Dawson and Barnet; signallers and telegraphists such as Jones and the family Moffitt; astronomers: particularly PP King, Scott, Smalley, Russell, Cooke and Wood;

*The elevation of the site, with its harbour and city views and vistas framed by mature Moreton Bay fig (*Ficus macrophylla*) trees of the surrounding park, make it one of the most pleasant and spectacular locations in Sydney;*

The picturesque Italianate character and stylistic interest of the Observatory and residence building, together with the high level of competence of the masonry

(brick and stone) of all major structures on the site, combine to create a precinct of unusual quality;

Finally, the continued use of the observatory for astronomical observations and the survival of astronomical instruments, equipment (Appendix 4) and some early furniture (Appendix 3), although temporarily dispersed, and the retention of most interior spaces, joinery, plasterwork, fireplaces, and supports ensure that the observatory can remain the most intact and longest serving early scientific building in the State (Kerr 1991: 39)

Also of significance for relationship of Commonwealth and State powers. Site of the first intercolonial conference on meteorology and astronomy. (Pearson et al 1999)

An excellent example of a Colonial building erected for scientific purposes and continuing to perform its function at the present time. The structure makes an imposing composition atop the historic hill originally known as Flagstaff Hill and occupies the historic Fort Phillip site (1804-45). Designed by the colonial architect Alexander Dawson and built in 1858.

Millers Point & Dawes Point Village Precinct

Significance assessment for Millers Point & Dawes Point Village Precinct against the SHR assessment criteria

Criterion	Explanation
	Millers Point & Dawes Point Village Precinct is of state significance for its ability to demonstrate, in its physical forms, historical layering, documentary and archaeological records and social composition, the development of colonial and post-colonial settlement in Sydney and New South Wales.
	The natural rocky terrain, despite much alteration, remains the dominant physical element in this significant urban cultural landscape in which land and water, nature and culture are intimately connected historically, socially, visually and functionally.
	The close connections between the local Cadigal people and the place remain evident in the extensive archaeological resources, the historical records and the geographical place names of the area, as well as the continuing esteem of Sydney's Aboriginal communities for the place.
A – Historical Significance	<p>Much (but not all) of the colonial-era development was removed in the mass resumptions and demolitions following the bubonic plague outbreak of 1900, but remains substantially represented in the diverse archaeology of the place, its associated historical records, the local place name patterns, some of the remaining merchants villas and terraces, and the walking-scale, low-rise, village-like character of the place with its central 'green' in Argyle Place, and its vistas and glimpses of the harbour along its streets and over rooftops, the sounds of boats, ships and wharf work, and the smells of the sea and harbour waters.</p> <p>The post-colonial phase is well represented by the early 20th century public housing built for waterside workers and their families, the technologically innovative warehousing, the landmark Harbour Bridge approaches on the heights, the parklands marking the edges of the precinct, and the connections to working on the wharves and docklands still evident in the street patterns, the mixing of houses, shops and pubs, and social and family histories of the local residents.</p> <p>Millers Point & Dawes Point Village Precinct has evolved in response to both the physical</p>

Criterion	Explanation
	<p>characteristics of its peninsular location, and to the broader historical patterns and processes that have shaped the development of New South Wales since the 1780s, including the British invasion of the continent; cross-cultural relations; convictism; the defence of Sydney; the spread of maritime industries such as fishing and boat building; transporting and storing goods for export and import; immigration and emigration; astronomical and scientific achievements; small scale manufacturing; wind and gas generated energy production; the growth of controlled and market economies; contested waterfront work practises; the growth of trade unionism; the development of the state's oldest local government authority the City of Sydney; the development of public health, town planning and heritage conservation as roles for colonial and state government; the provision of religious and spiritual guidance; as inspiration for creative and artistic endeavour; and the evolution and regeneration of locally-distinctive and self-sustaining communities.</p> <p>The whole place remains a living cultural landscape greatly valued by both its local residents and the people of New South Wales. (HO)</p>
B – Associative Significance	<p>Millers Point & Dawes Point Village Precinct is of State significance for its many associations with many women and men significant in the history of NSW. These include the Cadigal people of the area; Colbee, a Cadigal 'leading man' in the 1790s; Lt William Dawes, first colonial astronomer (commemorated in the place-name Dawes Point); Jack 'the miller' Leighton, wind mill owner; William Walker, merchant; Henry Moore, merchant; Robert Towns, merchant; Norman Selfe, engineer; Sisters of St Joseph, Catholic nuns at St Brigit's; the 'Millers Point Push', gangsters of the Point; Ted Brady, wharf labourer, ALP and Communist Part stalwart; Arthur Payne, first sufferer of the Plague in 1900; William Morris Hughes, union leader and later prime minister; RRP Hickson, chairman Sydney Harbour Trust; Waterside Workers Federation (WWF), union established in 1902; Jim Healy, general secretary WWF 1937-1961; Harry Jensen, Lord Mayor of Sydney 1957-1965; and the multi-generational 'Pointer' families that give the Precinct its distinctive social character.</p>
C – Aesthetic Significance	<p>Millers Point & Dawes Point Village Precinct is of state significance for its landmark qualities as a terraced sandstone peninsula providing an eastern 'wall' to the inner harbour and supporting the fortress-like southern approaches to the Sydney Harbour Bridge; for its aesthetic distinctiveness as a walking-scale, low-rise, village-like harbourside district with its central 'green' in Argyle Place, and its vistas and glimpses of the harbour along its streets and over rooftops, the sounds of boats, ships and wharf work, and the smells of the sea and harbour waters; as well as for the technical innovations evident in the remoulding of the natural peninsular landform from the hand-picked Argyle Cut to the ongoing levelling and terracing of the western slopes to the highly planned and mechanically created Walsh Bay and Darling Harbour docklands of the 20th century.</p> <p>The Precinct has long been a source of creative inspiration, being imaginatively depicted by painters such as Joseph Fowles, James Taylor, Frederick Gosling, Eugene Delessert, Rebecca Hall, Samuel Elyard and John Rae in the mid-19th century and Lionel Lindsay, Sydney Long and Harold Greenhill in the early to mid-20th century; by photographers such as Johann Degotardi and Bernard Holtermann in the 1870s, John Harvey and Melvin Vaniman in the early 20th century, and Harold Cazneaux and Sam Hood in the 1930s; as well as being cartographically rendered by colonial map makers such as Dawes (1788), Lesueur (1802), Meehan (1807) and Harper (1823) and later engravers such as those working for Gibbs Shallard (1878) and the Illustrated Sydney News (1888).</p> <p>The whole precinct demonstrates a range of technologies and accomplishments dating from the period 1820s to 1930s; this relates to landscaping, residential dwellings, industrialisation, public areas, warehousing, maritime and religious structures. Millers Point is an intact example of early twentieth century shipping facilities and transport technology. It has a range of architectural styles that are both intact and excellent examples of their type, many of which are rare surviving shops and dwellings, with specific importance attributed to the Observatory, Fort Street School, and Holy Trinity Church, as well as colonial housing, hotels, and commercial amenities. It demonstrates characteristic dramatic harbourside topography that has been modified for human purposes, boasting extensive views, and is regarded as a complete and cohesive area due to contributory materials,</p>

Criterion	Explanation
	form and scale, with clear definition brought about through the location of the Sydney Harbour Bridge and Bradfield Highway, Walsh Bay and Darling Harbour.
D – Social Significance	<p>Millers Point & Dawes Point Village Precinct is significant through associations with a community in NSW for social, cultural and spiritual reasons. A proportion of the existing population is descended from previous generations of Millers Point locals, and has fostered a strong and loyal sense of community and solidarity. The preservation of the physical and social components of Millers Point has both provided insight into, and ensured the continuity of, early twentieth century inner Sydney lifestyles. The post-resumption phase of its history shows the establishment of social and public works, with building improvements brought about through the suburb's consolidation as a company port town. The role of the Sydney Harbour Trust entailed the construction of worker housing and support services, and the improvement in existing building stock and amenities. The modern Millers Point community is still administered under a similar arrangement with the Department of Housing, with a proportion of the area held as public domain and private ownership. It retains evidence of educational and social improvement programmes carried out at church and school sites such as St Brigid's School and the Fort Street School. Additional traces of spiritual contribution and social relevance relates to the Anglican Holy Trinity (Garrison) Church and the Catholic-based St. Brigid's Church and school, which remains a centre catering for the Irish working class community.</p>
E – Research Potential	<p>Millers Point & Dawes Point Village Precinct is of state significance for its potential to yield information from its archaeological resources not readily available elsewhere. The building and archaeological fabric of the place has remained intact through community opposition to redevelopment, resulting in a large number of sites within the locale that remain comparatively or minimally undisturbed. This physical evidence of the area's history is complemented by the wealth of oral history contained within the existing resident population, which is a rare resource that allows a greater opportunity to understand the historic role of Millers Point and its social frameworks</p>
F – Rarity	<p>Millers Point & Dawes Point Village Precinct is of state significance as a rare, if not the only, example of a maritime harbourside precinct that contains evidence of over 200 years of human settlement and activity that spans all historical phases in Australia since 1788. While there are other historical maritime precincts in Australia that might show a comparable mix of historical and contemporary values, none are as old or so intimately associated with the spectrum of historical, social, aesthetic, technological and research values that have shaped Australian society since 1788. The precinct is conceivably unique in Australia because of a strong sense of cohesion facilitated by a range of complementary architectural, structural, physical and social elements. The maintenance of both original fabric in a more or less intact state, and the successive generations of Millers Point residents, allows for a degree of rarity and authenticity that is unmatched on a national scale. In conjunction with these key features, Millers Point has the earliest above-ground archaeological evidence from the colonial period, has significant structures, and has in close proximity a range of shipping and wharf structures that are believed to be of international significance. Finally, it has a range of early buildings with specific functions that are rare within the Australian context, such as the Lord Nelson Hotel and the Observatory</p>
G – Representativeness	<p>Millers Point & Dawes Point Village Precinct is of state significance for its ability to demonstrate the principle characteristics of 19th and 20th century Australian maritime harbourside or dockland precincts, such as a close proximity between workplace and work residence; the development of new methods for moving produce and passengers between land and water; interaction between natural elements such as water and wind and cultural elements such as wharves, boatyards and warehouses; and the constant remaking of the shoreline and its hinterland in response to changing economic, social, political and environmental factors in order for it to remain viable as a living, working place. The precinct typifies the nineteenth and twentieth century residential and maritime environments through the retention of a range of architectural styles and buildings. It contains good examples of both domestic and commercial Australian building forms, including a clearly discernible staged evolution of housing progression of housing from the Ark on Kent Street to early twentieth century Australian Edwardian terrace houses. Similarly, the social and public nature of neighbourhood hotels and corner shops can be identified as typical of nineteenth century social spaces. The retention of such structures are demonstrative of the earlier 'everyday' environment of Millers Point, with the combination of formerly commonplace</p>

Criterion	Explanation
	buildings within a distinct space making the representative nature of Millers Point of extremely high standard

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

Millers Point & Dawes Point Village Precinct is of state significance for its ability to demonstrate, in its physical forms, historical layering, documentary and archaeological records and social composition, the development of colonial and post-colonial settlement in Sydney and New South Wales.

The natural rocky terrain, despite much alteration, remains the dominant physical element in this significant urban cultural landscape in which land and water, nature and culture are intimately connected historically, socially, visually and functionally.

The close connections between the local Cadigal people and the place remain evident in the extensive archaeological resources, the historical records and the geographical place names of the area, as well as the continuing esteem of Sydney's Aboriginal communities for the place.

Much (but not all) of the colonial-era development was removed in the mass resumptions and demolitions following the bubonic plague outbreak of 1900, but remains substantially represented in the diverse archaeology of the place, its associated historical records, the local place name patterns, some of the remaining merchants villas and terraces, and the walking-scale, low-rise, village-like character of the place with its central 'green' in Argyle Place, and its vistas and glimpses of the harbour along its streets and over rooftops, the sounds of boats, ships and wharf work, and the smells of the sea and harbour waters.

The post-colonial phase is well represented by the early 20th century public housing built for waterside workers and their families, the technologically innovative warehousing, the landmark Harbour Bridge approaches on the heights, the parklands marking the edges of the precinct, and the connections to working on the wharves and docklands still evident in the street patterns, the mixing of houses, shops and pubs, and social and family histories of the local residents.

Millers Point & Dawes Point Village Precinct has evolved in response to both the physical characteristics of its peninsular location, and to the broader historical patterns and processes that have shaped the development of New South Wales since the 1780s, including the British invasion of the continent; cross-cultural relations; convictism; the defence of Sydney; the spread of maritime industries such as fishing and boat building; transporting and storing goods for export and import; immigration and emigration; astronomical and scientific achievements; small scale manufacturing; wind and gas generated energy production; the growth of controlled and market economies; contested waterfront work practises; the growth of trade unionism; the development of the state's oldest local government authority the City of Sydney; the development of public health, town planning and heritage conservation as roles for colonial and state government; the provision of religious and spiritual guidance; as inspiration for creative and artistic endeavour;

and the evolution and regeneration of locally-distinctive and self-sustaining communities.

The whole place remains a living cultural landscape greatly valued by both its local residents and the people of New South Wales.

Garrison Anglican Church Precinct

Significance assessment for the Garrison Anglican Church Precinct against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	Garrison Anglican Church is of State significance in demonstrating a significant historical process. The construction of the church was initiated in 1840 shortly after the passing of the Church Act of 1836. the Act provided State aid to the major church denominations for the construction of new churches, employment of ministers, etc, as such placed for the first time in the history of New South Wales each of the religions on an equal footing. The church and adjoining school hall were built through funds secured by the Anglican church under the provisions of the Act (Davies 2004:92).
B – Associative Significance	Garrison Anglican Church is of State significance for its associations with William Grant Broughton, Bishop of Australia. Broughton supported the establishment of the parish.
C – Aesthetic or Technical Significance	The Garrison Church is of State significance as an early example of the archaeologically correct Gothic Revival style in NSW. The eastern stained glass window is of State significance as one of the earliest instances of stained glass in NSW (Davies 2004:93). This early window is complimented by a set of Lyon and Cottier windows from the second half of the 19th century.
D – Social Significance	The Garrison Church is of State significance as a place of commemoration of the nation's military past. This is borne out by the continuing tradition of placing memorials in the Church and the use of the hall for exhibits. The Garrison Church is of local significance as a place of worship since the 1840s.
F - Rarity	The Garrison church is of State significant rarity as one of five extant churches built after the passing of the Church Act of 1836 with money provided by the Government. The Garrison parish hall is of State significance as a rare, possibly unique, extant example of a parochial school erected in the 1840s. The Church and hall are of State significance as the only known ecclesiastical and educational work of architect Henry Ginn. It is one of only three examples of Ginn's work extant in NSW. The stained class east window is of State significance as one of the earliest uses of stained glass in NSW (1861). Other elements of the church fittings are rare, for example the raised pulpit.

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

Holy Trinity Anglican Church is a unique complex of church and former school hall in Sydney which is rare in New South Wales in regard to its age, architecture, and historic associations. The construction of the church and adjoining school was initiated by the Church Act of 1836; the church being completed in stages between

1840 and 1878 to designs prepared by Henry Ginn and Edmund T. Blacket in the archaeologically correct Gothic Revival style, and the school between 1846 and ca. 1860. The church is one of the earliest extant ecclesiastical structures in the state, while the former school hall is a unique rare survivor of the era. Consciously sited against the rock scarp and fronting the public reserve of Argyle Place, the mid-nineteenth century setting of the church is unique. The church and its contents demonstrate the nineteenth century commercial importance of the harbourside suburb, and the political and social status of the parish. The strong support for the establishment of the church by Bishop Broughton was sustained by prominent local families. Parishioner's endowments have included the unique east window (1861) imported from the workshop of Charles Clutterbuck of London, and the locally produced Lyon and Cottier windows (1878). the former school exhibits similar associations with the nineteenth century history of this city suburb. The comparatively recent military associations of the church are of considerable social significance, while the importance of the church to the broader community of the state is demonstrated through ongoing material support by institutions such as the National Trust. More importantly the church continues to serve members of the Anglican Church.

National Trust Centre Incl Buildings & Their Interiors, Retaining Walls & Ground

Significance assessment for the National Trust Centre against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	<p>The National Trust Centre is of state historical significance as the first purpose built hospital associated with the colony's origins as a penal colony, requiring a substantial military force in residence. The hospital was associated with the nearby barracks and other military establishments. The site was later used for educational purposes for over a century from 1849 until 1974. The leasing of the buildings and site to the National Trust in 1975 represents the second adaptive reuse of the complex. The numerous changes to the building indicate historical changes in architectural style.</p> <p>The associated buildings have significance as part of the first 'model school' of the Board of Education, established in Sydney during the mid 1850s. The buildings have had a lengthy association with a variety of historically important persons and organisations and are significant as a design of the colony's first Schools Architect, Henry Robertson. Has historic significance at a State level.</p>
B – Associative Significance	<p>The Military Hospital is associated with James Mitchell (1792-1869), physician and industrialist. He was the father of David Scott Mitchell (1836-1907), book collector and national benefactor. The hospital is associated with John Watts whom designed the building and Colonial Architect Mortimer Lewis whom carried out alterations to the building in a Neo-classical style. The conversion of Watt's military hospital therefore represented one of the final projects of Lewis in his position as Government Architect.</p> <p>Henry Robertson was the colony's first Schools Architect and was responsible for the design and construction of the building which is now known as the S.H. Ervin Gallery. The existence of the Gallery and its valuable art collection was the result of a generous donation by Harry Ervin, a successful wool buyer whom also left most of his valuable fine art collection to the Gallery.</p>

Criterion	Explanation
C – Aesthetic or Technical Significance	<p>The building is significant as a fine but substantially modified example of an early colonial building constructed in the Old Colonial Georgian style, later altered by Lewis with Neo-classical detailing. The building also contains alterations carried out by Robertson based on model English design, adapting them to suit the locally available materials. Evidence by Robertson to try and rectify planning deficiencies and to provide additional space survive, in particular the infilling of the verandahs. The location of the National Trust Centre makes it a significant element of the Observatory Hill Precinct. Observatory Hill has been one of the most prominent natural features since the earliest days of the colony- its elevated position ideal for both defensive and offensive military purposes. The building is a landmark in the area.</p> <p>The associated group of buildings are significant for their sequential development as an educational institution throughout the last half of the nineteenth century. Has aesthetic significance at a State level. Has aesthetic significance locally. Cultural: The buildings are significant as fine examples of mid-nineteenth century school buildings constructed in the Victorian Regency and Victorian Free Classical styles. They are significant for their prominent location and their visual and contextual relationship to the former Military Hospital building.</p>
D – Social Significance	<p>The National Trust Centre has significance for being the largest national school of its time, and for its association with the change from a denominational system of schooling to government schooling. The building has been associated with public functions since its construction, particularly in relation to its use by the National Trust. The location of the centre has long been a focal point for artistic life as the many topographic drawings, late-nineteenth century photographic panoramas and modernist paintings recording life on the Hill can attest.</p> <p>The associated buildings have significance for their association with the change from a denominational system of schooling to government schooling. They have been associated with community functions since their construction. Has social significance at a State level. The buildings are significant as fine examples of mid-nineteenth century school buildings constructed in the Victorian Regency and Victorian Free Classical styles. They are significant for their prominent location and their visual and contextual relationship to the former Military Hospital building.</p>
E – Research Potential	<p>The age of the building would justify a high archaeological potential despite the many additions and alterations that have been carried out.</p>
F - Rarity	<p>The National Trust Centre consists of a collection of buildings of varied individual significance. Their significance rests in their collective use as public buildings over a period of more than 180 years. The continuous use of the buildings since 1850 for educational purposes spans the entire history of government schools in Australia. It also represents the site of the first kindergarten in the colony and an important centre for the training of teachers.</p> <p>The Military hospital is a rare example of the design work of John Watts in Sydney, the majority of his extant work being at Parramatta. Evidence of the high standard of joinery achieved by the convict workforce survives in the former military hospital.</p> <p>The site is one of the few building complexes still owned by the Department of Public Works who have been responsible for the maintenance of the buildings since c1850.</p> <p>The buildings are a rare surviving example of modifications to an Old Colonial Georgian hospital building for use as a mid-nineteenth century school.</p>
G- Representativeness	<p>The building is a representative example of a Victorian Mannerist design from the mid 19th century. The building also is representative of the Georgian style in layout and remnant detail.</p> <p>The associated buildings are representative as fine examples of the Victorian Regency and Victorian Free Classical styles as used in public school buildings in the mid-nineteenth century.</p>

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

The National Trust Centre is of state historical significance providing evidence of the Military Precinct located between Dawes Point and the Wynyard Barracks c1815 to c1850 of which the former Military Hospital; the first and earliest purpose built hospital building associated with the colony, was an integral part. It is of aesthetic significance in providing an example of the spread of architectural taste and standard building forms during the first half of the nineteenth century by the Royal Engineers and subsequently the Colonial Architect and architects designing public schools including John Watts, Mortimer Lewis and Henry Robertson.

The extant building, now the finest largely intact example of the Victorian Mannerist style in the city, includes the adoption of archaeologically correct motifs based on published measured drawings of Greek monuments adapted to new building forms, and demonstrates the alterations carried out by Robertson based on model English design. The building has been associated with a range of institutional purposes, being an early example of the reuse of a colonial building from a hospital to the largest national school of its time and again adapted as the headquarters of the National Trust. The National Trust Centre occupies a prominent position on Observatory Hill overlooking the southern approaches to the Harbour Bridge, its elevated position giving an important visual and contextual relationship to the Observatory and Upper Fort Street.

The major part of associated structures on the site are significant as fine examples of mid-nineteenth century buildings constructed in the Victorian Free Classical and Victorian Regency styles. The buildings have a prominent position and an important visual and contextual relationship with the former Military Hospital building. These buildings have significance as part of the largest national school to be established in the colony during the mid 1850s. They have had a lengthy association with a variety of historically important persons and organisations and are significant as a design of the colony's first Schools Architect, Henry Robertson. The buildings have social significance for their association with the change from denominational to government schooling and for their association with community functions since their construction. The buildings have scientific significance for demonstrating the sequential development of an educational institution.

Fort Street Primary School Site

Significance assessment for the Fort Street Primary School Site against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	Fort Street School is historically significant in providing continuous educational facilities at Observatory Hill from the 1850s to the present day.
B – Associative Significance	The building is associated with Clive Evatt, Minister for Education (1941).

Criterion	Explanation
C – Aesthetic or Technical Significance	The school building is a good example of a post-war modernist school designed by the Government Architects office, with only minor changes since its construction.
F - Rarity	The building is a rare example of a modernist school.

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

Fort Street School is significant in providing evidence of educational use at Observatory Hill from the 1850s to the present day. The current school building is significant as a good example of post war modernism in a complete building complex with only minor changes since construction. Designed by the Government Architects office, it is part of a fine tradition of well designed school buildings in contemporary styles located in a prominent location within the centre of a very significant historic precinct. The building is a rare example of a modernist school.

Observatory Park Inc Boer War Memorial, Bandstand, Fences and Landscaping

Significance assessment for Observatory Park against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	The Observatory's dominant location beside and above the port town, and later, city of Sydney, made it the site for a range of changing uses. All of these were important to, and reflected changes in the development of the colony.
B – Associative Significance	The Observatory has an association with an extensive array of historical figures, most of whom have helped shape its fabric. These include colonial governors, military officers and engineers, convicts, architects and astronomers (Kerr 1991: 39)
C – Aesthetic or Technical Significance	Observatory Hill framed by the mature fig trees of the surrounding park, make it one of the most pleasant and spectacular locations. The Observatory picturesque Italianate character and stylistic interest of the observatory and residence building, together with the high level of competence of the masonry (both stone and brick) of all major structures on the site, combine to create a precinct of unusual quality. (Kerr 1991: 39)
D – Social Significance	The Sydney Observatory continues a tradition of astronomical research that began with the first observatory on Dawes Point in 1788. The changing defences of Sydney are also evident in the areas archaeological resources, notably at the site of Fort Phillip. Underlying this diverse potential for researching changing human occupation is also the potential for the peninsular landform itself, constantly shaped and re-shaped by human agency, to yield information on the abilities of the people of NSW to continue to craft cultural landscapes of strong aesthetic appeal. The surviving structures, both above and below ground, are themselves physical documentary evidence of 195 years of changes of use, technical development and ways of living. As such they are a continuing resource for investigation and public interpretation. (Kerr 1991:39)

Criterion	Explanation
E – Research Potential	The Sydney Observatory continues a tradition of astronomical research that began with the first observatory on Dawes Point in 1788. The changing defences of Sydney are also evident in the areas archaeological resources, notably at the site of Fort Phillip. Underlying this diverse potential for researching changing human occupation is also the potential for the peninsular landform itself, constantly shaped and re-shaped by human agency, to yield information on the abilities of the people of NSW to continue to craft cultural landscapes of strong aesthetic appeal. The surviving structures, both above and below ground, are themselves physical documentary evidence of 195 years of changes of use, technical development and ways of living. As such they are a continuing resource for investigation and public interpretation. (Kerr 1991:39)
F - Rarity	The early buildings with specific functions related to the Observatory are rare within the Australian context.

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

The Observatory Park is of outstanding historical significance and a major component of the Observatory Hill precinct. The park commands panoramic views to the north, west and south. The Observatory is of exceptional significance in terms of European culture. Its dominant location beside and above the port town and, later, City of Sydney made it the site for a range of changing uses, all of which were important to, and reflected, stages in the development of the colony. These uses included: milling (the first windmill); defence (the first, and still extant, fort fabric); communications (the flagstaffs, first semaphore and first electric telegraph connection); astronomy, meteorology and time keeping.

The surviving structures of the Observatory Hill precinct, both above and below ground, are themselves physical documentary evidence of 195 years changes of use, technical development and ways of living. As such they are a continuing resource for investigation and public interpretation.

Observatory Hill has an association with an extensive array of historical figures most of whom have helped shape its fabric. These include: colonial Governors Hunter, Bligh, Macquarie & Denison; military officers and engineers Barrallier; Bellasis and Minchin; convicts: the as yet unnamed constructors of the mill and fort; architects: Greenway (also a convict), Lewis, Blacket, Weaver, Dawson and Barnett; signallers and telegraphists such as Jones and the family Moffitt; astronomers: particularly PP King, Scott, Smalley, Russell, Cooke and Wood.

The elevation of the site, with its harbour and city views and vistas framed by mature Moreton Bay fig (Ficus macrophylla) trees of the surrounding park, make it one of the most pleasant and spectacular locations in Sydney.

The picturesque Italianate character and stylistic interest of the Observatory and residence building, together with the high level of competence of the masonry (brick and stone) of all major structures on the site, combine to create a precinct of unusual quality.

Finally, the continued use of the observatory for astronomical observations and the survival of astronomical instruments, equipment and some early furniture although

temporarily dispersed, and the retention of most interior spaces, joinery, plasterwork, fireplaces, and supports ensure that the observatory can remain the most intact and longest serving early scientific building in the State (Kerr 1991: 39). The site is also of significance for relationship of Commonwealth and State powers. It is the site of the first intercolonial conference on meteorology and astronomy. (Pearson et al 1999) The building is an excellent example of a Colonial building erected for scientific purposes and continuing to perform its function at the present time. The structure makes an imposing composition atop the historic hill originally known as Flagstaff Hill and occupies the historic Fort Phillip site (1804-45). It was designed by the colonial architect Alexander Dawson and built in 1858.

Messenger's Cottage for Sydney Observatory

Significance assessment for Messenger's Cottage against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	The Messenger's Cottage for Sydney Observatory served as an addition to the Signal Station facility and played a significant role in the early communications system around the harbour. It was constructed as a result of the addition of the electric telegraph to the Harbour's communications network and is representative of the growth and development of the network. Messenger's Cottage for Sydney Observatory is associated with the National Trust. They both have historic significance at a State level.
B – Associative Significance	Messenger's Cottage for Sydney Observatory is significant as a design of architect Alexander Graham and with Government Astronomer Reverend William Scott.
C – Aesthetic or Technical Significance	The Messenger's Cottage for Sydney Observatory is aesthetically significant as a fine and largely intact single storied rendered brick cottage with hipped corrugated iron roof and timber framed verandah.

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

Messenger's Cottage for Sydney Observatory (c.1862) is aesthetically significant as a fine and largely intact single storied rendered brick cottage with hipped corrugated iron roof and timber framed verandah in the simple asymmetrical Victorian cottage style. It was built in its current location far from the Observatory on the suggestion of Government Astronomer William Scott in order to reduce expense by allowing a brick building to be constructed. The building is significant for its association with architect Alexander Graham.

Bureau of Meteorology

Significance assessment for the Bureau of Meteorology against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	The Bureau of Meteorology Building is significant as the first purpose built building for Meteorology in NSW in 1922. The building is associated with the Bureau of Meteorology which is an Executive Agency of the Australian Government responsible for providing weather services to Australia and surrounding areas. It was established in 1906 under the Meteorology Act, and brought together the state meteorological services that existed before then. The building is associated with the Observatory which was originally the site of the first dedicated building for meteorology in Australia in 1859 and one of the key locations from where Sydney's weather is still measured. The buildings dominant location beside and above City of Sydney, made it an appropriate site for meteorological observations. The building operated as a Weather Bureau for over 70 years from 1922 until 1992.
C – Aesthetic or Technical Significance	The building is significant as an austere structure, reflecting the economic constraints of the mid-war period in which it was built with fine Georgian Revival detailing with only minor changes since construction. The buildings' size, colour, massing and position render it a dominant physical element in its immediate setting. Designed by the Commonwealth Department of Works and Railways, it is part of a fine tradition of well designed Commonwealth buildings in a prominent location within the centre of a very significant historic precinct. The building is a rare example of a mid war Georgian revival style building purposefully designed for meteorological observations.
D – Social Significance	The Bureau of Meteorology provided an essentially scientific establishment in providing forecasts of Sydney's weather for 70 years.
E – Research Potential	Surviving meteorological equipment are physical evidence of 70 years of use on site, technical development and ways of studying weather patterns. As such they are a continuing resource for investigation and public interpretation.
F - Rarity	The building is a rare surviving example of one of the first purpose built buildings for meteorology in NSW. It is a rare mid war Georgian revival style building purposefully designed for meteorological observations.
G – Representativeness	The building is representative of purposefully designed weather bureau building built as the result of the transfer of meteorology to the Commonwealth in 1908 with establishment of the Bureau of Meteorology, thereby leaving astronomy to the States.

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

The Bureau of Meteorology Building is significant as one of the first purpose built building for Meteorology in NSW in 1922. The building is associated with the Bureau of Meteorology which is an Executive Agency of the Australian Government responsible for providing weather services to Australia and surrounding area which was established in 1906 under the Meteorology Act, and brought together the state meteorological services that existed before then. The buildings dominant location beside and above City of Sydney, made it an appropriate site for meteorological observations. The building its significant for its operation as a Weather Bureau for over 70 years from 1922 until 1992. The buildings' size, colour, massing and position render it a dominant physical element in its immediate setting. Designed by the Commonwealth Department of Works and Railways, it is part of a fine tradition of well designed Commonwealth buildings in a prominent location within the centre of a very significant historic precinct. The building is a rare example of a mid war Georgian Revival style building purposefully

designed for meteorological observations and reflects the economic constraints of the period in which it was built with only minor changes since construction.

Millers Point Heritage Conservation Area

Significance assessment for the Millers Point Heritage Conservation Area against the SHR assessment criteria

Criterion	Explanation
A – Historical Significance	<p>The area was occupied by the Cadigal, Wangal, Borogegal and Gameragal clans. The Precinct retains some of these clans place names and is illustrated by several early colonial artists and cartographers in its pre-colonial landform and vegetation, sometimes with Aboriginal people in view, making it one of the oldest places on the continent so depicted. There is evidence that there were Aboriginal people using Millers Point until at least the 1840s. • Millers Point & Walsh Bay Special Area is of state significance for its ability to demonstrate, in its physical forms and associated documentary evidence, over 200 years of European settlement – making it one of a few sites in Australia to display the oldest such continuum of evidence on one site since the beginning of British colonisation in 1788.</p>
	<p>The elevated height, abundance of sandstone and long shoreline of Aboriginal middens along Darling Harbour was important in encouraging industrial, commercial and defence activities in the area.</p>
	<p>British settlement in the area began with the first colonial fortifications, then the development of wharves and dock facilities and their associated housing. The outbreak of the Plague in 1900 and the consequent mass-resumption of the area and its large-scale rebuilding during the early 20th century was a significant period. It was followed with the development of waterside trade, underlain by a continuing separation from the rest of the City of Sydney by topography and social differentiations to the present day. All of these historical phases remain evident in the area.</p>
	<p>The area is of state and national significance due to its unique characteristics, composition, architectural diversity and its continuity of nineteenth and twentieth century residential and maritime elements. It is a living community with clearly discernible links to the maritime industries that formed the village's core from the early part of the nineteenth century, and one that has long-term memories of the precinct's fabric and relevance. Its architecture is representative of each decade from the 1820s to the 1930s, with many structures of excellent aesthetic, technical or rare value.</p>
	<p>The street pattern of this suburb demonstrates both early nineteenth century transport routes, early haphazard development and replanning and urban design in the latter part of the nineteenth century. Further, it provides evidence of early twentieth century government policy, with large portions of the landscape re-shaped in response to the bubonic plague health crisis and through resumption by the State government. It features, virtually intact, residential areas, port and stevedoring works created by the Sydney Harbour Trust, 1900 1930, in response to the Sydney plague and the requirements of maritime trade at that time</p>
	<p>Millers Point contains dwellings, shops, businesses, warehouses,, churches, schools, institutions and related maritime structures that remain closely affiliated to the community today in a meaningful fashion. The area contains both private and government controlled components that merge seamlessly into a cohesive whole.</p>
	<p>An important feature of the area is the circular stone excavation for the Cahill Expressway that separated the school grounds from observatory hill and from the National Trust Centre (former school buildings) as it marks a phase of development of the city where the whole of the Millers Point area was at considerable risk of loss through new planning policies and development.</p>
	<p>The National Trust Centre (and associated buildings) are significant as part of the first</p>

Criterion	Explanation
	<p>'model school' of the Board of Education, established in Sydney during the mid 1850s and also as a remnant of the first military hospital. The buildings have had a lengthy association with a variety of historically important persons and organisations and are significant as a design of the colony's first Schools Architect, Henry Robertson. The buildings are a remnant of the first Military Hospital. They have historic significance at a State level.</p> <p>The Observatory's dominant location beside and above the port town, and later, city of Sydney, made it the site for a range of changing uses. All of these were important to, and reflected changes in the development of the colony.</p>
B – Associative Significance	<p>Millers Point is of State significance for its many associations with many women and men significant in the history of NSW.</p> <p>Indigenous Cadigal people of the area; Colbee, a Cadigal 'leading man' in the 1790s;</p> <p>Non Indigenous Jack 'the miller' Leighton, wind mill owner; William Walker, merchant; Henry Moore, merchant; Robert Towns, merchant; Sisters of St Joseph, Catholic nuns at St Brigit's; the 'Millers Point Push', gangsters of the Point; Ted Brady, wharf labourer, ALP and Communist Part stalwart; Arthur Payne, first sufferer of the Plague in 1900; William Morris Hughes, union leader and later prime minister; Waterside Workers Federation (WWF), union established in 1902; • Jim Healy, general secretary WWF 1937-1961; Harry Jensen, Lord Mayor of Sydney 1957-1965; 'Pointer' families that give the Precinct its distinctive social character; Colonial merchant class, represented by ownership of Bligh House (43 Lower Fort St) know also as 'Clydebank' by the Campbell family which Robert Crawford, Principal Clerk to Alexander Macleay lived in; Later merchant class who invested in major warehouses (Towns and Parbury); Prominent Sydney citizens of the mid nineteenth century such as John Fairfax of the Sydney Morning Herald who enjoyed the proximity to the town. (The relatively modest scale of the houses at Miller's Point, and the relative importance of its pre 1870 inhabitants reflects the economic circumstances and the aspirations of the citizens of the town of Sydney); 1880s property investors who built substantial rows of terrace houses of which 1-19 Lower Fort Street is the finest in Miller's Point, and the grandest surviving terrace in New South Wales; • Publicans, as key civic figures, for example, the Armstrong family of the Palisade Hotel; the Irish community, as a major social group, Significant architects and their work: H. Ginn & E. Blacket : Holy Trinity Church; W. L. Vernon : Post Office; A. Dawson : Observatory; J. Watts and M. Lewis : Fort Street School (also H. Robertson); M. Lewis : Richmond Villa, Kent Street (moved from Domain c.1975); J. Verge : 39 41 Lower Fort Street; G. McRae : 1910s workers' housing; V. Parkes : proposals c.1910 to Sydney Redevelopment Advisory Board for new hygienic tenements between Argyle Place and Windmill Street; W. Wardell : Grafton Bond Store,</p> <p>Members of the Sydney Harbour Trust Board: RRP Hickson, chairman Sydney Harbour Trust</p> <p>Artists, and the discovery of the pictorial qualities of Australia including urban squalor, waterfront incident and the harbour bridge: Prout and Rae 1840s in Sydney Illustrated; S. Elyard 1860s; Lindsay family c.1900; W. Hardy Wilson c.1910; Cazneaux c.1920; Dorrit Black c.1930.</p> <p>The Observatory has an association with an extensive array of historical figures, most of whom have helped shape its fabric. These include colonial governors, military officers and engineers, convicts, architects and astronomers (Kerr 1991: 39)</p>

Criterion	Explanation
C – Aesthetic or Technical Significance	<p>Millers Point is of state significance for its landmark qualities as a terraced sandstone peninsula providing an eastern 'wall' to the inner harbour and supporting the fortress-like southern approaches to the Sydney Harbour Bridge; for its aesthetic distinctiveness as a walking-scale, low-rise, village-like harbourside district with its central 'green' in Argyle Place, and its vistas and glimpses of the harbour along its streets and from escarpments, as well as for the technical innovations evident in the remoulding of the natural peninsular landform from the hand-picked Argyle Cut to the ongoing levelling and terracing of the western slopes..</p> <p>The area contains numerous original and characterful views to and from the harbour that are formed by a combination of dramatic topography and long physical evolution. It is the extent, the expansiveness, the change of view of individual buildings as the viewer moves around the water that gives the place distinction and significance.</p> <p>The area is distinctive in that the escarpment edge is sharply defined by rock faces, concrete walls and vertical barriers that separate it from the waterfront.</p> <p>The area is distinctive in that it has no single character but is made up of contrasts; juxtapositions of often disparate elements such as the stark edge of cliff or wall against the softer park or walkway; redefined and rebuilt wharf structures with new gently uses that belie their history, stylistically defined period of housing development that follows a well established pattern of small lot housing now contrasted with modern apartment/warehouse style dwellings.</p> <p>The variety, complexity and scale of views from the wharfs, observatory hill, from roadways, edges of escarpments and walls are significant in defining the character of the area. The area is significant as aside from the southern edge of the precinct it is not overpowered by city scale development. The area contains numerous streets and lanes of historical and aesthetic interest. The area contains numerous features such as steps, fences, rock cuttings of historical and aesthetic interest.</p> <p>The value of the area is further enhanced by its separation from the Rocks precinct which is predominantly commercial in use with Millers Point retaining its residential character, in particular worker housing. This is a rare continuing use. The character of the area is almost defined on a street by street basis rather than a broad precinct basis. With very few exceptions every element of the precinct contributes to the whole in a significant way.</p> <p>The area has long been a source of creative inspiration, being imaginatively depicted by painters such as Joseph Fowles, James Taylor, Frederick Gosling, Eugene Delessert, Rebecca Hall, Samuel Elyard and John Rae in the mid-19th century and Lionel Lindsay, Sydney Long and Harold Greenhill in the early to mid-20th century; by photographers such as Johann Degotardi and Bernard Holtermann in the 1870s, John Harvey and Melvin Vaniman in the early 20th century, and Harold Cazneaux and Sam Hood in the 1930s; as well as being cartographically rendered by colonial map makers such as Dawes (1788), Lesueur (1802), Meehan (1807) and Harper (1823) and later engravers such as those working for Gibbs Shallard (1878) and the Illustrated Sydney News (1888).</p> <p>The area has a range of architectural styles that are both intact and excellent examples of their type, many of which are rare surviving shops and dwellings, with specific importance attributed to the Observatory, Fort Street School, Holy Trinity Church and Millers Point Post Office, as well as colonial housing, hotels, and commercial amenities. It demonstrates characteristic dramatic harbourside topography that has been modified for human purposes, and is regarded as a complete and cohesive area due to contributory materials, form and scale, with clear definition brought about through the location of the Sydney Harbour Bridge and Bradfield Highway, Walsh Bay and Darling Harbour.</p> <p>It demonstrates technical and creative excellence of the period 1820 to 1930, including, warehousing, civic facilities and landscaping, the observatory, hotels, public housing and its support facilities, colonial housing and the Garrison Church buildings. This is contrasted with modern apartment/warehouse style dwellings and the redeveloped wharves.</p> <p>The National Trust Centre (and associated buildings) are significant for their sequential development initially as a Military Hospital and then as an educational institution throughout the last half of the nineteenth century. They have aesthetic significance at a State and local</p>

Criterion	Explanation
	<p>level.</p> <p>The elevation of the Observatory site with its harbour and city views and vistas framed by the mature fig trees of the surrounding park, make it one of the most pleasant and spectacular locations.</p> <ul style="list-style-type: none"> • The Observatory picturesque Italianate character and stylistic interest of the observatory and residence building, together with the high level of competence of the masonry (both stone and brick) of all major structures on the site, combine to create a precinct of unusual quality. (Kerr 1991: 39)
D – Social Significance	<p>Millers Point is of state significance for its potential to yield information from its archaeological resources not readily available elsewhere including oviform drains, early kerb and guttering, woodblock or other features that remain extant in Millers Point.</p>
	<p>The changing domestic life of the residents has been documented in several excavations of residential sites;</p>
	<p>The area contains examples of buildings demonstrating each stage and every major component in the history of the suburb, the only exception being for the period 1788-1820.</p>
	<p>The building and archaeological fabric of the place has remained intact through community opposition to redevelopment, resulting in a large number of sites within the locale that remain comparatively or minimally undisturbed.</p>
	<p>The physical evidence of the area's history is complemented by the wealth of oral history contained within the existing resident population, which is a rare resource that allows a greater opportunity to understand the historic role of Millers Point and its social frameworks.</p>
	<p>The Sydney Observatory continues a tradition of astronomical research that began with the first observatory on Dawes Point in 1788. The changing defences of Sydney are also evident in the areas archaeological resources, notably at the site of Fort Phillip. Underlying this diverse potential for researching changing human occupation is also the potential for the peninsular landform itself, constantly shaped and re-shaped by human agency, to yield information on the abilities of the people of NSW to continue to craft cultural landscapes of strong aesthetic appeal. The surviving structures, both above and below ground, are themselves physical documentary evidence of 195 years of changes of use, technical development and ways of living. As such they are a continuing resource for investigation and public interpretation. (Kerr 1991:39)</p>
	<p>Millers Point layered fabric, both in terms of structures and archaeology, has had relatively little disturbance since intervention by the Sydney Harbour Trust and has the potential to provide valuable evidence about the place and its community.</p>
E – Research Potential	<p>Evidence from an archaeological excavation at Moore's Wharf when it was moved showed continuing indigenous occupation at least until the 1830s and it is possible other such sites exist.</p>
	<p>Millers Point is of state significance for its potential to yield information from its archaeological resources not readily available elsewhere including oviform drains, early kerb and guttering, woodblock or other features that remain extant in Millers Point.</p>
	<p>The changing domestic life of the residents has been documented in several excavations of residential sites;</p>
	<p>The area contains examples of buildings demonstrating each stage and every major component in the history of the suburb, the only exception being for the period 1788-1820.</p>
	<p>The building and archaeological fabric of the place has remained intact through community opposition to redevelopment, resulting in a large number of sites within the locale that remain comparatively or minimally undisturbed.</p>
	<p>The physical evidence of the area's history is complemented by the wealth of oral history contained within the existing resident population, which is a rare resource that allows a</p>

Criterion	Explanation
	<p>greater opportunity to understand the historic role of Millers Point and its social frameworks.</p> <p>The Sydney Observatory continues a tradition of astronomical research that began with the first observatory on Dawes Point in 1788. The changing defences of Sydney are also evident in the areas archaeological resources, notably at the site of Fort Phillip. Underlying this diverse potential for researching changing human occupation is also the potential for the peninsular landform itself, constantly shaped and re-shaped by human agency, to yield information on the abilities of the people of NSW to continue to craft cultural landscapes of strong aesthetic appeal. The surviving structures, both above and below ground, are themselves physical documentary evidence of 195 years of changes of use, technical development and ways of living. As such they are a continuing resource for investigation and public interpretation. (Kerr 1991:39)</p> <p>Millers Point and Walsh Bay layered fabric, both in terms of structures and archaeology, has had relatively little disturbance since intervention by the Sydney Harbour Trust and has the potential to provide valuable evidence about the place and its community.</p>
F - Rarity	<p>Natural Heritage Millers Point is an important area in the Sydney City LGA, and its prominence is emphasised by its strong topography, particularly as viewed from the Harbour.</p> <p>Non indigenous Millers Point is of state significance as a rare, if not the only, example of a maritime harbourside precinct that contains evidence of over 200 years of human settlement and activity that spans all historical phases in Australia since 1788. While there are other historical maritime precincts in Australia that might show a comparable mix of historical and contemporary values, none are as old or so intimately associated with the spectrum of historical, social, aesthetic, technological and research values that have shaped Australian society since 1788.</p> <p>The area is one of a few unique sites in Australia because of a strong sense of cohesion facilitated by a range of complementary architectural, structural, physical and social elements. The maintenance of both original fabric in a more or less intact state, and the successive generations of Millers Point residents, allows for a degree of rarity and authenticity.</p> <p>Millers Point has significant structures, and has in close proximity a range of shipping and wharf structures that are believed to be of international significance.</p> <p>The area has a range of early buildings with specific functions that are rare within the Australian context, such as the Lord Nelson Hotel and the Observatory.</p> <p>Its unity, authenticity of fabric and community, and complexity of significant activities and events make it a significant historic urban place in Australia.</p> <p>The National Trust Centre (and associated buildings) are rare surviving example of modifications to an Old Colonial Georgian hospital building for use as a mid-nineteenth century school.</p>
G – Representativeness	<p>Millers Point is of state significance for its ability to demonstrate the principle characteristics of 19th and 20th century Australian maritime harbourside or dockland precincts, such as a close proximity between workplace and work residence; the development of new methods for moving produce and passengers between land and water; interaction between natural elements such as water and wind and cultural elements such as wharves, boatyards and warehouses; and the constant remaking of the shoreline and its hinterland in response to changing economic, social, political and environmental factors in order for it to remain viable as a living, working place.</p> <p>The area typifies the nineteenth and twentieth century residential and maritime environments through the retention of a range of architectural styles and buildings. It contains good examples of both domestic and commercial Australian building forms, including a clearly discernible staged evolution of housing progression of housing from the Ark on Kent Street to early twentieth century Australian Edwardian terrace houses.</p>

Criterion	Explanation
	<p>The social and public nature of neighbourhood hotels and corner shops can be identified as typical of nineteenth century social spaces. The retention of such structures are demonstrative of the earlier 'everyday' environment of Millers Point, with the combination of formerly commonplace buildings within a distinct space making the representative nature of Millers Point of extremely high standard.</p> <p>The National Trust Centre (and associated buildings) are representative as fine examples of the Victorian Regency and Victorian Free Classical styles as used in public school buildings in the mid-nineteenth century</p>

The NSW Office of Environment & Heritage SHI database contains the following statement of significance:

Millers Point Heritage Conservation Area is a substantially intact residential and commercial precinct of outstanding State and National significance. It contains buildings and civic spaces dating from the 1830s and is an important example of nineteenth and early twentieth century adaptation of the landscape. Millers Point has changed little since the 1930s.

The natural rocky terrain, despite much alteration, remains the dominant physical element in this significant urban cultural landscape in which land and water, nature and culture are intimately connected historically, socially, visually and functionally.

The close connections between local Aboriginal clans and the place remain evident in the historical records and the geographical place names of the area, as well as the continuing esteem of Sydney's Aboriginal communities for the place.

Much (but not all) of the colonial-era development was removed in the mass resumptions and demolitions following the bubonic plague outbreak of 1900, but remains substantially represented in the diverse archaeology of the place, its associated historical records, the local place name patterns, some of the remaining merchants villas and terraces, and the walking-scale, low-rise, village-like character of the place with its central 'green' in Argyle Place, and its vistas and glimpses of the harbour along its streets and over rooftops and views from the harbour to the area.

The post-colonial phase is well represented by the early 20th century public housing built for waterside workers and their families, the technologically innovative warehousing, the landmark Harbour Bridge approaches on the heights, the parklands marking the edges of the precinct, and the connections to the wharves and docklands still evident in the street patterns, the mixing of houses, shops and pubs, and social and family histories of the local residents.

The Millers Point Heritage Conservation Area has evolved in response to both the physical characteristics of its peninsular location, and to the broader historical patterns and processes that have shaped the development of New South Wales since the 1780s, including the British occupation of the continent; cross-cultural relations; convictism; the defence of Sydney; the spread of maritime industries such as fishing and boat building; transporting and storing goods for export and import; immigration and emigration; astronomical and scientific achievements;

small scale manufacturing; wind and gas generated energy production; the growth of controlled and market economies; contested waterfront work practises; the growth of trade unionism; the development of the state's oldest local government authority the City of Sydney; the development of public health, town planning and heritage conservation as roles for colonial and state government; the provision of religious and spiritual guidance; as inspiration for creative and artistic endeavour; and the evolution and regeneration of locally-distinctive and self-sustaining communities.

The area contains numerous original and characterful views to and from the harbour that are formed by a combination of dramatic topography and long physical evolution. It is the extent, the expansiveness, the change of view of individual buildings as the viewer moves around the water that gives the place distinction and significance. The variety, complexity and scale of views from the wharfs, observatory hill, from roadways, edges of escarpments and walls are significant in defining the character of the area. The area is significant, as aside from the southern edge of the precinct, it is not overpowered by city scale development. The area contains numerous streets and lanes of historical and aesthetic significance. The area contains numerous features such as steps, fences, rock cuttings of historical and aesthetic interest.

The whole place remains a living cultural landscape greatly valued by both its local residents and the people of New South Wales. The value of the area is further enhanced by its separation from the Rocks precinct, which is predominantly commercial in use with Millers Point retaining its residential character, in particular worker housing. This is a rare continuing use. The character of the area is almost defined on a street by street basis rather than a broad precinct basis, but the most striking element is the homogeneity of the whole. With very few exceptions every element of the precinct contributes to the whole in a significant way.

The relative intactness (or interpretation in cases of redevelopment) of the area is representative of measures taken to protect the heritage values of individual buildings and the precinct as a whole since the 1950s by the local community and Heritage/Historic Groups. This led to the listing of Millers Point Heritage Conservation Area and individual listings for items in the area. Within planning control documents.

The Millers Point area is of State and National Significance as a rare urban residential area remnant of early port of Sydney dating from the early 1800s which remains relatively unchanged since the 1930s; exhibits a range of fine buildings and spaces from the 1830s-1920s with high individual integrity, important collection of Government housing (built for port workers) and community maritime associations from European settlement to 20th century. The area has changed little since the 1930s, the high degree of integrity and authenticity area and of individual buildings

The National Trust Centre and associated structures are significant as fine examples of mid-nineteenth century buildings constructed in the Victorian Free Classical and Victorian Regency styles. The buildings have a prominent position and an important visual and contextual relationship with the former Military Hospital building. These buildings have significance as part of the largest national school to be established in the colony during the mid 1850's. They have had a lengthy

association with a variety of historically important persons and organisations and are significant as a design of the colony's first Schools Architect, Henry Robertson. The buildings have social significance for their association with the change from denominational to government schooling and for their association with community functions since their construction. The buildings have scientific significance for demonstrating the sequential development of an educational institution.

An important feature of this precinct is the circular stone excavation for the Cahill Expressway that separated the school grounds from observatory hill and from the National Trust Centre (former school buildings) as it marks a phase of development of the city where the whole of the Millers Point area was at considerable risk of loss through new planning policies and development.

The Observatory Hill Park is of outstanding historical significance and a major component of the Observatory Hill precinct. The park commands panoramic views to the north, west and south.

The Observatory is of exceptional significance in terms of European culture. Its dominant location beside and above the port town and, later, City of Sydney made it the site for a range of changing uses, all of which were important to, and reflected, stages in the development of the colony. These uses included: milling (the first windmill); defence (the first, and still extant, fort fabric); communications (the flagstaffs, first semaphore and first electric telegraph connection); astronomy, meteorology and time keeping.

The surviving structures of the Observatory Hill precinct, both above and below ground, are themselves physical documentary evidence of 195 years changes of use, technical development and ways of living. As such they are a continuing resource for investigation and public interpretation.

Observatory Hill has an association with an extensive array of historical figures most of whom have helped shape its fabric. These include: colonial Governors Hunter, Bligh, Macquarie & Denison; military officers and engineers Barrallier; Bellasis and Minchin; convicts: the as yet unnamed constructors of the mill and fort; architects: Greenway (also a convict), Lewis, Blacket, Weaver, Dawson and Barnet; signallers and telegraphists such as Jones and the family Moffitt; astronomers: particularly PP King, Scott, Smalley, Russell, Cooke and Wood.

*The elevation of the site, with its harbour and city views and vistas framed by mature Moreton Bay fig (*Ficus macrophylla*) trees of the surrounding park, make it one of the most pleasant and spectacular locations in Sydney.*

The picturesque Italianate character and stylistic interest of the Observatory and residence building, together with the high level of competence of the masonry (brick and stone) of all major structures on the site, combine to create a precinct of unusual quality.

Finally, the continued use of the observatory for astronomical observations and the survival of astronomical instruments, equipment and some early furniture although temporarily dispersed, and the retention of most interior spaces, joinery, plasterwork, fireplaces, and supports ensure that the observatory can remain the most intact and longest serving early scientific building in the State (Kerr 1991: 39). The site is also of significance for relationship of Commonwealth and State powers. It is the site of the first intercolonial conference on meteorology and astronomy.

(Pearson et al 1999)

The building is an excellent example of a Colonial building erected for scientific purposes and continuing to perform its function at the present time. The structure makes an imposing composition atop the historic hill originally known as Flagstaff Hill and occupies the historic Fort Phillip site (1804-45). It was designed by the colonial architect Alexander Dawson and built in 1858.

Jelly Palms

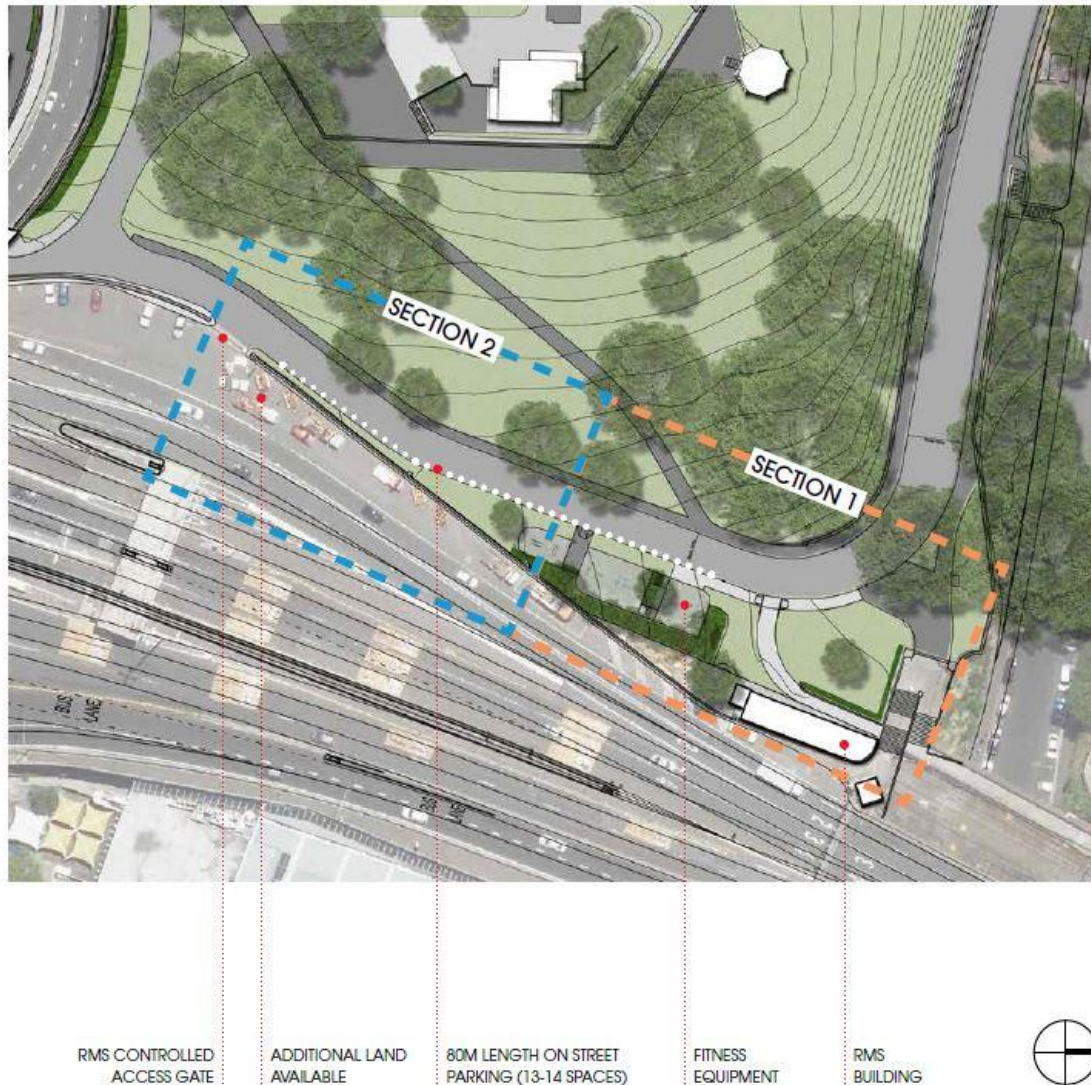
The City of Sydney Register of Significant Trees contains the following statement of significance for the item:

*The small group of exotic, ornamental Jelly Palms (*Butia capitata*) are believed to be part of a broader civic landscaping program associated with the Harbour Bridge opening in 1932. This group has significance at the City/ LGA level in terms of aesthetic, visual, historic, commemorative and rarity values.*

Appendix B

GSA Group proposal options (City of Sydney)

The following options were explored during the early phase of the project by GSA Group and are summarised below.



10.1.1.1 Section 1

Options for Section 1 encompass the connection point with the existing SHB cycleway. Consideration of key factors includes the recently installed cycleway connection to Upper Fort Street from the SHB southern portal, existing fitness equipment, existing parking on Upper Fort Street and the RMS boom gate from Bradfield Highway to Upper Fort Street.

Figure 68: Option 1A
(Source: City of Sydney)

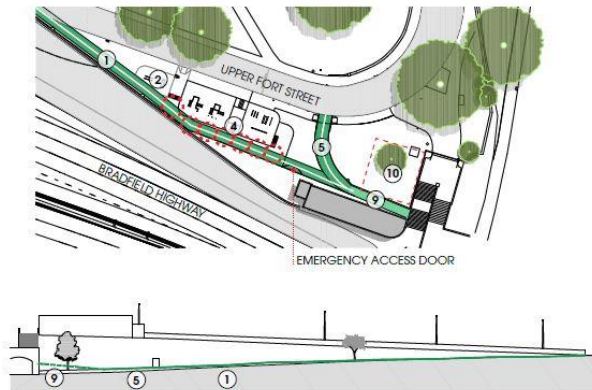


Figure 69: Option 1B
(Source: City of Sydney)

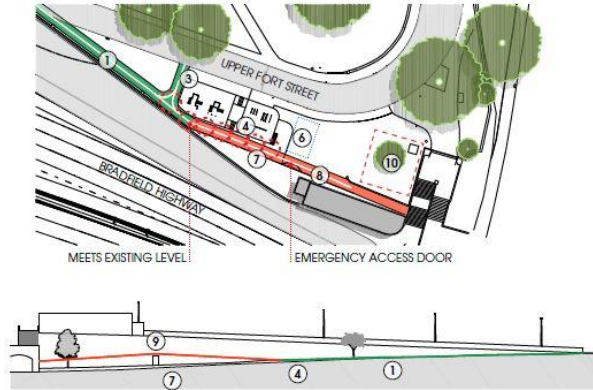


Figure 70: Option 1C
(Source: City of Sydney)

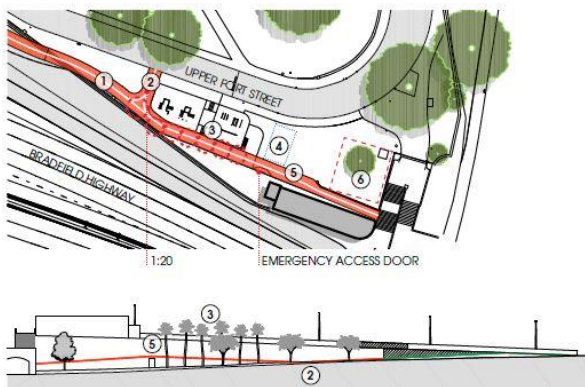
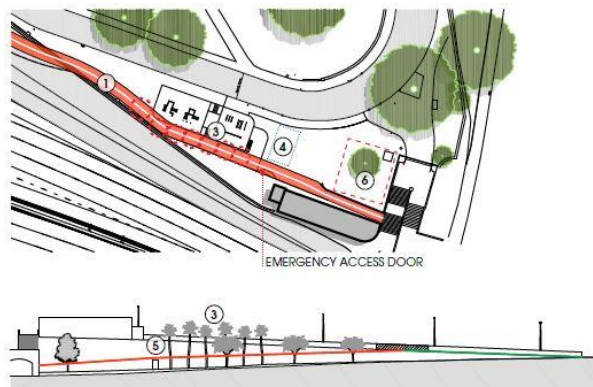


Figure 71: Option 1D
(Source: City of Sydney)



Option 1A (Retain Existing Entry Ramp)

Option 1A for the Proposal involved retention of the existing entry ramp at the commencement of the existing SHB cycleway approaching the south west bridge stair portal and a new on-grade cycleway alongside the SHB southern approach retaining wall.

The main advantages of this option included:

- Minimum visual impact to SHB southern approach retaining wall
- Existing cyclist exit to Upper Fort Street retained
- Minimum physical impact to SHB southern approach retaining wall
- Existing exit ramp from Harbour Bridge retained
- Lower cost

The main disadvantages of this option included:

- The existing jelly palms would be relocated
- There would be a loss of street parking
- The existing exercise area would be adjusted
- There would be a clash between cycleway traffic and emergency access (safety risk)

Option 1B (New Ramp + Above Door + Connection to Upper Fort St)

Option 1B for the Proposal involved combination works with a new elevated cycleway approximately 25 metres long continuing from a new on-grade cycleway along the southern end of the SHB southern approach retaining wall at Upper Fort Street.

The main advantages of this option included:

- Moderate visual impact to SHB southern approach retaining wall
- Minimum physical impact to SHB southern approach retaining wall
- New elevated cycleway to clear height of emergency access door
- Increased safety

The main disadvantages of this option included:

- The existing jelly palms would be relocated
- There would be a loss of street parking
- The existing exercise area would be adjusted

Option 1C (Elevated + Above Door + Connection to Upper Fort St (+ Excavation))

Option 1C for the Proposal involved combination works with an elevated cycleway continuing from a new on-grade cycleway excavated into the SHB southern approach retaining wall opposite Upper Fort Street.

The main advantages of this option included:

- New elevated cycleway to clear height of emergency access door

The main disadvantages of this option included:

- High physical impact to SHB southern approach retaining wall
- Moderate visual impact to SHB southern approach retaining wall
- The existing jelly palms would be relocated
- There would be a loss of street parking
- The existing exercise area would be adjusted

Option 1D (Elevated + Above Door + No Connection to Upper Fort St)

Option 1D for the Proposal involved a new elevated cycleway continuing the entire length of the SHB southern approach without connecting/affecting Upper Fort Street.

The main advantages of this option included:

- No impact to Upper Fort Street including no impact to parking
- New elevated cycleway to clear height of emergency access door
- Increased safety

The main disadvantages of this option included:

- The existing jelly palms would be relocated
- Higher visual impact to the SHB southern approaches
- Higher physical impact to the SHB southern approaches
- The existing exercise area would be adjusted
- Higher cost

10.1.1.2 Section 2

Options for Section 2 encompass the southern end of Upper Fort Street. Consideration of key factors includes recently install new path/cycleway connection to Upper Fort Street, existing fitness equipment, existing parking on Upper Fort Street and the RMS access gate from Bradfield Highway to Upper Fort Street.

Figure 72: Option 2A
(Source: City of Sydney)

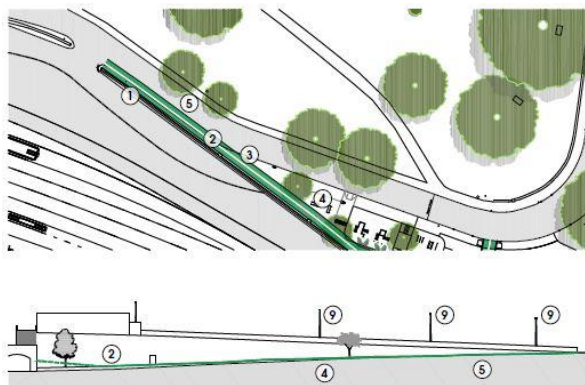


Figure 73: Option 2B
(Source: City of Sydney)

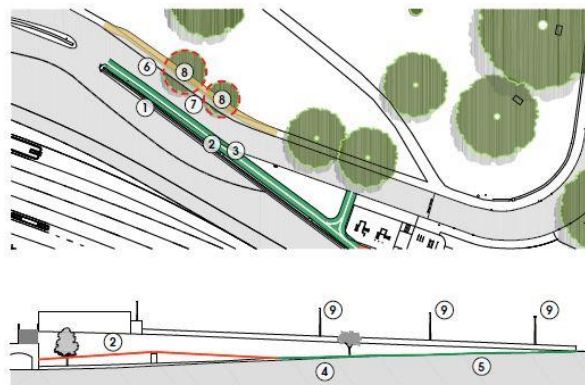


Figure 74: Option 2C
(Source: City of Sydney)

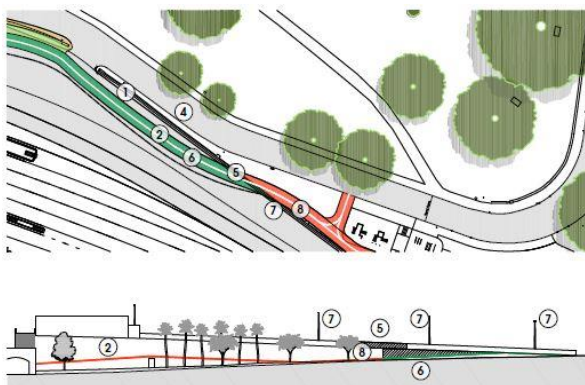
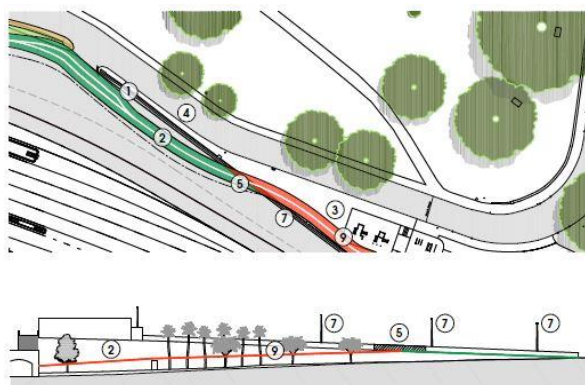


Figure 75: Option 2D
(Source: City of Sydney)



Option 2A (At Grade + Lose Parking)

Option 2A for the Proposal, encompassing proposed works at the southern end of Upper Fort Street, a new on-grade separated cycleway alongside the SHB southern approach retaining wall.

The main advantages of this option included:

- Minimum visual impact to SHB southern approach retaining wall
- Minimum physical impact to SHB southern approach retaining wall
- Lower cost (move kerb line)
- Retention of trees on west side of Upper Fort Street in Observatory Hill

The main disadvantages of this option included:

- Loss of street parking
- Road width reduced (4m)
- Reduced safety

Option 2B (At Grade + Move Roadway)

Option 2B for the Proposal, encompassing proposed works at the southern end of Upper Fort Street, involved a new on-grade separated cycleway alongside the SHB southern approach retaining wall and modification works to move the roadway towards Observatory Hill Park in order to retain existing street conditions and parking.

The main advantages of this option included:

- Minimum visual impact to SHB southern approach retaining wall
- Minimum physical impact to SHB southern approach retaining wall
- No impact to parking

The main disadvantages of this option included:

- Removal of existing trees in Observatory Hill Park
- High cost of works including road realignment

Option 2C (Elevated + Cut Into Bradfield Highway)

Option 2B for the Proposal, encompassing proposed works at the southern end of Upper Fort Street, involved a new elevated separated cycleway alongside the SHB southern approach retaining wall connecting to a new on-grade cycleway excavated into Bradfield Highway.

The main advantages of this option included:

- No impact to parking
- Increase in safety (gentle gradient)
- Reduced visual impact to SHB southern approach retaining wall from Observatory Hill Park
- Trees in Observatory Hill Park not impacted

The main disadvantages of this option included:

- High physical impact to SHB southern approaches
- High cost of works including excavation and demolition works

Option 2D (Elevated + No Cut Into Bradfield Highway)

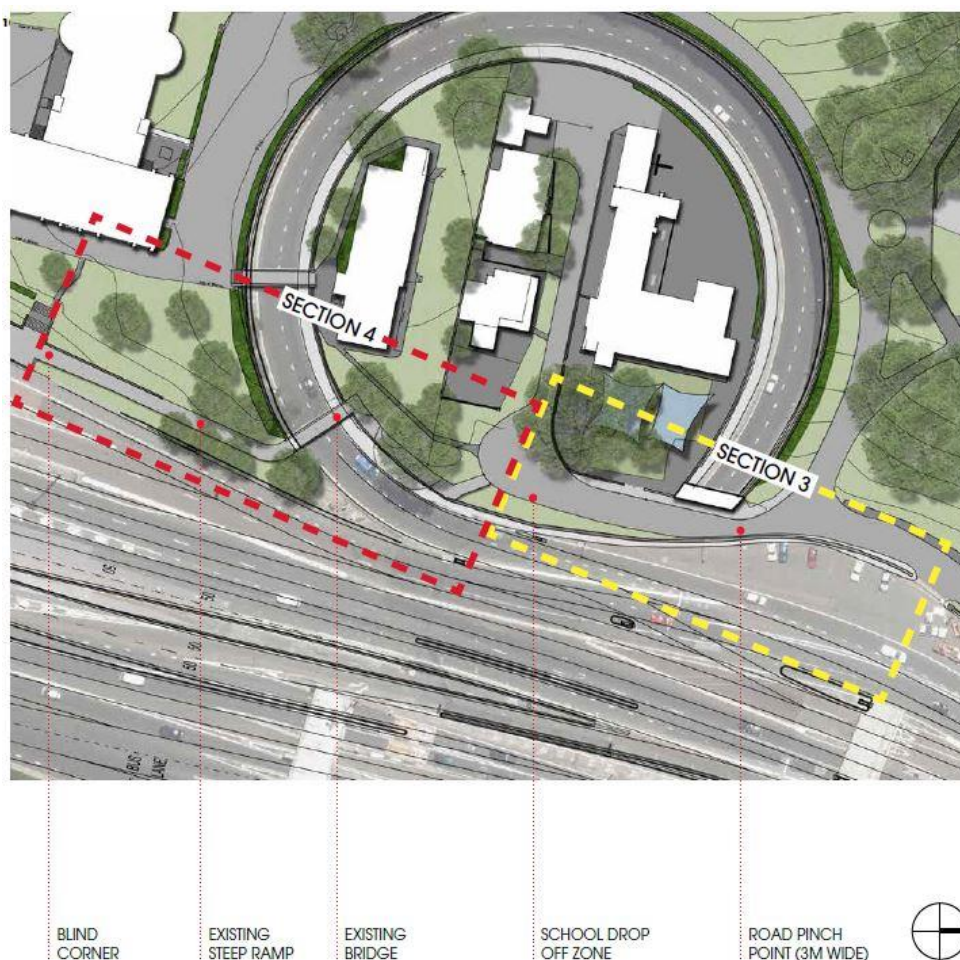
Option 2D for the Proposal, encompassing proposed works at the southern end of Upper Fort Street, involved a new 56m long elevated separated cycleway alongside the SHB southern approach retaining wall connecting to a new on-grade cycleway along the Bradfield Highway in the IRA.

The main advantages of this option included:

- No impact to parking
- Increase in safety (gentle gradient)
- Reduced visual impact to SHB southern approach retaining wall from Observatory Hill Park.
- Reduced physical impact to SHB southern approaches (no excavation to Bradfield Highway)
- Trees in Observatory Hill Park not impacted

The main disadvantages of this option included:

- Moderate physical impact to SHB southern approaches (removal of parapet section)
- Moderate visual impact to SHB southern approaches
- Moderate cost of works including elevated cycleway and demolition works



10.1.1.3 Section 3

Options for Section 3 encompass the southern end of Upper Fort Street opposite Fort Street Public School. Consideration of key factors includes the RMS access gate from Bradfield Highway to Upper Fort Street, existing road pinch point outside Fort Street Public School only 3m wide for two-way traffic, school drop off zone and the approach to the existing bridge over Cahill Expressway cutting.

Figure 76: Option 3A
(Source: City of Sydney)



Figure 77: Option 3B
(Source: City of Sydney)



Figure 78: Option 3C
(Source: City of Sydney)



Option 3A (Retain Road + Cantilever Footpath & Cycleway)

Option 3A for the Proposal, involves retention of Upper Fort Street as is, with a new 3m wide separated cycleway and cantilevered footpath and cycleway structure within the IRA zone.

The main advantages of this option included:

- Increased safety with new path and separated cycleway

The main disadvantages of this option included:

- Width of Upper Fort Street maintained (pinch point not resolved)
- Moderate cost (cantilevered structure and demolition works)

Option 3B (Widen Road + New Wall to Minimum)

Option 3B for the Proposal, involves modification works to widen Upper Fort Street to 6m and construction of a 3m wide separated cycleway within the realigned IRA zone.

The main advantages of this option included:

- Increased safety with new path and separated cycleway
- Widening of Upper Fort Street to remove pinch point

The main disadvantages of this option included:

- Higher cost (demolition works)

Option 3C (Widen Road + New Wall + New Green Space)

Option 3B for the Proposal, involves modification works to widen Upper Fort Street to 6m, construction of a 3m wide separated cycleway within the realigned IRA zone with provision of green space bordering cycleway.

The main advantages of this option included:

- Increased safety with new path and separated cycleway
- Widening of Upper Fort Street to remove pinch point
- Opportunities for new tree plantings

The main disadvantages of this option included:

- Higher cost (demolition works)

10.1.1.4 Section 4

Options for Section 4 encompass the Cahill Expressway cutting overpass. Consideration of key factors includes existing bridge crossing the Cahill Expressway cutting (likely below minimum 5.5m clearance requirement from freeway), approach to bridge on sharp angle with limited visibility, steep ramp on the southern side of the bridge, and blind corner where shared path meets path into S.H. Ervin Gallery. Consideration of proximity to heritage items including National Trust Centre, Fort Street Primary School Site, Messenger's Cottage and Bureau Meteorology also necessary.

Figure 79: Option 4A
(Source: City of Sydney)

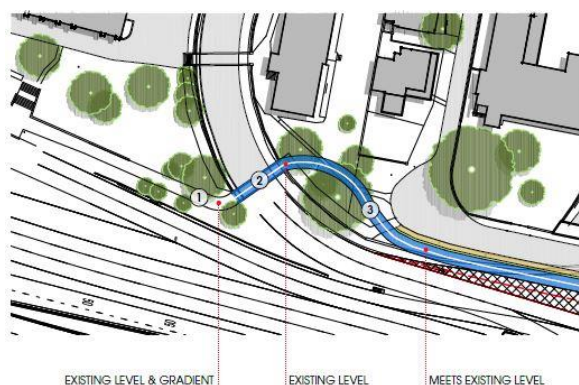


Figure 80: Option 4B
(Source: City of Sydney)

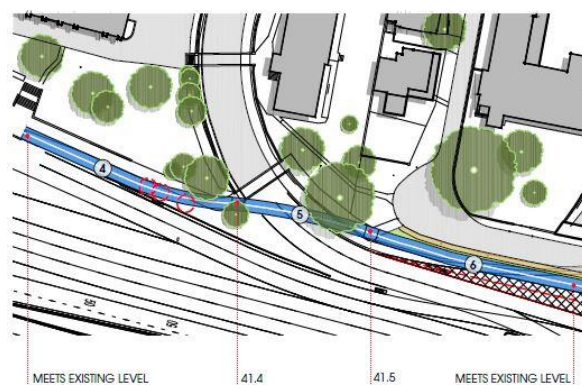


Figure 81: Option 4C
(Source: City of Sydney)

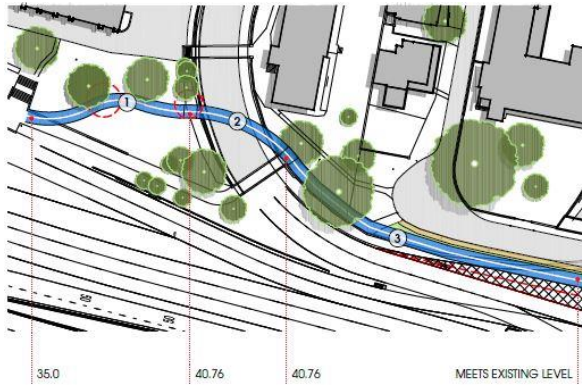


Figure 82: Option 4D
(Source: City of Sydney)

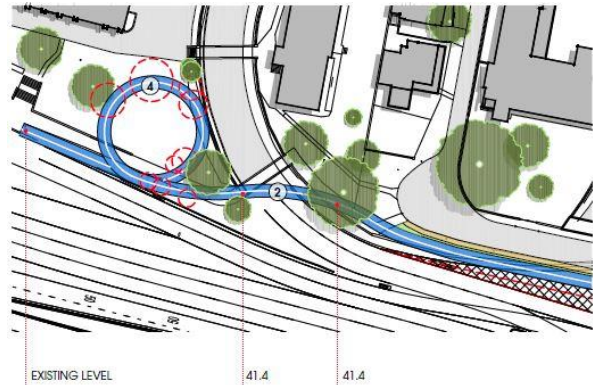


Figure 83: Option 4E
(Source: City of Sydney)



Figure 84: Option 4F
(Source: City of Sydney)



Figure 85: Option 4G
(Source: City of Sydney)



Figure 86: Option 4H
(Source: City of Sydney)



Figure 87: Option 4I
(Source: City of Sydney)

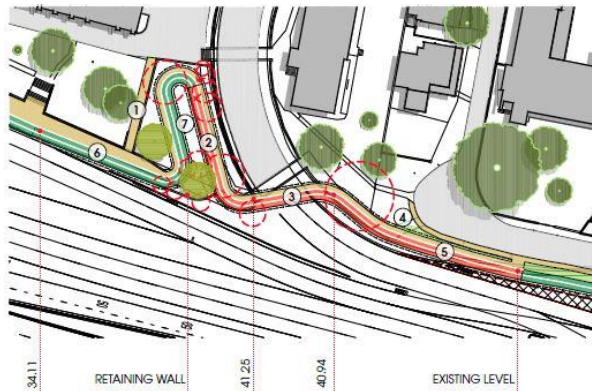


Figure 88: Option 4J
(Source: City of Sydney)



Figure 89: Option 4K
(Source: City of Sydney)



Option 4A (Retain Bridge + New Approach)

Option 4A for the Proposal, involves retention of the existing bridge and approach ramp on the southern side, with a new 50m long ramp on the northern side of the bridge to meet existing level of separated cycleway at Upper Fort Street opposite Fort Street Public School.

The main advantages of this option included:

- Low cost (minimal works required)
- Avoidance of introducing dominant new built feature within grounds of National Trust Centre/S.H. Ervin Gallery
- No impact to significant trees

The main disadvantages of this option included:

- Low safety (steep southern approach ramp to bridge not resolved)
- Incursion into Department of Education and Training land

Option 4B (New Bridge + Possible New Ramp Down)

Option 4B for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway, and a new 50m long ramp on the southern approach to meet existing level opposite National Trust Centre and a new 45m long ramp on the northern side of the bridge to meet existing level of separated cycleway at Upper Fort Street opposite Fort Street Public School.

The main advantages of this option included:

- Reduced impact to significant trees

The main disadvantages of this option included:

- High cost (new bridge)
- Removal of several trees opposite National Trust Centre site
- Low safety (steepness of southern approach ramp not resolved)
- Incursion into National Trust site

Option 4C (New Bridge + New Ramp Down to S.H. Ervin Gallery Frontage)

Option 4C for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway, a new 42m long ramp on the southern approach to meet existing level at entry stair to National Trust Centre and a new 45m long ramp on the northern side of the bridge to meet existing level of separated cycleway at Upper Fort Street opposite Fort Street Public School.

The main advantages of this option included:

- Reduced impact to significant trees

The main disadvantages of this option included:

- High cost (new bridge)
- Removal of several trees opposite National Trust Centre site
- Low safety (steepness of southern approach ramp not resolved)
- Incursion into National Trust site
- Asymmetrical form incongruent with geometric character of SHB

Option 4D (New Bridge + Circular Ramp Down)

Option 4C for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway and a new 102m long circular ramp to the south meeting the existing level opposite the National Trust Centre entry stair.

The main advantages of this option included:

- Increased safety (improved angles and gradient)
- Symmetrical form of circular ramp consistent with geometric and aesthetic character of SHB

The main disadvantages of this option included:

- High cost (new bridge)

- Removal of significant trees opposite National Trust Centre site
- Incursion and higher visual impact on setting of National Trust Centre

Option 4E (New Bridge + Spiral Down Ramp + Pedestrians on Inside)

Option 4E for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway, a new 95m long spiral ramp meeting the existing level opposite the National Trust Centre, and a new 50m long ramp meeting existing level at Upper Fort Street opposite Fort Street Public School.

The main advantages of this option included:

- Increased safety (improved angles and gradient)

The main disadvantages of this option included:

- High cost (new bridge)
- Removal of significant trees within and opposite National Trust Centre site, and opposite Fort Street Public School
- Incursion and higher visual impact on setting of National Trust Centre
- Asymmetrical form incongruent with geometric character of SHB

Option 4F (New Bridge + Spiral Down Ramp + Pedestrians on Outside + Minimal Overlap)

Option 4F for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway, a new 75m long spiral ramp and new on-grade cycleway to meet new level at the National Trust Centre main entry stair, and a new 50m long ramp meeting existing level at Upper Fort Street opposite Fort Street Public School.

The main advantages of this option included:

- Increased safety (improved angles and gradient)
- Greater setback distance from National Trust Centre principal heritage view corridor

The main disadvantages of this option included:

- High cost (new bridge)
- Removal of significant trees within and opposite National Trust Centre site, and opposite Fort Street Public School
- Incursion on National Trust Centre site
- Asymmetrical form incongruent with geometric character of SHB

Option 4G (New Bridge + S-Curve + No Overlap)

Option 4G for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway, a new 's-curve' 70m long ramp and new on-grade cycleway to meet new level at the National Trust Centre main entry stair, and a new 50m long ramp meeting existing level at Upper Fort Street opposite Fort Street Public School. The option also includes a possible pedestrian connection to the S.H. Ervin Gallery.

The main advantages of this option included:

- Increased safety (improved angles and gradient)
- Possible pedestrian connection to the S.H. Ervin Gallery enhances connectivity with local Millers Point & Dawes Point Village Precinct

The main disadvantages of this option included:

- High cost (new bridge)
- Removal of significant trees within and opposite National Trust Centre site, and opposite Fort Street Public School
- Incursion and higher visual impact on setting of National Trust Centre
- Asymmetrical form incongruent with geometric character of SHB

Option 4H (New Bridge + Spiral Down Ramp + Pedestrians on Outside + Minimal Overlap)

Option 4H for the Proposal, involves a new bridge over the Cahill Expressway cutting further west with levels achieving 5.5m clearance from the expressway, a new 92m long spiral ramp to meet new level at the National Trust Centre main entry stair, and a new 22m long ramp meeting existing level at Upper Fort Street opposite Fort Street Public School. The option also includes a possible pedestrian connection to the S.H. Ervin Gallery.

The main advantages of this option included:

- Increased safety (improved angles and gradient)
- Set back of new bridge over Cahill Expressway cutting further west potentially minimises visual prominence of suspended structure from surrounding streetscape

The main disadvantages of this option included:

- High cost (new bridge)
- Removal of significant trees within and opposite National Trust Centre site, and opposite Fort Street Public School
- Incursion and higher visual impact on setting of National Trust Centre
- Asymmetrical form incongruent with geometric character of SHB

Option 4I (New Bridge + Hairpin Turn + Landscape Solution)

Option 4I for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway, a new 36m long spiral ramp and hairpin turn to new on-grade cycleway to meet new level at the National Trust Centre main entry stair, and a new 50m long ramp meeting existing level at Upper Fort Street opposite Fort Street Public School. The option also includes a possible pedestrian connection to the S.H. Ervin Gallery.

The main advantages of this option included:

- Increased safety (improved angles and gradient)
- Possible pedestrian connection to the S.H. Ervin Gallery enhances connectivity with local Millers Point & Dawes Point Village Precinct

The main disadvantages of this option included:

- High cost (new bridge)
- Removal of significant trees within and opposite National Trust Centre site, and opposite Fort Street Public School
- Incursion into National Trust site

Option 4J (New Bridge + Spiral Down Ramp)

Option 4J for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway, a new 92m long spiral ramp to meet new level at National Trust Centre main entry stair, and a new 50m long ramp meeting existing level at Upper Fort Street opposite Fort Street Public School. The option also includes a possible pedestrian connection to the S.H. Ervin Gallery.

The main advantages of this option included:

- Increased safety (improved angles and gradient)
- Possible pedestrian connection to the S.H. Ervin Gallery enhances connectivity with local Millers Point & Dawes Point Village Precinct
- Increased set back from National Trust Centre principal heritage view corridor

The main disadvantages of this option included:

- High cost (new bridge)
- Removal of significant trees within and opposite National Trust Centre site, and opposite Fort Street Public School
- Incursion into National Trust site

Option 4K (New Bridge + Straight Down Ramp)

Option 4K for the Proposal, involves a new bridge over the Cahill Expressway cutting with levels achieving 5.5m clearance from the expressway, a new 52m long ramp to meet new level at National Trust Centre main entry stair, and a new 50m long ramp meeting existing level at Upper Fort Street opposite Fort Street Public School. The option also includes a possible pedestrian connection to the S.H. Ervin Gallery. Notably, this option involves minimal incursion onto National Trust site.

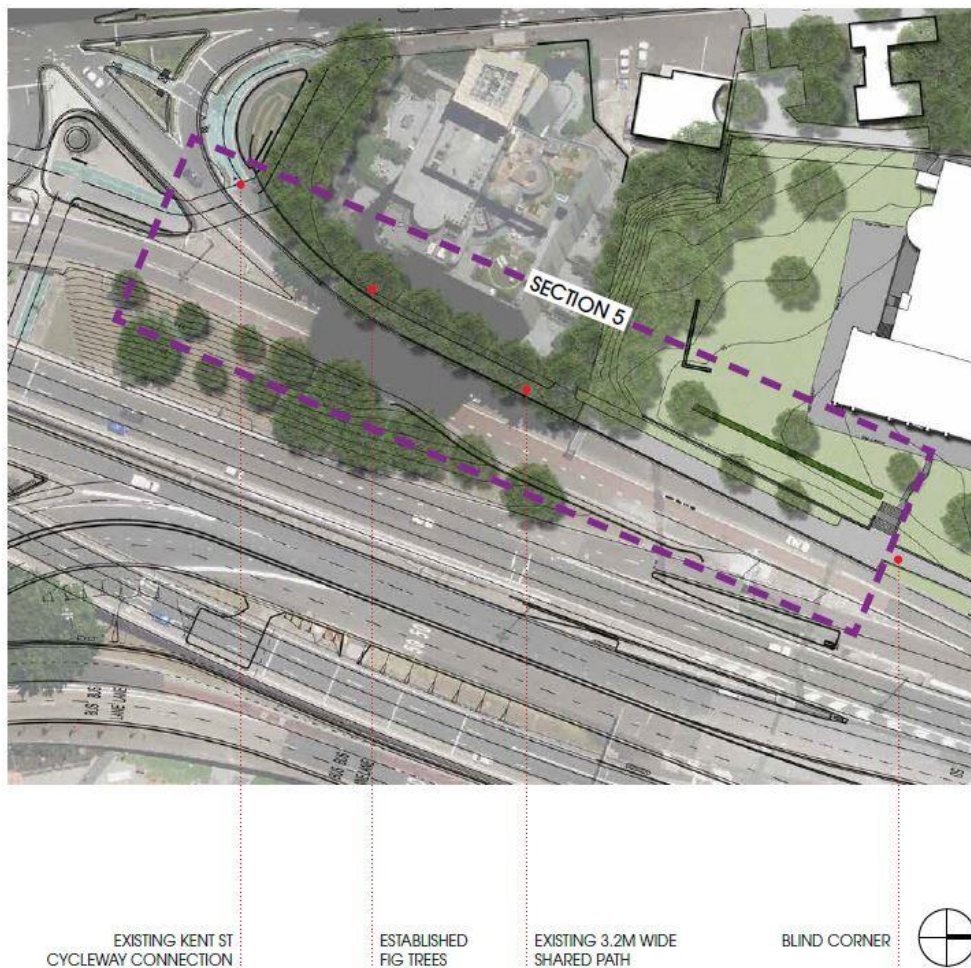
The main advantages of this option included:

- Minimal incursion onto National Trust site
- Maintains National Trust Centre principal heritage view corridor
- Possible pedestrian connection to the S.H. Ervin Gallery enhances connectivity with local Millers Point & Dawes Point Village Precinct
- Lower cost

The main disadvantages of this option included:

- Removal of significant trees opposite National Trust Centre site, and opposite Fort Street Public School

- Reduced safety (gradient for cyclists/pedestrians not improved)
- Down ramp from new bridge over Cahill Expressway not DDA compliant



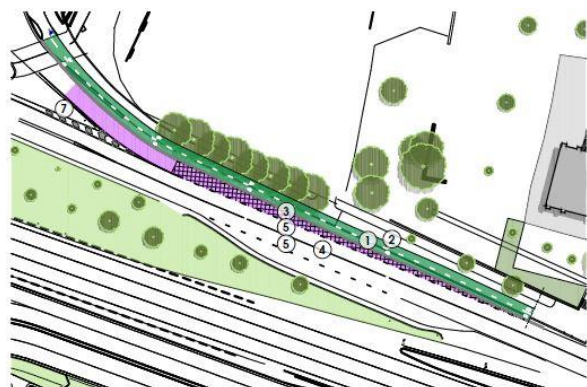
10.1.1.5 Section 5

Options for Section 5 encompass the shared-use path from National Trust Centre/S.H. Ervin Gallery to Kent Street. Key factors include blind corner where shared path meets path into S.H. Ervin Gallery, existing shared path approximately 3.2m wide, established fig trees in landscaped strip adjacent to residential building and connection to Kent Street cycleway at southern end. As these considerations do not relate to any heritage issues, they are not considered any further in this options assessment.

Figure 90: Option 5A
(Source: City of Sydney)



Figure 91: Option 5B
(Source: City of Sydney)





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