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Dear Mr Sellwood

Parramatta Light Rail – Stage 1 – Westmead to Carlingford (SSI 8285) – Notice of Public Exhibition

Thank you for the invitation to the Heritage Council of NSW (Heritage Council) to comment on and provide recommended conditions of approval for the Parramatta Light Rail project. I am responding as the delegate of the Heritage Council.

It is understood that Stage 1 of the project comprises a Light Rail network extending approximately 12 kilometres in length with 16 stops. The route will connect Westmead to Carlingford via Parramatta CBD and Camellia.

The project was presented to the Heritage Council Approvals Committee on 4 October 2017. The comments of the members are included in this submission.

A review of the documentation associated with the Environmental Impact Statement (EIS) has been undertaken, in particular the:

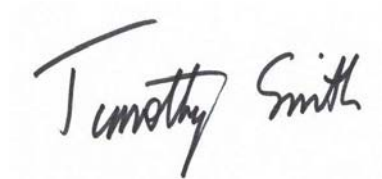
- 'Technical Working Paper: Built Heritage Impact Assessment' prepared by Artefact, 16 August 2017
- 'Technical Working Paper: Non-Aboriginal Archaeological Assessment' prepared by Artefact, 18 August 2017
- 'Technical working paper: Landscape and Visual Impact Assessment' prepared by IRIS Visual Planning and Design, August 2017

Based upon this review, general comments and recommended conditions are provided at **Annexure A**. More detailed discussion of individual items and the impacts proposed have been collated according to the five Parramatta Light Rail (PLR) precincts. These are attached at **Annexure B** to this letter.

Finally, the Heritage Council has identified and expressed strong concerns of the project's significant impacts to state and local heritage items. These include, but not limited to, impacts to archaeology, significant visual and structural impacts to Lennox Bridge, significant visual impacts to Cumberland District Hospital and significant impacts to locally significant items.

Should you have any queries, please contact David Nix, Heritage Assets Officer, at the Heritage Division on (02) 9895 6523 or at david.nix@environment.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink that reads "Timothy Smith". The signature is written in a cursive style, with the first name "Timothy" and the last name "Smith" clearly legible.

Tim Smith OAM

Director Heritage Operations

Heritage Division Office of Environment and Heritage

As Delegate of the Heritage Council of NSW

Annexure A – General Comments and Recommended Conditions

General comments:

It is noted that the project area is divided into five precincts. There are approximately 101 listed heritage items located within a 25m buffer zone of the five proposed project precincts. This includes 83 locally listed items and 18 State listed items. However, the EIS has not investigated if there are any potential heritage items within the development area. An assessment should be undertaken (including the two storey industrial building proposed to be demolished as part of the proposed maintenance/ stabling facility) to understand if any potential heritage items will be impacted by the works.

Plans are Deficient

The supplied plans are not sufficiently detailed to provide an understanding of the alignment of the light rail line or impacts to statutory listed places along the route. Further, detailed designs for the light rail infrastructure including stops and interchanges have not been finalised. This has made it difficult to adequately assess the visual impacts to the views, setting and character of statutory listed places.

Need for Design Guidelines

Significant design development is required and should involve consultation with specialist urban designers and heritage architects. It is recommended the Heritage Council provides input into the design of the stops within the proximity of SHR listed items to ensure impacts to setting and character are minimised.

Cumberland District Hospital Site – Separate Consideration

The proposed works within the Cumberland District Hospital Site for the PLR project will be considered as part of a separate IDA application for the Public Domain at Parramatta North. That IDA is yet to be approved. The PLR proposal has assumed that this IDA will be approved as some of the proposed works are dependent on it being approved. It would be more appropriate for the PLR project to provide an appropriate assessment of the impact of the project route on the affected items.

Post Approval Consideration

It is noted that if the project were approved, there would be a need to manage infrastructure generated from this project within the SHR curtilages of several items. This would need to be addressed post approval.

Uncertainty of Risk Assessment and Impact Methodology

The EIS methodology for assessing impact from this proposal has been based on an approach explained in the ICOMOS' publication Guidance on Heritage Impact Assessment for Cultural World Heritage Properties, January 2011. The approach describes the impacts in terms of primary and secondary consequences and as direct and indirect impacts. In this approach, indirect impacts are explained as secondary consequences from construction or development whereas direct impacts are explained as primary consequences of the proposed development. The project then seeks to scale the severity of that change by using phrases such as neutral, negligible; minor, moderate and major changes.

This type of assessment methodology makes it difficult to understand the level of impact the project will have. This is seen in the arguments for Lennox Bridge and the Ancient Aboriginal and Early Colonial Landscape/Robin Thomas Reserve (both SHR listed). For example, the matrix of impacts for Lennox Bridge variously describes the development impact as follows:

Direct impact – Moderate

Visual impact – Major

Minor impact – Potential indirect

This assessment approach for the PLR has been used by the same consultants elsewhere, for example the Sydney Metro but it does not lead to clarity about specific project impacts.

State Significant Archaeological Impact

The proposal will impact five items on the SHR that retain State significant archaeological values in conjunction with items having landscape and built heritage values. Historical archaeological sites not listed on the SHR, but which are likely to retain state significant or locally significant archaeology will also be impacted. The alignment will impact some 43 historical archaeological management units along the alignment.

The affected sites across these AMUs range from rare and fragile to substantially intact and interpretable evidence of early convict era occupation dating from the 1790s to the 1840s. They encompass significant evidence like the Parramatta Gaol, the military barracks, commissariat and convict lumberyard, and the Female Factory. The potential archaeology also includes evidence of ongoing town development and expansion of the town plans and population of the area from the 1850s. This includes the development of surrounding suburbs to Parramatta such as Westmead and Rosehill, away from the Railway line and main roads, with associated industry, and residential occupation.

Key Research into Likely Impacted Archaeological Sites Missing

The SSI EIS lacks appropriate site-specific research and assessment to understand the impacts and level of significance for historical archaeological resources along the identified PLR route. The Assessment has relied on the values assessed in the 2000 archaeological management plan prepared for Parramatta known as PHALMS (Parramatta Historical Archaeological Landscape Management Study). The absence of specific assessment and research has created potential for underassessment of both significance and the impact of this proposal. It is uncertain whether detailed design could mitigate or avoid harm to these sites. To address this, the project must include a detailed assessment stage as part of the Research Design prepared to support the project. Conditions are recommended to mitigate the impacts to items of State Significance and several items identified in the EIS as retaining local significance, but which are likely to have a higher level of significance (State).

Recommended Conditions of Approval:

If approved, the following conditions are recommended.

Heritage Consultants to guide the work:

- A heritage architect and heritage landscape architect must be integrally involved in the detailed design development for all the proposed project's components.
- A suitably qualified historical archaeological consultant/s shall be nominated for the works. The consultant shall have appropriate qualifications and experience commensurate with the scope of the Major Project works and the investigation of State significant archaeological sites. The name and experience of these consultants shall be submitted to the Secretary of DPE for approval prior to commencement of works. This must be supported by a submission which addresses the Heritage Council of NSW Excavation Director criteria.

Historical Archaeological Testing to Inform Design and avoid harm to state significant archaeological sites:

a) A phase of archaeological testing shall be undertaken for this project in all HAMUs where state significant archaeological resources have been identified as well as the following 'local' items:

- Westmead Precinct (c1859) former Cemetery
- Queen's Wharf Reserve

- Prince Alfred Park
- The Town Drains (including the Grose Street Town Drain and the Town Drain where these alignments are unclear)

It is noted that archaeological testing has already been undertaken at the following sites in part and archaeological resources are confirmed. Those results should directly guide the proponent to ensure works avoid harm to these sites in accordance with the conditions below. Where additional testing is appropriate to guide detailed design, this should also be addressed as required above:

- Robin Thomas Reserve (Ancient Aboriginal and Early Colonial Landscape)
- Arthur Philip High School (Barrack Lane/Macquarie Street)
- Cumberland District Hospital Group
- St Patricks' Roman Catholic Cemetery

b) The testing shall be guided by an appropriate research design, excavation methodology and be directed by a suitably qualified and experienced excavation director who fulfils the Heritage Council's Excavation Director Criteria for the excavation of state significant archaeological sites. These shall be submitted to the Department of Planning and Environment for approval following review and written comment from the Heritage Council of NSW or its delegate, that the nominated personnel are appropriate, prior to commencing testing.

c) The testing results shall guide the detailed design for each of the investigated areas that have been found to retain known, extant and potential state significant archaeology. Harm to isolated burials and cemeteries (of local and state significance) along the alignment must be avoided. Any management should be consistent with existing Heritage Council Guidelines 'Skeletal Remains 1998'.

d) Efforts to avoid harm to state significant archaeological resources must be clearly demonstrated through test excavation results in the first instance and this reconsidered against the detail design options. These results must be provided to the Department of Planning and Environment for formal approval following review and written comment from the Heritage Council of NSW or its delegate.

e) In the event detailed design cannot avoid harm to archaeological sites along the alignment in whole or in part, detailed and full archaeological salvage must be undertaken for each site impacted by this activity. This must be guided by an appropriate research design, excavation methodology and be directed by a suitably qualified and experienced excavation director who fulfils the Heritage Council's Excavation Director Criteria for the excavation of state significant archaeological sites, which should be confirmed by the assessment of the Heritage Council or its Delegate. These documents shall be based on the results of any test excavation previously undertaken and must include site specific research adequate to support excavation. The documents shall be submitted for approval of the Department of Planning and Environment following review and written comment from the Heritage Council of NSW or its delegate.

Historical Archaeological Mitigation:

a) **Final Archaeological report:** A final excavation report shall be prepared within 12 months of the completion of archaeological works on site. It should also include details of any artefacts recovered, where they are located and details of their ongoing conservation and protection in perpetuity by the land owner. The Final Excavation Report shall include detailed results of each of the excavation sites, full copies of the site records and artefact analyses and appropriate site records in supporting appendices. Copies shall be provided to the Department of Planning and Environment, the Heritage Council and to the Parramatta City Council Local Studies Unit.

b) **An Interpretation Plan** shall be prepared and provided to the Heritage Council of NSW for review and comments incorporated within 18 months of the completion of archaeological excavations on site. This strategy shall include details of the archaeological investigation of the site and how the results will be incorporated into the completed development.

c) **Dissemination of archaeological results:** As mitigation for direct and irreversible impact to state significant archaeological sites including SHR listed archaeological resources through this project, the PLR shall be required to disseminate the results of the archaeological excavations along the Parramatta Light Rail alignment. This should be prepared in a precinct by precinct summary based on the Final archaeological excavation report. This document shall be published on the TfNSW website for public download following review and approval of the Department of Planning and Environment based on written support of the Heritage Council of NSW or its delegate. The Heritage Council would like to be further involved in the design and is willing to meet with the Proponent and provide further guidance to reduce heritage impacts.

Cumberland District Hospital Group:

Landscaping

- An analysis of existing landscaping within the Cumberland District Hospital (West campus) must be prepared by a suitably qualified heritage landscape specialist to identify significant planting, and to provide measures to avoid or mitigate any impacts during construction.

Design

- Design development for the proposed bridge connecting the Cumberland District Hospital Western and Eastern campuses must give consideration to the surrounding setting and landscape character of the area. Views to the SHR Cumberland District Hospital (East campus) must not be impacted. Designs must be prepared in consultation with the Heritage Council or its delegate.

Alignment

- The alignment of the Light Rail line through the Cumberland District Hospital (East campus) site must be modified to avoid the removal of trees identified as being of high significance to minimise impacts to the significant landscape setting.

Kerbing

- Sandstone kerbing proposed to be removed as part of the Light Rail alignment through Cumberland District Hospital (East campus) must either be retained or salvaged and reused within the site.

Vibration

- Significant buildings within the Cumberland District Hospital site (East campus) in the vicinity of the proposed Light Rail line must be monitored for impacts of vibration during construction to ensure they are not structurally damaged. Further, protection systems must be put in place to ensure potential impact damage during construction is avoided.

Acoustic Treatment

- Any acoustic treatments proposed to be implemented on significant buildings within the Cumberland District Hospital site (East campus) must be done in consultation with an experienced heritage specialist and the Heritage Council or its delegate.

Design in Context

- Design development of the Light Rail stop proposed within the Cumberland District Hospital site (East campus) must involve consultation with the Heritage Division to ensure the significant heritage values of the place are not impacted.

Public Domain

- The proponent must explore a grass track treatment within the designated open public space areas of the Cumberland District Hospital site (East campus) to ensure the significant parklike setting of the site is maintained. Further, consideration must be given to utilising a wire free operation of the Light Rail line within the site to mitigate against adverse visual impacts.

Archaeology

- The alignment of the PLR and associated impacts through the intersection of Greenup Drive and Factory Street should avoid known archaeologically significant remains identified through historical archaeological testing of the PNUT site. Significant archaeological remains shall be avoided in the placement of the alignment through the Cumberland District Hospital Group site. The project must demonstrate how avoidance has been achieved.

Old Government and Domain:

- Design development for the proposed works adjacent to the World Heritage listed Old Government House and Domain site's Buffer Zone (in the "sensitive" area) must give consideration to visual impacts to the site.

St Patrick's Roman Catholic Cemetery:

- The proponent must explore wire free operations of the Light Rail line adjacent to the St Patrick's Roman Catholic Cemetery site to minimise visual impacts. Further, the design must be modified to ensure there is no encroachment within the SHR site.
- The detailed design must be guided by the archaeological testing as required under the above archaeological management conditions. The project must demonstrate how avoidance has been achieved to state significant archaeological remains associated with this cemetery. This includes historic burials now outside the boundary of the site.

The Royal Oaks Hotel and potential archaeological site:

- The demolition of the Royal Oaks Hotel building along Church Street is not supported. The proponent must explore alternative design solutions to retain the building. This building is rare in the context of North Parramatta and must be excluded from the development area.

Prince Alfred Square and Potential Archaeological Site:

- Design development of the Light Rail stop proposed to be located adjacent to the Prince Alfred Square must involve consultation with the Heritage Division to ensure the significant heritage values of the place are not impacted.
- The proponent must explore alternative design solutions to retain the north-eastern corner of Prince Alfred Square and ensure the existing configuration of the square is not adversely modified.
- The detailed design must be guided by the archaeological testing as required under the above archaeological management conditions. The project must demonstrate how avoidance has been achieved.

Lennox Bridge:

- The Heritage Council raises strong concerns to the alignment across this nationally significant structure on visual, structural and landscape grounds. The proponent must explore alternative design options to avoid the Light Rail alignment crossing Lennox Bridge.
- Should the route across the Lennox Bridge be approved, an independent engineering specialist with experience in heritage bridges must prepare a thorough structural investigation/ report into the SHR listed Lennox Bridge. This must outline what impacts construction of the Light Rail line will have on the bridge; what strengthening measures are proposed, and their likely impact.
- Should the route across the Lennox Bridge be approved, an assessment of the introduction of rail and rail infrastructure on the heritage bridge must be fully assessed as it has the potential to undermine the State significant heritage values of this unique asset.
- Should the route across the Lennox Bridge be approved, the alignment should be modified to run across the 1935 section of the bridge instead of the 1839 section.
- Should the route across the Lennox Bridge be approved, the proponent must utilise wire free operations of the Light Rail line on the Lennox Bridge to minimise visual impacts. Similarly, new lighting structures on Lennox Bridge are not supported as they will have an adverse visual impact.
- Should the route across the Lennox Bridge be approved, detailed drawings showing any structural changes to the bridge, including stabilisation and conservation works, must be provided to the Heritage Council for comment prior to finalisation of the project.
- Should the route across the Lennox Bridge be approved, all works to Lennox Bridge must be undertaken by skilled tradespeople with experience working on heritage sites, under the supervision of a heritage specialist.

Historical Archaeological Site: Barrack Lane/Parramatta Convict Lumberyard:

- Physical remains located in Arthur Philip High School (on Macquarie Street), Parramatta, must be avoided through the placement of the PLR, compound, utility substation and new services. An Alternative location must be selected along Macquarie Street to avoid retained state significant archaeological resources protected under SSD 7372.

Ancient Aboriginal and Early Colonial Landscape/Robin Thomas Reserve:

- The proponent must explore alternative design options to retain at least two of the three mature fig trees on the western boundary of Robin Thomas Reserve proposed to be removed. Further, the use of a grass track treatment and wire free operations should be utilised to ensure the landscape setting of the site is maintained.
- The detailed design must be guided by the archaeological testing as required under the above archaeological management conditions. The project must demonstrate how maximum avoidance has been achieved to state significant archaeological remains associated with rare state significant Aboriginal and historical archaeological site.

Sewage Pumping Station 67:

- Design development for the proposed bridge across James Ruse Drive must include consultation with the Heritage Council or its delegate to ensure significant views to the Sewage Pumping Station 67 are not impacted.

- A qualified heritage specialist must undertake an investigation of the building proposed to be demolished adjacent to the proposed maintenance/stabling facility at Rose Hill to assess its potential heritage significance. Should the property be identified as a potential heritage item, the entry into the maintenance/stabling facility must be modified to avoid demolition.

Camellia Underbridge Abutments:

- The demolition of the Camellia (Parramatta River) Underbridge Abutments is not supported. The proponent must modify the design to retain these significant elements. Protection systems must be put in place to ensure damage does not occur during construction.

Rydalmere Hospital Precinct:

- The proponent must explore alternative design solutions to the proposed construction of the two compound sites within the curtilage of Rydalmere Hospital Precinct to ensure these landscapes, identified as being of high - moderate significance are not adversely impacted.

Dundas Railway Station:

- Design development for the proposed Light Rail stop at the Dundas Railway Station must include consultation with the Heritage Council or its delegates to ensure the significant elements of the station are not adversely impacted. Further, protection systems must be put in place to mitigate damage during construction.

Carlingford Railway Station:

- Design development for the proposed Light Rail stop at the Carlingford Railway Station must include consultation with the Heritage Council or its delegates to ensure the significant elements of the Carlingford Stock Feeds are not adversely impacted. Further, protection systems must be put in place to mitigate damage during construction.

Annexure B – Detailed Comments arranged by PLR Precincts

Impacts vary within each of the five works precincts, however they include adverse impacts to State and locally significant historical archaeological and Aboriginal sites located along the route, demolition of State significant buildings and landscaping, and the demolition of a number of locally listed heritage items. A key element of the project is the alignment of the rail line across the Lennox Bridge, which is listed on the State Heritage Register (SHR 00750). The comments below incorporate comments on built heritage, landscape and archaeological values including historical archaeological impacts and management arranged by precinct.

Precinct 1: Westmead Precinct

This precinct does not contain any sites listed on the State Heritage Register or any sites likely to contain State significant archaeological resources. There are several resources identified as being of local archaeological significance, including a former Cemetery dating from c1859.

Historical Archaeological Site: C1859 Church of England Cemetery (HAMU 2)

The assessment lacks detailed and site-specific research to address key questions about this cemetery. The proposed mitigation measures for harm focus on excavation. The management for human skeletal remains as outlined in supporting Heritage Council of NSW Guidelines, identifies that exhumation should be avoided (should there prove to be burials in this location). Specific requirements are recommended in conditions of consent for detailed assessment to more clearly understand the potential resource of this cemetery. If archaeology is identified then test excavation should occur to inform detailed design to avoid harm.

Precinct 2: Parramatta North Precinct

Cumberland District Hospital (West campus) (SHR 00820)

The Cumberland District Hospital site is of exceptional heritage significance. It provides abundant physical evidence of the formative years of the Colony of New South Wales, and the initial settlement of Parramatta.

The Parramatta Light Rail alignment is proposed to run through the Cumberland District Hospital site. To facilitate this route, several items within the SHR site are proposed to be demolished including significant landscaping and one building identified as being of moderate significance. It also includes the realignment of several internal roads and the construction of a new bridge crossing connecting the eastern and western areas of the site. There is concern the project, including a light rail stop and associated infrastructure, will adversely impact in the parklike setting of the site. In addition, further impacts to significant fabric may occur as a result of vibration due to intensive construction activities occurring in close proximity to significant buildings within the site.

It is noted that the plans for the light rail stop and new bridge crossing provided in the EIS are indicative only and that further detail is yet to be developed. Mitigation of heritage impacts should be a key consideration of the detailed design phase of the project and include options for a grass track treatment within the designated open public space areas and wire free rail operations to ensure the parklike setting of the site is maintained.

The historical archaeological evidence within this site includes evidence of Marsden's Mills, potentially Mrs Betts House and the Government Mill and the female factory, all assessed as state significant. Archaeological testing results have recently become available confirming impacts are likely from the PLR in the alignment of the road at the intersection of Factory Street and Greenup Drive. These confirmed remains should be avoided through detail design of the road alignment and in careful placement of services to facilitate the light rail.

Old Government House and Domain site (NHL/WHL)

The proposed works are adjacent to the World Heritage listed Old Government House and Domain site's Buffer Zone in the 'sensitive' area. The proposed alignment of the route avoids any physical impact on this site. However, as the project area is located approximately 100 metres from the Old Government House and Domain site at its closest point and the detailed design is yet to be developed, any visual impacts to the site must be considered.

St Patrick's Roman Catholic Cemetery (SHR 01880)

The proposed light rail alignment runs down Church Street adjacent to the SHR listed St Patrick's Cemetery. Whilst the proposed works will not physically impact the site, there is potential for visual impacts including from overhead rail wires and the removal of street trees (noting that all trees within the curtilage are being retained). The proponent must investigate the use of wire free rail operations within this area to mitigate any visual impacts, including seeking advice from a heritage landscape architect. The cemetery has some of the earliest burials in Parramatta, the alignment has the potential to impact unmarked burials for the alignment of the PLR and associated infrastructure. The design shall be informed by test excavation and detailed design should limit harm to these significant resources of state significance.

Royal Oaks Hotel and stables (and potential archaeological site) (LEP item I691)

The two-storey rendered brick Royal Oaks Hotel was constructed in 1831 and is considered a landmark and rare in the context of North Parramatta. The demolition of this building is strongly opposed by the Heritage Council as it will have a major impact on the character of the streetscape. The Light Rail alignment must be modified to avoid demolition of this significant building. The management of historical archaeological resources should also be considered in this impact.

Precinct 3: Parramatta CBD Precinct

This precinct contains three items listed on the State Heritage Register which retain state significant archaeological as well as four other sites which have been identified as having potential for State significant archaeology but not yet listed on the State Heritage Register. Other sites of local heritage significance will also be impacted by this proposal.

Prince Alfred Square and Potential Archaeological Site (SHR 01997)

Prince Alfred Square is of exceptional significance as an intact representative example of a square or public park layout from the Victorian era, embellished in the Edwardian, inter-war and post-war eras. The proposed reconfiguration of the north-eastern corner of the site, including the demolition of the Victoria Street entrance, will significantly alter the streetscape. Further, the construction of the light rail stop has the potential to have adverse visual impacts, including to the War Memorial situated within the site. The design of the light rail stop and line must be modified to ensure the configuration of the site (square) is not altered, that significant views to and from the site are not impacted (through the use of wire free rail operations), and that significant elements of the site are retained.

The Site has exceptional **archaeological research potential** related to Parramatta's second gaol (1804-1841), the first female factory (1804-1821) and as a village green since 1837. Physical testing has occurred in the past. The Assessment has argued these remains have low archaeological potential. It has failed to consider the results of assessment undertaken

previously by consultants' Casey and Lowe, consequently this may not be an accurate statement of likely impact. The proposed approach suggests only unexpected finds will be progressed with insitu investigation if remains are found. The Heritage Division recommends conditions to require test excavation and avoidance of known deposits in the detailed design.

Lennox Bridge (SHR 00750)

Lennox Bridge, constructed between 1836-1839, is one of the first bridges built in NSW. Whilst the bridge has undergone a number of modifications, it remains one of the most significant heritage items in NSW, and is rare nationally.

Heritage Council members expressed strong concerns regarding the proposed alignment of the light rail line across the original sandstone side of the bridge, which includes potential strengthening of the bridge. It is unclear what 'potential strengthening' refers to as no structural information from an engineering specialist has been provided as part of the EIS. Strengthening works have the potential to have a major impact on the fabric of the bridge.

It is recommended that a thorough structural investigation be undertaken by an engineering specialist with experience in heritage bridges to understand what the potential impacts of this project are on the bridge. It should include an analysis of operational impacts such as loads, frequency of light rail vehicles, what strengthening works are required, and any additional impacts generated by the previously introduced portal cuttings through the structure.

Further, proposed new lighting structures on the bridge are strongly opposed. Wire free operations should be considered for the bridge and bridge approaches to retain its current unencumbered presentation.

Ancient Aboriginal and Early Colonial Landscape/Robin Thomas Reserve (SHR 01863)

This SHR listed site is significant because of its Aboriginal archaeological potential and cultural values as well as early colonial historical archaeological resources. It is significant because it retains potential for one of the few remaining resources with intact evidence of the Parramatta Sand Body remaining in Parramatta with pre-colonial evidence by Aboriginal people in Parramatta. The site also contains confirmed state significant evidence of the Military Barracks and Soldiers Garden dating from 1790. The light rail line is proposed to cut across the north-western part of the SHR-listed Robin Thomas Reserve and include the removal of three mature Fig trees on the western boundary. The alignment of the PLR track would have a direct, irreversible impact on this site and its significance. Excavation and salvage would cause further loss of the resource, not mitigate it. The alignment will also impact on the setting of the place. It is therefore recommended the use of a grass track and wire free rail operations to reduce the visual impact within this area. However, the current project impacts through this site will be major and irreversible impacts which may materially affect the significance of this item on the State Heritage Register.

Historical Archaeological Sites: Grose Street Town Drain, Church Street and the Town Drain Macquarie Street

The town drains are identified archaeological resources with direct links to the development of the Town of Parramatta dating from the c.1820s and are found at varying locations throughout the old Town plan. One of these items is identified by the PLR as being local and the other of state significance. There is an inconsistency in this approach based on the perceived level of significance. The preferred approach for these two related items is to identify the alignments and avoid harm where possible, particularly through careful placement of stormwater and other services requiring relocation in these areas for this project. This could be achieved through testing informing detailed design, where the alignments are unclear.

Historical Archaeological Site: (Retained insitu state significant remains) Barrack Lane/ Parramatta Convict Lumberyard

The historical archaeological potential of this area includes substantially intact and interpretable remains of the 1820s Convict Barracks and Convict Lumberyard. This was recently confirmed through archaeological investigations of SSD 7372 for the O'Connell Street Public School in Parramatta. These results generated retention *in situ*, in a conservation zone established within the site along the Macquarie Street and Barrack Lane frontages. The current Assessment for the PLR does not reflect the fact these resources are extant and of state significance (it assesses low potential). The proposed impacts are likely to remove such evidence because they have not been considered as an impact. This section of the PLR should be conditioned to require redesign to avoid these significant archaeological resources which have been protected through a separate DPE approval (SSD 7372), which should be a priority area of avoidance.

Historical Archaeological Site: Queen's Wharf Reserve (HAMU 21)

The Physical evidence anticipated for these areas includes historical archaeological evidence linked to the Soldier's District and including the c1790s Wharf, and 1820s Commissariat and former barracks. This has been previously investigated through archaeological assessment and geotechnical testing, however these results have not been considered by the PLR assessment. Impacts include the rail corridors, public domain works and utilities adjustments. It is unclear how the proposed mitigation of detailed design could effectively avoid and resolve these impacts. Conditions for testing to inform and guide the detailed design are recommended to reduce these impacts as much as possible.

Precinct 4: Rose Hill and Camellia Precinct

Historical Archaeological Site: Eliner McGee and Child grave (HAMU 31)

The burials date to 1793 and were located along the Parramatta River, near the place of death. The grave is linked to an associated hut. They have been assessed as retaining State significance. Impacts may include the placement of a compound site. The project identifies it would attempt to avoid impact and if it cannot, excavation including exhumation would be proposed. This may be partially compounded by the exact location being unclear. The proposed approach is not supported by the Heritage Division for such a rare and early site. The proposed management should be guided by archaeological testing as conditioned below.

Precinct 5: Carlingford Precinct

Camellia Underbridge Abutments/ Clyde Carlingford Bridge

The Camellia Underbridge Abutments date back to 1885 and are a remnant of an excellent example of a classic 19th century bridge in the English railway design tradition remaining unaltered in their appearance since their construction. The Heritage Council strongly opposes their demolition. Modification to the design must be undertaken to ensure these significant elements are not destroyed.

Dundas Railway Station (SHR 01133)

The existing platform and station building are proposed to be retained and the new light rail stop is proposed to be located to the north of the existing building. The retention of the platform and station building is seen as positive. However, design development must be undertaken in consultation with the Heritage Council to ensure significant heritage values including significant views to and from the site are retained and enhanced.