



# Planning Approval Consistency Assessment Form

SM ES-FT-414

Sydney Metro Integrated Management System (IMS)

<b>Assessment Name:</b>	CSR on Heritage Bridges
<b>Prepared by:</b>	Daniel Keegan (JHLOR)
<b>Prepared for:</b>	Sydney Metro
<b>Assessment number:</b>	SWM09 SMCSWSSJ-JHL-WEC-EM-REC-000021
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The Planning Approval Consistency Assessment Form should be completed in accordance with the Sydney Metro Planning Approval Consistency Assessment Procedure (SM ES-PW-314) and Sydney Metro Environmental Planning and Approval Manual (SM ES-ST-216)

## 1.0 Existing Approved Project

**Planning approval reference details (Application/Document No. (including modifications)):**

Sydney Metro City & Southwest - Sydenham to Bankstown (SSI 8256)

**Date of determination:**

Planning Approval Date – 12/12/2018

**Type of planning approval:**

Critical State Significant Infrastructure

**Description of existing approved project you are assessing for consistency:**

Sydney Metro City and Southwest – Sydenham to Bankstown works includes the following;

- Station upgrades;
  - Installation of platform screen doors
  - Provision of operational facilities, such as station service buildings
  - Upgrades of 10 stations from Marrickville to Bankstown to provide lifts and level access where not available.
  - Accessibility upgrades for buildings
  - Works related to integration with other modes of transport
- Track and rail systems;
  - Upgrades of track at Bankstown
  - Rail cross-over at Campsie
- Other Project elements;
  - Security measures, such as fencing
  - Noise barriers
  - Augmentation of existing power supply, including new traction sub-stations
  - Bridge protection works
  - Combined Service Route
  - Drainage

- Utility and rail system protection
  - Temporary works during construction;
    - Provision of temporary facilities to support construction, including construction compounds and work sites

It is assumed that construction activities would occur along the length of the rail corridor within the Project area. Construction areas would be generally accessed via existing corridor gates along the rail corridor.

**Relevant background information (including EA, REF, Submissions Report, Director General’s Report, MCoA):**

- The Sydney Metro City & Southwest – Sydenham to Bankstown – State Significant Infrastructure Assessment (SSI 8256), dated 12th December 2018
- The Sydney Metro City & Southwest – Sydenham to Bankstown - Environmental Impact Statement , dated 7th September 2017;
- The Sydney Metro City & Southwest – Sydenham to Bankstown – Submissions and Preferred Infrastructure Report, June 2018;
- The Sydney Metro City & Southwest – Sydenham to Bankstown – Submissions Report, September 2018;
- The Sydney Metro City & Southwest – Sydenham to Bankstown – Instrument of Approval, dated 12th December 2018

All proposed works identified in this assessment would be undertaken in accordance with the mitigation measures identified in the EIS, Submissions and Preferred Infrastructure Report, the Submission Report and the conditions of approval.

## 2.0 Description of proposed development/activity/works

**Describe ancillary activities, duration of work, working hours, machinery, staffing levels, impacts on utilities/authorities, wastes generated or hazardous substances/dangerous goods used.**

In accordance with the Southwest Metro Early Works (SMEW) Scope of Works and Technical Criteria (SWTC), JHLOR are required to install Combined Service Route (CSR) within parts of the T3 Bankstown line corridor. The CSR will service future Sydney Metro services.

JHLOR’s scope includes extending the CSR through a number of locally listed heritage items, including the following heritage bridges;

- Hurlstone Park Railway Underbridge (HPRU) - RailCorp S.170 Heritage and Conservation Register (4805737) & Canterbury LEP 2012 (I126)
- Canterbury (Cooks River/Charles Street) Railway Underbridge (CRU) - RailCorp S.170 Heritage and Conservation Register (5062566) & Canterbury LEP 2012 (I72)

This PACA has been written to outline how the design outcomes for the SMEW CSR remain consistent with the approved project. For the purpose of this PACA it is noted that from a heritage perspective, impacts are generally described as direct impacts (physical impacts) or visual impacts.

As per the SWTC JHLOR have produced a design for the CSR based on the required number of Galvanised Steel Troughs (GST), allowing for clearance between the GST to for sufficient room for access during maintenance, and to meet technical requirements for minimum separation between different types of services.

Where possible, JHLOR has minimised the height of the GST to reduce visual impacts. Generally, this was possible where access to the GST is easily achieved from both sides. Easy access is important for maintenance, particularly emergency maintenance as limited access will result in increased risk of delayed services.

(Uncontrolled when printed)

For GST on heritage bridges, GST must be aligned two wide by four high. This design outcome has been determined by the following factors;

- The GST must include 8 troughs to meet the technical criteria as set by Sydney Metro
- The steel troughs must be placed on one side (track-side) of the GST post to allow safe access for maintenance of the troughs and/or cables within. The troughs cannot be placed on the outer-side of the GST posts as it is too far away from the bridge to safely access without specialised plant (such as a knuckle boom). It is noted that specialised plant may not be available when emergency maintenance is required.
- The lowest steel trough has been lowered so that the top of the trough is just above the walkway height of the bridges. The steel troughs cannot be installed at a lower base level as the troughs must remain accessible from the bridge
- The troughs must maintain a minimum spacing to allow reasonable access for maintenance of the troughs and/or cables within the trough.
- Troughs must be placed at a width of two across, additional troughs would be difficult to access and may present a safety risk to workers. Arrangements where troughs are placed at more than two in a row, or on either side of the GST post are only possible for ground level CSR where access is available from both side of the CSR.

JHLOR has sought advice from Heritage Consultant, Artefact Heritage, to assess the impacts of the final design outcome – see Attachment 1 for advice from Artefact.

Attachment 1 also includes a response from JHLOR Design Manager to Artefact's request under Question 2. Explicitly, that is that clearances have been minimised to mitigate visual impacts however minimum clearances must be maintained to allow safe access for maintenance, to allow maintenance without any specialised equipment and to maintain required clearances between service types.

Artefact have found the following;

Hurlstone Park Railway Underbridge

Direct impacts; minor

Visual impacts; minor

Canterbury (Cooks River/Charles Street) Railway Underbridge

Direct impacts; minor

Visual impacts; minor

From the Sydney Metro City & Southwest – Sydenham to Bankstown Upgrade Planning Approval , JHLOR notes the following;

- "It is noted that the project scope described in this section is based on the level of design developed to date. Detailed design would include further engineering, construction planning, and detailed assessment work, and would be subject to further input from key stakeholders and consultation with the community." *Sydney Metro City & Southwest – Sydenham to Bankstown Upgrade – Submissions and Preferred Infrastructure Report*
- "Hurlstone Park Railway Underbridge - No works are proposed to the underbridge, which is located 180 metres west of Hurlstone Park Railway Station. Minor works would be undertaken within the rail corridor, including installation of fencing and communications services routes. The preferred project would have a negligible

impact on the heritage values of the underbridge. Direct impacts of the works on the Hurlstone Park Railway underbridge would be negligible. This is consistent with the assessment of the exhibited project.” *Submissions and Preferred Infrastructure Report – Appendix F Non-Aboriginal Heritage Assessment*

- Works include “installing Sydney Metro rail systems and adjusting existing Sydney Trains rail systems” Sydney Metro City & Southwest – Sydenham to Bankstown Upgrade – Environmental Impact Statement
- *Sydney Metro City & Southwest – Sydenham to Bankstown Upgrade – Submissions and Preferred Infrastructure Report – Appendix F Non-Aboriginal Heritage Assessment* – no works will occur at Hurlstone Park Railway Bridge – negligible direct and visual impacts
- *Sydney Metro City & Southwest – Sydenham to Bankstown Upgrade – Submissions and Preferred Infrastructure Report – Appendix F Non-Aboriginal Heritage Assessment* – throw screen and vehicle protection works will occur at Canterbury (Cooks River/Charles Street) Railway Underbridge – minor direct and visual impacts. For visual impacts the Assessment notes “The heritage item is located approximately 200 metres to the northwest of Canterbury Railway Station, adjacent to the Canterbury (Cooks River) Underbridge. Current views on the station are very limited. The preferred project would have a minor visual impact on the underbridge as it is assumed throw screens and vehicle protection would be as light weight as possible.”

Both the visual and direct impacts at Hurlstone Park Railway Underbridge have gone from negligible within the Planning Approval to minor as a result of detailed design. Noting that the impacts of CSR on the heritage bridges was not assessed within the Planning Approval, the change in overall impact is minor. JHLOR have minimised direct impacts by designing a bridging structure, adjacent to the Hurlstone Park Railway Underbridge – there will be no direct connection to the heritage bridge. JHLOR has minimised visual impacts by designing the base level trough at the walkway level and by minimising GST clearances.

The impacts at Canterbury (Cooks River/Charles Street) Railway Underbridge are minor as assessed within the Planning Approval and Artefacts design review.

As such, the impacts to heritage bridges are overall consistent with the approved Project.

Works will occur between May and December 2020, however the works will likely only take 6-8 days within this period. Works would occur during rail shutdowns, including outside of standard construction hours, to mitigate safety risks to workers. Any out of hours work would be subject to an JHLOR OOHW Permit and the conditions of EPL 21147.

Plant expected to be used for the works include include;

- Excavator
- EWP
- Multi-crane
- Power tools

Works would involve 2-10 workers at any time.

There will be no impact to existing utilities.

There will be only minor amounts of waste generated from off-cuts. No hazardous substances or dangerous goods are expected to be used as part of the CSR.

### 3.0 Timeframe

**When will the proposed change take place? For how long?**

Construction of the CSR will take place between May and December 2020. The CSR will remain permanently.

### 4.0 Site description

**Provide a description of the site on which the proposed works are to be carried out, including, Lot and Deposited Plan details, where available. Map to be included here or as an appendix. Detail of land owner.**

Hurlstone Park Railway Underbridge

This bridge is located within Lot1 DP1135292. The bridge passes over Foord Avenue, Hurstone Park

Canterbury (Cooks River/Charles Street) Railway Underbridge

This bridge is located within Lot1 DP1184690. The bridge passes over the Cooks River, on the country side of Canterbury Railway Station.

Refer to Appendix B for lot maps.

### 5.0 Site Environmental Characteristics

**Describe the environment (i.e., vegetation, nearby waterways, land use, surrounding land use), identify likely presence of protected flora/fauna and sensitive area.**

Hurlstone Park Railway Underbridge

Some weeds are located on the rail embankment adjacent to the bridge – these will be removed as part of the CSR works. There are no waterways nearby – Foord Avenue kerb-side gutters convey runoff to street drainage.

Surrounding land use is predominately residential.

There is no known protected flora or fauna within the area. Apart from the heritage significance of the bridge, there is no known environmentally sensitive areas at the location.

Canterbury (Cooks River/Charles Street) Railway Underbridge

Some weeds are located on the rail embankment adjacent to the bridge – these will be removed as part of the CSR works. The works will occur over the Cooks River.

Surrounding land use is predominately residential.

There is no known protected flora or fauna within the area. Apart from the heritage significance of the bridge, there is no known environmentally sensitive areas at the location.

## 6.0 Justification for the proposed works

**Address the need for the proposed works, whether there are alternatives to the proposed works (and why these are not appropriate), and the consequences with not proceeding with the proposed work.**

The CSR must be installed on the locally listed heritage bridges to provide continuity of services along the T3 Bankstown line. Other routes were investigated and it was found that these were not viable. Other routes investigated include;

- Attachment to underside of bridges – no access for emergency maintenance
- Placed within the bridge – not enough space available for troughs – difficult access for emergency maintenance
- Underbore – not feasible.

As such the CSR must be attached to the heritage bridges as no other viable options are available.

## 7.0 Environmental Benefit

**Identify whether there are environmental benefits associated with the proposed works. If so, provide details:**

None.

## 8.0 Control Measures

**Will a project and site specific EMP be prepared? Are appropriate control measures already identified in an existing EMP?**

Works will be completed under the project, Construction Environmental Management Plan (CEMP), CEMP sub-plans (including the Construction Heritage Management Plan (CHMP)), and Community Consultation Strategy (CCS).

## 9.0 Climate Change Impacts

**Is the site likely to be adversely affected by the impacts of climate change? If yes, what adaptation/mitigation measures will be incorporated into the design?**

No changes to climate change impacts.



## 10.0 Impact Assessment – Construction

Attach supporting evidence in the Appendices if required. Make reference to the relevant Appendix if used.

Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Flora and fauna	No change from the EIS and SPIR.	Comply with mitigation measures as stated within the Tree Report, CEMP and CEMP sub-plans.	Y	Y	
Water	No change from the EIS and SPIR.	Include this area within the Erosion and Sediment Control Plan for the area – include any controls required to mitigate erosion/dirt tracking at the access point. No change from the EIS and SPIR. Comply with mitigation measures as stated within the CEMP and CEMP sub-plans.	Y	Y	
Air quality	No change from the EIS and SPIR.	No change from the EIS and SPIR. Comply with mitigation measures as stated within the CEMP and CEMP sub-plans.	Y	Y	
Noise vibration	No change from the EIS and SPIR.	No change from the EIS and SPIR. Comply with mitigation measures as stated within the CEMP and CEMP sub-plans.	Y	Y	
Indigenous heritage	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Non-indigenous heritage	<u>Hurlstone Park Railway Underbridge</u> Planning Approval indicated negligible direct impacts – noting CSR was not assessed as part of	Monitor vibration from augured piling at HPRU	Y	Y	

Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
	<p>bridge works. The design review has indicated direct impacts would be minor.</p> <p>JHLOR have minimised direct impacts by constructing the CSR on a bridging beam rather than attaching directly to the Hurlstone Park Railway Underbridge.</p> <p>Some vibration may occur during augured piling for bridging structure at Hurlstone Park Railway Underbridge</p> <p>Plant and equipment will temporarily occupy the area – construction plant and equipment is consistent with the operation of railways</p> <p><u>Canterbury (Cooks River/Charles Street) Railway Underbridge</u></p> <p>Both the Planning Approval and design review indicate that direct impacts would be minor.</p> <p>JHLOR have minimised direct impacts by attaching the CSR to a concrete bridge deck panels, rather than connecting directly to a heritage component. The concrete bridge deck panels were installed in 1995.</p> <p>Plant and equipment will temporarily occupy the area – construction plant and equipment is consistent with the operation of railways</p>	<p>Comply with mitigation measures as stated within the CEMP, CEMP sub-plans, including the CHMP and VAMP.</p> <p>Toolbox talk work crews on heritage nature of bridges</p>			
Community and stakeholder	No change from the EIS and SPIR.	<p>Community consultation and notifications.</p> <p>Implementation of control measures as per the CEMP, CEMP sub-plans, CCS and CTMP</p>	Y	Y	
Traffic	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	

(Uncontrolled when printed)

Aspect	Nature and extent of impacts (negative and positive) during construction (if control measures implemented) of the proposed/activity, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
		Comply with mitigation measures as stated within the CEMP and CEMP sub-plans.			
Waste	No change from the EIS and SPIR.	No change from the EIS and SPIR. Implementation of control measures as per the CEMP.	Y	Y	
Social	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Economic	No loss of access for businesses associated with the works. No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Visual	Plant and equipment will temporarily occupy the area – construction plant and equipment is consistent with the operation of railways	Comply with mitigation measures as stated within the CEMP, CEMP sub-plans, including the VAMP.	Y	Y	
Urban design	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Geotechnical	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Land use	The area is currently used for material laydown. The area will be returned to its existing state upon completion of the works. No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Climate Change	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Risk	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Other	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	
Management and mitigation measures	No change from the EIS and SPIR.	No change from the EIS and SPIR.	Y	Y	

## 11.0 Impact Assessment – Operation

Attach supporting evidence in the Appendix if required. Make reference to the relevant Appendix if used.

Aspect	Nature and extent of impacts (negative and positive) during operation (if control measures implemented) of the proposed activity/works, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Flora and fauna	No change from the EIS and SPIR.	N/A		Y	
Water	No change from the EIS and SPIR.	N/A		Y	
Air quality	No change from the EIS and SPIR.	N/A		Y	
Noise vibration	No change from the EIS and SPIR.	N/A		Y	
Indigenous heritage	No change from the EIS and SPIR.	N/A		Y	
Non-indigenous heritage	<p><u>Hurlstone Park Railway Underbridge</u>                      Planning Approval indicated negligible visual impacts – noting CSR was not assessed as part of bridge works. The design review has indicated visual impacts would be minor</p> <p><u>Canterbury (Cooks River/Charles Street) Railway Underbridge</u>                      Both the Planning Approval and design review indicate that visual impacts would be minor</p>	<p><u>Design</u>                      Base GST to be at walkway base level                      Minimise spacing between GST Bridging structure in place at HPRU                      Attach GST brackets to concrete bridge deck panels (installed in 1995) and not to heritage components for CRU</p> <p><u>Implementation</u>                      Implement the measures within the CEMP and CHMP</p>	Y	Y	
Community and stakeholder	No change from the EIS and SPIR.	N/A		Y	

Aspect	Nature and extent of impacts (negative and positive) during operation (if control measures implemented) of the proposed activity/works, relative to the Approved Project	Proposed Control Measures in addition to project COA and REMMs	Minimal Impact Y/N	Endorsed	
				Y/N	Comments
Traffic	No change from the EIS and SPIR.	N/A		Y	
Waste	No change from the EIS and SPIR.	N/A		Y	
Social	No change from the EIS and SPIR.	N/A		Y	
Economic	No change from the EIS and SPIR.	N/A		Y	
Visual	Refer to operation phase visual impacts in Non-indigenous heritage section above	Refer to operation phase visual impacts in Non-indigenous heritage section above	Y	Y	
Urban design	No change from the EIS and SPIR.	N/A		Y	
Geotechnical	No change from the EIS and SPIR.	N/A		Y	
Land use	No change from the EIS and SPIR.	N/A		Y	
Climate Change	No change from the EIS and SPIR.	N/A		Y	
Risk	No change from the EIS and SPIR.	N/A		Y	
Other	No change from the EIS and SPIR.	N/A		Y	
Management and mitigation measures	No change from the EIS and SPIR.	N/A		Y	

## 12.0 Consistency with the Approved Project

<p>Based on a review and understanding of the existing Approved Project and the proposed modifications, is there a transformation of the Project?</p>	<p>No. The proposed works would not transform the project. The project would continue to provide a metro rail line between Sydenham and Bankstown</p>
<p>Is the project as modified consistent with the objectives and functions of the Approved Project as a whole?</p>	<p>Yes. The proposed works would be consistent with the objectives and functions of the approved project.</p>
<p>Is the project as modified consistent with the objectives and functions of elements of the Approved Project?</p>	<p>Yes. The changes identified in this assessment are consistent with the objectives and functions of the elements of the Approved Project</p>
<p>Are there any new environmental impacts as a result of the proposed works/modifications?</p>	<p>All risks would be adequately addressed through the application of the mitigation measures in the above tables. No new environmental risks are outstanding.</p>
<p>Is the project as modified consistent with the conditions of approval?</p>	<p>Yes. The proposed works would be consistent with the conditions of approval</p>
<p>Are the impacts of the proposed activity/works known and understood?</p>	<p>Yes. The impacts of the proposed works are understood and will be accounted for by implementing the control measures within this document, the CEMP, CEMP sub-plans, CTMP, CCS and any other measures as directed by Council, RMS, TfNSW and SCO.</p>
<p>Are the impacts of the proposed activity/works able to be managed so as not to have an adverse impact?</p>	<p>Yes. The impacts of the proposed works can be managed so as to avoid an adverse impact.</p>


## 13.0 Other Environmental Approvals

Identify all other approvals required for the project:


- N/A

## Author certification

To be completed by person preparing checklist.

<p>I certify that to the best of my knowledge this Consistency Checklist:</p> <ul style="list-style-type: none"> <li>Examines and takes into account the fullest extent possible all matters affecting or likely to affect the environment as a result of activities associated with the Proposed Revision; and</li> <li>Examines the consistency of the Proposed Revision with the Approved Project; is accurate in all material respects and does not omit any material information.</li> </ul>			
Name:	Dan Keegan	Signature:	
Title:	Environment Manager		
Company:	JHLOR	Date:	27/04/2020

This section is for Sydney Metro only.

<p>Application supported and submitted by</p>			
Name:	Yvette Buchli	Date:	28/04/2020
Title:	Planning Approvals Manager	Comments:	
Signature:			

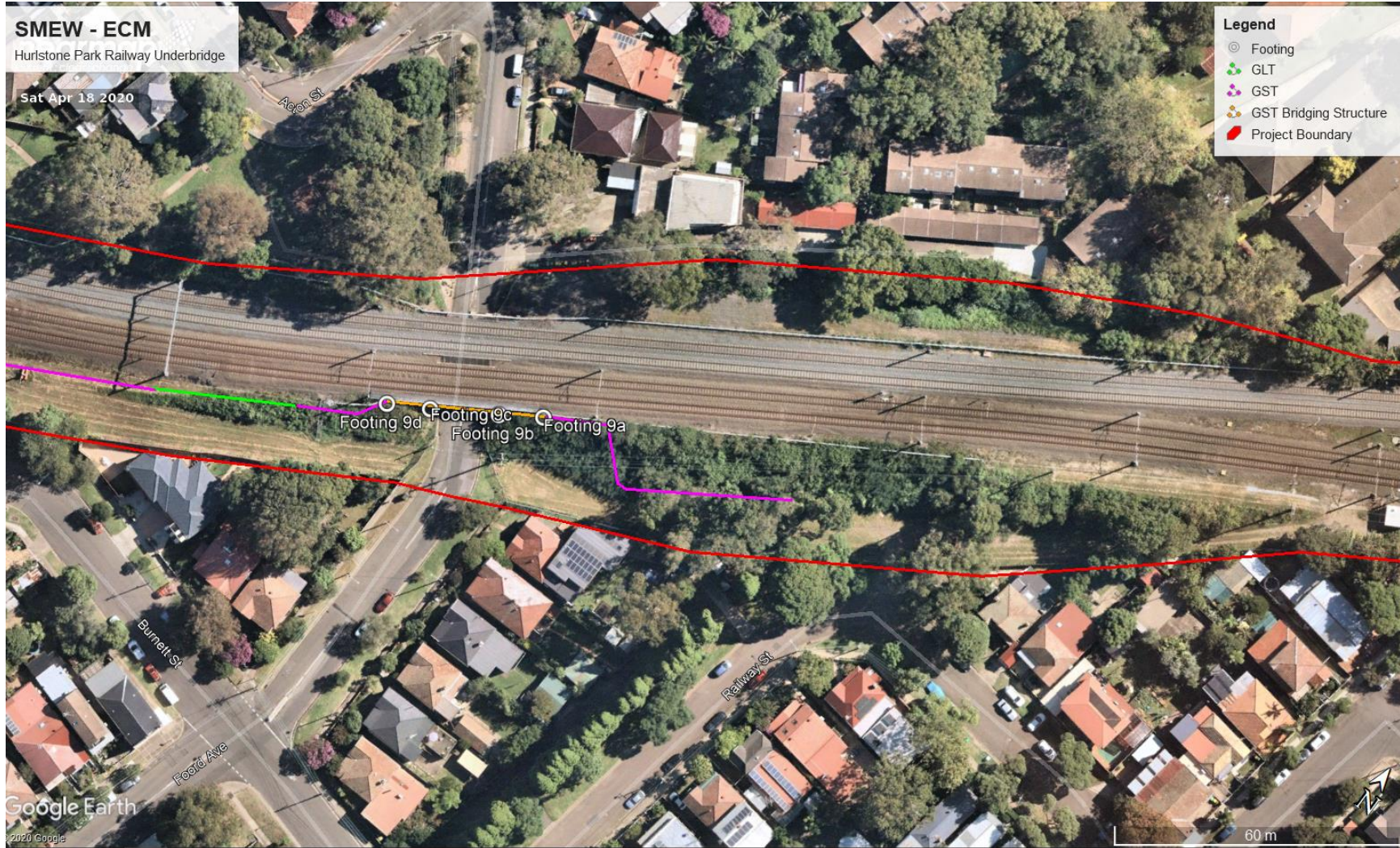
Based on the above assessment, are the impacts and scope of the proposed activity/modification consistent with the existing Approved Project?

- Yes  The proposed activity/works are consistent and no further assessment is required.
- No  The proposed works/activity is not consistent with the Approved Project. A modification or a new activity approval/ consent is required. Advise Project Manager of appropriate alternative planning approvals pathway to be undertaken.

<p>Endorsed by</p>			
Name:	Fil Cerone	Date:	30 April 2020
Title:	Director, City & Southwest, Sustainability Environment and Planning	Comments:	Nil
Signature:			



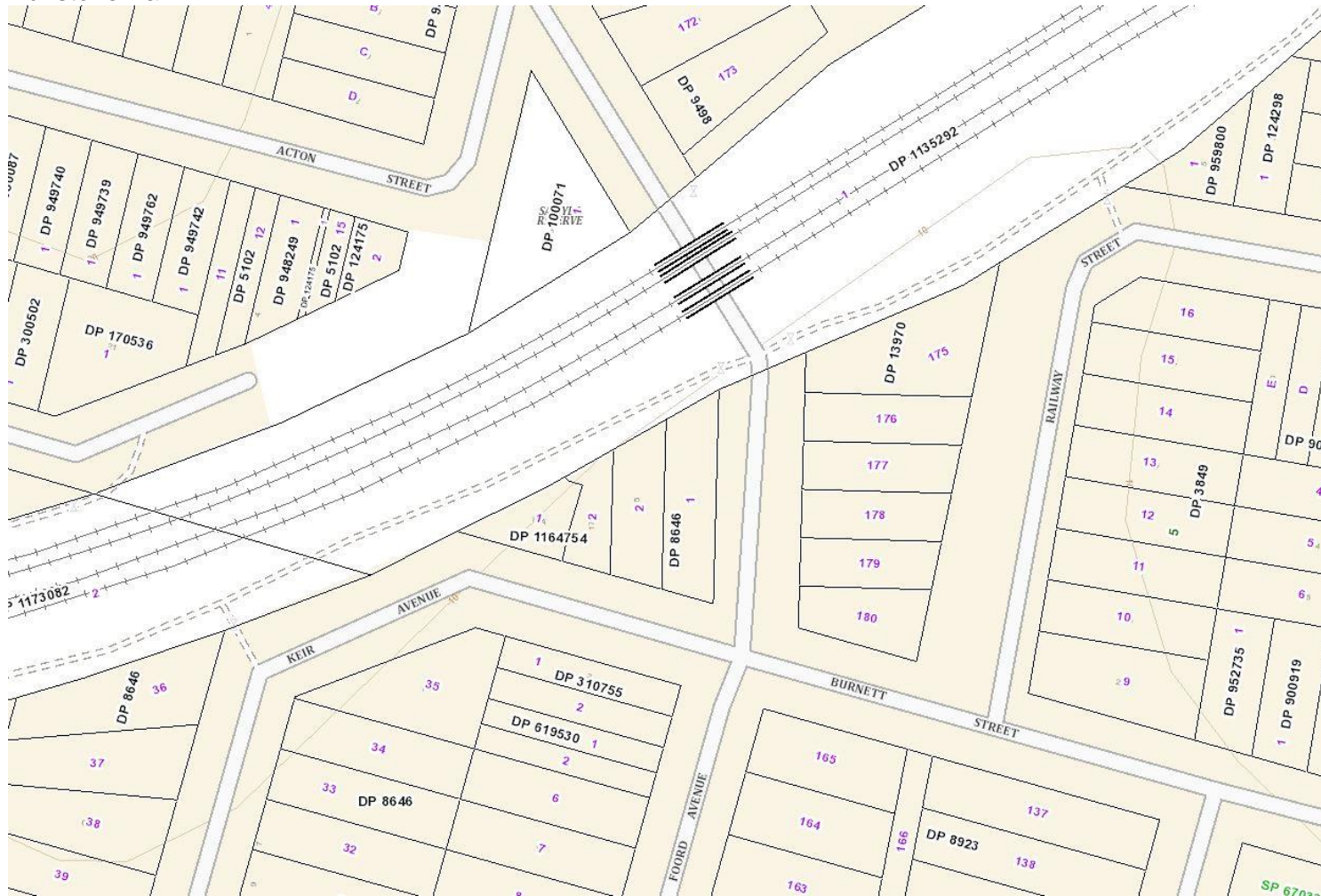
## Appendix A – Site Location



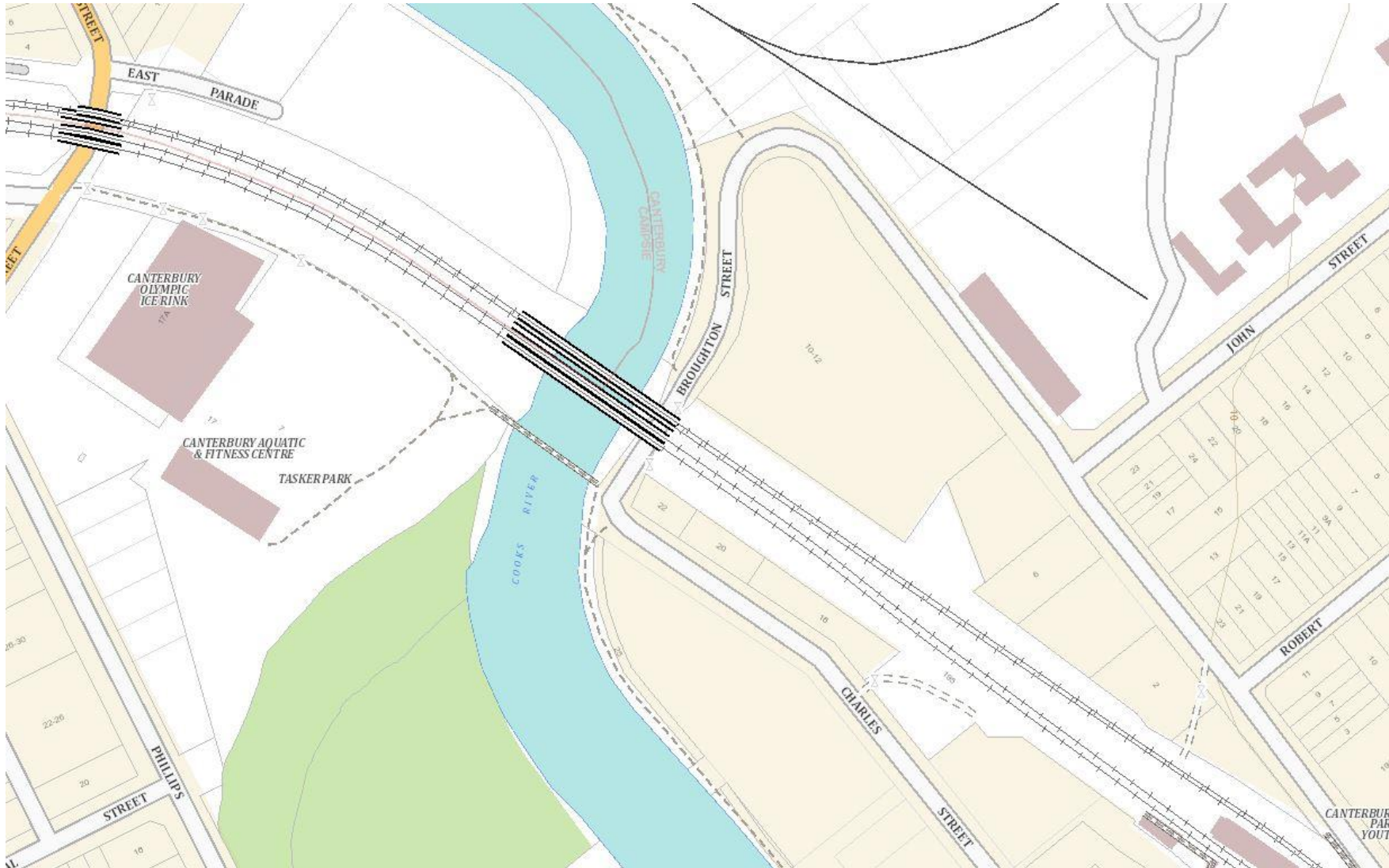


## Appendix B – Lot Details

### Hurlstone Park



Cooks River





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## Appendix C – Land Owners Consent

N/A

**Unclassified**

Sydney Metro – Integrated Management System (IMS)

(Uncontrolled when printed)



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## Attachment 1 – Heritage Advice

## Keegan, Daniel

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**From:** Duncan Jones <[REDACTED]>  
**Sent:** Monday, 20 April 2020 12:58 PM  
**To:** Keegan, Daniel; Sandra Wallace  
**Subject:** RE: SMEW - CSR Design at Heritage Bridges

**CAUTION - This email was sent from outside Laing O'Rourke**

Hi Dan,

The sentence explains that design materials on large projects are usually procured for the whole of project and that these design materials are often not contextually sensitive to the particular characteristics of a heritage item that they are constructed in or near.

Regards,

Duncan

---

**From:** Keegan, Daniel <[REDACTED]>  
**Sent:** Monday, 20 April 2020 12:55 PM  
**To:** Duncan Jones <[REDACTED]>; Sandra Wallace <[REDACTED]>  
**Subject:** FW: SMEW - CSR Design at Heritage Bridges

Thanks Duncan, Sandra,

Our Design Manager has added further context to the reasoning behind the spacings of the GST – refer to Question 2 responses below.

Can you please explain, in layman's terms, what is meant by "The use of standardised materials which are insensitive to the context of heritage items is not encouraged".

Cheers,

Dan Keegan  
[REDACTED]

---

**From:** Olivier, Edward <[REDACTED]>  
**Sent:** Saturday, 18 April 2020 2:46 PM  
**To:** Keegan, Daniel <[REDACTED]>  
**Cc:** Fields, Paul <[REDACTED]>  
**Subject:** RE: SMEW - CSR Design at Heritage Bridges

See comment in red below, Let me know if need expanding

Regards

Edward

---

**From:** Keegan, Daniel <[REDACTED]>  
**Sent:** Thursday, 16 April 2020 3:30 PM  
**To:** Olivier, Edward <[REDACTED]>  
**Cc:** Fields, Paul <[REDACTED]>  
**Subject:** FW: SMEW - CSR Design at Heritage Bridges

Ed,

Can you please provide me with some feedback on Artefact's response to Question 2?

Regards,

Dan Keegan  
[REDACTED]

---

**From:** Duncan Jones <[REDACTED]>  
**Sent:** Thursday, 16 April 2020 2:52 PM  
**To:** Keegan, Daniel <[REDACTED]>; Sandra Wallace <[REDACTED]>  
**Cc:** Fields, Paul <[REDACTED]>; Olivier, Edward <[REDACTED]>  
**Subject:** RE: SMEW - CSR Design at Heritage Bridges

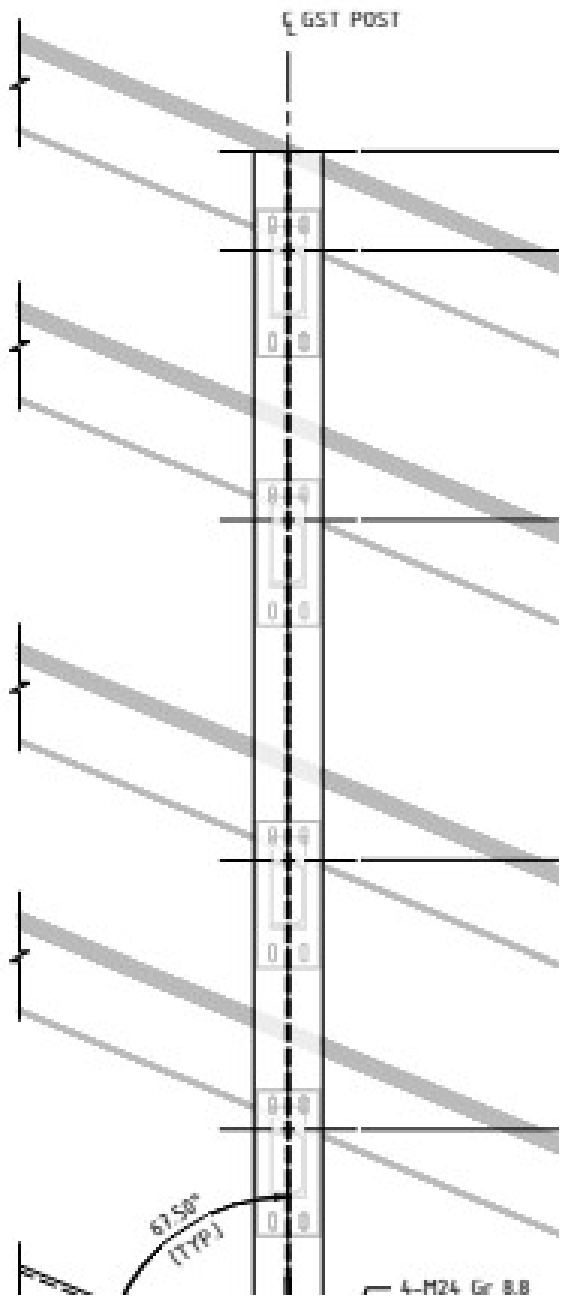
**CAUTION - This email was sent from outside Laing O'Rourke**



Hi Dan

In response to your memo dated 15 April 2020 "CSR Design - heritage bridges", the following comments have been provided in response to questions raised in that memo.

- Question 1. Confirm their stance of the visual impacts associated with the CSR at heritage bridges, based on the design included within SMCSWSSJ-JHL-WEC-EM-REP-000008 - Heritage Fabric Works Methodology, including the basis for the assessment, including the relevant view points assessed. If there are changes from the original assessment, how these came about.
  - Response 1a. Impact assessment for GST installed on the Foord Avenue overbridge: The proposed GST would be constructed on a new bridging structure which would not be physically attached to the bridge structure itself. No heritage significant fabric would be modified by the works. Views of the retaining walls and abutments of the bridge would be largely concealed behind the proposed GST installation. While no significant fabric is being modified by the works, opportunities to reduce the height of the proposed GST conduits should be considered during works to minimise adverse visual impacts to significant elements (retaining walls and abutments) of the locally significant structure from street level. Overall the works would result in a minor visual heritage impact.
  - Response 1b. Impact assessment for GST installed on the Cooks River overbridge: The proposed GST would be constructed on a new bridging structure located on the southern side of the bridge with connecting brackets affixed into the concrete deck structure. The concrete deck structure was constructed in the 1990s to replace earlier decking structures and overly the steel piers and beams of the original 1895 bridge structure. The proposed GST would be only marginally taller than existing balustrades for the pedestrian deck but would be a more robust and noticeable structure than the current steel pedestrian walkway. The GST would not directly obstruct views of the steel piers and trellis' of the original 1895 bridge structure from the south. The GST would not obstruct the brick abutments and piers on the northern side. Brackets installed into the concrete deck of the bridge would not impact original or significant fabric. Opportunities to reduce the height of the proposed GST conduits should be considered during works to minimise the prominence of the new GST structures and reduce the degree of visual impact. Overall the works would result in a negligible physical and minor visual heritage impact.
- Question 2. Provide any recommendations to further minimise the visual impacts of the CSR on Heritage Bridges.
  - Response 2a. We note that the provided drawings indicate that there are two spacings between GST troughs of approximately 350mm each, and a central spacing of approximately 500mm. Clearances for reducing the minimum maintenance allowances should be sought to reduce the spacing between troughs, to reduce the overall height of the structure, as much as possible as the GST crosses both bridges. Should spacings be minimised, the upper portion of unused GST support posts should be cut and reduced to the maximum trough level height. **350mm is min space needed to access cables. The 500mm gap is related to EMC separation between high voltage cable [Above GST] and low voltage [Lower GST] and can not be reduced from 500mm. The vertical beam will match the top GST level, as detail below.**



- Response 2b. Should these spacings not be modifiable due to the use of prefabricated GST support posts, strong consideration should be given to customising these support posts for altering the spacing to ensure that the height of the GST is minimised to reduce overshadowing and the obstruction of sight lines. The use of standardised materials which are insensitive to the context of heritage items is not encouraged. **The design is as optimized as possible give the technical limitation to all cables to cross the bridge.**
- Question 3. Determine whether the Construction Heritage Management Plan and the Heritage Inventory (REMM NAH17) will need to be updated.
  - Response 3: The CHMP would not require updating for the proposed design, however information in the heritage inventory for the bridges would require updating to reflect the modified scope of GST works.

Let me know if you need any further information to complete your consistency assessment, my mobile number is 0413 607 425 if you would like to discuss.

Regards,

**Duncan Jones**  
Principal

**ARTEFACT**

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Cultural Heritage Management | Archaeology | Heritage Interpretation

 We acknowledge the Traditional Custodians of Country in which we live and work, and pay our respects to them, their culture and their Elders past, present and future

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**From:** Keegan, Daniel <[REDACTED]>  
**Sent:** Thursday, 16 April 2020 7:11 AM  
**To:** Sandra Wallace <[REDACTED]>  
**Cc:** Fields, Paul <[REDACTED]>; Olivier, Edward <[REDACTED]>; Duncan Jones <[REDACTED]>  
**Subject:** SMEW - CSR Design at Heritage Bridges

Hi Sandra,

As discussed we've put together a memo detailing why the design outcomes at the Heritage bridges on SMEW are as they are.

Can you please respond to the questions in the memo. Can we please get a quick turn-around on this one.

Regards,

**Daniel Keegan**  
Environment Manager

Sydenham Metro upgrade project

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