Pre-Construction Minor Works Approval Form

Minor Works are defined as any low impact activities that are undertaken prior to the commencement of 'construction' as defined in the project's applicable planning approval. However if Minor Works affect or potentially affect heritage items, threatened species, populations or endangered ecological communities, these works are defined as 'construction' unless otherwise determined by the applicable planning authority.

Minor Works approvals do not remove any obligation to comply with the project's applicable planning approval conditions (including requirements prior to 'any works' commencing) or obtain any other applicable permits, licenses or approvals as necessary.

This application and all supporting information must be submitted to TfNSW/the Environmental Representative as one (1) PDF file at least 10 business days prior to the commencement of the proposed Minor Works.

Part 1: Application	
Contractor:	Laing O'Rourke
Project:	Sydney Metro and Southwest – Chatswood to Sydenham and Central Walk Central Station Main Works
Application Title: (e.g. Smith St trenching works)	Central Station Main Works – Sydney Yard works
Application Number:	CSMW 002
Application Date:	20/04/2018
Planning Approval:	SSI 15_7400
Minor Works Categories: • Highlight as applicable. • If Items 4, 8 or 11 are applicable, this form must be endorsed by an Environmental Representative.	1. Survey, survey facilitation and investigations works (including road and building dilapidation survey works, drilling and excavation). 2. Treatment of contaminated sites. 3. Establishment of ancillary facilities (excluding demolition), including construction of ancillary facility access roads and providing facility utilities. 4. Operation of ancillary facilities that have minimal impact on the environment and community. 5. Minor clearing and relocation of vegetation (including native). 6. Installation of mitigation measures, including erosion and sediment controls, temporary exclusion fencing for sensitive areas and acoustic treatments. 7. Property acquisition adjustment works, including installation of property fencing and utility relocation and adjustments to properties. 8. Utility relocation and connections. 9. Maintenance of existing buildings and structures. 10. Archaeological testing under the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010) or archaeological monitoring undertaken in association with other Minor Works to ensure there is no impact on heritage items. 11. Any other activities that have minimal environmental impact, including construction of minor access roads, temporary relocation of pedestrian and cycle paths and the provision of property access.
Planning Authority Determination: Will the proposed works affect or have the potential to affect heritage items, threatened species, populations or endangered ecological communities?	Yes. The works are within the Sydney Terminal and Central Railway Station curtilage (SHR no.01255). The works have the potential to impact on built heritage and archaeology. Works would be undertaken in accordance with the Statement of Heritage Impact (SOHI)(Artefact 2018) and the Archaeological Method Statement (AMS)(Artefact 2018), which were prepared to act as a framework to facilitate the avoidance of impacts to heritage items as defined by the approval, during early works. Refer to Appendix 2 for a copy of the SOHI and the AMS. Consultation has commenced with the Heritage Division and a determination is being

	sought from the Secretary to undertake the works.

Part 2: Details

Describe the proposed Minor Works:

Including work methodologies, site location(s) and site description(s) (e.g. landscape type, waterways, etc.).

The works would be carried out in Sydney Yard on 12/13, 14/15, between Eddy Avenue, Regent Street, Chalmers/Devonshire Street intersection and Gibbons Street (Redfern) access points.

The surrounding land uses are roads including Lee, Chalmers, Devonshire, Regent, Gibbons Streets and Eddy Avenue, the rail corridor and associated infrastructure, office buildings, a hotel and Prince Alfred Park.

The site is located within the state heritage listed Sydney Terminal and Central Railway Stations Group (01255), on Eddy Avenue, Sydney and is listed on the Sydney Trains s170 register. Work would occur on the tracks, platforms and within Sydney Yard. The works area is highly disturbed and there are no waterways within 50 metres.

Where heritage items are affected or potentially affected by the low impact work, further assessment has been undertaken in the Sydney Metro Archaeological Method Statement – Central Station Metro Early Works (Artefact 2018) (AMS) and the Central Station Main Works: Early Works Statement of Heritage Impact (Artefact 2018) (SOHI). The following table indicates where further assessment has occurred:

Table 1. Low impact activities

Ref	Low impact activities	Refer to SOHI/AMS
1	Visual inspections across the whole site	N/A
2	Non-destructive digging and excavation for the combined services route (CSR) and galvanised steel trough (GST) post locations in Sydney Yard.	AMS
3	Non-destructive digging in the location of the ULX in Sydney Yard	AMS
4	Non-destructive digging in the location of signal bases, LOC bases and any other infrastructure in Sydney Yard	AMS
5	Vegetation removal in Sydney Yard	N/A
6	Hazmat assessment of buildings on platforms 12/13 and 14/15 and in Sydney Yard	SOHI
7	Construction of the footings for the padmount substation in Sydney Yard	AMS
8	Construction of the padmount substation in Sydney Yard	N/A

Some works are required during a rail possession weekend for worker safety and the associated enabling works are required in the weeks leading up to a possession weekend. Specific work dates are outlined below.

Pre-possession scope June 1 to June 8 2018

Activities: 1, 2, 4, 6 and 7

Standard construction hours

Plant and equipment will include:

- Super sucker
- 6t excavator
- Site utes

Possession scope June 9-10 2018 (weekend 50)

Activities: 1 and 3

0600 Saturday to 1800 Sunday (OOHW)

Plant and equipment will include:

- Hi Rail Super sucker
- Site utes

	Pre-possession scope 11 June to 10 August 2018 **Activities: 1 and 8** **Standard construction hours** Plant and equipment will include: - Site utes - Hirail EWP **Weekend work 7-8 July 2018** **Activities: 1 and 5** **0600 to 1800 Saturday and Sunday** Plant and equipment will include: - Chainsaw - Mulching machine - Site utes
Planned Commencement Date:	Friday June 1st 2018
Local Sensitivities: Describe the presence (if any) of local sensitive environmental areas and community receptors.	**Heritage** – The works are within the Sydney Terminal and Central Railway Station curtilage (SHR no.01255). **Community** – No residents will have a direct line of sight to the works. Site access would be via site access gates to the rail corridor at the intersection of Chalmers/Devonshire Streets, Gibbons Street, Redfern and Sydney Yard Access Bridge from Regent Street and the office driveway on Lee Street. Worksite areas would be established (in accordance with CoA 18) on Chalmers Street at the rail access gate on Chalmers Street and two areas south of the Chalmers Street substation zone. Sensitive residential receivers are located near the proposed site accesses and worksites.

Part 3: Environmental Risk Assessment and Management

Prepare an Environmental Risk Assessment (in accordance with the *Sydney Metro Risk Management Standard*) and an Environmental Control Map for the proposed Minor Works and attach as Appendix 1.

If an Environmental Risk Assessment and/or an Environmental Control Map for the proposed Minor Works is/are already contained in existing documentation, attach the relevant section(s) as Appendix 1.

Documentation: List any existing documents (including those referenced above) that the proposed Minor Works will be undertaken in accordance with and attach as Appendix 2 (e.g. plans, procedures, procedures, etc.).	- Sydney Metro Construction Environmental Management Framework. - Sydney Metro City and Southwest, Chatswood to Sydenham, Planning approval SSI 15_7400. - Sydney Metro out of hours work protocol. - CSM 01 – Consistency assessment for the power supply to Sydney Yard. - CSM 04 – Consistency Assessment for the Mortuary Station temporary site office - Sydney Trains Environmental Protection Licence (EPL 12208). - Central Station Main Works - Environmental Control Map - Condition of Approval (CoA) E36. - Sydney Metro Archaeological Method Statement – Central Station Metro Early Works (Artefact 2018). - Central Station Main Works: Early Works Statement of Heritage Impact (Artefact 2018). - Sydney Metro Tree Report

Part 4: Workforce Notification

How will the environmental and community risks and associated mitigation measures of the proposed Minor Works be communicated to the contractor's workforce?	All workers will undertake a CSMW specific induction. In addition, there will be a pre-start briefing undertaken by the worksite manager at the start of shift for all work groups. This will detail the environmental and community risks and mitigation measures.

Part 5: Community Consultation	
What community consultation has been undertaken already?	Laing O'Rourke have previously provided input into the standard Sydney Trains weekend possession notification that was delivered to surrounding residents for the weekend of 21/22 April 2018. No CSMW specific notification has been issued as agreed with the Sydney Metro communications team.
What community consultation is planned to be undertaken?	Laing O'Rourke will prepare notifications in accordance with Sydney Metro out of hours work protocol.
If drafted already, attach applicable Community Notification as Appendix 3.	

Part 6: Contact Details					
Nominate contractor's project manager, environmental and communications contact(s).					
Name:	Jamie Jack	**Position:**	Project Leader	**Phone:**	0477 355 531
	Chris McCallum		Environmental Manager		0408 264 164
	Peter Whelan		Communications and Stakeholders Manager		0403 133 490

Part 7: Signature			
This signature acknowledges that the proposed Minor Works will be undertaken in accordance with this application, have minimal environmental impact and are not defined as 'construction' in accordance with the applicable planning approval.			
Name:	Leah Henderson		
Signature:		**Date:**	20/4/2018

Determination Page

(TfNSW/Environmental Representative Use Only)

12. Endorsement/Approval

These signatures represent formal endorsement/approval for the proposed Minor Works to commence in accordance with this application and the applicable planning approval requirements (subject to any determination from the applicable planning authority as may be required by the planning approval conditions).

	TfNSW Principal Manager, Communication & Engagement – Endorsement (required for all applications)	**TfNSW Principal Manager, Sustainability, Environment & Planning** – Approval (required for all applications)	**Environmental Representative** – Endorsement (required as necessary in accordance with the applicable planning approval, optional for all other circumstances)
Signature:			
Name:			Annabelle Tungol Reyes
Date:			26 April 2018
Comments:			~~*Supporting letter attached as Appendix 4 if necessary.*~~ OOHW will be subject to AA endorsements and Sydney Trains EPL condition.
Conditions:			~~*Supporting letter attached as Appendix 4 if necessary.*~~ Subject to OEH consultation and DPE determination due to potential impact to heritage.

☐	Approved (by TfNSW)
☑	Endorsed (by Environmental Representative)
☐	Rejected

Appendix 1: Cover Page

Environmental Risk Assessment and Environmental Control Map.

Risk Assessment Rankings: **>17 = Extreme** **10 - 16 = High** **5 - 9 = Medium** **1 - 4 = Low**

Issues or activities that represent an Extreme risk after the application of control measures are not to be undertaken

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
Approvals and Licensing								
Not identifying appropriate approvals / licenses required or proceeding without them.	Works delayed, infringements, prosecution and reputational loss.	**P**	**3**	**M**	Planning approval has been granted for the Sydney Metro and Southwest - Sydenham to Chatswood works. This minor works application is being completed to ensure appropriate documentation is completed to manage the environmental risk of the project.	**U**	**3**	**M**
Noise								
Noise from non-destructive digging	Disturbance to residents or neighbouring businesses. Potential for complaints.	P	3	**M**	Control measures as per Community Consultation Strategy (CCS) are to be implemented. Consult with the community in relation to upcoming activities that may result in concern (completed by Sydney Metro). Silenced lighting towers and equipment will be used where practical. In the event of noise monitoring indicating noise levels are exceeding predicted levels during evening and night periods, the team will be required to change work practices, such as reducing the number of plant/equipment operating concurrently and provide respite periods.	**P**	**3**	**M**

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
Noise from investigation activities, office installation and the installation of services and wiring to be undertaken out of standard working hours.	Disturbance to residents or neighbouring businesses with potential for complaints.	**P**	**3**	**M**	Control measures as per Community Consultation Strategy (CCS) are to be implemented. Consult with the community in relation to upcoming activities that may result in concern (completed by Sydney Metro). Site walks, survey and visual inspections will be inaudible at surrounding receivers. For non-destructive digging, use silenced lighting towers and equipment where practical. All compaction, if required is to be undertaken during daytime hours.	**U**	**3**	**M**
Vibration								
Vibration intensive activities undertaken on the site in proximity to sensitive heritage structures and community.	Damage to listed heritage items. Disruption, annoyance and nuisance to residents. Potential damage to adjacent residential and commercial residences and structures. Disruption to businesses as a result of vibration nuisance	**P**	**4**	**M**	Consult with potentially affected parties prior to commencement of works for any activities that may create vibration impacts caused by the works. Manual plate compactor only to be used to backfill investigative trenches, not in proximity to built heritage and at least 20m away from residents.	**U**	**4**	M
Water Quality, Erosion & Sedimentation								
Sediment laden runoff from investigation works leaving site.	Degradation of local watercourses. Increased turbidity in local water ways resulting in impact on aquatic life. Fines for sediment escaping site.	**U**	**3**	**M**	Existing stormwater drainage points and swales will be identified prior to investigative excavation works. Install erosion and sedimentation controls as per ECM. All vehicle wheels to be clean prior to exiting site. Ensure measures are inspected and maintained as the works progress and also prior to and post	**R**	**3**	**L**

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
					rainfall events. Investigative excavations backfilled after shift finishes.			
Non-compliant water from investigation works discharged from site	Non-compliant water entering stormwater system waterways (i.e. polluting - not compliant with discharge criteria).	**P**	**3**	**M**	Induction and toolbox talks Educate site staff on licence conditions and consequences of prosecution No water discharge anticipated for minor works. Erosion and Sediment Controls to be maintained for the duration of works. If water discharge is required, Sydney Metro Water Discharge or Reuse Approval form to be utilised. Form to be approved by LOR Environmental Manager prior to discharge.	**U**	**3**	**M**
Ground water	Ground water entering excavations Without appropriate safeguards onsite could lead to ground water contamination	**U**	**2**	**L**	Non-destructive digging will not be going to groundwater depth. BH006 at Central Station indicates that groundwater sits approximately 14.75 metres below ground level (*Sydney Metro Chatswood to Sydenham Technical Paper 7: Groundwater Assessment May 2016, page 67*).	**R**	**2**	**L**
Waste								
Waste disposal during works.	Incorrect disposal of waste, further costs incurred for classifications and disposal, fines may be issued.	**P**	**2**	**M**	Wastes to licenced waste facility only. Ensure accurate waste records are retained. Removal of wastes from the site would only be undertaken by a licensed contractor as required by the POEO Act and with appropriate approvals, if required, for contaminated materials, etc. All material that requires off-site disposal to be appropriately classified against the Waste	**U**	**2**	**L**

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
					Classification Guidelines (DECC, 2008).			
Contamination								
Potential for discovery of unexpected contaminated spoil during works involving excavation.	Health effects resulting from airborne contamination, e.g. asbestos. Complaints received from odours.	**P**	**3**	**M**	If contaminated soil is encountered, all works are to stop in the vicinity of the find and investigations commence. Occupational hygienist in attendance on site. Induct personnel on location, type, nature, concentration of contaminants on site if found.	**P**	**2**	**L**
Hazardous Materials								
Storage of hazardous substances, leaking plant and equipment and spillage from refuelling.	Localised ground contamination / pollution of stormwater and requiring clean-up and/or receiving fines. Risk of igniting volatile substances.	**U**	**3**	**M**	No fuels or hazardous materials to be stored on site for minor works. Spill kits to be onsite when using plant/equipment. No major servicing of equipment to be undertaken onsite. Pre-mobilisation checks on all plant/equipment to come to site, including check of fuel and hydraulic leaks.	**R**	**3**	**L**
Biodiversity								
Vegetation trimming / clearing required outside approved work area.	Unauthorised works / removal of vegetation outside defined work area, possibility of removing threatened species, fines incurred.	**R**	**3**	**L**	Only vegetation adjacent to Track 16 will be removed. Trees and shrubs will be removed in accordance with Sydney Metro Tree Report (2018).	**R**	**1**	**L**
Clearing and grubbing of vegetation within work site.	Erosion of soils, uncontrolled runoff, sediment deposited into surrounding vegetated areas and water courses,	**R**	**3**	**L**	Only vegetation adjacent to Track 16 will be removed. Vegetation will be checked by construction staff	**R**	**1**	**L**

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
	and invasion of weeds. Wrong vegetation removed. Potential for injury to native fauna.				prior to removal and if fauna is present the local WIRES group would be contacted to capture and relocate fauna.			
Air Quality								
General works; investigative excavations	Dust activity in close proximity to residential and commercial premises, complaints received.	**U**	**3**	**M**	Non-destructive digging will use water aided digging – no dry excavations undertaken. All excavated spoil will be removed via spoil bags, no spoil will be stockpiled on site.	**R**	**2**	**L**
Exhaust from plant and equipment.	Emissions resulting in air pollution.	**U**	**3**	**M**	Well maintained plant/ equipment and pre-start checks and servicing. Non-complaint vehicles removed from site / repaired.	**R**	**2**	**L**
Heritage								
Unexpected heritage items encountered.	Work delays, additional studies, approvals required, damage to heritage item.	**P**	**3**	**M**	General inductions on heritage management 'stop-works' protocol. If suspected heritage item encountered. Works to stop immediately and Environment Manager contacted. If suspected heritage item encountered. Works to stop immediately and Environmental Manager contacted. Unexpected finds of heritage items must be reported to LOR Environmental Manager and Sydney Metro. The site is to be isolated and investigated by a heritage consultant. Approval to proceed required prior to re-commencing works. Label any known heritage items on Environmental Control Maps.	**P**	**2**	**M**

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
Works at the Sydney Terminal and Central Railway Station curtilage (SHR no.01255).	Damage to listed heritage item.	**U**	**3**	**M**	No impact to significant heritage fabric is permitted during works. The heritage requirements for non-destructive digging will be included at each pre-start meeting and possession briefings.	**R**	**3**	**L**
Flora & Fauna								
Removal of flora without approval.	Failure to identify flora prior to removal.	**R**	**3**	**L**	Only vegetation adjacent to Platform 16 will be removed.	**R**	**1**	**L**
Traffic								
Loss of on-street car parking in adjacent residential streets and commercial areas during investigation works.	Loss of parking availability to adjacent residential and commercial properties could result in community complaints.	**P**	**3**	**M**	Community notifications. Site vehicles shall be parked within the rail corridor and not affect public parking area No road/lane closures required.	**U**	**3**	**L**
Management of heavy vehicles / access routes.	Complaints from sensitive receivers due to increased level and frequency of noise.	**P**	**3**	**M**	Deliveries of plant and materials shall be undertaken outside of peak periods where possible Site vehicles shall be parked within the rail corridor and not affect public parking areas Scheduled road movements shall be minimised where possible Oversized deliveries would be undertaken in accordance with the requirements of NSW Police or Roads and Maritime Services. Designated heavy vehicle access routes given to contractors/suppliers. Community Notifications.	**U**	**3**	**M**

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
					Pedestrian management with traffic controller in place where required.			
Truck deliveries out of normal working hours (un-approved).	Noise impact to community / potential complaints.	**P**	**3**	**M**	Induction on approved working hours for deliveries. Communication of delivery times to suppliers. Community Notifications on project activities occurring locally. Approved traffic/access routes. Planning and staging of works in approved hours as much as practical.	**U**	**3**	**M**
Resources and Energy Use								
Energy consumption by plant and equipment.	Inappropriate energy use, waste of energy recourses, energy wastage costs, increased greenhouse gas emissions.	**U**	**2**	**L**	No idling of plant equipment where possible onsite. Equipment / plant equipment inspections must be undertaken prior to use on site.	**R**	**2**	**L**
Resource usage (e.g. building materials, water, fuels, packaging), waste generation and disposal	Depletion of resources due to wastage (e.g. wastage of water / no recycling, poor management of procurement, ineffective removal of off-cuts, waste, i.e. no recycling).	**U**	**2**	**L**	Recycled aggregate to be considered to backfill trenches. Subcontractor's agreements to include project compliant waste management principles. Waste management undertaken in accordance with the *Waste Avoidance and Resource Recovery Act 2001*. Only sufficient materials to complete the works will be procured.	**U**	**2**	**L**

For each identified issue, consider the 'maximum credible' (not absolute worst case) risk that could result with **minimal or no controls** other than existing and using normal work practices.

Note: Any one of the listed consequences must result in the use of the applicable consequence grading.

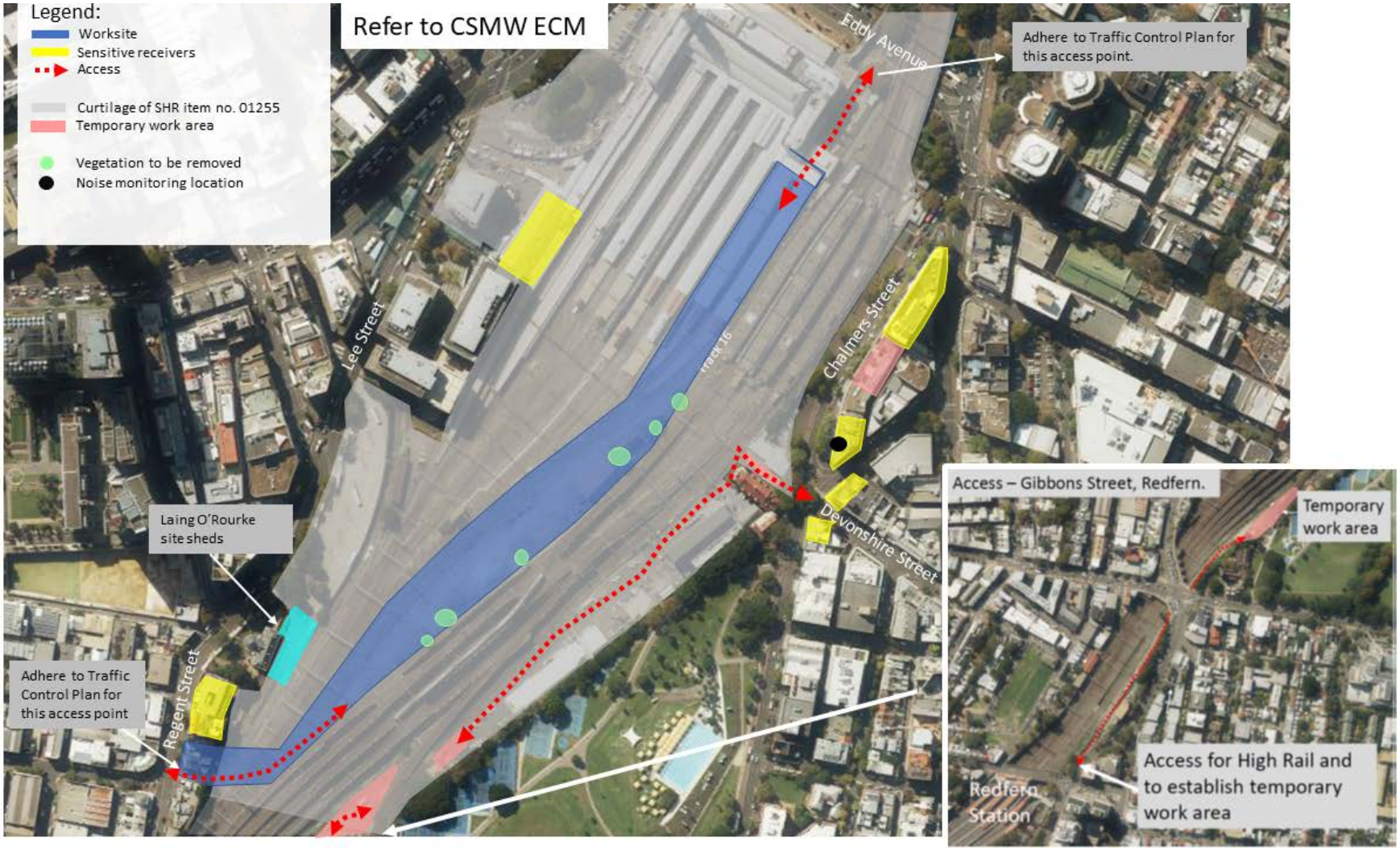
Probability:	**Consequence:**
5 = Certain **4** = Likely **3** = Possible **2** = Unlikely **1** = Rare	**5** = Severe **4** = Major **3** = Moderate **2** = Minor **1**= Incidental
1- 4 Acceptable 5 - 9 Acceptable with control measures 10 - 16 Requires the implementation of best practice 17 and Above = UNACCEPTABLE	

5	Certain	– Common or repeating occurrence – Consequence can reasonably be expected to occur in life of Project.	5	Severe	– Major pollution incident causing significant and widespread damage or potential to health or the environment – Persistent reduction in ecosystem function and value. – Ongoing disruption and loss of protected species. – Major prosecution likely, outcome in excess of $500,000
4	Likely	– Known to have occurred / “has happened” – Conditions may allow the consequence to occur on the Project during its lifetime – The event has occurred within the Business Unit within the previous 5 years.	4	Major	– Significant widespread and persistent changes to habitat, species or environmental media – Significant pollution incident causing damage or potential damage to health or the environment external to the site. – Potential for prosecution. Potential outcome between $50,000 - $500,000 – Numerous substantial complaints – Actual material environmental harm
3	Possible	– Could occur / “heard of it happening” – Exceptional conditions may allow consequences to occur on the Project, or has occurred nationally within the Australian Business.	3	Moderate	– Localised irreversible habitat loss or effects on habitat, species or environmental media – Reportable incident to the relevant environmental regulator or other authority. – Demonstrated breach of legislative, licence or guideline requirements. – Likely infringement notice or fine, potential for prosecution up to $50,000. – Will cause complaints.
2	Unlikely	– Not likely to occur – Reasonable to expect that the consequence will not occur on the	2	Minor	– Localised degradation of habitat or short term impacts to habitat, species or environmental media. – Pollution incident that marginally exceeds licence conditions or guidelines for acceptable

		Project. – Has occurred in industry but not in Business Unit.			pollution. – Fine unlikely. – Potential for complaints.
1	Rare	– Practically impossible – Not known to have occurred in industry or unheard of.	1	Incidental	– Localised or short term effects on habitat, species or environmental media. – Fully contained on site and can be fully remediated. Little potential for fine or complaints. – Insignificant or trivial incident

Probability ►	CERTAIN	LIKELY	POSSIBLE	UNLIKELY	RARE
▼Consequence	5	4	3	2	1
5 – Severe	25	20	15	10	5
4 – Major	20	16	12	8	4
3 – Moderate	15	12	9	6	3
2 – Minor	10	8	6	4	2
1 – Incidental	5	4	3	2	1

Central Station Main Works 002 ECM



Environmental Management - Environmental Control Map Central Station Main Works 001	
Investigative Work / Environmental Aspect	**Description**
Works	- Visual inspections across the whole site - Non-destructive digging for the combined services route (CSR) and galvanised steel trough (GST) post locations in Sydney Yard. - Non-destructive digging in the location of the ULX in Sydney Yard - Non-destructive digging in the location of signal bases, LOC bases and any other infrastructure in Sydney Yard - Vegetation removal in Sydney Yard - Hazmat and archival recording of buildings on platforms 12/13 and 14/15 and in Sydney Yard - Construction of the footings for the padmount substation in Sydney Yard - Construction of the padmount substation in Sydney Yard
Program	- Pre-possession scope April 23 to June 8 2018 - Standard construction hours - Possession scope June 9-10 2018 (weekend 50) - 0600 Saturday to 1800 Sunday (OOHW) - Pre-possession scope 11 June to 10 August 2018 – Standard construction hours - Weekend work 7-8 July 2018 - 0600 to 1800 Saturday and Sunday
Induction / General	• All staff and contractors to be trained on the sensitive heritage environment they are working in and the location of sensitive receivers near the works, the worksites and access points. Other relevant environmental issues will also be discussed. • Daily pre-start/toolbox meetings to include this Environmental Controls Map and to address specific day to day environmental concerns. • This ECM will be displayed on site at worksites and accommodation.
Soils and water	• Existing stormwater drainage points and swales will be identified during initial site walks to allow installation of stormwater protection prior to any excavation works. • Sandbags / silt socks to be placed around drain inlets adjacent/downslope investigative excavation works. • All vehicle wheels to be clean prior to exiting site.
Air Quality	• All vehicle and machinery movements during works is restricted to designated areas. • All site vehicles and machinery would be switched off or throttled down to a minimum when not in use.
Waste	• No spoil to be removed from or imported onto site without approval. • Maintain waste dockets for the site.
Heritage	• The State Heritage listed Sydney Terminal and Central Railway Station curtilage (SHR no.01255) is at the proposed works. • If intact subsurface elements are uncovered during the works all work in the vicinity of the find must cease and appropriate advice would be sought from OEH and/or heritage consultants. Work in the vicinity of the find would not re-start until clearance has been received. • If previously unidentified Indigenous heritage items are uncovered during the work, all work in the vicinity of the find must cease and appropriate advice would be sought from OEH and/or heritage consultants. Work in the vicinity of the find would not re-start until clearance has been received. • Unexpected finds of heritage items must be reported to Sydney Metro. • No impact to significant heritage fabric is permitted during works.
Noise and Vibration	• Residential receivers on Chalmers, Devonshire, Regent and Gibbons Streets (those within the vicinity of the access points and work sites and with a direct line of sight) will be notified of the works via letter box notifications. • All plant used regularly on site will have non-tonal alarms.

	• Schedule noisy activities during daytime hours as far as practical. • Turn off plant that is not being used. • Ensure plant is regularly maintained, and repair or replace equipment that becomes noisy. • Noise monitoring will be carried out to validate noise predictions and also in response to any complaints. • All out of hours works require approval from the Environmental Manager. • All works will be completed in compliance with Sydney Metro CEMF, SSD 15_7400 Planning Approval, Construction Noise Strategy and EPL 12208 requirements. • Community notifications will be drafted and sent to Sydney Metro Community Liaison team.
Traffic and Transport	• Access to site will be from existing access gates on Chalmers/Devonshire Streets, Gibbons Street, Redfern, Eddy Avenue and Regent Street. • Plant movements are restricted to the designated traffic routes. If plant is required to be delivered outside of normal hours due to safety concerns contact Environmental Manager. • Access requirements will be managed by using existing driveways and hard stand roads into the site areas. • All site vehicles shall be parked within the rail corridor and not affect public parking areas. • All delivery drivers will be briefed on the sensitive nature of the site given its State Heritage listing. • Additional traffic control will be implemented as required. • All vehicles to enter rail corridor immediately on arrival to gate. • Plant and vehicles engines to be switched off when not in use, with engine idling minimised as much as possible. • Adhere to the TCP for access on the Sydney Yard Access Bridge and Eddy Avenue.
Utilities	• Any impacts to utilities will be reported to site HSE Manager, supervisors, Sydney Trains and Sydney Metro.
Biodiversity	• Only vegetation adjacent to Track 16 is to be removed. • If fauna is encountered on site – stop work and contact the site supervisor. • Trenches/excavations would be covered at the end of each day and inspected before they are backfilled to ensure no fauna species are harmed. • Vegetation will be removed in accordance with Sydney Metro Tree Report (2018).
Chemical and fuel storage and use	• No fuels or hazardous materials to be stored on site for minor works. • Spill kits to be onsite when using plant/equipment. • No major servicing of equipment to be undertaken onsite. • Pre-mobilisation checks on all plant/equipment to come to site, including check of fuel and hydraulic leaks.
Imported materials	• All sources of imported materials (backfill trench material) must be approved and sourced by appropriately licenced supplier.
No-go zones	• Any activities outside the CSMW site boundary will undergo a review for potential environmental impacts and require approval from Sydney Metro.

Contact Information		
Position	**Name**	**Phone**
LOR Project Leader	Jamie Jack	0477 355 531
LOR/Sydney Metro Communications Manager	Peter Whelan	0403 133 490
LOR Environmental Manager	Chris McCallum	0408 264 164
LOR WHS Manager	Richard Keys	0408 966 187
Environmental Representative	Annabelle Reyes	0416 170 480
Sydney Metro Environment Manager	Andrew Hendy	0475 983 494
Sydney Metro City and Southwest Info Line	1800 019 989	
Sydney Trains Info Line		131 500
TfNSW Construction Response Line		1800 775 465
TfNSW Info Line		1800 684 490
Environmental Line / Pollution Incident Response Line		131 555
Office of Environment & Heritage Pollution Line		131 555
Emergency		000 or 112 (mobiles)
WIRES		1300 094 737

Standard Working Hours

Unless otherwise approved by the Environmental Manager, works will be restricted to:

- **7:00AM to 6:00PM - Monday to Friday**
- **7:00AM to 1:00PM - Saturdays**

No work on Sundays or public holidays.

Any works outside of the hours above require OOHW and Environment Managers Approval

Appendix 2: Cover Page

Environmental Management Documentation

Central Station Main Works – Early Works: Archaeological Method Statement

Project: Sydney Metro – Chatswood to Sydenham	**Date:** 20 April 2018
Project site: Central Station Main Works	**Author:** Shona Lindsay (Senior Heritage Consultant); Dr Iain Stuart (Excavation Director - Historical), Dr Sandra Wallace (Excavation Director – Aboriginal)
Contractor: Laing O'Rourke	**Contact:** Chris McCallum

Background

This Archaeological Method Statement (AMS) outlines the archaeological methodology to manage early works to avoid impacts to non-Aboriginal archaeological sites and relics and Aboriginal objects at the Central Station Main Works site. Heritage items, including archaeological sites, relics and Aboriginal objects, cannot be impacted prior to approval of the Construction Environmental Management Plan (CEMP) and heritage sub-pan in accordance with the Minister's Conditions of Approval for the Sydney Metro City & Southwest - Chatswood to Sydenham project.

The methodology has been informed by, and is in accordance with, the following project assessment and management documents:

- Artefact Heritage 2016a. Sydney Metro City & Southwest - Chatswood to Sydenham Non-Aboriginal Archaeological Assessment and Research Design (AARD)
- Artefact Heritage 2016b. Sydney Metro City & Southwest - Chatswood to Sydenham Aboriginal Cultural Heritage Assessment Report (CHAR)
- Artefact Heritage 2017. Central Walk – Addendum AARD
- Transport for NSW 2017. Sydney Metro Unexpected Heritage Finds Procedure
- Transport for NSW 2018. Sydney Metro Exhumation Management Plan

Approval framework

The CEMP including the heritage sub-plan for the approved Central Station Main Works project has not yet complied with Conditions C1 to C7 of the Minister's Conditions of Approval for the Sydney Metro City & Southwest - Chatswood to Sydenham project.[1] The Heritage Division of the NSW Office of Environment and Heritage (OEH) and the relevant local councils are required to review the CEMP heritage sub-plan prior to its publication, in accordance with Conditions C1 and C3 of the CSSI approval.

The Conditions of Approval stipulate that low impact work, such as investigative excavations, is able to be undertaken prior to the approval of the CEMP heritage sub-plan unless heritage items

[1] NSW Government Department of Planning & Environment, 2017. *Critical State Significance Infrastructure Sydney Metro City & Southwest Chatswood to Sydenham Conditions of Approval*.

(including significant archaeological sites, relics and Aboriginal objects) are affected or potentially affected.[2]. This AMS is required to act as a framework to facilitate the avoidance of impacts to archaeological heritage items as defined by the approval, during early works.

Condition E17 stipulates requirements for AMS documents. As this AMS relates only to early works, and does not provide for mitigation of impacts to significant archaeological remains, the Condition E17 would not be met at this stage. An additional AMS, or several work stage specific AMS documents, would be provided for construction works at a later date.

Condition E18 requires the nomination of an Excavation Director who complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July 2011). Information on the nominated Excavation Director and archaeological team have been provided for approval by the Heritage Division as a delegate of the NSW Heritage Council.

Archaeological Resources

Archaeological resources at the Central Station site are related to the former Devonshire Street cemetery, First and Second Railway Station expansion, Third Central Station, and the expansion of Central Station in the twentieth century and associated upgrades. The Devonshire Street Cemetery was the second formal burial ground established in the colony in 1820, and continued in use until the 1860s. The First Station was constructed in 1855 and the Second Station was built in 1874. The Third Central Station was constructed between 1906-1926 during large-scale expansion of Central Station.

The plan of archaeological management for the Central Station Main Works site prepared as part of the Sydney Metro City & Southwest - Chatswood to Sydenham AARD and amended in accordance with the Central Walk CSSI modification has been reproduced in Figure 1(Artefact 2016a and 2017).

Proposed Works

The proposed early works that include excavation are:

- **Preparation of Platforms 20/21 and 22/23 for the future installation of staircases to provide temporary access to the platforms via the existing Olympic Tunnel** - The works to Platforms 20/21 and 22/23 involve the removal of an approximately 7m by 4m area to a depth of approximately 2m on each platform, located to the north of the centre of the platforms. Prior to works, temporary hoarding around the area of works and protection for the nearby canopies and posts would be installed. These works would be undertaken by first cutting and removing the tiles and concrete slab of the platforms within the 7m by 4m area, use of a low headroom drilling rig to install bored piles through the platforms around the area to excavated, and removal of the platform structure/fill in the area. Given the sequencing of construction activities for the Olympic stairs, further excavation to reach the Olympic Tunnel, the installation of stairs, and installation of balustrading is anticipated to occur post approval of the CEMP.
- **Combined services route (CSR), galvanised streel trough (GST) & under line crossing (ULX) potholing and excavation** - The works for the CSR route would include NDD to locate services, excavate fill, place conduits, then compact the area. The installation of GST would be along the side of the retaining wall south of platform 15 up to the existing buildings to be

[2] NSW Government Department of Planning & Environment, 2017. *Critical State Significance Infrastructure Sydney Metro City & Southwest Chatswood to Sydenham Conditions of Approval*, p. 6.

demolished. This would be located in the same location as existing GST. The installation of ULV and comms routes would utilise existing network

- **Gas works investigation** - The construction methodology for potholing (NDD) would be to pressure hose sediment to loosen material. Maximum 2000psi so as to not damage services and vacuum up loose fines.
- **Overhead wire (OHS) footing potholing and excavation on Platform 10/11** - The works to prepare Platform 10/11 for the future installation of overhead wire structure involve saw cutting and removal of sections of the tiles and concrete slab and potholing and NDD to identify existing services. A 6 tonne excavator would remove the fill The area would measure 1750 mm to 1200 mm by up to 4m in depth. Note that the proposed early works do not include the installation of overhead wire structures.
- **Track infrastructure foundations potholing and excavation** – NDD methodology as above.
- **Platform zero potholing for new location of temporary office amenities** – NDD methodology as above.
- **SYAB padmount potholing & excavation as part of Central Station Main Works.** - The padmount potholing and excavation would involve NDD within a 4m x 3m footprint, then a 6 tonne excavator would be used to excavate to a depth of 1.5 m. A dumpy would be used to remove and place fill then a compactor would level the area. A form reo would pour a concrete slab and a hiab truck would be used. The area would then be drilled for an electrical conductor down to a depth of 4m.

The location of the proposed early works is presented in Figure **2**.

Figure 1: Archaeological management plan for Central Railway Station including Central Walk (Source: Artefact 2016: 333 modified for Central Walk)

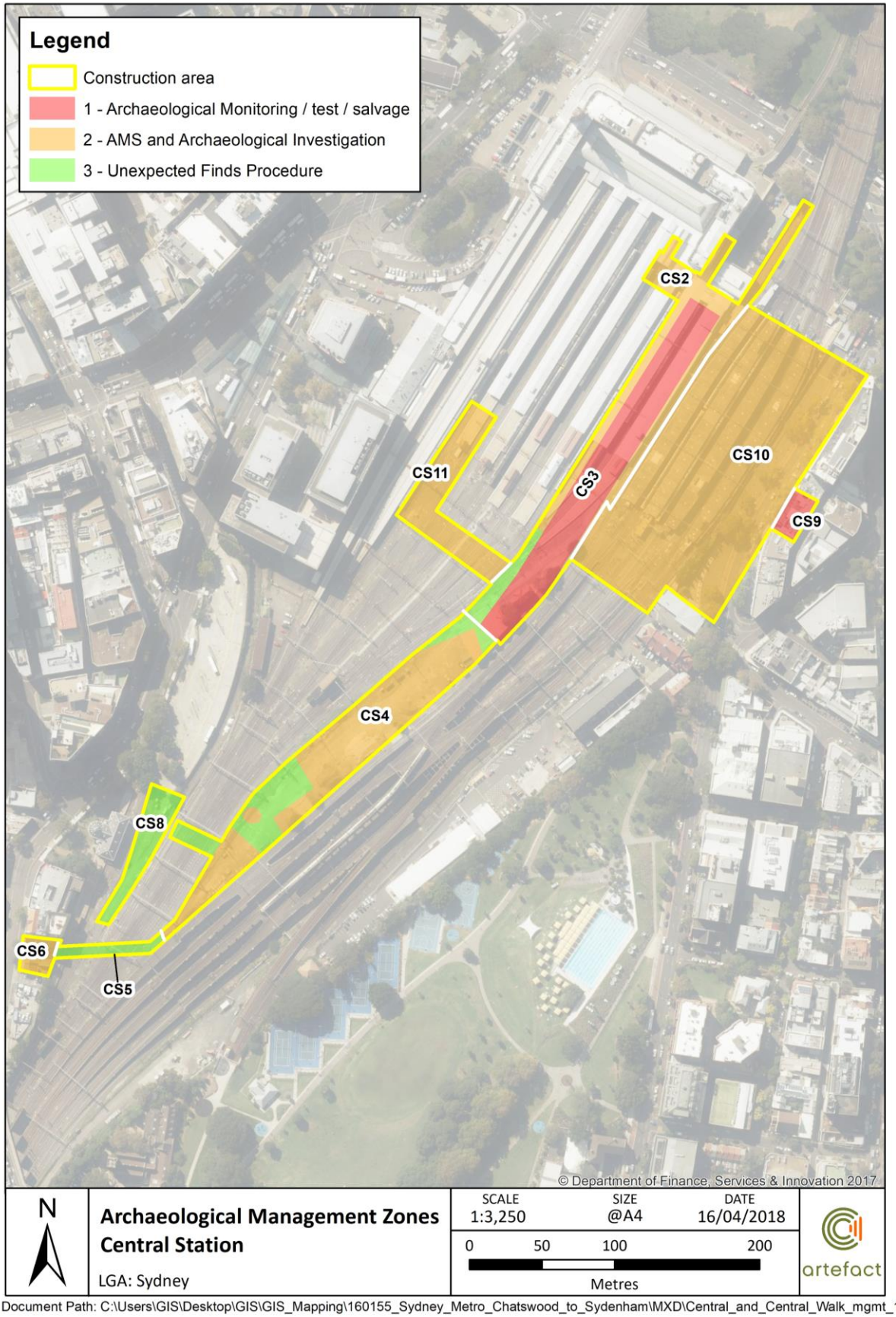


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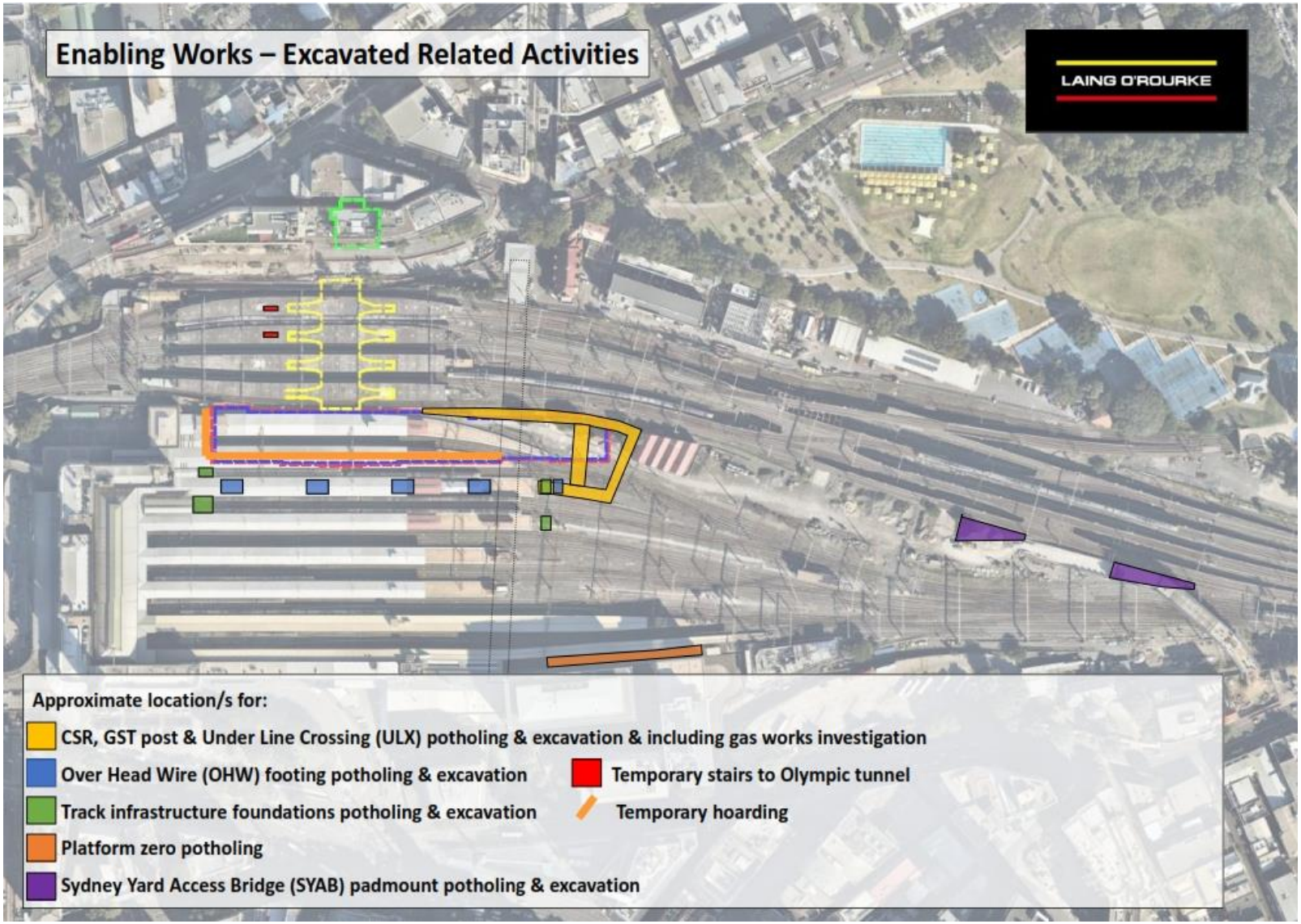
Figure 2: Plan of proposed excavation works (Source: Laing O'Rourke)



Land Use Summary

A detailed historical context is included in the AARD (Artefact 2016a) and is not reproduced here. In the AARD, European occupation of the Central Station study area has been divided into four distinct phases of historical activity, which are:

- Phase 1 (1788 – 1855) early European settlement and the Devonshire Street Cemetery. Early land use associated with the construction of early brick and sandstone buildings, road building, wall construction, pasturage and the development of the Devonshire Street cemetery.
- Phase 2 (1855 – 1900) first and second railway stations. Land use predominantly associated with the development of Sydney's first railway station and the expansion of the railway station. Earthworks and industrial rail infrastructure developed on the site at this time. Road building and grading in the area as nearby subdivisions are laid out and built on. Construction of early water and sewerage infrastructure.
- Phase 3 (1900 – 1930) twentieth century land resumptions and station expansion. Land use predominantly associated with the enlargement of Central station north of Devonshire Street and the large-scale earthworks required for this expansion. Exhumation of burials. Excavation of large areas of tunnels, basements and below station services. Renovation of existing station sidings and facilities in southern part of the station.
- Phase 4 (1930 – present) mid- to late-twentieth century station modifications. Further excavation of below-ground service tunnels and new underground platforms. Redevelopment of carriage sheds and rail sidings areas.

Recent archaeological investigations

Sydney Yard Access Bridge (SYAB)

Artefact Heritage were engaged by Laing O'Rourke to archaeologically manage construction activities for the SYAB, which is part of the Sydney Metro City & Southwest – Chatswood to Sydenham project. The construction of SYAB involved excavations within Sydney Yards in CS 4. Monitoring works in November 2017 uncovered brick remains of a former structure, likely associated with the 'Railway Shop' which was part of the 'second station' development phase of Central Railway Station. The remains were assessed as being of local significance.[3]

CBD and South East Light Rail (CSELR)

Artefact Heritage were engaged by Acciona to archaeologically manage investigation and construction activities for the CBD and South East Light Rail (CSELR) project. The utility and civil works involved excavations within the Former Radio Workshop of Central Station, and within the road corridors of the surrounding streets.

Archaeological test excavations at the intersection of Eddy Avenue and Pitt Street undertaken by Artefact Heritage in May 2017 encountered the remains of a brick barrel drain. The feature was interpreted as being the remains of a brick drain depicted in Map 36 of the 1865 Trigonometrical Survey of the City of Sydney. Metal tracks and timber sleepers associated with the former tramways

[3] Artefact Heritage December 2017. *Memo – Archaeological monitoring summary report.*

were also exposed within the intersection. The remains of the drain and the tramway were assessed as being of local significance.

Preliminary investigative works monitored by GML in February 2014 identified a possible bottle dump and sandstone block at the corner of Chalmers Street and Eddy Avenue. In July 2017 the bottle dump was encountered during NDD works monitored by Artefact Heritage. The area was shown to be heavily disturbed by existing services and the bottle dump had likely been previously excavated and then redeposited. No evidence of the sandstone block identified by GML was uncovered.

NDD works within the Former Radio Workshop in Central Station undertaken in September and October 2017 uncovered the remains of former brick and trachyte block floor surfaces beneath the modern floor of the structure. The remains were assessed as being of local significance.

In March 2018 a brick and concrete structure was identified during NDD investigative works within Prince Alfred Park. The structure was identified as likely being associated with 20th century utilities. The remains were assessed as unlikely to reach the threshold of local significance.

In March 2018 a substantial sandstone structure was identified on the west side of Elizabeth Street during trenching for the installation of a conduit alignment. The feature was identified as likely representing the remains of the boundary wall of the former Devonshire Street Cemetery. The remains were assessed as potentially being State significant.

Additional archaeological test excavations and monitoring undertaken by Artefact Heritage between 2016 and 2018 also encountered numerous services along Eddy Avenue, Elizabeth Street, and Chalmers Street. These included terracotta and metal pipes, and brick service pits. These were assessed as unlikely to reach the threshold of local significance. No evidence of human burials or remains were identified within the former boundaries of the Devonshire Street Cemetery. No evidence associated with Carter's Barracks or the Benevolent Asylum have been identified along Eddy Avenue or Pitt Street.

It is noted that the excavation works and analysis of the remains for this project are still underway.

Non-Aboriginal Archaeological Resources

The following section outlines the potential archaeological remains for each site code within the study area and archaeological significance and has been divided by phase. It has been adapted from the AARD (Artefact 2016a).

Table 1: Summary of potential archaeological remains at the Central Station site

Site Code	Phase	Likely archaeological remains	Potential	Significance
CS 2	**1 (1788 – 1855)**	Devonshire Street Cemetery located in this area. No documented structures located within this area. Area contained graves, tombstones and grave cuts. The area was located in the Church of England, Presbyterian, Wesleyan and Roman Catholic burial grounds. Potential archaeological remains such as skeletal material, coffin furniture, personal items such as jewellery and clothing, coffin timber, disarticulated human skeletal material and artefacts. The outer perimeter of the cemetery had a 4-foot 6-inch brick outer fence in the southern part of this area.	Low	State

Site Code	Phase	Likely archaeological remains	Potential	Significance
	2 (1855 – 1900)	Devonshire Street Cemetery located in this area, no burials continued after the 1860s. Isolated artefacts from deposited nineteenth century rubbish.	Low	State
	3 (1900 – 1930)	Third Central Station original railway platforms located in this area. Potential archaeological remains would include brick former platform surfaces and retaining walls, and former footings for original canopy supports.	Low	Local
	4 (1930 – Present)	Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure.	Nil	N/A
CS 3	**1 (1788 – 1855)**	Devonshire Street Cemetery located in this area. No documented structures located within this area. Area contained graves, tombstones and grave cuts. The area was located in the Church of England, Presbyterian, Wesleyan and Roman Catholic burial grounds. Potential archaeological remains such as skeletal remains, coffin furniture, personal items such as jewellery and clothing, coffin timber, ghosts, disarticulated human skeletal material and artefacts. The outer perimeter of the cemetery had a 4-foot 6-inch brick outer fence in the southern part of this area.	Low	State
	2 (1855 – 1900)	Devonshire Street Cemetery located in this area, no burials continued after the 1860s. Isolated artefacts from deposited nineteenth century rubbish.	Low	State
	3 (1900 – 1930)	Third Central Station original railway platforms located in this area. Potential archaeological remains would include brick former platform surfaces and retaining walls, and former footings for original canopy supports.	Low	Local
	4 (1930 – Present)	Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure.	Nil	N/A
CS 4	**1 (1788 – 1855)**	Area located within Government Paddocks, no evidence of built structures in this area. Potential for evidence of former wooden boundary fences, postholes, field drains, isolated artefact scatters.	Nil - Low	N/A

Site Code	Phase	Likely archaeological remains	Potential	Significance
	2 (1855 – 1900)	First and second railway station expansion (1855 and 1874) located in this area. This area was predominantly the location of the main rail sidings and train storage areas. Buildings consisted of stone, wood and brick train sheds and workshops, of which former footings and discarded industrial objects are likely to be present. Rail siding lines also present, likely partially remaining below modern ground surface. Rail infrastructure from this period could include former signalling equipment and rail points as well as rail beams, sleepers and ballast. A train turntable was located in this area from 1855 until 1895. The turntable was likely infilled during the third phase of Central Station's expansion in 1901. Remains associated with the turntable would include the outer brick-lining of the turntable; a metal circular rail around the lower base of the turntable supported by wooden sleepers and footings; the possible remains of a steel rail bridge used to support the locomotives; and mechanical remains of the central pivot to the rail bridge. Remnants of the original fabric of the Prince Alfred Sewer may be located in this area. Remains associated with the sewer could include sandstone culverts, sandstock brick barrel drains and isolated artefact deposits.	Moderate - High	Local – State
	3 (1900 – 1930)	East carriage shed was constructed during this period, demolished in 1987. Potential remains include postholes, footings, surfaces and artefacts.	Moderate - High	N/A
	4 (1930 – Present)	Area is predominately open ground with sealed road and side yards, with three existing structures on the site (two sheds, one brick building).	Nil	N/A

Archaeological potential

Archaeological remains associated with the following phases may be present in the proposed Central Station Main Works early works areas:

Preparation of Platforms 20/21 and 22/23 for the future installation of staircases to provide temporary access to the platforms via the existing Olympic Tunnel

- Devonshire Street Cemetery
- Third Central Station expansion
- Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure.

Combined services route (CSR), galvanised streel trough (GST) & under line crossing (ULX) potholing and excavation. Gas works investigation

- Devonshire Street Cemetery
- First and second railway expansion
- Third Central Station expansion
- Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure.

Over head wire (OHS) footing potholing and excavation on Platform 10/11

- Devonshire Street Cemetery
- First and second railway expansion
- Third Central Station expansion
- Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure.

Track infrastructure foundations potholing and excavation

- Devonshire Street Cemetery
- First and second railway expansion
- Third Central Station expansion
- Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure.

Platform zero potholing for new location of temporary office amenities

- First and second railway expansion
- Third Central Station expansion
- Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure.

Sydney Yard Access Bridge (SYAB) padmount potholing & excavation

- First and second railway expansion
- East carriage shed

Work Stage Specific Archaeological Methodology

The AMS archaeological methodology would in general meet the requirements of Chapter 12 of the project ARD which discusses details of archaeological methodologies. These requirements are not reproduced in detail, but where relevant are discussed below.

The Archaeological Method section of the AARD in relation to Central Station notes that ground disturbance and excavation works would be required.

> *Excavation work within the former Devonshire Cemetery site (Sites CS 2 and CS 3) would require archaeological management. As potential for human skeletal and burial-related remains cannot be ruled out entirely at this stage, archaeological monitoring and testing should be undertaken.*
>
> *Ground disturbance and excavation work in Sites CS 4 with potential to impact significant archaeological remains (rail-related 1850s-1900s) would require archaeological mitigation. This would be monitoring or test/salvage depending on extent of work and level of potential impact, for example, archaeological*

test/salvage in the northern part of Site CS 4 subject to bulk excavation for the station utilities structure.

In summary, the archaeological mitigation for CS 2, CS 3, and CS 4 would include preparation of an AMS (this document), and archaeological monitoring during early works due to the low potential for impacts. If significant archaeological remains, Aboriginal objects, or skeletal material are identified works must cease as impacts are not approved under early works.

It is recommended that archaeological monitoring is undertaken for all early works to manage the risk of impacting significant archaeological remains. Works may proceed under on call provisions if approved to do so by the Excavation Director. Works would cease if archaeology may be affected or impacted.

Contractor

The contractor would set up site and then operate under the direction of the archaeologists during archaeological monitoring of the early works, as appropriate. This would involve:

- Set out and secure the work area for the construction and archaeological team
- Provide a site induction to contractors in consultation with the Excavation Director.

Historical archaeological monitoring of early works

Due to the potential for archaeological resources to be located within the study area, early works involving excavation would be archaeologically monitored. **It should be noted that significant archaeological remains cannot be impacted under early works.**

Archaeological monitoring is where an archaeologist is in attendance and supervising construction excavation work with potential to expose or impact archaeological remains. Monitoring is generally undertaken where there is lower potential for significant archaeological remains and/or where minor excavation work is in an area of archaeological sensitivity.

If archaeological remains are identified during archaeological monitoring, they would be recorded, protected, and assessed to determine their heritage significance and if further investigation is required at a later date under the CMEP/CHMP and AMS. Localised stoppages in the construction work would be required to facilitate this process. Works would not recommence until the monitoring archaeologist has completed the recording and is satisfied that further investigation is not required. If needed, potholing would be relocated around any archaeological remains, as appropriate for the design bearing in mind that it is a requirement that impacts to any archaeological remains would not occur during the early works program.

A record of archaeological monitoring would be made in accordance with the methodology outlined in the AARD. This would include digital photography, in RAW format, using photographic scales and photo boards where appropriate. A photographic record of all phases of the work on site would be undertaken. Archaeological recording including the locations, dimensions and characteristics of all archaeological features and deposits will be recorded on a sequentially numbered context register.

Should hazardous materials or contaminants be identified during archaeological monitoring, ground excavation would cease until appropriate controls or remediation is conducted by Laing O'Rourke.

Human Remains

Discovery of suspected human remains would be managed under the project Unexpected Finds Policy and the Exhumation Policy (Transport for NSW 2016b; Transport for NSW 2016c). All suspected bone must be treated as potential human skeletal remains and work around them must stop while they are protected and investigated. **Human remains cannot be impacted during early works.**

Aboriginal archaeological heritage strategy

The Central Station Main Works site is within Method Area 2 as outlined in the Aboriginal Cultural Heritage Assessment Report (CHAR) (Artefact Heritage 2016b). In accordance with the provisions for MA2 Aboriginal archaeological test/salvage excavation would be undertaken where intact natural soil profiles with the potential to contain significant deposits, or Aboriginal objects, are located during historical archaeological excavations.

If intact natural soil profiles or suspected Aboriginal objects were identified during early works the Aboriginal archaeological team would be notified by the Excavation Director and a qualified archaeologist experienced in Aboriginal archaeology would assess the find**. Aboriginal objects can not be impacted during early works**, therefore archaeological management of any identified intact soil profiles would be undertaken during the construction phase and could not be further impacted during early works.

Reporting

A preliminary findings report would be prepared following completion of the works outlined in this AMS in accordance with the ARD (Artefact 2016a:314). This report would outline the main results and identify if further archaeological work would be required.

Team and timing

Archaeological team

The archaeological team would comprise:

- Primary Excavation Director – Dr Iain Stuart (JCIS Consultants/ Artefact Heritage)
- Secondary Excavation Director – Jenny Winnett (Senior Heritage Consultant, Artefact Heritage)
- Site Director – Shona Lindsay (Senior Heritage Consultant, Artefact Heritage)
- Excavation Director (Aboriginal) – Dr Sandra Wallace (Principal, Artefact Heritage)
- Forensic Anthropologist – Dr Denise Donlan (Senior Lecturer in Anatomy and Curator, Shellshear Museum, University of Sydney)
- Archaeologists – Adele Zubrzycka (Senior Heritage Consultant, Artefact Heritage), HollyMae Steane Price (Heritage Consultant, Artefact Heritage), Jessica Horton (Graduate Heritage Consultant, Artefact Heritage) and other subconsultants as needed.
- Archaeological Surveyor - Guy Hazell and Gala Hazell (ArcSurv)

The Excavation Directors meet the requirements of the AARD, CHAR and Condition E18.

Excavation timing

The excavation works would be monitored by an archaeologist as required under the direction of the Excavation Director.

The Excavation Director would be on call during the excavation works to oversee responses to unexpected finds as required.

Central Station Main Works: Early Works Statement of Heritage Impact

Project: Central Station Main Works	**Date:** 18 April 2018
Project site: Central Station	**Author:** Elanor Pitt (Heritage Consultant), Shona Lindsay (Senior Heritage Consultant), Dr Sandra Wallace (Managing Director)
Contractor: Laing O'Rourke	**Contact:** Chris McCallum

Introduction

The purpose of this Statement of Heritage Impact (SoHI) is to provide an impact assessment for the early works required to facilitate construction of the Central Station Main Works, approved under the Sydney Metro City & Southwest Chatswood to Sydenham project. This SoHI provides a brief background for the project, outlines the proposed works, summarises the heritage listings and significance of Central Railway Station Group and elements, assesses the potential heritage impact to Central Railway Station Group as a result of the early works and provides mitigation measures to minimise potential impact.

Background

The Sydney Metro City & Southwest Chatswood to Sydenham project involves the construction of a new metro rail line between Chatswood and Sydenham. New metro stations will be provided along the line. As part of the project, new underground platforms will be constructed at Central Station along with other modifications to upgrade sections of the station to metro standard. This part of the project is known as Central Station Main Works.

As part of the Sydney Metro City & Southwest Chatswood to Sydenham project, the Central Station Main Works project has Critical State Significant Infrastructure (CSSI) approval (SSI15_7400). The Environmental Impact Statement (EIS, May 2016) for the project included a Non-Aboriginal Heritage Impact Assessment (HIA) prepared by Artefact Heritage in April 2016.[1] The HIA identified the heritage and archaeological impact of the proposed corridor and associated works, including proposed works at Central Station.

Early Works

The aim of this SoHI is to assess the proposed impacts of the early (enabling) works for the Central Station Main Works project.

[1] Artefact Heritage Services, 2016. *Sydney Metro City & Southwest – Chatswood to Sydenham Technical Paper 4 – Non-Aboriginal Heritage Impact Assessment*. Report to Jacobs / Arcadis / RPS. Version dated 12 April 2016.

The CEMP including the heritage sub-plan for the Central Station Main Works project is currently being developed in accordance with Conditions C1 to C7 of the Minister's Conditions of Approval for the Sydney Metro City & Southwest - Chatswood to Sydenham project.[2] The Heritage Division of the NSW Office of Environment and Heritage (OEH) and the relevant local councils are required to review the CEMP heritage sub-plan prior to its publication, in accordance with Conditions C1 and C3 of the CSSI approval.

The Conditions of Approval stipulate that low impact work is able to be undertaken prior to the approval of the CEMP heritage sub-plan unless heritage items are affected or potentially affected.[3]. This SoHI is required to act as a framework to facilitate the avoidance of impacts to archaeological heritage items as defined by the approval, during early works.

The early works for Central Station stipulated in the Sydney Metro City & Southwest - Chatswood to Sydenham Staging Report (v3.1, February 2018), prepared to meet Conditions A12 to A15 of the CSSI approval, include works to Platforms 12 to 15 as well as customer continuity works to reduce construction impacts and to ensure the effective operation of Central Station, a new eastern concourse to connect future metro platforms to a new Chalmers Street entry and connections to the existing aboveground suburban platforms (and associated platform works).[4]

Proposed Works

The works proposed to be included as part of the early works at Central Station involve preparation of Platforms 20/21 and 22/23 for the future installation of staircases to provide temporary access to the platforms via the existing Olympic Tunnel and preparation of Platform 10/11 for the future installation of overhead wire structures. Note that the proposed early works to the Olympic Stairs do not include further excavation to reach the Olympic Tunnel, the installation of stairs, balustrading or overhead wire structures as the timing of works will be in the Construction phase after CEMP approval.

Temporary hoarding will be installed around the area of works on Platforms 20/21 and 22/23, around the northern and western boundaries of the area of works to Platforms 12/13 and 14/15 and temporary scaffolding for access will be installed over the sandstone and iron fence during the installation phase only of the temporary buildings adjacent to Platform 0.

Early works also include the construction of temporary offices on Platform 0 and hazmat material testing in the Rolling Stock Officers Building and Cleaners Amenity Block in the Sydney Yards.

Heritage Listings

A search of all relevant registers was undertaken on 4 April 2018. The results are displayed below in Table 1 and Figure 1.

The Heritage Item

The study area, Platforms 10/11, 20/21 and 22/23 of Central Station, are located within the Sydney Terminal and Central Electric Precincts of the State significant heritage item, Sydney Terminal and

[2] NSW Government Department of Planning & Environment, 2017. *Critical State Significance Infrastructure Sydney Metro City & Southwest Chatswood to Sydenham Conditions of Approval*.
[3] NSW Government Department of Planning & Environment, 2017. *Critical State Significance Infrastructure Sydney Metro City & Southwest Chatswood to Sydenham Conditions of Approval*, p. 6.
[4] Sydney Metro Delivery Office, 2018. *City & Southwest Chatswood to Sydenham Staging Report*. Revision v3.1, dated 15 February 2018. Prepared for TfNSW. Section 3.2.3.

Central Railway Stations Group (Central Station) (SHR Item No. 01255).[5] Central Station is listed on the NSW State Heritage Register (SHR), the Sydney Local Environmental Plan (SLEP) 2012 and the RailCorp Section (S.) 170 Heritage and Conservation Register (RailCorp S.170), as shown in Table 1 and Figure 1 below. The study area is also part of an item listed on the non-statutory Register of the National Estate (RNE).[6] The study area is not listed or in the vicinity of any items on the Commonwealth Heritage List or the National Heritage List.

Mortuary Station is located on Regent Street to the southwest of the Central Station SHR curtilage. It is at a distance from the works assessed in this SoHI so it is not included in the detailed impact assessments below.

Table 1: Heritage registers search results.

Item	Significance	Listing
Sydney Terminal and Central Railway Stations Group	State	SHR (Item No. 01255)
Central Railway Station group including buildings, station yard, viaducts and building interiors	State	SLEP 2012 (Item No. I824)
Central Railway Station and Sydney Terminal Group	State	RailCorp S.170 (SHI No. 4801296)
Mortuary Station	State	State Heritage Register 00157 Included in the 'Sydney Terminal and Central Railway Station Group' SHR item no. 01255 Sydney Trains S170 Sydney LEP 2012 I194

Statement of Significance for the Heritage Items

The Statements of Significance for Central Station (Sydney Terminal and Central Railway Stations Group), Sydney Terminal Precinct, Country and Interstate Platforms (Platforms 1-15), Central Electric Precinct and the Above Ground Platforms (Platforms 16-23), as well as the pertinent areas of the Western Yard and Sydney Yards, have been extracted in full from the *Central Station Conservation Management Plan* 2013 (CMP), prepared for NSW Transport RailCorp by the NSW Government Architect's Office and Rappoport Pty Ltd. These Statements of Significance are provided in the Appendix of this report.

[5] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013. Central Station Conservation Management Plan, NSW Transport RailCorp, Section 5.0 Central Electric, p. 1.
[6] The Register of the National Estate is no longer recognised as a statutory heritage list, though it is still used as an inventory of Australian heritage places registered between 1976 and 2007.

Figure 1: Listed curtilage for Central Station

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Grading of Elements

Sydney Terminal Country and Interstate Platforms (Platforms 1-15)

The Country and Interstate Platforms (Platforms 1-15) to the south of the Main Concourse, of which Platform 10/11 is a part, were originally built in 1906 as part of the third Central Station Terminus. The platforms were originally built with brick walls beneath the level of the platform and with timber-framed platform awnings, clad with corrugated iron (Figure 2). The original platform and awning on Platform 10/11 are still extant.[7]

In 1913, a room for cleaning water bottles and glasses was built at the south end of Platform 10/11. The brick store on Platform 10/11 was constructed in the mid to late 20th century and was refurbished in the early 2000s. The platforms were extended with concrete walls in the late 1990s prior to the 2000 Sydney Olympics, as part of the 1998 Olympic Enhancement Project. The existing brick paving was constructed on top of the previous surface of the platforms as part of the late 1990s works to raise the level of the platforms. As part of the Olympic Enhancement Projects, the awnings of Platform 10/11 were extended to the south and the platform was truncated at the northern end to allow for the extension of the concourse at the northern end of Platforms 11-14 (Figure 3).[8]

The significance of the relevant individual elements within the Country and Interstate Platforms (Platforms 1-15) area of the Sydney Terminal Precinct are provided in Table 2 below, extracted from the 2013 CMP. Note that Platform 0 is included in this assessment.

Table 2: Gradings of Significance and Condition for the Sydney Terminal Precinct at Central Station.[9]

Element	Date	Significance	Condition
Country and Interstate Platforms Overall	1906-Contemporary	Moderate	Good
Platforms (original 1906 brick supporting walls and c.1990s concrete extension)	1906	Moderate	Good
Brick paving (all platforms, including original sections and extensions)	c.1998	Moderate	Good
Platforms 1-3 Awnings and Columns(includes Platform 0)	1990s	Little	Good
Platforms 8-15 Awnings, Skylights. Columns and Trusswork	1906 (timber)/20th century (steel)	Moderate	Fair/Good
Platform Goods Lifts	c.1906	Moderate	Fair
Original Platform Lift Mechanism	1906	High	Good

[7] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 3.0 Sydney Terminal Precinct, 3.12 Country and Interstate Platforms, pp. 1-9.
[8] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 3.0 Sydney Terminal Precinct, 3.12 Country and Interstate Platforms, pp. 1-9.
[9] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 3.0 Sydney Terminal Precinct, 3.12 Country and Interstate Platforms, pp. 1-9.

Element	Date	Significance	Condition
Brick Stores (Platforms 8-11)	Mid-late 20th century (on Platform 10/11), altered early 2000s	Moderate	Fair
Information Boards, Vending Machines, Signage & Wayfinding	Contemporary	Little	Good
Platform Furniture	Contemporary	Little	Good
Introduced Services; Mechanical, Electrical, Lighting & Data	Contemporary	Intrusive	Good
Platform 10/11 Clock	c.1906	Moderate	Fair

Figure 2: Typical original awnings on the Sydney Terminal platforms and the c.1998 brick paving tiles (Source: Rappoport, 2013).

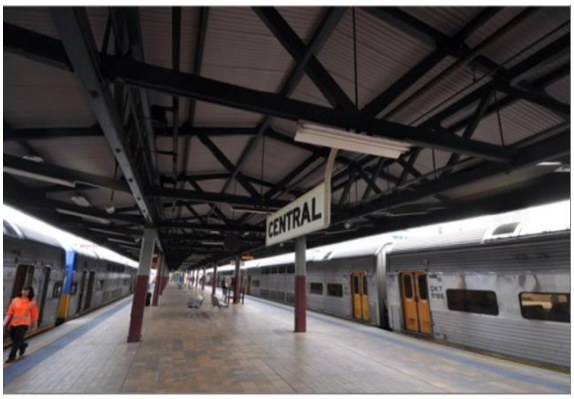


Figure 3: Typical awning extension on the Sydney Terminal platforms and extant balustrading (Source: Rappoport, 2013).

Central Electric Above Ground Platforms (Platforms 16-23)

The four island platforms of the Central Electric Station, known as the Above Ground Platforms (Platforms 16-23), were built between 1922 and c.1926 as part of the electrification of Central Station. The platforms were originally accessed by the Northern Concourse below the track level, with a staircase connecting it to the Main Concourse. The platforms were built with corbelled brick supporting walls with a rendered brick top course, which are still extant (Figure 4). The still extant original awnings were built from reinforced concrete slabs supported by steel columns and trusses (Figure 5). The original asphalt surface of the platforms has been covered by the c.1998 brick tiles used to raise the level of the platforms. In c.2000, goods and passenger lifts were constructed at the northern end of the platforms to access the Northern Concourse.[10]

The significance of the relevant individual elements within the Above Ground Platforms (Platforms 16-23) area of the Central Electric Precinct are provided in Table 3 below, extracted from the 2013 CMP.

[10] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 5.0 Central Electric Precinct, 5.4 Above Ground Platforms, pp. 1-5.

Table 3: Gradings of Significance and Condition for the Central Electric Precinct at Central Station.[11]

Element	Date	Significance	Condition
Above Ground Platforms Overall	1922-c.1926	Moderate	Good
Platforms and Original Asphalt Platform Surface	1922-c.1926	Moderate	Fair
Brick Paving	c.1998	Moderate	Fair
Corbelled Platform Walls	1922-c.1926	Moderate	Good
Iron Balustrades and Sign Brackets	1922-c.1926	Moderate	Good
Concrete Platform Roofs, Columns and Trusswork	1922-c.1926	High	Good
Stairs to Subway Tunnels and Northern Concourse	1922-Mid 20th Century	Moderate	Good
Central Signs/Signage and Wayfinding	Mid-20th century/ contemporary	High/Little	Good
Mid to Late 20th Century Platform Sheds	Mid to Late 20th Century	Little	Good
c.2000 Metal Clad Platform Sheds	c.2000	Little	Very Good
Lifts (northern platform ends)	c.2000	Little	Very Good
Introduced Services; Mechanical, Electrical, Lighting & Data	Late 20th century/ contemporary	Intrusive	Good
Furniture	Contemporary	Little	Good

[11] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 5.0 Central Electric Precinct, 5.4 Above Ground Platforms, pp. 1-5.

Figure 4: Original corbelled brickwork of the platform supporting wall, trusswork and columns of the awnings and original iron balustrading (Source: Rappoport, 2013).

Figure 5: The steel trusses and reinforced concrete awning along the platforms (Source: Rappoport, 2013).

Figure 6: Typical guard room/information shed located centrally on all platforms (Source: Rappoport, 2013).

Western Yard

The Western Yard of Central Station was used for servicing the railway from 1855, comprising the Inwards Parcels Dock, the Western Carriage Shed, support offices, demountable workshops and stores. These buildings were demolished preceding the construction of the Henry Deane Plaza in c.1998-2000.[12] An iron palisade fence with a dwarf sandstone base was built in c.1906 in conjunction with the extant third Sydney Terminus, to delineate the Western Yard area. This fence is located to the south of the Henry Deane Plaza and to the west of the southern end of Platform 0/1.[13]

The Henry Deane Plaza is located between Platform 0/1 to the east and Railway Square to the west, with a small strip of undeveloped land between Platform 0 and the Henry Deane Plaza. The Henry Deane Plaza comprises the western access to the Devonshire Street Tunnel, as well as three mid-rise commercial buildings group around a large public space. The fenestration and cladding was designed to respond to the adjacent brick heritage buildings of the station.[14] A narrow grassed strip

[12] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 1.0 Western Yards, 1.7 Henry Deane Plaza, pp. 1-3.
[13] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 1.0 Western Yards, 1.6 Remnant Boundary Fence, pp. 1-2.
[14] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 1.0 Western Yards, 1.7 Henry Deane Plaza, pp. 1-3.

lies between the Henry Deane Plaza and Platform 0/1 (Figure 7 and Figure 8), with some rail infrastructure within the area.

The significance of the relevant individual elements within the Henry Deane Plaza to the west of the Central Electric Precinct are provided in Table 4 below, extracted from the 2013 CMP.

Table 4: Gradings of Significance and Condition for the Henry Deane Plaza at Central Station.[15]

Element	Date	Significance	Condition
Henry Deane Plaza Overall	c.1998-2000	Moderate	Good
Views and Vistas	N/A	Moderate	N/A
Walls, Roofs and Building Form (Henry Deane Building, 18 Lee Street and Gateway Building)	c.1998-2000	Moderate	Good
Context and Setting	N/A	Moderate	N/A
Plaza and link to Devonshire St. Tunnel	c.1998-2000	Moderate	Good
Remnant Boundary Fence Wall and Iron Palisade	c.1906	Moderate	Fair

Figure 7: The sandstone and iron fence from Platform 0/1 (Source: Sydney Metro, 2018).

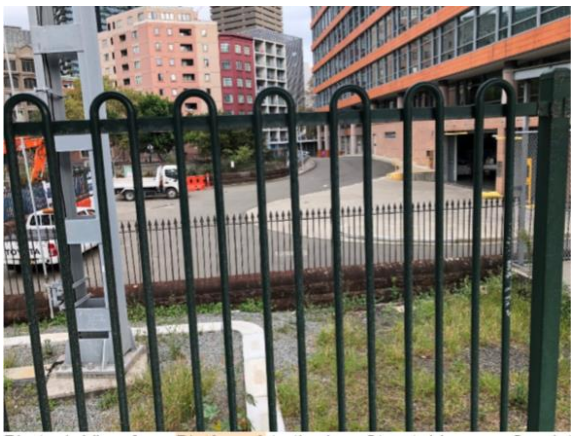
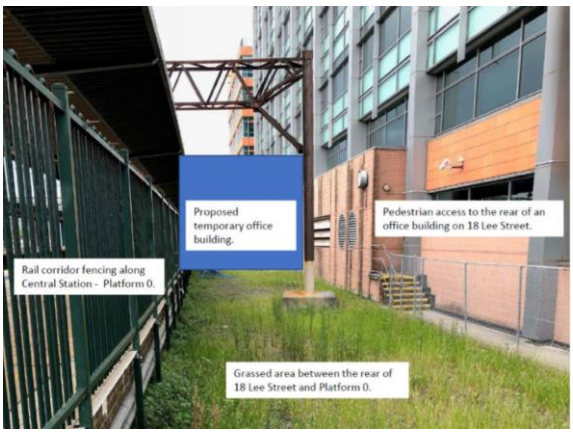


Figure 8: The grassed area between the Henry Deane Plaza and Platform 0/1 (Source: Sydney Metro, 2018).



[15] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 1.0 Western Yards, 1.7 Henry Deane Plaza, pp. 1-3.

Sydney Yards

The Sydney Yards comprise the central portion of Central Station, located to the south of the Sydney Terminal Platforms. The Sydney Yards date back to c.1855 as part of the yards of the first and second Sydney Termini, which contained a number of workshops, railway tracks and vacant land. The Rolling Stock Officers Building, built between 1929 and 1949, is situated at the northern end of the Sydney Yards. The building is a two-storey face-brick Inter-War structure, but has undergone some internal alterations for an office fit-out and a ground level substation.[16] The Cleaners Amenities building is located immediately south of the Rolling Stock Officers Building. The structure is an Inter-War two-storey brick building divided into four gabled bays, which was built by c.1929.[17]

The significance of the relevant individual elements within the Sydney Yards to the south of the Central Electric Precinct are provided in Table 5 below, extracted from the 2013 CMP.

Table 5: Gradings of Significance and Condition for the Sydney Yards at Central Station.[18]

Element	Date	Significance	Condition
Rolling Stock Officers Building Overall	c.1929-1949	Moderate	Good
Brick Façades of Rolling Stock Officers Building	c.1929-1949	Moderate	Good
Roof of Rolling Stock Officers Building	c.1929-1949	Moderate	Good
Substation of Rolling Stock Officers Building	Late 20th Century	Little	Good
Doors, Windows and Hardware of Rolling Stock Officers Building	c.1929-1949	High	Good
Floors and Paving of Rolling Stock Officers Building	Late 20th Century	Little	Fair
Skirting, Architraves and Linings of Rolling Stock Officers Building	c.1929-1949	High	Good
Applied Finishes of Rolling Stock Officers Building	Late 20th Century	Little	Good
Fitout of Rolling Stock Officers Building	Late 20th Century	Little	Fair
Introduced Services: Mechanical, Electrical, lighting and data of Rolling Stock Officers Building	Late 20th Century	Little	Poor
Cleaners Amenities East Deck Overall	c.1929	Moderate	Poor

[16] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 4.0 Sydney Yards, 4.2 Rolling Stock Officers Building, pp. 1-3.
[17] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 4.0 Sydney Yards, 4.3 Cleaners Amenities, pp. 1-3.
[18] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 4.0 Sydney Yards.

Element	Date	Significance	Condition
Cleaners Amenities Brick Façades	c.1929	Moderate	Poor
Cleaners Amenities Roof	c.1929-Late 20th Century	Moderate	Good
Cleaners Amenities Doors, Windows and Hardware	c.1929-Late 20th Century	Little/Moderate	Poor
Cleaners Amenities Floors and Paving	Late 20th Century	Little	Fair
Cleaners Amenities Skirting, Architraves and Linings	Late 20th Century	Little	Fair
Cleaners Amenities Applied Finishes	Late 20th Century	Little	Fair
Cleaners Amenities Fitout	Late 20th Century	Little	Fair
Cleaners Amenities Introduced Services: Mechanical, Electrical, lighting and data	Late 20th Century	Intrusive	Poor
Cleaners Amenities No 1 Air Vacuum	c.1927	High	Poor
Cleaners Amenities No 2 Air Vacuum	c.1927	High	Poor
Cleaners Amenities Carpet Runner Cleaner	c.1927	High	Poor
Cleaners Amenities Remnant Cleaning Equipment Parts	c.1927	High	Poor

Figure 9: The Rolling Stock Officers Building (Source: Rappoport, 2013).

Figure 10: The Cleaners Amenities building (Source: Rappoport, 2013).

Heritage Impact

The following section provides a description of the proposed works, an assessment of the heritage impact, a brief justification for the works and recommendations for management and mitigation for

each class of proposed work in accordance with the CSSI Conditions of Approval and supporting documents.

Temporary Hoarding and Scaffolding

Description of impacts

Temporary hoarding and/or scaffolding is to be installed in the following as part of the approved early works to Central Station:

- Temporary hoarding around the area of works on Platforms 20/21 and 22/23 (located to the north of the centre of the platform), as shown in Figure 11 to Figure 13;
- Temporary hoarding around the northern and western boundaries of the area of works to Platforms 12/13 and 14/15 (Figure 14);
- Temporary scaffolding over the sandstone and iron fence (Figure 7) for access during the installation phase only of temporary buildings adjacent to Platform 0 (Figure 14).

Impact assessment

The installation of temporary hoarding on Platforms 20/21, 22/23, 12/13 and 14/15, depending on the design and exact location, has potential to result in a localised minor direct impact to nearby significant fabric, such as damage to brick paving tiles (moderate significance) or columns and trusses of the awnings (high significance). Note that although tiles are assessed as having moderate significance in the CMP, they are modern additions installed in 1998. The overall direct impact to Central Station is likely to be negligible. It is noted that the tiles to these platforms will be replaced as part of the Project works.

The installation of hoarding would have a localised minor to moderate visual impact to views to and from Platforms 12/13, 14/15, 20/21 and 22/23 and the adjacent platforms. The overall visual impact to Central Station is likely to be negligible.

The installation of hoarding is unlikely to result in an indirect impact to Platforms 12/13, 14/15, 20/21 and 22/23 and the adjacent platforms, as the installation would not result in vibration. The overall indirect impact to Central Station is likely to be neutral.

The installation of scaffolding over the sandstone and iron fence (Figure 7) for access during the installation phase of temporary buildings at Platform 0, depending on the design and exact location, would aid in minimising potential inadvertent direct or indirect damage to this element of moderate significance. The scaffolding, would not be fixed directly to the fence, would have a neutral direct impact to the significant fabric of the fence. The overall direct impact to Central Station is likely to be neutral.

The installation of scaffolding would have a temporary high visual impact to the significant fence, but would have a neutral permanent visual impact due to its removal on completion of the installation phase of the temporary buildings at Platform 0. The overall temporary visual impact to Central Station would be negligible and the overall permanent visual impact would be neutral.

The installation of scaffolding over the sandstone and iron fence would have no indirect impact to significant fabric and therefore would have no impact on the significance of Central Station.

Justification

Temporary hoarding is required to be constructed around the proposed area of works in order to restrict access to the work site and ensure the safety of users and staff of Central Station. The temporary scaffolding around the sandstone and iron fence is required for access during installation of the temporary buildings at Platform 0.

Management and mitigation

The following management and mitigation methods should be followed prior to the installation of temporary hoarding on Platforms 12/13, 14/15, 20/21 and 22/23 and scaffolding on Platform 0:

- A photographic archival recording must be undertaken of the relevant areas and views of the platforms and sandstone and iron fence prior to any works, including the installation of temporary hoarding, in accordance with the requirements of Condition E13 of the CSSI approval;
- Temporary hoarding should be interpretative, in accordance with Condition E21 of the CSSI approval. This could include historic photographs of the Above Ground Platforms at Central Station during the 1922-c.1926 construction works or following completion, or more general historic photographs of Central Station. Those on the sandstone and iron fence could consist of historic photographs of the First or Second Sydney Termini yards or station;
- The temporary hoarding and scaffolding should be light-weight and free-standing and should not be fixed to significant elements of the platforms or sandstone and iron fence, such as the brick paving tiles, base, balustrades or structural trusses, columns or beams of the awning;
- The temporary hoarding should be designed so that is easily constructible on site, to minimise potential damage to fabric of Central Station during movement of components;
- The temporary scaffolding should be designed to be sturdy enough to withstand high point loads so that it does not fall over and damage the sandstone and iron fence if direct force is applied to the scaffolding;
- The temporary hoarding and scaffolding should be designed so that the opening of the hoarding does not scrape or otherwise cause damage to significant elements of the platform or other surfaces; and
- The temporary hoarding and scaffolding should utilise footings that will not damage the brick paving tiles or other significant surfaces. Consider installation of an adequate protective barrier under the footings to ensure any movement of the footings does not damage the tiles.

Piles and Initial Excavation on Platforms 20/21 and 22/22

Description of impacts

The following works to Platforms 20/21 and 22/23 are proposed as part of the approved early works to Central Station:

- Protection of the nearby canopies and posts by wrapping with an appropriate protective cover and installing boards held together by straps;

- Cutting and removal of the tiles and concrete slab within a 7m by 4m area on Platforms 20/21 and 22/23 (located to the north of the centre of the platform), as shown in Figure 11 to Figure 13 to allow for piling works to commence;
- Delivery of a low headroom drilling rig by train and ramp for it to be manoeuvred onto the platform under the existing canopies;
- Installation of bored piles using the low headroom drilling rig, to a depth of 2m, retaining the casings in situ for extra reinforcement and to contain the spread of the grout;
- Removal of the remaining platform structure/fill within the area (7m by 4m) bounded by the piles and excavation will be conducted to a depth of approximately 2m, with the spoil removed by a bulker bag on the train. The timing of further excavation is anticipated to occur after CEMP approval;
- Vibration monitoring will be conducted during works in accordance with the CSSI approval; and
- The works would be monitored by an archaeologist as required as discussed in the Archaeological Method Statement (AMS) (Artefact April 2018).

Impact assessment

The proposed installation of piles and initial approximately 2m deep excavation on Platforms 20/21 and 22/23, to prepare the site for future installation of a temporary staircase, would result in a non-reversible localised direct impact to fabric of moderate significance, that being the c.1998 brick paving tiles (which is unlikely to be of significance), the original (1922-c.1926) flooring surface/concrete slab of the platforms and the internal structure of the platforms (1922-c.1926). As a 7m by 4m section of tiling and original platform surface/concrete slab would require cutting and removal, this would result in a minor direct impact to section of fabric of moderate significance, noting the 1988 tiles are not of moderate significance. The installation of the bored piles and excavation of the remaining platform structure/fill would involve the removal of fabric of moderate significance.

A number of mitigation methods are proposed to minimise direct impact to surrounding significant fabric. The retention of the casings to contain the spread of the grout would aid in minimising impact to surrounding significant fabric. The delivery of a low headroom rig by train and ramp would minimise inadvertent direct impact to surrounding fabric, including the reinforced concrete roof, steel trusswork and columns of the platform awnings of high significance to the heritage item. Additionally, the protection of the nearby canopies and posts by wrapping them with a appropriate protective material and installing boards held together by straps would also aid in the minimisation of inadvertent impact to surrounding fabric. These mitigation methods would aid in preventing direct impact to surrounding fabric, resulting in negligible impacts to nearby fabric, but would not mitigate impacts to the fabric to be removed. See the recommendations in the management and mitigation section below.

Overall, due to the proposed removal of sections of fabric of moderate significance, the overall direct impact to each platform would be minor. The overall impact to the significance of Central Station would be negligible.

The proposed installation of piles and initial 2m deep excavation on Platforms 20/21 and 22/23 would result in a temporary moderate visual impact due to the removal of 7m by 4m areas of the c.1998 brick paving tiles, original platform surface and internal platform structure, leaving a large gap in the platform. The overall visual impact to the platforms is likely to be moderate, with an overall negligible to minor visual impact to Central Station.

The works required to cut and remove the c.1998 brick paving tiles and concrete platform surface and, install bored piles and excavate the platform structure has the potential to result in moderate indirect impact to surrounding heritage fabric due to the vibration caused by such works. The works are likely to result in minor indirect impacts to Platforms 20/21 and 22/23 and negligible to minor indirect impacts to the overall heritage item of Central Station.

Justification

The installation of piles and initial excavation to the north of the centre of Platforms 20/21 and 22/23 is required to prepare the site for the future works of providing temporary access to the Olympic Tunnel in order to maintain pedestrian access to the platform during the main construction works at Central Station as part of the CSSI Central Station Metro project. The timing of further excavation is anticipated to occur in the Construction phase after CEMP approval. All works for the Olympic Stairs are required to be completed by early December 2018 to ensure the safe and effective operation of Central Station in the busy holiday period.

Management and mitigation

- A photographic archival recording must be undertaken of the relevant areas and views of the platforms prior to any works, including the installation of protective wrappings, in accordance with the requirements of Condition E13 of the CSSI approval;
- Significant fabric, including the canopies and posts, should be protected by wrapping them with an appropriate protective material and installing boards held together by straps. No fixing method is to involve penetration of significant fabric;
- The temporary ramp to manoeuvre the rig should not be fixed to the brick paving tiles, but should be free-standing;
- The brick paving tiles should be protected with an appropriate protective material during manoeuvring of the rig into position, as well as for movement of any other required machinery for cutting and excavation works;
- All brick paving tiles and concrete within the footprint of the excavation should be removed carefully prior to piling and excavation so as not to damage them or the surrounding fabric, in accordance with Condition E15.
- Vibration monitoring should be conducted in accordance with approval Conditions E28 to E31 during works to ensure limits are not exceeded. The following recommendations should be followed to minimise impact of vibration monitoring equipment:
    - Vibration monitoring equipment should not be directly fixed to fabric of moderate, high or exceptional heritage significance. Where possible, fix to fabric of little or intrusive significance;
    - If vibration monitoring must be fixed to fabric of moderate, high or exceptional heritage significance, the method of attaching the equipment must be reversible; and
    - If the vibration caused by the works exceeds the accepted level of vibration for heritage items, works should cease and alternative methods of work considered in consultation with an experience heritage engineer.
- The piling and excavation works should be monitored by a suitably qualified archaeologist as outlined in the AMS for these works (Artefact April 2018); and

- The Sydney Metro Unexpected Finds Procedure would be followed in the event of identification of potential archaeological remains or Aboriginal objects.

Non-Destructive Digging on Platform 10/11

Description of impacts

The following works are required to prepare Platform 10/11 for the future installation of overhead wire structures:

- Saw cutting and removal of the tiles and concrete slabs approximately 1m x 1m on Platform 10/11 in the areas shown in Figure 14; and
- Potholing and non-destructive digging (NDD) on Platform 10/11 to confirm location of the existing services within the platform.
- Excavation of footings

Note that the proposed early works do not include the installation of the overhead wire structures.

Impact assessment

Saw cutting, removal of the paving tiles and concrete slabs on Platform 10/11 and excavation would result in a moderate direct impact to fabric of moderate significance. The works would also result in a moderate direct impact to the original 1906 platform surface, determined to be of moderate significance. Potholing and non-destructive digging (NDD) on Platform 10/11 would also result in a moderate direct impact to fabric of moderate significance (the platform structure). The overall direct impact to the platform is likely to be moderate and the overall impact to Central Station is likely to be minor.

The works would have a localised temporary minor visual impact to views to and from the platform and the adjacent platforms. The overall visual impact to Central Station is likely to be negligible.

The works required to cut and remove the paving tiles and concrete platform surface, undertake potholing and NDD to the platform structure and excavate footings have the potential to result in minor indirect impact to surrounding heritage fabric due to the vibration caused by such works. The works are likely to result in minor indirect impacts to Platform 10/11 and negligible indirect impacts to the overall heritage item of Central Station.

Justification

Potholing and NDD and footing excavation is required along Platform 10/11 in order to prepare the site for the future works of providing overhead wiring to maintain connection to services on the platform during the main construction works at Central Station as part of the CSSI Sydney Central Station Metro project.

Management and mitigation

- A photographic archival recording must be undertaken of the relevant areas and views of the platforms prior to any works including the installation of any hoarding or protective wrappings, in accordance with the requirements of Condition E13 of the CSSI approval;
- Any hoarding required should be designed to follow the recommendations provided for *Temporary Hoarding* above;

- The potholing and excavation works should be monitored by a suitably qualified archaeologist in accordance with the AMS (Artefact April 2018);
- The brick paving tiles should be protected with an appropriate protective material during manoeuvring of any equipment or machines for excavation;
- The brick paving tiles and concrete should be removed carefully so as not to damage them or the surrounding fabric.
- The brick paving (and concrete, if possible) should be retained onsite, stored carefully and labelled for future reinstatement after the construction of the overhead wiring footings. Any remaining tiles should be retained for any future repairs to the flooring, in accordance with Condition E15;
- The Sydney Metro Unexpected Finds Procedure would be followed in the event of identification of potential archaeological remains or Aboriginal objects.

Installation of Temporary Offices Adjacent to Platform 0

Description of impacts

The following works are required to be undertaken to install temporary offices in the narrow grassed strip between Platform 0/1 and the Henry Deane Plaza, as part of the approved early works to Central Station:

- Site investigations including potholing, non-destructive digging and survey;
- Installations of an 85 m long concrete and steel track from the existing substation to the existing gantry structure, using a concrete truck, site ute and hand tools;
- Installation of the temporary office built on aboveground foundations, delivered in parts, craned into place and pushed along the concrete and steel track. The office would measure 2.4 m tall, 6 m wide and 85 m long;
- Timber infill would be inserted between the temporary office and Platform 0 with a 20mm gap to minimise impacts to the platform;
- Temporary removal of green steel fence along the western side of Platform 0/1 reinstatement following completion of the works (Figure 7 and Figure 8). The fence would be removed through dismantling the existing bolts and reinstated utilising the same bolts and bolt holes;
- Installation of temporary fencing to prevent access from the platform to the site when not in use; and
- Fitout of the temporary office, including connections to stormwater, sewer and electricity, utilising an excavator, hand tools, site ute and two rigid heavy vehicles.

Impact assessment

The proposed works for the installation of the temporary office buildings, undertaken in accordance with the mitigation methods provided below and in the *Planning Approval Consistency Form SM ES-FT-414*, has potential to result in localised negligible direct impacts to nearby significant fabric, such as Platform 0/1 and the Henry Deane Plaza. The temporary removal of the fence along the western side of Platform 0/1 would have a localised negligible impact due to the fence being of little

significance. As it would be replaced using the existing bolts and holes, there would be no loss of fabric and no impact to significant fabric. The use of gaps between the new offices and Platform 0/1 and timber infill that is not directly connected to the platforms would ensure the minimisation of potential impact to significant fabric. The overall direct impact to Central Station is likely to be neutral.

The works would have a temporary localised minor visual impact to views to and from Platforms 0/1 and the adjacent platforms, as well as from the rear of the Henry Deane Plaza. The overall visual impact to Central Station is likely to be negligible.

The works are unlikely to result in an indirect impact to nearby significant fabric, as the installation would not result in vibration. The overall indirect impact to Central Station is likely to be neutral.

Justification

The construction of a temporary office between Platform 0/1 and the Henry Deane Plaza is required for the Sydney Trains staff in order to relocate staff prior to demolition of the Rolling Stock Officers Building and the Cleaners Amenities, in order to enable construction staff to operate efficiently out of the Sydney Yard construction site at Central Station.

Management and mitigation

- A photographic archival recording must be undertaken of the relevant areas and views from Platform 0/1, the rear of the Henry Deane Plaza area and along the narrow strip of grass between the two areas prior to any works, in accordance with the requirements of Condition E13 of the CSSI approval;
- In order to avoid direct impacts to significant fabric of Platform 0 and the Henry Deane Plaza, there must be a sufficient gap between the temporary office and Platform 0, as well as between the temporary office and the Henry Deane Plaza buildings;
- Install timber infill between the temporary office and Platform 0 with a 20mm gap in order to minimise impacts to the platform. Ensure this timber infill is not directly connected to the platform;
- No works are to involve penetration of, drilling or fixing to Platform 0 or other nearby significant fabric, such as the rear of the Henry Deane Plaza buildings;
- The crane lifts should be controlled sufficiently to prevent inadvertent direct or indirect impacts to the nearby significant fabric, including Platform 0, the Henry Deane Plaza and the sandstone and iron fence;
- The potholing and excavation works should be monitored by a suitably qualified archaeologist in accordance with the AMS (Artefact, April 2018); and
- The Sydney Metro Unexpected Finds Procedure would be followed in the event of identification of potential archaeological remains or Aboriginal objects

Hazmat Testing of the Rolling Stock Officers Building and Cleaners Amenities

Description of impacts

Hazardous materials testing is required to be undertaken to the Rolling Stock Officers Building and the Cleaners Amenities as part of the approved early works to Central Station. This will include:

- One sample from each surface/fabric type within the buildings, which will usually comprise 50mm diameter cores, but may also comprise smaller samples such as paint scrapings.

Impact assessment

The removal of 50mm diameter cores from each surface/fabric type within the Rolling Stock Officers Building and the Cleaners Amenities would result in localised minor direct impacts to fabric of high through to little significance. Fabric that would be affected would be existing paint finishes, floors, existing doors, windows, timber framing and skirting, brickwork and roofing. Though the impact to the overall individual elements would be negligible, the cumulative direct impact to the buildings would be minor. As both buildings are assessed as having moderate significance to Central Station in the CMP, the works would result in an overall negligible direct impact to the significance of Central Station. It should be noted that the CSSI approved the removal of both these structures during construction.

The removal of 50mm diameter cores and samples would have a localised minor visual impact to views to and from the Rolling Stock Officers Building and the Cleaners Amenities, as well as views within the buildings. The cumulative visual impact to the buildings would be negligible. The overall visual impact to Central Station is likely to be negligible.

The removal of 50mm diameter cores and samples is likely to result in a localised minor indirect impact to fabric of the Rolling Stock Officers Building and the Cleaners Amenities, due to the works resulting in low vibration levels. The overall indirect impact to Central Station is likely to be negligible.

Justification

Hazardous materials testing is required to be undertaken to the Rolling Stock Officers Building and the Cleaners Amenities in order to ensure the correct methods of demolition are carried out to minimise potential health and safety issues to workers and users of the train station.

Management and mitigation

- A photographic archival recording must be undertaken of the relevant areas and views of the Rolling Stock Officers Building and the Cleaners Amenities prior to any hazardous materials testing, in accordance with the requirements of Condition E13 of the CSSI approval unless a recording has been done for the structures in their entirety.

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Figure 11: Proposed hoarding and initial 2m deep excavation for the future temporary staircase on Platform 20/21 (Source: Laing O'Rourke, 2018).

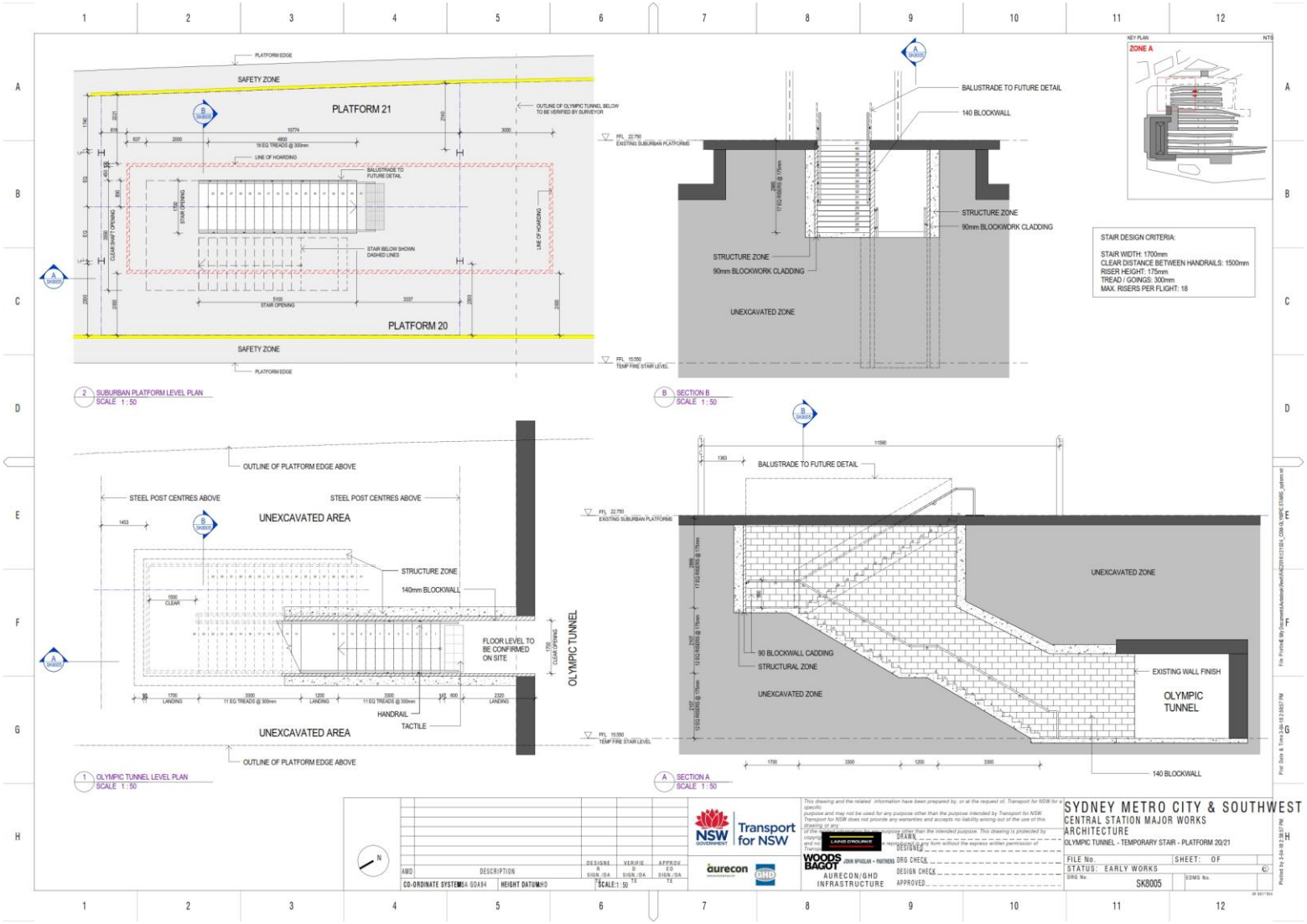


Figure 12: Proposed hoarding and initial 2m deep excavation for the future temporary staircase on Platform 22/23 (Source: Laing O'Rourke, 2018).

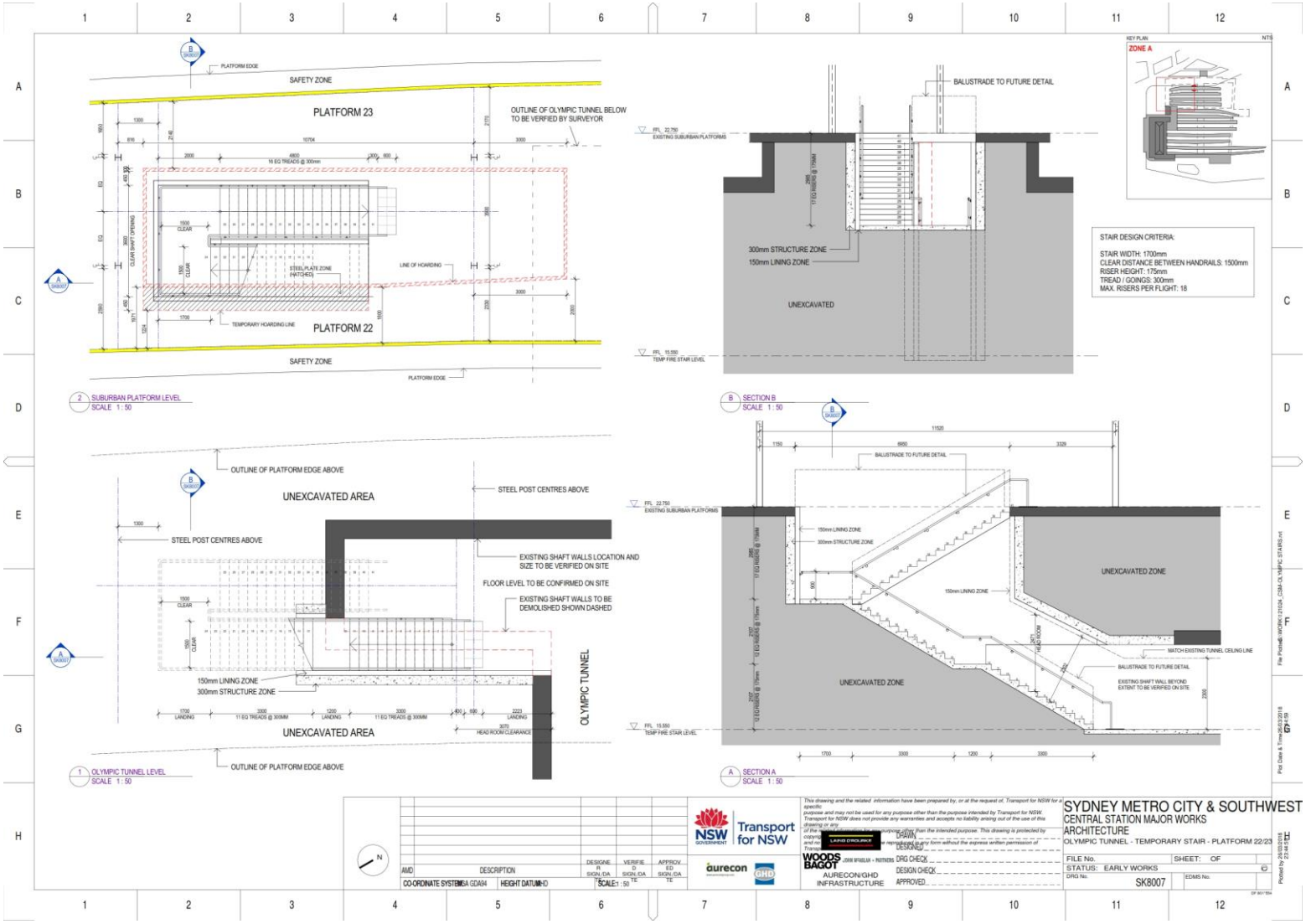


Figure 13: Proposed location of the excavation for the future temporary staircases on Platforms 20/21 and 22/23 (Source: Laing O'Rourke, 2018).

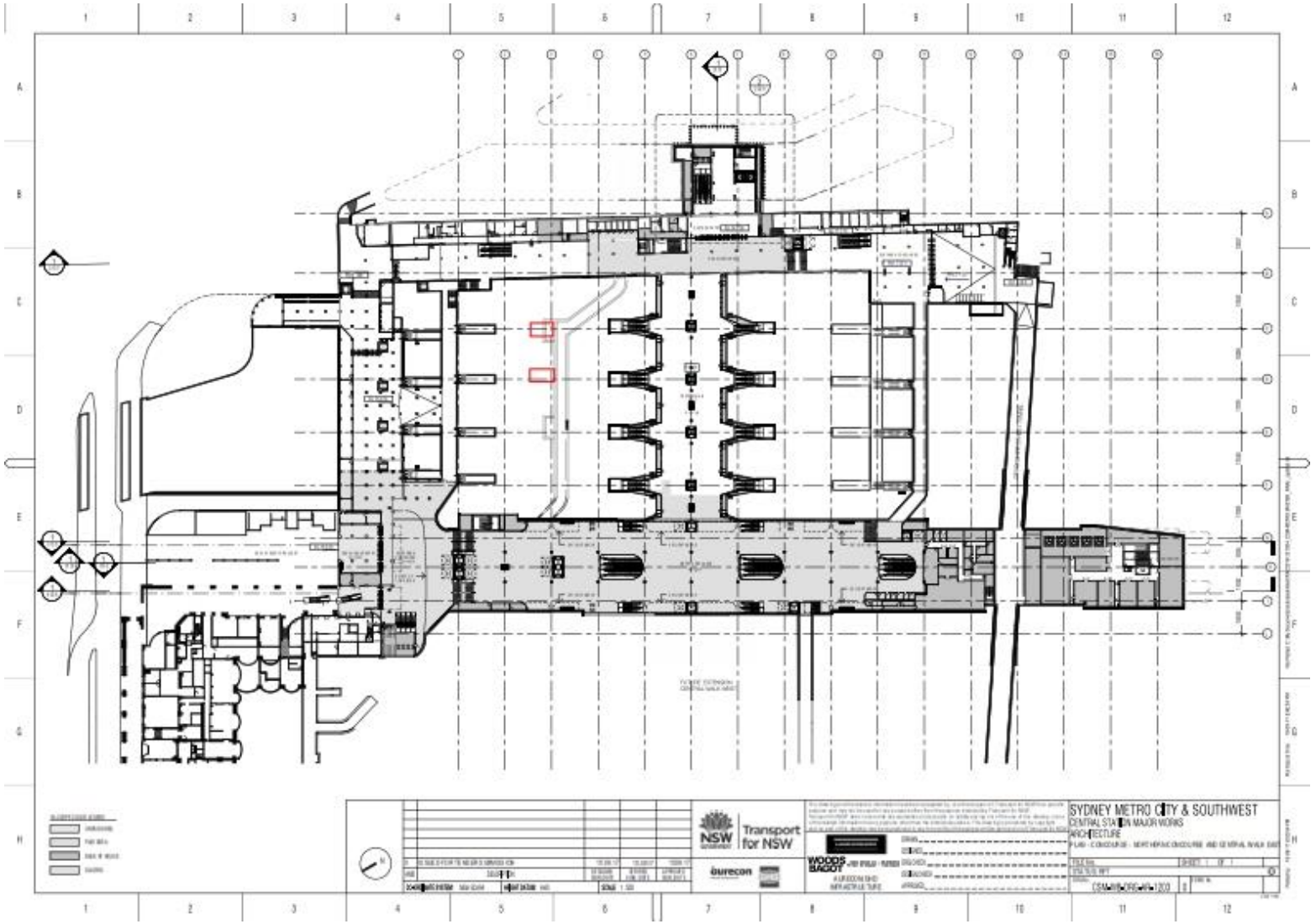
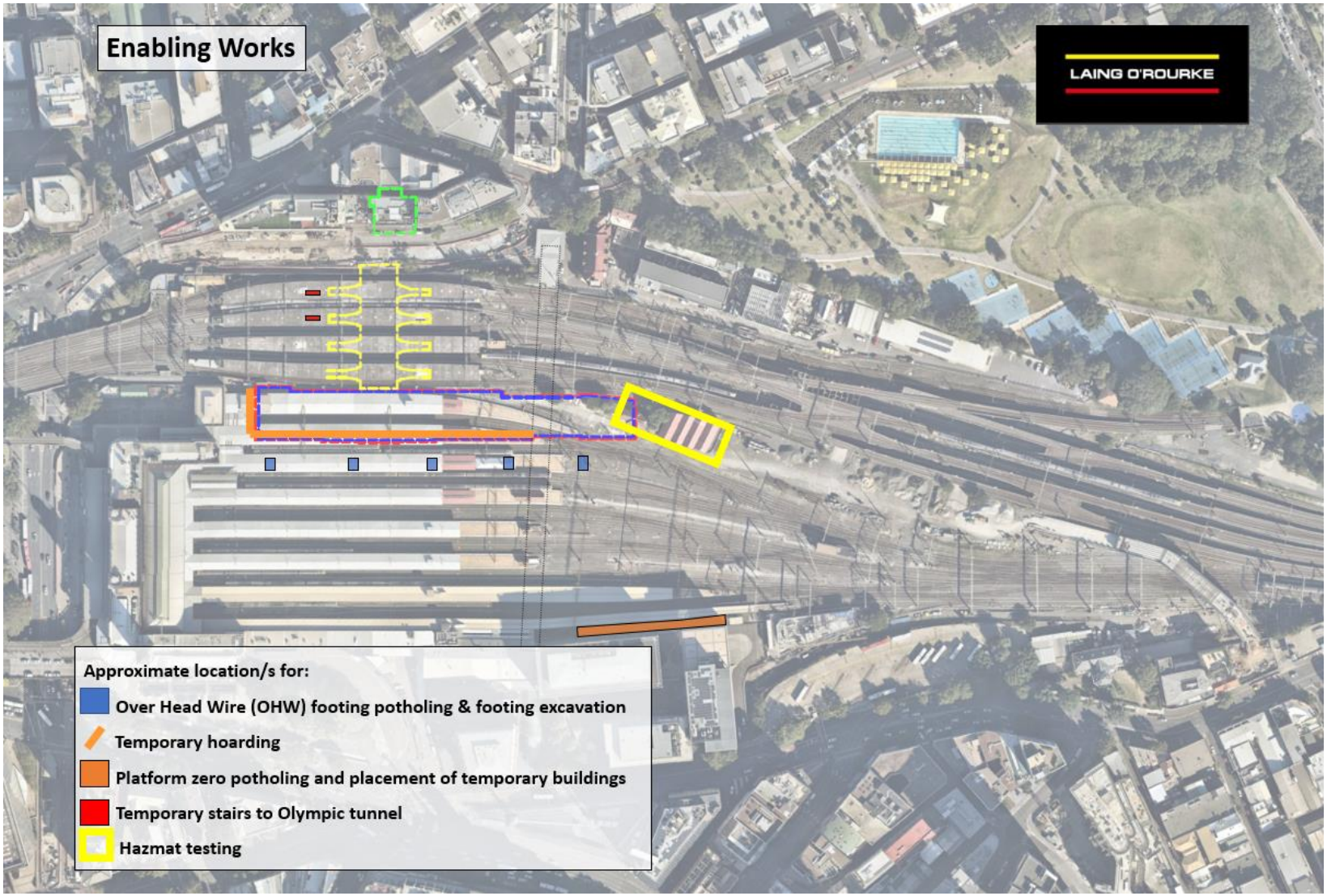


Figure 14: Proposed location of works (Source: Laing O'Rourke).



Summary of impacts and mitigation measures

Table 6: Summary of impacts and mitigation measures.

Item of Work	Direct Impact (fabric)		Visual Impact (views)		Indirect (vibration)		Mitigation (Approval Condition, if relevant)
	Localised	Overall to Central Station	Localised	Overall to Central Station	Localised	Overall to Central Station	
Temporary Hoarding and scaffolding	Minor	Negligible	Minor	Negligible	Neutral	Neutral	• Archival Recording (E13); • Interpretative hoarding (E21); and • Design free-standing lightweight hoarding to minimise impact.
Piles and Initial Excavation on Platforms 20/21 and 22/22	Minor	Negligible	Minor	Negligible to Minor	Minor	Negligible to Minor	• Archival Recording (E13); • Vibration monitoring (E28 to E31); • Unexpected Finds Procedure (E19 and E20); • Monitoring by a suitably qualified archaeologist; and • Protection of significant fabric with free-standing ramp, adequate protective material and boards.
Non-Destructive Digging on Platform 10/11	Minor	Minor	Minor	Negligible	Minor	Negligible	• Archival Recording (E13); • Vibration monitoring (E28 to E31); • Unexpected Finds Procedure (E19 and E20); • Monitoring by a suitably qualified archaeologist; • Protection of significant fabric with free-standing ramp, adequate protective material and boards; • Interpretative free-standing lightweight hoarding (E21).

Item of Work	Direct Impact (fabric)		Visual Impact (views)		Indirect (vibration)		Mitigation (Approval Condition, if relevant)
	Localised	Overall to Central Station	Localised	Overall to Central Station	Localised	Overall to Central Station	
Installation of temporary office on Platform 0	Negligible	Negligible	Negligible	Neutral	Neutral	Neutral	• Archival Recording (E13); • Unexpected Finds Procedure (E19 and E20); • Monitoring by a suitably qualified archaeologist; • Protection of significant fabric with sufficient gaps, adequate protective material and boards; • Interpretative free-standing lightweight hoarding (E21).
Hazmat testing	Minor	Negligible	Minor	Negligible	Minor	Negligible	• Archival Recording (E13);

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Appendix

The following Statements of Significance for Central Station (Sydney Terminal and Central Railway Stations Group), Central Electric Precinct, the Above Ground Platforms and the Henry Deane Plaza, in which the study area is located, have been extracted, in full, from the *Central Station Conservation Management Plan* 2013 (CMP), prepared for NSW Transport RailCorp by the NSW Government Architect's Office and Rappoport Pty Ltd.

Table 7: Statement of Significance for the Central Railway Station and Sydney Terminal Group.

Central Railway Station and Sydney Terminal Group	
Listings	SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*Central Station is the largest railway station and transport interchange in NSW and is of State significance for its historical, aesthetic, technical values and for its research potential. With its grand sandstone edifices and approaches it is a well-known landmark in Sydney.* *The site contains the original Sydney Railway Company grant on which the first Sydney Station and yards were opened, in 1855, and so represents over 150 years of railway operations in the same place, making it the oldest and the longest continuously operated yard in Australia.* *The Sydney Terminal precinct has a high level of historic significance associated with its early government and institutional uses, as well as being the site of Sydney's second major burial ground, the Devonshire Street cemetery. Archaeological evidence of the government and institutional uses is rare and has high research potential.* *Central Station site contains evidence of the first phase of railway construction in NSW and has been the major hub of rail transportation in NSW since the mid-19th century and has the ability to demonstrate the evolution of changes in the NSW railways and in railway technology over the past 150 years, from steam to electric, reflected in the changes in yard layout and in signalling [sic] work practices. The Darling Harbour branch line and associated sandstone Ultimo Railway Overbridge is the only remaining example of railway infrastructure built for the Sydney Railway Company and is the oldest piece of railway infrastructure in NSW. The Prince Alfred Sidings contains some of the oldest remaining workshops in the NSW railway system. The Prince Alfred Substation is part of the Bradfield 1926 electrification works and was designed by Bradfield himself. The site has technical heritage value in such elements as: The Darling Harbour Dive; Central Electrics flyovers; the elliptical arch construction of the Elizabeth Street Viaduct; the western approach ramp underbridge the three-pin truss roof of the porte-cochère; the Devonshire Street subway (probably the first of its type in Australia); the underground men's toilets; and the early mail, parcels and luggage subway system.* *The main terminus building, accentuated by its clock tower and approach ramps, exemplifies the predominant use of sandstone at the site and it has been sited to dominate its surroundings and to mark the importance of the railway to both the city and the State. The construction of the Sydney Terminus was the largest planned intervention into the urban fabric of Sydney at the time and it was the only major complex of the period where the urban setting was consciously designed to enhance and provide views to and from the main structure. With its multi layered access modes and above ground level platforms not only was the development extraordinarily innovative but also the largest incursion into the southern part of Sydney prior to World War I.* *Some of Sydney's most notable 19th and 20th century architects and engineers have worked on the Central Station site, including: James Wallace and William Randle who*

Central Railway Station and Sydney Terminal Group

together designed and built the first railway from Sydney to Parramatta and the associated Darling Harbour Branch Line; the last serving Colonial Architect, James Barnet (Mortuary Station); the first NSW Government Architect, Walter Liberty Vernon (the main Terminus building and the Parcels Post Office); and the Chief Engineer for the City Underground and Sydney Harbour Bridge, Dr John Jacob Crew Bradfield (Central Electric). Mortuary Station, the main terminus building, and the Parcels Post Office were the only designs undertaken for the NSW Railways by the Colonial Architect and the Government Architect within the Department of Public Works.

The main terminus building is enhanced by its Neo-classical architectural features together with the high-quality workmanship and materials it contains, from carved sandstone, marble and terrazzo to cedar joinery, acid etched glazing and metalwork balustrades.

The same fine quality in design, materials and workmanship is seen in Mortuary Station, the Railway Institute and also in the Neo-classical Chalmers Street Entrance, the Central Electric Station main façade and the Parcels Post Office, all of which tends to unify these buildings with the main terminus.

The Mortuary Station is a fine and rare example by James Barnet of the Gothic Revival architectural style and is the only remaining example of a mortuary station in NSW. The exemplary Federation Anglo-Dutch architectural style of the Railway Institute is significant, and it was as the first institute of its type in Australia, demonstrating 19th century initiatives in railway workers educational and recreational facilities. The Parcels Post Office contains fine brickwork and sandstone detailed facades and documents the association of the site with railway postal services.

The significance of Central Station is widely appreciated by the broad community for its sense of place and theatre; as an extraordinary place of work for employees past and present and their families; and by many specialist transport and heritage community groups.[19]

[19] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, p. 27.

Table 8: Statement of Significance for the Sydney Terminal Precinct within the Central Railway Station and Sydney Terminal Group.

Sydney Terminal Precinct	
Listings	SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*Central Station, constructed to serve the expanding population of Sydney, was the first major metropolitan rail terminal to be constructed in Australia and is the main NSW terminus. There have been three successive passenger termini on this site, each successive station designed to provide a much greater level of passenger accommodation than the former. The debate concerning the location of the main terminal for Sydney occurred on and off during the last two decades of the nineteenth Century. The technical difficulties associated with extending the line further north and the associated cost as well as changing governments resulted in the creation and abandonment of numerous station designs and almost as many locations. The Sydney Terminal precinct has a high level of historic significance associated with its early government and institutional uses, as well as being the site of Sydney's second major burial ground, the Devonshire Street cemetery. The development of the Benevolent Asylum and Carters barracks are associated with Governor Macquarie and were part of his overall plan for Sydney. The Carters Barracks site had the first treadmill in use in Australia. The archaeological remains would be rare and important survivors from this early Colonial period. The striking form, character and materials of the Sydney Terminus contribute to the high degree of aesthetic significance of this precinct, and ensure that it remains an iconic landmark.* *Archaeological evidence of the charitable institutions on the site can contribute to a range of important research questions relating to:* *- the nature of charitable institutions during the convict period and after;* *- the way the residents and staff lived and worked;* *- the way the archaeological evidence contributes to a range of views on the nature of charitable institutions in NSW, Australia and the United Kingdom.*[20]

Table 9: Statement of Significance for the Country and Interstate Platforms (Platforms 1-15) within the Sydney Terminal Precinct of the Central Railway Station and Sydney Terminal Group.

Country and Interstate Platforms	
Listings	SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*Notwithstanding the various extensions and truncations of the Country and Interstate Platforms over the course of a Century, the overall layout of these platforms conforms to their c 1906 design. Some of the original fabric of these platforms remains in situ and the platforms document the evolution of the railways since the establishment of the c 1906 third Sydney Station.*[21]

[20] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 3.0 Sydney Terminal, pp. 7-8.
[21] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 3.12 Country and Interstate Platforms (Platforms 1-15), p. 7.

Table 10: Statement of Significance for the Central Electric Precinct within the Central Railway Station and Sydney Terminal Group.

Central Electric Precinct	
Listings	A part of the SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*The Central Electric Precinct documents the first phase of the suburban electrification of the NSW Railway in 1926. It is associated with Dr John Job Crew Bradfield. The aesthetic presentation is Neoclassical. The Precinct has the grandest of entrances on the City Circle Line using sandstone detailing. The monumental sandstone walling of the Elizabeth Street Viaduct and the tram ramps is a well known and iconic landmark in Sydney. The precinct has high technical value in the design of the viaducts, underbridges and overbridges. Central Electric was the only station on the new electric system to use reinforced concrete slabs for the platform canopy roofs.*[22]

Table 11: Statement of Significance for the Above Ground Platforms (Platforms 16 to 23) within the Central Electric Precinct of the Central Railway Station and Sydney Terminal Group.

Above Ground Platforms	
Listings	A part of the SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*The platforms are significant as evidence of the transition in the 1920s from the traditional use of bricks or stone to concrete; and also for the innovative use of reinforced concrete in the platform awnings. Central Electric was the only station on the new electric system to use reinforced concrete slabs for the platform canopy roofs.*[23]

Table 12: Statement of Significance for the Henry Deane Plaza within the Western Yards of the Central Railway Station and Sydney Terminal Group.

Henry Deane Plaza	
Listings	A part of the SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*The significance of the Henry Deane Plaza lies mainly in the setting that it provides for the former Parcels Post Office (Inventory Sheet 3.19) and to a lesser extent for the access and setting it provides to the YHA Railway Square (Inventory Sheet 3.18). Although the Plaza is excluded from the Railway Square/Central Station Special Character Area under the Sydney DCP 2012, it contributes to the network of active public open space that connects the surrounding heritage places. The Plaza has social significance as a public space for Sydney-siders and for its commemoration of Henry Deane – a prominent engineer for the NSW railways and Engineer in Chief from 1891 - 1906.*[24]

[22] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 5.0 Central Electric, pp. 4-5.
[23] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 5.4 Above Ground Platforms, p. 5.
[24] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 1.7 Henry Deane Plaza, p. 2.

Table 13: Statement of Significance for the Remnant Boundary Fence within the Western Yards of the Central Railway Station and Sydney Terminal Group.

Remnant Boundary Fence	
Listings	A part of the SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*The wall is historically and aesthetically significant as remnant c. 1906 fabric from the first phase of construction of the third Sydney Station. The sandstone dwarf wall is significant as it documents the wide use of rusticated Pyrmont sandstone in the first phase of construction of the c. 1906 station and is evidence of the use of sandstone at this time for important public sites. The pales are also indicators of the c. 1906 site. The lost context of this fence diminishes its heritage significance.*[25]

Table 14: Statement of Significance for the Rolling Stock Officers Building within the Sydney Yards of the Central Railway Station and Sydney Terminal Group.

Rolling Stock Officers Building	
Listings	A part of the SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*The Former Rolling Stock Officers Building is representative of a group of buildings which have been used in conjunction with administration of Central Station and, as such, is an integral part of the cultural landscape of the Sydney Yards.*[26]

Table 15: Statement of Significance for the Cleaners Amenities within the Sydney Yards of the Central Railway Station and Sydney Terminal Group.

Rolling Stock Officers Building	
Listings	A part of the SLEP 2012 (Item No. I824) and SHR (Item No. 01255)
Significance	State
Statement of Significance	*The Cleaners Amenities is representative of a building of the Inter War period which has been continuously used in conjunction with the administration of the Central Station site. The building documents the evolution of the Sydney Yards as its original use as a base for cleaning related purposes associated with the East Carriage Shed has changed to that of general administration. The building continues to house significant carpet cleaning equipment which was used in conjunction with the East Carriage Shed. It is an integral part of the Sydney Yard.*[27]

[25] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 1.6 Remnant Boundary Fence, p. 2.
[26] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 4.2 Rolling Stock Officers Building, p. 3.
[27] NSW Government Architect's Office, and Rappoport Pty Ltd, 2013, *Central Station Conservation Management Plan*, NSW Transport RailCorp, Section 4.3 Cleaners Amenities, p. 4.

Appendix 3: Cover Page

Community Notification.

Appendix 4: Cover Page

Environmental Representative Supporting Letter.- Refer to Section 12 Determination Page above

NSW GOVERNMENT | Planning & Environment

Mr Fil Cerone
Director, Sustainability Environment & Planning
City & Southwest Metro
Transport for NSW
PO Box K659, HAYMARKET NSW 1240

Our ref: SSI 7400

Dear Fil,

Sydney Metro City and Southwest (SSI 7400) Low impact works in heritage areas – investigation and preparation at Central Station

Thank you for your correspondence of 29 May 2018 seeking the Secretary's determination that certain low impact works at Central Station are not 'construction' activities under the definition in the infrastructure approval. I also note supplementary information provided to the Department on 5 June 2018 in response to our comments.

The proposed works comprise pre-construction and preparatory works at Central Station as outlined in your correspondence and the *Central Station Main Works: Early Works Statement of Heritage Impact (18 April 2018, updated 16 May 2018)* ('Statement of Heritage Impact'). The works are within the Sydney Terminal and Central Electric Precincts of the *Sydney Terminal and Central Railway Stations Group (SHR: No. 01255)*, which is listed as State significant on both State and Local Registers.

I understand the likely impact of these works on heritage items would be only negligible or minor at worst, as assessed in detail in the Statement of Heritage Impact.

I note the Office of Environment and Heritage's (OEH) correspondence of 7 May 2018, confirmed that the management and mitigation measures in the Statement of Heritage Impact are appropriate to minimise the impacts from these works. OEH also recommended some updates, which have been addressed in the final Heritage Impact Statement (dated 16 May 2018).

On this basis, I approve the above low impact works described in your letter of 29 May 2018 and the Statement of Heritage Impact as non-construction activities. Please ensure you carefully implement the methodology and mitigation measures for these works, as described in the Statement of Heritage Impact.

If you have any queries, please contact Jacqueline McLeod, Team Leader, Infrastructure Management on jacqui.mcleod@planning.nsw.gov.au.

Yours sincerely

6/6/18

Stacy Warren
Director – Infrastructure Management
As delegate of the Secretary