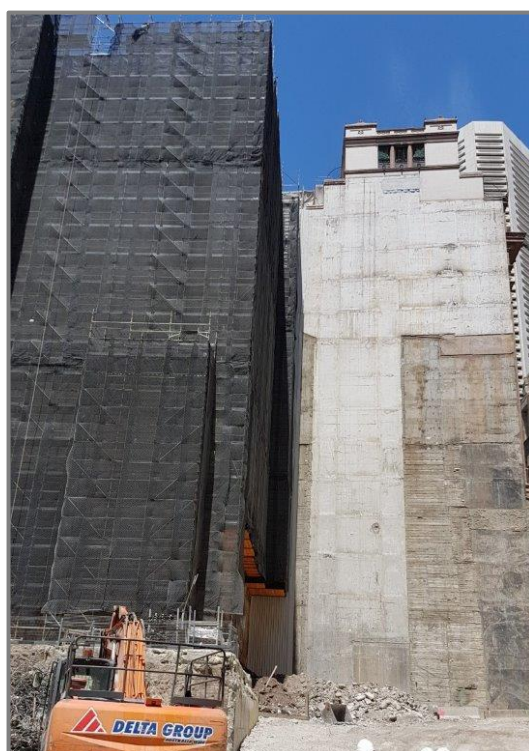


INDEPENDENT ENVIRONMENTAL AUDIT

FINAL REPORT



Proponent:	Sydney Metro
Project:	City & South West, Chatswood to Sydenham
Scope:	Vibration, Noise & Heritage Management
Works / Process:	Martin Place Integrated Station Development contract
Auditee:	Lendlease

Audit Organisation: QEM Consulting Pty Ltd
Auditor: Julie Dickson
Registration: Exemplar Global EMS Auditor Accreditation no. 13573
Audit References: QEM 1803-A13
SM18.19-071-CSW-MPISD-IEA
Audit date: 31 January 2019
Report date: 12 March 2019

EXECUTIVE SUMMARY

An Independent Environment Audit was conducted of Martin Place Integrated Station Development (MP-ISD) demolition of 9-19 Elizabeth Street Sydney to assess compliance with relevant Planning & Assessment Approvals. The audit was conducted at the Lendlease project office in Hunter Street Sydney on 31 January 2019, and included a site visit, interviews and a sampling of formal project records maintained by the principal construction contractor Lendlease and by the owner's representative of 50 Martin Place (Macquarie Bank).

Overall, the audit found that appropriate controls and processes were in place to manage potential vibrational impacts from the demolition works to the adjacent listed heritage building and other surrounding buildings, and heritage archive recording, and salvage has been undertaken as required. Evidence was also provided to demonstrate that community and business consultation is undertaken, and interfaces with other contractors and Sydney Metro consider the cumulative noise and vibration impacts of the project.

In summary, no (0) non-compliances were raised, however seven (7) observations and two (2) opportunities for improvement have been raised for action and consideration. The key issues are discussed below and are summarised in the table in Section 2.1 and detailed in Section 2.3 of this report.

Real-time noise and vibration monitoring has been set up as required by the conditions of approval, however the relationship between real time monitoring and potentially impacted areas has not yet been established through attended monitoring, and real-time alerts were not available to the demolition contractors. The processes for reporting of monitoring outcomes was also unclear. Refer to findings 1, 2, 3 and 5.

It could not be clearly demonstrated that formal processes adequately communicated the key heritage, noise and vibration risks to all relevant parties. The induction materials do not fully reflect the commitments made in the Heritage management plan, and the demolition methodology documentation does not clearly set out the preferred equipment to be used preferentially to minimise noise and vibration. Refer to findings 8 and 9.

Some minor issues regarding the consistency and presentation of information in plans and application were identified, and these have been raised as opportunities for improvement (findings 4 and 6). In addition, some compliance records in relation to out of hours works could not be located in the project files at the time of the audit (finding 7).

In conclusion, it was evident that the Principal Contractors were generally compliant with the planning approval conditions, however will need to undertake corrective actions to address the issues identified during this audit. Some agreed actions have been completed post-audit, and these are reflected within Section 2.3.

Report Author (& Auditor):

J Dickson

Julie Dickson

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1.0 AUDIT DETAILS

1.1 Purpose

The purpose of this Independent Environmental Audit was to assess Principal Contractor Lendlease compliance with the relevant Planning and Assessment Approvals City and Southwest (C&SW) Martin Place Integrated Station Development (MP-ISD) focusing on vibration, heritage and noise management.

1.2 Context

Planning Approvals issued by the Department of Planning & Environment require Sydney Metro (formerly Transport for NSW) to develop an Environmental Audit Program for independent annual environmental auditing against the terms the City & Southwest (C&SW) Critical State Significant Infrastructure (CSSI) Project Approvals.

QEM Consulting Pty Ltd have been engaged by Sydney Metro Delivery Office (SMDO) Safety, Sustainability & Environment (SSE) to deliver a program of Independent Environmental Audits. As required by C&SW Planning Approval CSSI 15_7400 (A39) and the associated Environmental Audit Program, an Independent Environmental Audit was undertaken to assess compliance with Planning Approvals requirements in the demolition of 9-19 Elizabeth Street Sydney.

As context, Macquarie Group Limited provided the NSW Government with an unsolicited proposal for a single fully integrated station and Over Station Development (OSD) relating to the approved metro station at Martin Place. A modification was approved for the Martin Place Metro Station works and will be completed as part of the CSSI project as approved by SSI 7400 MOD 3. OSD south tower and north tower works will be completed under separate State Significant Development (SSD) approvals and is not part of the scope of this audit.

An existing multi-story building, 9–19 Elizabeth Street adjacent to a listed heritage building, 50 Martin place needs to be demolished to enable the construction of the MP-ISD. There is potential for damage due to vibration during demolition works and from the removal and infilling of interconnected openings between the two buildings if not carefully managed.

Macquarie has engaged Lendlease to deliver the construction of the Martin Place Metro Station including the demolition of 9-19 Elizabeth Street. Lendlease has engaged Delta Group to undertake the demolition activities.

1.3 Audit Objectives, Criteria & Scope

The Audit Objective was to assess Planning Approval compliance for the demolition works relating to the Martin Place Integrated Station Development contract. The focus of the audit was on heritage building protection against vibrational and other demolition related damage, as well an assessment of noise and vibration impacts on the surrounding businesses and community.

Audit criteria included relevant Sydney Metro C&SW Construction Noise and Vibration Strategy (CNVS) requirements, plus the following Project Environmental Planning Approvals:

- CSSI 15_7400 Conditions C3 a) & g), C9 a), C11, C15, E10, E13, E14, E15, E22.1, E29-31, E33, E34, E36, E38-39, E47, E59 and;
- Revised Environmental Mitigation Measures NV1, NV3, NV4, NV7, NAH1, NAH4, NAH5.

The audit scope focused on key vibration and heritage risks including the planning and implementation of management and monitoring plans, engineering controls and demolition methodologies to prevent vibration and other demolition related impacts.

1.4 Audit Process and Methodology

The audit comprised an off-site desktop review, a Principal Contractor audit, a site inspection and a post audit assessment of documentation and records. The audit process including scoping and planning was undertaken in accordance with the principals of AS / NZS / ISO 19011:2018 – Guidelines for Auditing Management Systems.

Further details on Auditor credentials, independence and disclaimer can be found in Appendix 2 to this report.

1.5 Auditees and Participation

Refer to full Audit Attendance list in Appendix 3.

1.6 Audit Definitions & Abbreviations

The following abbreviations and definitions apply throughout this report:

Item	Explanation
AA	<i>Acoustic Advisor</i>
C&SW	<i>City & Southwest</i>
CHMP	<i>Construction Heritage Management Plan</i>
CNVIS	<i>Construction Noise and Vibration Impact Statement</i>
CNVMP	<i>Construction Noise and Vibration Management Plan</i>
CNVS	<i>Construction Noise and Vibration Strategy (Sydney Metro)</i>
CSSI	<i>Critical State Significant Infrastructure</i>
MCoA	<i>Minister's Conditions of Approval</i>
MP-ISD	<i>Martin Place Integrated Station Development</i>
NML	<i>Noise Management Level</i>
OOHW	<i>Out of Hours Works</i>
OSD	<i>Over Station Development</i>
REMM	<i>Revised Environmental Management Measure</i>
SM	<i>Sydney Metro</i>
SMDO	<i>Sydney Metro Delivery Office</i>
Non-compliant	<i>Refer Section 2.1 overleaf</i>
Observation	
Improvement Opportunity	
Compliant	
Notable Practice	

2.0 AUDIT FINDINGS

2.1 Audit Summary

This table provides a summary of compliance against audit criteria and area of focus:

Focus Area	Key Criteria	STATUS		
		NP	Compliant *	NC
C				
OFI				
OBS				
Planning approvals, endorsement	C3 (a & g), C9 (a), C15, E33, E36, E37		C	
Site management (inspection)	C11, NV1, NV4, NV7, E36, SM CNVS Table 9		C	
Noise and Vibration monitoring, alerts	C11, E29-31, NV3, CNVMP 9.1.6, 9.2.2		OBS (3)	
Engineering / work plan methodology / procedures	E28.1, E59, NV7		OBS (1)	
Out of Hours Works (OOHW)	E47 CNVMP Section 5.2		OFI (1)	
Community and Stakeholder communication, cumulative impact, complaints, sensitive receivers	E34, E38, E39, E59		OFI (1)	
Induction / training – heritage, noise, vibration	NV7, SM CNVS 7.1.2, CNVMP 1.6		OBS (1)	
Heritage Protection, archival recording, salvage, building condition survey	E10, E13, E14, E15, E22.1, E31, E59, NAH1, NAH4, NAH5, CNVMP CHMP		C	
Compliance records, reporting	C11, E10		OBS (2)	

* Note: Compliance limited to demonstrated evidence referenced in Appendix 1 and/or Audit Checklist working notes

Audit Findings are classified as follows:

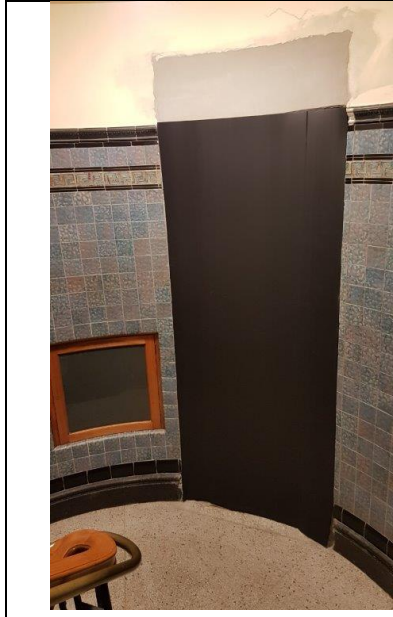
Status	Explanation
Non-compliant (NC)	<i>The intent of one or more specific requirements of a condition or obligation have not been met, based on insufficient objective evidence to demonstrate required outcomes or deliverables being achieved and/or complied with.</i>
Observation (OBS)	<i>Documented requirement and/or implementation issue which may not strictly affect required performance or compliance outcomes. Also termed a non-conformance (as opposed to non-compliance) in the industry, observations could be an early indication of potential non-compliance and/or an adverse performance outcome.</i>
Improvement Opportunity (OFI)	<i>A suggestion or opportunity to implement a good or better practice to improve efficiency, further reduce exposure to risk or improve information management.</i>
	<i>When specifically stated as a Recommendation, this requires a formal response as to a considered action, alternative action or management decision in the negative.</i>
Compliant (C)	<i>Where sufficient verifiable evidence demonstrates that the intent and specific requirements or elements of a condition or obligation have been met within the scope of the Independent Audit.</i>
Notable Practice (NP)	<i>Outstanding positive observation about a system, process or practice, for recognition and/or sharing purposes.</i>

2.2 Site Inspection details/outcomes

A site inspection was conducted at the 9-19 Elizabeth Street demolition site and within the 50 Martin Place Macquarie / Commonwealth Bank building. The demolition works were observed during hammering and dust suppression activities from a viewing area within 50 Martin Place at the interface between the two buildings. It was observed and verbally confirmed that the building being demolished is physically separated (including the interconnected openings) from the walls of 50 Martin Place, which is important in minimising vibrational damage potential. Scaffolding, mesh and noise blankets were noted to be in place for noise mitigation.

Hammering attachments were used to demolish the wall adjacent to the 50 Martin Place wall, as it was explained that pulverisers / shears cannot be used (required to be used in preference to hammering where possible) in such close proximity to the common wall. Shears were observed to be on-site, and an interview with the Delta Group Project Manager confirmed awareness of the requirement to preferentially use these over hammering.

The inspection of the 50 Martin Place building included the observation of the locations of the vibration monitor and the noise monitor as well as all five infilled interconnected openings.



One of 5 infilled interconnected openings. The walls are to be tiled to match original adjacent ceramic wall tiles.



Demolition site showing area close to the 50 Martin Place wall.

2.3 Detailed Findings and Agreed Action Plan

Ref	Audit Finding	Status	Priority	Agreed Action Plan
1.	<p><u>Vibration Monitoring</u> The relationship between the vibration monitored in real time at 50 Martin Place (in the electrical equipment room at approximately 7m from the interface with 9-19 Elizabeth Street) and the vibration in the heritage stair well (at the interface with 9-19 Elizabeth Street has not yet been established.</p> <p>In consultation with project Acoustic Advisor it is considered that this could be established by:</p> <ul style="list-style-type: none"> Carrying out attended vibration monitoring in the heritage stairwell during representative demolition activity (hammering, for example) and comparing the results with data from the real-time monitor; This relationship should then be considered when setting alerts and alarms that are applied to the real-time monitoring system and when interpreting the results. For example, it may be that vibration reaches 5mm/s at the part of the building closest to the demolition activity while it is 2mm/s at the real-time monitor <p><i>At the time of the audit, no attended vibration monitoring had been conducted, however was planned within the next few days.</i></p>	OBS	MEDIUM	<p>MP-ISP Agreed Action:</p> <p>Attended vibration monitoring completed by Renzo Tonin & Associated on the 7th February 2019 between 15:20 and 16:00. During this period jackhammering was being undertaken at 9-19 Elizabeth Street.</p> <p>Comparison has been completed to show correlation between vibration data of the attended monitoring results and real-time loggers located inside the 50 Martin Place building, and will be used to verify ongoing real-time monitoring data.</p> <p>Further correlation will be undertaken as the project progresses into excavation and station construction, and the monitoring locations change.</p> <p>Responsible person: Hari Corliss Completed date: 08/03/2019</p>
2.	<p><u>Noise Monitoring</u> The relationship between noise monitored in real time at 50 Martin Place (within north west corner of the atrium – level 10) and external noise closer to the 9-19 Elizabeth St worksite has not yet been established. In consultation with project Acoustic Advisor it is considered that this could be established by:</p> <ul style="list-style-type: none"> Carrying out attended noise monitoring, e.g. at Castlereagh Street, during representative demolition activity (hammering, for example) and comparing the results with data from the real-time monitor This relationship should then be considered when setting alerts and alarms that are applied to the real-time monitoring system and when interpreting the results. In particular, it should be demonstrated how the real-time monitoring results 	OBS	MEDIUM	<p>MP-ISP Agreed Action:</p> <p>Attended noise monitoring completed by Renzo Tonin & Associated on the 7th February 2019 between 16:30 and 16:45. During this period demolition was being undertaken at 9-19 Elizabeth Street.</p> <p>Comparison has been completed to show correlation between noise data of the attended monitoring results and real-time loggers located inside the 50 Martin Place building, and will be used to verify ongoing real-time monitoring data.</p> <p>Further correlation will be undertaken as the project progresses into excavation and station construction, and the monitoring locations change.</p>

Ref	Audit Finding	Status	Priority	Agreed Action Plan
	will be used to inform and manage noise levels at other sensitive receivers including Hosking Place and Network 7. <i>At the time of the audit, no noise monitoring had been conducted, however was planned within the next few days</i>			Responsible person: Hari Corliss Completed date: 08/03/2019
3.	<u>Real-time monitoring alerts</u> Whilst real-time monitoring alerts were set up for regulators, Macquarie Bank and Lendlease personnel, these were not yet available to key Delta Group site personnel. <i>It is recommended key that Delta Group personnel are provided with access to real-time monitoring alerts to ensure timely action should trigger levels for action be reached.</i> <i>It is noted that Lendlease were already considering this issue.</i>	OBS	LOW	MP-ISP Agreed Action: Set up Delta Site Supervisor with real-time monitoring access. Responsible person: Jason Ambler Completed date: 08/03/2019
4.	<u>OOHW application – documentation inconsistency</u> Inconsistencies were noted in Out of Hours Works Application LL MPISD OOH 1 5/09/2018 relating to hoarding / site installation early works. Section 4 states “attended noise monitoring not proposed...” whilst the Addendum Mitigation Measures Table 4 states “Compliance noise monitoring will be undertaken. <i>It appears that this may have been a documentation oversight, as the activities were considered low risk and no NMLs at any receivers were anticipated. At the time of the works, the real-time monitoring had not yet been set up and no attended monitoring had yet been conducted.</i>	OFI	LOW	MP-ISP Agreed Action: Noted as a documentation error. The real-time noise and vibration monitoring system is now operating Status: Closed
5.	<u>Reporting</u> Section 9.7 of the CNVMP requires that “the results of noise and vibration monitoring shall be documented and published monthly on the Projects website as part of Construction Monitoring Report...” At the time of the audit, evidence could not be provided to support the intention to report monthly, and it was unclear, which website is referred to in the CNVMP. In addition, the interface between the contractor and Sydney Metro for reporting of monitoring results was not clear in the CNVMP.	OBS	LOW	MP-ISP Agreed Action: Sydney Metro confirmed following the audit that a 6 monthly Compliance Construction Program is required under A34(a), and as such the management plan will be amended to reflect this. Responsible person: Jason Ambler Due date: 29/03/2019

Ref	Audit Finding	Status	Priority	Agreed Action Plan
6.	<p><u>Location of sensitive receivers</u></p> <p>Whilst sensitive receivers are identified in lists in the text of the CNVIS, and a map is provided with colour-coded overlays with receiver type, the exact locations of the sensitive receivers could be made clearer.</p>	OFI	LOW	<p>MP-ISP Agreed Action:</p> <p>Discuss amendment of map with project acoustic consultant, Renzo Tonin, to include in further revisions of the CNVIS.</p> <p>Responsible person: Jason Ambler</p> <p>Completed date: 08/03/2019</p>
7.	<p><u>Compliance records retention - Out of Hours Works Application</u></p> <p>The compliance record retention processes did not ensure that the signed version of the OOHW No 2 (i.e. – the Determination Page for approval by SM, AA and ER) was retained in the project files.</p> <p><i>It was confirmed that a signed copy is held by Sydney Metro</i></p>	OBS	LOW	<p>MP-ISP Agreed Action:</p> <p>Save the appropriate approval page on the project server in the appropriate location.</p> <p>Responsible person: Jason Ambler</p> <p>Completed date: 08/02/19</p>
8.	<p><u>Induction / communication of heritage issues</u></p> <p>The key messages and requirements from the Construction Noise and Vibration Management Plan and Construction Heritage Management Plan are not fully reflected in the documentation. For example:</p> <ul style="list-style-type: none"> For Heritage, the commitment to provide an “illustrated easy to understand presentation that includes general principles of “ask before you act / if in doubt ask / why / how / where to seek advice..” and “taking care of the building (50 Martin Place)” etc is not fully reflected in the current induction material. <p><i>Induction material and other communications could be improved / enhanced to include clear information regarding the noise, vibration and heritage risks.</i></p>	OBS	LOW	<p>MP-ISP Agreed Action:</p> <p>Revise site induction heritage content.</p> <p>Responsible person: Jason Ambler</p> <p>Due date: 11/03/2019</p>
9.	<p><u>Demolition methodology</u></p> <p>Whilst pulverisers / shears are identified as required equipment, the preferred use of these over hammering as a key noise and vibration mitigation measure is not flagged in Demolition Work Plans and other methodology documentation provided by the demolition Contractor (Delta Group).</p>	OBS	LOW	<p>MP-ISP Agreed Action:</p> <p>This has been discussed with the demolition contractor as a requirement to maximise use of the pulveriser where feasible and is included in contractual requirements. Usage of the pulveriser is being tracked per floor.</p>

Ref	Audit Finding	Status	Priority	Agreed Action Plan
				<p>The top two floors including the plant room were 80% demolished with the pulveriser. The remaining floors aim at 20% demolition using the pulveriser.</p> <p>Machine access within the building footprint and placement of vertical building columns place restrictions on further use of the pulveriser, and a hammer is required to be used.</p> <p>Responsible person: Jason Ambler</p> <p>Completed date: 01/03/2019</p>

Appendix 1: Audit documentation

The following indicates key systems, documents, reports, information and records that were reviewed, accessed or sighted during the audit process:

Documentation	Information / Records
1. Project documentation – Management Plans (general)	
Construction Environmental Management Plan – Sydney Metro Martin Place Station – Integrated Station Development 9-19 Elizabeth Street Demolition Rev 5 24 Oct 2018	Letter from Planning and Environment approving the Demolition of 9-19 Elizabeth Street Construction Environmental Management Plan and sub-plans (including Noise and Vibration and Heritage Plans) dated 19/12/2018
Construction Noise and Vibration Management Plan – Martin Place Metro CSSI - Renzo Tonin & Assts for Lendlease Group, 22 Oct 2018	
Construction Noise and Vibration Impact Statement for Demolition of 9-19 Elizabeth Street – Renzo Tonin & Assts for Lendlease Group, 2 nd Nov 2018	
Business Management Plan: 9-19 Elizabeth Street Demolition – Macquarie Rev 7, 10 Dec 2018	
Sydney Metro City & Southwest – Martin Place Station 9-19 Elizabeth Street, Sydney – Demolition Works Construction Heritage Management Plan	
Community Communications Strategy: 9-19 Elizabeth Street Demolition - – Macquarie Rev 11, 6 Dec 2018	
Chatswood to Sydenham Construction Noise and Vibration Strategy – Sydney Metro V 0.4, 09 Aug 2018 Issue D 20 Nov 2018 – Tanner Kibble and Associates	
2. Noise and Vibration management process – approvals, assessments, monitoring, Out of Hours Works	
	City & Southwest Out of Hours Work Application Form LL MPISD OOH1 - Early Works rev 2 – Signed (Determination page) 26/10/2018
	City & Southwest Out of Hours Work Application Form LL MPISD OOH2 – Application date 31/10/2018 for Geotechnical works – drilling Nov / Dec 2018 (not signed)
	City & Southwest Out of Hours Work Application Form MPISD OOH3 for MP-ISD Demo Extended Saturdays OOH Application rev1 Signed (Determination page) 15 Jan 19
	City & Southwest Out of Hours Work Application Form LL MPISD OOH2 Application date 26/01/19 (not yet signed, undertaken)

Documentation	Information / Records
	Email from Macquarie Group dated 11 Feb 2019 advising that the Technical Director of Taylor Thomson Whitting (TTW) provided advice on the vibration monitoring equipment (incumbent structural engineer).
	Real-time monitoring data (on portal / computer) – no hard copy)
	Email string to Noise and Vibration consultants Renzo Tonin requesting attended monitoring 22 Jan, 29 Jan
	Email from Macquarie to Lendlease noting no noise or vibration exceedances from monitoring to date (22 January) and trigger levels for alerts to be sent out.
	Email string – Lendlease to Macquarie requesting real-time monitoring access to relevant Lendlease, Sydney Metro, ER, AA, EPA and DP&E.
3. Noise and Vibration - consultation with community, businesses, agencies, Sydney Metro, other contractors (cumulative impact)	
	Community engagement summary for additional weekend working hours December 2018 – extract of communications in Consultation Manager
	Sydney Metro City & Southwest – Martin Place Communications Coordination Meeting 24 January 2019
	20190201 Monthly update - Martin Place Station - February 2019
	20190112 Construction notification - Martin Place ISD - Demolition work January 2019
	20181030 – Notification – Out of hours work update – revised schedule for hoarding work on Elizabeth Street – November 2018
4. Communication, induction (Noise and vibration, Heritage)	
Induction Presentation Sydney Metro Martin Place Precinct Rev 8 (62 slide PowerPoint presentation)	Induction records (17 individuals) on Environment, Health and Safety Induction Record Form (Lendlease) 6/11/18, 7/11/18, 8/11/18, 9/11/18 6/12/18
	Toolbox talk 22 October 2018
	Memorandum from TKD Architects to Macquarie Group dated 7 Feb 2019 with appended heritage induction material provided to AJ Bristow (heritage contractors for infill works).

Documentation	Information / Records
5. Heritage Management	
Archival Recording Report (within Appendix D of the Construction Heritage Management Plan)	Approval of Heritage Architect - George Phillips of Tanner Kibble Denton Architects
	Memorandum from TKD Architects to Macquarie Group dated 7 Feb 2019 with appended relevant documents) confirming salvage, heritage induction material, trial removal of internal finishes and provision of methodology for the removal of internal finishes to 50 Martin Place
	Memorandum from TKD Architects to Macquarie Group Ltd dated 03/05/2018: 50 Martin Place Fabric Salvage Process Guidelines Report
	Memorandum from TKD Architects to Macquarie Group Ltd dated 03/05/2018: Heritage Induction Script for doorways and infill works
	Memorandum from TKD Architects (Scott MacArthur) to Macquarie Group dated 7 February 2019 (post-audit) – Subject: Metro Compliance Audit - confirming Salvage Process Guidelines report prepared, Heritage Induction provided to AJ Bristow, trial tile removal approved and provision of methodology for removal of tiles.
	Memorandum from AJ Bristow and Sons to TKD Architects (Simon Hodder) – 50 Martin Place – Heritage Tile Salvage and Storage dated 15 February 2019 (post-audit). Memo provided methodologies and stated that the salvage of tiles was carried out by AJ Bristow tradespeople with heritage experience.
6. Design, construction and engineering controls	
Sydney Metro Martin Place integrated station development Demolition Management Plan for 9-19 Elizabeth Street Rev D 12 October 2018	Safe Work Method Statement / JSA – Typical Floor Demolition 12/12/2018
Delta Group Demolition Plan 9 – 19 Elizabeth Street – Demolition Work Plan 24/09/2018 Rev 00 (draft)	Safe Work Method Statement / JSA – Plant Room Demolition 12/12/2018
9-19 Elizabeth Street Methodology (Demolition) 13/07/2018 Rev 0	Macquarie Metro Martin Place – 50 Martin Place Condition Assessment 25 Jan 2018 (Arup Pty Ltd) (Table of contents, executive summary)
	Pre-construction Dilapidation Inspections 48 – 50 Martin Place, Sydney on behalf of Macquarie Corporate Holdings Pty Ltd, Joint Party of Interest: Lendlease Group, prepared by GreenPlus Property Services – Aug / Sept 2018.
7. Compliance Tracking / management	
	Draft Environmental Compliance Tracking Matrix (early stages of development)

Appendix 2: Audit Credentials

Audit process

This Independent Environment Audit comprised an off-site desktop review, an onsite or office audit and a post audit assessment of documentation and records. The audit assignment was undertaken by the identified QEM Consulting Pty Ltd Auditor below, with the second Auditor not directly involved in the audit conducting a peer review of the report prior to finalising.

The audit process including scoping and planning was undertaken in accordance with the principals of AS / NZS / ISO 19011:2018 – Guidelines for Auditing Management Systems.

Auditor information

Audit Organisation:	QEM Consulting Pty Ltd
Auditor & Report Author:	Julie Dickson
Auditor Qualification:	Exemplar Global EMS Auditor Accreditation no. 13573
Affiliations:	EIANZ Certified Environmental Practitioner, Reg. no. 221
Report Reviewer:	Larry Weiss
Auditor Qualification:	Exemplar Global EMS Auditor Accreditation no. 12355
Affiliations:	Member, Engineers Australia 938517

Auditor certification

The abovementioned Auditor certifies as having personally undertaken this Independent Audit and preparing the contents of this Independent Audit Report; and that the findings of the audit are reported truthfully, accurately and completely; and that he / she has exercised due diligence and professional judgement in conducting the audit. The signed Statement of Interests and Association in our services agreement with Sydney Metro confirm our Auditor's independence and absence of pecuniary interest in the audited project.

Audit disclaimer

It should be noted that this report is a snapshot in time, based on selected and supplied documentation, as well as observations on the day only, and does not purport to be a definitive confirmation of overall or potential compliance or vice-versa.

Appendix 3: Audit Attendance Register

AUDITEE: Lendlease AUDIT: SM18.19-071-CSW-MPISD-ENV SITE: 9-19 Elisabeth Street demolition / 50 Martin Place			31/01/2019	
NAME (print)	POSITION & ORGANIZATION		ENTRY (Initials)	EXIT (initials)
Julie Dickson	Lead Auditor -	QEM	JD	JD
Dave Anderson	Acoustic advisor (As Subject Matter Expert)	Acoustic Studio	DA	DA
Hari Corliss	Stand-in Environment Manager	Lendlease	HC	HC
Chris Berg	Environment Manager <u>C&SW</u> , Sydney Metro (as Observer)	Sydney Metro	CB	CB
Dean Rogerson	Site Supervisor	Lendlease	(site)	
David Mc Ewen	Owners Representative	Macquarie Bank	DM	
John Newton	Station Interface Director	<u>Tactix</u> / Macquarie	JN	
Tim Elliott	Project Manager	Delta Demolitions	(site)	
<u>Lorryn</u> Williamson	NSW Environment Manager -	Lendlease Engineering		LL
Richard Eaton	Construction Director	Lendlease		RE
Natalie Dickson	Communications / Place <u>Mgr</u>	Sydney Metro		ND

----- END REPORT -----