

Independent Environmental Audit on the Acoustic Advisor role

Final Report

Contract works: Sydney Metro City and Southwest – Project wide AA role
Scope: AA obligations, responsibilities and service provision

Reference: SM18.19-073B-CSW-AS-ENV

21/01/2019

Audit Organisation:	QEM Consulting	Audit Date:	12 December 2018
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1. Executive Summary

1.1 Introduction

The purpose of this audit was to assess the compliance of Acoustic Advisor (AA) services provided by Acoustic Studio (AS) with the relevant Planning and Assessment Approvals and Sydney Metro requirements.

1.2 Background

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 of the City and Southwest project Critical State Significant Infrastructure (CSSI) approval.

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 Critical State Significant Infrastructure Approval SSI 15_7400 Condition A39 and the associated Environmental Audit Program, an Independent Environmental Audit was undertaken to assess Acoustic Studio's compliance with relevant Planning Approvals Sydney Metro requirements documented within the Sydney Metro Services Brief.

1.3 Objective and Scope

The objective of this audit is to provide assurance that AA services provided by Acoustic Studio on the Sydney Metro City and Southwest project are being performed in accordance with the following:

- Ministers Conditions of Approval (MCoA) of the Project Planning Approval CSSI 15_7400 (conditions A25 and A27 (a-f))
- Key obligations and requirements of the Sydney Metro Services Brief

** Documents and records assessed at the time of audit are indicated in Appendix 1.*

1.4 Summary of Findings

The table below provides a summary of key findings noted in this audit and the priority assigned to these findings.

Ref	Description	Priority*
Positive OBS 1	Positive collaboration and working relationship with the Environmental Representatives (ERs) was demonstrated	Observation
1	A finding was raised in regard to the lack of a Services Management Plan as required by the Sydney Metro Services Brief	Medium

2. * Priority Definition enclosed as Appendix 2

1.6 Overall Assessment

This section summarises the outcomes of the Independent Environmental Audit of the AAs against relevant Planning and Assessment Approvals. The assessment was conducted on 12 December 2018 at the Acoustic Studio Offices in Stanmore.

Based on the documentation and information sampled, the assessment noted that appropriate systems and processes were generally developed and implemented to ensure ongoing compliance with the MCoAs, and the requirements documented within the Sydney Metro Services Brief relevant to the scope of this audit. However, a Services Management Plan has not been prepared as required by Section 4.1 of the Sydney Metro Services Brief and this has been raised as a finding.

A review of documents and records and interviews with the AAs indicated appropriate levels of communication and collaboration with various stakeholders. The document review process was found to be adequate and appropriate, with evidence presented to demonstrate that Construction Noise and Vibration Management Plans (CNVMP), Construction Noise and Vibration Impact Statements (CNVIS) and Out of Hours Works (OOHW) endorsements were formalised only once all comments and concerns had been satisfactorily considered and addressed.

Involvement in inspections, monitoring activities, complaints & incident review and follow-up and submission of monthly combined AA reports to DP&E, & Sydney Metro provided evidence of ongoing and timely monitoring and measuring of the performance of the project.

Overall, the outcome of this audit was positive, with no areas of Non-compliance identified against the Conditions of Approval relevant to the Acoustic Advisors role (A25 and A27 (a – g)).

Report certified by:

Julie Dickson

Exemplar Global certified Lead Auditor (13573)

2. Detailed Findings and Agreed Action Plan

2.1 Audit Findings & Action Plan

The following section of this report provides details of audit findings and the agreed action plan, including allocation of responsibility and timeframes.

Ref	Audit Finding	Risk/Impact	Priority*	Agreed Action Plan
	<i>Positive observations / strengths:</i>			
Obs1	Despite the lack of precedence in the provision of Acoustic Advisor services as part of Conditions of Approval, the AAs demonstrated effective collaboration and working relationship with the ERs to provide value added services to the project in regards to noise and vibration.	None	Observation	N/A
	<i>Audit findings requiring action:</i>			
1	A Services Management Plan that sets out the general approach to managing delivery of acoustic advisory services and is consistent with the principles of AS/NZS ISO 9001 has not yet been developed or submitted to Sydney Metro in accordance with Section 4.1 of the Services Brief.	Service consistency Documents may not reflect any required, changed or revised practices	Medium	AA Proposed Action: Prepare a Services Management Plan in accordance with Sydney Metro requirements Responsible person: Dave Anderson Due date: 28 February 2019

* Priority Definition enclosed as Appendix 2

2.2 Assessment Details

This audit assessed the AAs in fulfilling their role as defined by the Conditions of Approval, and the Sydney Metro Services Brief. The following section of this report provides an overview of the outcomes of the audit, based on a review of core processes, information, records, documentation, communications, and outputs.

Approval of AAs (CoA A25)

Evidence was provided to demonstrate that the Acoustic Advisor was approved on 11 April 2017 and the Alternative Acoustic Advisor was approved on 14 July 2017 by the Department of Planning and Environment.

Communications and collaboration (CoA A27a, b, c Serv Brief Sec 2.4.2, 2.5)

Communications with the Department of Planning and Environment was demonstrated through various means including regular attendance at fortnightly meetings and correspondence with DP&E on noise and vibration issues, including recent examples of correspondence clarifying that vibration exceedance events during two trial blasts at Victoria Cross did not meet the definition of an incident as defined in the Conditions of Approval. Evidence of communications with other various stakeholders including Sydney Metro, Community Complaints Commissioner, the Environmental Representatives, and Principal Contractors' teams, were demonstrated through meeting agendas and minutes, out of hours works (OOHW) application recommendations, appointments, correspondence, and verbal discussions.

Document Reviews, endorsements, minor amendments (CoA A27 d, g (iv and v) and Serv Brief Sec 2.5 d),

The document review process by the AA focuses on Construction Noise and Vibration Management Plans and Construction Noise and Vibration Impact Statements and link to the ER review and endorsement process. The assessment included an overview of the number of reviews undertaken, a review of individual samples of reviewed and endorsed documents and also examined the processes that resulted in conditional endorsements where reviews identified initial sub-optimal outcomes. Evidence was provided to demonstrate that comments were raised, entered and addressed in comments sheets prior to endorsements by the AA. Consideration of minor amendments to the CEMP and relevant sub-plans, their consistency with noise and vibration monitoring programs, and assessments of the impacts of minor ancillary facilities was also satisfactorily demonstrated.

Out of Hours Works requests – Consideration and endorsement (CoA 27 g (i), E47, Service Brief 2.5 d)

Evidence was provided to demonstrate that the AA reviews and endorses OOHW applications and applies the requirements of the OOHW Protocol including a risk assessment process to identify their risk levels. Various endorsed applications were reviewed including examples that indicated low risk with no comments, low risk with comments, and low risks with specific conditions to be complied with. Evidence was also provided of coordination with NRT and Sydney Trains with other construction activities where noise management was required. No activity has triggered "high" risk where the application requires application to DP&E for approval.

Monitoring implementation and strategic inspections (CoA A27 e and Serv Brief Sec 2.4.2, 2.5)

Monthly reports, monitoring results and correspondence provided evidence of attendance at and involvement in site inspections, witnessing of noise and vibration monitoring, identification of areas of potential cumulative impacts and review of implementation of noise and vibration mitigation & management commitments during key activities.

Audit, complaints, incidents, dispute resolution

It was noted that no notifications of noise and vibration incidents have been required to be notified to the Secretary. Potential vibration incidents were identified relating to two trial blasts at Victoria Cross North in October and November 2018, which have been subject to extensive investigation and included correspondence with DP&E. It has since been determined by the AA that the events were not classified as incidents as damage did not occur, however two separate Non-compliances have been raised. The AA responded to requests for assistance by the Community Complaints Commissioner to review ongoing complaints by a specific complainant residing in Chatswood, and evidence of meetings with the complainant and attendance at associated monitoring was provided. The AAs receive incident correspondence and notifications of noise and vibration related complaints and incidents and details are reported within the Non-compliance / Incident and Noise and Vibrations sections of the monthly reports. Evidence was also provided of involvement in and contribution to noise and vibration investigations and of attendance at Independent Environmental audits.

Monthly Reporting to DP&E and Sydney Metro (CoA A27 f and Serv Brief 2.4.2)

It was confirmed that monthly AA Reports have been prepared and submitted to DP&E and were mostly submitted within the required timeframes of “within seven (7) days following the end of each month”. It was noted, however that one report for July 2018 was submitted early in the morning on the day after the required submission date (submitted 7.54am 8 August). The monthly reports detail the AAs actions and decisions in the preceding month as required by the condition of approval, and also include the Sydney Metro requirements including inspections, site visits, non-compliance, incident and complaint details as documented in the Services Brief. The combined reports are simultaneously submitted to DP&E and Sydney Metro.

Appendix 1: Audit information

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

Documentation	Information / Records
1. Approval of AAs (CoA A25)	
	Sydney Metro and Southwest – Chatswood to Sydenham (SSI15_7400) Condition A25 Acoustics Advisor – letter dated 11/04/2017 approving nomination of Dave Anderson as the AA
	Sydney Metro (SSI7400) – Nomination of Alternate Acoustic Advisor (Condition A25) approving Sav Shimada as alternative AA dated 14/07/2017
2. General (CoA A24)	
Services Brief – City and Southwest Acoustic Advisor Rev 2.1 (Schedule 7 of the CSW Acoustic Advisor – Professional Services Contract PSC No.00013/10922)	
City and Southwest Chatswood to Sydenham Out of Hours Work Protocol Ver 2.0 14 July 2017	
3. Communications and Interfaces	
	Meeting Agendas: Department of Planning and Environment fortnightly meetings 7/12/2018, 23/11/2018, 9/11/18, 26/10/18 (attended by Sydney Metro, Acoustic Advisor, DP&E compliance team etc),
	TSE meeting minutes samples with AA involvement: 24/4/2018, 26/06/2018, 25/09/2018
	SSJ meeting minutes examples with AA involvement 03/10/2018, 15/11/2018, 30/11/2018
	Email – AA Dave Anderson to DP&E Jacqui McLeod RE: Clarifications of Vic Cross outstanding issues 22 June 2017
	Email – response from Stuart Anstee 11 Dec 2018 regarding works undertaken at Martin Place with monitoring results showing results within predicted values
	Email string 19 September re: Blasting vibration limits between AA, and ER

Documentation	Information / Records
	Presentation – Noise and Vibration Sydney Metro and EPA – 22 October 2018
4. Review of documentation, (A27 d, g (iv, v), endorsements	
	CNVIS for Delta demolition works at Chatswood 10 July 2017 Endorsement by Alternative AA – endorsement subject to precautionary approach with interim criterion.
	Construction Noise and Vibration Management Plan for TSE works 21 November 2017 – endorsement by AA
	Construction Noise and Vibration Impact Statement: Demolition Works – Pitt Street South 7 March 2018 Revision 4 (Rev 3 previously endorsed)
	Construction Noise and Vibration Impact Statement: Marrickville Dive Site 26 April 2017 Revision 6 conditional endorsement by Alternative AA
	Central Station Main Works Construction Noise and Vibration Impact Statement (CNVIS) Revision 4 3 August 2018 by AA
	Construction Noise and Vibration Impact Statement: Marrickville Dive Site 3 August 2018 Revision 8 (Revision 6 was conditionally endorsed)
	Construction Noise and Vibration Impact Statement for TSE Tunnelling 12 October 2018 Revision 2 by AA
	Construction Noise and Vibration Impact Statement for Laing O’Rourke Northern Corridor Works – Portion 7B 16 October 2018 Revision F.01 by AA
	Construction Noise and Vibration Management Plan for Laing O’Rourke Northern Corridor Works Portion 7B 16 October 2018 Revision V.04 by AA
	Construction Noise and Vibration Impact Statement: Barangaroo Site 17 October 2018 Revision 10 (previously reviewed and endorsed revisions 7, 8 and 9) by AA
	Construction Noise and Vibration Impact Statement: Chatswood Construction Site 15 November 2018 Revision 9 (previously reviewed revisions 5 & 8) by AA
	Construction Noise and Vibration Impact Statement DRAFT Rev E: Pitt Street 17 July 2017 and a marked-up version with AA comments
	Email – 10 Jan 2018 – Alternate AA (Sav Shimada) to Sydney Metro and ER – Review of CNVMP, CNVIS and Monitoring report – comments.
	Email – 11 Jan 2018 – NCW Portion 7 – CAFMP; MW App 006 – AA comments on CNVMP, Construction Ancillary Facilities Management Plan and Minor Works application 006. (+ other related emails)

Documentation	Information / Records
5. Out of Hours Works approvals endorsements (A27 d, g (i)),	
	OOHW Application 181129 02 – Reinstatement of tunnel boring machine deliveries works endorsed TfNSW 29/08/18, endorsed AA 12/12/18 with comments and conditions
	OOHW Application MP_022 Martin Place South – Demolition Works 07/12/2018. Endorsed AA 10/12/2018 with comments (low risk provided conditions met) and 6 conditions
	OOHW Application MPS_018 – Martin Place South Eastern Suburbs Rail Corridor Works including concrete pour for void slab 26/11/2018. Endorsed TfNSW 26/11/18, endorsed AA 26/11/18 – low risk, no conditions
	OOHW Application 007 – Central Station Main Works – Olympic Stairs and Metro Box early Works 07/08/2018. Endorsed TfNSW 22/08/2018 and endorsed AA 24/08/18.
	OOHW Application LL MPISD OOHW1 Early Works 05/09/2018 – 9 – 19 Elisabeth Street Early works (with highlighted revisions) Endorsed TfNSW 25/10/2018, endorsed Alternative AA 26/10/2018 – low risk, with conditions.
	20181212 20181126 NCW OOHA 023 Comment Register – combined – with AA comments and responses
	20181030 20181024 CMSW OOHW1 – Combined comments_LOR response-sav – AA comments and responses
6. Monitoring and Reporting (A27 e, f)	
	Barangaroo shed verification monitoring witnessed by AA – 15/11/2018 - notes
	Email – 15 September 2018 from ER Annabelle Reyes/response to AA email 11 September re: AA actions from today's site visit. – requests for actions from site visit at Victoria Cross North for inclusion in ER report
	Tunneling under Lord Street residences – email 30 Nov 2018 – validation of ground borne noise monitoring
	Blasting vibration limits – email 19 September 2018 – re: draft incident report on vibration exceedances at 243 Miller Street
	Waterloo: 10th Dec shift update – email –11/12/2018 recorded noise levels – acceptability

Documentation	Information / Records
	Independent Environmental Audit on Sydney Metro City & Southwest – TSE Works – Scope: Planning Approval compliance relating to Construction Heritage Management – attendance by AA
7. Audit, complaints, incidents, dispute resolution (A27 f, Services Brief 2.4.4, 2.4.5)	
	Email Update Potential noise and vibration incident during trial blast at Victoria Cross North – Email string commencing 6 Nov 2018 – update on investigation into vibration event to 16 Nov – AA’s and DPE correspondence – conclusion that “not an incident” as defined under the approval definitions, and that the second trial blast planned is planned for 17 Nov.
	Email – from AA to Kate Moore (DPE) dated 17 Nov 2018 “Potential noise and vibration incident during second trial blast at Victoria Cross North, 17 November 2018” notifying that vibration levels at 243 Miller Street exceeded vibration limits.
8. Reporting (A27 f (vi))	
	Monthly Reports – City and Southwest Acoustic Advisor – for periods Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct and Nov 2018 Reports to DP&E and Sydney Metro

Appendix 2: Priority Definition

The priority for findings raised in this report is described in the table below.

Priority	Definition	Guidelines for Implementing Actions
Very High	A significant control weakness / issue or fundamental non-compliance that exposes the project or area under review to a very high level of risk	Requires immediate management attention, with actions plans to be developed and enforced within an agreed time frame. The matter will be escalated immediately to senior management from all parties
High	A control weakness / issue or non-compliance that may expose the project or area under review to a high level of risk	Action plans to be developed and implemented within an agreed time frame. The matter will be escalated to relevant senior executives where it is deemed necessary
Medium	A control weakness / issue or non-compliance that may expose the project or area under review to a moderate level of risk	Action plans to be developed and implemented within an agreed time frame
Low	A control weakness / issue or non-compliance that may expose the project or area under review to a low level of risk	Action plans to be developed and implemented within an agreed time frame
OFI	Opportunity For Improvement (OFI) – opportunity to implement a good or better practice to improve efficiency or further reduce exposure to risk	Suggestion to be considered for implementation
Observation	Good Practice – process / system in place and implemented effectively across business.	Maintain to current standard. Share with other areas of business.

Appendix 3: Personnel Consulted and Timeline

We would like to extend our appreciation to the following individuals involved this audit:

Name	Title
Dave Anderson	Acoustic Advisor, Director, Acoustic Studio
Sav Shimada	Alternate Acoustic Advisor

The timeline is shown in the table below.

Milestone	Date
Issuance of Audit Notification Plan	29 November 2018
Issuance of Audit Checklist	6 December 2018
Briefing Meeting	6 December 2018
Desktop Audit	7 December 2018
Audit including Opening Meeting	12 December 2018
Issue of draft Audit Findings	18 December 2018
Issuance of Draft Report	19 December 2018
Response to audit findings (agreed action plan)	16 January 2019
Issuance of Final Report	21 January 2019

Appendix 4: Audit attendance register

AUDIT ATTENDANCE REGISTER				
AUDITEE: Acoustic Studio AUDIT: SM18.19-073B-CSW-AS-ENV SITE: Unit 27, 43-53 Bridge Road, Stanmore			12/12/2018	
NAME (print)	POSITION & ORGANIZATION		ENTRY (Initials)	EXIT (initials)
Julie Dickson	Lead Auditor	QEM	<i>JD</i>	✓
Dave Anderson	Director and Acoustic Advisor	Acoustic Studio	<i>DLA</i>	✓
Sav Shimada	Alternative Acoustic Advisor	Acoustic Studio	✓ <i>SS</i>	✓
Larry Clark	Acoustic Engineer	Acoustic Studio	<i>LTC</i>	✓

Appendix 5: Audit Credentials

Audit process

The Independent Environmental Audit comprised a desktop review, and a 5-hour desktop review at the Acoustic Studio office, which was conducted by Julie Dickson, of QEM Consulting Pty Ltd. The audit comprised an assessment of documentation and records conducted at the Acoustic Studio office at 43-53 Bridge Road, Stanmore. The audit utilised an assignment specific Audit Checklist based on the Planning Approvals and the Sydney Metro Service Brief. Requirements were then verified as being implemented and/or compliant, based on records and objective evidence, the entire process undertaken in accordance with AS / NZS / ISO 19011:2014 – Guidelines for Auditing Management Systems.

Auditor information

Audit Organisation:	QEM Consulting Pty Ltd
Auditor & Report Author	Julie Dickson
Auditor Qualification	Lead EMS and Environmental Compliance Auditor, Exemplar Global Certification 13573
Affiliations	Certified Environmental Practitioner (EIANZ) Reg No: #221 MEIANZ

Auditor certification

The abovementioned Auditor certifies as having personally undertaken this Independent Audit and preparing the contents of this Independent Environmental Audit Report; and that the findings of the audit are reported truthfully, accurately and completely; and that 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 evidence, and does not purport to be a definitive confirmation of overall compliance or vice-versa.