

NSW Planning ref: SSD-9787-PA-89

Julie Meehan
Senior Manager Business Administration & Improvement
The University of Newcastle
Awabakal Country

Sent via the Major Projects Portal only

19/03/2024

Subject: Nihon University Newcastle Campus - Operational Noise Monitoring Report (March 2024)

Dear Mrs Meehan

Reference is made to your post approval matter, SSD-9787-PA-89, Operational Noise Monitoring Report (March 2024), submitted as required by Schedule 2, Condition F9 of SSD-9787 (the consent) to the NSW Department of Planning, Housing and Infrastructure (NSW Planning) on 18 March 2024.

NSW Planning has reviewed the Operational Noise Monitoring Report (March 2024) and considers it to generally satisfy the conditions of consent in relation to monitoring reports.

Should you wish to discuss the matter further, please contact Joel Fleming, (Senior Compliance Officer) on 02 6575 3416 or email compliance@planning.nsw.gov.au

Yours sincerely

A handwritten signature in black ink that reads "H Watters".

Heidi Watters
Team Leader Northern
Compliance

As nominee of the Planning Secretary

18 March 2024

The Planning Secretary
Department of Planning, Industry & Environment
320 Pitt Street
Sydney, NSW 2000

Attention: Joel Fleming (or whom it may concern)
Project: Nihon University Newcastle Campus – SSD-9787
Re: Condition F9 Operational Noise Limits

Dear Joel,

Reference is made to SSD-9787 Condition F9 in relation to the Operational Noise Limits of the development.

Occupation commenced on 1st February 2024. As such Condition F9 required the following prior to 1st April 2024:

The Applicant must undertake short term noise monitoring in accordance with the Noise Policy for Industry within two months following the commencement use. The monitoring program must be carried out by an appropriately qualified person and a monitoring report must be submitted to the Planning Secretary within two months of commencement use of the development to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant identified in the report titled Noise and Vibration Assessment – Operational and Construction report dated May 2019 and prepared by EMM Consulting. Should the noise monitoring program identify any exceedance of the recommended noise levels or internal amenity noise levels for building occupants, the Applicant is required to implement appropriate noise attenuation measures so that operational noise levels do not exceed the recommended noise levels or provide attenuation measures at the affected noise sensitive receivers.

The Applicant engaged RAPT Consulting as the appropriately qualified person with their report attached. The report concludes that no contributions from activities within Nihon University could be measured off-site, and computed contributions were also below criteria levels. Therefore, based on the results of the measurements and attended observations, emissions from the site were considered compliant with the criteria established.

Should you require further clarification on the short term noise monitoring to confirm compliance with the Operational Noise Limits, please feel free to contact Mathew Watson of The APP Group.

Yours sincerely,

APP CORPORATION PTY LIMITED



MATHEW WATSON

Project Director



RAPT
CONSULTING

Noise Monitoring Report – Nihon University Newcastle

Prepared for
Nihon University

March 2024

Relationships Attention Professional Trust

Document Details

Noise Monitoring Report – Nihon University Newcastle

Prepared For:

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Table of Contents

1. INTRODUCTION	5
1.1 Background	5
1.2 Limitations	7
2. OVERVIEW AND NOISE CRITERIA	8
3. OPERATIONAL NOISE MONITORING	9
3.1 Noise Monitoring Information	9
3.2 Noise Monitoring Results	10
4. CONCLUSION	11
APPENDIX A: GLOSSARY OF ACOUSTIC TERMS	12

Table Index

Table 2-1 Project Noise Trigger Levels	8
Table 3-1 Noise Monitoring Details	10
Table 3-2 Noise Monitoring Results	10

Figure Index

Figure 1-1 SSD 9787 Condition F9	5
Figure 1-2 Site Location and Surrounding Area	6
Figure 2-1 Condition F9 Approval Requirements	8
Figure 3-1 Noise Monitoring Location	9

1. Introduction

1.1 Background

RAPT Consulting has been engaged to undertake operational attended noise monitoring and reporting services on behalf of Nihon University at Nihon University 9 Church Street Newcastle, NSW. The monitoring is to satisfy Condition F9 of SSD 9787 Nihon University Newcastle Campus. Condition F9 is shown in Figure 1-1.

The Applicant must undertake short term noise monitoring in accordance with the Noise Policy for Industry within two months following the commencement use. The monitoring program must be carried out by an appropriately qualified person and a monitoring report must be submitted to the Planning Secretary within two months of commencement use of the development to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant identified in the report titled Noise and Vibration Assessment – Operational and Construction report dated May 2019 and prepared by EMM Consulting. Should the noise monitoring program identify any exceedance of the recommended noise levels or internal amenity noise levels for building occupants, the Applicant is required to implement appropriate noise attenuation

measures so that operational noise levels do not exceed the recommended noise levels or provide attenuation measures at the affected noise sensitive receivers.

Figure 1-1 SSD 9787 Condition F9

The site and surrounding area is shown in Figure 1-2.

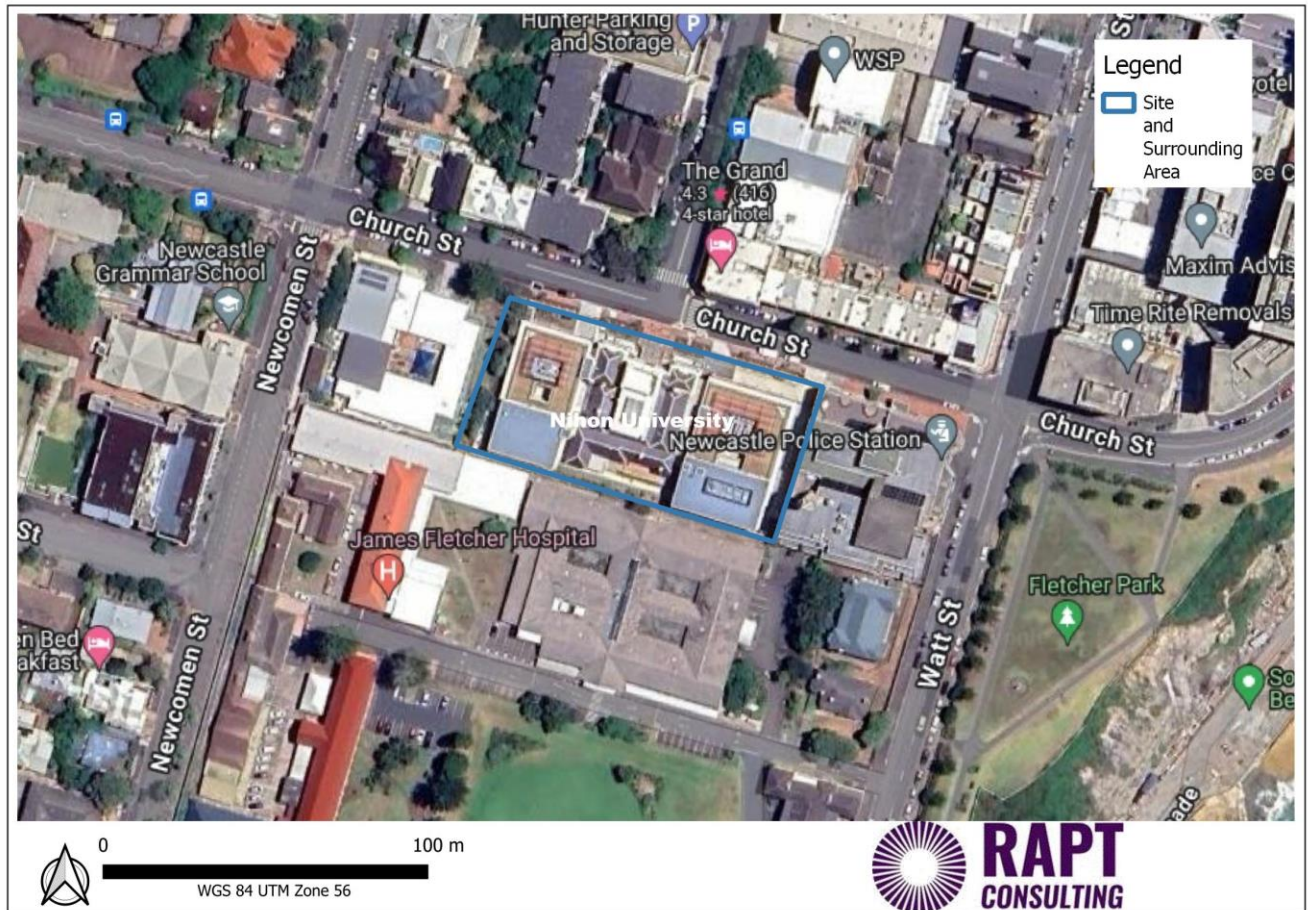


Figure 1-2 Site Location and Surrounding Area

1.2 Limitations

The purpose of the report is to provide an independent acoustic assessment.

It is not the intention of the assessment to cover every element of the acoustic environment, but rather to conduct the assessment with consideration to the prescribed work scope.

The findings of the acoustic assessment represent the findings apparent at the date and time of the assessment undertaken. It is the nature of environmental assessments that all variations in environmental conditions cannot be assessed and all uncertainty concerning the conditions of the ambient environment cannot be eliminated. Professional judgement must be exercised in the investigation and interpretation of observations.

In conducting this assessment and preparing the report, current guidelines for acoustics, noise were referred to. This work has been conducted in good faith with RAPT Consulting's understanding of the client's brief and the generally accepted consulting practice.

No other warranty, expressed or implied, is made as to the information and professional advice included in this report. It is not intended for other parties or other uses.

2. Overview and Noise Criteria

Noise emissions from activities within the site were evaluated against the noise limits specified in condition F9 of the approval.

Criteria

The Applicant must undertake short term noise monitoring in accordance with the Noise Policy for Industry within two months following the commencement use. The monitoring program must be carried out by an appropriately qualified person and a monitoring report must be submitted to the Planning Secretary within two months of commencement use of the development to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant identified in the report titled Noise and Vibration Assessment – Operational and Construction report dated May 2019 and prepared by EMM Consulting. Should the noise monitoring program identify any exceedance of the recommended noise levels or internal amenity noise levels for building occupants, the Applicant is required to implement appropriate noise attenuation

measures so that operational noise levels do not exceed the recommended noise levels or provide attenuation measures at the affected noise sensitive receivers.

Figure 2-1 Condition F9 Approval Requirements

Project operational noise trigger levels for the project were established by EMM and are found in their document *Nihon University - Newcastle Campus Noise and Vibration Assessment - Operational and Construction May 2019 H190015 RP#1*.

Project noise trigger levels are provided in Table 2-1.

Table 2-1 Project Noise Trigger Levels

Situation	Period / Time	Project Noise Trigger Level dB(A) $L_{eq}(15min)$
Residential	Day (7am-6pm)	54
	Evening (6pm-10pm)	48
	Night (10pm-7pm)	43
Commercial	When in Use	63
Hospital	When in Use	45

3. Operational Noise Monitoring

3.1 Noise Monitoring Information

Attended noise monitoring was undertaken by RAPT Consulting on 13 and 14 March 2024 at 60 Bolton Street, Newcastle. The monitoring location is shown in Figure 3-1.



Figure 3-1 Noise Monitoring Location

The attended noise measurements were conducted using a RION NL-52 Sound Level Meter with Type 1 Precision. 1 x 15-minute measurements were undertaken during day, evening and night time at the location. The attended noise surveys were conducted with consideration to the procedures described in Australian Standard AS 1055:2018, “Acoustics – Description and Measurement of Environmental Noise” and the NSW Noise Policy for Industry (NPfI).

Calibration was checked before and after each measurement and no significant drift occurred. The acoustic instrumentation used carries current NATA calibration and complies with AS/NZS IEC 61672.1-2019-Electroacoustics – Sound level meters – Specifications. Logged data was reviewed and filtered to exclude any extraneous data during the monitoring period. The monitoring was undertaken during calm conditions.

Details regarding the noise monitoring are provided in Table 3-1.

Table 3-1 Noise Monitoring Details

Monitoring Location	NM1 60 Bolton Street	NM1 60 Bolton Street	NM1 60 Bolton Street
Noise Monitor Type	Rion NL-52	Rion NL-52	Rion NL-52
Serial Number	00186647	00186647	00186647
Measurement Time	5:40pm – 5:55pm 13 March 2024	6:00pm – 6:15pm 13 March 2024	6:30am – 6:45am 14 March 2024
Pre-Measurement Reference	93.7	93.7	93.7
Post Measurement Reference	93.7	93.7	93.7
Time Response	Fast	Fast	Fast
Engineering Units	dB(A) SPL	dB(A) SPL	dB(A) SPL
Temperature Celsius	25°	25°	20°
Wind Speed	<5m/s	<5m/s	<5m/s

3.2 Noise Monitoring Results

The results of the noise monitoring are provided in Table 3-2.

Table 3-2 Noise Monitoring Results

Location	Measurement Date & Time	Measured Result dB(A) Leq(15min)	Observations dB(A)	Nihon University Noise Contribution dB(A)	Project Noise Trigger Level Day / Evening / Night dB(A) Leq(15min)	Compliance Yes / No
NM1	5:40pm – 5:55pm 13 March 2024	59	Birds 44-51	Imperceptible <35	54/48/43	Yes
NM1	6:00pm – 6:15pm 13 March 2024	58	Car Pass-by 48-72 Distant Traffic 39-40 Underlying Urban Hum	Imperceptible <35	54/48/43	Yes
NM1	6:30am – 6:45am 14 March 2024	57		Imperceptible <35	54/48/43	Yes

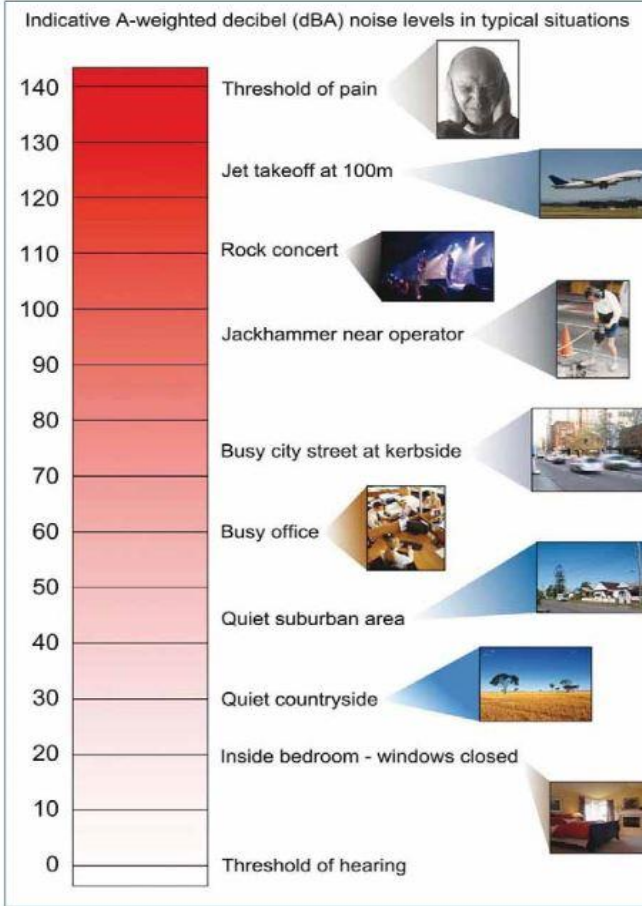
Attended monitoring results and observations recorded and noted Nihon University noise sources were imperceptible and did not register during the monitoring. Mechanical plant was particularly imperceptible and found to be compliant with all operational noise trigger levels.

4. Conclusion

This acoustic assessment has been undertaken on behalf of Nihon University at Nihon University 9 Church Street Newcastle, NSW as part of the Development Consent conditions for the operation of the Nihon University Newcastle. The purpose was to assess compliance with consideration to its development consent conditions pertaining to operational noise.

No contributions from activities within Nihon University could be measured off-site, and computed contributions were also below criteria levels. Therefore, based on the results of the measurements and attended observations, emissions from the site were considered compliant with the criteria established.

Appendix A: Glossary of Acoustic Terms

Term	Definition
dB	Decibel is the unit used for expressing the sound pressure level (SPL) or power level (SWL) in acoustics. The picture below indicates typical noise levels from common noise sources.
	Indicative A-weighted decibel (dBA) noise levels in typical situations 
dB(A)	Frequency weighting filter used to measure 'A-weighted' sound pressure levels, which conforms approximately to the human ear response, as our hearing is less sensitive at very low and very high frequencies.
$L_{Aeq}(\text{period})$	Equivalent sound pressure level: the steady sound level that, over a specified period of time, would produce the same energy equivalence as the fluctuating sound level actually occurring.
$L_{A10}(\text{period})$	The sound pressure level that is exceeded for 10% of the measurement period.
$L_{A90}(\text{period})$	The sound pressure level that is exceeded for 90% of the measurement period.
L_{Amax}	The maximum sound level recorded during the measurement period.
Noise sensitive receiver	An area or place potentially affected by noise which includes:

	A residential dwelling. An educational institution, library, childcare centre or kindergarten. A hospital, surgery or other medical institution. An active (e.g. sports field, golf course) or passive (e.g. national park) recreational area. Commercial or industrial premises. A place of worship.
Rating Background Level (RBL)	The overall single-figure background level representing each assessment period (day/evening/night) over the whole monitoring period.
Feasible and Reasonable (Noise Policy for Industry Definition)	Feasible mitigation measure is a noise mitigation measure that can be engineered and is practical to build and/or implement, given project constraints such as safety, maintenance and reliability requirements. Selecting Reasonable measures from those that are feasible involves judging whether the overall noise benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the mitigation measure. To make a judgement, consider the following: Noise impacts Noise mitigation benefits Cost effectiveness of noise mitigation Community views.
Sound power level (SWL)	The sound power level of a noise source is the sound energy emitted by the source. Notated as SWL, sound power levels are typically presented in dB(A).