

DEVELOPMENT APPLICATION

INFORMATION REQUEST RESPONSE:

Material Change of Use: Low Impact Industry
+ Reconfiguration of a Lot by Lease Agreement

6133 Captain Cook Highway, Craiglie Qld. 4877
Lot 3 on RP743352

PREPARED BY: SCOPE TOWN PLANNING

May 2023



APPLICATION SUMMARY	
DEVELOPMENT APPLICATION	Material Change of Use (+ ROL by Lease Agreement)
APPLICATION NUMBER	CA 2023_5331/1
PROPOSED USE	Low Impact Industry
ASSESSMENT LEVEL	Impact
STREET ADDRESS	6133 Captain Cook Highway, Craiglie Qld.
REAL PROPERTY ADDRESS	Lot 3 on RP743352
LAND AREA	17,650m ²
APPLICANT	Scope Town Planning c/- Land Owner
LAND OWNER	Angela Whittaker
LOCAL GOVERNMENT AREA	Douglas Shire Council
PLANNING SCHEME	Douglas Shire Planning Scheme 2018
ZONE	Rural Zone
PRECINCT	n/a
LOCAL PLAN	Port Douglas - Craiglie
EASEMENTS	Nil
IMPROVEMENTS	Dwellings and Outbuildings
APPLICABLE PLANNING CODES	Rural Zone Code
	Port Douglas – Craiglie Local Plan Code
	Acid Sulfate Soils Overlay Code
	Bushfire Hazard Overlay Code
	Flood and Storm Tide Hazard Overlay Code
	Landscape Values Overlay Code
	Natural Areas Overlay Code
	Transport Network Overlay Code
	Industry Activities Code
	Access, Parking and Servicing Code
	Environmental Performance Code
	Infrastructure Works Code
	Landscaping Code
	Vegetation Management Code
APPLICABLE REFERRALS	Department of Transport and Main Roads

INFORMATION REQUEST RESPONSE

Scope Town Planning hereby provides the following in response to the Information Request for Application number CA 2023_5331/1, Combined MCU/ROL (by lease agreement) for Light Industrial Use over land at 6133 Captain Cook Highway Craiglie (3RP743352) received by email on the 17th April 2023 from the Douglas Shire Council.

Strategic Framework

1. Please provide a response to all the affected matters under the strategic framework.

The particular matters of the strategic framework affected by the proposed development are identified in the Information Request as Theme 1 – Settlement Pattern (Elements 3.4.1, 3.4.2, 3.4.3 and 3.4.4) and Theme 5 – Economy (Element 3.8.1).

Theme 1 – Settlement Pattern

Element 3.4.1 – Strategic Outcomes

As relative to item (4), the proposed Industrial Activity is located within the Rural Zone with nearby sensitive uses being located on the same site and on adjacent properties. Given the large size of the site, separation distances between the shed and these sensitive uses and the extremely low impact nature of the proposed use (as demonstrated by the attached Acoustic Report prepared by XNOISE), the location of the proposed use is not considered to adversely impact upon the amenity of those sensitive uses thus satisfying the intent of the Outcome.

Element 3.4.2 – Urban Settlement

As relative to item (5), the proposed Industrial Development cannot be located in Mossman as the business owner, staff and majority of clientele are located in the greater Port Douglas area thus the business is strategically located in Craiglie. It is acknowledged that there is a small Industrial precinct located in Craiglie however several factors have inhibited the business owner from using one of these sites.

The subject business is a small business with only 2 on-site employees has specific height requirements for its activities. After extensive research and attempts to secure land or leases in the Craiglie industrial area, the business owner found that the existing available sheds for lease were unsuitable for use due to size and/or height constraints and that the cost to purchase land to build a suitable building was unviable against the business turnover.

Although Council has advised that they do not consider the prohibitive costs of land and construction as relevant to the proposed development, it is of note that this is at the forefront of determining the real practicality of locating a business on available industrial land, especially for small businesses.

Element 3.4.3 – Activity Centres

As relative to item (3), it is noted that there is a regional Tourist designation for Port Douglas with preference for industrial activities to locate in Mossman however, as outlined above, the business is established in Port Douglas and it is unviable to locate the business in Mossman. It is further noted that the said Tourist and Residential uses located in Port Douglas result in a demand for the products provided by the business.

Element 3.4.4 – Industry Areas and Activities

As relative to item (1), it is noted that Douglas Shire Council has provided an Industrial area in Craiglie however, for reasons outlined above, the existing industrial land and leases are cost prohibitive (not of Council concern) or unsuitable for the proposed use. It has also been outlined above why the business cannot be located in Mossman.

Theme 5 – Economy

Element 3.8.1 – Strategic Outcomes

As relative to item (1), the Council supports local businesses such as the subject business which provides employment to local residents and, should the business grow, it will be able to relocate to the designated industrial precinct.

As relative to item (2), while there is a supply of Industrial land available in Craiglie, the Council advises that the prohibitive cost of development is not considered in assessing the proposed development. It is considered that this is in conflict with the purpose of item (2) which determines to provide *resilience to adverse economic conditions*. In this case, it is of note that the proposed development has been put forward as a direct result of the existing adverse economic conditions which make the purchase and construction of a suitable facility within the industrial precinct unviable.

As relative to item (3), it is considered that the business is not large enough to afford land and construction within the industrial precinct and that doing so would not result in any economic benefits since the business would likely close down. It is noted that the proposed industrial activity is of such low impact that it poses minimal land use conflict concern and has no adverse impacts on strategic economic infrastructure.

Planning Need

2. Please provide an economic analysis and evidence supporting the Applicant's submission regarding need for the use given the extent of existing and intended industrial land already provided in the Shire.

The proposed Industrial Development cannot be located in Mossman as the business owner, staff and majority of clientele are located in the greater Port Douglas area thus the business is strategically located in Craiglie. It is acknowledged that there is a small Industrial precinct located in Craiglie however several factors have inhibited the business owner from using one of these sites.

The subject business is a small business with only 2 on-site employees has specific height requirements for its activities. After extensive research and attempts to secure land or leases in the Craiglie industrial area, the business owner found that the existing available sheds for lease were unsuitable for use due to size and/or height constraints and that the cost to purchase land to build a suitable building was unviable against the business turnover.

Consideration of Codes

3. Please provide assessment of the Whole of the Scheme and the relevant codes where applicable.

The Information Request specifies that although the site is not identified within the Port Douglas / Craigie Local Plan mapped area, the access spanning the Captain Cook Highway road reserve is located within the Port Douglas / Craigie Local Plan and must therefore be assessed against the Port Douglas / Craigie Local Plan Code as demonstrated on the map below obtained by the Douglas Shire Council property report.

The State referral determination (attached) has conditioned the upgrade of the access between the property to a Class B access point with no requirement to install a turning lane. As a result, no vegetation clearing will be required for compliance with PO2 of the Port Douglas – Craigie Local Plan Code.

Scope Town Planning has therefore determined that all relevant Codes have been addressed as part of the original application.



Hours of Use

4. Please advise the location of the premises where the industrial activity associated with the business is currently operated from.

The business was previously operated out of a shed at Port Traders located on the Captain Cook Highway.

5. Given the above statement about security and being an essential service [refer to Planning Report], please advise where there is any after-hours emergency service offered for glazing and security screens. Note, if such a service is provided this should be reflected in the opening hours for use of the premises.

The hours of operation are as stated in the original Planning Report.

Vegetation Clearing

6. Please provide advice as to the extent of clearing required for safe access and egress from the site.

The attached referral response from the Department of Main Roads has determined that the access will require upgrading to a Class B access. As such, no further vegetation clearing will be required.

Light Industrial Use

7. Please advise whether the materials to be used will be exclusively aluminium, steel and glass.

The materials used by the business will be exclusively aluminium, steel and glass.

Reverse Amenity

7. Please provide sufficient evidence from a suitably qualified professional acoustic Engineer that the noise associated with the industrial activity is sufficiently attenuated in respect to all sensitive land uses within 300m of the shed. The noise report must include consideration of the shed doors being open for ventilation and heat impacts for work health and safety for employees in particular during hot weather events. The noise report should include the impacts in particular of cutting aluminium and glass.

An Acoustic Report has been provided by XNOISE and is attached with this IR response.



Johnathan Burns

Senior Town Planner | Scope Town Planning

Noise Impact Assessment

Port Douglas Windows & Glass (QLD) Pty Ltd

Version 1 • 26 May 2023



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Noise Impact Assessment

Port Douglas Windows & Glass (QLD) Pty Ltd


Development Application

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Document Control

Project Details	
Number	143
Project Name	Noise Impact Assessment - Port Douglas Windows & Glass
Location Address	6133 Captain Cook Highway, Craiglie, 4877
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Revision History

Date	Version	Description	Name	Signature
26/05/23	1	Noise Impact Assessment Report	Mark O'Brien	

DISCLAIMER

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Please be advised that our recommendations in this report are intended solely to address acoustic issues. We do not claim expertise in other areas of building construction, such as structural, fire, or thermal. Therefore, it is important that you consider the possibility that our recommendations may not address all areas of the building's construction.

We strongly encourage you to consult with Xnoise before using alternate materials or equipment. If you choose to use preferred materials or equipment providers, please adhere to the acoustic data outlined in this report to ensure that you meet the required standards, performance, and desired outcomes.

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1 Executive Summary

A Development Application to Douglas Shire Council, recently made for Material Change of Use of Low Impact Industry and Reconfiguration of a Lot by Lease Agreement, subject to reasonable and relevant conditions, at 6133 captain Cook Highway, Craiglie, 4877 (Lot 3 on RP743352).

Douglas Shire Council, the local authority, need a detailed Noise Impact Assessment (NIA) Report to predict noise impacts from the development to the nearest noise sensitive receptors against relevant noise standards. This report must be endorsed by Council prior to the issue of a Development Permit for use of the existing shed structure for the continuation of the already settled business known as Port Douglas Windows & Glass (QLD) Pty Ltd.

Xnoise, commissioned by Port Douglas Windows & Glass (QLD) Pty Ltd has prepared and completed this NIA for the proposed development.

Development of the noise criteria performed in accordance with EPA 1994 default noise standards 440S- Regulated devices; for the proposed operation of the business;

- Section (2) A person must not operate a regulated device in a way that makes an audible noise-
 - (a) on a business day or Saturday, before 7:00a.m. or after 7.00p.m;
 - or
 - (b) on any other day, before 8.00a.m. or after 7.00p.m.

Due to the frequency of the operation (i.e. continuous and intermittent noise periods with significant idle periods), it's recommended that the above terms apply. EPA 1994 is the main noise standard for noise impact but should not be the limiting criteria, and that EPP(Noise) 2019 additionally employed to compliment management of the noise heirarchy (i.e. avoid, minimise, manage). This provides the noise level budget of 5 dB(A) under the noise criteria to preserve noise levels within the noise criteria.

Noise emission forecast from regulated devices found not to exceed the noise budget and noise criteria. Forecast modelling found no noise exposure to nearby sensitive noise receptors and will not cause noise disturbance or degradation of the local acoustic environment for now and into the future.

This NIA has found the commercial activities of Port Douglas Windows & Glass (QLD) Pty Ltd with use of regulated devices meet the noise criteria and satisfies the acoustic component of the development application.

2 Introduction

At the request of Port Douglas Windows & Glass (QLD) Pty Ltd, Xnoise completed this Noise Impact Assessment (NIA) for the development application of Material Change of Use of Low Impact Industry and Reconfiguration of a Lot by Lease Agreement, subject to reasonable and relevant conditions, at 6133 Captain Cook Highway, Craiglie, 4877 (Lot 3 on RP743352).

The proposed use of the site is to allow the existing shed of the already established business known as Port Douglas Windows & Glass (QLD) Pty Ltd to commercially operate in a Low Impact Industry Zone with the use of regulated devices.

This NIA Report presents the results of background noise measurement data collected at a nearby noise sensitive receptor (R2) and evaluate the potential impact of noise from existing commercial activities on nearby noise sensitive receptors.

This NIA assess the likelihood and potentiality of noise impact to nearby noise sensitive receptors in accordance with:

- Douglas Shire Planning Scheme (2018) (DSPS 2018)
- Environmental Protection Act 1994 (EPA 1994)
- Environmental Protection (Noise) Policy 2019 (EPP 2019)
- Queensland Government's Noise Measurement Manual (NMM)
- Australian Standard AS1055 Acoustics - Description and measurement of environmental noise (AS1055)

Noise measurement data collected during day, evening and night periods ensures a comprehensive assessment of the potential noise impact from existing commercial activities on nearby residential premises.

The results of the noise measurement data analysed using industry-standard software to ensure that accurate and reliable conclusions are drawn from the potential impact of the proposed commercial activities on the nearby residential premises.

The findings of this NIA will also be used by Port Douglas Windows & Glass (QLD) Pty Ltd to discover suitable measures for mitigating any noise impacts on noise sensitive receptors.

Overall, this NIA provides a comprehensive and reliable evaluation of the potential noise impact from commercial operation of Port Douglas Windows & Glass (QLD) Pty Ltd located at 6133 Captain Cook Highway, Craiglie, 4877 (Lot 3 on RP743352).

3 Site Detail and Locality

Development site located at 6133 Captain Cook Highway, Craiglie, 4877 (Lot 3 on RP743352) as seen in Figure 1. Development plans seen in Figure 2 and available in Appendix 12.1, provide details about the development.

These plans outline the shed with a GFA of 288m², as intended for commercial activities of manufacture of residential and commercial window and door fabrication. According to the DSPS 2018, development exists in a Rural Zone with nearby noise sensitive receptors zoned as Rural Zone seen in Figure 3.

This zoning designation highlights the importance of conducting an NIA to evaluate the potential noise impact from reconfiguration and commercial activities to nearby noise sensitive receptors.



Figure 1 Development Site and Locality



Figure 2 Development Site Plan

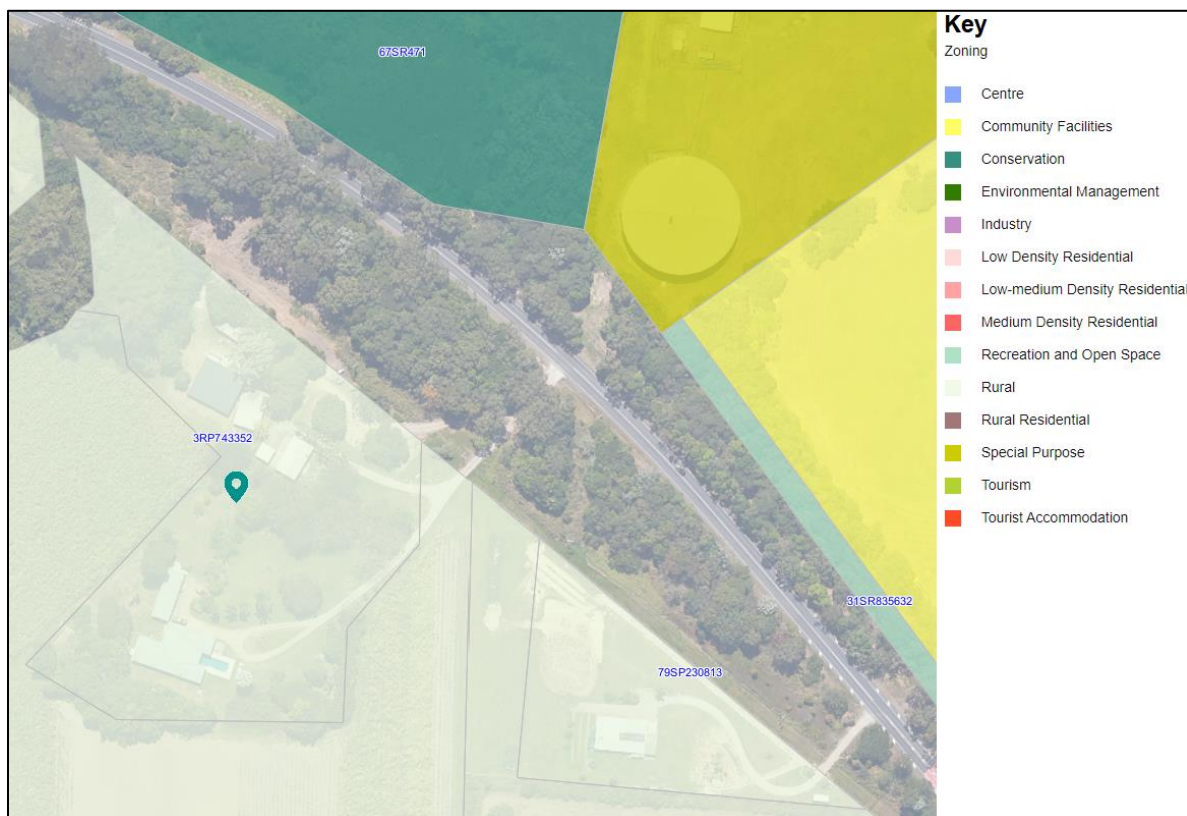


Figure 3 Locale in Zone under Douglas Shire Planning Scheme (2018)

4 Proposed Development

Development application for reconfiguration of Lot 3 on RP743352, recently submitted to Council for approval. It was found, commercial activities of the business could impact nearby noise sensitive receptors, therefore consideration to the approval of the development application is reliant on a noise impact assessment.

Lease area to be parceled from Lot 3 on RP743352 seen in Figure 5.

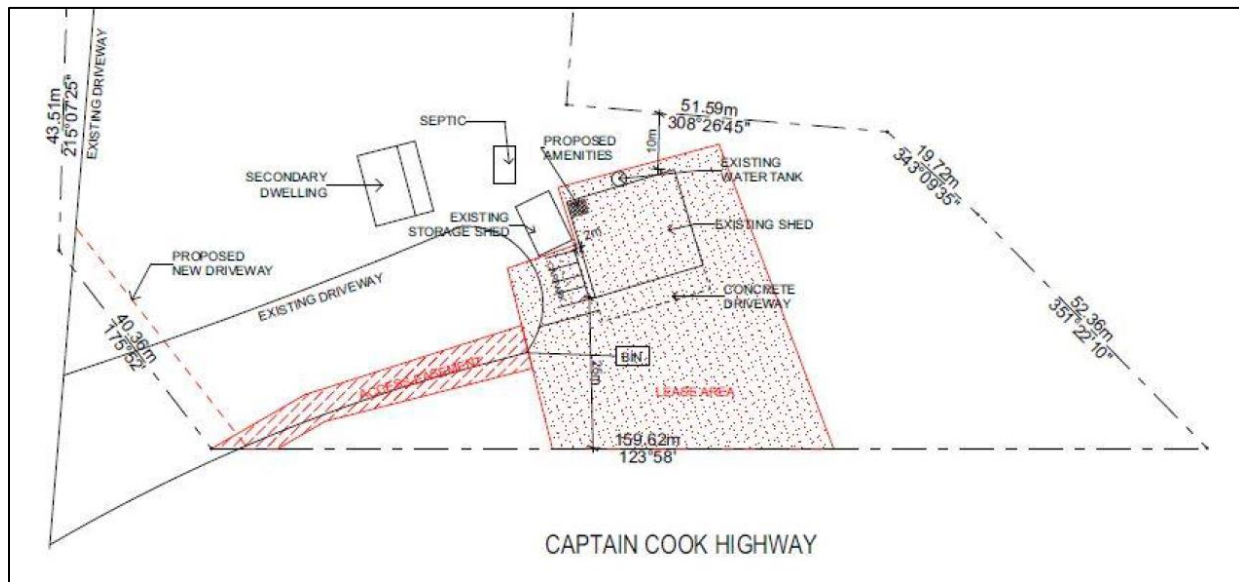


Figure 5 Lease Area of Lot 3 on RP743352

Development Application: Planning Report has stated that on Lot 3 on RP743352 contains two residential houses, the primary house and secondary house accommodates direct family members of the landowner and business. Occupants of both houses are aware of the potential noise impact.

The secondary house is nearest to the shed which has potential for noise impact, and the primary house further away, may also be noise affected.

A neighbouring residential premises and any future residential premises are considered in this NIA to find any potential noise affect to neighbouring premises which could occur from the commercial activities.

This NIA aims to find whether any neighbouring residential premises will be noise affected and whether noise control is required to reduce the noise emission and meet the noise criteria.

4.1 Noisy Work Processes

Work including noise from regulated devices will perform throughout the workday and at intermittent times with a sporadic nature. The proposed activities and hours shown in Table 1. Workers onsite will be 2, however each worker will perform a single operation at a time. 2 workers may attend noisy work at the same time with noise levels accounted for in the following noise forecast in Section 10.4.1.

Table 1 Proposed activities and hours of commercial operation

Activity	Day	Time	Number of Persons
Mitre Saw - Cutting Window Framing	Monday to Friday	7:30am to 4:30pm	1
Mitre Saw - Cutting Steel tubing	Monday to Friday	7:30am to 4:30pm	1
Hydraulic Press – Punching holes in material with Air Compressor operating	Monday to Friday	7:30am to 4:30pm	1

Commercial activities involving the noisy processes will be performed in the Shed of Port Douglas Windows & Glass (QLD) Pty Ltd. Shed is passively cooled, and operated with all windows and doors in the open position.

4.2 Documented Construction

Shed construction is made up of rolled sheet metal exterior wall facades and roofing with an internally lined insulation. Shed already constructed and exists as the commercial operation for the manufacture of residential and commercial window and door fabrication.

Table 2 Acoustic performance of building elements

Element	Construction	Acoustic Performance
External Walls	0.48mm BMT sheeting with min. 60mm foil faced insulation blanket above purlins.	R _w 30
Roof	0.48mm BMT sheeting with min. 60mm foil faced insulation blanket above purlins.	R _w 30
External Doors	Glazed door - 4mm thick glazing with standard rubber seals	R _w 22
External Windows	Glazed window - 4mm thick glazing with standard rubber seals	R _w 22
External Roller Doors	0.48mm BMT sheeting	R _w 26

5 Nearest Noise Sensitive Receptors

Nearest noise sensitive receptors are the residential premises that could be affected by noise emission from the commercial activities of Port Douglas Windows & Glass (QLD) Pty Ltd.



Figure 4 Nearest Noise Sensitive Receptors

Table 3 Nearest Noise Sensitive Receptors

Label	Address	Coordinates	Building Height (m)
R1	6133 Captain Cook Hwy, Craiglie, QLD, 4877 (3RP743352)	-16.524784990839386° 145.45722257078162°	4
R2	6133 Captain Cook Hwy, Craiglie, QLD, 4877 (3RP743352)	-16.525451624323182° 145.45680790953452°	4
R3	6115 Captain Cook Hwy, Craiglie, QLD, 4877 (79SP230813)	-16.525772708436918° 145.45840276048497°	4

6 Legislation and Assessment Criteria

6.1 Environmental Protection Act 1994

The Environmental Protection Act (EPA 1994) is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (i.e., ecologically sustainable development).

Under EPA 1994:

- An environmental value is defined as:
 - A quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or
 - Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
- Environmental harm:
 - Is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.
 - May be caused by any activity:
 - Whether the harm is a direct or indirect result of the activity; or
 - Whether the harm results from the activity alone or from the combined effects of the activity and other activity or factors.
- Environmental nuisance:
 - Is unreasonable interference or likely interference with an environmental value caused by –
 - Aerosols, fumes, light, noise, odour, particles or smoke; or
 - An unhealthy, offensive or unsightly condition because of contamination; or
 - Another way prescribed by regulation.

Environmental values for the acoustic environment are defined in the Environmental Protection (Noise) Policy 2019.

EPA 1994 also nominates default noise standards for regulated devices (440S) as detailed.

440S- Regulated devices

- (1) This section applies to- premises at or for which there is air-conditioning equipment.
 - (a) person carrying out an activity other than building work; and
 - (b) a person carrying out building work, at premises used by
- (2) A person must not operate a regulated device in a way that makes an audible noise –
 - (a) on a business day or Saturday, before 7.00a.m. or after 7.00p.m; or
 - (b) on any other day, before 8.00a.m. or after 7.00p.m.
- (3) Subsection (2) does not apply to a person operating a grass-cutter or leaf-blower at a place that is a State-controlled Road or a railway under an authority from the occupier of the place.
- (4) Subsection (2)(a) does not apply to a person operating a regulated device at a manual arts facility at an educational institution between 7.00p.m. and 10.00p.m.
- (5) In this section-

grass-cutter means an electrical or mechanical device a function of which is to cut grass.

Examples—

brush-cutter, edge cutter, lawnmower, ride-on mower, string trimmer

leaf-blower means an electrical or mechanical device a function of which is to blow leaves.

regulated device means any of the following—

- (a) a compressor;
- (b) a ducted vacuuming system;
- (c) a generator;
- (d) a grass-cutter;
- (e) an impacting tool;
- (f) a leaf-blower;
- (g) a mulcher;
- (h) an oxyacetylene burner;
- (i) an electrical, mechanical or pneumatic power tool.

Examples of a power tool—

chainsaw, drill, electric grinder or sander, electric welder, nail gun

The Environmental Protection Regulation 2019 (EPP 2019) nominates that measurement of source noise under section 440S be measured with the LA_{eq}, T descriptor.

6.2 Environmental Protection (Noise) Policy 2019

General noise requirements for developments are outlined in the Environmental Protection Act 1994 (Qld) with the Environment Protection (Noise) Policy 2019 (EPP 2019) establishing the acoustic quality objectives (AQO) to protect and enhance stated environmental values.

Environmental values protected under the EPP 2019 are designed to protect human health and well-being, the biodiversity of ecosystems, the quality of the acoustic environment for individuals' sleep, study and learning, recreational activities such as relaxation and conversation, and the overall amenity of the acoustic environment.

Table 4 Environmental Protection (Noise) Policy 2019 Acoustic Quality Objectives (AQO)

Occupancy Type	Acoustic Quality Objective		
	LA _{eq,adj,1hr}	LA _{10,adj,1hr}	LA _{01,adj,1hr}
Dwelling, Outdoors, Daytime & Evening	50	55	65
Dwelling, Indoors, Daytime & Evening	35	40	45
Dwelling, Indoors, Night-time	30	35	40

EPP also states that noise must be dealt with reasonably in a way to ensure the noise doesn't have any adverse effect, or potential adverse effect, on an environmental value under the policy and that background creep in an area or place is minimised or prevented.

If Acoustic Quality Objectives in an area or place are not being achieved or maintained, the noise experienced in the area or place must be dealt with in a way that progressively improves the acoustic environment.

6.3 Douglas Shire Planning Scheme (2018)

6.3.1 Industry Zone Code

The Industry Zone Code applies to assessing development in the Industry zone.

Noise related performance outcomes and acceptable outcomes for this code as in Table 5.

Table 5 Noise related performance outcomes and acceptable outcomes for the commercial activities (part)

Performance outcomes	Acceptable outcomes
For assessable development	
PO10 Development does not lower the standards of amenity in terms of air, noise, odour, electrical interference and vibrations at any land use associated with the: (a) the Accommodation activity group, located outside the Industry zone; (b) the Sensitive land use activity group, located outside the Industry zone.	AO10 No acceptable outcomes are prescribed.

The commercial activities involve regulated devices that will produce noise such as;

- Power Mitre saw
- Hydraulic Punch
- Air Compressor

Intended operating hours of 7:30am to 4:30pm, Monday to Friday.

As such it is required to achieve the performance outcomes of:

- Being designed to protect nearby Accommodation activity group located outside the industry zone from adverse impacts on the existing levels of amenity with regard to noise; and.
- Ensure hours of usage do not impact on the amenity of nearby Sensitive land use activity group outside Industry zone with regard to noise.

Potential impacts on adjacent development have been considered against the Environmental Protection Act 1994 and the subordinate Environmental Protection (Noise) Policy 2019.

7 Background Noise Levels

7.1 Procedure

Background noise monitoring was performed between 03/05/23 and 09/05/23 at the nearest noise sensitive receptor labelled R2 in Figure 6. The noise logger was setup 21 metres from the southern façade of the dwelling house. Noise logger microphone at height of 1.5 metres and in the free field environment.



Figure 6 Noise Logger (Logger) Location



Figure 7 Noise Logger (Logger) Photo (South)



Figure 8 Noise Logger (Logger) Photo (North)

7.2 Instrumentation

Noise logger instrumentation used for the background noise logging consisted of a Svantek Type 1 SV971A Sound Level Meter (SLM) (serial number 124687) with an extension lead to Type 1 Microphone and approved windscreen. This instrument conforms to Australian Standard 1259 "Acoustics - Sound Level Meters" (1990) and has an accuracy suitable for both field and laboratory use.

Calibration of the noise logger checked before and after the measurement period with a Svantek acoustical calibrator model SV33B (serial number 101611). No significant drift occurred over the measurement periods.

The noise logger and the acoustical calibrator, checked and aligned to conform with Svantek factory specifications. Instrumentation issued with a conformance certificate within the last 12 months. The internal test equipment is traceable to the Measurement Laboratory at

Acu-Vib, 22 Hudson Ave, Castle Hill NSW 2154. Instrumentation certificates available in Appendix 12.8 and Appendix 12.9.

7.3 Methodology

Background noise measured the sound pressure levels of the environment in accordance with Australian Standard AS1055 Acoustics - Description and measurement of environmental noise – Part 1: General Procedures.

Measurement location was free of reflective surfaces within 3.5 metres from the microphone, on soft ground and in the free-field.

Background noise levels recorded at 1-hour intervals, noise measurement results available in following Section 8 in Tables 6 and 7.

8 Noise Measurement Results

Table 6 Noise levels at noise logging location for each date

Date	Period	LA _{eq} (dB)	LA ₀₁ (dB)	LA ₁₀ (dB)	LA ₉₀ (dB)
03/05/23	Day (7 AM – 6 PM)	49.8	55.1	51.2	44.8
	Evening (6 PM – 10 PM)	49.8	59.4	52.6	41.0
	Night (10 PM – 7 AM)	52.0	54.4	51.1	47.5
04/05/23	Day (7 AM – 6 PM)	50.5	55.0	51.9	46.8
	Evening (6 PM – 10 PM)	54.4	57.2	54.9	46.4
	Night (10 PM – 7 AM)	52.5	53.1	51.8	47.6
05/05/23	Day (7 AM – 6 PM)	50.2	55.4	51.5	45.9
	Evening (6 PM – 10 PM)	56.9	61.5	57.1	46.3
	Night (10 PM – 7 AM)	49.9	52.7	51.3	47.7
06/05/23	Day (7 AM – 6 PM)	48.5	54.1	49.2	42.8
	Evening (6 PM – 10 PM)	56.1	62.9	57.0	43.0
	Night (10 PM – 7 AM)	50.4	53.6	51.4	48.2
07/05/23	Day (7 AM – 6 PM)	49.6	54.4	50.7	44.3
	Evening (6 PM – 10 PM)	54.7	60.3	56.55	47.8
	Night (10 PM – 7 AM)	51.2	54.7	51.2	48.7
08/05/23	Day (7 AM – 6 PM)	50.4	54.7	51.3	44.5
	Evening (6 PM – 10 PM)	54.6	60.3	56.6	47.8
	Night (10 PM – 7 AM)	54.2	58.1	50.8	52.4
09/05/23	Day (7 AM – 6 PM)	53.5	59.3	50.8	47.9
	Evening (6 PM – 10 PM)	51.6	50.7	50.8	44.6
	Night (10 PM – 7 AM)	47.2	49.3	50.8	43.9

Table 7 Average Noise Levels at noise logging location

Average	Period	LA _{eq} (dB)	LA ₀₁ (dB)	LA ₁₀ (dB)	LA ₉₀ (dB)
	Day (7 AM – 6 PM)	50.6	55.4	50.9	45.3
	Evening (6 PM – 10 PM)	54.6	58.9	55.1	45.2
	Night (10 PM – 7 AM)	51.5	53.7	51.2	48.0

9 Noise Emission Criteria

Noise emission criteria for relevant EPA 1994 Noise Standards, shown in Tables 8 and 9, were developed based on measured rated background levels, described in Section 5.

Table 8 Rating Background Level (RBL)

Period	Time	RBL LA ₉₀ dB(A)
Day	7 AM – 6 PM	44
Evening	6 PM – 10 PM	45
Night	10 PM – 7 AM	47

Table 9 Noise emission criteria (EPA 1994) based on measured rated background levels

Noise Standard	Time	Noise Limit LA _{eq,adj,1hr} dB(A)
440S – Regulated devices	7 AM – 7 PM	51
Business Day – Monday to Saturday	7 PM – 7 AM	Inaudible
440S – Regulated devices	8 AM – 7 PM	51
Any other day	7 PM – 8 AM	Inaudible

Noise emission criteria for relevant EPP(Noise) Policy 2019, shown in Table 10, based on measured rated background levels, described in Section 5.

Table 10 Environmental Protection (Noise) Policy 2019 Acoustic Quality Objectives (AQO)

Period	Time	Acoustic Quality Objective		
		LA _{eq,adj,1hr}	LA _{10,adj,1hr}	LA _{01,adj,1hr}
Day	7 AM – 6 PM	51	55	51
Evening	6 PM – 10 PM	55	59	55
Night	10 PM – 7 AM	52	54	51

9.1 Overall Noise Emission Criteria

The following criteria to be considered most relevant to the development:

- Regulated devices;
 - Overall noise emission:
 - Day (7 AM – 7 PM) Business Day (Monday - Saturday) - $LA_{eq,adj,1hr}$ 51 dB
 - Evening (7 PM – 7 AM) Business Day (Monday - Saturday) - Inaudible
 - Day (8 AM – 7 PM) Any other day - $LA_{eq,adj,1hr}$ 51 dB
 - Evening (7 PM – 8 AM) Any other day – Inaudible

10 Noise Emission Assessment

It is expected that the following noise sources will be introduced with the development:

- Noise breakout from services and activities within the building (shed);
- Noise emission from waste collection.

10.1 Noise Sensitive Receptors

The noise assessment considers the closest receptors surrounding the development and are shown in Figure 8. Noise receptors have been modelled at a height of 1.8m above ground level from the nearest façade to the development (i.e., reflective surfaces taken into account with calculations). Each receptor location seen as yellow marker in Figure 9.

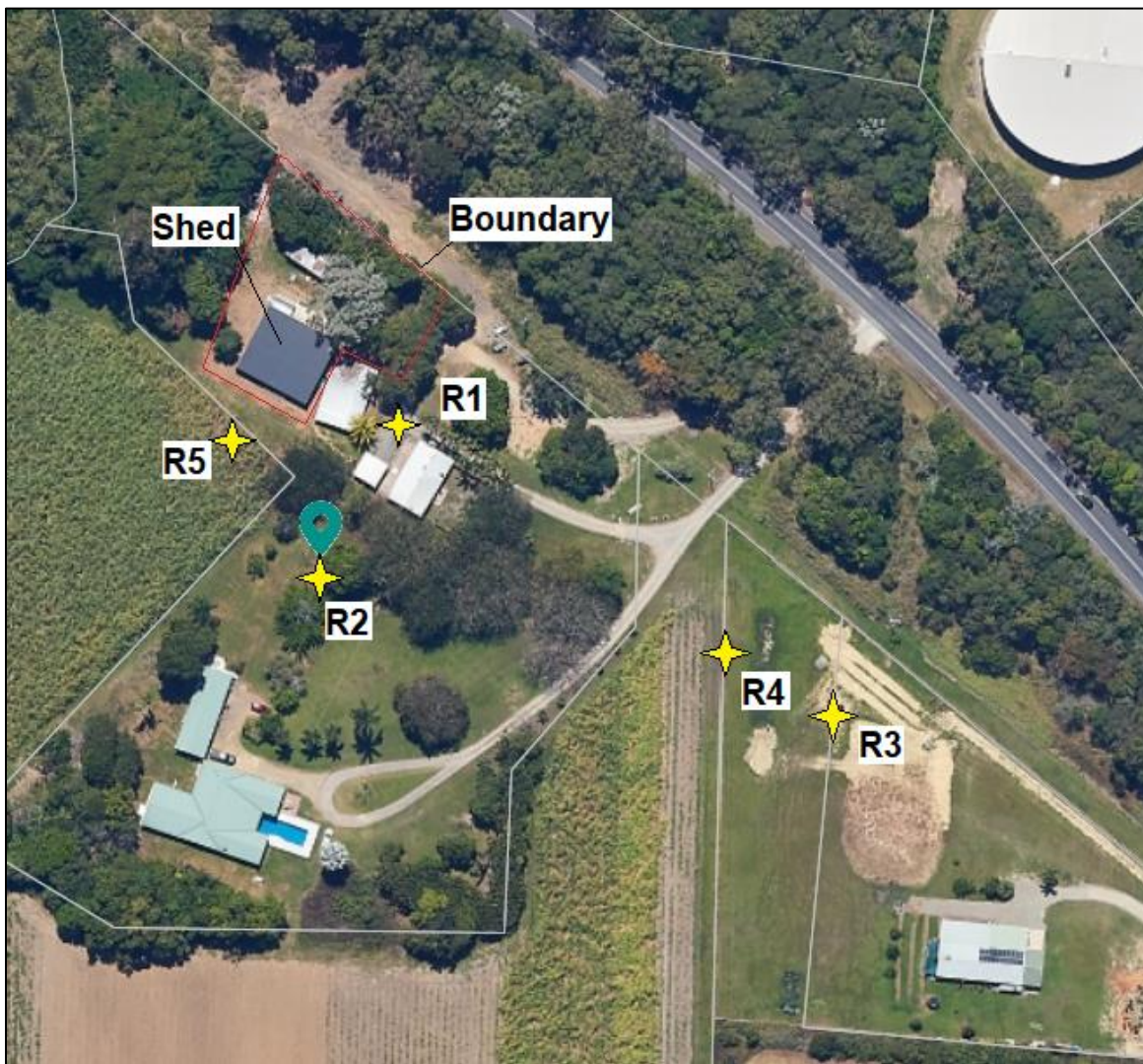


Figure 9 Closest Sensitive Receptors

10.2 Noise Modelling Methodology

Predictor (Version 2023) noise modelling software has been used to predict noise emission from the development. The model incorporates a three-dimensional digital terrain map, ground cover, screening from buildings and atmospheric information and noise source data to forecast noise emission levels to noise sensitive receptors.

The noise model is based on the following parameters:

- Atmospheric conditions
 - Temperature 30°C;
 - Humidity 70%;
 - Conditions favourable to noise propagation (i.e., downwind propagation or under a well-developed, moderate temperature inversion).
- Terrain data sourced from Geosciences Australia for the subject site and surrounds.
 - Ground absorption
 - Hard surfaces, such as roads and car park areas, have been modelled as fully reflective with a ground absorption coefficient of 0.
 - Soft surfaces, such as grassed area, have been modelled as 80% absorptive with a ground absorption coefficient of 0.8.
- Buildings
 - Neighbouring building footprints have been digitised based on aerial imagery. Estimates have been made for buildings not shown on the aerial imagery available. Buildings have been modelled with a height of 3m to 4m for single storey and facades are set to be reflective.
- Foliage
 - Tree coverage in the area has been modelled as foliage with a 3m effective height relative natural ground level.

Activities at the shed are expected to occur in a sequence rather than simultaneously (e.g., workers arrive and attend work with sporadic building of windows). As such, the noise emission from the development has been considered as one scenario.

Noise emission forecasts have been undertaken for the following activities:

- Noise breakout from activities within the building/ shed.

10.3 Regulated Devices

Regulated device selections, operating hours and assessed noise data is shown in Table 11.

Regulated device Sound Power Level measured onsite at the Shed featuring noise emission levels as worst-case scenario.

Table 11 Make, Model, Location and Sound Power Level of Regulated Devices

Model Number	Make	Model	Location	Sound Power Level
KD400PS	LUNA	Mitre Saw	Shed	90 dB(A)
N/A	DIE-NAMIC	Hydraulic Punch	Shed	67 dB(A)
N/A	IRON-AIR	Air Compressor	Shed	89 dB(A)

It is expected that commercial activities and all regulated devices will operate during day period and will not operate during evening and night periods. The regulated devices are assessed directly against the requirements of EPA 1994 (440S Regulated devices) and the $L_{Aeq,adj,1hr}$ descriptor for the EPP (Noise) 2019 Acoustic Quality Objectives. As such, preliminary treatment recommendations are based on controlling regulated devices to a level of 5 dB(A) below criteria to allow some room in the noise budget for the contribution of other sources (e.g., if the criteria are 51 dB(A) and regulated devices are controlled to 46 dB(A), then the criteria can be achieved if other sources are controlled to 43 dB(A).

10.4 Forecast Noise Levels

10.4.1 Regulated Devices

Forecast noise emission levels from the currently documented regulated devices are shown in Table 12 for the shed to be operating with all doors and windows in the open position.

Table 12 Receptor, Source, Forecast Level, Noise Limit, Compliance Recommended Criteria

Receptor	Source	Forecast Level, $LA_{eq,adj,1hr}$ dB(A)	Combined Forecast Level, $LA_{eq,adj,1hr}$ dB(A)	Noise Limit $LA_{eq,adj,1hr}$ dB(A)	Compliance with Recommended Criteria
R1	Mitre Saw	19	31	51	Yes
	Hydraulic Punch	4			
	Air Compressor	31			
R2	Mitre Saw	31	37	51	Yes
	Hydraulic Punch	9			
	Air Compressor	37			
R3	Mitre Saw	13	23	51	Yes
	Hydraulic Punch	5			
	Air Compressor	23			
R4	Mitre Saw	15	25	51	Yes
	Hydraulic Punch	3			
	Air Compressor	25			
R5	Mitre Saw	40	45	51	Yes
	Hydraulic Punch	18			
	Air Compressor	45			

11 Conclusion

A Material Change of Use of Low Impact Industry and Reconfiguration of a Lot by Lease Agreement submitted to Council for approval, subject to reasonable and relevant conditions, at 6133 captain Cook Highway, Craiglie, 4877 (Lot 3 on RP743352).

Douglas Shire Council, the local authority, require a detailed Noise Impact Assessment (NIA) be prepared to predict noise impacts upon the nearest noise sensitive receptors against the relevant noise standards. This report is to be submitted to Council for the issue of Development Permit for the continuation of the commercial operation of Port Douglas Windows & Glass (QLD) Pty Ltd.

This NIA as requested by Port Douglas Windows & Glass (QLD) Pty Ltd, Xnoise has prepared and completed this detailed NIA for this development application.

Recommended noise emission criteria as developed based on measured background noise levels in accordance with EPA 1994 noise standards 440S- Regulated devices; for the proposed commercial activities at the Shed of Port Douglas Windows & Glass (QLD) Pty Ltd. Noise levels from the commercial activities are required to be under or at the criteria during the day time period of 7 AM- 6 PM and considered suitably assessed against the day time criteria.

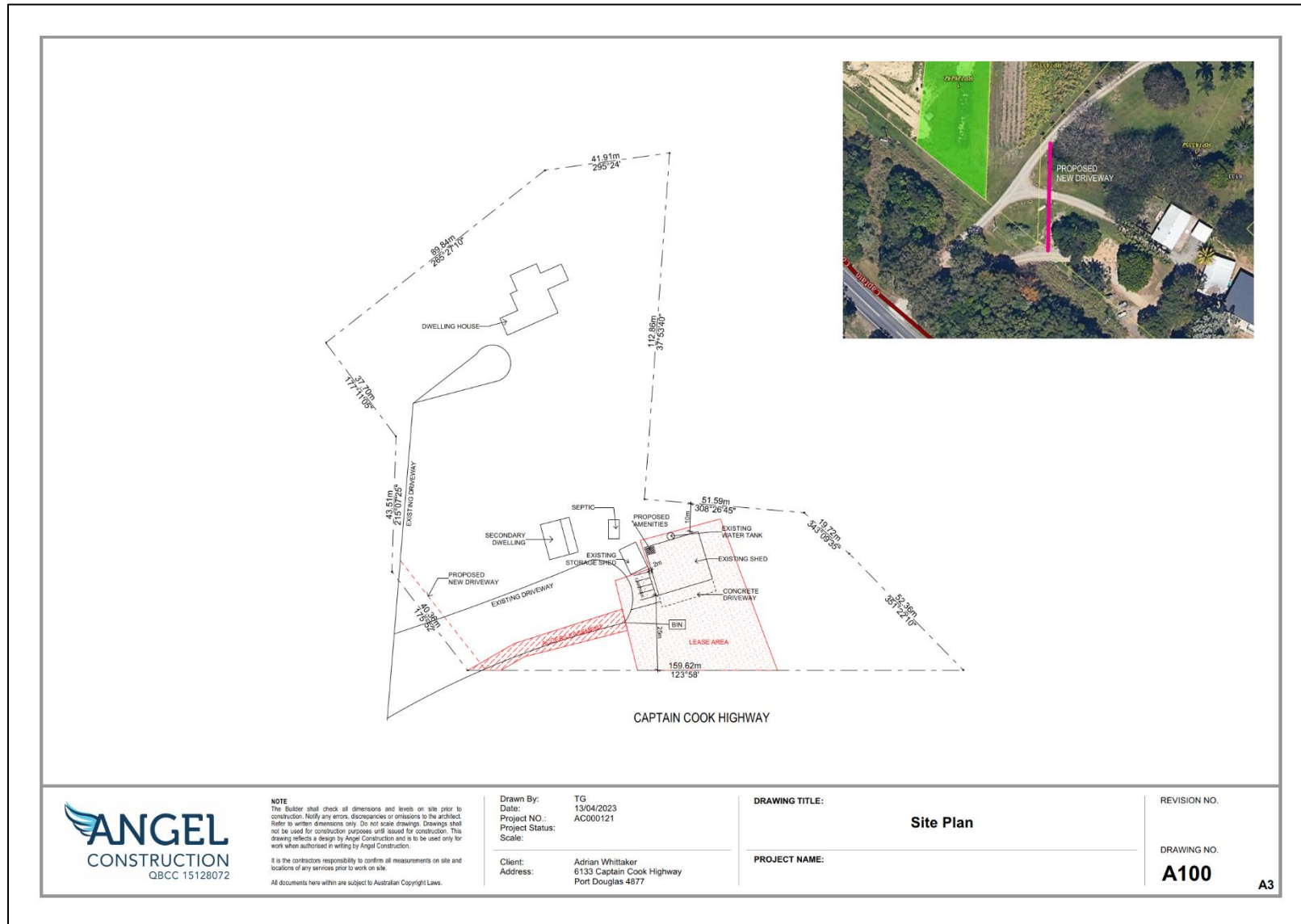
This criteria is stringent and does not take into account the frequency of noise events (i.e., continuous operation and intermittent operation are not treated differently), therefore the noise levels assessed are of the worst case scenario. The actual noise levels from the Shed are intermittent and fluctuate during the course of the day, with times of no activity, whereby no noise occurring from the Shed. Due to noise levels not of a continuous nature should not increase background noise creep or change the acoustic amenity of the neighbouring area.

Noise emission from the regulated devices is forecast to not exceed the criteria. Regulated devices operate during limited times, with no noise exposure to nearby sensitive noise receptors and will not cause noise disturbance or degradation of the local acoustic environment.

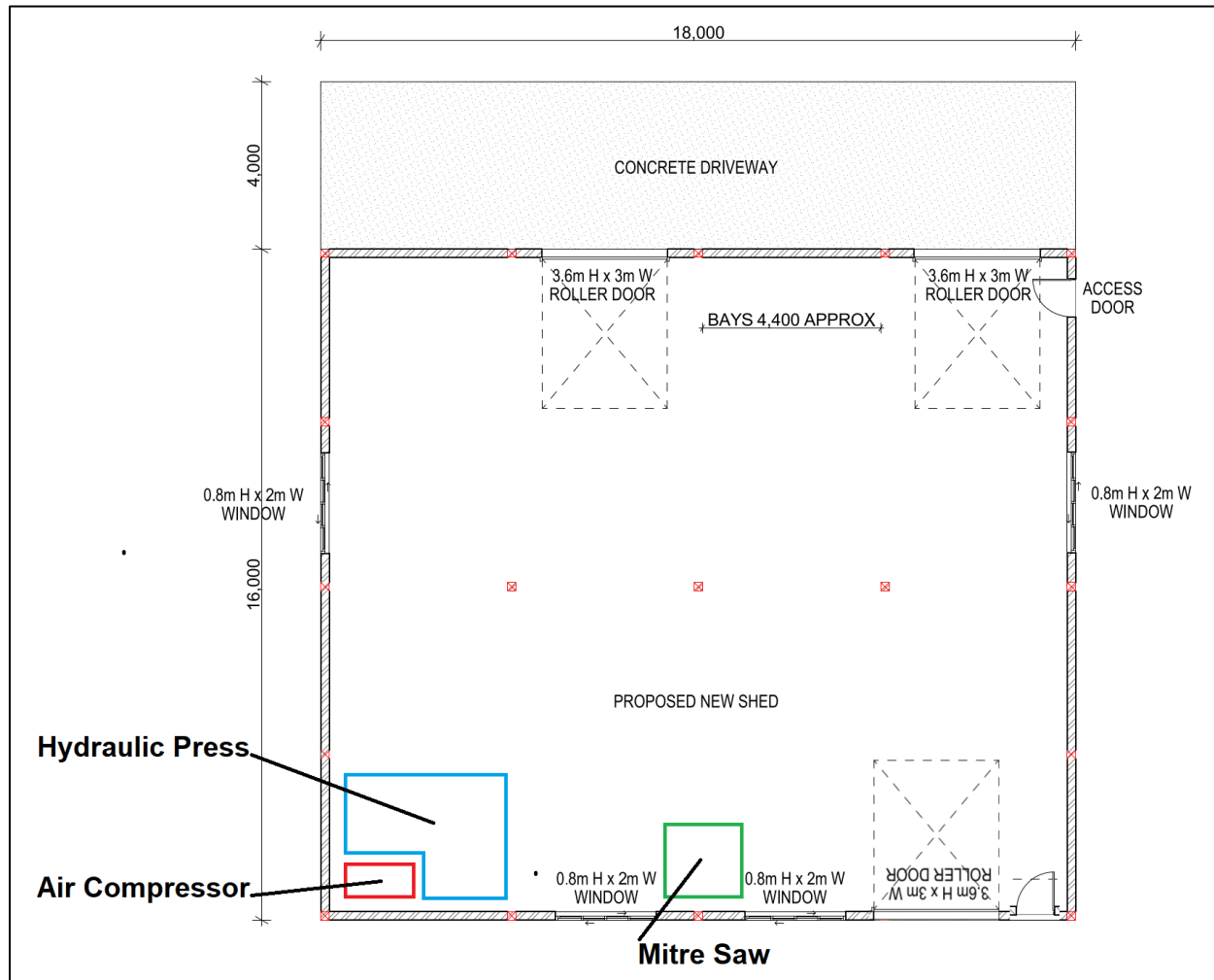
Overall, the noise emission from the operation of commercial activities involving the use of regulated devices at Port Douglas Windows & Glass (QLD) Pty Ltd is in compliance with the noise criteria as developed in accordance with relevant standards, therefore satisfying the acoustic requirements of the development application.

12 Appendices

12.1 Development Plans



12.2 Shed Layout



12.3 Douglas Shire Planning Scheme (2018)

12.3.1 Industry Zone Code (part)

Performance outcomes	Acceptable outcomes
For assessable development	
PO9 The establishment of uses is consistent with the outcomes sought for the Industry zone and protects the zone from the intrusion of inconsistent uses.	AO9 Uses identified in Table 6.2.5.3.b are not established in the Industry zone.
PO10 Development does not lower the standards of amenity in terms of air, noise, odour, electrical interference and vibrations at any land use associated with the: (a) the Accommodation activity group, located outside the Industry zone; (b) the Sensitive land use activity group, located outside the Industry zone.	AO10 No acceptable outcomes are prescribed.
PO11 New lots contain a minimum area of 1000m ² .	AO11 No acceptable outcomes are prescribed.
PO12 New lots have a minimum road frontage of 20 metres.	AO12 No acceptable outcomes are prescribed.
PO13 New lots contain a 20 metre x 40 metre rectangle.	AO13 No acceptable outcomes are prescribed.

12.4 Environment Protection Act 1994

12.4.1 440S Regulated devices (part)

440S Regulated devices

(1) This section applies to—

- (a) a person carrying out an activity other than building work; and
 - (b) a person carrying out building work, at premises used by the person only for residential purposes, other than under an owner-builder permit.
- (2) A person must not operate a regulated device in a way that makes an audible noise—
- (a) on a business day or Saturday, before 7.00a.m. or after 7.00p.m; or
 - (b) on any other day, before 8.00a.m. or after 7.00p.m.
- (3) Subsection (2) does not apply to a person operating a grass-cutter or leaf-blower at a place that is a State-controlled road or a railway under an authority from the occupier of the place.
- (4) Subsection (2)(a) does not apply to a person operating a regulated device at a manual arts facility at an educational institution between 7.00p.m. and 10.00p.m.

(5) In this section—

grass-cutter means an electrical or mechanical device a function of which is to cut grass.

Examples—

brush-cutter, edge cutter, lawnmower, ride-on mower, string trimmer

leaf-blower means an electrical or mechanical device a function of which is to blow leaves.

regulated device means any of the following—

- (a) a compressor;
- (b) a ducted vacuuming system;
- (c) a generator;
- (d) a grass-cutter;
- (e) an impacting tool;
- (f) a leaf-blower;
- (g) a mulcher;
- (h) an oxyacetylene burner;
- (i) an electrical, mechanical or pneumatic power tool.

Examples of a power tool—

chainsaw, drill, electric grinder or sander, electric welder, nail gun

12.5 Glossary of Acoustic Terms

The following is a brief description of the technical terms to assist in understanding the technicalities presented in this report.

Event maximum sound pressure level (LA%,adj,T), L01

The L01 level is calculated as the noise level equalled and exceeded for 1% of the measurement time, for example 9 seconds in any 15 minute interval. L01 is an appropriate level to characterise single events, such as from impulsive or distinctive pass-by noise.

Average maximum sound pressure level (LA%,adj, T), L10

The "L10" level is an indicator of "steady-state" noise or intrusive noise conditions from traffic, music and other relatively non-impulsive noise sources. The L10 level is calculated as the noise level equalled and exceeded for 10% the measurement time, for example 90 seconds in any 15 minute interval. The measured L10 time-intervals for day/evening/night are arithmetically averaged to present the "average maximum" levels of the environment for day/evening/night. The level can be adjusted for tonality or impulsiveness.

Background sound pressure level (LA90,T), L90

Commonly called the "L90" or "background" level and is an indicator of the quietest times of day, evening or night. The L90 level is calculated as the noise level equalled and exceeded for 90% the measurement time. The measured L90 time-intervals are arithmetically averaged to present the "average background" levels of the environment for day/evening/night. The level is recorded in the absence of any noise under investigation. The level is not adjusted for tonality or impulsiveness.

Equivalent Continuous or time average sound pressure level (LAeq,T), Leq

Commonly called the "Leq" level it is the logarithmic average noise level from all sources far and near. The maximum 1-hour levels within the day/evening/night time intervals are referenced for building design. The level can be adjusted for tonality.

Façade-adjusted level

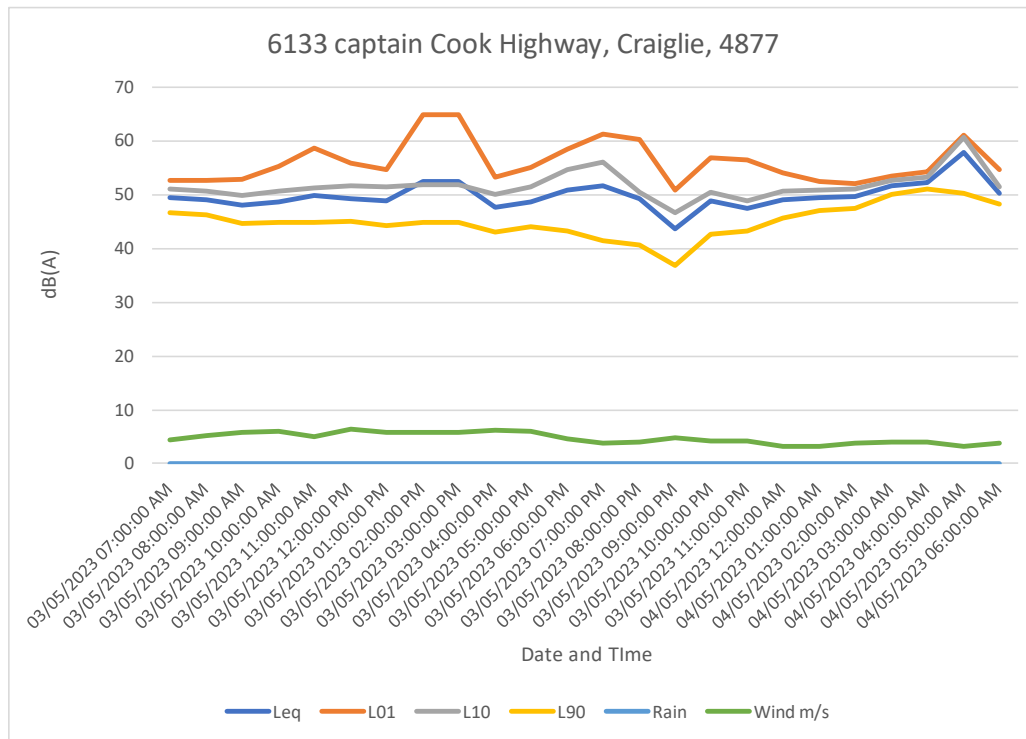
A sound level that is measured at a distance of 1.0 metre from a wall or facade. The level is nominally 2.5 dB higher than the free-field level.

Free-field level

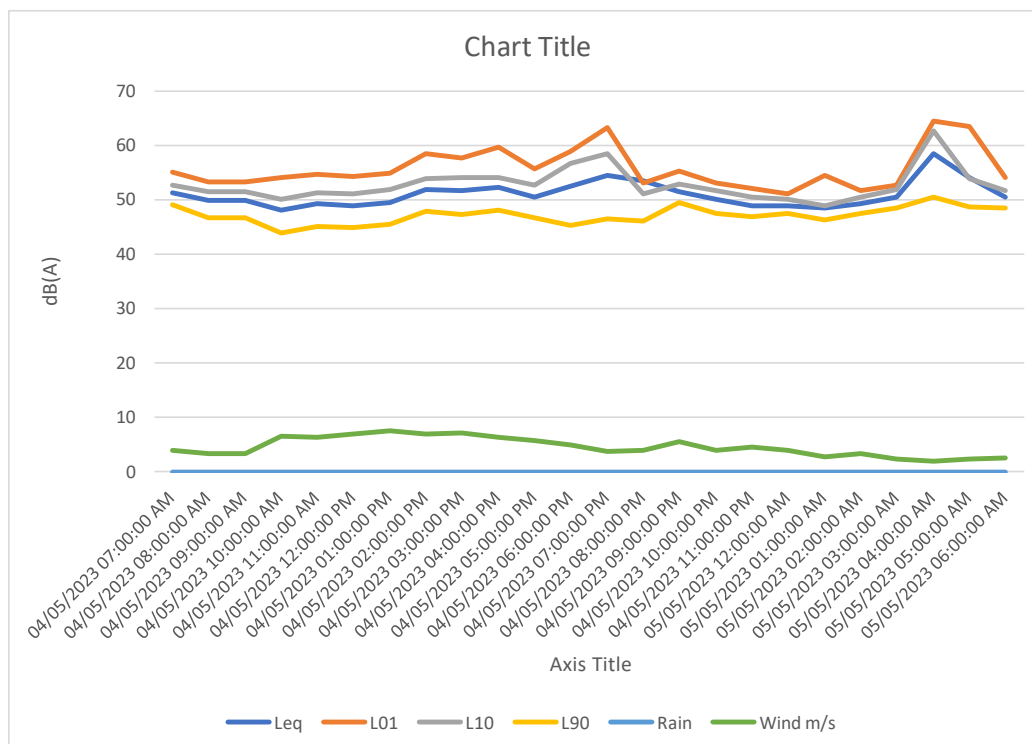
A sound level that is measured at a distance of more than 3.5 metres from a wall or facade.

12.6 Measured Ambient Noise Traces

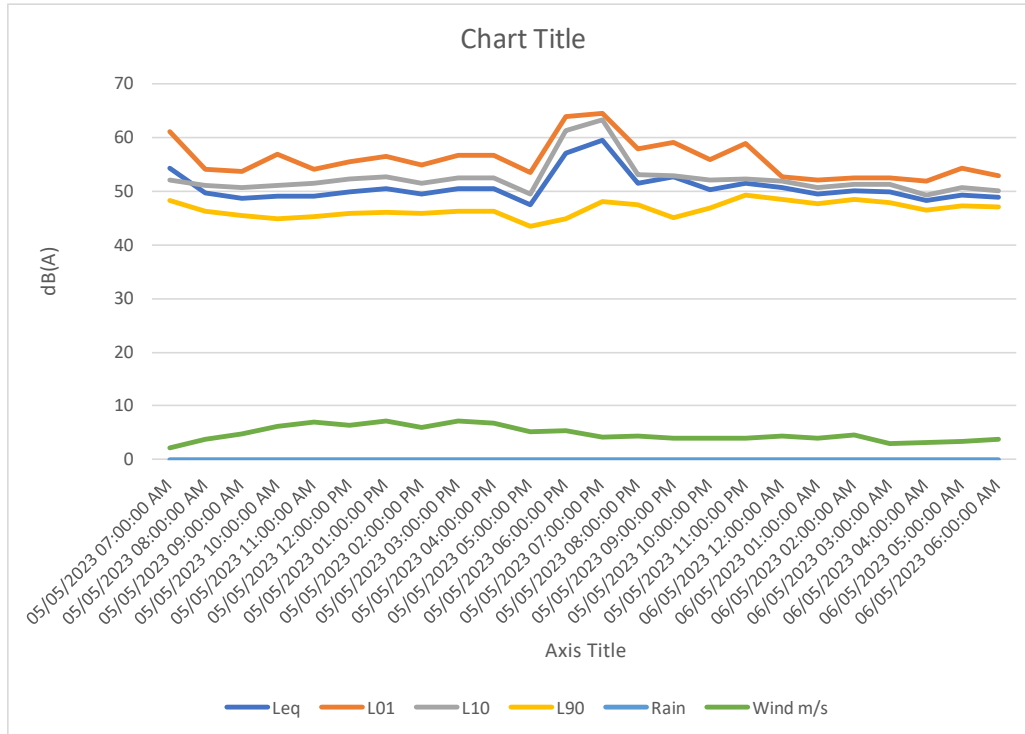
03/05/23 – 04/05/23



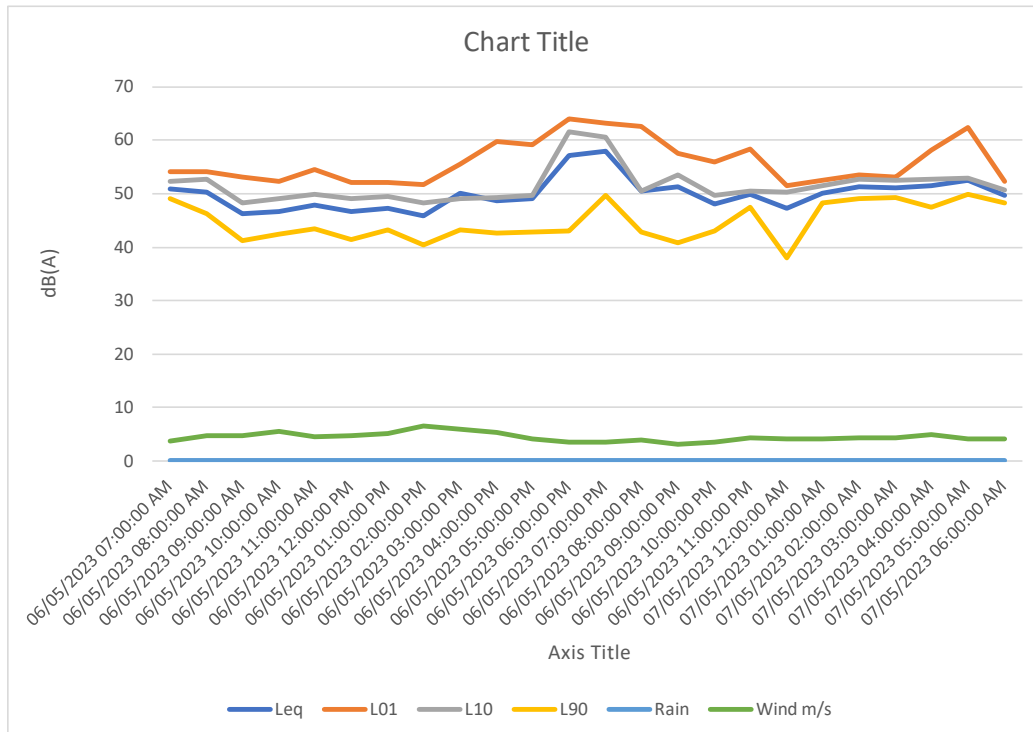
04/05/23 – 05/05/23



05/05/23 – 06/05/23

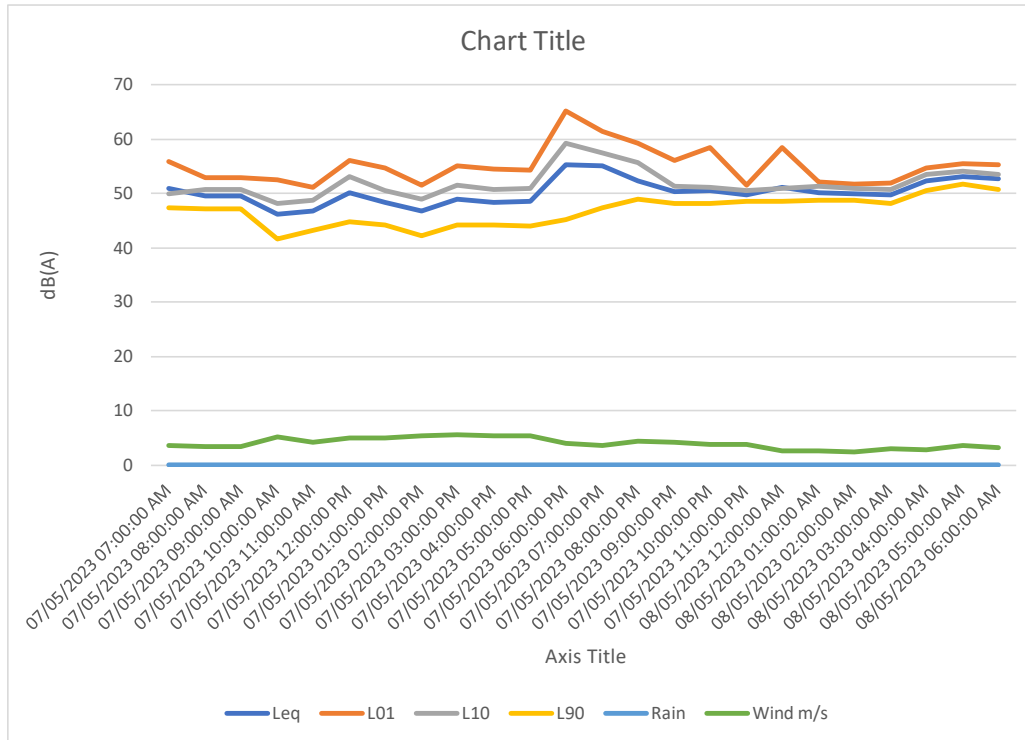


06/05/23 – 07/05/23

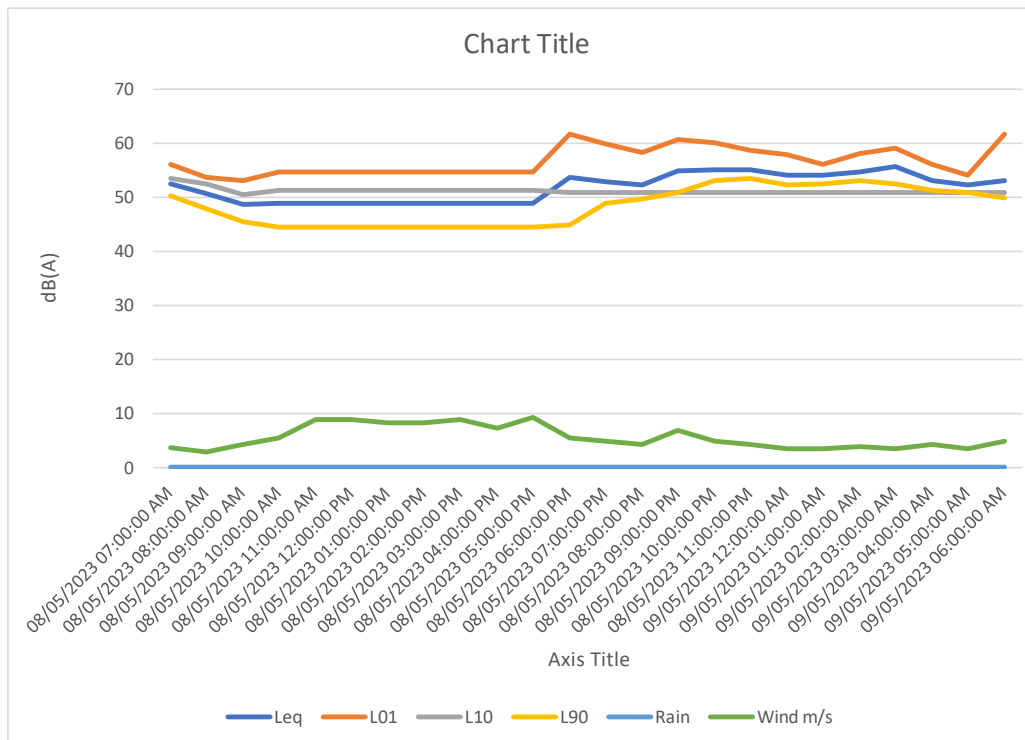


07/05/23 – 08/05/23

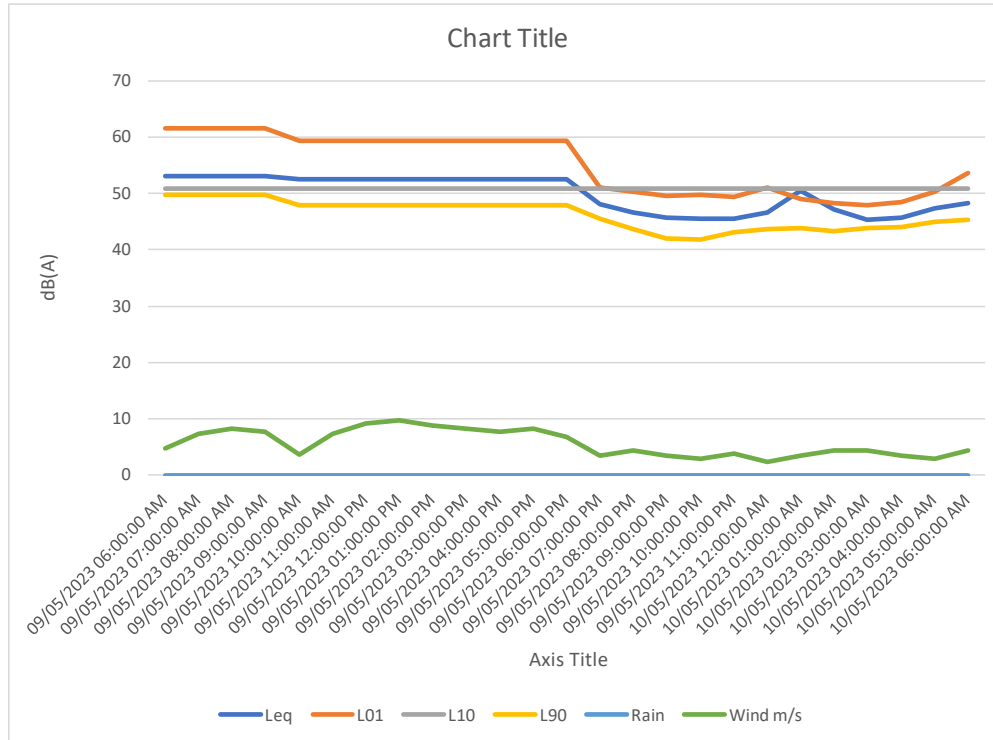




08/05/23 – 09/05/23



09/05/23 – 10/05/23



12.7 Forecast Model Layout of Noise Emission

12.7.1 Noise Emission Forecast– Mitre Saw



12.7.2 Noise Emission Forecast – Hydraulic Punch



12.7.3 Noise Emission Forecast – Air Compressor



12.8 Field Calibrator - Certificate of Calibration

CERTIFICATE OF CALIBRATION
CERTIFICATE NO: C33241

EQUIPMENT TESTED : Sound Level Meter



Manufacturer: Svantek
Type No: SV-36 **Serial No:** 124002
Owner: XNOISE
35/8-14 Munro Tce
Mooroobool, QLD 4870

Tests Performed: Measured Output Pressure level, Frequency & Distortion
Comments: See Details overleaf. All Test Passed.


Parameter	Pre-Adj	Adj Y/N	Output: (dB re 20 µPa)	Frequency (Hz)	THD&N (%)
Level1:	NA	N	94.05 dB	999.98 Hz	0.56 %
Level2:	NA	N	114.05 dB	999.98 Hz	0.35 %
Uncertainty			±0.11 dB	±0.05%	±0.20 %
Uncertainty (at 95% c.i.) k=2					


CONDITION OF TEST:
Ambient Pressure 1003 hPa ±1 hPa **Date of Receipt :** 08/11/2022
Temperature 22 °C ±1° C **Date of Calibration :** 08/11/2022
Relative Humidity 55 % ±5% **Date of Issue :** 08/11/2022

Acu-Vib Test AVP02 (Calibrators)
Procedure: Test Method: AS IEC 60942 - 2017

CHECKED BY:  **AUTHORISED SIGNATURE:**  *J. Smith*

Accredited for compliance with ISO/IEC 17025 - Calibration
Results of the tests, calibration and/or measurements included in this document are traceable to SI units through reference equipment that has been calibrated by the Australian National Measurement Institute or other NATA accredited laboratories demonstrating traceability.
This report applies only to the item identified in the report and may not be reproduced in part.
The uncertainties quoted are calculated in accordance with the methods of the ISO Guide to the Uncertainty of Measurement and quoted at a coverage factor of 2 with a confidence interval of approximately 95%.


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Unit 14, 22 Hudson Ave. Cairns NSW 2354
(07) 9690 8133
www.acu-vib.com.au

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AVCERT02.1 Rev 2.0 14.04.2021

12.9 Sound Level Meter - Certificate of Calibration

CERTIFICATE OF CALIBRATION
CERTIFICATE NO: **SLM33830**

EQUIPMENT TESTED: Sound Level Meter

Manufacturer: Svanetek

Type No: Svan-971A **Serial No:** 124687

Mic. Type: ACO 7152 **Serial No:** 82841

Pre-Amp. Type: SV18A **Serial No:** 129900

Filter Type: 1/3 Octave **Test No:** F033835

Owner: XNOISE
35/8-14 Munro Tce
Mooroobool, QLD 4870

Tests Performed: IEC 61672-3:2013 & IEC 61260-3:2016

Comments: All Test passed for Class 1. (See overleaf for details)

CONDITIONS OF TEST:

Ambient Pressure	1000 hPa ± 1 hPa	Date of Receipt :	27/09/2022
Temperature	21 °C ± 1 °C	Date of Calibration :	27/09/2022
Relative Humidity	59 % ± 5 %	Date of Issue :	27/09/2022

Acu-Vib Test Procedure: AVP10 (SLM) & AVP06 (Filters)

CHECKED BY:  **AUTHORISED SIGNATURE:** 

Accredited for compliance with ISO/IEC 17025 - Calibration
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