

Noise Monitoring Assessment

Werris Creek Intermodal Freight Terminal
Annual Period Ending April 2024
Bi-Annual Survey #2 - February 2024

Prepared for: Crawfords Freightlines Pty Ltd
February 2024
MAC190870-RP15



Document Information

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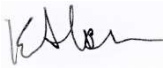

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by Crawford's Freightlines Pty Ltd to complete a Noise Monitoring Assessment (NMA) for the EPL monitoring period (ending April 2024) for the Werris Creek Intermodal Freight Terminal, Werris Creek, NSW. The NMA has been completed to quantify operational noise emissions as per Condition L3 of the site Environment Protection Licence (EPL) (Licence Number - 21253, variation 2022) from NSW Environment Protection Authority (EPA).

Condition M7.1 of the EPL requires that compliance monitoring is to be conducted every six months in the reporting period (April 2023 – April 2024). This is the second six monthly assessment for the EPL reporting period.

The assessment has been conducted in accordance with the following documents:

- NSW Environment Protection Authority (EPA) 2011, Environment Protection Licence (EPL) – 21253, variation 2022;
- NSW Environment Protection Authority (EPA) 2017, Noise Policy for Industry (NPI);
- NSW Environment Protection Authority (EPA's), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022; and
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise - General Procedures.

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A**.

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2 Noise Criteria

2.1 Operational Noise Criteria

This assessment has adopted operational criteria as per Section L3.1 of the EPL (see **Appendix B**) and are reproduced in **Table 1**.

Table 1 Noise Criteria				
Location	Criteria			
	Day	Evening	Night	Night
	dB LAeq(15min)	dB LAeq(15min)	dB LAeq(15min)	dB LAmax
NM2	45	41	38	52
NM3	42	37	35	52
NM4	41	36	35	52
NM5	41	35	35	52
NM6	45	35	35	52

Additionally, Section L3 of the EPL states:

L3.2 For the purposes of Condition L3.1:

- (a) Day is defined as the period from 7am to 6pm Monday to Saturday, and 8am to 6pm Sundays and Public Holidays;
- (b) Evening is defined as the period from 6pm to 10pm; and
- (c) Night is defined as the period from 10pm to 7am Monday to Saturday, and 10pm to 8am Sundays and Public Holidays.

L3.3: The noise conditions set out in condition L3.1 apply under the following meteorological conditions:

- Day - Stability categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m AGL;
- Evening - Stability categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m AGL; and
- Night - Stability categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m AGL and/or Stability category F with wind speeds up to and including 2m/s.

Note: Stability categories refer to Pasquill-Gifford stability categories A-G presented in Fact Sheet D of the Noise Policy for Industry (EPA 2017)

L3.4 During all meteorological conditions, other than those stated in Condition L3.3, noise from the premises must not be more than 5dB above the limits stated in Condition L3.1.

L3.5 For the purposes of conditions L3.3 and L3.4:

(a) Data recorded by the onsite weather station must be used to determine meteorological conditions, and

(b) Stability category must be determined using the sigma-theta method referred to in Fact Sheet D of the Noise Policy for Industry (EPA 2017).

L3.6 To determine compliance:

a) with the noise limits in conditions L3.1 and L3.4, the noise measurement equipment must be located:

i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or

ii) within 30 metres of a dwelling façade, but not closer than 3 metres, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable ; or

iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.

b) with the noise limits in conditions L3.1 and L3.4, the noise measurement equipment must be located:

i) at the most affected point at a location where there is no dwelling at the location; or

ii) at the most affected point within an area at a location prescribed by part (a) or part (b) of this condition.

L3.7 A non-compliance of Conditions L3.1 or L3.4 will still occur where noise generated from the premises in excess of the appropriate limit is measured:

i) at a location other than an area prescribed in part (a) and part (b) of this condition; and/or

ii) at a point other than the most affected point at a location.

L3.8 To determine the noise generated from the premises, the modification factors in Fact Sheet C of The Noise Policy for Industry (EPA 2017) must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

3 Assessment Methodology

All attended noise measurements were conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, Acoustics - Description and Measurement of Environmental Noise and the EPL.

All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed ± 0.5 dBA.

3.1 Operational Noise Measurement Methodology

The locality surrounding the Werris Creek Intermodal Freight Terminal is primarily rural/residential. Five representative receivers were selected for this assessment, as per the recent variation (2022), EPL 21253.

- Location NM2 - is situated at the residential receiver located 82 Single Street, approximately 50m east of the northern end of the Intermodal Freight Terminal. This location is representative of receivers at the northern end of Intermodal Freight Terminal;
- Location NM3 - is situated at the residential receiver located at 220 Loco Street, approximately 250m west of the northern end of Intermodal Freight Terminal. This location is representative of receivers at the northern end of Intermodal Freight Terminal;
- Location NM4 - is situated at the residential receiver located at 24 Loco Street, approximately 75m west of centre section of the Intermodal Freight Terminal. This location is representative of receivers at the centre section of Intermodal Freight Terminal;
- Location NM5 - is situated at the residential receiver located at 102 Single Street, approximately 50m west of the centre section of the Intermodal Freight Terminal; and
- Location NM6 – is situated at the corner of Kurrara Street and Single Street, approximately 50m east of the far southern end of the Intermodal Freight Terminal. This location is representative of receivers at the far southern end of Intermodal Freight Terminal.

Monitoring locations with respect to the Intermodal Freight Terminal site are shown visually in **Figure 1**.

The measurements were carried out using a Svantek Type 1, 971 noise analyser for the second six-month period in the 2024 EPL period. In accordance with EPL 21253, variation 2022, as per Section M7.1

M7.1 To assess compliance with the noise limits, attended noise monitoring must be undertaken in accordance with Condition L3.6 and:

- (a) at each one of the locations listed in Condition L3.1;*
- (b) occur once every six months in a reporting period;*
- (c) occur during each day period as defined in the Noise Policy for Industry (EPA 2017) for a minimum of two 15 minute periods separated by at least one hour; and*
- (d) occur over one day of operation.*

Where possible, noise contributions from significant noise sources were quantified throughout each survey by operator observations. The programme of the measurements and list of Intermodal Freight Terminal activities is presented in **Table 2**.

Table 2 Noise Monitoring Programme				
Assessment Period	Measurement Period	Duration of Monitoring ¹	Number of 15-min Measurements	Terminal Activities
Day	7am to 6pm	15-mins	2	Full Site Operations

Note 1: Duration of monitoring at each monitoring location per period per day.

Prevailing meteorological conditions for the monitoring period were sourced from both Crawford’s meteorological station and handheld weather meters and are presented in **Table 3**. Data was analysed in accordance with Fact Sheet D of the NPI to determine the stability category present at the time of each measurement. This was undertaken to determine applicability of results in accordance with Condition L3.3 of the EPL. Results obtained during non-prevailing meteorological conditions (ie F Class Stability in conjunction with a 2m/s drainage wind or a G Class Stability) are considered not applicable against the EPL criteria.



FIGURE 1
 LOCALITY PLAN
 REF: MAC190870

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4 Results

4.1 Assessment Information

The noise monitoring assessment for the second six-month period in the 2024 EPL period was conducted on Thursday 1 February 2024 by Field Officer Kristian Allen.

4.2 Meteorological Conditions

As prescribed in Condition L3.5 of the EPL (EPL #21253) Weather data for the noise assessment period was sourced from onsite weather station to determine prevailing meteorological conditions at the time of the attended measurements are presented in **Table 3**. The data shows that wind speeds, at 10m above ground level were at or below the EPL criteria of 3m/s and observed wind speeds at ground level were less than 3m/s, meeting the requirements of AS1055.

Table 3 Prevailing Meteorological Conditions

Date	Time	Onsite Weather Station (10mAGL)		
		Wind Direction	Wind (m/s)	Stability Class
01/02/2024	09:00	S	2.5	B
01/02/2024	09:15	S	2	A
01/02/2024	09:30	SE	1.8	A
01/02/2024	09:45	SSE	1.5	B
01/02/2024	10:00	SSW	1.5	A
01/02/2024	10:15	ESE	2.8	B
01/02/2024	10:30	NE	1.5	A
01/02/2024	10:45	NNW	1.3	A
01/02/2024	11:00	SE	2	A
01/02/2024	11:15	SW	2	A
01/02/2024	11:30	SW	2.5	A
01/02/2024	11:45	WNW	2	A
01/02/2024	12:00	SSE	2.5	A
01/02/2024	12:15	SSE	2	A
01/02/2024	12:30	N	1.8	A
01/02/2024	12:45	ESE	2.3	A
01/02/2024	13:00	ENE	2.3	A
01/02/2024	13:15	SSE	2.5	A
01/02/2024	13:30	SSW	2	A
01/02/2024	13:45	S	2.8	A

4.3 Assessment Results – Location NM2

The monitored noise level contributions and observed meteorological conditions for NM2 are presented in **Table 4**.

Table 4 Operator-Attended Noise Survey Results – Location NM2							
Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)				Meteorology ²	Description and SPL, dBA
		L _{Amax}	L _{A10}	L _{Aeq}	L _{A90}		
01/02/2024	10:39 (Day)	93	68	68	50	WD: S	Train Idle (offsite) 48-53
						WS: 0.5m/s	Traffic 45-93
						Rain: nil	Birds <45
							Site Inaudible
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<45
01/02/2024	11:59 (Day)	81	67	63	41	WD: S	Traffic 37-81
						WS: 0.5m/s	Birds 35-40
						Rain: nil	Train Passing-by 35-58
							Site Inaudible
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<45

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

Note 2: At operator position as per AS1055.

4.4 Assessment Results – Location NM3

The monitored noise level contributions and observed meteorological conditions for NM3 are presented in **Table 5**.

Table 5 Operator-Attended Noise Survey Results – Location NM3							
Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)				Meteorology ²	Description and SPL, dBA
		L _{Amax}	L _{A10}	L _{Aeq}	L _{A90}		
01/02/2024	09:10 (Day)	66	49	48	41	WD: SE WS: 0.5m/s Rain: nil	Insects 36-48
							Birds 35-55
							Traffic 35-66
							Train Passing-by.40-57
							Site - Loaders 30-36 (barely to just audible <25% measurement)
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<42
01/02/2024	11:02 (Day)	53	40	37	33	WD: S WS: 0.5m/s Rain: nil	Insects 31-41
							Birds 30-47
							Train Passing-by 30-53
							Site Inaudible
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<42

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

Note 2: At operator position as per AS1055.

4.5 Assessment Results – Location NM4

The monitored noise level contributions and observed meteorological conditions for NM4 are presented in **Table 6**.

Table 6 Operator-Attended Noise Survey Results – Location NM4							
Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)				Meteorology ²	Description and SPL, dBA
		L _{Amax}	L _{A10}	L _{Aeq}	L _{A90}		
01/02/2024	09:29 (Day)	73	48	49	39	WD: E WS: 0.5m/s Rain: nil	Train idle 37-42
							Train Horn 58
							Birds 35-45
							Aircraft 40-64
							Site - Impacts 40-73 (multiple 1-2 second durations)
							Site - Loaders 30-38 (just audible to audible 50% measurement)
							Site - Vehicles 35-42 (just audible to audible <25% measurement)
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<41
01/02/2024	11:19 (Day)	52	37	34	29	WD: S WS: 1.0m/s Rain: nil	Birds 30-52
							Train Horn 35-47
							Traffic 28-35
							Site - Vehicles 35-42 (just audible <25% measurement)
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<41

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

Note 2: At operator position as per AS1055.

4.6 Assessment Results – Location NM5

The monitored noise level contributions and observed meteorological conditions for NM5 are presented in **Table 7**.

Table 7 Operator-Attended Noise Survey Results – Location NM5								
Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)				Meteorology ²	Description and SPL, dBA	
		L _{Amax}	L _{A10}	L _{Aeq}	L _{A90}			
01/02/2024	10:22 (Day)	86	69	66	44	WD: SE	Traffic 35-86	
						WS: 0.5m/s	Birds 35-54	
							Rain: nil	Insects 36-39
							Site Inaudible	
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<41	
01/02/2024	12:17 (Day)	78	64	60	40	WD: S	Traffic 35-78	
						WS: 0.5m/s	Train Passing-by 40-53	
							Rain: nil	Insects 37-44
							Residential Noise 37-39	
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<41	
Site - Loaders 30-37 (barely to just audible <25% measurement)								

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

Note 2: At operator position as per AS1055.

4.7 Assessment Results – Location NM6

The monitored noise level contributions and observed meteorological conditions for NM6 are presented in **Table 8**.

Table 8 Operator-Attended Noise Survey Results – Location NM6							
Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)				Meteorology ²	Description and SPL, dBA
		L _{Amax}	L _{A10}	L _{Aeq}	L _{A90}		
01/02/2024	09:51 (Day)	79	63	60	41	WD: SE	Insects 36-43
						WS: 0.5m/s	Traffic 35-79
							Birds 35-45
							Aircraft 40-53
						Rain: nil	Site Inaudible
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<45
01/02/2024	11:41 (Day)	84	64	62	39	WD: S	Traffic 30-84
						WS: 1.0m/s	Birds 30-48
							Industrial Noise (Offsite)
							32-51
						Rain: nil	Site Inaudible
Intermodal Freight Terminal, L _{Aeq} (15min) Contribution							<45

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

Note 2: At operator position as per AS1055.

5 Discussion

5.1 Discussion of Results – Location NM2

Attended monitoring on Thursday 1 February 2024 identified that Intermodal Freight Terminal noise was inaudible during both daytime measurement periods, with site contributions estimated to be <45dB LAeq(15min). Extraneous noise sources audible during the survey included traffic, birds, and train idling and passing-by.

In summary, the noise contribution from the Intermodal Freight Terminal satisfied the relevant noise criteria at Location NM2.

5.2 Discussion of Results – Location NM3

Attended monitoring on Thursday 1 February 2024 identified that Intermodal Freight Terminal noise was audible during first daytime measurement period and inaudible during second daytime measurement period with site contributions estimated to be <42dB LAeq(15min). Site noise sources included loader operations. Extraneous noise sources audible during the survey included traffic, birds, insects, trains passing-by, and horns.

In summary, the noise contribution from the Intermodal Freight Terminal satisfied the relevant noise criteria at Location NM3.

5.3 Discussion of Results – Location NM4

Attended monitoring on Thursday 1 February 2024 identified that Intermodal Freight Terminal noise was audible during both daytime measurement periods, with site contributions estimated to be <41dB LAeq(15min). Site noise sources included loader operations, vehicle movements, and general impact noise. Extraneous noise sources audible during the survey included traffic, birds, aircraft, and trains idling and horns.

In summary, the noise contribution from the Intermodal Freight Terminal satisfied the relevant noise criteria at Location NM4.

5.4 Discussion of Results – Location NM5

Attended monitoring on Thursday 1 February 2024 identified that Intermodal Freight Terminal noise was inaudible during first daytime measurement period and just audible during second daytime measurement period with site contributions estimated to be <41dB LAeq(15min). Site noise sources included loader operations. Extraneous noise sources audible during the survey included traffic, birds, insects, train passing-by, and residential noise.

In summary, the noise contribution from the Intermodal Freight Terminal satisfied the relevant noise criteria at Location NM5.

5.5 Discussion of Results – Location NM6

Attended monitoring on Thursday 1 February 2024 identified that Intermodal Freight Terminal noise was inaudible during both daytime measurement periods, with site contributions estimated to be <45dB LAeq(15min). Extraneous noise sources audible during the survey included traffic, birds, insects, aircraft, and nearby industrial noise.

In summary, the noise contribution from the Intermodal Freight Terminal satisfied the relevant noise criteria at Location NM6.

6 Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment of Werris Creek Intermodal Freight Terminal operated by Crawford's Freightlines Pty Ltd. The assessment was completed to quantify operational noise emissions as per Condition L3, in the recent variation (2022) of Environment Protection Licence Number 21253 for the second six-month period of the EPL.

Attended monitoring completed on Thursday 1 February 2024 identified that operational noise from the Intermodal Freight Terminal was generally audible at three survey locations and inaudible at two survey location during the daytime measurement period. Notwithstanding, noise contributions from the Intermodal Freight Terminal satisfied the relevant EPL noise limits.

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Appendix A – Glossary of Terms

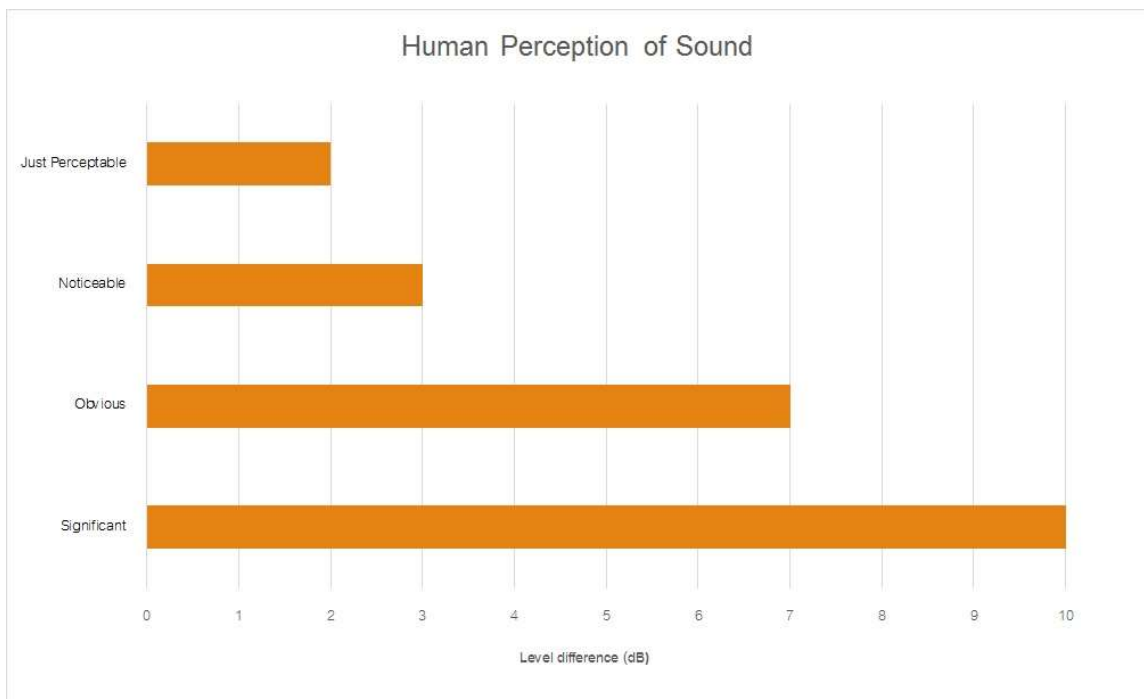
A number of technical terms have been used in this report and are explained in **Table A1**.

Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dba	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAm _{ax}	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (L _w or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by $10 \cdot \log_{10} (W/W_0)$. Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (L _p or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from L _w in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA	
Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound



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Appendix B – EPL



Environment Protection Licence

Licence - 21253

Licence Details

Number:	21253
Anniversary Date:	09-April

Licensee

CRAWFORDS FREIGHTLINES PTY LTD
 PO BOX 247
 HUNTER REGION MAIL CENTRE NSW 2310

Premises

CRAWFORDS FREIGHTLINES INTERMODAL TERMINAL
 127 RAILWAY PARADE
 WERRIS CREEK NSW 2341

Scheduled Activity

Wood preservation

Fee Based Activity

Scale

Wood preservation	> 30000 m3 annual processing capacity
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Contact Us

NSW EPA
 4 Parramatta Square
 12 Darcy Street
 PARRAMATTA NSW 2150
 Phone: 131 555
 Email: info@epa.nsw.gov.au

Locked Bag 5022
 PARRAMATTA NSW 2124



Environment Protection Licence

Licence - 21253

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Environment Protection Licence

Licence - 21253

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Environment Protection Licence

Licence - 21253

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).



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The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

CRAWFORDS FREIGHTLINES PTY LTD
PO BOX 247
HUNTER REGION MAIL CENTRE NSW 2310

subject to the conditions which follow.

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1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Wood preservation	Wood preservation	> 30000 m3 annual processing capacity

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
CRAWFORDS FREIGHTLINES INTERMODAL TERMINAL
127 RAILWAY PARADE
WERRIS CREEK
NSW 2341
LOT 22 DP 8788, LOT 23 DP 8788, PART LOT 41 DP 1126436
THE PROJECT LOCATION AS SHOWN BY FIGURE 1, PAGE 8 OF "STATEMENT OF ENVIRONMENTAL EFFECTS – WERRIS CREEK INTERMODAL FREIGHT TERMINAL", NOVEMBER 2019. EPA REFERENCE DOC20/37632.

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

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2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1		Discharge	Red hashed area depicting location of fumigation containers on Fig 2-1 in Air Quality Impact Assessment dated September 2020. Recorded on EPA file at: DOC20/717598

P1.2 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

Noise/Weather

EPA identification no.	Type of monitoring point	Location description
2	Noise monitoring	Lot 2 DP 1109 Noise monitoring location labelled as 'NM2' on map titled 'Figure 1, Locality Plan, Ref: MAC190870' provided to the EPA on 3 February 2022 (CM9: DOC22/73874).
3	Noise monitoring	Lot 42 DP 8788 Noise monitoring location labelled as 'NM3' on map titled 'Figure 1, Locality Plan, Ref: MAC190870' provided to the EPA on 3 February 2022 (CM9: DOC22/73874).
4	Noise monitoring	Lot 45 DP8788 Noise monitoring location labelled as 'NM4' on map titled 'Figure 1, Locality Plan, Ref: MAC190870' provided to the EPA on 3 February 2022 (CM9: DOC22/73874).
5	Noise monitoring	Lot 1 DP6762 Noise monitoring location labelled as 'NM5' on map titled 'Figure 1, Locality Plan, Ref: MAC190870' provided to the EPA on 3 February 2022 (CM9: DOC22/73874).
6	Noise monitoring	Lot 1 DP1006856 Noise monitoring location labelled as 'NM6' on map titled 'Figure 1, Locality Plan, Ref: MAC190870' provided to the EPA on 3 February 2022 (CM9: DOC22/73874).

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9	Meteorological Station	Met station to be established at a location on the licensed premises to be agreed between EPA and licensee. It must be operational prior to scheduled activities commencing at the premises.
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3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Waste

L2.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.

L2.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence.

L3 Noise limits

L3.1 Noise generated at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2.

POINT 2

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	Day-LAeq (15 minute)	-	45
Evening	Evening-LAeq (15 minute)	-	41
Night	Night-LAeq (15 minute)	-	38
Night	LAm _{ax}	-	52

POINT 3

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	Day-LAeq (15 minute)	-	42

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Evening	Evening-LAeq (15 minute)	-	37
Night	Night-LAeq (15 minute)	-	35
Night	LAm _{ax}	-	52

POINT 4

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	Day-LAeq (15 minute)	-	41
Evening	Evening-LAeq (15 minute)	-	36
Night	Night-LAeq (15 minute)	-	35
Night	LAm _{ax}	-	52

POINT 5

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	Day-LAeq (15 minute)	-	41
Evening	Evening-LAeq (15 minute)	-	35
Night	Night-LAeq (15 minute)	-	35
Night	LAm _{ax}	-	52

POINT 6

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	Day-LAeq (15 minute)	-	45
Evening	Evening-LAeq (15 minute)	-	35
Night	Night-LAeq (15 minute)	-	35
Night	LAm _{ax}	-	52

L3.2 For the purposes of Condition L3.1:

(a) day is defined as the period from 7am to 6pm Monday to Saturday, and 8am to 6pm Sundays and Public Holidays.

(b) evening is defined as the period from 6pm to 10pm.

(c) night is defined as the period from 10pm to 7am Monday to Saturday, and 10pm to 8am Sundays and Public Holidays.

L3.3 The noise conditions set out in condition L3.1 apply under the following meteorological conditions:

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Assessment Period	Meteorological Conditions
Day	Stability categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m AGL.
Evening	Stability categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m AGL.
Night	Stability categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m AGL; and/or, Stability category F with wind speeds up to and including 2m/s.

Note: Stability categories refer to Pasquill-Gifford stability categories A-G presented in Fact Sheet D of the *Noise Policy for Industry* (EPA 2017)

L3.4 During all meteorological conditions, other than those stated in Condition L3.3, noise from the premises must not be more than 5dB above the limits stated in Condition L3.1.

L3.5 For the purposes of conditions L3.3 and L3.4:

- (a) Data recorded by the onsite weather station must be used to determine meteorological conditions, and
- (b) Stability category must be determined using the sigma-theta method referred to in Fact Sheet D of the *Noise Policy for Industry* (EPA 2017).

L3.6 Determining Compliance

To determine compliance:

- a) with the noise limits in conditions L3.1 and L3.4, the noise measurement equipment must be located:
 - i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
 - ii) within 30 metres of a dwelling façade, but not closer than 3 metres, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
 - iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.
- b) with the noise limits in conditions L3.1 and L3.4, the noise measurement equipment must be located:
 - i) at the most affected point at a location where there is no dwelling at the location; or
 - ii) at the most affected point within an area at a location prescribed by part (a) or part (b) of this condition.

L3.7 A non-compliance of Conditions L3.1 or L3.4 will still occur where noise generated from the premises in excess of the appropriate limit is measured:

- i) at a location other than an area prescribed in part (a) and part (b) of this condition; and/or
- ii) at a point other than the most affected point at a location.

L3.8 To determine the noise generated from the premises, the modification factors in Fact Sheet C of the *Noise Policy for Industry* (EPA 2017) must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

L4 Hours of operation



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- L4.1 Activities covered by this licence must only be carried out:
- (a) between the hours of 7am and 6pm Monday to Friday;
 - (b) between the hours of 8am and 1pm on Saturdays; and
 - (c) at no time on Sundays and Public Holidays.
- L4.2 The following activities are permitted outside the hours specified in Condition L4.1:
- a) log delivery and unloading between the hours of 6am and 7am Monday to Friday;
 - b) cooling of containers using inbuilt refrigeration systems; and
 - c) rail movements into or out of the site, provided that:
 - i. the reason for movements outside the day is outside the control of the licensee; and
 - ii. the locomotives are shut down as soon as they are stationary.

Fumigant Venting

- L4.3 Fumigant venting must only occur between 7am and 6pm on any day.
- L4.4 Fumigant venting must not occur less than 2 hours after sunrise or before sunset.

L5 Other limit conditions

- L5.1 The licensee must not ventilate more than the number of containers per hour for the corresponding weather conditions prevailing at the time of ventilation, as shown in the table below:

Wind Speed/Direction	North	East	South	West
(m/s 15-minute average)	(15-minute average)	(15-minute average)	(15-minute average)	(15-minute average)
0.5 - 1	10	2	10	2
1 - 2	10	4	10	4
2 - 3	20	10	20	10
3 or above	20	20	20	20

- L5.2 No containers may be opened for ventilation, if the 15-minute average wind speed from any direction is less than 0.5 metres per second.
- L5.3 For the purposes of this condition:
- (a) A North wind is considered to be coming from between 330 and 45 degrees from True North;
 - (b) An East wind is considered to be coming from between 45 and 175 degrees from True North;
 - (c) A South wind is considered to be coming from between 175 and 230 degrees from True North; and
 - (d) A West wind is considered to be blowing from between 230 and 330 degrees from True North.
- L5.4 The proponent must only ventilate containers that contain a residual methyl bromide concentration less than or equal to 20g/m³.

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4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises.

O4 Processes and management

Air Quality Management Plan

O4.1 The licensee must prepare, implement and maintain, in consultation with a recognised air quality specialist an Air Quality Management Plan describing measures to minimise air quality impacts associated with the operation, in accordance with condition O4.3.

O4.2 Where management measures include limiting the number of fumigation vessels that can be ventilated in a nominated period, during prevailing onsite conditions, the Air Quality Management Plan required by Condition O4.1 must detail the number of containers to be ventilated in any period to ensure compliance with project adopted methyl bromide threshold (considering the EPA's published impact assessment criteria) at, or beyond the site boundary.

O4.3 The Air Quality Management Plan required by condition O4.1 must also include:

- a) Key performance indicator(s) for emission controls;
- b) Air quality monitoring method(s) including location, frequency and duration;
- c) Response mechanisms including proactive and reactive management measures for managing fumigation at the premises to ensure that fumigation activities comply with the project's adopted methyl bromide threshold, considering the EPA's published impact assessment criteria;
- d) Response mechanisms including proactive and reactive management measures for managing dust generation at the premises, including wet suppression on haul roads;
- e) Addresses all aspects of the fumigation process, including but not limited to fumigant dosing, the fumigant sleep period within the fumigation vessels and fumigant ventilation;



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- f) Identification of the number of fumigation vessels that can be ventilated in a nominated period, during prevailing onsite conditions to ensure relevant limit conditions within this licence are met and in consideration of EPA's published impact assessment criteria at or beyond the site boundary;
- g) Record keeping processes, systems and forms that can demonstrate compliance with condition L5.1 to L5.4 inclusive;
- h) Compliance reporting;
- i) A protocol to benchmark the emission controls adopted at the site against best management practice every 3 years. This includes, each time controls are benchmarked, setting timelines to implement all additional identified feasible and reasonable controls.
- j) A communications strategy for handling potential air quality complaints that includes recording, investigating, reporting and actioning;
- k) An air quality complaints register to be reported to the EPA as required in the Annual Return. The register must document investigations undertaken to identify the cause(s) of an action(s) to rectify the complaints.

O4.4 The licensee must provide the Armidale EPA office with the Air Quality Management Plan required by condition O4.3 prior to commencement of extended hours of operations.

O5 Other operating conditions

Real Time Video Monitoring and Recording

- O5.1 Real time video monitoring of the entire Premises must be maintained and operated 24 hours a day seven days a week.
- O5.2 Recordings must be kept for a minimum of three months from the time of the recording and must display the time and date on the recorded image.
- O5.3 The recordings must be made available to the EPA or an EPA Authorised Officer when requested.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
 - a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
 - a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and

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d) the name of the person who collected the sample.

M1.4 The following information must be kept as part of weather and methyl bromide monitoring records:

- (a) The date/s and time/s at which the measurement was made;
- (b) The point at which the sample was taken, including a map or comprehensive description;
- (c) The name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

Air Discharge Point 1 - Fumigation Containers

M2.1 The proponent must measure the ambient concentration of methyl bromide continuously during each hourly batch of containers from immediately before venting the first container in the batch for at least one hour. The monitoring must occur immediately downwind of the container venting area of EPA discharge point 1 and:

- (a) at the site boundary; or
- (b) at the nearest sensitive receiver, or
- (c) between the site boundary and nearest sensitive receiver.

M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:

- a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
- b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
- c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2021* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

M4 Weather monitoring

M4.1 An onsite meteorological weather station must be built, maintained and operated so as to be capable of continuously monitoring the parameters specified in condition M4.2.

Point 9

M4.2 The proponent must monitor the parameters specified in Column 1 of the table below at the onsite weather station, EPA monitoring point 9, using the sampling method, units of measure, averaging period and sampling frequency specified in the other columns. Sampling methods are defined in the *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (DEC 2007).

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Parameter	Units of Measure	Frequency	Averaging period	Sampling method
Siting	-	-	-	AM-1
Air temperature	degrees celcius	Continuous	1 hour	AM-4
Wind direction	degrees	Continuous	15 minute	AM-2 and AM-4
Wind speed	metres per second	Continuous	15 minute	AM-2 and AM-4
Sigma theta	degrees	Continuous	15 minute	AM-2 and AM-4
Rainfall	millimetres	Continuous	15 minute	AM-4
Relative humidity	percentage	Continuous	1 hour	AM-4

M5 Recording of pollution complaints

M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M5.2 The record must include details of the following:

- a) the date and time of the complaint;
- b) the method by which the complaint was made;
- c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- d) the nature of the complaint;
- e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- f) if no action was taken by the licensee, the reasons why no action was taken.

M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M6.3 The preceding two conditions do not apply until one month from the date of the issue of this licence.

M7 Noise monitoring

M7.1 To assess compliance with the noise limits, attended noise monitoring must be undertaken in accordance with Condition L3.6 and:

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- (a) at each one of the locations listed in Condition L3.1;
- (b) occur once every six months in a reporting period;
- (c) occur during each day period as defined in the Noise Policy for Industry (EPA 2017) for a minimum of:
 - two 15 minute periods separated by at least one hour; and
- (d) occur over one day of operation.

M7.2 The frequency of noise monitoring required by condition M7.1 may be varied after ongoing compliance with the noise limits is established over at least one 12-month period, to the satisfaction of the EPA, and the EPA has approved the varied noise monitoring frequency through a licence variation.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.



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- R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
- the licence holder; or
 - by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
- where this licence applies to premises, an event has occurred at the premises; or
 - where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.
- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
- the cause, time and duration of the event;
 - the type, volume and concentration of every pollutant discharged as a result of the event;
 - the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and



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g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Other notifications

R4.1 If the hourly average methyl bromide concentration measured at or beyond the site boundary is greater than 0.09 parts per million, the licensee must immediately notify the EPA's Environment Line by telephoning 131 555 and must provide:

- (a) The date and times over which the ambient methyl bromide monitoring was undertaken;
- (b) A description of the location where ambient methyl bromide monitoring was performed;
- (c) The measured hourly average methyl bromide concentration in units of 'parts per million';
- (d) wind speed and direction measured at the start, during and at the end of the opening of the batch of containers which caused the measured methyl bromide concentration;
- (e) Actions taken by the proponent in response to the measured methyl bromide level.

R5 Other reporting conditions

Noise Compliance Assessment Report

R5.1 A noise compliance assessment report must be submitted to the EPA with the Annual Return for this Environment Protection Licence. The assessment must be prepared by a suitably qualified and experienced person and include:

- (a) an assessment of compliance with noise limits presented in Conditions L3.1 and L3.4; and
- (b) an outline of any management actions taken within the monitoring period to address any noise levels measured above the noise limits identified in Conditions L3.1 and L4.1.

Air Quality Verification Report

R5.2 An Air Quality Verification Report must be submitted to the EPA with the Annual Return for this Environment Protection Licence. The report must:

- (a) Include fumigation records for each fumigation event undertaken during the reporting period. The records must include, but not necessarily be limited to:
 1. Date and time of each fumigation event;
 2. Number of containers fumigated for each event;
 3. Mass of fumigant applied to each container, including any additional fumigant required to be dosed to achieve completed fumigation event(s); and
 4. Fumigant concentrations measured within the containers at the beginning, during and prior to commencement of ventilation of each fumigation.
- (b) Detail meteorological data collected from monitoring point 9, being the onsite meteorological station, for each fumigation ventilation;
- (c) Using the information in (a) and (b), demonstrate that the container ventilation management regime ensures compliance with the project adopted methyl bromide threshold (considering the EPA's published impact assessment criteria) at or beyond the premises boundary.
- (d) Use modelling conducted in accordance with the *Approved Methods for Modelling and Assessment of*

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Air Pollutants in NSW, if modelling is needed to confirm compliance with the adopted threshold.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

8 Pollution Studies and Reduction Programs

U1 Site Water Management Plan

Note: Definitions:

Sediment basin - a detention structure designed to capture, treat and manage surface water at the Premises.

Stormwater basin - a detention structure designed to capture, treat and manage stormwater piped through the site from Werris Creek Village and the ARTC site.

- U1.1 The Licensee must engage a suitably qualified and experienced person(s) to prepare a Site Water Management Plan ("SWMP") for the Premises that addresses, but is not limited to:
- a) Map of the Premises identifying dirty and clean water catchment areas and other surface water on-flow areas;
 - b) Location, Size and Volume of current Detention Structures;
 - c) Consideration of Premises Operational Surface;
 - d) Location of Sediment and Stormwater Basins;
 - e) Water Contaminants;
 - f) SWMP Maintenance Program;
 - g) Basin Construction;
 - h) Water Quality Objectives;
 - i) SWMP Testing Program; and
 - j) Schedule of Works
- U1.2 The following details are to be addressed in the Site Water Management Plan required by Condition U1.1:
- a) Map of the Premises and other surface water on-flow areas, including:

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- Identifying the areas of the licenced Premises as defined by Condition A2;
- Identifying any surface water flows onto the Premises, identifying the surface water catchment(s) area; and
- Identify whether any clean water surface water flows can be diverted around the site or must be managed as contaminated or dirty water from the Premises.

b) Location, Size and Volume of Current Sediment and Stormwater Basins, including:

- Identify the location of sediment and stormwater basins that capture surface water runoff from the Premises. These basins may be both on and outside the Premises boundary.
- If sediment and/or stormwater basins are located outside Premises boundary, provide plans to relocate the basins onto the Premises; or provide details of planning consent for these basins to be located off Premises and how they have been designed to capture surface water from the Premises; or obtain planning consent to incorporate the land into the licenced Premises.
- Calculate the size and capacity of the existing sediment and stormwater basins managed by the licensee in accordance with Landcom *Managing Urban Stormwater: Soils and Construction 4th Edition, (March 2004)*; and if existing sediment and stormwater basins do not meet the requirements in accordance with *Landcom Managing Urban Stormwater: Soils and Construction 4th Edition (March 2004)*, provide details of how the capacity of the stormwater management system will be increased. Include calculations for sizing and capacity of any additional sediment and stormwater basins proposed for the Premises.

c) The SWMP must consider alternative surfaces at the Premises, such as concrete hard stand areas, as advised by Development Consent 1/2020 dated 18 November 2020, Advice Condition 1, as issued by Liverpool Plains Shire Council.

d) Management and mitigation measures of contaminants ensuring no offsite impacts occur at the Premises including management strategies to control bark chip and sediment before reaching internal drainage lines.

e) Implementation of a maintenance program that maintains required capacity and freeboard of all sediment and stormwater basins including demonstration of how accessibility to basins will be achieved immediately following rain events.

f) Implementation of a testing and validation program to monitor the water quality in the sediment and stormwater basins.

g) Provision of a "Schedule of works" that will be undertaken to meet the objectives of the SWMP.

U1.3 The SWMP must be completed and submitted to the EPA by 30 July 2021.
The SWMP must be submitted electronically to: Armidale@epa.nsw.gov.au

U1.4 The licensee must provide the EPA with a progress report on the development of the SWMP by 11 June 2021.

9 Special Conditions

E1 Ambient Air Monitoring Program

E1.1 Within 12 months of the first fumigation event, the licensee must complete an ambient air monitoring program for methyl bromide. The ambient air monitoring program must report on ambient air concentrations for methyl bromide at or beyond the site boundary of the premises. Sampling must be undertaken at a time that is representative of reasonable worst-case conditions with respect to site operations and metrological



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conditions at the time of monitoring.

- E1.2 A report of the ambient air monitoring program developed in accordance with Condition E1.1 must be submitted to Liverpool Plains Shire Council and the EPA within three (3) months of the monitoring program being carried out. The report must:
- (a) Justify the sampling method adopted for measuring ambient air concentration of methyl bromide, with reference to the limit of reporting, limit of detection and method accuracy; and
 - (b) Justify the sample duration of methods adopted for measuring methyl bromide; and
 - (c) Justify the number and location of sampling points utilised; and
 - (d) Interpret the analytical results obtained with reference to project adopted methyl bromide thresholds considering the EPA's published impact assessment criteria for methyl bromide. If the EPA's published impact assessment criteria for methyl bromide is exceeded, the report must identify actions to be taken by the licensee to achieve the criteria at the location where the exceedance occurred.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .



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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Ms Rebecca Scrivener

Environment Protection Authority

(By Delegation)

Date of this edition: 09-April-2019

End Notes

- | | |
|---|--------------------------------------------------------|
| 2 | Licence format updated on 01-May-2019 |
| 3 | Licence varied by notice 1583556 issued on 18-Sep-2019 |
| 4 | Licence varied by notice 1588266 issued on 12-Nov-2019 |
| 5 | Licence varied by notice 1589871 issued on 20-Dec-2019 |
| 6 | Licence varied by notice 1604166 issued on 23-Dec-2020 |
| 7 | Licence varied by notice 1605085 issued on 30-Apr-2021 |
| 8 | Licence varied by notice 1615833 issued on 08-Feb-2022 |

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