Annual Environmental Management Review 2023-2024

Spring Farm Resource Recovery Facility

PREPARED FOR

VEOLIA

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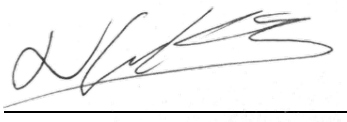
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Annual Environmental Management Review 2023-2024

Springfarm Advanced Resource Recovery Technology Facility

0759502



Nate Crooks
Environmental Consultant



Michael Mercer
Project Manager



Rob MacIntosh
Partner

Environmental Resources Management
Australia Pty Ltd
Level 14 207 Kent Street
Sydney NSW 2000
T: +61 2 8584 8888

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
AEMR	Annual Environmental Management Review
ARRTF	Advanced Resource Recovery Technology Facility
AST	Above-ground Storage Tank
BOD	Biochemical Oxygen Demand
BOM	Bureau of Meteorology
EMP	Environmental Management Plan
EPL	Environmental Protection Licence
ERM	Environmental Resources Management Australia Pty Ltd
DDGs	Depositional Dust Gauges
GSW	General Solid Waste
IEA	Independent Environmental Audit
LGA	Local Government Area
MRF	Material Recycling Facility
NSW EPA	New South Wales Environment Protection Authority
NSR	Noise Sensitive Receptors
OMP	Odour Management Plan
PA	Project Approval
POEO	Protection of the Environment Operation Act
SAWT	SITA Adavanced Waste Treatment
SOP	Standard Operating Procedure
t	Tonne
Veolia	Veolia Recycling and Recovery Pty Ltd
VMP	Vegetation Management Plan

TITLE BLOCK

Item	Details
Name of Operation	Spring Farm Advanced Resource Recovery Technology Facility (SF ARRTF)
Name of Operator	Veolia Recycling and Recovery Pty Ltd
Project Approval No.	05_0098
Name of Holder of Project Approval	Veolia Recycling and Recovery Pty Ltd
Environmental Protection Licence No.	12588
Name of Holder of EPA Licence	Veolia Recycling and Recovery Pty Ltd
Annual Review Start Date	10 October 2023
Annual Review End Date	9 October 2024
Name of Authorised Reporting Officer	Teri Tewhiu
Title of Authorised Reporting Officer	Environmental Advisor

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Veolia Recycling and Recovery Pty Ltd (Veolia) to prepare the 2023-2024 Annual Environmental Management Review (AEMR) for the Veolia Spring Farm Advanced Resource Recovery Technology Facility (ARRTF) (the Site). The Site is located at 20 Barrow Road, Spring Farm, New South Wales (NSW), 2570 (Lots 2-4 DP 250033 and Lot 2, DP 1076817). The Site location is presented in *Figure 1, Appendix B* and the Site layout is presented in *Figure 2, Appendix B.*

The Site is regulated by the New South Wales Environment Protection Authority (NSW EPA) under the NSW Protection of the Environment Operations Act 1997 through Environment Protection Licence (EPL) 12588 (the EPL). The EPL permits the operation of a composting facility for organics processing; aerobic and anaerobic digestion facility and electricity generation plant; and a mechanical pre-treatment are where organic material is separated from general waste, of which organic material is transferred to the nearby Kemp Creeks SITA Advanced Waste Treatment (SAWT). The Site is also permitted to accept liquid waste, including leachate, grease trap waste and liquid food waste. ERM understands Veolia has operated the Site since 2011.

The AEMR is based on information provided by Veolia. ERM did not conduct a Site visit as part of the preparation of the AEMR and has relied on the accuracy of the information provided by phone interview and subsequent correspondence with Kelly Gee and Teri Tewhiu, Compliance Manager and Environmental Advisor, for Veolia.

1.1 BACKGROUND

The Site forms part of the larger Veolia Spring Farm Resource Recovery Park, which includes a former landfill (Jacks Gully Landfill), weighbridge and Material Recycling Facility (MRF). The adjacent landfill ceased accepting waste in May 2016, however the MRF remains active. The facility includes a waste receival and processing hall, organics composting plant, first flush storm water system and a number of above ground storage tanks (ASTs) for storage and treatment of liquids within a bunded tank farm area. The larger Resource Recovery Park covers approximately 36 hectares, with the ARRF (the Site) covering approximately 2.7 hectares. The Site layout is presented in *Figure 2, Appendix B*.

An environmental assessment (EA) was completed in March 2006 to evaluate the potential environmental impacts of the facility and to support the associated development application. Project Approval MP05_0098 (PA) for the facility was granted on 7 September 2006 under the now repealed Part 3A of the NSW *Environment Planning and Assessment Act 1979* (EP&A Act). Six modifications to the original development consent have been submitted and approved, as outlined below in *Table 1-1*:

TABLE 1-1 SUMMARY OF MODIFCATIONS

Modification No.	Summary	Approval date
1	Update documentation to reflect current subdivision boundaries and clarify the extent of land subject to the existing approval.	27 November 2006

Modification No.	Summary	Approval date
2	Revise lot numbers and land descriptions; update references to air filtration technology to reflect current systems.	3 April 2009
3	Permit acceptance of additional input materials at the Garden Organics Plant; approve construction and commissioning of a gas pipeline from the landfill to the tank farm.	10 December 2010
4	Authorise treatment of increased quantities of garden waste at the Garden Organics Plant.	12 December 2010
5	Permit recommissioning of the tank farm to receive and treat up to 520 m^3/day of organic liquid waste and off-site leachate.	10 December 2015
6	Clarify minor operational differences between the original environmental assessment and current optimised site conditions	17 June 2020

1.2 OBJECTIVES

The objective of this AEMR is to comply with the reporting requirements of Schedule 2, Condition C5 – Annual Reporting of the Sites Project Approval (Modification 6, 17 June 2020) (application number 05_0098) (the PA), included in *Appendix C*. The specific reporting requirements are described in *Section 3.2* of this AEMR.

1.3 SCOPE OF WORKS

This AEMR assesses data collected through the environmental monitoring program implemented at the Site. The purpose pf this program is to measure and evaluate the Site's overall environmental performance and ensure compliance with the Project Approval (PA) and Environmental Protection Licence (EPL) 12588. The Site's EPL is presented in *Appendix D*.

This AEMR covers the monitoring period of 10 October 2023 to 9 October 2024. It is important to note that this AEMR is separate to the Independent Environmental Audit (IEA), which is completed every three years in accordance with the PA. The AEMR serves as an annual self-reporting tool to assess and review environmental performance.

ERM have assisted Veolia in the compilation and review of data. However, ERM has not conducted detailed independent verification of data collected by other parties and supplied for collation in this AEMR. Further distinctions between the two processes are provided in Sections 3 and 4.

1.4 ENVIRONMENTAL MANAGEMENT PLAN

In order to maintain compliance with the Sites licenses and approval documents, Veolia undertake a monitoring program for the Site which has been designed on an annual timeframe. The monitoring program incorporates the monitoring required under the Sites licences and approvals as well as additional data collection that is viewed by Veolia as beneficial from the perspective of environmental diligence. The data collected under this

program allows assessment of the Site's compliance with relevant documents and allows assessment of the Site's overall environmental performance.

The management strategies which Veolia employ to mitigate and monitor a number of environmental issues are described in the Spring Farm ARRFT Environmental Management Plan (EMP). The EMP specifies the requirements of the monitoring program (described in *Section 7*), which this AEMR reports on. The EMP is included in *Appendix E.*

2. STATEMENT OF COMPLIANCE

The purpose of the Annual Environmental Management Review (AEMR) is to undertake an assessment and review of compliance, environmental impact predictions and the effectiveness of environmental measures required under Project Approval 05_0098 (PA).

The overall assessment of environmental performance for this reporting period demonstrated six non-compliances with the Project Approval. A summary of the AEMR findings is presented in *Table 2-1* and *Table 2-2*, below. A comprehensive table with compliance status of Environmental Project Approval conditions is included in *Appendix A*.

TABLE 2-1 SUMMARY OF COMPLIANCE

Relevant Approval	No. of Conditions Compliant / Not Applicable	No. of Conditions/ Non-Compliant	No. of Conditions Not Verified
Project Approval 05_0098	38	5	1

Non- compliances reported during this AEMR are summarised in *Table 2-2* below.

TABLE 2-2 SUMMARY OF NON-COMPLIANCE

Relevant Approval	Condition	Compliance Status	Summary	Section Addressed
Project Approval 05_0098	2.14	Non-compliant	Veolia stated that pre-loads were leaving site at 3 am. No evidence of approval regarding extension of operation hours was provided.	*Section 6.2, 7.2, & 8.2*
	2.19	Not verified	No evidence of consultation with non-MACROC councils and no evidence of satisfaction from the Secretary.	*Section 6.7 & Section 9*
	3.6	Non-compliant	No annual noise assessment undertaken during	*Section 6.2, 7.2, &8.2*

Relevant Approval	Condition	Compliance Status	Summary	Section Addressed
			the monitoring period.	
	5.1	Non-compliant	Three smoulders and one spill were reported; however, Department of Planning, Housing, and Infrastructure were not notified within 7 days of each incident.	*Section 5.1*
	5.2	Non-complaint	The AEMR report was delivered outside of the acceptable reporting period.	*Section 9*
	5.8	Non-complaint	Veolia's website does not provide up-to-date environmental performance data for Spring Farm ARRFT.	*Section 9*

3. LICENSING AND APPROVALS

3.1 NSW EPA ENVIRONMENTAL PROTECTION LICENCE

The Site is regulated by the NSW Environment Protection Authority (EPA) under the Protection of the Environment Operation Act (POEO Act.). The NSW administers its regulation via EPL 12588. The EPL includes the minimum conditions under which the Sire may operate in order to maintain compliance with the POEO Act.

The EPL contains conditions which are relevant to the AEMR which include those relating the implementation of a monitoring program. The only environmental parameter specifically requiring data collection under the EPL is noise.

The EPL is included in *Appendix D*. The EPL limits are summarised in *section 7* of this report and an assessment of the Site monitoring data against the EPL limits is included in *Section 8*.

3.2 AEMR REPORTING REQUIREMENTS

This AEMR has been developed as per Schedule 2, Condition 5 (Modification 6, 17 June 2020) of the PA. The condition states 'Within 1 year of the date of approval to Modification, and every year thereafter, the Proponent shall review the environment performance of the project.

The specific Schedule 2, Condition C5 requirements and reference to the section of the AEMR are presented in *Table 3-1* below.

TABLE 3-1 PA (MODIFICATION 6) SCHEDULE 2, CONDITION 5 REQUIREMENTS

Condition Requirement	AEMR Section
(a) describe the operations that were carried out in the previous calendar year, and the operations that are proposed to be carried out over the next year;	*Section 5*
(b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of the results against the:	*Section 5, Section 8, Appendix I and Appendix J*
(i) the relevant statutory requirements, limits or performance measures/criteria;	*Section 7*
(ii) requirements of any plan or program required under this approval;	*Section 6*
(iii) the monitoring results of previous years; and	*Section 8*
(iv) the relevant predictions in the Environmental Assessment (EA).	*Section 3.4*

Condition Requirement	AEMR Section
(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	*Section 1, Section 9 Appendix A*
(d) identify any trends in the monitoring data over the life of the project;	*Section 8*
(e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and	*Section 8*
(f) describe what measures will be implemented over the next year to improve the environmental performance of the project.	*Section 9*

3.3 INDEPENDENT ENVIRONMENTAL AUDIT

Condition 3 of the PA requires an Independent Environment Audit (IEA) within one year of the date of approval to Modification 5 (12 December 2015) and every three years thereafter. The most recent IEA was completed by Element Environment Pty Ltd (Element Environment) in 2023, which included an open meeting at the Site office on 13 December 2023 and a Site inspection and a post-inspection interview on the 23 January 2023 with an NSW DP&E approved auditor from Element Environment. A summary of the Audit findings is presented in *Table 3-2* below.

TABLE 3-2 SUMMARY OF COMPLIANCES (ELEMENT ENVIRONMENT, 2023)

Relevant Approval	No. of Conditions Compliant	No. of Conditions Non-Compliant	No. of Conditions Not Verified
Project Approval 05_0098	16	14	21

3.4 ENVIRONMENTAL ASSESSMENT (WSN ENVIRONMENTAL SOULTIONS, 2006)

As part of the planning of the Spring Farm ARRF, an Environmental Assessment (EA) was completed by WSN Environmental Solutions (2006). The EA included various reviews of the potential environmental impact of the Site based on certain environmental parameters (noise, dust, odour etc.). These reviews were used to make predictions as to whether the operation of the Site would have any adverse or unacceptable environmental effects.

- The key predictions of the EA are as follows:
- The Site will not impact on any threatened or endangered flora and/or fauna species and no significant impacts to locally or regionally significant native vegetation and flora are expected to occur as a result of the proposed project expected to occur;
- Odour at the facility will not significantly impact surrounding residences;

- Dust will be mitigated such that the Site will not generate significant dust levels;
- The facility operating at full capacity under neutral weather conditions will not exceed the relevant noise criteria at residences in proximity to the site;
- Traffic flows on the surrounding road network is likely to be reduced in the long term, through the construction of the proposed arterial road linking Spring Farm to the Camden Bypass; and
- The potential visual impact of the facility would be insignificant on vistas within the visual catchment and the planned Spring Farm residential area would be screened by a buffer zone.

The assessment criteria which has been adopted to screen the data collected during the reporting period (refer to *Section 8*) is largely aimed at verifying the key predictions made during the EA. Exceedances of the assessment criteria may indicate that either the predictions of the EA were not accurate, or the Site is not being operated within the requirements of the Statement of Commitments which was relied during the EA to make predictions.

3.5 ANNUAL ENVIRONMENTAL MANAGEMENT REVIEW REPORT 2022-23 (ERM, 2025)

ERM were engaged by Veolia to undertake the 2022-23 AEMR for Spring Farm ARRF. The report summarises the Site's environmental performance over the reporting period. Four non-compliant and one not verified condition were noted within the report *Table 3-3* summarises the non-compliance and the relevant corrective actions.

TABLE 3-3 NON-COMPLIANT CONDITIONS AND CORRECTIVE ACTIONS (AEMR 2022-23)

Condition No.	Nature of Non-Compliance / Not Verified	Corrective Action
2.1	Emission of offensive odours from the site	The broken door at ARRT was fixed after odour complaints. Veolia will continue to undertake odour monitoring in line with the OMP to mitigate any emission of offensive odours.
2.14	Operating outside of the hours of access	Veolia have applied for a modification to the PA regarding an extension of hours of access.
2.19	Consultation with non-MACROC councils prior to receiving waste. Not verified.	Veolia were unable to provide evidence of communication with non-MACROC councils. Veolia shall provide evidence in future monitoring periods.
5.2	Regular reporting on environmental performance not completed.	Veolia are in the process of updating regular reporting.
5.8	The website does not provide most up-to-date information on the Environmental performance of facility.	Veolia are in the process of updating the information.

4. COMPLAINTS AND ENVIRONMENTAL INCIDENTS

4.1 COMPLAINTS

Veolia maintains a register of all complaints through the Veolia Interlex system. Veolia investigates and responds to complaints in accordance with the Environmental Complaints Management SOP. A free call telephone line through Veolia's customer Service Department operates 24 hours a day, 7 days per week. Veolia may also be referred complaints though the NSW EPA complaint line, which are also recorded in the Interlex system as required.

During the reporting period, ERM understands that no complaints were issued to the NSW EPA relating to the Site. Veolia's complaint register is presented in *Appendix F*.

4.2 ENVIRONMENTAL INCIDENTS

The PA refers to an incident as 'a set of circumstances that causes or threatens to cause material harm to the environment and/or breaches or exceeds the limits or performance measure/criteria in this approval'. All environmental incidents are to be recorded in accordance with condition C1 of the PA.

Veolia maintains a register of all environmental incidents through the VEOLIA Interlex system. Three smolders and one spill occurred during the 2023-24 reporting period. These incidents were registered in the Veolia Interlex system, however, it is ERM's understanding that these incidents were not communicated to the Secretary or any other relevant bodies under Condition 5.1.

4.3 NSW EPA STATUTORY PENALTY NOTICES

According to the NSW EPA POEO register the Site (as regulated under EPL 12588) did not receive any penalty notices during the reporting period.

5. SITE MANAGEMENT

5.1 SURROUNDING LAND USES AND RECEPTORS

Adjacent and sensitive lands uses in the vicinity of the site are detailed in *Table 5-1* and *Table 5-2* below.

TABLE 5-1 ADJACENT LAND USES

Direction	Distance from Site Boundary	Land Use
North	Adjacent	Former Jacks Gully Landfill
East	Adjacent	Bushland
South	Adjacent	Industrial
West	Adjacent	Residential Estate

TABLE 5-2 NEAREST SENSITIVE LAND USE

Direction	Distance from Site Boundary	Land Use
North	~550 m	Residential – Spring Farm
East	~1,500 m	Bushland/ Recreational Parkland – Mount Annan
South	~1,500 m	Unnamed Tributary of Nepean River
West	~220 m / 1,200 m	Jacks Gully Creek and Nepean River / Residential Estate

5.2 GEOLOGY

The Wollongong - Port Hacking 1:100 000 Geological Sheet (Stroud et al. 1985) refers to the geology beneath the Site as 'unnamed sandstone member, fine to medium grained quartz-lithic sandstone'.

5.3 HYDROGEOLOGY

There are currently no groundwater monitoring wells installed at the Site and no groundwater data for the Site is available. A search of ground water bores through the Australian Groundwater Explorer (Bureau of Meteorology (BOM) was performed on 20 November 2024 the search indicated there were no licensed groundwater bores located within 500m of the Site (BoM, 2021).

5.4 LOCAL CLIMATE

Meteorological data for the Site was obtained from the weather station located on site during a portion of the reporting period. There is a data gap between 16 June 2024 to 10 October 2024. Rainfall data collected from the onsite weather unit reported a total of 731.6 mm of rain from the beginning of the reporting period (10 October 2023 to 16 June 2024) data range provided

by Veolia. The highest daily total of 110.8 mm was recorded on 6 April 2024. A summary of the Site's meteorological data is presented in *Appendix G*.

6. SITE OPERATIONS

The Site is licenced under the EPL and/or PA to receive and process the following quantities of various waste streams. The Site is currently licenced to operate within the hours 0600 and 1800. The GSW waste stream is through domestic waste collection, which is passed through the ARRT transfer station and then transported directly to Veolia landfills, including Elizabeth Drive Landfill and Lucas Heights Landfill.

6.1 SITE IMPROVEMENTS

The Site completed the below development works during the 2023/2024 reporting period:

- Installation of solar panels on the ARRT;
- Installation of Electric Vehicle (EV) charger;
- Interim licence variation for acceptance of leachate from Veolia Woodlawn facility;
- MOD7 is at determination stage; and
- Project24 won for five (5) year period.

6.2 WASTE MANAGEMENT

The Site is licenced to receive waste as defined in Schedule 1 of the Protection of the Environment Operations Act 2014 (POEO Act). All incoming waste is processed via the weighbridge, where Veolia personnel record key details including, waste type, weight, and vehicle information. Veolia staff are responsible for monitoring and managing waste, ensuring only approved waste streams are received at the Site.

The Site is authorised to accept the following waste type:

- General Solid Waste (putrescible);
- General Solid Waste (non-putrescible);
- Leachate (non thermal treatment);
- Grease trap waste – Liquid (non thermal treatment);
- Liquid food waste – K120 (non thermal treatment); and
- General or Specific exempted waste for resource recovery that meets all the conditions of resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2014.

Site activities generate insignificant volumes of leachate through the transfer station. As mentioned above, leachate is accepted at the Site as liquid waste from a number of Veolia waste management and treated in bunded holding tanks. Any leachate which is generated at the transfer station or during the composting process is captured and stored along with leachate imported to the Site from other sites as liquid waste.

The leachate at the Site is treated with ferric chloride and flocculent to separate any solids from the liquid. The solids are then disposed of at various Veolia landfills and the remaining liquids are biologically treated prior to transport offsite to licensed liquid waste facilities for disposal.

ERM understand that stormwater collected from areas not impacted by waste streams or operation (aka; roof runoff and other stormwater onsite) is directed into the First Flush system, with acceptable liquid discharged into the public sewer and unacceptable liquid disposed offsite with the treated leachate.

6.2.1 WASTE ACCEPTANCE CRITERIA

The Site is licenced under the EPL and approved under condition 2.9 of the PA to receive and process the following quantities of various waste streams as follows:

- <130,000 tonnes (t) per annum of General Solid Waste (GSW) (putrescible and non-putrescible);
- <25,000t per annum of Garden Waste;
- <5,000t per annum of Organic Waste; and
- <520m^3 per day of Liquid Waste comprising liquid organic waste, leachate and grease trap waste (<15,000 t/year) (after 1 April 2016).

6.3 NOISE MANAGEMENT

Noise at the Site is managed under the Noise Management Plan. Key objectives are to ensure noise released from the site does not cause an impact on sensitive receptors. The plan includes the following key mitigation measures:

- Restricted operating hours;
- Vehicle pre-start requirements;
- Maintenance of plant in accordance with manufacturers specifications; and
- Noise assessments carried out in accordance with the EPL.

6.3.1 NOISE ASSESSMENT CRITERIA

Noise limits for the Site are set out in the PA, which states that noise generated at the Site during operation does not exceed the noise limits summarised below in *Table 6-1*.

TABLE 6-1 NOISE LIMITS

Location	**Day / Evening**	**Night**	
	LAeq (15 minute) decibel (dB)(A)	LAeq (15 minute) dB(A)	LAeq (1 minute) dB(A)
All existing and proposed residences including Glenlee House	39	35	45

6.4 DUST MANAGEMENT

Air Quality Management Plan has been developed to ensure dust generated at the Site does not cause an impact on sensitive receptors. The plan includes the following key mitigation measures;

- All potentially dusty waste to be processed must be processed within the enclosed process buildings at all times;
- Use of dust suppression sprinklers;
- Paving of all trafficable areas and regular sweeping of these areas;
- Enforcement of speed limits to reduce dust generation; and
- Use of a water cart as required.

6.4.1 DUST ASSESSMENT CRITERIA

The EPL does not specify any specific dust assessment criteria but states that "*all operations occurring at the premises must be carried out in a manner that will minimise the emissions of dust from the premises*."

The NSW EPA (2016) Approved Method for the Modelling and Assessment of Air Pollutants in New South Wales specify an annual target of an average of 4.0 g/m^2/month for total insoluble matter. Since the intention of the NSW EPA (2016) criteria is to be measured over an annual period, a rolling annual average is calculated and screened against the NSW EPA (2016) guideline. A summary of dust monitoring results is presented with *Table I.1, Appendix I*.

6.5 ODOUR MANAGEMENT

An Odour Management Plan (OMP) has been developed and is in place for the Site in accordance with the condition 2.1 of the PA and EPL. The OMP is included in *Appendix H.*

The objective of the OMP is to ensure that the Site is operating in a manner that does not cause or permit the emission of any offensive odour beyond the boundary of the Site. The OMP identifies a number of odour sources at the Site and specifies mitigation measures to reduce the impact of these sources.

6.5.1 ODOUR ASSESSMENT CRITERIA

The EPL and PA do not specify any specific odour assessment criteria, however the EPL does refer to Section 129 of the POEO Act 1997: '*the licensee must not cause or permit the emission of any offensive odour from the premises*'. The EPL goes onto state that the emission of an offensive odour is defensible if the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

The weekly checklist of potential odour source controls at the Site as well as odour sources included in the OMP are designed to ensure that the required odour minimisation controls are in place and effective. The OMP does not specify any specific thresholds, rather actions to be taken under the following conditions:

- If during the weekly checklist for inspections of controls are not in place as required by the OMP, then the controls are to be reinstated as soon as practicable; and
- If odours are detected during the weekly offsite odour tour, then the controls onsite are to be reviewed for effectiveness.

6.6 STORMWATER MANAGEMENT

The primary objective of managing and monitoring the water on site is to reduce any potential impacts of the facility to the surroundings water course or groundwater. Veolia manages water on site in accordance with the Water Management Standard Operating Procedure (SOP).

Roof runoff is diverted to the onsite water storage tanks, and this is used for cleaning the facility and wash down areas.

The facility utilises the "first flush" system which captures the first 10 mm of rainfall in a holding tank to reduce the potential for any contaminants present on the hardstand area to migrate off-site. All stormwater from paved areas is directed primarily to the first flush tank. Stormwater additional to the first 10 mm of rainfall is freely discharged. The tank levels are monitored, and environmental testing of the first flush water is undertaken and aligned with the Trade Waste Agreement with Sydney Water, however these results have not been provided to ERM for review.

6.6.1 STORMWATER ASSESSMENT CRITERIA

While there are no specific regulatory requirements/criteria for stormwater discharge under the PA, Veolia Water Management Plan outlines that first flush system tanks are monitored on a quarterly basis, and stormwater quality is monitored during off-site discharge. Captured stormwater is treated as liquid waste and removed from Site to facilities licenced to process liquid waste.

6.7 TRAFFIC MANAGEMENT

Traffic at the Site is managed under the Traffic Management Plan (TMP). The plan includes details on types of traffic flows, site roles, signage, and traffic zones. All council vehicles enter the site via Camden Bypass, Liz Kernohan Drive, and Barrow Road, to maintain compliance with development consent. Communication with any non-MACROC council vehicles is required to ensure the correct route is taken. It is noted that during this monitoring period, ERM were unable to verify the communications based on the information provided by Veolia.

Vehicles entering the site must comply with the Hours of access outlined under Condition 2.14, summarised in *Table 6-2* below.

TABLE 6-2 SUMMARY OF HOURS OF ACCESS

Actvity	Day	Time
Heavy vehicles entering / exiting the Site	Monday - Sunday	6 am – 10 pm
Waste Receival	Monday – Friday	6 am – 5 pm
	Saturday – Sunday	8 am - 4 pm
	Public Holidays	6am – 4 pm on a weekday 7 am – 2 pm on a weekend

Based on information provided by Veolia, the Site was reported to be receiving pre-loads at 3 am under a variation of hours granted by the Department of Planning & Environment until 31

March 2023. However, no evidence of variation of the hours of access was provided for dates beyond to 31st March 2023. Therefore, the site is considered not compliant under condition 2.14.

Additionally, communication with any non-MACROC council vehicles is required to ensure the correct route/s are taken. It is noted that during this monitoring period, ERM were unable to verify the communications based on the information provided by Veolia. Therefore, the site condition 2.19 is considered to be not verified.

6.8 VEGETATION MANAGEMENT

The Site is largely sealed by concrete and minimal vegetation exists within the Site boundary. The Site undertakes a program of noxious weed control under the Vegetation Management Plan (VMP). Under the VMP significant weed growth is to be controlled through the combination of physical removal and the application of biodegradable herbicides. The VMP lists a number of target species which are specific to the area which are controlled as a priority. ERM understand that vegetation at the Site is inspected monthly as part of routine Site inspections.

7. MONITORING PROGRAM

7.1 ROLES AND RESPONSILBIITLIES

Table 6-1 below identifies the roles and responsibilities of all parties involved in the implementation of the environmental monitoring requirements

TABLE 6-1 ROLES AND RESPONSIBILITES

Role	Responsible Part for Monitoring
Authority	NSW EPA
Dust Monitoring	Veolia Recycling and Recovery Pty Ltd
Noise Monitoring	Muller Acoustic Consulting Pty Ltd (Muller Acoustic)
Odour Monitoring	Veolia Recycling and Recovery Pty Ltd
TWA Monitoring	Veolia Recycling and Recovery Pty Ltd
AEMR Preparation	Environmental Resources Management Australia Pty Ltd (ERM)

7.2 NOISE

Noise limits for the Site are prescribed in the EPL for a number of receptor locations. The EPL specifies that the noise limits apply at "all existing and proposed residences including Glenlee House. Although, the EPL does not specify a frequency for noise monitoring to be undertaken, condition 3.6 of the Project Approval (PA) (05_0098) requires the noise monitoring be conducted "within 90 days of the commencement of operations associated with the development, and annually thereafter". Both the PA and EPL note that "*where it can be demonstrated that direct measurement of noise from the development is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy)".*

There were no noise monitoring assessments conducted during the 2023-24 reporting period; Although, Muller Acoustic Consulting Pty Ltd (Muller Acoustics) were engaged to conduct the 2023 noise impact assessment and noise monitoring assessment at the Site. Muller Acoustic completed direct noise measurements in April and May 2023. The Muller Acoustics reports on the noise assessments are included in *Appendix K*.

7.3 DUST

The PA states that "t*he Proponent shall design, construct, operate and maintain the project in a manner that prevents and/or minimises dust emissions from the site*". The EPL does not include a specific requirement for dust monitoring to be undertaken but does state that *'all operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises*'.

In order to demonstrate that dust is not being generated at the Site at unacceptable levels, air quality monitoring is conducted at the Site through the measurement of particulates (deposited matter) through depositional dust gauges (DDGs). Three DDG locations are installed at the Site and dust samples are analysed by ALS Laboratories (a NATA accredited

laboratory). The analytical results from the dust gauges are compared against the NSW EPA (2016) Approved Method for the Modelling and Assessment of Air Pollutants.

7.4 ODOUR

Veolia conducts the following odour monitoring program as per the OMP which forms part of the OEMP:

- Weekly checklist of controls on potential odour sources;
- Weekly assessment of the Deodoriser Dust Suppression System;
- Weekly odour monitoring of any unusual level of odour at the following specified on and off-site locations, including the following off-site locations which are in proximity to sensitive residential receptors:
    - Waterford Drive, Narellan Vale;
    - Welling Drive, Mt Annan;
    - Mt Annan Drive, Mt Annan;
    - Commelina Drive, Caley Drive;
    - Moyengully, Mt Annan;
    - Camden Bypass, Elderslie;
    - Richardson Road, Spring Farm; and
    - River Side, Spring Farm.

Weekly odour monitoring is included in *Appendix J*.

7.5 STORMWATER

The first 10mm of rainfall must be captured by the Site's first flush system. Captured stormwater is treated as liquid waste and removed from Site to facilities licenced to process liquid waste. The remaining stormwater is discharged into the public stormwater/ sewer.

Quarterly sampling is conducted during discharge, however the results have not been provided, nor is there any applicable screening criteria pertaining to this AEMR.

8. RESULTS

8.1 SITE OPERATION LIMITS – WASTE ACCEPTANCE

Veolia has provided data for the material accepted by the Site under various waste streams. The annual data provided to ERM by Veolia is included in *Table 8-1* below.

TABLE 8-1 PRODUCTION SUMMARY

Material	Approved Limit (EPL & PA)	Previous reporting period (actual)	This reporting period (actual)
General Solid Waste	<130,000 tpa	123,997.46 tpa	129,194.25 tpa
Garden Waste	<25,000 tpa	16,960 tpa	11,865.22 tpa
Organic Waste	<5,000 tpa	0 tpa	0 tpa
Liquid Watse (comprising liquid organic waste and leachate)	<520m^3 per day (Liquid Organic Waste, Leachate, and Grease Trap Waste (15,000 tpa)	37,534.7 tpa (<520 m^3/d)	27,501.94 tpa (<520 m^3/d)

The data provided by Veolia indicates that the volume and solid waste and green waste were in compliance with the EPL Limits for the reporting period.

As the volumes of liquid waste permitted were presented as an annual period rather than a per day volume as per the EPL conditions, ERM could not confirm that the conditions were complied with every day of the reporting period, however, Veolia has indicated that the limits were not exceeded.

8.2 NOISE

During the 2023/24 reporting period, no noise monitoring assessments were undertaken. However, the 'Noise Monitoring Assessment' and 'Noise Impact Assessment' were completed by Muller Acoustics Consulting Pty Ltd outside of the reporting period. For the purpose of this report, these assessments are considered to be representative of typical site operations under normal conditions.

Due to the lack of noise complaints at the Site during the 2023/24 reporting period, it is assumed that the Site operated under normal site conditions throughout the reporting period. Despite the lack of complaints, the Site is considered non-compliant under condition 3.6, due to the absence of annual noise monitoring assessment. Muller Acoustics reports on the noise assessments are included in *Appendix K.*

8.2.1 MULLER ACOUSTICS - NOISE MONITORING ASSESSMENT 2023

Noise measurements were undertaken at three monitoring locations, NML1 – NML3, to determine compliance with the EPL and PA. Attended monitoring was undertaken on 4 April 2023 at all three locations. It was determined that the ARRF was inaudible during all monitoring period at all locations and was compliant with the assessment criteria. The results of the noise monitoring assessment are summarised in *Table 8-2* below.

TABLE 8-2 SUMMARY OF NOISE MONITORING RESULTS

Date	Time	LAmax	LAeq	LA90	Comments
NML 1					
03/04/2023	17:53 (Day)	58	45	42	ARRF not audible. Extraneous noises sources included traffic, insects, aircraft noise, and birds.
03/04/2023	18:09 (Evening)	63	47	42	
03/04/2023	23:07 (Night)	76	41	34	
NML 2					
3/04/2023	17:30 (Day)	67	46	43	ARRF not audible. Extraneous noises sources included traffic, insects, aircraft noise, barking dogs, and birds.
3/04/2023	18:43 (Evening)	62	47	46	
3/04/2023	22:37 (Night)	56	42	38	
NML 3					
3/04/2023	16:55 (Day)	67	46	44	ARRF not audible. Extraneous noises sources included traffic, insects, train noise, and birds.
3/04/2023	19:28 (Evening)	64	46	42	
3/04/2023	22:00 (Night)	66	48	44	

8.2.2 MULLER ACOUSTICS – NOISE IMPACT ASSESSMENT

Noise Impact Assessment was undertaken as part of the proposed modification to the development consent. The proposed modification will seek approval for the increase in acceptance of general waste limits and extension of the approved operating hours.

Attended and unattended noise monitoring was undertaken as part of the assessment. The results are presented within the noise impact assessment report in *Appendix K.*

8.3 DUST

The available dust monitoring laboratory analytical results as collected and provided to ERM by Veolia and the summary table for the reporting period are included in *Table I.1, Appendix I.*

The data presented in *Appendix I* included both the monthly average values and rolling annual average values for particulates – total insoluble matter, with comparisons to the NSW EPA (2016) Annual Target Average. There were no reported exceedances of the screening criteria (annual average value (4 g/m^2/month)) for the Site. A summary of the dust results is presented in *Table 8-4* below.

TABLE 8-3 SUMMARY OF DUST MONITORING RESULTS

Dust Monitoring Location ID	Rolling Annual Average – Total Insoluble Matter ($g/m^2/month$)
Moyengully Access Gate	0.42
Phone Tower	0.53
Barrow Road	1.38

Given the consistently low dust results for the twelve months monitored during reporting period and historically, the data is considered sufficient to demonstrate compliance with condition 2.2 of the PA (*The Proponent shall design, construct, operate and maintain the project in a manner that prevents and/or minimises dust emissions from the Site*).

The results were considered consistent with monitoring data from previous reporting periods and do not identify a trend in increasing dust reported.

8.4 ODOUR

The odour monitoring results from the reporting period are included in *Appendix J.* Throughout this period there were 38 odour monitoring patrols conducted both at the site entrance and at off-site locations with patrols commencing on 9/10/2023. Odour patrols were not completed for 12 weeks where monitoring was required during the reporting period, including a ten week between 15/01/2024 – 25/03/2024.

8.5 STORMWATER

No stormwater monitoring results were provided for this reporting period. While there are no specific regulatory requirements/criteria for stormwater discharge under the PA, Veolia Water Management Plan outlines that first flush system tanks are monitored on a quarterly basis, and stormwater quality is monitored during off-site discharge. Captured stormwater is treated as liquid waste and removed from Site to facilities licenced to process liquid waste.

9. CONCLUSIONS

This AEMR has been developed to satisfy the reporting requirements of Schedule 2, Condition 5 – Annual Reporting of the Sites PA (Modification 6, 17 June 2020) (application number 05_0098) for the 2023-2024 monitoring period (10 October 2023 to 9 October 2024).

The AEMR has assessed available data collected from the environmental monitoring program during the reporting period and assessed the Site's overall environmental performance and compliance with the EPL and the PA. The available data has been collected to satisfy EPL and PA requirements and is generally sufficient to satisfy the requirements for the reporting period.

An Independent Environmental Audit was completed for the Site in 2022 which raised a number of compliance issues for the Site and made recommendations to Veolia to address those issues. A summary of these compliance issues and an update of their status has been provided.

No noise monitoring assessments were undertaken during the 2023/2024 reporting period. It should be noted that the Site received no complaints regarding noise emissions during the reporting period. Noise assessments were conducted in the previous reporting period (2022-23), which reported noise levels which comply with applicable criteria and are considered to be representative of the Site operating under normal conditions.

Dust was monitored by Veolia at the Site during the reporting period at three locations. The annual rolling average was below the relevant guidelines during monitoring period, indicating that the Site is managing dust generation appropriately.

Odour monitoring rounds did not identify off-site odours which were suspected to be directly attributed to the operation of the Site, and no odour complaints were received during the reporting period indicates that the site did not generate any offensive odours during this monitoring period.

Based on the completion of this AEMR, ERM considers that the Site is compliant with Schedule 2, Condition 5 – Annual Reporting of the Sites PA (application number 05_0098, modification 6, 17 June 2020) for the period 10 October 2023 to 9 October 2024. Based on information provided by Veolia, the Site is generally compliant with the PA and EPL, with the five non-compliance and one not verified condition, reported being against the following conditions;

- Condition 2.14 – regarding site operations outside the hours approved under the Project Approval (PA). ERM has been informed that this condition would be resolved if MOD7, which seeks to extend operational hours, is approved following its submission in early 2024;
- Condition 2.19 – concerning consultation with non-MACROC councils regarding the provision of vehicle access route details for waste transport to the Site. This condition is currently considered unverified, and ERM understands it will be addressed in future AEMRs;
- Condition 3.6 – relating to the required annual noise monitoring. As discussed in the above sections, no complaints were received regarding noise emissions. This non-conformance will be rectified through appropriate noise monitoring in the next reporting period;

- Condition 5.1 – relating to the notification of incidents to the Secretary and other relevant agencies, namely the spill and smolders. This non-conformance will be rectified in future reporting periods;
- Condition 5.2 – relating to the regular reporting on environmental performance (AEMRs). This non-conformance will be rectified during the 2024/25 reporting period; and
- Condition 5.8 – relating to the public availability of required documents on the webpage. This condition is being addressed.

10. REFERENCES

Bureau of Meteorology (BoM) (2021), *Australian Groundwater Explorer*, Australian Government, viewed 20 November 2024.

Element Environment (2023), *Independent Environmental Audit, Spring Farm Advanced Resource Recovery Technology Facility*, 23 March 2023.

NSW EPA (2016), *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*, 2016.

NSW EPA (2021), *Protection of the Environment Operations Act 1997*, NSW Government.

NSW Government (1979), *Environment Planning and Assessment Act 1979* (EP&A Act).

Muller Acoustic Consulting Pty Ltd (2023), *Noise Monitoring Assessment, Veolia Spring Farm Advanced Resources Recovery Facility*, April 2023.

Muller Acoustic Consulting Pty Ltd (2024), *Noise Impact Assessment, Veolia Spring Farm Advanced Resources Recovery Facility*, May 2024.

Stroud et al. (1985) *The Wollongong - Port Hacking 1:100 000 Geological Sheet*, 1985.

WSN Environmental Solutions (2006), *Environmental Assessment*, 2006.

APPENDIX A TABLE OF COMPLIANCE

Condition No.	Condition/Requirement	Compliance Status	Comment
Specific Environmental Conditions			
Air Quality			
2.1	The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the *Protection of the Environment Operations Act 1997*	Compliant	No odour complaints noted during the reporting period. Weekly odour reports provided.
2.2	The Proponent shall design, construct, operate and maintain the project in a manner that prevents and/or minimises dust emissions from the site.	Compliant	Veolia operations and activities are managed to minimise emissions of dust from the Site. The Operational Environmental Management Plan (OEMP) details key mitigation measures; - Dust suppression - Hardstand surfaces in trafficable areas - Regular sweeping of trafficable areas
2.3	The Proponent shall ensure that all vehicles entering or leaving the site with a load that may generate offensive odours or dust emissions are covered at all times.	Compliant	Veolia receives waste in enclosed / covered vehicles.
Stormwater Management			

Condition No.	Condition/Requirement	Compliance Status	Comment
2.4	The Proponent shall ensure that all areas involving the handling, treatment or storage of waste and outputs must be sealed, with all runoff directed to a first flush system	Compliant	Refer to Standard Operating Procedure 069 – Water Management / Stormwater
2.5	The Proponent shall construct bunds to ensure that above-ground tanks and vats including those used for treating or processing waste/water slurry and tanks for storing wastewater from these activities, are surrounded with a bund with a capacity of 110% or greater than that of the largest tank within the bund. Area to be bunded include: a) the AWT process building and tank farm; and b) the perimeter of the AWT site.	Compliant	Refer to Standard Operating Procedure 078 – Bund Construction and Maintenance
Wastewater Management			
2.6	The Proponent shall ensure that process waste water from the ArrowBio plant is kept separate from the stormwater management system and is stored in a reservoir or tank engineered and designed in accordance with the requirements of the EPA's (1999) Environmental Guidelines: Assessment, Classification and Management	N/A	The ArrowBio plant was decommissioned in 2012/13.
2.7	Prior to the irrigation or reuse of process wastewater from the ArrowBio plant on or offsite, the Proponent shall provide evidence, to the satisfaction of the Secretary, the EPA is satisfied with the standard of wastewater for its intended application. Irrigation or reuse of process wastewater shall not commence until written approval has been provided by the Secretary. This condition does not apply to any wastewater intended to be reused in the process as makeup water.	N/A	The ArrowBio plant was decommissioned in 2012/13.

Condition No.	Condition/Requirement	Compliance Status	Comment
Waste Management			
2.8	The Proponent shall not cause, permit or allow any materials or waste generated outside the site to be received at the site for storage, resources recovery, processing, or disposal on the site, except as expressly permitted by an EPL.	Compliant	Spring Farm ARRFT only accepts waste specified in the Site EPL.
2.9	The Proponent must not receive or process on the site more than: a) 130,000 tonnes per year of General Solid Waste; b) 25,000 tonnes per year of Garden Waste c) 5,000 tonnes per year of Organic Waste; and d) 520m^3 per day of Liquid Waste comprising liquid organic waste, leachate, grease trap waste, with grease trap waste not exceeding 15,000 tonnes per year.	Compliant	Volumes of waste received were in accordance with the Site's EPL.
2.10	Prior to applying any organic outputs to land, the Proponent shall fully characterise the organic outputs to be applied to land with supporting laboratory analysis and propose an appropriate specification to ensure this waste-derived material is fit for its intended purpose. AS4454 Composts, soil conditioners and mulches and the EPA's Environmental Guidelines: Use and Disposal of Biosolids Products (1997) shall not be the sole determinants of the suitability (or otherwise) of this material for land application. The characterisation and proposed specification shall be provided to the EPA, and evidence of the EPA's approval shall be provided to the Secretary within two weeks of the approval being granted.	N/A	On-site green waste operations ceased in October 2018. This condition is no longer applicable.

Condition No.	Condition/Requirement	Compliance Status	Comment
Noise			
2.12	The Proponent shall undertake all construction activities associated with the development that would generate an audible noise at any premises beyond the boundary of the site between the following hours: a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive; b) 8:00am to 1:00 pm, Saturdays; and c) at no time on Sundays or public holidays unless otherwise approved in witing by the Secretary.	N/A	This condition is no longer applicable as no construction works are occurring at the Site.
2.13	The Proponent shall ensure that noise from the project at all existing and proposed residences, including Glenlee House, does not exceed: a) a LAeq (15 minute) noise emission criterion of 39 dB(A) during the day/evening; b) a LAeq (15 minute) emission criterion of 35 dB(A) during the night; and c) a LA1 (1 minute) noise emission criterion of 45 dB(A) during the night.	Compliant	An environmental noise monitoring assessment was undertaken by Muller Acoustics Consulting Pty Ltd outside of the reporting period. However, the EPL does not specify a frequency for noise monitoring to be undertaken. Condition 3.6 of the Project Approval (PA) (05_0098) requires the noise monitoring be conducted "within 90 days of the commencement of operations associated with the development, and annually thereafter". Both the PA and EPL note that "where it can be demonstrated that direct measurement of noise from the development is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy)". Therefore, the previous environmental noise assessment (conducted in April 2023) is considered to be suitable, as the 2.13 condition does not stipulate frequency of assessment required.

<table>
<tr><th>Condition No.</th><th>Condition/Requirement</th><th>Compliance Status</th><th>Comment</th></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="4">Transport</td></tr>
<tr><td>2.14</td><td>The Proponent must comply with the hours detailed in Table 1, unless otherwise agreed in writing by the Planning Secretary.

Table 1: Hours of access
<table>
<tr><th>Activity</th><th>Day</th><th>Time</th></tr>
<tr><td>Heavy Vehicles entering/exiting site</td><td>Monday -Sunday</td><td>6 am – 10 pm</td></tr>
<tr><td rowspan="3">Waste receival</td><td>Monday - Friday</td><td>6 am - 5 pm</td></tr>
<tr><td>Saturday - Sunday</td><td>8 am – 4 pm</td></tr>
<tr><td>Public Holidays</td><td>6am – 4 pm on a week day
7 am – 2 pm on a weekend</td></tr>
</table></td><td>Non-compliant</td><td>Veolia stated that pre-loads were leaving site at 3 am. Variation to hours of access was granted by the Department of Planning & Environment until 31 March 2023. No evidence of approval extension provided. MOD7 was submitted in early 2024 to request an increase in operational hours. It should be noted that no noise complaints were received during this monitoring.</td></tr>
<tr><td>2.16</td><td>The Proponent shall take all reasonable steps to inform vehicles carrying waste to/from the development from MACROC Councils to use the following routes:</td><td>N/A</td><td>Arterial road construction complete</td></tr>
</table>

Condition No.	Condition/Requirement	Compliance Status	Comment
	a) Narellan Road, Camden Bypass, Springs Road, Richardson Road and the current right of way, when accessing the site from the north or east; and/or b) Old Hume Highway, Camden Bypass, Springs Road, Richardson Road and the current right of way, when accessing the site from the south or west, prior to the finalisation of public access to the proposed arterial road referred to in the comments listed under condition 1.1.		
2.17	Upon finalisation of public access to the proposed arterial road referred to in the documents listed under condition 1.1, the Proponent shall take all reasonable steps to inform vehicles carrying waste to/from the development from MACROC Councils to use the following routes: a) Narellan Road, Camden Bypass, arterial road and new public road when accessing the site from the north or east; and/or b) Old Hume Highway, Camden Bypass, arterial road and new public road when accessing the site from the south or west.	Compliant	Trucks access the Site via Camden Bypass, Arterial Road (Liz Kernohan Drive), Narellan Road.
2.18	Prior to finalisation of public access to the proposed road network referred to in the documents under condition 1.1, the Proponent shall pay Council $13,194 annually for the maintenance of the local roads used by the AWT Facility. However, upon finalisation of public access to the proposed road network, the Proponent shall pay Council $5,124 annually	Compliant	Proposed road network completed. Payment completed.
2.19	Prior to the receipt of waste from non-MACROC Councils, the Proponent shall provide to Council details of vehicle access routes to the site for vehicles carrying waste from non-MACROC Councils. Evidence of consultation with Council shall be provided to the satisfaction of the Secretary.	Non-compliant	No evidence of consultation with non-MACROC councils and no evidence of satisfaction from the Secretary.

Condition No.	Condition/Requirement	Compliance Status	Comment
2.20	The Proponent shall ensure that vehicles associated with the project do not park, queue or stand in any of the road reserves outside the site.	Compliant	Vehicles associated with the project do not park, queue, or stand in any of the road reserves outside the site. Adequate space on-site to hold vehicles.
Mine Subsidence			
2.21	The Proponent shall ensure that the project is designed to withstand the following mine subsidence parameters: a) Maximum subsidence: 1200 mm b) Maximum strains: 1.5 mm c) Maximum tilt: 5 mm/m d) Radius of curvature:12000m	N/A	Project construction was complete prior to Veolia's acquisition
Visual			
2.22	The Proponent shall ensure that all external lighting associated with the project: a) does not create a nuisance to surroundings properties or roadways; and b) complies with AS 4282(INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting.	Compliant	To minimise impacts on visual quality during operation, strategic tree planting will be undertaken. No complaints were received in relation to lighting.
Hazards			
2.23	The Proponent shall ensure that Liquefied Natural Gas is not used at the site.	Compliant	Liquefied Natural Gas is not used at the Site

Condition No.	Condition/Requirement	Compliance Status	Comment
2.24	Prior to the commissioning the gas pipeline, the Proponent shall: a) Implement the proposed safeguards and actions listed in Appendix A of the HAZOP study report (AECOM, 26 August 2009). b) Prepare and implement a Commissioning Procedure; and c) Prepare and implementt a Safety and Operating Plan (SAOP); for the pipeline based on Australian Standard AS/NZS4645.1-2008- Gas Distribution Networks, Part 1-Network Management to the satisfaction of the Secretary.	N/A	Gas pipeline decommissions in September 2016.

Condition No.	Condition/Requirement	Compliance Status	Comment
2.25	The Proponent shall prepare the studies set out under subsections (a to b)) the pre-construction studies).. Construction associated with MOD 5, other than preliminary works that are outside the scope of the hazard studies, shall not commence until the recommendations of the study have been considered and, where appropriate, acted upon: a) a Hazard and Operability Study for MOD 5, chaired by an independent qualified person. The study shall be consistent with the department's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'; and b) a Final Hazard Analysis for MOD 5, consistent with the Department's Hazardous Industry Planning Advisory paper No 6 "Hazard Analysis". The document shall be prepared and submitted to the Department no later than one month prior to the commencement of construction of MOD 5 (other than preliminary works), or within such further period as the Secretary may agree.	N/A	MOD 5 associated constructions were completed before this reporting period

Condition No.	Condition/Requirement	Compliance Status	Comment
2.26	The Proponent shall develop and implement the plans and systems set out under subsections a) to b). No later than two months prior to the commencement of commissioning of MOD 5, or within such further period as the Secretary may agree, the Proponent shall submit for the approval of the Secretary documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Secretary. a) the Proponent's Emergency Plan and detailed emergency procedures shall be updated to incorporate any changes due to MOD 5. The plan shall include detailed procedures for the safety of all people outside of the development who may be at risk from the development. The plan shall be in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Industry Emergency Planning Guidelines'; and b) the Proponent's Safety Management System shall be updated to include any changes due to MOD 5. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Secretary upon request. The Safety Management System shall be developed in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.	N/A	MOD 5 associated constructions were completed prior to this reporting period

Condition No.	Condition/Requirement	Compliance Status	Comment
Environmental Management and Monitoring			
Operation Environmental Management Plan			
3.3	Prior to the commencement of operations, the Proponent shall prepare (and following approval implement) an Operation Environmental Management Plan (OEMP) for the project. This plan must describe the environmental management framework, practices and procedures that would be followed during operations, and include: a) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to operation of the development, including all approvals, licences, approvals and consultations; NSW Government Department of Planning; b) a description of the roles and responsibilities for all relevant employees involved in the operation of the development; c) overall environmental policies, principles and performance measures that will be applied to the operation of the development; and d) the management plans listed under condition 3.4. Operations shall not commence until the Secretary has approved the OEMP.	Compliant	
3.4	The OEMP for the project shall include the following Management Plans: a) a **Stormwater Management Plan** outlining the measures that would be implemented to manage the stormwater generated by the project. This plan shall be prepared in consultation with the EPA, and include: (i) details of the proposed stormwater management system for the project, which must be designed as a first flush system to capture the first 10mm of stormwater for each m² of catchment; and	Compliant	OEMP outlines stormwater management and vegetation management plans.

Condition No.	Condition/Requirement	Compliance Status	Comment
	(ii) details of the program for the reuse of captured first flush stormwater, whether as process water in the ArrowBio Plant, as discharge to sewer, or tankering to an off site treatment facility, until such time as the Proponent has demonstrated to the satisfaction of the EPA that the stormwater is suitable for other management approaches. b) a **Vegetation Management Plan** outlining the measures that would be implemented to minimise the impacts of the project on surrounding vegetation. This plan must be prepared in consultation with DNR and Council, and include: (i) details of any natural watercourses or riparian areas to be disturbed by the project; (ii) details of the proposed program for the rehabilitation of disturbed areas; and (iii) details of the proposed program for weed control at the site.		
3.4a	The Proponent shall operate a meteorological station on the site that complies with the requirements in the latest version of the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales.	Compliant	Weather Station is located at the Site
Odour Monitoring			
3.5	Prior to the commencement of operations associated with the development, the Proponent shall prepare an ongoing odour monitoring program to ensure compliance with condition 2.1 of this approval throughout the life of the development, consistent with Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2005). The Program shall be submitted for the approval of the Secretary and operations shall not commence until written approval has been received from the Secretary.	Compliant	Approval received

Condition No.	Condition/Requirement	Compliance Status	Comment
3.5a	The Proponent shall prepare and implement a Standard Operating Procedure (SOP) to control fugitive emissions from the operations of the Garden Organics Plant. the SOP shall be: a) consistent with the existing Environmental Management Plan b) developed in consultation with Council ; and c) submitted to the Secretary for approval within 3 months of approval of Modification 4.	N/A	The Site no longer receives green waste.
3.5b	The Proponent shall carry out an Odour Audit of the Project no later than 6 months after the commencement of operation of the tank farm. The audit must: a) be carried out by a suitably qualified and experienced independent person(s), whose appointment has been endorsed by the Secretary; b) audit the Project in full operation; c) include a summary of odour complaints and any actions that were carried out to address the complaints; d) validate the Project against odour impact predictions in Modification Application 05_0098 MOD 5; e) review design and management practices in the Project against industry best practice for odour management; and f) include an action plan that identifies and prioritises any odour mitigation measures that may be necessary to reduce odour emissions. Note: The odour audit may be prepared so that it addresses the requirements of this consent and the EPL for the Development.	N/A	Odour Audit was completed in 2018
3.5c	The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of the Odour Audit.	N/A	No further requirements were requested prior to the Odour Audit in 2018.

Condition No.	Condition/Requirement	Compliance Status	Comment
3.5d	The Proponent must update the odour audit required under Condition 3.5b no later than 6 months after the commencement of Modification Application 05_0098 MOD 6 to the satisfaction of the Planning Secretary and the EPA. In addition to the requirements under Condition 3.5b, the audit must also: a) be carried out by a suitably qualified and experience independent person(s), whose appointment has been endorsed by the Planning Secretary. b) Be prepared in consultation with the EPA, including on the odour assessment methodology; c) Audit the project in full operation; and d) Validate the project against odour impact predictions in Modification Application 05_0098 MOD 6.	Compliant	Odour Audit was undertaken by ERM on 9th December 2020, conducted within 6 months after the commencement of MOD 6.
3.5e	Prior to the receival of grease trap waste under Modification Application 05_0098 MOD 6, the Proponent must enclose the location of the grease trap waste residuals bin.	N/A	Grease currently not accepted on-site
Noise Monitoring			
3.6	Within 90 days of the commencement of operations associated with the development, and annually thereafter, the Proponent shall assess the noise emission performance of the development during a period in which the development is operating under normal operating conditions. The assessment shall include, but not necessarily be limited to: a) noise monitoring, consistent with the guidelines provided in the New South Wales Industrial Noise Policy (EPA, 2000), to assess compliance with condition 2.13 of this approval; b) a comparison of the results of the noise monitoring required under a) above, and the predicted noise impacts detailed in the documents listed under condition 1.1 of this approval; and	Non-Compliant	Annual noise monitoring is required to be completed under this condition.

Condition No.	Condition/Requirement	Compliance Status	Comment
	c) details of any entries in the Complaints Register (required as part of the annual review under condition 5.5) relating to noise impacts. A report providing the results of the program shall be submitted to the Secretary and the EPA within 28 days of completion of the testing required under a).		
3.7	If the results of the monitoring required under conditions 3.5 and 3.6 indicate that the operation of any component of the development, when operating under design loads and normal operating conditions, exceeds the limits imposed under conditions 2.1 and/or 2.13 of this approval, the Proponent shall provide details of remedial measures to be implemented and a timetable for implementation to reduce emissions to the levels required. Details of the remedial measures shall be submitted to the Secretary for approval and be accompanied by evidence that the EPA is satisfied that the remedial measures are acceptable.	N/A	Not applicable based on non-compliance of condition 3.6.
Compliance			
4.1	Prior to the commencement of construction and operations, the Proponent shall certify in writing to the satisfaction of the Secretary that it has complied with all the applicable conditions of this approval.	N/A	Not applicable as construction and operations commenced prior to this reporting period.
Reporting, Review and Access to Information			
Incident Reporting			
5.1	The Proponent shall notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident	Non-Compliant	Three smoulders and one spill were entered into Intelex. However, Department of

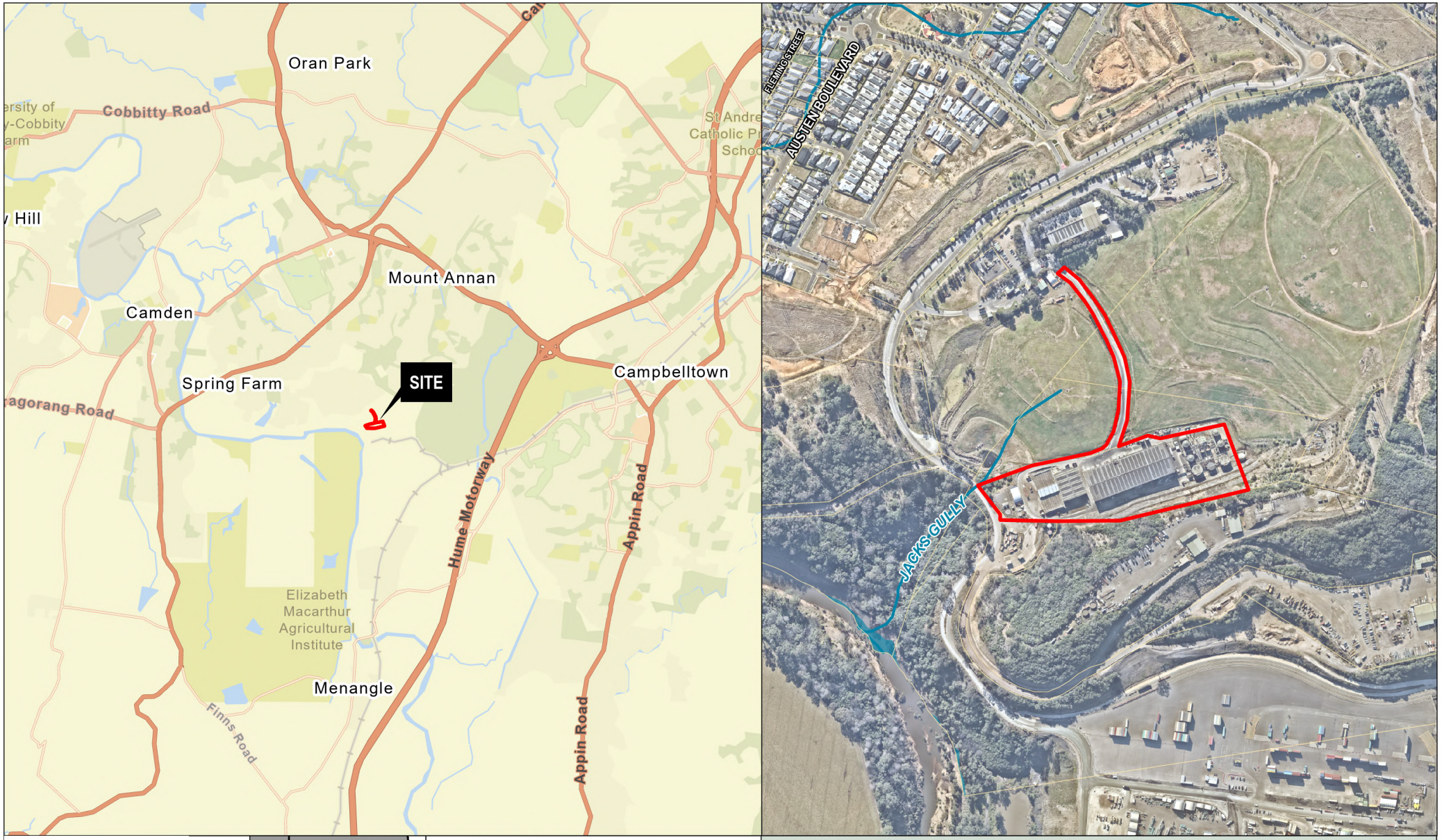
Condition No.	Condition/Requirement	Compliance Status	Comment
	that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the Project, the Proponent shall notify the Secretary and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.		Planning, Housing, and Infrastructure were not notified.
Regular Reporting			
5.2	The Proponent shall provide regular reporting on the environmental performance of the Project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.	Non-compliant	2022/23 AEMR is not available on Veolia's website. It should be noted that ERM is completing the 2022/23 AEMR in conjunction with this report. The 2022/23 AEMR will be uploaded at its completion.
Independent Environmental Audit			
5.3	Within 1 year of the date of approval to Modification 5, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must: a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; b) led by a suitably qualified auditor, and include experts in fields specified by the Secretary; c) include consultation with the relevant agencies; d) assess the environmental performance of the Project and assess whether it is complying with the requirements in this approval, and any other relevant approvals NSW Government	Compliant	Independent Environmental Audit was undertaken by Element in 2022.

Condition No.	Condition/Requirement	Compliance Status	Comment
	Department of Planning and Environment 3 and relevant EPL/s (including any assessment, plan or program required under the approvals); e) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and f) recommend measures or actions to improve the environmental performance of the Project, and/or any strategy, plan or program required under the approvals.		
5.4	Within three months of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.	Compliant	-
Annual Review			

Condition No.	Condition/Requirement	Compliance Status	Comment
5.5	Proponent shall review the environmental performance of the Project. This review must: a) describe the operations that were carried out in the previous calendar year, and the operations that are proposed to be carried out over the next year; b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of the results against the: (i) the relevant statutory requirements, limits or performance measures/criteria; (ii) requirements of any plan or program required under this approval; (iii) the monitoring results of previous years; and (iv) the relevant predictions in the EA; c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; d) identify any trends in the monitoring data over the life of the Project; e) identify any discrepancies between the predicted and actual impacts of the Project, and analyse the potential cause of any significant discrepancies; and f) describe what measures will be implemented over the next year to improve the environmental performance of the Project.	Compliant	ERM have assisted Veolia in compiling the Annual Review (this document) with information provided by Veolia.
Revision of strategies, plans and programs			
5.6	Within 3 months of the submission of an: a) annual review under Condition C5 above; b) incident report under Condition C1 above; c) audit under Condition C3 above; or d) any modification to this consent,	Compliant	A review of strategies and plans were completed within 3 months of MOD 6.

Condition No.	Condition/Requirement	Compliance Status	Comment
	the Proponent shall review, and if necessary, revise, the strategies, plans, and programs required under this approval.		
5.7	The Proponent shall ensure that the operation of the Project is undertaken in accordance with all relevant updated and/or amended strategies, management plans and programs approved by the Secretary (or as revised and approved by the Secretary), unless otherwise agreed by the Secretary.	Compliant	Veolia state submission of reviewed management plans were approved
Access to information			
5.8	The Proponent shall: a) make copies of the following publicly available on its website: (i) the documents referred to in Condition 1.1; (ii) all current statutory approvals for the Project; (iii) all approved strategies, plans and programs required under the conditions of this consent; (iv) a comprehensive summary of the monitoring results of the Project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs; (v) a complaints register, updated on a monthly basis; (vi) the annual reviews of the Project; (vii) any independent environmental audit of the Project, and the Proponent's response to the recommendations in any audit; and (viii) any other matter required by the Secretary; and b) keep this information up to date.	Non-Compliant	2022-23 annual review of this project is not available on Veolia's website, under a) vi and b) subsections of this condition. It should be noted that ERM are completing 2022/23 AEMR in conjunction with this report. The 2022/23 AEMR report will be publicly available at the report's completion.

APPENDIX B FIGURES



Legend

- ARRF Site Boundary
- Cadastre

Data Source
Imagery: Nearmap July 2025
Basedata: DFSI, DCDB/DTDB 2018



Coordinate System:
GDA 1994 MGA Zone 56
Date: 12/08/2025
Created By: AM
Drawing Size: A4

0 75 150 225m

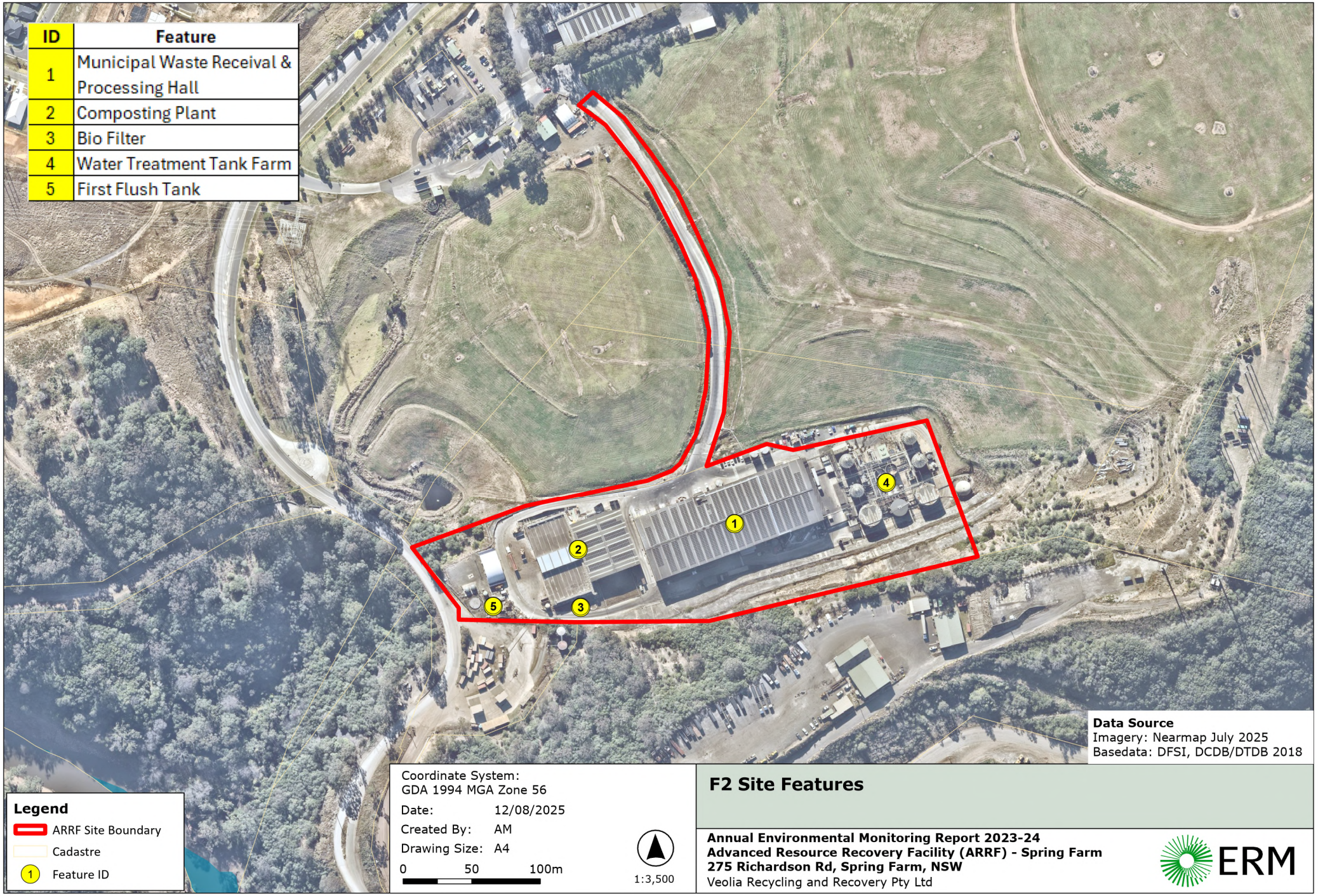
1:8,000

F1 Site Location

Annual Environmental Monitoring Report 2023-24
Advanced Resource Recovery Facility (ARRF) - Spring Farm
275 Richardson Rd, Spring Farm, NSW
Veolia Recycling and Recovery Pty Ltd

ERM

0747163_AEMR_Veolia_R0.aprx



0747163_AEMR_Veolia_R0.aprx

APPENDIX C PROJECT APPROVAL

Notice of Modification

Section 75W of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, under delegation dated 16 February 2015, I approve the modification of the project approval referred to in Schedule 1, subject to the conditions in Schedule 2.



David Gainsford
A/Executive Director
Key Sites and Industry Assessments

Sydney 10th December 2015

SCHEDULE 1

The Project Approval (05_0098) granted by the Minister for Planning for Jack's Gully Alternative Waste Technology Facility on 7 September 2006.

SCHEDULE 2

1. In the table of definitions in Schedule 2, delete the definitions for DEC, Department, Director-General and Proponent and insert the following in alphabetical order:

Department	Department of Planning and Environment.
DPI	Department of Primary Industries.
EPA	Environment Protection Authority.
Feasible	Feasible relates to engineering considerations and what is practical to build.
Garden Waste	As defined in Schedule 1 of the *Protection of the Environment Operations Act 1997.*
General Solid Waste	As defined in Schedule 1 of the *Protection of the Environment Operations Act 1997.*
Incident	A set of circumstances that: • causes or threatens to cause material harm to the environment; and/or • breaches or exceeds the limits or performance measures/criteria in this approval.
Liquid Waste	As defined in Schedule 1 of the *Protection of the Environment Operations Act 1997.*
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial.
Mitigation	Activities associated with reducing the impacts of the project prior to or during those impacts occurring.
Organic Waste	As defined in Schedule 1 of the *Protection of the Environment Operations Act 1997.*
Proponent	SITA Australia Pty Ltd, or its successors.
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements.
Secretary	Secretary of the Department (or nominee).

2. Delete all instances of the word DEC and replace with EPA.

3. Delete all instances of the word Director-General and replace with Secretary.

4. Delete all instances of the word DNR and replace with DPI.

5. In condition 1.1, delete paragraph i) and insert instead:

   i) Modification Application 05_0098 MOD 5, dated 30 October 2013, accompanied by documents titled, *Environmental Assessment: Modification Application – Spring Farm Advanced Resource Recovery Technology (ARRT) Facility*, dated 30 October 2013, prepared by Cardno NSW/ACT, and *Response to Submissions to the Public Exhibition, Spring Farm Resource Recovery Facility* S.75W *Modification Application (05_0098 MOD 5)*, dated 12 January 2015, prepared by Cardno NSW/ACT.

6. Delete conditions 2.8 and 2.9 and insert instead:

   2.8 The Proponent shall not cause, permit or allow any materials or waste generated outside the site to be received at the site for storage, resource recovery, processing, or disposal on the site, except as expressly permitted by an EPL.

   2.9 The Proponent shall not receive or process on the site more than:
   a) 130,000 tonnes per year of General Solid Waste;
   b) 25,000 tonnes per year of Garden Waste;
   c) 5,000 tonnes per year of Organic Waste; and
   d) 520m^3 per day of Liquid Waste comprising liquid organic waste and leachate.

7. Delete condition 2.11.

8. Insert the following conditions immediately after condition 2.24:

   2.25 The Proponent shall prepare the studies set out under subsections a) to b) (the pre-construction studies). Construction associated with MOD 5, other than preliminary works that are outside the scope of the hazard studies, shall not commence until the recommendations of the study have been considered and, where appropriate, acted upon:
   a) a Hazard and Operability Study for MOD 5, chaired by an independent qualified person. The study shall be consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'*; and
   b) a Final Hazard Analysis for MOD 5, consistent with the Department's *Hazardous Industry Planning Advisory paper No 6 "Hazard Analysis"*. The document shall be prepared and submitted to the Department no later than one month prior to the commencement of construction of MOD 5 (other than preliminary works), or within such further period as the Secretary may agree.

   2.26 The Proponent shall develop and implement the plans and systems set out under subsections a) to b). No later than two months prior to the commencement of commissioning of MOD 5, or within such further period as the Secretary may agree, the Proponent shall submit for the approval of the Secretary documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Secretary.
   a) the Proponent's Emergency Plan and detailed emergency procedures shall be updated to incorporate any changes due to MOD 5. The plan shall include detailed procedures for the safety of all people outside of the development who may be at risk from the development. The plan shall be in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 1, 'Industry Emergency Planning Guidelines'*; and
   b) the Proponent's Safety Management System shall be updated to include any changes due to MOD 5. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Secretary upon request. The Safety Management System shall be developed in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.*

9. Insert the following condition immediately after condition 3.4:

Meteorological monitoring

3.4a The Proponent shall operate a meteorological station on the site that complies with the requirements in the latest version of the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales*.

10. Insert the following conditions immediately after condition 3.5a:

Odour Audit

3.5b The Proponent shall carry out an Odour Audit of the Project no later than 6 months after the commencement of operation of the tank farm. The audit must:

a) be carried out by a suitably qualified and experienced independent person(s), whose appointment has been endorsed by the Secretary;
b) audit the Project in full operation;
c) include a summary of odour complaints and any actions that were carried out to address the complaints;
d) validate the Project against odour impact predictions in Modification Application 05_0098 MOD 5;
e) review design and management practices in the Project against industry best practice for odour management; and
f) include an action plan that identifies and prioritises any odour mitigation measures that may be necessary to reduce odour emissions.

Note: The odour audit may be prepared so that it addresses the requirements of this consent and the EPL for the Development.

3.5c The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of the Odour Audit.

11. Delete conditions 5, 5.1, 5.2, 6, 6.1, 6.2 and 6.3 and insert the following:

C. REPORTING, REVIEW AND ACCESS TO INFORMATION

Incident reporting

C1. The Proponent shall notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the Project, the Proponent shall notify the Secretary and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular reporting

C2. The Proponent shall provide regular reporting on the environmental performance of the Project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.

Independent Environmental Audit

C3. Within 1 year of the date of approval to Modification 5, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must:

a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
b) led by a suitably qualified auditor, and include experts in fields specified by the Secretary;
c) include consultation with the relevant agencies;
d) assess the environmental performance of the Project and assess whether it is complying with the requirements in this approval, and any other relevant approvals

and relevant EPL/s (including any assessment, plan or program required under the approvals);

e) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and

f) recommend measures or actions to improve the environmental performance of the Project, and/or any strategy, plan or program required under the approvals.

C4. Within three months of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

Annual review

C5. Within 1 year of the date of approval to Modification 5, and every year thereafter, the Proponent shall review the environmental performance of the Project. This review must:

a) describe the operations that were carried out in the previous calendar year, and the operations that are proposed to be carried out over the next year;

b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of the results against the:

(i) the relevant statutory requirements, limits or performance measures/criteria;

(ii) requirements of any plan or program required under this approval;

(iii) the monitoring results of previous years; and

(iv) the relevant predictions in the EA;

c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;

d) identify any trends in the monitoring data over the life of the Project;

e) identify any discrepancies between the predicted and actual impacts of the Project, and analyse the potential cause of any significant discrepancies; and

f) describe what measures will be implemented over the next year to improve the environmental performance of the Project.

Revision of strategies, plans and programs

C6. Within 3 months of the submission of an:

a) annual review under Condition C5 above;

b) incident report under Condition C1 above;

c) audit under Condition C3 above; or

d) any modification to this consent,

the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval.

Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.

C7. The Proponent shall ensure that the operation of the Project is undertaken in accordance with all relevant updated and/or amended strategies, management plans and programs approved by the Secretary (or as revised and approved by the Secretary), unless otherwise agreed by the Secretary.

Access to information

C8. The Proponent shall:

a) make copies of the following publicly available on its website:

(i) the documents referred to in Condition 1.1;

(ii) all current statutory approvals for the Project;

(iii) all approved strategies, plans and programs required under the conditions of this consent;

(iv) a comprehensive summary of the monitoring results of the Project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs;

(v) a complaints register, updated on a monthly basis;
(vi) the annual reviews of the Project;
(vii) any independent environmental audit of the Project, and the Proponent's response to the recommendations in any audit; and
(viii) any other matter required by the Secretary; and

b) keep this information up to date.

Modification of Development Consent

Section 4.55(1A) of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister for Planning and Public Spaces, under delegation executed on 9 March 2020, I approve the modification of the development consent referred to in Schedule 1, subject to the conditions outlined in Schedule 2.

Chris Ritchie
Director
Industry Assessments

Sydney 17 June 2020 File: EF19/17315

SCHEDULE 1

Development Consent

Development Consent:	05_0098 granted by the then Minister for Planning on 7 September 2006
For the following:	Jacks Gully Alternative Waste Technology Facility

Modification 6

Modification Application:	05_0098 MOD 6 – Hours of access, processing of grease trap waste and minor operational processes
Applicant:	SUEZ Recycling & Recovery Pty Ltd
Consent Authority:	Minister for Planning and Public Spaces
Land:	Lot 35 DP 1098588, Lot 21 DP 112 5616, Lot 2 DP 1076817 and Lot 33 DP 1096463, Camden local government area.

SCHEDULE 2

This consent is modified as follows:

In Schedule 1

1. Delete the description of the land in Schedule 1 and replace with the following:

Land:	Lot 35 DP 1098588, Camden local government area

In Schedule 2

2. Replace all instances of the word 'shall' with 'must', except for in Condition 1.2, Condition 3.2(a)(iv) and in the notes.

3. Replace all instances of the word 'Secretary' with 'Planning Secretary'.

4. Replace the definitions for Department, Minister and Secretary with the following:

Department	Department of Planning, Industry and Environment.
Minister	Minister for Planning and Public Spaces.
Planning Secretary	Secretary of the Department of Planning, Industry and Environment (or nominee).

5. Insert the following definitions in alphabetical order:

Modification Assessments	The document assessing the environmental impact of a proposed modification of this consent and any other information submitted with the following modification applications made under the EP&A Act: • 05_0098 MOD 1 prepared by WSN Environmental Solutions and dated 11 October 2006; • 05_0098 MOD 2 prepared by WSN Environmental Solutions and dated 16 January 2009; • 05_0098 MOD 3 prepared by WSN Environmental Solutions and dated 29 June 2010; • 05_0098 MOD 4 prepared by WSN Environmental Solutions and dated 9 September 2010; • 05_0098 MOD 5 prepared by Cardno NSW/ACT and dated 30 October 2013; and • 05_0098 MOD 6 prepared by SUEZ Recycling and Recovery Pty Ltd and dated 25 February 2019.

In Schedule 2, Part 1: Administrative Conditions

6. Delete Condition 1.1 and replace with the following:

1.1 The Proponent must carry out the project generally in accordance with the:
- a) Major Project Application 05_0098, lodged with the Department of Planning on 14 December 2005;
- b) environmental assessment: *Environmental Assessment: Proposed Alternative Waste Technology Facility at Jacks Gully Waste and Recycling Centre* (WSN Environmental Solutions, March 2006, Volumes 1 and 2);
- c) the Statement of Commitments, prepared by WSN Environmental Solutions and dated March 2006;
- d) response to submissions: *Responses to Submissions* prepared by WSN Environmental Solutions, dated 16 June 2006; and
- e) Modification Assessments.

In Schedule 2, Part 2: Specific Environmental Conditions

7. Delete Condition 2.9 and replace with the following:

2.9 The Proponent must not receive or process on the site more than:
- a) 130,000 tonnes per year of General Solid Waste;
- b) 25,000 tonnes per year of Garden Waste;
- c) 5,000 tonnes per year of Organic Waste; and

d) 520m^3 per day of Liquid Waste comprising liquid organic waste, leachate and grease trap waste, with grease trap waste not exceeding 15,000 tonnes per year.

8. Delete Condition 2.14 and 2.15 and replace with the following:

2.14 The Proponent must comply with the hours detailed in **Table 1**, unless otherwise agreed in writing by the Planning Secretary.

Table 1: Hours of access

Activity	Day	Time
Heavy vehicles entering/exiting site	Monday – Sunday	6 am – 10 pm
Waste receival	Monday – Friday	6 am – 5 pm
	Saturday – Sunday	8 am – 4 pm
	Public Holidays	6 am – 4 pm on a week day 7 am – 2 pm on a weekend

In Schedule 2, Part 3: Environmental Management and Monitoring

9. Insert condition 3.5d as follows:

3.5d The Proponent must update the odour audit required under Condition 3.5b no later than 6 months after the commencement of Modification Application 05_0098 MOD 6 to the satisfaction of the Planning Secretary and the EPA. In addition to the requirements under Condition 3.5b, the audit must also:
a) be carried out by a suitably qualified and experienced independent person(s), whose appointment has been endorsed by the Planning Secretary;
b) be prepared in consultation with the EPA, including on the odour assessment methodology;
c) audit the project in full operation; and
d) validate the project against odour impact predictions in Modification Application 05_0098 MOD 6.

10. Delete item (c) of condition 3.6 and replace with the following:

c) details of any entries in the Complaints Register (required as part of the annual review under condition 5.5) relating to noise impacts.

11. Insert condition 3.5e as follows:

3.5e Prior to the receival of grease trap waste under Modification Application 05_0098 MOD 6, the Proponent must enclose the location of the grease trap waste residuals bin.

In Schedule 2, Part C: Reporting, Review and Access to Information

12. Replace all instances of ‘C’ with ‘5’ in the section heading and condition numbering.

Notice of Modification

Section 75W of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I modify the development consent referred to in Schedule 1 as set out in Schedule 2.

Chris Wison
Executive Director
Major Projects Assessment

Sydney 26 August 2010 File No: S04/00422

SCHEDULE 1

Application No:	05_0098.
Proponent:	WSN Environmental Solutions
Approval Authority:	Minister for Planning
Land:	Lot 35 DP 1098588, Lot 21 DP 1125616, Lot 2 DP 1076817 and Lot 33 DP 1096463, Camden local government area
Project:	Jacks Gully Alternative Waste Technology Facility

SCHEDULE 2

The project approval is modified by:

1. Replacing existing condition 1.1 in Schedule 1 with the following:

   1.1 The Proponent shall carry out the project generally in accordance with the:

   a) Major Project Application 05_0098, lodged with the Department of Planning on 14 December 2005;

   b) environmental assessment: *Environmental Assessment: Proposed Alternative Waste Technology Facility at Jacks Gully Waste and Recycling Centre* (WSN Environmental Solutions, March 2006, Volumes 1 and 2);

   c) the Statement of Commitments, prepared by WSN Environmental Solutions and dated March 2006;

d) Responses to Submissions prepared by WSN Environmental Solutions, dated 16 June 2006; and

e) Modification 1 (06_0098 Mod 1), change the property description following subdivision;

f) Modification 2 (06_0098 Mod 2), amendment to the land description;

g) modification application 05_0098 MOD 3, dated March 2010, accompanied by documents titled *Macarthur Resource Recovery Park – Application under S.75W of the Environmental Planning & Assessment Act 1979 to Modify the Ministers Consent No. 05/0098 dated 7 September 2006 – Environmental Assessment, As amended June 2010* and *Jacks Gully AWT Plant Landfill Gas Supply Hazards and Operability Study dated August 2009;* and

h) conditions of this approval.

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2. Insert new condition 1.4 directly after condition 1.3:

1.4 Within 3 months of the date of the approval for 05_0098 MOD 3 the Proponent shall:

a) obtain and provide copies to the Director-General all necessary building certificate(s) from Camden City Council for all buildings and structures the subject of modification application 05_0098 MOD 3; and

b) ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the Building Code of Australia.

Notes:

- *Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.*
- *As the 1998 consent was issued under the Unamended Act it refers to Building Applications which have been replaced with Construction Certificates under the Amended Act. As such, all reference to Building Applications in the 1998 consent shall be noted as references to Construction Certificates. In accordance with the clause 20 of the Environmental Planning and Assessment (Savings and Transitional) Regulation 1998, as the Minister issued a Building Approval, the Minister is the Principal Certifying Authority.*

3. Insert new condition 2.24 directly after condition 2.23:

2.24 Prior to the commissioning the gas pipeline, the Proponent shall:

a) implement the proposed safeguards and actions listed in Appendix A of the HAZOP study report (AECOM, 26 August 2009)

b) prepare and implement a Commissioning Procedure; and

c) prepare and implement a Safety and Operating Plan (SAOP);

for the pipeline based on Australian Standard AS/NZS 4645.1-2008 – Gas Distribution Networks, Part 1:- Network Management, to the satisfaction of the Director-General.

Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

I, the Minister for Planning, approve the project referred to in Schedule 1, subject to the conditions in Schedule 2.

These conditions are required to:
- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

Frank Sartor MP
Minister for Planning

Sydney 2006 File No: S04/00422

SCHEDULE 1

Application No:	05_0098.
Proponent:	WSN Environmental Solutions
Approval Authority:	Minister for Planning
Land:	Lots 2-4 DP 250033, Lot 2 DP 1076817
Project:	Jacks Gully Alternative Waste Technology Facility

KEY TO CONDITIONS

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SCHEDULE 2

Act	*Environmental Planning and Assessment Act, 1979*.
Construction	Includes any activity requiring a Construction Certificate, significant excavation work, road works, demolition, or any construction related activity as described in Major Projects Application 05_0098.
Council	Camden Council.
DEC	Department of Environment and Conservation.
Department	Department of Planning.
Director-General	Director-General of the Department (or delegate).
EA	*Environmental Assessment: Proposed Alternative Waste Technology Facility at Jacks Gully Waste and Recycling Centre* (WSN Environmental Solutions, March 2006, Volumes 1 and 2).
EPL	Environment Protection Licence issued under the *Protection of the Environment Operations Act 1997*.
MACROC	Macarthur Regional Organisation of Councils.
Minister	Minister for Planning.
Operation	Commissioning of any stage of works as described in the Major Projects Application 05_0098.
Proponent	WSN Environmental Solutions, or its successors on title
Publicly Available	Available for inspection by a member of the general public (for example available on an internet site or at a display centre).
Site	Land to which Major Projects Application 05_0098 applies.

1. ADMINISTRATIVE CONDITIONS

Terms of Approval

1.1 The Proponent shall carry out the project generally in accordance with the:

a) Major Project Application 05_0098, lodged with the Department of Planning on 14 December 2005;

b) environmental assessment: *Environmental Assessment: Proposed Alternative Waste Technology Facility at Jacks Gully Waste and Recycling Centre* (WSN Environmental Solutions, March 2006, Volumes 1 and 2);

c) the Statement of Commitments, prepared by WSN Environmental Solutions and dated March 2006;

d) response to submissions: *Responses to Submissions* prepared by WSN Environmental Solutions, dated 16 June 2006; and

e) conditions of this approval.

1.2 If there is any inconsistency between the above, the conditions of this approval shall prevail to the extent of the inconsistency.

1.3 The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:

a) any reports, plans or correspondence that are submitted by the Proponent in accordance with this approval; and

b) the implementation of any actions or measures contained in those reports, plans or correspondence submitted by the Proponent.

2. SPECIFIC ENVIRONMENTAL CONDITIONS

Air Quality

2.1 The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the *Protection of the Environment Operations Act 1997*.

2.2 The Proponent shall design, construct, operate and maintain the project in a manner that prevents and/or minimises dust emissions from the site.

2.3 The Proponent shall ensure that all vehicles entering or leaving the site with a load that may generate offensive odours or dust emissions are covered at all times.

Stormwater Management

2.4 The Proponent shall ensure that all areas involving the handling, treatment or storage of waste and outputs must be sealed, with all runoff directed to a first flush system.

2.5 The proponent shall construct bunds to ensure that above-ground tanks and vats including those used for treating or processing waste/water slurry and tanks for storing wastewater from these activities, are surrounded with a bund with a capacity of 110% or greater than that of the largest tank within the bund. Areas to be bunded include:

a) the AWT process building and tank farm; and

b) the perimeter of the AWT site.

Wastewater Management

2.6 The Proponent shall ensure that process wastewater from the ArrowBio plant is kept separate from the stormwater management system and is stored in a reservoir or tank engineered and designed in accordance with the requirements of the DEC's (1999) *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes*.

2.7 Prior to the irrigation or reuse of process wastewater from the ArrowBio plant on or off site, the Proponent shall provide evidence, to the satisfaction of the Director-General, that the DEC is satisfied with the standard of the wastewater for its intended application. Irrigation or reuse of process wastewater shall not commence until written approval has been provided by the Director-General.

This condition does not apply to any wastewater intended to be reused in the process as makeup water.

Waste Management

2.8 Except as provided by a condition of an EPL, the Proponent shall restrict the waste received at the site to the following:

a) 130,000 tonnes per year of mixed municipal waste classified as inert or solid waste under Schedule 1 of the *Protection of the Environment Operations Act 1997*;
b) 25,000 tonnes per year of garden waste; and
c) 5,000 tonnes per year of biosolids.

2.9 Except as provided by a condition of an EPL, the Proponent shall ensure that the only wastes that are processed at the site are:

a) 90,000 tonnes per year of mixed municipal waste classified as inert or solid waste under Schedule 1 of the *Protection of the Environment Operations Act 1997* at the ArrowBio Plant;
b) 25,000 tonnes per year of garden waste at the Garden Organics Plant; and
c) 5,000 tonnes per year of biosolids at the Garden Organics Plant.

2.10 Prior to applying any organic outputs to land, the Proponent shall fully characterise the organic outputs to be applied to land with supporting laboratory analysis and propose an appropriate specification to ensure this waste-derived material is fit for its intended purpose.

AS4454 *Composts, soil conditioners and* mulches and the DEC's *Environmental Guidelines: Use and Disposal of Biosolids Products* (1997) shall not be the sole determinants of the suitability (or otherwise) of this material for land application.

The characterisation and proposed specification shall be provided to the DEC, and evidence of the DEC's approval shall be provided to the Director-General within two weeks of the approval being granted.

2.11 Except as provided by a condition of an EPL, the Proponent shall ensure that the only waste landfilled at the site is non-putrescible waste.

Noise

2.12 The Proponent shall undertake all construction activities associated with the development that would generate an audible noise at any premises beyond the boundary of the site between the following hours:

a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive;
b) 8:00 am to 1:00 pm, Saturdays; and
c) at no time on Sundays or public holidays

unless otherwise approved in writing by the Director-General.

2.13 The Proponent shall ensure that noise from the project at all existing and proposed residences, including Glenlee House, does not exceed:

a) a $L_{Aeq\ (15\ minute)}$ noise emission criterion of 39 dB(A) during the day/evening;
b) a $L_{Aeq\ (15\ minute)}$ noise emission criterion of 35 dB(A) during the night; and
c) a $L_{A1\ (1\ minute)}$ noise emission criterion of 45 dB(A) during the night.

Note: For the purposes of this condition, day is defined as the period from 7am to 6pm, Monday to Saturday, and 8am to 6pm, Sundays and Public Holidays. Evening is defined as the period from 6pm to 10pm. Night is defined as the period from 10pm to 7am, Monday to Saturday, and 10pm to 8am, Sundays and Public Holidays.

Noise emission limits apply under meteorological conditions of wind speeds up to 3 m/s at 10 metres above ground level or temperature inversions conditions of 3^0C/100m and wind speed up to 2 m/s at 10 metres above the ground. To determine compliance with this condition, noise from the development must be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary.

Noise from the site is to be measured at 1m from the dwelling façade to determine compliance with the $L_{A1\ (1\ minute)}$ noise criterion specified in condition 2.13c. However, where it can be demonstrated that direct measurement of noise from the development is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.

Transport

2.14 The Proponent shall ensure that heavy vehicles associated with the project do not enter or exit the site between 10pm and 7am, unless these movements are due to circumstances beyond the control of the Proponent.

2.15 Notwithstanding condition 2.14, the Proponent shall ensure that all waste to be processed at the site is received between the following hours:
- a) 7:00 am to 5:00 pm, Mondays to Fridays, inclusive;
- b) 8:00 am to 4:00 pm, Saturdays and Sundays; and
- c) 7:00 am to 2:00 pm on public holidays.

2.16 The Proponent shall take all reasonable steps to inform vehicles carrying waste to/from the development from MACROC Councils to use the following routes:
- a) Narellan Road, Camden Bypass, Springs Road, Richardson Road and the current right of way, when accessing the site from the north or east; and/or
- b) Old Hume Highway, Camden Bypass, Springs Road, Richardson Road and the current right of way, when accessing the site from the south or west,

prior to the finalisation of public access to the proposed arterial road referred to in the documents listed under condition 1.1.

2.17 Upon finalisation of public access to the proposed arterial road referred to in the documents listed under condition 1.1, the Proponent shall take all reasonable steps to inform vehicles carrying waste to/from the development from MACROC Councils to use the following routes:
- a) Narellan Road, Camden Bypass, arterial road and new public road when accessing the site from the north or east; and/or
- b) Old Hume Highway, Camden Bypass, arterial road and new public road when accessing the site from the south or west.

2.18 Prior to finalisation of public access to the proposed road network referred to in the documents listed under condition 1.1, the Proponent shall pay Council $13,194 annually for the maintenance of the local roads used by the AWT Facility. However, upon finalisation of public access to the proposed road network, the Proponent shall pay Council $5,124 annually.

Note: This contribution is subject to indexation by the Implicit Price Deflator, as published by the Australian Bureau of Statistics.

2.19 Prior to the receipt of waste from non-MACROC Councils, the Proponent shall provide to Council details of vehicle access routes to the site for vehicles carrying waste from non-MACROC Councils. Evidence of consultation with Council shall be provided to the satisfaction of the Director-General.

2.20 The Proponent shall ensure that vehicles associated with the project do not park, queue or stand in any of the road reserves outside the site.

Mine Subsidence

2.21 The Proponent shall ensure that the project is designed to withstand the following mine subsidence parameters:

a) Maximum subsidence: 1200mm
b) Maximum strains: 1.5mm
c) Maximum tilt: 5mm/m
d) Radius of curvature: 12000m

Visual

2.22 The Proponent shall ensure that all external lighting associated with the project:

a) does not create a nuisance to surrounding properties or roadways; and
b) complies with *AS 4282(INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting.*

Hazards

2.23 The Proponent shall ensure that Liquefied Natural Gas is not used at the site.

3. ENVIRONMENTAL MANAGEMENT AND MONITORING

Construction Environmental Management Plan

3.1 Prior to the commencement of construction, the Proponent shall prepare (and following approval implement) a **Construction Environmental Management Plan** (CEMP) for the project. This plan must outline the environmental management practices and procedures that would be implemented during each stage of construction, and include:

a) a description of all activities to be undertaken on the site during construction of the project, including an indication of stages of construction, where relevant;
b) statutory and other obligations that the Proponent is required to fulfil during construction, including all approvals, consultations and agreements required from authorities and other stakeholders;
c) details of how the environmental performance of the construction works would be monitored, and what actions would be taken to address identified adverse environmental impacts;
d) a description of the roles and responsibilities for all relevant employees involved in the construction of the project
e) the management plans listed under condition 3.2; and
f) complaints handling procedures during construction and site preparation.

Site preparation and construction works associated with any stage of the project shall not commence until the Director-General has approved the CEMP for that stage.

3.2 The CEMP for the project shall include the following Management Plans:

a) a **Soil and Water Management Plan** to detail measures to minimise the incidence of erosion and salinity during construction of the project. This plan must be prepared in consultation with the DEC, DNR and Council, and include:
   i) an assessment of the potential salinity risk during construction;
   ii) a description of the proposed erosion and sediment control measures, which must be consistent with best practice, and in general accordance with Landcom's

publications *Soil and Water Management for Urban Development* and the *Managing Urban Stormwater – Soils and Construction*;

iii) details of any stormwater control dams, including evidence that such dams have sufficient capacity to cater for the 90th percentile 5 day rainfall event;

iv) details of the pollutant parameters of any pumped discharges from stormwater detention dams, including a limit of less than 50mg/L of Total Suspended Solids. No discharges shall contain water that has come into contact with waste;

v) a description of procedures that would be implemented to ensure that the erosion and sediment control measures are maintained at all times, and to address any erosion, should it occur; and

vi) a description of the decommissioning procedures for the proposed erosion and sediment control measures at the completion of construction.

b) a **Noise Management Plan** to detail measures to manage and minimise noise emissions during construction. The plan must be prepared in consultation with the DEC, and include:

i) identification of all work areas, site compounds and access routes (both private and public) to be used during construction;

ii) identification of the specific activities that will be carried out and associated noise sources occurring at each of the locations identified under condition 3.2b)i);

iii) identification of all potentially affected sensitive receivers;

iv) a comparison of predicted noise emissions with the construction noise and vibration objectives identified in the documents listed under condition 1.1 for construction periods greater than 26 weeks;

v) details of all noise mitigation measures to be implemented during construction, including the early erection of operational noise control barriers;

vi) monitoring measures for construction noise; and

vii) procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity, and measures to receive, record and respond to complaints.

c) a **Traffic Management Plan** to detail measures to manage and minimise the impact of construction traffic associated with the project. This plan must be prepared in consultation with the DEC, Council and Landcom, and include:

i) details of predicted construction traffic volumes and proposed access routes in light of the planned closure of Springs Road, and proposed mitigation measures for the impact of construction vehicles on these routes;

ii) best noise practice in the selection and maintenance of construction vehicle fleets and specific procedures for drivers to minimise road traffic noise impacts, including limits to compression braking and movement scheduling where appropriate;

iii) clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimisation procedures referred to in condition 3.3c)ii) and communication strategies for non-WSN owned and operated vehicles to ensure these procedures are implemented;

iv) a system of audited management practices that identifies non-conformances, initiates and monitors corrective and preventative action and assesses the implementation of the Traffic Management Plan.

Operation Environmental Management Plan

3.3 Prior to the commencement of operations, the Proponent shall prepare (and following approval implement) an **Operation Environmental Management Plan** (OEMP) for the project. This plan must describe the environmental management framework, practices and procedures that would be followed during operations, and include:

a) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to operation of the development, including all approvals, licences, approvals and consultations;

b) a description of the roles and responsibilities for all relevant employees involved in the operation of the development;
c) overall environmental policies, principles and performance measures that will be applied to the operation of the development; and
d) the management plans listed under condition 3.4.

Operations shall not commence until the Director-General has approved the OEMP.

3.4 The OEMP for the project shall include the following Management Plans:

a) a **Stormwater Management Plan** outlining the measures that would be implemented to manage the stormwater generated by the project. This plan shall be prepared in consultation with the DEC, and include:
   (i) details of the proposed stormwater management system for the project, which must be designed as a first flush system to capture the first 10mm of stormwater for each m^2 of catchment; and
   (ii) details of the program for the reuse of captured first flush stormwater, whether as process water in the ArrowBio Plant, as discharge to sewer, or tankering to an off site treatment facility, until such time as the Proponent has demonstrated to the satisfaction of the DEC that the stormwater is suitable for other management approaches.

b) a **Vegetation Management Plan** outlining the measures that would be implemented to minimise the impacts of the project on surrounding vegetation. This plan must be prepared in consultation with DNR and Council, and include:
   (i) details of any natural watercourses or riparian areas to be disturbed by the project;
   (ii) details of the proposed program for the rehabilitation of disturbed areas; and
   (iii) details of the proposed program for weed control at the site.

Odour Monitoring

3.5 Prior to the commencement of operations associated with the development, the Proponent shall prepare an ongoing odour monitoring program to ensure compliance with condition 2.1 of this approval throughout the life of the development, consistent with *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (DEC, 2005).

The Program shall be submitted for the approval of the Director-General and operations shall not commence until written approval has been received from the Director-General.

Noise Monitoring

3.6 Within 90 days of the commencement of operations associated with the development, and annually thereafter, the Proponent shall assess the noise emission performance of the development during a period in which the development is operating under normal operating conditions. The assessment shall include, but not necessarily be limited to:

a) noise monitoring, consistent with the guidelines provided in the *New South Wales Industrial Noise Policy* (EPA, 2000), to assess compliance with condition 2.13 of this approval;
b) a comparison of the results of the noise monitoring required under a) above, and the predicted noise impacts detailed in the documents listed under condition 1.1 of this approval; and
c) details of any entries in the Complaints Register (condition 6.3 of this approval) relating to noise impacts.

A report providing the results of the program shall be submitted to the Director-General and the DEC within 28 days of completion of the testing required under a).

3.7 If the results of the monitoring required under conditions 3.5 and 3.6 indicate that the operation of any component of the development, when operating under design loads and normal operating conditions, exceeds the limits imposed under conditions 2.1 and/or 2.13 of this approval, the Proponent shall provide details of remedial measures to be implemented and a timetable for implementation to reduce emissions to the levels required.

Details of the remedial measures shall be submitted to the Director-General for approval, and be accompanied by evidence that the DEC is satisfied that the remedial measures are acceptable.

4. COMPLIANCE

4.1 Prior to the commencement of construction and operations, the Proponent shall certify in writing to the satisfaction of the Director-General, that it has complied with all the applicable conditions of this approval.

5. ENVIRONMENTAL REPORTING

Incident Reporting

5.1 The Proponent shall notify the DEC and the Director-General of any incident with actual or potential significant off-site impacts on people or the biophysical environment as soon as practicable after the occurrence of the incident. The Proponent shall provide written details of the incident to the DEC and the Director-General within seven days of the date on which the incident occurred.

Annual Performance Reporting

5.2 Within 12 months of the commencement of operations, and annually thereafter, the Proponent shall submit an **Annual Environmental Management Report** (AEMR) for the project to the DEC, Council, and the Department. The AEMR shall include:

a) details of compliance with the conditions of this approval, and any other licences and approvals for the project;
b) a list of variations obtained to approvals applicable to the development and to the site during the preceding twelve-month period;
c) a copy of the Complaints Register for the preceding twelve month period (exclusive of personal details), and a description of how these complaints were addressed and resolved;
d) a comparison of the environmental impacts and performance of the development against the environmental impacts and performance predicted in the documents listed under condition 1.1;
e) identification of trends in monitoring data over the life of the development to date; and
f) environmental management targets and strategies for the following twelve-month period, taking into account identified trends in monitoring results.

6. COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT

Access to Information

6.1 Subject to confidentiality, the Proponent shall make all documents required under this approval publicly available.

Complaints Procedure

6.2 Prior to the commencement of construction, the Proponent shall establish a community complaints system to the satisfaction of the Director-General. This system must include:

a) a 24-hour telephone number on which complaints about operations on the site may be registered;
b) a postal address to which written complaints may be sent; and

c) an email address to which electronic complaints may be transmitted, should the Proponent have email capabilities.

The telephone number, the postal address and the email address shall be advertised in a newspaper circulating within the locality on at least one occasion prior to the commencement of construction of each stage of the development. These details must also be displayed on a sign near the entrance to the site, in a position that is clearly visible to the public and on the Proponent's internet site, should one exist. The telephone number, postal address and email address must be maintained throughout the life of the development.

6.3 The Proponent must record details of all complaints received about the project in an up-to-date Complaints Register. This register must record, but not necessarily be limited to:
the date and time, where relevant, of the complaint;

a) the means by which the complaint was made (telephone, mail or email);
b) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
c) the nature of the complaint;
d) any action(s) taken by the Proponent in relation to the complaint, including any follow-up contact with the complainant; and
e) if no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken.

The Complaints Register must be made available for inspection by the Director-General upon request.

APPENDIX D ENVIRONMENTAL PROTECTION LICENCE

Environment Protection Licence

Licence - 12588

Licence Details	
Number:	12588
Anniversary Date:	10-October

Licensee
VEOLIA RECYCLING & RECOVERY PTY LTD
LOCKED BAG 5015
KINGSGROVE DC NSW 2208

Premises
ECOLIBRIUM MIXED WASTE AND ORGANICS FACILITY
20 BARROW ROAD
SPRING FARM NSW 2570

Scheduled Activity
Composting
Electricity generation
Resource recovery
Waste processing (non-thermal treatment)

Fee Based Activity	Scale
Composting	> 50000 T annual capacity to receive organics
Generation of electrical power otherwise than from coal, diesel or gas	0-250 GWh annual generating capacity
Non-thermal treatment of general waste	Any annual processing capacity
Non-thermal treatment of liquid waste	Any annual processing capacity
Recovery of general waste	Any general waste recovered

Contact Us
NSW EPA 6 Parramatta Square 10 Darcy Street
PARRAMATTA NSW 2150
Phone: 131 555
Email: info@epa.nsw.gov.au
Locked Bag 5022 PARRAMATTA NSW 2124

Environment Protection Licence

Licence - 12588

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Environment Protection Licence

Licence - 12588

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).

Environment Protection Licence

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:

VEOLIA RECYCLING & RECOVERY PTY LTD

LOCKED BAG 5015

KINGSGROVE DC NSW 2208

subject to the conditions which follow.

Environment Protection Licence

Licence - 12588

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
Composting	Composting	> 50000 T annual capacity to receive organics
Electricity generation	Generation of electrical power otherwise than from coal, diesel or gas	0 - 250 GWh annual generating capacity
Waste processing (non-thermal treatment)	Non-thermal treatment of general waste	Any annual processing capacity
Waste processing (non-thermal treatment)	Non-thermal treatment of liquid waste	Any annual processing capacity
Resource recovery	Recovery of general waste	Any general waste recovered

A2 Premises or plant to which this licence applies

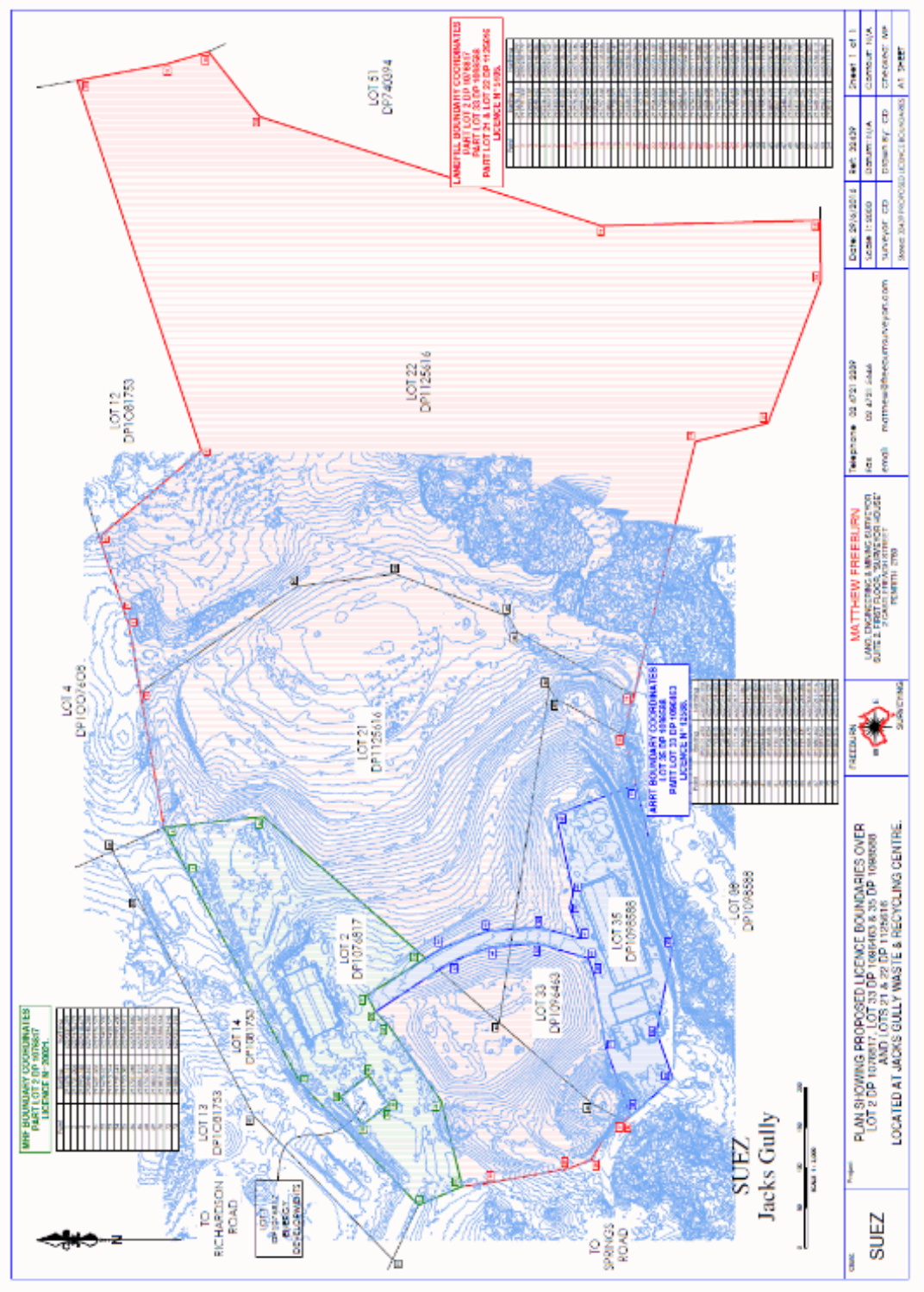
A2.1 The licence applies to the following premises:

Premises Details
ECOLIBRIUM MIXED WASTE AND ORGANICS FACILITY
20 BARROW ROAD
SPRING FARM
NSW 2570
PART LOT 2 DP 1076817, PART LOT 33 DP 1096463, LOT 35 DP 1098588, PART LOT 21 DP 1125616

A2.2 The premises location is shown on the map below.

Environment Protection Licence

Licence - 12588



Note: Please see Plan prepared by Freeburn Surveying on behalf of the licensee titled *Plan showing proposed boundaries over Lot 2 DP 1076817, Lot 33 DP 1096463 & 35 DP 1098588 and Lots 21 & 22 DP 1125616* (See DOC16/405848).

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:
a) 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
b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 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 to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below.
Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below.
Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below.
This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	Leachate	Only leachate from other licensed waste facilities with Environment Protection Licence numbers listed below may be imported to the premises: 4922, 4547, 13312, 4068, 12556, 7628, 4557, 4527, 12889, 4571, 5272, 5647, 4548, 5893, 12517, 20021, 12520, 5065, 7518, 20026, 20476, 20581, 11436, 11763, 11584, 6179, and former Richardson Road Landfill EPL 5105 (now surrendered)	Waste processing (non-thermal treatment) Waste storage	The maximum quantity of liquid food waste, grease trap waste and leachate combined, received at the premises must not exceed 520 cubic metres per day. Any leachate received from EPL 11436 must be treated leachate sourced from the Coffer dam only.
NA	Grease Trap Waste	As defined in Schedule	Waste processing	The maximum

	(Liquid)	1 of the POEO Act, in force from time to time	(non-thermal treatment) Waste storage	quantity of liquid food waste, grease trap waste and leachate combined, received at the premises must not exceed 520 cubic metres per day.
K120	Liquid Food Waste	As defined in Schedule 1 of the POEO Act, in force from time to time	Waste processing (non-thermal treatment) Waste storage	The maximum quantity of liquid food waste, grease trap waste and leachate combined, received at the premises must not exceed 520 cubic metres per day.
NA	General solid waste (putrescible)	As defined in Schedule 1 of the POEO Act, in force from time to time	Composting Resource recovery Waste processing (non-thermal treatment)	NA
NA	General solid waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, in force from time to time	Composting Resource recovery Waste processing (non-thermal treatment)	NA

L2.2 The authorised amount of waste permitted on the premises cannot exceed 6,500 tonnes at any one time.

L3 Noise limits

L3.1 Noise from the premises must not exceed the sound pressure levels (noise limits) presented in the table below. Note the limits represent the sound pressure level (noise) contribution, at the nominated receiver locations in the table.

For the purpose of this condition:

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

Noise Assessment Location	Day/Evening (L Aeq(15min))	Night (L Aeq(15min))	Night (L A1(1min))
All existing and proposed residences including Glenlee House	39	35	45

L3.2 The noise emission limits identified in the above table apply under meteorological conditions of :
a) Wind speeds up to 3m/s at 10 metres above the ground level; or
b) Temperature inversion conditions of up to 30C/100m and wind speed up to 2m/s at 10 metres above the ground.

L3.3 Noise from the premises is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise levels in the licence.

L3.4 Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with LA1 (1 minute) noise level in the Licence.

Where is can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.

L4 Hours of operation

L4.1 For the purpose of controlling potential odour emissions, the activities listed in condition L4.2 must only be conducted between the hours of 06:00 and 18:00.

L4.2 The following activities shall only be conducted during the operating hours specified in condition L4.1:
a) Dewatering and handling of the ArrowBio Digestate outside the waste water treatment vessels.
b) Removal of general solid waste (residual) from the Waste Process Hall, Waste Receival Hall and Waste Water Treatment Plant.
c) Opening of compost tunnels, handling and processing of composted material and loading compost for transport
d) Other activities likely to cause odorous emissions.

L5 Potentially offensive odour

L5.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

3 Operating Conditions

Environment Protection Licence

Licence - 12588

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 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

O4 Emergency response

O4.1 The licensee must maintain, and implement as necessary, a current emergency response plan for the premises. The licensee must keep the emergency response plan on the premises at all times. The emergency response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. If a current emergency response plan does not exist at the date on which this condition is attached to the licence, the licensee must develop an emergency response plan within three months of that date.

O5 Processes and management

Construction environmental management plan

O5.1 The licensee must implement the actions outlined in the document titled “Construction Environmental Management Plan” dated August 2006.

The Construction Environmental Management Plan includes the following plans:
a) a Soil and Management Plan;
b) a Noise Management Plan; and
c) a Traffic Management Plan.

O6 Waste management

Waste Processing Outside of Buildings

O6.1 Processing of waste shall only occur in the buildings constructed for that purpose.

O7 Other operating conditions

Bunding

O7.1 The licensee must ensure, prior to commencement of operation of the waste facility, that all above-ground tanks and vats including those used for treating or processing waste/water slurry and tanks for storing wastewater for these activities are surrounded by a bund with a capacity of 110% or greater than that of the largest tanks within the bund. Areas to be bunded include:

a) the AWT process building and tank farm; and
b) the perimeter of the AWT site.

4 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
d) the name of the person who collected the sample.

M2 Recording of pollution complaints

M2.1 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.

M2.2 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.

M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

M3.1 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.

M3.2 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.

M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

5 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.

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:
a) the licence holder; or
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.8 After the licensee's premises cease to be used for the purpose to which the licence relates or in the event that the licensee ceases to carry out the activity that is subject of this licence, that licensee must:
a)remove and lawfully dispose of all liquid and mom-liquid waste stored on the licensee's premises; and
b)rehabilitate the site, including conducting an assessment of and if required remediation of any site contamination.

R1.9 In the event of an earthquake, storm, fire, flood or any other event where it is reasonable to suspect that a pollution incident has occurred, is occurring or is likely to occur, the licensee (whether or not the premises continue to be used for the purposes to which the licence relates) must:
a)make all efforts to contain firewater on the licensee's premises,
b)make all efforts to control air pollution from the licensee's premises,
c)make all efforts to contain any discharge, spill or run-off from the licensee's premises,
d)make all efforts to prevent flood water entering the licensee's premises,
e)remediate and rehabilitate any exposed areas of soils and/or waste,
f)lawfully dispose of all liquid and solid waste(s) stored on the premises that is not already securely disposed of,
g)at the request of the EPA monitor groundwater beneath the licensee's premises and its potential to migrate from the licensee's premises, at the request of the EPA monitor surface water leaving the licensee's premises; and
h)ensure the licensee's premises is secure.

R1.10 While the licensee's premises are being used for the purpose to which the licence relates, the licensee must:
a)Clean up any spill, leak or other discharge of any waste(s) or other material(s) as soon as practicable after it becomes known to the licensee or to one of the licensee's employees or agents.
b)In the event(s) that any liquid and non-liquid waste(s) must be removed and lawfully disposed of as soon as practicable or in accordance with any direction given by the EPA.

R2 Notification of environmental harm

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

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.

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.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
a) where this licence applies to premises, an event has occurred at the premises; or
b) 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:
a) the cause, time and duration of the event;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
c) 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;
d) 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;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
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.

6 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.

Environment Protection Licence

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.

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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 *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
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 *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
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

Environment Protection Licence

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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 Environmen t 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 describe d 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 mo nths. 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 *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.

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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
Wellhead	Has the same meaning as in Schedule 1 to the Protection of the Environment Operations (General) Regulation 2021.

Mr Stephen Beaman

Environment Protection Authority

(By Delegation)

Date of this edition: 10-October-2006

Environment Protection Licence

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End Notes

1	Licence varied by notice 1069652, issued on 23-May-2007, which came into effect on 23-May-2007.
2	Licence varied by notice 1073962, issued on 30-May-2007, which came into effect on 30-May-2007.
3	Licence varied by notice 1093072, issued on 14-Nov-2008, which came into effect on 14-Nov-2008.
4	Licence varied by notice 1104466, issued on 29-Jul-2009, which came into effect on 29-Jul-2009.
5	Licence varied by notice 1113551, issued on 19-May-2010, which came into effect on 19-May-2010.
6	Licence varied by Correction to EPA Region data record., issued on 28-Jun-2010, which came into effect on 28-Jun-2010.
7	Licence varied by correction to DECCW Region data record, issued on 07-Jul-2010, which came into effect on 07-Jul-2010.
8	Licence varied by notice 1118588, issued on 19-Aug-2010, which came into effect on 19-Aug-2010.
9	Licence varied by notice 1118942, issued on 07-Sep-2010, which came into effect on 07-Sep-2010.
10	Licence varied by notice 1119452, issued on 15-Sep-2010, which came into effect on 15-Sep-2010.
11	Licence transferred through application 146434, approved on 01-Mar-2011, which came into effect on 01-Mar-2011.
12	Licence varied by notice 1126570, issued on 04-Apr-2011, which came into effect on 04-Apr-2011.
13	Licence varied by notice 1532744 issued on 20-Aug-2015
14	Licence varied by notice 1539039 issued on 01-Apr-2016
15	Licence varied by notice 1543761 issued on 12-Sep-2016
16	Licence varied by notice 1568504 issued on 17-Aug-2018
17	Licence varied by notice 1580023 issued on 07-Jun-2019
18	Licence varied by notice 1606315 issued on 22-Feb-2021
19	Licence varied by notice 1614554 issued on 01-Dec-2021
20	Licence varied by notice 1619255 issued on 20-Jun-2022
21	Licence format updated on 01-Jul-2022

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22	Licence varied by notice	1623607 issued on 17-Oct-2022
23	Licence varied by notice	1629313 issued on 28-Jun-2023

APPENDIX E ENVIRONMENTAL MANAGEMENT PLAN

Environmental Management Plan

Spring Farm RRP

Document #. PLANS004

Issue Date: 28/02/23

Version: 8

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1. Introduction

1.1. Purpose

The purpose of this document is to describe the environmental management of operational activities at Spring Farm Advanced Resource Recovery Facility (ARRF), including Liquid Treatment Facility, Product Destruction Facility and Glass Processing Facility, that have, or are likely to have, an impact on the environment. This document sets out detailed procedures and measures that must be taken to minimize and eliminate environmental impact. This document also assists internal and external stakeholders in assessing environmental performance and ensures transparency across environmental operations.

VEOLIA's Safety, Health, Environment and Quality (SHEQ) Management System is structured in accordance with the requirements of the following standards:

- AS/NZS 4801:2001 Occupational Health and Safety Management
- Systems; ISO 14001:2011 Environmental Management Systems; and
- ISO 9001:2000 Quality Management System.

VEOLIA's SHEQ system is certified to the above standards by an independent third-party and regular internal reviews are undertaken in accordance with the *Management System Review Procedure.*



"VEOLIA is committed to operating all in an environmentally responsible way, preventing pollution and engaging in environmentally sustainable activities." – *Environment Policy*

1.2. Scope

This document applies to all activities undertaken at the Spring Farm ARRF, Liquid Treatment Facility, Product Destruction Facility and Glass Processing Facility.

1.3. Statutory Requirements

Spring farm ARRF, Liquid Treatment Facility, Product Destruction Facility and Glass Processing Facility operate under an Environment Protection Licence (EPL 12588) (refer to Appendix 1. for further information on this licence) issued by the New South Wales Environment Protection Authority (EPA).

The procedure for maintaining compliance with legal and regulatory requirements at Spring Farm ARRF is outlined in "*PROC001 Legislative and Other Requirements*" Procedure. The procedure designates responsibility for identifying applicable legal and regulatory requirements and ensuring access is maintained on-site to applicable legal and regulatory requirements.

Relevant statutory requirements are maintained in the Legislative Register – Environmental.

1.4. Developmental Consent

The construction of Spring Farm ARRF was granted development consent in 2006 by Camden Council and was managed by Waste Services NSW. VEOLIA subsequently acquired the site in 2011.

Project approval 05_0098 was granted by the Minister for Planning in 2006 and is subject to further approved modifications where compliance is managed at site level.

MOD 1: 06_0098 – Change in property description following sub division

MOD 2: 06_0098 – Amendment to land description

MOD 3: 05_0098 – Landfill gas supply & Operability study

MOD 5: 05-0098 – Received and processing of Liquid waste comprising liquid organic waste and leachate.

05_0098 MOD 6 – Hours of access, processing of grease trap waste and minor operational processes.

1.5. Risk Management

Risks to health, safety, the environment and property arising from operational activities are identified, assessed, controlled, reviewed and reported in line with applicable legislation in accordance with *Risk Management Procedure.*

1.6. Staffing and Training Requirements

The Site Manager must ensure the provision of adequate training for workers on-site to ensure that all requirements described in this EMP are met. It is also the Site Manager's responsibility to provide adequate training to all workers performing critical tasks, such as inspection and direction of incoming wastes, operation of the equipment and environmental management on-site.

An environment, quality and safety system has been prepared and implemented by VEOLIA. It is designed to provide VEOLIA's employees with information about their environmental responsibilities which are outlined in the specific procedure or SOP.

Roles and responsibilities are reflective of PROC019.

1.7. Environmental Auditing and Review

VEOLIA evaluates the performance of Spring Farm ARRF, Liquid Treatment Facility, Product Destruction Facility and Glass Processing Facility in accordance with *Management Systems Review Procedure, Monitoring and Measurement Procedure, Audit Procedure* and in conjunction with the annual return process required of the EPL. This annual return records complaints received, testing and activation of the Pollution Incident Response Management Plan (PIRMP), documenting the results of environmental monitoring that has been conducted as a requirement of the EPL and recording non-compliances and remedial actions taken or proposed for the non-compliances.

1.9. Update and Version Control Requirements

This document is version controlled. All updates to this document must be made in accordance with the *Document Control Procedure.*

The Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this any regulatory approval. This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.

2. Site Overview

2.1. Site Description and Layout

Spring Farm ARRF, Liquid Treatment Facility, Product Destruction Facility and Glass Processing Facility is located in the Camden Local Government Area. Access to the site is from from Barrow Road, Spring Farm. Spring Farm Resource Recovery Park is located on 36 hectares of land, some of which is a buffer zone between the Spring Farm Advanced Resource Recovery Facility and adjacent housing.

Figure 1: Spring Farm Advance Resource Recovery Facility



Figure 2: Location and Site Context of Spring Farm ARRF, Liquid Treatment Facility, Product Processing Facility and Glass Processing Facility

2.2. Infrastructure

The main components of the SFARRF site include:

- reception hall for Council and VEOLIA vehicles
- product destruction unit
- crushing and washing glass processing
- separation hall
- transport area
- water treatment tank farm
- administrative Buildings
- staff and Visitor Car Parking Areas
- amenities buildings
- maintenance workshop

2.2.1. Hours of operation

Spring Farm ARRF operates to accommodate a Monday to Friday receiving pattern of waste:

Activity	**Day**	**Time**
Heavy vehicles entering/exiting	Monday - Sunday	6am-10pm

site		
Waste receival	Monday - Friday	6am - 5pm
	Saturday	8am - 4pm
	Sunday	8am - 12pm
	Public Holidays	6am - 4pm on a weekday
		7am - 2pm on a weekend

In accordance with the Environment Protection Licence, Spring Farm AARF operates between the hours listed in Appendix 2.

2.2.2. Traffic Management

Spring Farm ARRF assesses the risks and implements appropriate and effective traffic controls in accordance with the *Traffic Management Plan.* Council & VEOLIA vehicles entering the facility must first report to the Spring Farm Resource Recovery Park weighbridge to obtain a weighbridge docket. Vehicle details will be recorded at this point prior to diverting to SFARRF receival or loading area.

A range of vehicles and mobile plant are used at SFARRF to conduct operations, including the transfer and transport of materials in and around the facility. Refer to the *Traffic Management Plan* for further details of traffic types and movements. All roads have been constructed to a standard so that they are accessible in all weather conditions.

2.2.3. Landscaping

Management of vegetation is conducted in accordance with the *Site Management – Infrastructure Facilities SOP.*

2.2.4. Security

The Spring Farm ARRT forms part of the Spring Farm Resource Recovery Park and as such a 2 meter high chain-wire fence surrounds the facility. The weighbridge staff supervise the main entrance. All access gates are locked and on-site security is provided after hours.

Refer to the *Site Management – Infrastructure Facilities* for further information.

2.3.4. Drainage

All Frequently trafficable areas for waste delivery are sealed which facilitates drainage control and minimises the potential for sediment immobilisation (where applicable). Drains also consist of grates and litter traps. For details on what to do when a spill occurs refer to the *Spill Response SOP* (SOP007).

2.3.5. Security

The following measures are in place:

• 1.8 chain wire fence around the perimeter
• All gates are securely locked when the site is unattended.
• 24hr security camera surveillance throughout the site
• Routine patrols by onsite security when the site is closed.
• Regular inspections of fencing and locks in accordance with *Site Maintenance – Service Centres SOP (SOP158)*

2.2.6. Services

The facility is connected to mains potable water, telephone and electricity systems. There is no onsite sewerage connection to the Spring Farm Resource Recovery Park and a site Bio Septic treatment plant, approved by council, has been installed to treat effluent.

For information on safely conducting work around utility services, refer to the *Utility Services SOP.*

2.3. Overview of Spring Farm ARRF Activities

Municipal solid wastes are deposited at the ARRF from Camden, Campbelltown, Wingecarribee and Wollondilly Council kerbside collections.

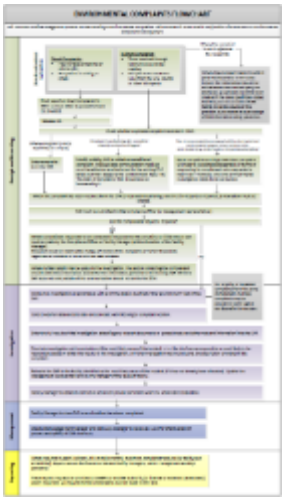
Waste segregation is an integral part of the entire resource recovery operation. These waste are primarily from curb side collection and council vehicles or approved providers of Commercial and Industrial wastes.

Liquid waste is delivered to the Tank Farm

Products that require destruction are delivered to the Product Destruction Unit located within the ARRF.

3. Environmental Incident Management and Community Engagement

3.1. Environmental Incident Management



All Environmental incidents are to be recorded in accordance with the *Incident Reporting and Corrective Action Procedure*. Environmental complaints are handled in accordance with *Environmental Complaints Management SOP*. Where a pollution incident occurs the Pollution Incident Response Management Plan (PIRMP) for SFARRF must be activated.

Noting e that all contact with a regulatory body must be approved by the relevant Site Manager or Business Line Manager.

3.1.1. Specific Requirements - Fire Incidents

All fire occurrences on site must be reported to the EPA as soon as practicable after workers become aware of the fire. An Environmental Initial Investigation Report (IIR) must be recorded for every fire and an Environmental Incident Corrective Action Report (CAR) must be raised in accordance with the *Incident Reporting and Corrective Action Procedure.*

3.2. Community Complaints

A free call telephone line is operated on behalf of VEOLIA. The telephone line, 1800 368 737, receives and records environmental feedback and is operated 24 hours per day, 7 days per week. All environmental feedback and complaints can also be logged with the NSW EPA on 131 555. The details of all complaints received, and actions taken in response to the complaints are kept on the VEOLIA database through the Intelex system. Complaints received via the environmental feedback line are investigated and responded to within the allocated time frame set out in Environmental Complaints Management SOP.

3.3. Community Reference Group

SFRRP had an operating Community Reference Group (CRG) in place, however all members of the CRG agreed that the ongoing meeting was no longer warranted as all parties were satisfied with current operations with the facility. CRG Members were informed the meeting could resume at any time they felt necessary in the future.

3.4. Emergency Preparedness

In accordance with the *Emergency Management Procedure* an *Emergency Management Plan* (ERP) and PIRMP have been developed for the Spring Farm ARRF.

Emergency drills are to be conducted in accordance with the *Emergency Management Procedure*. In the event of an emergency involving potential environmental damage the PIRMP must be activated. It is a requirement of the *Protection of the Environment Operations Act* (POEO Act) that as a minimum, the PIRMP is tested at least 12 monthly intervals.

4. Waste Acceptance and Stockpiling

4.1. Wastes accepted at SFARRF

The ARRF is licensed to receive waste as defined in Schedule 1 of the Protection of the Environment Operations Act 2014 (POEO Act). Only the following waste types from the above schedule will be accepted for storage, processing and/or transfer:

- General Solid Waste (putrescible) for composting, resource recovery and waste processing (non-thermal treatment)
- General Solid Waste (non-putrescible) for composting, resource recovery and waste processing (non-thermal treatment)
- Leachate (non thermal treatment)
- Grease trap waste – Liquid (non thermal treatment)
- Liquid food waste K120 (non thermal treatment)
- General or Specific exempted waste for resource recovery that meets all the conditions of resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2014

Any other wastes received on site that are below the licensing thresholds in Schedule 1 of the POEO Act.

4.2. Excluded Materials

Any material that does not fall into the categories outlined 4.1 is not accepted. This includes, but is not limited to:

- Tree trunks and roots;
- Separated bricks, concrete, roof tiles, terracotta pipes;
- Mixed construction and demolition material;
- Large and shredded tyres;
- Expanded plastics e.g. polystyrene where the volume in the load is >50%;
- Security wastes e.g. expired food stock; and
- Special wastes e.g. Asbestos

Staff at the ARRF, Tank Farm, Product Destruction Unit and Glass Processing Plant are responsible for monitoring and controlling the waste delivered to the site, and rejecting any substances that are not acceptable at the ARRF.. This function is fulfilled by making enquiries concerning customer loads at the weighbridge, and visual monitoring during unloading etc. When contentious or ambiguous matters arise in the receipt or handling of any particular category of waste, the staff are required to seek direction from the Site Manager.

4.3. Acceptance of Waste

The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below. Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below. Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below.

This condition does not limit any other conditions in this licence. Refer to **Appendix 3**.

5. Environmental Management and Monitoring

All monitoring activities set out in this section must comply with the requirements of the *Monitoring and Measuring Procedure* and the *Incident Reporting and Corrective Actions Procedure*.



5.1. General

Environmental management (including operational requirements) and monitoring requirements for SFARRF are contained within the Environment Protection Licence, 12588. In line with the monitoring requirements set out in the site's licence, SFARRF conducts further monitoring (which is also outlined in this section) which may be used for management purposes on site.

Annual environmental management report (AEMR) will be submitted to Council & DPE and be publically available on the VEOLIA website. All plans associated with site operations will be publically available on the VEOLIA website.

The annual review must include

- Current and proposed operations for the previous and upcoming calendar year
- Monitoring results including complaint records
- All non-compliances over the previous year, with actions taken to ensure compliance
- Identify trends in monitoring data
- Identify and analysis any discrepancies between the predicted and actual impacts of the project
- Measures implemented over the next year to improve the environmental performance of the project

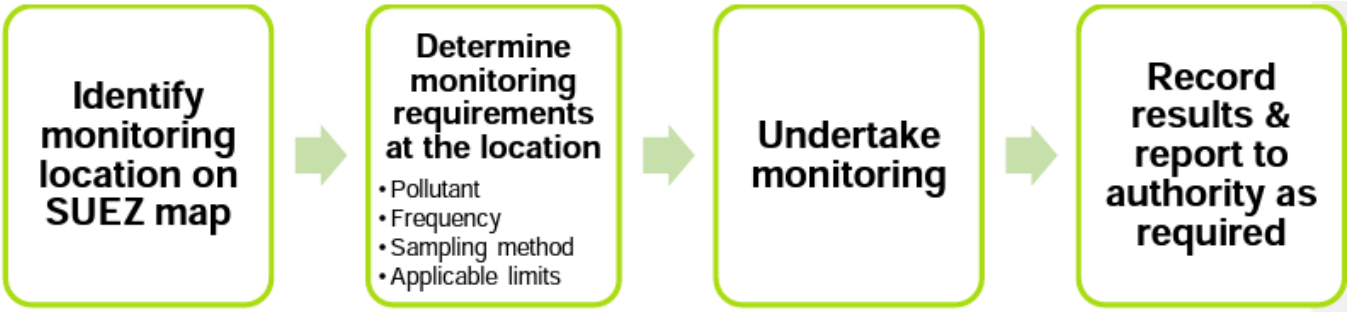


Figure 3: Summary of the monitoring process at SFARRF

The responsibilities of VEOLIA workers are outlined within the relevant Standard Operating Procedures (SOPs) and Work Instructions (WIs) outlining the operations. Please note that the overall responsibility for Environmental Management on the site rests with the Site Manager.

5.2. Records

All monitoring records referenced in this section must be maintained in accordance with the *Records Management Procedure* and:

- Be in a **legible form**, or in a form that can readily be reduced to a legible form;
- Kept for a least **4 years** after the monitoring or the event to which they relate took place; and
- Be able to be **produced** in a legible form **to any authorised officer of the EPA** requesting who asks to see them.

All samples taken in this section must contain:

- The **date**(s) the sample was taken;
- The **time**(s) at which the sample was collected;
- The **point/location** at which the sample was taken; and
- The **name of the person** who collected the sample.

5.3. Limiting Conditions

All operations undertaken by VEOLIA must **not** pollute land or waters. For details of the limiting conditions, refer to the relevant section which outlines the management of that particular issue.

5.4. Operational Requirements

At VEOLIA, all activities must be carried out in a competent manner. This includes:

- The processing, handling, movement and storage of materials and substances used to carry out the activity;

- The treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

All the activities outlined above must be carried out in a manner that will prevent and minimise fire at the premises.

5.5. Leachate

The management of leachate is to be conducted in accordance with the requirements set out in the *Leachate Management SOP.* The purpose of effective leachate management is to ensure that leachate does not contaminate local water courses, ground water sources or stormwater which is discharged from the premises. Lowest concentrate leachate created from Stormwater falling onto material handling areas, vehicle movement areas and compost product stockpiles are treated through the first flush system.

5.6. Water

Water is to be managed in accordance with the requirements set out in the *Water Management SOP.* The purpose in managing and monitoring water onsite is to ensure that the local water courses, ground water sources or stormwater which is discharged from the premises are not contaminated due to the ARRF's activities.

5.6.1. Management Strategy

Rainwater harvesting is maximized with all water from the roof of the ARRF diverted to the onsite water storage tanks. Harvested water is used for various processes including cleaning of the facility and wash down areas.

In accordance with the requirements of the Development Consent all water from the ARRT is processed via a first flush system to remove contaminants prior to discharge to stormwater channels.

5.6.2. Infrastructure and Collection

The site takes all reasonable and practicable measures to prevent the emission of noise, which causes or is likely to cause a nuisance at any noise affected premises. Nuisance includes noise that is or is likely to be annoying, intrusive or offensive to a person.

5.7. Air and Dust

The management of dust is to be conducted in accordance with the requirements of the *Site Maintenance – Infrastructure Facilities.* The purpose of dust management is to ensure that neighbouring properties are not adversely affected by dust, from operations attributed to the ARRF.

5.7.1. Management Strategy

Potential dust nuisance during dry weather is controlled by regular wetting down of unsealed access and manoeuvring areas, as required. A water truck is maintained permanently on the site for this purpose as well as for fire control.

All areas including stockpiles and haul roads shall be operated so as to minimise dust nuisance.

Complaints received are to be recorded into the Intelex system as per the requirements of *Incident Reporting and Corrective Action Procedure.*

5.7.2. Monitoring Sampling and Instructions

All monitoring must be undertaken in accordance with the requirements set out in *AS/NZS 3580.10.1:2003 methods for sampling and analysis of ambient air. Method 10.1: Determination of particulate matter—Deposited matter—Gravimetric method.*

Depositional dust gauges are located at the phone tower & Moyengully, and MRF carpark . Monthly monitoring is undertaken by site Compliance officers to measure compliance of 4g/m2/month. Analysis is undertaken for combustible matter, total insoluble matter & total solids.

.5.8. Odour

The management of odour is to be conducted in accordance with the requirements set out in *Odour Management SOP and Odour Management Plan*. The purpose in odour management is to prevent the degradation of local amenity from potential odour emissions or odorous activities associated with composting operations.

5.8.1. Management Strategy

The main source of odour emissions from the ARRF is the breakdown of material. The principal management control methods used to avoid offensive odours shall be:

Controls used to minimise odour include:
- Removal of material from the reception waste hall
- Odour suppression sprinkler system
- Air exhaust system
- Automated door closure
- Closed top tanks
- Correlation of any odour complaints with weather conditions and site activities

5.9. Litter

The management of litter is to be conducted in accordance with the requirements of the *Site Maintenance – Infrastructure Facilities SOP*. The purpose for control and management of litter is to ensure that local amenity is not affected by wind blown litter.

5.9.1. Management Strategy

Minor quantities of litter which escape and blow around the site are to be recovered by litter "pickers" who patrol the site and boundaries recovering such material as required.

5.10. Noise

The management of noise is to be conducted in accordance with the requirements of the *Site Maintenance – Infrastructure Facilities SOP*. The purpose of noise management is to ensure that no loss of amenity is caused to neighbours from noisy operations associated with the organics facility. Independent noise monitoring will be conducted annually. Noise from the premises will be measured at the most affected point within the residential boundary, or at the most affected point within 30 meters of the dwelling where the dwelling is more than 30 meters from the boundary, to determine compliance with the noise levels in the licence.

Annual monitoring results will be sent to the EPA.

5.10.1. Management Strategy

In accordance with the EPL, unacceptable noise (including vibration) must not be emitted beyond the boundaries of the premises. The following general measures are taken to reduce noise onsite:

- The use of appropriate and well-maintained machinery manufactured to appropriate design specifications
- Process activities conducted during specified operating hours.

In addition, vehicles entering the site must adopt the following measures to ensure noise is minimised by restricting the number of waste transport vehicles in operation during the early hours of the day:

- All vehicles are to limit the use compression braking;
- All vehicles are required to adhere to site sign posted speed limits; and
- All vehicles are to be operated between the allowed hours of operations.

5.11. Pests and Vermin Control

The management of pests and vermin is to be conducted in accordance with the requirements of the *Site Maintenance – Infrastructure Facilities SOP.* The purpose of pest and vermin management is to reduce the impact on amenity to neighbours and the community caused from the attraction of vermin and pests to waste materials.

5.11.1. Management Strategy

These are operated as part of the overall site management strategy.

- Pest control contractor engaged
- Rat and mouse baiting
- Feral cat control

The following items may be implemented if pests and vermin become a continuing risk on site.

- Distress tapes.
- Avitrol poisoning.
- Racket bombs.
- Wire grid system.

A combination of monitoring will be conducted in accordance with the *Monitoring and Measurements Procedure* and records retained on the applicable *Inspection Checklist.*.

5.12. Vegetation

Vegetation Management is to be conducted in accordance with the requirements of the *Site Maintenance Infrastructure Facilities SOP and Spring Farm Resource Recovery Park Vegetation Management Plan.* The purpose of appropriate vegetation management is to ensure that no weed outbreaks occur to local areas due to waste placement activities of the facility.

5.12.1. Management Strategy

The following activities will be utilised to monitor and maintain vegetation:

- Regular inspection of grassed areas for weed infestations;
- Regular maintenance of rehabilitated areas;
- Regular inspection and maintenance of the riparian zone;
- Planted areas will be regularly inspected, where depressions are noted these will be filled, reseeded and mulched
    - Revegetation and plantings will be, where possible, indigenous climaxed species amongst established colonised species.

5.13. Weather

VEOLIA records and monitors the following items in accordance with the conditions outlined in the EPL:

a) The daily wind speed and direction; and
b) Daily rainfall

All records are maintained in accordance with the *Records Management SOP.*

6. Definitions

Leachate – Means a liquid that has percolated through and/or been generated by decomposition of waste material. It includes water that comes into contact with waste and is potentially contaminated by nutrients, metals, salts and other soluble or suspended components and/or products of decomposition of the waste.

Act – Means the Protection of the Environment Operations Act 1997

Asbestos – means the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos), tremolite, or any mixture containing one or more of the mineral silicates belonging to the serpentine and amphibole groups.

Greenwaste – means the vegetative portion of the waste stream arising from various sources including waste from domestic and commercial premises and municipal operations.

EPA – Means Environment Protection Authority of New South Wales.

7. Related Documents

DOCUMENT NAME	REFERENCE
Environment Policy	POL001
Legislative and Other Requirements	PROC001
Legislative Register – Environmental	REG005
Site Document Manifest	REG013
Document Control Procedure	PROC004
Emergency Response Plan	PLANS003
Traffic Management Plan	PLANS002
Site Management – Infrastructure Facilities	SOP041
Utility Services	SOP102
Environmental Complaints Management	SOP066
Incident Reporting and Corrective Action Procedure	PROC008
Waste Acceptance Manual	MAN011
Monitoring and Measuring Procedure	PROC007
Leachate Management	SOP029

Contractor and Visitor Control Procedure	PROC013
Records Management	PROC009
Contractor and Visitor Control Procedure	PROC013
Water Management	SOP069
Odour Management	SOP065
Snakes, Spiders, Ticks and Fire Ants	SOP054
Emergency Management	PROC005
Emergency Management Plan	PLANS003
Management Systems Review	PROC012
Audit Procedure	PROC010
SFRRF Odour Management Plan	PLANS004

8. Review and Document Control

VERSION	CHANGE	REVIEWED	AUTHORISED	DATE ISSUED
1	Initial Issue	-	-	20 October 2013
2	Redevelopment	R Georges	-	Review Process
3	Template update	Kelly Gee	Pat Keating	May 2016
4	Review and update	M Stojanoski	Int Sys Mgr	19/12/16
5	Content update and appendix added	K.Gee M Stojanoski	Nat EQS Mgr	February 2018
6	Update ISO dates	K. Gee	Nat EQS Mgr	10/10/18
7	Reviewed document & updated Included Tank Farm, Product Destruction Unit and Glass Processing Plant Added 05_0098 MOD 6 – Hours of access, processing of grease trap waste and minor operational processes Updated Organisational Structure at SF ARRF Updated site map to include Small Vehicle Drop Off, Liquid Treatment Facility, Product Destruction Facility and Glass Processing Facility. Added product destruction unit, glass processing plant & erased garden organics collection & sorting from Infrastructure	Environment & Sustainability Business Partner	Site Manager	02/09/2020

	Updated hours of operation Included Tank Farm and PDU activities into Overview of Spring Farm ARRF Activities Updated Infrastructure and Collection Removed reference to organics processes in Odour Management Strategy and erased shredding material as a control measure Included reference to Vegetation Management Plan in Vegetation section			
8	Updated format, rebranding, review and update content and license information	Environmental Advisor	Environmental Manager NSW/ACT	28/02/23

APPENDIX - Current environmental protection licence

Summary Licence No: 12588

View this licence (PDF document 301 kb)

Licence holder:	**VEOLIA RECYCLING & RECOVERY PTY LTD**
Premises:	ECOLIBRIUM MIXED WASTE AND ORGANICS FACILITY 20 Barrow Road, SPRING FARM, NSW, 2570 **LGA:** CAMDEN **Catchment:** Hawkesbury
Administrative fee:	$7,300.00
Licence status:	Issued
Activity type:	Generation of electrical power otherwise than from coal, diesel or gas Non-thermal treatment of general waste Recovery of general waste Non-thermal treatment of liquid waste Composting
Licence review:	Complete date 29 Mar 2018 Complete date 08 Apr 2013 Due date 29 Mar 2023
Pollution incident management plan:	Last tested 02 May 2022
Current Environmental Risk Level:	Level 1

APPENDIX - Hours of operation at Spring Farm ARRF		
Activity	**Day**	**Hours**
Waste Acceptance	Monday to Friday	7:00am to 4:00pm
Waste processing	Monday to Sunday	6:00am to 6:00pm

APPENDIX - Waste accepted at SFARRF

Code	Waste	Description	Activity	Other Limits
NA	Leachate	Only leachate from other licensed waste facilities with Environment Protection Licence numbers listed below may be imported to the premises: 4922, 4547, 13312, 4068, 12556, 7628, 4557, 4527, 12889, 4571, 5647, 4548, 5893, 12517, 20021, 12520, 5065, 7518, 20026, 20476, 20581, 11436, 11763, 11584, 6179, and former Richardson Road Landfill EPL 5105 (now surrendered)	Waste processing (non-thermal treatment) Waste storage	The maximum quantity of liquid food waste, grease trap waste and leachate combined, received at the premises must not exceed 520 cubic metres per day. Any leachate received from EPL 11436 must be treated leachate sourced from the Coffer dam only.
NA	Grease Trap Waste	As defined in Schedule	Waste processing	The maximum

	(Liquid)	1 of the POEO Act, in force from time to time	(non-thermal treatment) Waste storage	quantity of liquid food waste, grease trap waste and leachate combined, received at the premises must not exceed 520 cubic metres per day.
K120	Liquid Food Waste	As defined in Schedule 1 of the POEO Act, in force from time to time	Waste processing (non-thermal treatment) Waste storage	The maximum quantity of liquid food waste, grease trap waste and leachate combined, received at the premises must not exceed 520 cubic metres per day.
NA	General solid waste (putrescible)	As defined in Schedule 1 of the POEO Act, in force from time to time	Composting Resource recovery Waste processing (non-thermal treatment)	NA
NA	General solid waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, in force from time to time	Composting Resource recovery Waste processing (non-thermal treatment)	NA

Source: Environmental Protection Licence 12588
Licence version date: 17/10/22

APPENDIX - Odour Management Plan

VEOLIA

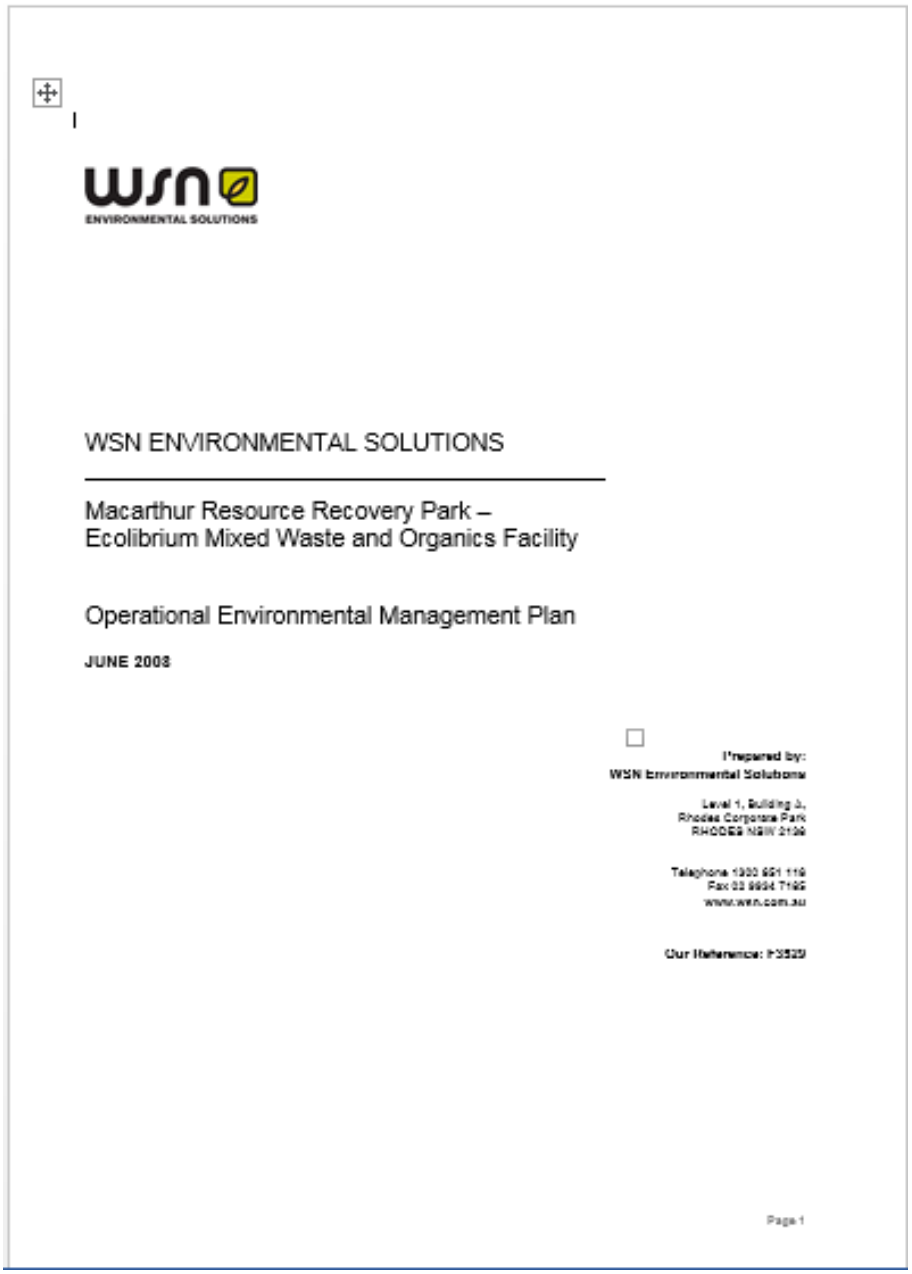
SPRING FARM RESOURCE RECOVERY PARK ODOUR MANAGEMENT PLAN 28/02/2023

Spring Farm Resource Recovery Park Odour Management Plan



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APPENDIX - OEMP



WSN ENVIRONMENTAL SOLUTIONS

Macarthur Resource Recovery Park –
Ecolibrium Mixed Waste and Organics Facility

Operational Environmental Management Plan

JUNE 2008

Prepared by:
WSN Environmental Solutions

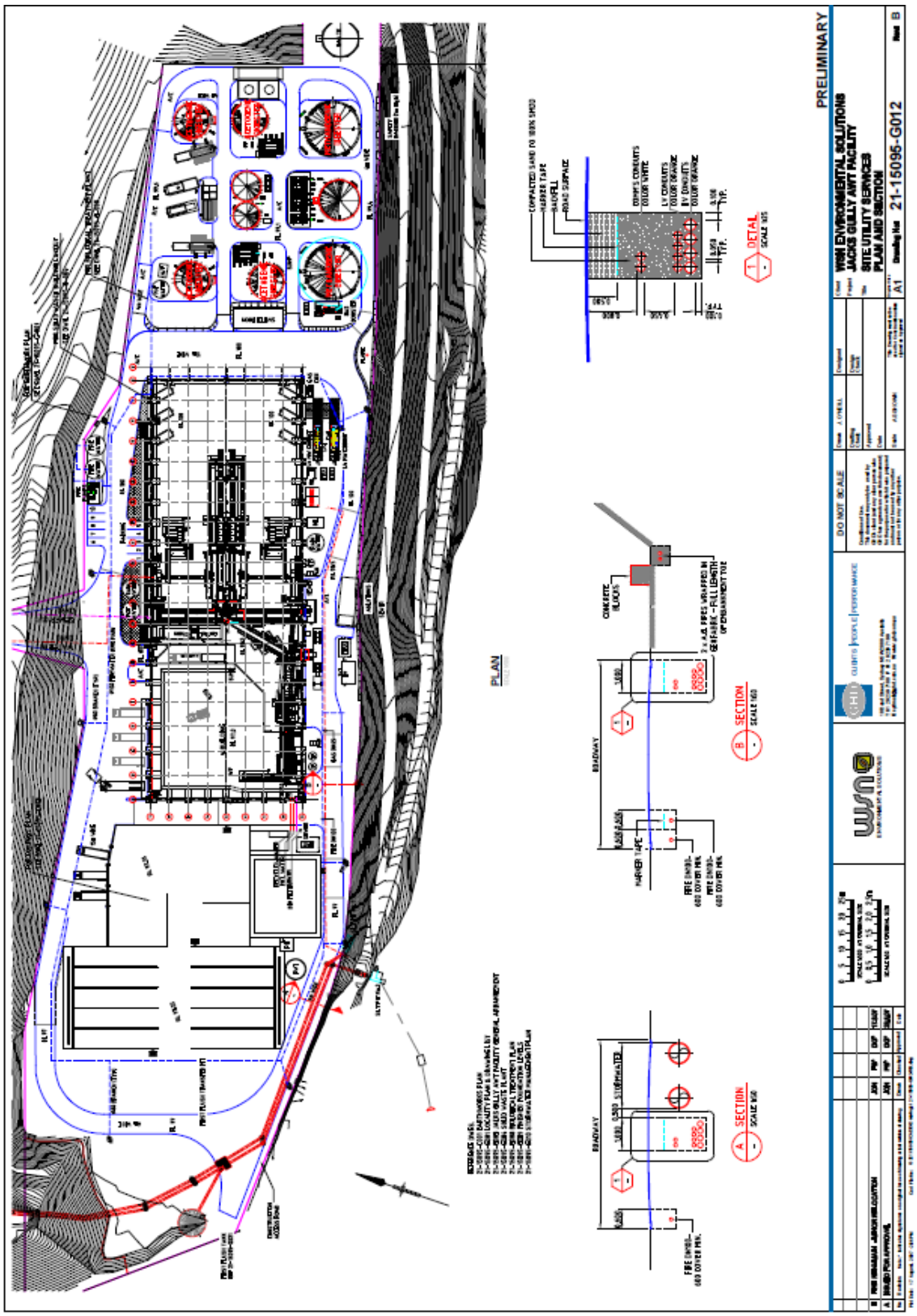
Level 1, Building J,
Rhodes Corporate Park
RHODES NSW 2138

Telephone 1300 651 116
Fax 03 9994 7199
www.wsn.com.au

Our Reference: P3529

Page 1

APPENDIX - Stormwater Management



standard operating procedure
high risk – environment

SUEZ

Water Management / Stormwater – Spring Farm Resource Recovery Park (SFRRP)

SOP069

Purpose and Scope

	The purpose of this procedure is to outline the key requirements for the management of stormwater at SFRRP. It includes: • providing direction for the appropriate management of stormwater, surface water and groundwater on site • Ensuring the risks of contamination of water systems are identified • Controlling and minimising the impact of rain and storm events on site This procedure applies to all SUEZ facilities within SFRRP. *Note – Management of Leachate is detailed in the Leachate Management SOP- SOP036.

Key Hazards

	• Flooding • Damage to land infrastructure and property • Contamination of soil	• Personal injury • Negative impact to surrounding ecosystems and environments • Breach of licence conditions

KEY OPERATIONAL CONTROLS	detailed actions overleaf
Identification of environmental aspects and impacts through risk assessments of the effect of stormwater, surface water and ground water	
Lawful disposal of effluent	
Facilities designed to consider water pathways on site during, and post construction	
Site drainage maps in place and understood by relevant workers	
Ensure appropriate water diversion methods/controls are implemented	

APPENDIX - Vegetation Management

VEOLIA

SPRING FARM RESOURCE RECOVERY PARK VEGETATION MANAGEMENT PLAN 28/02/2023

Spring Farm Resource Recovery Park Vegetation Management Plan



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APPENDIX F VEOLIA COMPLAINTS REGISTER

Site	Company	Incident Type	Incident Date	Incident Time	Location of Complaint	Complaint Received By	Details
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	31/10/2023	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	30/11/2023	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	31/12/2023	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	31/01/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	29/02/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	31/03/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	30/04/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	31/05/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	30/06/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	31/07/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	31/08/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	30/09/2024	-	Not Applicable	Nil	Nil
Spring Farm ARRF	Veolia Australia Pty Ltd	Nil	31/10/2024	-	Not Applicable	Nil	Nil

APPENDIX G SITE WEATHER DATA

Site Name	Date	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Direction (°)	Average Wind Speed (km/h)	Total Rain Gauge (mm)
Veolia Spring Farm	10/10/2023	17.3	59.78	181.8	9.7	0
Veolia Spring Farm	11/10/2023	17	75.69	132.9	8.4	0
Veolia Spring Farm	12/10/2023	18.1	71.07	125.6	9.3	0
Veolia Spring Farm	13/10/2023	19.9	47.59	237.1	19.9	0.8
Veolia Spring Farm	14/10/2023	16.9	47.87	230.7	15.8	0
Veolia Spring Farm	15/10/2023	19.5	42.79	226.1	17.4	0
Veolia Spring Farm	16/10/2023	17.4	62.02	155	8.8	0
Veolia Spring Farm	17/10/2023	13.6	59.38	218.6	19	2
Veolia Spring Farm	18/10/2023	12.6	82.66	185.4	10.1	0.6
Veolia Spring Farm	19/10/2023	15.4	69.54	135.8	8.6	0
Veolia Spring Farm	20/10/2023	15.9	69.41	112.8	8.8	0
Veolia Spring Farm	21/10/2023	19.2	69.99	120.9	9.7	0
Veolia Spring Farm	22/10/2023	20.3	75.78	110.4	11.1	0
Veolia Spring Farm	23/10/2023	20.7	36.28	251.5	15.8	0
Veolia Spring Farm	24/10/2023	18.3	54.97	179.2	11.5	0
Veolia Spring Farm	25/10/2023	22.3	51.78	146.5	11	0
Veolia Spring Farm	26/10/2023	17.4	62.44	170.7	11.3	0
Veolia Spring Farm	27/10/2023	12.8	66.74	175.7	15.2	1.4
Veolia Spring Farm	28/10/2023	12.8	74.11	183.6	11.2	0
Veolia Spring Farm	29/10/2023	14.3	63.52	132.1	8.8	0
Veolia Spring Farm	30/10/2023	18.7	55.19	127.2	10.6	0
Veolia Spring Farm	31/10/2023	27.2	23.56	246.5	22.8	0
Veolia Spring Farm	1/11/2023	17.5	52.07	182	16.1	0
Veolia Spring Farm	2/11/2023	16.5	58.95	159.4	8.9	0
Veolia Spring Farm	3/11/2023	17.8	62.11	140.1	7.6	0
Veolia Spring Farm	4/11/2023	18.2	75.68	129.2	8.5	0
Veolia Spring Farm	5/11/2023	15.9	88.21	153	8.7	21
Veolia Spring Farm	6/11/2023	14.6	86.08	148.1	8.3	1
Veolia Spring Farm	7/11/2023	16.4	70.42	110.9	8.4	0
Veolia Spring Farm	8/11/2023	18.7	69.82	109.4	11.5	0
Veolia Spring Farm	9/11/2023	19.8	73.52	134.8	8.7	1.4
Veolia Spring Farm	10/11/2023	18.8	83.38	139.9	7.7	5.2
Veolia Spring Farm	11/11/2023	20	78.98	124.6	9.4	0
Veolia Spring Farm	12/11/2023	23.5	64.55	129.4	9.9	0
Veolia Spring Farm	13/11/2023	20.8	71.33	134.7	9.9	0
Veolia Spring Farm	14/11/2023	18.4	68.18	89	9.8	0
Veolia Spring Farm	15/11/2023	21.1	71.81	123.9	7.4	0
Veolia Spring Farm	16/11/2023	20.6	75.05	113.6	7.7	0
Veolia Spring Farm	17/11/2023	19.5	71.29	150.2	12.5	13.4
Veolia Spring Farm	18/11/2023	16.8	70.3	160.4	9.4	0
Veolia Spring Farm	19/11/2023	18.5	64.14	96.7	11.3	0
Veolia Spring Farm	20/11/2023	21.3	67.57	104.8	11.4	0
Veolia Spring Farm	21/11/2023	21.5	64.81	93.7	9.6	0
Veolia Spring Farm	22/11/2023	19.8	78.63	163.4	7.9	0
Veolia Spring Farm	23/11/2023	20.6	70.13	160.7	8.6	0
Veolia Spring Farm	24/11/2023	19.5	83.16	189.4	9.9	2
Veolia Spring Farm	25/11/2023	19.3	90.33	78	8.3	9
Veolia Spring Farm	26/11/2023	19.3	95.19	111.2	6.9	1.6
Veolia Spring Farm	27/11/2023	23.6	64.86	195.8	11.5	0
Veolia Spring Farm	28/11/2023	21.5	74.18	79.3	11.7	0
Veolia Spring Farm	29/11/2023	19.2	93.94	71	15.6	21.2
Veolia Spring Farm	30/11/2023	19.4	89.42	143	7.9	7.2
Veolia Spring Farm	1/12/2023	21	71.14	211.3	12	0
Veolia Spring Farm	2/12/2023	20.7	78.73	157.3	6.3	3.4
Veolia Spring Farm	3/12/2023	18.4	85.27	140.3	8.2	17.6
Veolia Spring Farm	4/12/2023	19.4	76.53	186.2	8.3	0
Veolia Spring Farm	5/12/2023	19.4	72.9	100.1	8.2	0
Veolia Spring Farm	6/12/2023	27.1	52.78	132	8.3	0
Veolia Spring Farm	7/12/2023	21.7	68.48	100.9	9.1	0
Veolia Spring Farm	8/12/2023	22.8	75.16	138.4	8.4	0
Veolia Spring Farm	9/12/2023	28.1	56.25	137.5	9.4	0
Veolia Spring Farm	10/12/2023	29.1	56.91	187.7	15.6	0
Veolia Spring Farm	11/12/2023	22.8	78.87	134.7	8.6	0
Veolia Spring Farm	12/12/2023	23.8	76.65	168	8.8	0
Veolia Spring Farm	13/12/2023	23	74.67	69.3	8.7	0
Veolia Spring Farm	14/12/2023	24.7	73.93	129.1	10.8	2.2
Veolia Spring Farm	15/12/2023	27.5	54.52	207.4	15.2	0
Veolia Spring Farm	16/12/2023	21.9	71.97	112.6	10.2	0
Veolia Spring Farm	17/12/2023	24.9	54.41	166	12.9	0
Veolia Spring Farm	18/12/2023	21.3	73.69	107.2	11.2	0
Veolia Spring Farm	19/12/2023	24.1	78.68	116.8	8.4	0
Veolia Spring Farm	20/12/2023	24.1	74.78	141.5	10.9	32.4
Veolia Spring Farm	21/12/2023	16.5	88.56	212.7	12.2	8.2
Veolia Spring Farm	22/12/2023	18.4	69.22	199.1	13.9	0
Veolia Spring Farm	23/12/2023	19.1	67.81	170.6	8.5	0
Veolia Spring Farm	24/12/2023	20.5	75.66	98.4	8	1.2
Veolia Spring Farm	25/12/2023	18.3	93.8	161.9	7.8	39.6
Veolia Spring Farm	26/12/2023	21.1	84.33	146.7	10.3	3.6
Veolia Spring Farm	27/12/2023	22.5	82.86	153.1	8.4	0.4
Veolia Spring Farm	28/12/2023	19.4	80.62	177.2	7.2	9.8
Veolia Spring Farm	29/12/2023	22.2	68.59	159.5	8.9	0
Veolia Spring Farm	30/12/2023	20.9	73.79	153.1	8.4	0
Veolia Spring Farm	31/12/2023	20	72.56	151.6	10.9	1.6
Veolia Spring Farm	1/01/2024	17.7	84.49	156.3	5.9	0.4
Veolia Spring Farm	2/01/2024	20.4	88.47	83.2	7.7	0.6
Veolia Spring Farm	3/01/2024	23	77.82	64.7	11.2	0
Veolia Spring Farm	4/01/2024	22.7	81.69	125.8	7.4	1.8

Site Name	Date	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Direction (°)	Average Wind Speed (km/h)	Total Rain Gauge (mm)
Veolia Spring Farm	5/01/2024	21.5	81.75	157.3	8.3	1.8
Veolia Spring Farm	6/01/2024	19.1	73.46	152.5	9	0
Veolia Spring Farm	7/01/2024	21	69.34	96.7	9.2	0
Veolia Spring Farm	8/01/2024	23.2	70.36	80.2	11.5	0
Veolia Spring Farm	9/01/2024	21.4	89.6	153	6.4	6.6
Veolia Spring Farm	10/01/2024	21.8	80.59	136.9	7.1	0
Veolia Spring Farm	11/01/2024	24.5	78.76	104.3	9.1	0
Veolia Spring Farm	12/01/2024	24.5	81.83	125.9	9.1	1
Veolia Spring Farm	13/01/2024	23.1	80.67	98.3	9.9	0.6
Veolia Spring Farm	14/01/2024	24.9	66.56	163	10.2	0
Veolia Spring Farm	15/01/2024	20.7	87.22	146.1	11.8	16.4
Veolia Spring Farm	16/01/2024	17.8	92.32	168.6	8	6
Veolia Spring Farm	17/01/2024	20.9	91.86	92.7	6.4	14
Veolia Spring Farm	18/01/2024	22.5	91.89	175.5	6.4	25.8
Veolia Spring Farm	19/01/2024	23.4	51.73	229.2	14.4	0.2
Veolia Spring Farm	20/01/2024	22.9	63.5	115.8	9.9	0
Veolia Spring Farm	21/01/2024	22.5	77.23	93.2	10.8	0
Veolia Spring Farm	22/01/2024	27.2	54.39	203.6	10.3	0
Veolia Spring Farm	23/01/2024	19.9	75.4	147.6	8.4	0.4
Veolia Spring Farm	24/01/2024	20	74.16	92.9	9.4	0
Veolia Spring Farm	25/01/2024	25.6	68.98	186.1	6.8	0
Veolia Spring Farm	26/01/2024	24.9	73.39	143.4	5.6	0
Veolia Spring Farm	27/01/2024	23.7	72.39	209.8	10.7	0.2
Veolia Spring Farm	28/01/2024	18.9	93.17	158	6.7	0.6
Veolia Spring Farm	29/01/2024	21.9	77.31	129.8	8.8	0.2
Veolia Spring Farm	30/01/2024	25.8	75.48	124.6	9.8	0
Veolia Spring Farm	31/01/2024	23	84.65	144.3	6.7	0.2
Veolia Spring Farm	1/02/2024	21.5	83.14	170.2	8.4	0.2
Veolia Spring Farm	2/02/2024	24.3	76.11	173.3	8	0
Veolia Spring Farm	3/02/2024	24.1	67.44	93.9	11	0
Veolia Spring Farm	4/02/2024	22.6	73.75	107.3	9.6	0
Veolia Spring Farm	5/02/2024	28.1	64.39	126.4	8.8	0
Veolia Spring Farm	6/02/2024	26	73.69	164.3	9	31.6
Veolia Spring Farm	7/02/2024	19.1	77.36	186.7	12.5	1.2
Veolia Spring Farm	8/02/2024	19.5	75.76	175.9	10.2	0
Veolia Spring Farm	9/02/2024	18.3	71.32	160.2	9.7	0
Veolia Spring Farm	10/02/2024	21.5	69.67	169.4	11.2	0
Veolia Spring Farm	11/02/2024	19.6	73.82	153.1	11.2	0
Veolia Spring Farm	12/02/2024	21.8	68.38	93.5	8.3	0
Veolia Spring Farm	13/02/2024	23.9	74.05	136.2	10	0
Veolia Spring Farm	14/02/2024	24.4	73.17	158.5	8	0
Veolia Spring Farm	15/02/2024	20	82.62	184.1	9.9	0.6
Veolia Spring Farm	16/02/2024	19.1	88.12	191.8	5.3	2
Veolia Spring Farm	17/02/2024	23.4	86.38	100.9	8.4	0
Veolia Spring Farm	18/02/2024	23.5	82.11	146	7.4	1.6
Veolia Spring Farm	19/02/2024	23	80.73	189.3	7.7	3.6
Veolia Spring Farm	20/02/2024	19.8	90.45	176.6	6.8	1.8
Veolia Spring Farm	21/02/2024	19.6	88.31	159.1	7.3	6.2
Veolia Spring Farm	22/02/2024	21	88.26	160.6	6.4	14.2
Veolia Spring Farm	23/02/2024	24.5	76.71	155.1	7.5	0
Veolia Spring Farm	24/02/2024	24.2	74.04	183.8	10.3	0.2
Veolia Spring Farm	25/02/2024	17.1	83.18	172.3	9.2	0
Veolia Spring Farm	26/02/2024	21.3	75.2	146.8	7.1	0
Veolia Spring Farm	27/02/2024	22	75.08	175	9.6	0
Veolia Spring Farm	28/02/2024	20.1	91.8	149	4.2	2
Veolia Spring Farm	29/02/2024	23.8	84.23	109.8	9.1	0
Veolia Spring Farm	1/03/2024	27.7	66.95	181.1	8.2	0
Veolia Spring Farm	2/03/2024	24.3	83.32	158.1	6.4	4.4
Veolia Spring Farm	3/03/2024	20.3	87.52	167.9	6.8	0.8
Veolia Spring Farm	4/03/2024	22.9	67.39	189.3	11.4	0
Veolia Spring Farm	5/03/2024	17.9	70.78	156.1	8.9	0
Veolia Spring Farm	6/03/2024	20	67.41	129.2	8.1	0
Veolia Spring Farm	7/03/2024	23.3	71.82	133.7	8.4	0
Veolia Spring Farm	8/03/2024	23.1	78.37	184.1	7.8	0
Veolia Spring Farm	9/03/2024	22.8	72.21	95.9	8.7	0
Veolia Spring Farm	10/03/2024	22.7	71.56	133.3	9.5	0
Veolia Spring Farm	11/03/2024	23.2	71.46	93.7	9.5	0
Veolia Spring Farm	12/03/2024	21.8	71.01	108.9	9.6	0
Veolia Spring Farm	13/03/2024	24.6	54.52	172.5	7.5	0
Veolia Spring Farm	14/03/2024	22.2	74.08	98.9	8.2	0
Veolia Spring Farm	15/03/2024	21.9	74.99	197	10.4	2.6
Veolia Spring Farm	16/03/2024	18.2	72.05	160.1	10.4	0
Veolia Spring Farm	17/03/2024	19.1	81	120.2	8.3	18.4
Veolia Spring Farm	18/03/2024	17.8	91.03	154.6	5.9	0
Veolia Spring Farm	19/03/2024	20.6	84.8	166.8	6.5	0
Veolia Spring Farm	20/03/2024	22.5	81.19	110	6.8	0.2
Veolia Spring Farm	21/03/2024	17.7	75.15	195.5	11.5	0.8
Veolia Spring Farm	22/03/2024	15.8	71.6	153.3	8.9	2.6
Veolia Spring Farm	23/03/2024	17.8	75.6	139.4	7.3	0
Veolia Spring Farm	24/03/2024	19.4	79.1	150.6	6.3	1.2
Veolia Spring Farm	25/03/2024	19.4	79	173	7.4	0
Veolia Spring Farm	26/03/2024	20.5	55.8	194.4	8.6	0
Veolia Spring Farm	27/03/2024	20.3	73.3	162.6	6.8	0
Veolia Spring Farm	28/03/2024	19.9	78.4	142.2	7.6	0
Veolia Spring Farm	29/03/2024	19.8	79.9	141.9	7.4	0
Veolia Spring Farm	30/03/2024	19	76	139.5	9	0
Veolia Spring Farm	31/03/2024	20.1	76.8	139.8	8.1	0

Site Name	Date	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Direction (°)	Average Wind Speed (km/h)	Total Rain Gauge (mm)
Veolia Spring Farm	1/04/2024	20.2	77.7	137.9	8.1	0
Veolia Spring Farm	2/04/2024	21.5	70.8	109.1	8.9	0
Veolia Spring Farm	3/04/2024	18.4	67	190.5	12.2	1.2
Veolia Spring Farm	4/04/2024	18.6	76.2	154.7	7.2	0
Veolia Spring Farm	5/04/2024	17.7	89.7	139.1	9	26
Veolia Spring Farm	6/04/2024	18.2	95.4	118	14.9	110.8
Veolia Spring Farm	7/04/2024	20.1	76.2	221.5	8.2	0.2
Veolia Spring Farm	8/04/2024	19.6	72.2	204.9	6.4	0
Veolia Spring Farm	9/04/2024	18	83.3	157	6.8	0
Veolia Spring Farm	10/04/2024	13.2	70.4	217.6	19.2	1.6
Veolia Spring Farm	11/04/2024	14.5	65.5	189.5	11.8	0
Veolia Spring Farm	12/04/2024	15.4	73.5	173.2	8.1	0
Veolia Spring Farm	13/04/2024	16.8	75.1	158.4	8.4	0
Veolia Spring Farm	14/04/2024	18.2	80.9	167.5	6.7	0
Veolia Spring Farm	15/04/2024	18.4	79.9	166.1	7.7	0
Veolia Spring Farm	16/04/2024	17	69.9	179.6	8.1	0
Veolia Spring Farm	17/04/2024	17.4	81.7	179.2	6.5	0
Veolia Spring Farm	18/04/2024	17.2	84.8	146.8	6.9	0
Veolia Spring Farm	19/04/2024	15.2	78.1	186.7	7.8	2.4
Veolia Spring Farm	20/04/2024	15.9	73.3	193.8	11.3	0
Veolia Spring Farm	21/04/2024	14.8	77.5	193.7	12.9	0.2
Veolia Spring Farm	22/04/2024	15.3	79.3	157.2	7.4	0
Veolia Spring Farm	23/04/2024	16	78.6	173.3	7.4	0
Veolia Spring Farm	24/04/2024	17.3	76.5	143.1	4.8	0
Veolia Spring Farm	25/04/2024	14.5	74.7	188.8	7.4	0
Veolia Spring Farm	26/04/2024	13.3	68.4	179.7	7.8	0
Veolia Spring Farm	27/04/2024	13.6	74.6	170	8.4	0
Veolia Spring Farm	28/04/2024	15	82.9	142.5	8	0
Veolia Spring Farm	29/04/2024	16.7	79	147.4	7.4	0
Veolia Spring Farm	30/04/2024	19.1	70.4	200.5	7.9	0.4
Veolia Spring Farm	1/05/2024	14.1	75	205.5	12.9	0
Veolia Spring Farm	2/05/2024	14.4	75.5	183.6	9.5	0
Veolia Spring Farm	3/05/2024	14.8	80	164.9	7.6	0
Veolia Spring Farm	4/05/2024	13.7	92.9	185.4	6.4	1.2
Veolia Spring Farm	5/05/2024	15.1	89.5	178.7	7.2	1.8
Veolia Spring Farm	6/05/2024	14	91.8	199.2	11.3	12
Veolia Spring Farm	7/05/2024	14.1	90.2	189.8	9	6.6
Veolia Spring Farm	8/05/2024	14.2	93.1	172.8	6.4	6
Veolia Spring Farm	9/05/2024	14.5	96.9	187.9	5.3	12.2
Veolia Spring Farm	10/05/2024	15.2	93.2	167.7	5.5	10
Veolia Spring Farm	11/05/2024	15.4	93.3	142.9	6.2	11.4
Veolia Spring Farm	12/05/2024	14	98.1	179.6	6.4	36.6
Veolia Spring Farm	13/05/2024	15.2	90.5	220.7	14	5.2
Veolia Spring Farm	14/05/2024	14.8	84.8	180.8	10.3	0
Veolia Spring Farm	15/05/2024	15.4	79.8	207.1	5.6	0
Veolia Spring Farm	16/05/2024	14.5	81.4	202.9	7	0
Veolia Spring Farm	17/05/2024	14.7	85.4	172.2	6.6	0
Veolia Spring Farm	18/05/2024	15.3	64.1	216.6	11.2	0
Veolia Spring Farm	19/05/2024	10.6	65.6	216.3	19.5	0
Veolia Spring Farm	20/05/2024	10.9	57.5	201.1	11.5	0
Veolia Spring Farm	21/05/2024	12.8	69.7	212.3	11.4	0
Veolia Spring Farm	22/05/2024	11.8	75.3	184.8	8.8	0
Veolia Spring Farm	23/05/2024	10.8	75.7	185.7	8.1	0
Veolia Spring Farm	24/05/2024	11.8	76.4	167.5	7	0
Veolia Spring Farm	25/05/2024	12.8	81.6	179.4	6.4	0
Veolia Spring Farm	26/05/2024	12.1	86.6	175.1	6.4	0
Veolia Spring Farm	27/05/2024	12.6	77.8	172.6	7.6	0
Veolia Spring Farm	28/05/2024	11.8	78.2	171.1	7.8	0
Veolia Spring Farm	29/05/2024	11.8	75.2	176.7	7.5	0
Veolia Spring Farm	30/05/2024	12.8	78.7	159.7	7.4	0
Veolia Spring Farm	31/05/2024	16.9	69.3	161.4	8.4	0
Veolia Spring Farm	1/06/2024	15.1	78.3	181.4	9.8	0
Veolia Spring Farm	2/06/2024	12.8	80.5	202.9	16.4	5
Veolia Spring Farm	3/06/2024	11.2	71.5	258.1	11.2	0
Veolia Spring Farm	4/06/2024	10.4	65.1	229.1	11.7	0
Veolia Spring Farm	5/06/2024	11.1	73.7	198.7	9.1	0
Veolia Spring Farm	6/06/2024	11.3	93.2	236.1	6.5	27.2
Veolia Spring Farm	7/06/2024	12.7	96	217.3	14.5	56
Veolia Spring Farm	8/06/2024	12.4	95.1	216.5	8	7.6
Veolia Spring Farm	9/06/2024	13.7	75.4	210.7	12.2	0
Veolia Spring Farm	10/06/2024	12	68.7	197.5	10.4	0
Veolia Spring Farm	11/06/2024	9.4	76	183.9	10.2	0
Veolia Spring Farm	12/06/2024	12.3	71.8	213	11.9	0
Veolia Spring Farm	13/06/2024	10	62.9	214.4	17.3	0
Veolia Spring Farm	14/06/2024	9.5	75.6	199.5	9.6	0
Veolia Spring Farm	15/06/2024	11.1	86.5	229.6	5.7	9.2
Veolia Spring Farm	16/06/2024	9.7	80.5	205.1	11	0
						731.6
						110.8

APPENDIX H ODOUR MANAGEMENT PLAN

Spring Farm Resource Recovery Park

Odour Management Plan

MAN-17959-1

Issue Date: 26/02/2025



PURPOSE	This OMP has been established to outline the proposed management measures that should be implemented to minimise potential odour related to all on site activities.

Scope	This manual applies to Spring Farm Resource Recovery Park.
Review Frequency	3 Yearly

CONTENTS

Objectives
- Potential Odour Sources
- Controls of Potential Odour Sources
  - Waste Receival and Storage in ARRF
  - Waste Receival, transfer and Storage in GO
  - Waste Receival, processing and Storage in Liquid Treatment facility
  - Waste Receival, processing and Storage in Public drop off
  - Waste Receival, processing and Storage in MRF
  - Waste Receival & Storage pre consumer waste
  - Storage of chemicals used for processing
- Odour Monitoring

Revision History
Reviewed documents, added section under Controls of Potential Odour Sources for Glass Processing
RELATED DOCUMENTS
Roles and Responsibility
- Site Manager & Compliance
- Site Supervisor
- Site staff

Appendices
- Appendix 1 - Site Monitoring Locations

Objectives

The objective of the Odour Management Plan is to ensure that the VEOLIA is operating Spring Farm Resource Recovery Park (SFRRP) in a manner to manage the potential impacts of odour within the site vicinity and to not impact on neighbouring properties.

The requirements for the Odour Management Plan is to include a description of all potential odour sources and identify how odour control measures will be adopted to limit odour release.

Activities to manage potential odours from the operations will include periodic monitoring during operations, odour monitoring, contingency plans and complaint procedures.

The requirement is to 'implement the plan', which means that all operations must use the odour control facilities provided in design and document the procedures to be followed in operations and maintenance to keep odour emissions within the levels necessary to meet the objective.

Potential Odour Sources

As part of a review process of Odour Management Plan VEOLIA has identified potential odour sources that may occur from the operations at the facility and using the VEOLIA internal risk management procedure. The potential odour sources have been identified in the list below -

- Waste Receival and Storage in ARRF - (Moderate)
- Waste Receival, Processing and Storage in MRF - (Low)
- Waste receival and storage in GO - (Low)
- Liquid Waste Receival, Treatment and Storage in LTP - (Low)
- Waste Receival and Storage in Small Vehicle Drop Off Facility - (Low)
- Processing & Storage pre consumer waste - (Low)

Controls of Potential Odour Sources

As part of the risk management procedure controls have been identified and implemented to ensure that all potential odour sources are controlled and do not impact on neighbouring properties. The controls have been broken down into areas of potential odours sources which are listed below.

Waste Receival and Storage in ARRF

- Section L2.1 of Environmental Protection Licence No 12588 stipulates the types of wastes that are acceptable to be received at the facility. This is monitored by the weighbridge staff and site operators using the waste classification guidelines.
- If odorous waste has been identified, it must be directed to the appropriate area and stored within the building at all times and processed as soon as possible.
- The total volume of waste stored at the facility must not exceed the limits as stated in condition L2.2 of Environmental Protection Licence No 12588 which states the authorised amount of waste permitted on site at any one time cannot exceed 6500 tonnes.
- All equipment used in this area is cleaned on a regular basis
- Litter patrols are conducted on a regular basis
- All waste that is required to be disposed of at a landfill is loaded out in a walking floor. The waste is then transported to landfill.

- Walking floor is fully sealed and is covered or tarped at the top.
- Automated closing doors on timers are utilised to control the release of odour
- Deodoriser line in reception hall

Waste Receival, transfer and Storage in GO

- All garden organic material product that is received collected are to be stored within the tunnels at all times while awaiting transfer
- This material is received, then loaded out to a third party for processing.
- No maturation is occurring on site. GW is received and transferred off site.

Waste Receival, processing and Storage in Liquid Treatment facility

- The Liquid Treatment area is inside a self-contained bund.
- All liquids are stored in tanks and vapour/gas/odour from tanks is captured and directed into odour dewatering screws for treatment.
- All spills are captured within bund and transferred into a tank within the liquid treatment area.
- All equipment used in this area is cleaned on a regular basis.
- Once processed, liquid is tankered off site for disposal at a licensed facility.
- Odour fence around perimeter

Waste Receival, processing and Storage in Public drop off

- Waste is segregated into waste types
- All waste that is required to be disposed of at a landfill is loaded out in a walking floor. The waste is then transported to landfill.
- Resource recoverable material is transferred to the MRF for processing or off site to a recovery centre
- Haz chem items are stored within IBCs, bunds, cage or drums. These are stored and clearly labelled while waiting collection

Waste Receival, processing and Storage in MRF

- All waste is received within the MRF building
- Waste is segregated into waste types for processing
- The total volume of waste stored at the facility must not exceed the limits as stated in condition L2.2 of Environmental Protection Licence No 20021 which states the authorised amount of waste permitted on site at any one time cannot exceed 3500 tonnes.
- Residual waste is transported to the ARRF as soon as possible for processing
- Resource recoverable material is sorted, processed and baled in preparation for off take
- Processed material is stored under the awning at the rear of the MRF for collection
- Processed material is transported off site daily in enclosed or covered transport

Waste Receival & Storage pre consumer waste

- All waste is received within the PCW Building.

- Waste is segregated into waste types for processing
- Material generated as a result of pre consumer waste processing (PDU) for soil injection meets the required guidelines identified in the Resource Recovery Order and Exemption Liquid food Waste.
- Material generated as a result of pre consumer waste processing (PDU) for application to land meets the required guidelines identified in the Resource Recovery Order and Exemption Solid food Waste

Storage of chemicals used for processing

- Chemicals that are used for processing are stored within IBCs or chemical drums. These are stored in a bunded chemical area and clearly labelled.
- Segregated as per Australian Standards
- All spills are captured following SOP17539-1007 Spill response

Odour Monitoring

The following odour monitoring will occur to ensure that all controls are effective

- Weekly review of controls on potential odour sources

  Odour tours conducted weekly on and off site to determine if potential odour sources are leaving the site, refer to Appendix 1 – Site Monitoring Locations in the event odours are identified on and off site, odour tours will increase until satisfied potential odour sources are controlled or mitigated.

All odour monitoring is in line with “Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW” (NSW EPA, 2016).

A free call telephone line through VEOLIA’s Customer Service department operates 24 hours a day 7 days per week. PH: 13 13 35 (COC 153). The details of all complaints received and actions taken in response to the complaints are kept on the VEOLIA database through the SIMS system. Complaints received via the hotline are investigated and responded to within the allocated time frame, refer to the Environmental Complaints SOP.

The information to be recorded as part of the investigation includes;

- Name of complainant;
- Contact details of complainant (e.g. telephone, email, postal address);
- Location, date and time at which alleged environmental impact occurred (street address);
- A general description of the nature of the environmental impact, including the following where applicable:
  - Duration and any pattern;
  - Character of odour;
- Whether there were any adverse health effects related to the environmental impact;
- What response has been requested or expected by complainant from VEOLIA (e.g. a return phone call);
- The likely source(s) of the cause of the complaint; and
- What the weather conditions (e.g. wind speed, wind direction, temperature) were like at the time of the alleged environmental impact

Revision History

VERSION	DATE	REVIEWED	CHANGE	AUTHORISED
1	21/08/17	Kelly Gee M Stojanoski	Initial Issue	Nat EQS Mgr

2	03/09/2020	Mgahl Eather	**Reviewed documents, added section under Controls of Potential Odour Sources for Glass Processing**	Site Manager
3		Kelly Gee	Reinstate GO odour controls & identify GO receipt suspension	
4	26/02/2025	Teri Te Whiu	Rebranded and updated document, amended related documents and reinstate GO receival. Review post notifiable incident on 25/01/2025.	Environmental Manager NSW/ACT

RELATED DOCUMENTS

Subject	Definition
	SFARRF & SFMRF Risk Register
	Spill Response
	Site Maintenance
EPL 12588, 20021 & 5105 (Surrendered)	Environment Protection Licence
	Operational Environment Management Plan
	Environmental Complaints
	Pollution Incident Response Management Plan

Roles and Responsibility

Role	*Responsibility*
Site Manager & Compliance	• Implementation of this plan • Conforming with plan • Training of staff in the plan • Communication of the plan • Reporting of incidents • Ensuring corrective actions are taken
Site Supervisor	• Ensuring adherence to this plan • Conforming with site plan • Reporting of incidents • Implementing corrective action
Site staff	• Ensuring adherence to this plan • Conforming with site rules • Reporting of maintenance defects • Reporting of incidents

Appendices

Appendix 1 - Site Monitoring Locations



APPENDIX I DUST MONITORING DATA

	Dust Analysis	
	Total Insoluable Matter	Rolling Average (TIM) For Report
	g/m2/m	RAA
EQL	0.1	0.1
NSW EPA (2016) Annual Target Average	4	4

Field_ID	Sampled_Month		
Moyengully Access Gate	Oct-23	0.4	
Moyengully Access Gate	Nov-23	0.9	
Moyengully Access Gate	Dec-23	-	
Moyengully Access Gate	Jan-24	0.7	
Moyengully Access Gate	Feb-24	0.5	
Moyengully Access Gate	Mar-24	-	
Moyengully Access Gate	Apr-24	0.2	0.42
Moyengully Access Gate	May-24	0.3	
Moyengully Access Gate	Jun-24	0.3	
Moyengully Access Gate	Jul-24	0.3	
Moyengully Access Gate	Aug-24	0.3	
Moyengully Access Gate	Sep-24	0.3	
Moyengully Access Gate	Oct-24	-	
Phone Tower	Oct-23	0.5	
Phone Tower	Nov-23	0.9	
Phone Tower	Dec-23	-	
Phone Tower	Jan-24	1.1	
Phone Tower	Feb-24	0.7	
Phone Tower	Mar-24	-	
Phone Tower	Apr-24	0.5	0.53
Phone Tower	May-24	0.4	
Phone Tower	Jun-24	0.3	
Phone Tower	Jul-24	0.3	
Phone Tower	Aug-24	0.3	
Phone Tower	Sep-24	0.3	
Phone Tower	Oct-24	-	
Barrow Road	Oct-23	1.7	
Barrow Road	Nov-23	3.1	
Barrow Road	Dec-23	-	
Barrow Road	Jan-24	2.1	
Barrow Road	Feb-24	1.3	
Barrow Road	Mar-24	-	
Barrow Road	Apr-24	1.4	1.38
Barrow Road	May-24	1	
Barrow Road	Jun-24	0.8	
Barrow Road	Jul-24	0.8	
Barrow Road	Aug-24	0.8	
Barrow Road	Sep-24	0.8	
Barrow Road	Oct-24	-	

APPENDIX J ODOUR PATROL DOCUMENTATION

Spring Farm ARRT - Weekly Odour Record

VEOLIA

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 6/10/2024.	**Start time:** 5am	**Finish time:** 6.05am
Completed by: Teri	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 7km/h	Wind Direction: SSW	Air temp: 9°
Humidity: 56%	Other Conditions: —	Rain showers
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	5.30am		
2. Mt Annan Drive Mt Annan	5.34am		
3. Commelina & Caley	5.39am		
4. Moyengully, Mt Annan	5.43am		
5. Blackgum	5.45am		
6. Aotus Crt	5.47am		
7. Waterworth & Hacking	5.59am		
8. William Howe Regional Park	5.50am		
9. Rogers Way Mt Annan	6.05am		
10. Bilson Road Spring Farm	5am.		
11. Richardson Rd	6.10am		
12. LKD West	5.08am		
13. LKD East	5.10am		
14. Austen Blvd	5.13am		
15. Mooney St	5.15am		
16. Tristania Street Mount Annan	5.37		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Flower power

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 29/09/24	**Start time:** 8am	**Finish time:** 9.15am.
Completed by: Tori	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 3km/h	Wind Direction: S	Air temp: 15°
Humidity: 63%	Other Conditions: —	Rain —
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	8.30am		
2. Mt Annan Drive Mt Annan	8.35am		
3. Commelina & Caley	8.40am		
4. Moyengully, Mt Annan	8.41am		
5. Blackgum	8.43am		
6. Aotus Crt	8.45am		
7. Waterworth & Hacking	9.03am		
8. William Howe Regional Park	8.49am		
9. Rogers Way Mt Annan	9.10am		
10. Bilson Road Spring Farm	8am		
11 Richardson Rd	9.15am.		
12 LKD West	8.10am		
13 LKD East	8.15am		
14 Austen Blvd	8.20am		
15 Mooney St	8.25am.		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 22/9/23	**Start time:** 6.30am	**Finish time:** 7.35am.
Completed by: Teri	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 8km/h	Wind Direction: NE	Air temp: 11°
Humidity: 59%	Other Conditions: foggy	Rain –
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	6.45am		
2. Mt Annan Drive Mt Annan	6.50am		
3. Commelina & Caley	6.53am		
4. Moyengully, Mt Annan	6.55am		
5. Blackgum	6.57am		
6. Aotus Crt	6.59am		
7. Waterworth & Hacking	7.10am		
8. William Howe Regional Park	7.03am		
9. Rogers Way Mt Annan	7.12am		
10. Bilson Road Spring Farm	6.30am.		
11 Richardson Rd	7.15am.		
12 LKD West	6.32am		
13 LKD East	6.39am		
14 Austen Blvd	6.36am		
15 Mooney St	6.38am.		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 13/9/24	**Start time:** 6am.	**Finish time:** 7am
Completed by: Teri	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 7km/h	Wind Direction: N	Air temp: 12°.
Humidity: 67%	Other Conditions: —	Rain —
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	6.25am.		
2. Mt Annan Drive Mt Annan	6.30am		
3. Commelina & Caley	6.32am		
4. Moyengully, Mt Annan	6.35am		
5. Blackgum	6.36am		
6. Aotus Crt	6.37am.		
7. Waterworth & Hacking	6.50am		
8. William Howe Regional Park	6.40am		
9. Rogers Way Mt Annan	6.55am		
10. Bilson Road Spring Farm	6am.		
11 Richardson Rd	7am		
12 LKD West	6.05am		
13 LKD East	6.09am		
14 Austen Blvd	6.11am		
15 Mooney St	6.15am.		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 1/09/2[illegible]	**Start time:** 615am	**Finish time:** 715am.
Completed by: Tom	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 7km/h.	Wind Direction: SW	Air temp: 13°.
Humidity: 63%.	Other Conditions: —	Rain —
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	640am		
2. Mt Annan Drive Mt Annan	645am		
3. Commelina & Caley	647am		
4. Moyengully, Mt Annan	649am.		
5. Blackgum	650am		
6. Aotus Crt	652am.		
7. Waterworth & Hacking	700am.		
8. William Howe Regional Park	655am		
9. Rogers Way Mt Annan	7.00am		
10. Bilson Road Spring Farm	615am		
11 Richardson Rd	715am		
12 LKD West	618am		
13 LKD East	621am		
14 Austen Blvd	623am		
15 Mooney St	627am.		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 25/8/24	**Start time:** 9am.	**Finish time:** 10.20am.
Completed by: Ben	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 8km/h	Wind Direction: NW	Air temp: 17°
Humidity: 59%	Other Conditions: Clear	Rain —
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	9.30am.		
2. Mt Annan Drive Mt Annan	9.35am		
3. Commelina & Caley	9.40am		
4. Moyengully, Mt Annan	9.45am		
5. Blackgum	9.50am		
6. Aotus Crt	9.52am		
7. Waterworth & Hacking	10.05am		
8. William Howe Regional Park	9.55am		
9. Rogers Way Mt Annan	10.19am		
10. Bilson Road Spring Farm	9am.		
11 Richardson Rd	10.25am.		
12 LKD West	9.10am		
13 LKD East	9.15am		
14 Austen Blvd	9.20am		
15 Mooney St	9.22am.		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 14/8/2018	**Start time:** 6.25am.	**Finish time:** 7.20am.
Completed by: Teri	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 3km/h	Wind Direction: SSW	Air temp: 13°
Humidity: 60%	Other Conditions: Clear	Rain —
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	6.47am		
2. Mt Annan Drive Mt Annan	6.50am		
3. Commelina & Caley	6.53am		
4. Moyengully, Mt Annan	6.55am		
5. Blackgum	6.58am		
6. Aotus Crt	6.59am		
7. Waterworth & Hacking	7.10am.		
8. William Howe Regional Park	7am.		
9. Rogers Way Mt Annan	7.13am		
10. Bilson Road Spring Farm	6.25am		
11 Richardson Rd	7.20am.		
12 LKD West	6.28am		
13 LKD East	6.30am		
14 Austen Blvd	6.33am		
15 Mooney St	6.35am.		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 4/8/24	**Start time:** 6am.	**Finish time:** 7am
Completed by: Teri	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 5km/h	Wind Direction: N	Air temp: 13°
Humidity: 61%	Other Conditions: –	Rain –
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	6.25		
2. Mt Annan Drive Mt Annan	6.30		
3. Commelina & Caley	6.33		
4. Moyengully, Mt Annan	6.36		
5. Blackgum	6.38		
6. Aotus Crt	6.40		
7. Waterworth & Hacking	6.45		
8. William Howe Regional Park	6.42		
9. Rogers Way Mt Annan	6.50		
10. Bilson Road Spring Farm	6am		
11 Richardson Rd	6.58		
12 LKD West	6.05		
13 LKD East	6.09		
14 Austen Blvd	6.13		
15 Mooney St	6.15		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 28/7/24.	**Start time:** 6am.	**Finish time:** 739am.
Completed by: Jen	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 4km/h	Wind Direction: W	Air temp: 13°.
Humidity: 58%	Other Conditions: —	Rain —
Reason for Monitoring		
Weekly odour Patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	6.42am		
2. Mt Annan Drive Mt Annan	6.35am		
3. Commelina & Caley	6.57am		
4. Moyengully, Mt Annan	6.59am		
5. Blackgum	7.03am		
6. Aotus Crt	7.05am		
7. Waterworth & Hacking	7.10am		
8. William Howe Regional Park	7.15am		
9. Rogers Way Mt Annan	7.20am		
10. Bilson Road Spring Farm	6am.		
11 Richardson Rd	7.30am.		
12 LKD West	6.15am		
13 LKD East	6.19am		
14 Austen Blvd	6.23am		
15 Mooney St	6.30am		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 19/7/2024	**Start time:** 530	**Finish time:** 630
Completed by: Ten	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 7km/h	Wind Direction: SSE	Air temp: 9°
Humidity: 58%	Other Conditions: —	Rain —
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	5.55		
2. Mt Annan Drive Mt Annan	6.00		
3. Commelina & Caley	6.05		
4. Moyengully, Mt Annan	6.09		
5. Blackgum	6.09		
6. Aotus Crt	6.11		
7. Waterworth & Hacking	6.15		
8. William Howe Regional Park	6.21		
9. Rogers Way Mt Annan	6.25		
10. Bilson Road Spring Farm	530		
11 Richardson Rd	6.30		
12 LKD West	535		
13 LKD East	539		
14 Austen Blvd	543		
15 Mooney St	5.46		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 4/7/2024	**Start time:** 5am	**Finish time:** 6.10am.
Completed by: Levi	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 7km/h	Wind Direction: SSE	Air temp: 12°
Humidity: 61%	Other Conditions: —	Rain —
Reason for Monitoring		
Weekly odour patrol for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	5.25		
2. Mt Annan Drive Mt Annan	5.29		
3. Commelina & Caley	5.33		
4. Moyengully, Mt Annan	5.40		
5. Blackgum	5.45		
6. Aotus Crt	5.47		
7. Waterworth & Hacking	NOT VISITED		
8. William Howe Regional Park	5.55		
9. Rogers Way Mt Annan	6.am		
10. Bilson Road Spring Farm	5am.		
11 Richardson Rd	6.10		
12 LKD West	5.05		
13 LKD East	5.09		
14 Austen Blvd	5.13		
15 Mooney St	5.16		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 30/06/2024	**Start time:** 6am.	**Finish time:** 7am
Completed by: TM	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 4km/h	Wind Direction: SW	Air temp: 16°
Humidity: 62%	Other Conditions: Warm	Rain Light Showers.
Reason for Monitoring		
Weekly odour monitoring for potential offsite odour.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	6.20		
2. Mt Annan Drive Mt Annan	6.25		
3. Commelina & Caley	6.28		
4. Moyengully, Mt Annan	6.29		
5. Blackgum	6.30		
6. Aotus Crt	6.32		
7. Waterworth & Hacking	6.40		
8. William Howe Regional Park	6.45		
9. Rogers Way Mt Annan	6.50		
10. Bilson Road Spring Farm	6am		
11 Richardson Rd	7am.		
12 LKD West	6.03		
13 LKD East	6.06		
14 Austen Blvd	6.10		
15 Mooney St	6.13		

Additional Comments and Observations

No odour detected.

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 19-6-24	**Start time:**0700	**Finish time:** 0800
Completed by: ~~A.Phillip~~ J. Dooner	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 6 km/h	Wind Direction: N	Air temp: 3 °C
Humidity: 83%	Other Conditions: N:L	Rain —
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	7:28	0	
2. Mt Annan Drive Mt Annan	7:05	0	
3. Commelina & Caley	7:08	0	
4. Moyengully, Mt Annan	7:10	0	
5. Blackgum	7:14	0	
6. Aotus Crt	7:12	0	
7. Waterworth & Hacking	7:25	0	
8. William Howe Regional Park	7:20	0	
9. Rogers Way Mt Annan	7:00	0	
10. Bilson Road Spring Farm	7:35	0	
11. Richardson Rd	7:42	0	
12. LKD West	7:31	0	
13. LKD East	7:33	0	
14. Austen Blvd	7:37	0	
15. Mooney St	7:39	0	
16. Tristania Street Mount Annan	7:03	0	

Additional Comments and Observations

No odour present. Site undertaking operations compliantly

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 12-6-24	**Start time:0700**	**Finish time: 0800**
Completed by: ~~A.Philip~~ J. Bones	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 9 km/h	Wind Direction: NNW	Air temp: 8.9 °C
Humidity: 80%	Other Conditions: -	Rain -
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	7:20	0	
2. Mt Annan Drive Mt Annan	7:05	0	
3. Commelina & Caley	7:07	0	
4. Moyengully, Mt Annan	7:09	0	
5. Blackgum	7:11	0	
6. Aotus Crt	7:13	0	
7. Waterworth & Hacking	7:21	0	
8. William Howe Regional Park	7:17	0	
9. Rogers Way Mt Annan	7:00	0	
10. Bilson Road Spring Farm	7:31	0	
11. Richardson Rd	7:24	0	
12. LKD West	7:36	0	
13. LKD East	7:34	0	
14. Austen Blvd	7:27	0	
15. Mooney St	7:29	0	
16. Tristania Street Mount Annan	7:03	0	

Additional Comments and Observations

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 3-6-24	**Start time:** ~~0700~~ 8:00	**Finish time:** ~~0800~~ 9:00
Completed by: ~~A.Philip~~ J.Dooner	**Signature:**	
Other Attendees:		
Weather Conditions		
Wind Speed: 0 km/h	Wind Direction: N	Air temp: 5.8°C
Humidity: 99%	Other Conditions: –	Rain –
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	8:20	0	
2. Mt Annan Drive Mt Annan	8:36	0	
3. Commelina & Caley	8:38	0	
4. Moyengully, Mt Annan	8:40	0	
5. Blackgum	8:44	0	
6. Aotus Crt	8:42	0	
7. Waterworth & Hacking	8:23	0	
8. William Howe Regional Park	8:27	0	
9. Rogers Way Mt Annan	8:31	0	
10. Bilson Road Spring Farm	8:15	1	
11. Richardson Rd	8:06	0	
12. LKD West	8:04	2	Rubbish smell
13. LKD East	8:02	2	Rubbish smell
14. Austen Blvd	8:10	0	
15. Mooney St	8:12	0	
16. Tristania Street Mount Annan	8:34	0	

Additional Comments and Observations

Small odour present on LKD - Truck movements.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 29-5-24	**Start time:** ~~0700~~ 8:00am	**Finish time:** ~~0800~~ 9:00am
Completed by: ~~A.Philip~~ J.Dooner	**Signature:** JDooner	
Other Attendees:		
Weather Conditions		
Wind Speed: 0	Wind Direction: N	Air temp: 4.1°C
Humidity: 99%	Other Conditions: —	Rain —
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	8:25	0	
2. Mt Annan Drive Mt Annan	8:05	0	
3. Commelina & Caley	8:08	0	
4. Moyengully, Mt Annan	8:10	0	
5. Blackgum	8:12	0	
6. Aotus Crt	8:14	0	
7. Waterworth & Hacking	8:23	0	
8. William Howe Regional Park	8:19	0	
9. Rogers Way Mt Annan	8:00	0	
10. Bilson Road Spring Farm	8:31	0	
11. Richardson Rd	8:38	0	
12. LKD West	8:28	0	
13. LKD East	8:29	0	
14. Austen Blvd	8:34	0	
15. Mooney St	8:36	0	
16. Tristania Street Mount Annan	8:03	0	

Additional Comments and Observations

No odours present

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 13-5-24	**Start time:** 7:00am	**Finish time:** 8:00am
Completed by: Jake Rooney	**Signature:** J Rooney	
Other Attendees:		
Weather Conditions		
Wind Speed: SW	Wind Direction: 13	Air temp: 15.9
Humidity: 81%	~~Other Conditions:~~ Wet	Rain NO
Reason for Monitoring		
Routine odour monitoring		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	7:03	0	
2. Mt Annan Drive Mt Annan	7:16	0	
3. Commelina & Caley	7:23	0	
4. Moyengully, Mt Annan	7:21	0	
5. Blackgum	7:18	0	
6. Aotus Crt	7:19	0	
7. Waterworth & Hacking	7:00	0	
8. William Howe Regional Park	7:06	0	
9. Rogers Way Mt Annan	7:11	0	
10. Bilson Road Spring Farm	7:36	0	
11. Richardson Rd	7:30	0	
12. LKD West	7:32	0	
13. LKD East	7:34	0	
14. Austen Blvd	7:38	0	
15. Mooney St	7:40	0	
16. Tristania Street Mount Annan	7:14	0	

Additional Comments and Observations

No odours present

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 20-5-24	**Start time:** 8:00am	**Finish time:** 9:00am
Completed by: Jake Dooner	**Signature:** JDooner	
Other Attendees:		
Weather Conditions		
Wind Speed: ~~8.9~~ 13	Wind Direction: S	Air temp: 9.6
Humidity: 68%	Other Conditions: —	Rain —
Reason for Monitoring		
Routine odour monitoring		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	8:27	0	
2. Mt Annan Drive Mt Annan	8:08	0	
3. Commelina & Caley	8:16	2	small rubbish odour
4. Moyengully, Mt Annan	8:14	2	"
5. Blackgum	8:10	1	"
6. Aotus Crt	8:12	1	"
7. Waterworth & Hacking	8:24	0	
8. William Howe Regional Park	8:~~20~~	0	
9. Rogers Way Mt Annan	8:02	0	
10. Bilson Road Spring Farm	8:36	0	
11. Richardson Rd	8:43	0	
12. LKD West	8:32	0	
13. LKD East	8:34	0	
14. Austen Blvd	8:3~~2~~	0	
15. Mooney St	8:40	0	
16. Tristania Street Mount Annan	8:06	0	

Additional Comments and Observations

SF operations were all being conducted in a way that does not emite odours.
Camden have minimal stock to contribute to odour.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 6-5-24	**Start time:** 8:00am	**Finish time:** 9:00am
Completed by: Jake Dooner	**Signature:** JDooner	
Other Attendees:		
Weather Conditions		
Wind Speed: 15 km/h	Wind Direction: SSW	Air temp: 14.4°C
Humidity: 90%	Other Conditions: Raining	Rain Yes
Reason for Monitoring		
Routine odour monitoring		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	8:20	0	
2. Mt Annan Drive Mt Annan	8:~~30~~	1	"
3. Commelina & Caley	8:38	2	very minor
4. Moyengully, Mt Annan	8:40	2	"
5. Blackgum	8:48	2	"
6. Aotus Crt	8:42	1	"
7. Waterworth & Hacking	8:51	0	
8. William Howe Regional Park	8:24	0	
9. Rogers Way Mt Annan	8:31	0	
10. Bilson Road Spring Farm	8:18	0	
11. Richardson Rd	8:10	0	
12. LKD West	8:05	0	
13. LKD East	8:07	0	
14. Austen Blvd	8:13	0	
15. Mooney St	8:15	0	
16. Tristania Street Mount Annan	~~8:37~~ 8:34	1	

Additional Comments and Observations

No real odour sources -> small odour detected in Mount Annan

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 29-4-24	**Start time:** 8:00am	**Finish time:** 9:00am
Completed by: Jake Doaner	**Signature:** JDoaner	
Other Attendees:		
Weather Conditions		
Wind Speed: 4km/h	Wind Direction: WSW	Air temp: 13°C
Humidity: 83%	Other Conditions: Foggy	Rain –
Reason for Monitoring		
Routine odour patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	8:20	0	
2. Mt Annan Drive Mt Annan	8:31	0	
3. Commelina & Caley	8:33	0	
4. Moyengully, Mt Annan	8:35	0	
5. Blackgum	8:39	0	
6. Aotus Crt	8:37	0	
7. Waterworth & Hacking	8:45	0	
8. William Howe Regional Park	8:25	0	
9. Rogers Way Mt Annan	8:27	0	
10. Bilson Road Spring Farm	8:29	0	
11. Richardson Rd	8:12	1	
12. LKD West	8:09	2	Trucks
13. LKD East	8:08	3	Truck movements
14. Austen Blvd	8:14	0	
15. Mooney St	8:16	0	
16. Tristania Street Mount Annan	8:29	0	

Additional Comments and Observations

Small odour present on LKD - Due to high volume of truck movements.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 22-4-24	**Start time:** 7:00am	**Finish time:** 8:00am
Completed by: Jake Dooner	**Signature:** JDooner	
Other Attendees:		
Weather Conditions		
Wind Speed: 5km/h	Wind Direction: WSW	Air temp: 13°C
Humidity: 84%	Other Conditions: -	Rain -
Reason for Monitoring		
Routine weekly odour patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	7:24	0	
2. Mt Annan Drive Mt Annan	7:04	0	
3. Commelina & Caley	7:08	0	
4. Moyengully, Mt Annan	7:10	0	
5. Blackgum	7:12	0	
6. Aotus Crt	7:06	0	
7. Waterworth & Hacking	7:22	0	
8. William Howe Regional Park	7:17	0	
9. Rogers Way Mt Annan	7:00	0	
10. Bilson Road Spring Farm	7:38	0	
11. Richardson Rd	7:30	0	
12. LKD West	7:41	0	
13. LKD East	7:43	0	
14. Austen Blvd	7:33	0	
15. Mooney St	7:35	0	
16. Tristania Street Mount Annan	7:02	0	

Additional Comments and Observations

No odour present at all during monitoring

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 15-4-24	**Start time:** 9:00am	**Finish time:** 10:00am
Completed by: Jake Doner	**Signature:** JDoner	
Other Attendees:		
Weather Conditions		
Wind Speed: 6 km/h	Wind Direction: W	Air temp: 19°C
Humidity: 64%	Other Conditions: —	Rain —
Reason for Monitoring		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	9:20	0	
2. Mt Annan Drive Mt Annan	9:36	0	
3. Commelina & Caley	9:38	0	
4. Moyengully, Mt Annan	9:40	0	
5. Blackgum	9:44	0	
6. Aotus Crt	9:42	0	
7. Waterworth & Hacking	9:50	0	
8. William Howe Regional Park	9:24	0	
9. Rogers Way Mt Annan	9:31	0	
10. Bilson Road Spring Farm	9:18	0	
11. Richardson Rd	9:10	1	Trucks carrying waste
12. LKD West	9:07	1	"
13. LKD East	9:05	1	"
14. Austen Blvd	9:13	0	
15. Mooney St	9:15	0	
16. Tristania Street Mount Annan	9:34	0	

Additional Comments and Observations

No odour present in the surrounding areas. Very minor odour detected on LKD as a result of trucks being present at time of monitoring done

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 8-4-24	**Start time:** 8:00am	**Finish time:** 9:00am
Completed by: Jake Dooner	**Signature:** JDooner	
Other Attendees:		
Weather Conditions		
Wind Speed: 4Km/h	Wind Direction: SW	Air temp: 18°C
Humidity: 78%	Other Conditions: —	Rain —
Reason for Monitoring		
Weekly Odour monitoring		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	8:20	0	
2. Mt Annan Drive Mt Annan	8:36	2	
3. Commelina & Caley	8:38	1	
4. Moyengully, Mt Annan	8:40	1	
5. Blackgum	8:44	1	
6. Aotus Crt	8:42	1	
7. Waterworth & Hacking	8:50	0	
8. William Howe Regional Park	8:24	1	
9. Rogers Way Mt Annan	8:31	0	
10. Bilson Road Spring Farm	8:18	0	
11. Richardson Rd	8:10	1	
12. LKD West	8:07	1	
13. LKD East	8:05	1	
14. Austen Blvd	8:13	0	
15. Mooney St	8:15	0	
16. Tristania Street Mount Annan	8:34	2	

Additional Comments and Observations

Wind from the South west, Heavy rainfall 4th & 5th April
Small odour on Mt Annan drive
All facilities operating as normal

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 2-4-2024	**Start time:** 8:00am	**Finish time:** 9:00am
Completed by: Jake Doorer	**Signature:** J Doorer	
Other Attendees: Kelly Gee		
Weather Conditions		
Wind Speed: 6 km/h	Wind Direction: N	Air temp: 19°C
Humidity: 77%	Other Conditions: Overcast	Rain –
Reason for Monitoring		
Weekly odour patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	7:12	0	
2. Mt Annan Drive Mt Annan	7:25	0	
3. Commelina & Caley	7:34	0	
4. Moyengully, Mt Annan	7:31	0	
5. Blackgum	7:28	0	
6. Aotus Crt	7:27	0	
7. Waterworth & Hacking	7:15	0	
8. William Howe Regional Park	7:20	0	
9. Rogers Way Mt Annan	7:43	0	
~~10. Bilson Road Spring Farm~~		0	
11. Richardson Rd	7:08	0	
12. LKD West	7:07	0	
13. LKD East	7:05	0	
~~14. Austen Blvd~~			
~~15. Mooney St~~			
16. Tristania Street Mount Annan	7:38	0	

Additional Comments and Observations

Wind from the North

~~No odours~~ No odours detected

All facilities operating compliantly

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 8.1.24.	**Start time:** 0700	**Finish time:** 0800
Completed by: A.PHILIP	**Signature:** APhilip.	
Other Attendees:		
Weather Conditions		
Wind Speed: 2km/hr	Wind Direction: ESE	Air temp: 20°C
Humidity: 89%.	Other Conditions: Overcast	Rain —
Reason for Monitoring		
Routine weekly odour patrol.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	727	1	
2. Mt Annan Drive Mt Annan	743	0	
3. Commelina & Caley	756	0	
4. Moyengully, Mt Annan	753	0	
5. Blackgum	752	0	
6. Aotus Crt	751	0	
7. Waterworth & Hacking	750	0	
8. William Howe Regional Park	740	0	
9. Rogers Way Mt Annan	729	0	
10. Bilson Road Spring Farm	747	2	
11. Richardson Rd	722	0	
12. LKD West	723	2	
13. LKD East	720	2	
14. Austen Blvd	718	0	
15. Mooney St	713	0	
16. Tristania Street Mount Annan	711	1	

Additional Comments and Observations

Wind from the ESE
All ARRT doors operational.
No odours detected related to the SF or Camden ORRF facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 2.1.24	**Start time:** 0700	**Finish time:** 0800
Completed by: A.PHILIP	**Signature:** APhilip	
Other Attendees:		
Weather Conditions		
Wind Speed: 5km/hr	Wind Direction: E	Air temp: 19°C.
Humidity: 96%	Other Conditions: Overcast	Rain —
Reason for Monitoring		
Routine weekly odour patrol.		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	726	1	
2. Mt Annan Drive Mt Annan	742	1	
3. Commelina & Caley	755	0	
4. Moyengully, Mt Annan	753	0	
5. Blackgum	752	0	
6. Aotus Crt	751	0	
7. Waterworth & Hacking	750	0	
8. William Howe Regional Park	740	0	
9. Rogers Way Mt Annan	728	0	
10. Bilson Road Spring Farm	747	0	
11. Richardson Rd	721	0	
12. LKD West	722	0	
13. LKD East	719	0	
14. Austen Blvd	718	2	
15. Mooney St	712	2	
16. Tristania Street Mount Annan	710	1	

Additional Comments and Observations

Wind from the E
All ARRT doors operational
No odours detected related to the SF or Camden ORRF facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 27.12.23	**Start time:** 0700	**Finish time:** 0800
Completed by: A.PHILIP	**Signature:** APhilip	
Other Attendees: —		

Weather Conditions

Wind Speed: 10 km/hr	Wind Direction: SSW	Air temp: 19 °C.
Humidity: 93%.	Other Conditions: Overcast	Rain —

Reason for Monitoring

Routine weekly Odour Patrol

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	725	1	
2. Mt Annan Drive Mt Annan	741	0	
3. Commelina & Caley	755	2	
4. Moyengully, Mt Annan	753	2	
5. Blackgum	752	2	
6. Aotus Crt	751	1	
7. Waterworth & Hacking	750	0	
8. William Howe Regional Park	740	0	
9. Rogers Way Mt Annan	727	0	
10. Bilson Road Spring Farm	747	0	
11. Richardson Rd	721	0	
12. LKD West	722	0	
13. LKD East	719	0	
14. Austen Blvd	717	0	
15. Mooney St	712	0	
16. Tristania Street Mount Annan	710	1	

Additional Comments and Observations

Wind direction from the SSW
All ARRT doors operational
No odours detected related to the SF or Camden ORRF facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 18.12.23	**Start time:0700**	**Finish time: 0800**	
Completed by: A.Philip	**Signature:** APhilip		
Other Attendees:			
Weather Conditions			
Wind Speed: 6 km/hr	Wind Direction: SSE	Air temp: 18°C .	
Humidity: 93%	Other Conditions: Overcast	Rain —	
Reason for Monitoring			
Routine Weekly Odour Patrol			

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	727	1	
2. Mt Annan Drive Mt Annan	739	0	
3. Commelina & Caley	754	0	
4. Moyengully, Mt Annan	753	2	
5. Blackgum	751	2	
6. Aotus Crt	750	0	
7. Waterworth & Hacking	740	0	
8. William Howe Regional Park	725	0	
9. Rogers Way Mt Annan	746	0	
10. Bilson Road Spring Farm	718	2	
11. Richardson Rd	720	0	
12. LKD West	719	0	
13. LKD East	717	0	
14. Austen Blvd	715	0	
15. Mooney St	711	0	
16. Tristania Street Mount Annan	710	1	

Additional Comments and Observations

Wind direction from the SSE
All ARRT door operational
No odours detected offsite in relation to the SF or Camden ORRF facilities.
Slight leachate odour @ tank farm. Notified Ricky.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 11.12.23	**Start time:0700**	**Finish time: 0800**
Completed by: A.Philip	**Signature:** APhilip	
Other Attendees:		
Weather Conditions		
Wind Speed: 2km/hr	Wind Direction: S	Air temp: 20°C .
Humidity: 90% .	Other Conditions: Sunny	Rain —
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	729	1	
2. Mt Annan Drive Mt Annan	745	0	
3. Commelina & Caley	800	2	
4. Moyengully, Mt Annan	753	2	
5. Blackgum	751	2	
6. Aotus Crt	754	1	
7. Waterworth & Hacking	738	0	
8. William Howe Regional Park	726	0	
9. Rogers Way Mt Annan	746	0	
10. Bilson Road Spring Farm	717	0	
11. Richardson Rd	720	0	
12. LKD West	719	0	
13. LKD East	718	0	
14. Austen Blvd	715	0	
15. Mooney St	711	0	
16. Tristania Street Mount Annan	712	1	

Additional Comments and Observations

Wind direction from the South
All ARRT doors operational.
No odours detected in relation to the ST or Camden organics facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 4.12.23	**Start time:0700**	**Finish time: 0800**	
Completed by: A.Philip	**Signature:**		
Other Attendees:			
Weather Conditions			
Wind Speed: 5km/hr	Wind Direction: W	Air temp: 16°c	
Humidity: 93%	Other Conditions: Sunny		Rain
Reason for Monitoring			
Routine Weekly Odour Patrol			

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	728	1	
2. Mt Annan Drive Mt Annan	744	0	
3. Commelina & Caley	759	0	
4. Moyengully, Mt Annan	752	0	
5. Blackgum	751	0	
6. Aotus Crt	753	0	
7. Waterworth & Hacking	738	0	
8. William Howe Regional Park	726	0	
9. Rogers Way Mt Annan	746	0	
10. Bilson Road Spring Farm	717	2	
11. Richardson Rd	721	0	
12. LKD West	720	0	
13. LKD East	718	0	
14. Austen Blvd	714	2	
15. Mooney St	711	2	
16. Tristania Street Mount Annan	712	1	

Additional Comments and Observations

Wind direction from the W
All ARRT doors operational
No odours detected in relation to the SF or Camden organics facilities

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 27.11.23	**Start time:** 0700	**Finish time:** 0800
Completed by: A.PHILIP.	**Signature:** APhilip	
Other Attendees:		

Weather Conditions

Wind Speed: 7 km/hr	Wind Direction: S	Air temp: 20°C
Humidity: 85%	Other Conditions: overcast	Rain ——

Reason for Monitoring

Weekly odour patrol.

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	726	1	
2. Mt Annan Drive Mt Annan	742	0	
3. Commelina & Caley	754	0	
4. Moyengully, Mt Annan	753	0	
5. Blackgum	752	2	
6. Aotus Crt	751	0	
7. Waterworth & Hacking	750	2	
8. William Howe Regional Park	740	2	
9. Rogers Way Mt Annan	726	0	
10. Bilson Road Spring Farm	747	0	
11 Richardson Rd	721	0	
12 LKD West	722	0	
13 LKD East	719	0	
14 Austen Blvd	718	0	
15 Mooney St	713	0	
16 Tristania Street Mount Annan	711.	1	

Additional Comments and Observations

Wind from the S
All ARRT doors operational
No odour detected in relation to the SF or Camden organics facilities

Investigation outcome and actions undertaken

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 20.11.23	**Start time:0700**	**Finish time: 0800**	
Completed by: A.Philip	**Signature:** APhilip.		
Other Attendees:			
Weather Conditions			
Wind Speed: 5km/hr	Wind Direction: S	Air temp: 16°C .	
Humidity: 91%	Other Conditions: overcast	Rain —	
Reason for Monitoring			
Routine Weekly Odour Patrol			

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	728	1	
2. Mt Annan Drive Mt Annan	741	0	
3. Commelina & Caley	757	0	
4. Moyengully, Mt Annan	754	0	
5. Blackgum	752	2	
6. Aotus Crt	751	0	
7. Waterworth & Hacking	738	2	
8. William Howe Regional Park	725	2	
9. Rogers Way Mt Annan	745	0	
10. Bilson Road Spring Farm	715	0	
11. Richardson Rd	720	0	
12. LKD West	718	0	
13. LKD East	717	0	
14. Austen Blvd	716	0	
15. Mooney St	713	0	
16. Tristania Street Mount Annan	711	1	

Additional Comments and Observations

Wind from the S
All ARRT doors operational
No odour detected in relation to the SF or camden organics facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 13.11.23	**Start time:0700**	**Finish time: 0800**
Completed by: A.Philip	**Signature:** APhilip	
Other Attendees:		
Weather Conditions		
Wind Speed: 3km/hr	Wind Direction: SW	Air temp: 15°C.
Humidity: 87%	Other Conditions: Overcast	Rain —
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	729	1	
2. Mt Annan Drive Mt Annan	741	0	
3. Commelina & Caley	756	0	
4. Moyengully, Mt Annan	753	0	
5. Blackgum	752	0	
6. Aotus Crt	751	2	
7. Waterworth & Hacking	739	0	
8. William Howe Regional Park	725	0	
9. Rogers Way Mt Annan	745	2	
10. Bilson Road Spring Farm	717	1	
11. Richardson Rd	720	0	
12. LKD West	718	0	
13. LKD East	717	0	
14. Austen Blvd	716	0	
15. Mooney St	712	0	
16. Tristania Street Mount Annan	711	1	

Additional Comments and Observations

Wind from the SW
All ARRT doors operational
No odour detected in relation to the SF or Camden organics facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 6.11.23	**Start time:0700**	**Finish time: 0800**
Completed by: A.Philip	**Signature:** APhilip	
Other Attendees:		
Weather Conditions		
Wind Speed: 5km/hr	Wind Direction: S	Air temp: 13° C
Humidity: 95%.	Other Conditions: Overcast	Rain —
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	728	0	
2. Mt Annan Drive Mt Annan	740	0	
3. Commelina & Caley	757	0	
4. Moyengully, Mt Annan	755	2	
5. Blackgum	753	2	
6. Aotus Crt	751	0	
7. Waterworth & Hacking	738	1	
8. William Howe Regional Park	725	2	
9. Rogers Way Mt Annan	745	0	
10. Bilson Road Spring Farm	716	0	
11. Richardson Rd	721	0	
12. LKD West	718	0	
13. LKD East	717	0	
14. Austen Blvd	716	0	
15. Mooney St	713	0	
16. Tristania Street Mount Annan	712	1	

Additional Comments and Observations

Wind from the South
All ARRT doors operational.
No odour detected in relation to the SF or Camden organics facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 30.10.23	**Start time:**0700	**Finish time:** 0800
Completed by: A.Philip	**Signature:** APhilip	
Other Attendees:		
Weather Conditions		
Wind Speed: 9.4km/hr	Wind Direction: SSE	Air temp: 10°C.
Humidity: 87%	Other Conditions: Sunny	Rain –
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	729	1	
2. Mt Annan Drive Mt Annan	741	0	
3. Commelina & Caley	757	2	
4. Moyengully, Mt Annan	754	0	
5. Blackgum	753	0	
6. Aotus Crt	751	0	
7. Waterworth & Hacking	740	0	
8. William Howe Regional Park	725	0	
9. Rogers Way Mt Annan	745	2	
10. Bilson Road Spring Farm	717	0	
11. Richardson Rd	720	0	
12. LKD West	719	0	
13. LKD East	718	0	
14. Austen Blvd	717	0	
15. Mooney St	713	1	
16. Tristania Street Mount Annan	710	1	

Additional Comments and Observations

Wind from the SSW
All ARRT doors operational.
No odour detected in relation the SF or Camden ORRF facilities

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 23.10.23	**Start time:**0700	**Finish time:** 0800
Completed by: A.Philip	**Signature:** APhilip	
Other Attendees:		
Weather Conditions		
Wind Speed: 9km/hr.	Wind Direction: SSW	Air temp: 12°C.
Humidity: 60%.	Other Conditions: Sunny.	Rain —
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	729	1	
2. Mt Annan Drive Mt Annan	742	0	
3. Commelina & Caley	757	0	
4. Moyengully, Mt Annan	754	0	
5. Blackgum	753	0	
6. Aotus Crt	752	0	
7. Waterworth & Hacking	740	0	
8. William Howe Regional Park	725	0	
9. Rogers Way Mt Annan	745	0	
10. Bilson Road Spring Farm	716	1	
11. Richardson Rd	720	2	
12. LKD West	719	2	
13. LKD East	718	1	
14. Austen Blvd	717	0	
15. Mooney St	713	1	
16. Tristania Street Mount Annan	710.	1	

Additional Comments and Observations

Wind from the SSW
All ARRT doors operational
No odour detected in relation to the SF or Camden ORRF facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 16.10.23	**Start time:0700**	**Finish time: 0800**
Completed by: A.Philip	**Signature:** APhilip	
Other Attendees:		
Weather Conditions		
Wind Speed: 6km/hr	Wind Direction: SSW	Air temp: 10°C
Humidity: 87%	Other Conditions: Sunny.	Rain —
Reason for Monitoring		
Routine Weekly Odour Patrol		

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	728	1	
2. Mt Annan Drive Mt Annan	741	0	
3. Commelina & Caley	757	0	
4. Moyengully, Mt Annan	754	0	
5. Blackgum	752	0	
6. Aotus Crt	751	0	
7. Waterworth & Hacking	739	0	
8. William Howe Regional Park	725	0	
9. Rogers Way Mt Annan	745	0	
10. Bilson Road Spring Farm	715	1	
11. Richardson Rd	720	2	
12. LKD West	718	2	
13. LKD East	717	2	
14. Austen Blvd	716	0	
15. Mooney St	713	0	
16. Tristania Street Mount Annan	711	1	

Additional Comments and Observations

Wind from the SSW.
All ARRT doors operational.
No odour detected in relation to the SF or Camden ORRF facilities.

Spring Farm ARRT - Weekly

Odour Monitoring Record

Document #: FORM026.4.39

Instructions: External odour tours to be completed proactively, during adverse weather conditions or in response to an odour complaint. Fill in complaint details if in response to a complaint.

Date: 9.10.23	**Start time:0700**		**Finish time: 0800**
Completed by: A.Philip	**Signature:** APhilip		
Other Attendees:			
Weather Conditions			
Wind Speed: 6 km/hr	Wind Direction: SSE	Air temp: 7°C -	
Humidity: 93%.	Other Conditions: Sunny	Rain —	
Reason for Monitoring			
Routine Weekly Odour Patrol			

Odour Monitoring Results

Checkpoints (mark on map)	Time	Odour Level (0-5)	Comments / Description of Odour
1. Waterworth & Welling Drive	728	1	
2. Mt Annan Drive Mt Annan	742	0	
3. Commelina & Caley	755	0	
4. Moyengully, Mt Annan	753	0	
5. Blackgum	752	0	
6. Aotus Crt	751	0	
7. Waterworth & Hacking	739	0	
8. William Howe Regional Park	726	0	
9. Rogers Way Mt Annan	746	0	
10. Bilson Road Spring Farm	716	2	
11. Richardson Rd	720	1	
12. LKD West	718	0	
13. LKD East	716	0	
14. Austen Blvd	714	2	
15. Mooney St	712	1	
16. Tristania Street Mount Annan	711	1	

Additional Comments and Observations

Wind direction from the SSE
All ARRT doors operational
No odour detected in relation to the SF or Camden ORRF facilities.

APPENDIX K NOISE MONITORING ASSESSMENTS

Noise Monitoring Assessment

Veolia Spring Farm Advanced Resource Recovery Facility

Spring Farm, NSW
April 2023

Prepared for: Veolia Australia and New Zealand Pty Ltd
April 2023
MAC201202-02RP1

Muller Acoustic Consulting

Document Information

Noise Monitoring Assessment

Veolia Spring Farm Advanced Resource Recovery Facility

Spring Farm, NSW

April 2023

Prepared for: Veolia Australia and New Zealand Pty Ltd

Prepared by: Muller Acoustic Consulting Pty Ltd
PO Box 678, Kotara NSW 2289
ABN: 36 602 225 132
P: +61 2 4920 1833
www.mulleracoustic.com

Document ID	Date	Prepared By	Signed	Reviewed By	Signed
MAC201202-02RP1	18 April 2023	Louis Abell		Oliver Muller	

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APPENDIX A - GLOSSARY OF TERMS

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by Veolia Australia and New Zealand Pty Ltd (Veolia) to complete a Noise Monitoring Assessment (NMA) to quantify noise emissions and determine compliance with the Project Approval (MP05_0098 Mod-6) and Environment Protection Licence (EPL 12588) for the Advanced Resource Recovery Facility (ARRF) (the 'facility') at Barrow Road, Spring Farm, NSW.

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

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI), 2017;
- NSW Environment Protection Authority (EPA), Environmental Protection Licence 12588 (EPL 12588);
- NSW Environment Protection Authority (EPA's), Approved methods for the measurement and analysis of environmental noise in NSW, 2022;
- NSW Department of Planning and Environment, Development Consent MP05_0098 Mod-6; and
- Standards Australia AS 1055:2018 (AS 1055) – Acoustics – Description and Measurement of Environmental Noise.

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

The monitoring has been conducted at three representative monitoring locations for the period April 2023 to quantify current emissions from the project.

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2 Noise Criteria

The noise emission criteria outlined in the Section L3 of the EPL 12588 have been adopted as noise criteria for attended noise monitoring. The conditions of this EPL are presented below:

L3.1 Noise from the premises must not exceed the sound pressure levels (noise limits) presented in the table below. Note the limits represent the sound pressure level (noise) contribution, at the nominated receiver locations in the table. The noise emission criteria outlined in the Section L3 of the EPL 12588 have been adopted as noise criteria for attended noise monitoring and are reproduced in ***Table*** 1.

Table 1 Noise Emission Criteria

Noise Assessment Location	Time Period	Noise Emission Criteria
All existing and proposed residences including Glenlee House	Day	39dB $L_{Aeq(15min)}$
	Evening	
	Night	35dB $L_{Aeq(15min)}$ 45dB $L_{A1(1min)}$

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

L3.2 The noise emission limits identified in the above table apply under meteorological conditions of :

a) Wind speeds up to 3m/s at 10 metres above the ground level; or

b) Temperature inversion conditions of up to 30C/100m and wind speed up to 2m/s at 10 metres above the ground.

L3.3 Noise from the premises is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise levels in the licence.

L3.4 Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with LA1 (1 minute) noise level in the Licence.

Where is can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.

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3 Methodology

3.1 Locality

The Veolia Spring Farm Advanced Resource Recovery Facility (ARRF) is located at 20 Barrow Road, Spring Farm in the Camden local government area. The facility is part of the larger Spring Farm, Resource Recovery Park (RRP) which includes a weighbridge, a former (now capped) landfill, a Material Recovery Facility (MRF), a small vehicle drop-off facility and a landfill gas to energy plant. The ARRF covers approximately 2.6 hectares (ha) of the total 36 ha occupied by the RRP. The site is surrounded by residential and future residential developments to the north and northeast, and by the Australian Botanical Garden to the east. The project is adjacent to the Nepean River to the west.

The nearest receivers are existing houses at Commelina Drive to the northeast of the project and proposed houses in the 'East Village' development to the north. The Project Approval also refers to Glenlee House, which is approximately 1.6km to the southeast of the site. The monitoring locations with respect to the project are presented in the locality plan shown in **Figure 1**.

3.2 Noise Monitoring Locations

Three monitoring locations have been selected to undertake noise measurements and determine compliance with the EPL criteria. The locations are summarised below:

Noise Monitoring Location 1 (NML1): is approximately 0.6km to the north of the facility in a residential area on the corner of Oswald and Cuthbert Street.

Noise Monitoring Location 2 (NML2): is approximately 0.6km to the northeast of the facility in a residential along Commelina Drive.

Noise Monitoring Location (NML3): is approximately 1.7km to southeast of the facility at the residence known as Glenlee Estate.



FIGURE 1

Locality Plan

MAC201202-02

Veolia Recycling & Recovery

Spring Farm

KEY

Noise Monitoring Location

Veolia Recycling Facility

ARRTF

MRF

RRF

0 100 200 300 400 m

N

MAC
Muller Acoustic Consulting

4 Assessment Methodology

The 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”. Measurements were conducted using a Svantek Type 1, 971 noise analyser. The 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 ±0.5dBA.

Noise measurements were of 15-minutes in duration and where possible, throughout each survey the operator quantified the contribution of each significant noise source in accordance with the NSW EPA’s approved methods for the measurement and analysis of environmental noise. Measurements were conducted at three locations (N1, N2, N3) on Monday 3 April 2023, during the day, evening and night period to satisfy the requirements of the EPL.

Extraneous noise sources were excluded from the analysis to determine the $LA_{eq(15min)}$ site noise contribution for comparison against the relevant criteria. In the event of site attributed noise being above criteria, prevailing meteorological conditions for the monitoring period are analysed in accordance with Fact Sheet D of the NPI to determine the stability category present at the time of each attended measurement.

Where the site is inaudible, the contribution is estimated to be at least 10dBA below the ambient noise level.

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5 Results

5.1 Assessment Results - NML1

The monitored noise levels, observed meteorological conditions, and estimated/calculated project noise contributions for each assessment period at NML1 for the NMA are presented in **Table 2**.

Table 2 Operator-Attended Noise Survey Results – NML1

Date	Time (hrs)	Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
		L_{Amax}	L_{Aeq}	L_{A90}		
03/04/2023	17:53 (Day)	58	45	42	WD: NE WS: <0.5m/s Rain: Nil	Insects & Frogs 38-43 Birds 45-52 Local traffic 51-63 Local Impact (Operator) 58 Aircraft 40-46 MRF Operation 36-40 ARRF Not Audible
Facility $L_{Aeq(15min)}$ Contribution						<35
03/04/2023	18:09 (Evening)	63	47	42	WD: NE WS: <0.5m/s Rain: Nil	Insects & Frogs 38-43 Distant traffic <40 Local traffic 47-55 Local Impact 58 Aircraft 40-46 MRF Operation 36-40 ARRF Not Audible
Facility $L_{Aeq(15min)}$ Contribution						<35
03/04/2023	23:07 (Night)	76	41	34	WD: NE WS: <0.5m/s Rain: Nil	Site Truck (10 secs) 40-49 Insects & Frogs 33-36 Local Impact 76 Bats 34-35 MRF Operation <30-32 ARRF Not Audible
Facility $L_{Aeq(15min)}$ Contribution						<35
Facility $L_{A1(1min)}$ Contribution						<35

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5.2 Assessment Results – NML2

The monitored noise levels, observed meteorological conditions, and estimated/calculated project noise contributions for each assessment period at NML2 for the NMA are presented in **Table 3**.

Table 3 Operator-Attended Noise Survey Results – NML2

Date	Time (hrs)	Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
		L_{Amax}	L_{Aeq}	L_{A90}		
03/04/2023	17:30 (Day)	67	46	43	WD: N WS: <0.5m/s Rain: Nil	Birds 45-58 Local traffic 60-67 Distant Traffic <40-42 Insects <40 Aircraft 44-49 Dogs Barking 40-42 ARRF Not Audible
Facility $L_{Aeq(15min)}$ Contribution						<35
03/04/2023	18:43 (Evening)	62	47	46	WD: N WS: <0.5m/s Rain: Nil	Domestic Noise 40-45 Distant Traffic 42-43 Insects & Frogs 45-47 Aircraft 40-49 Dogs Barking 48-51 ARRF Not Audible
Facility $L_{Aeq(15min)}$ Contribution						<35
03/04/2023	22:37 (Night)	56	42	38	WD: NE WS: <0.5m/s Rain: Nil	Distant traffic <40-48 Insects & Frogs 41-43 MRF Operations 30-32 ARRF Not Audible
Facility $L_{Aeq(15min)}$ Contribution						<35
Facility $L_{A1(1min)}$ Contribution						<35

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5.3 Assessment Results – NML3

The monitored noise levels, observed meteorological conditions, and estimated/calculated project noise contributions for each assessment period at NML3 for the NMA are presented in **Table 4**.

Table 4 Operator-Attended Noise Survey Results – NML3

Date	Time (hrs)	Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
		L_{Amax}	L_{Aeq}	L_{A90}		
03/04/2023	16:55 (Day)	67	46	44	WD: NE WS: <0.5m/s Rain: Nil	Birds 53-67 Highway Traffic 43-49 Insects 44-47 ARRF Not Audible
		Facility $L_{Aeq(15min)}$ Contribution				<35
03/04/2023	19:28 (Evening)	64	46	42	WD: NE WS: <0.5m/s Rain: Nil	Distant traffic 40-45 Insects 40-43 Aircraft 43-46 Train 60-64 Nearby Industrial Operations (Not ARRF) (5 secs) 30-35 ARRF Not Audible
		Facility $L_{Aeq(15min)}$ Contribution				<35
03/04/2023	22:00 (Night)	66	48	44	WD: N WS: <0.5m/s Rain: Nil	Highway traffic 40-43 Insects 40-43 Local Impact 66 Nearby Industrial Operations (Not ARRF)(120 secs) 34-36 ARRF Not Audible
		Facility $L_{Aeq(15min)}$ Contribution				<35
		Facility $L_{A1(1min)}$ Contribution				<35

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

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6 Discussion

6.1 Discussion of Results – NML1

Monitoring on Monday 4 April 2023 identified that the MRF was audible during all periods. The ARRF was inaudible during all monitoring periods and satisfied the relevant criteria for all assessment periods. Extraneous noise sources included traffic, insects, aircraft noise and birds.

6.2 Discussion of Results – NML2

Monitoring on Monday 4 April 2023 identified that the identified that the MRF was audible during the night period. The ARRF was inaudible during all monitoring periods and satisfied the relevant criteria for all assessment periods. Extraneous noise sources included traffic, insects, aircraft noise, barking dogs and birds.

6.3 Discussion of Results – NML3

Monitoring on Monday 4 April 2023 identified that noise contributions from operations south of the RRP was audible during at the evening and night period. The ARRF was inaudible during all monitoring periods and satisfied the relevant criteria for all assessment periods. Extraneous noise sources included traffic, insects, train noise and birds.

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7 Discussion & Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment (NMA) for Veolia Recycling & Recovery Australia & New Zealand Pty Ltd at the Advanced Resource Recovery Facility at Barrow Road, Spring Farm, NSW. The assessment was completed to assess compliance with the relevant criteria outlined in Project Approval MP05_0098 Mod-6 and Environment Protection Licence 12588.

Attended monitoring was undertaken on Monday 3 April 2023 at three representative monitoring locations and identified that the ARRF was inaudible at all receiver locations. The MRF was audible at NML1 during all monitoring periods, however, was assessed to be below the noise criteria outlined in EPL 12588. Similarly, the MRF was audible at NML2 during the night period, however, was assessed to be below the noise criteria outlined in EPL 12588. Noise contributions from nearby industry south of the RRF (Glenlee intermodal Terminal) was audible at NML3 during the evening and night periods however, this was not associated with the facility.

The assessment identified that the project is compliant with the relevant criteria at all assessed locations for the monitoring period.

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Appendix A - Glossary of Terms

Table A1 provides a number of technical terms have been used in this report.

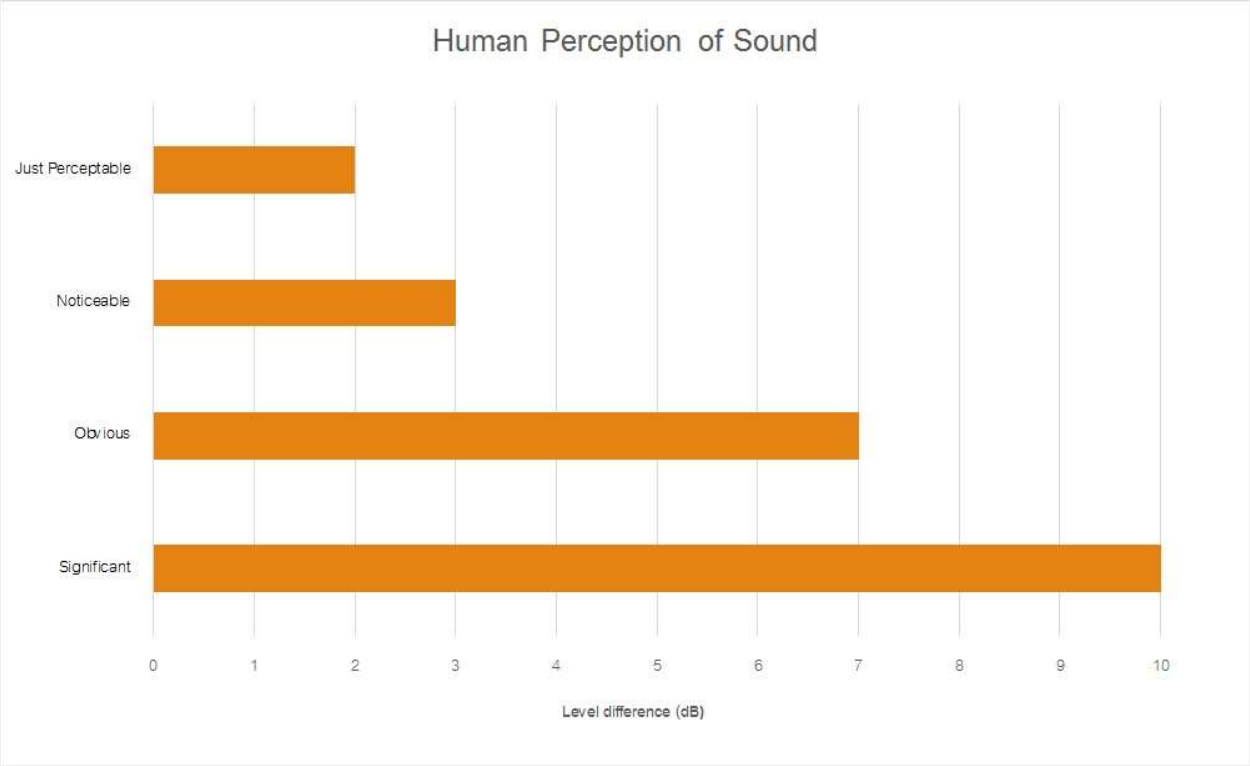
Table A1 Glossary of Terms

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 LA90 statistical noise levels.
Adverse Weather	Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).
Ambient Noise	The noise associated with a given environment. Typically a composite of sounds from many 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 noise.
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 Linear or decibels Z-weighted.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A noise level which is exceeded 10 % of the time. It is approximately equivalent to the average of maximum noise levels.
LA90	Commonly referred to as the background noise, this is the level exceeded 90 % of the time.
LAeq	The summation of noise over a selected period of time. It is the energy average noise from a source, and is the equivalent continuous sound pressure level over a given period.
LAmax	The maximum root mean squared (rms) sound pressure level received at the microphone during a measuring interval.
RBL	The Rating Background Level (RBL) is an overall single figure background level representing each assessment period over the whole monitoring period. The RBL is used to determine the intrusiveness criteria for noise assessment purposes and is the median of the ABL's.
Sound power level (LW)	This is a measure of the total power radiated by a source. The sound power of a source is a fundamental location of the source and is independent of the surrounding environment. Or a measure of the energy emitted from a source as sound and is given by : = 10.log10 (W/Wo) Where : W is the sound power in watts and Wo is the sound reference power at 10-12 watts.

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 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



Muller Acoustic Consulting Pty Ltd
PO Box 678, Kotara NSW 2289
ABN: 36 602 225 132
Ph: +61 2 4920 1833
www.mulleracoustic.com

MAC
Muller Acoustic Consulting



APPENDIX D

NOISE IMPACT ASSESSMENT

Noise Impact Assessment

Spring Farm Advanced Resource Recovery Facility
20 Barrow Road
Spring Farm, NSW

Prepared for: Veolia Recycling & Recovery Pty Ltd
C/- Element Environment Pty Ltd
May 2024
MAC201202-03RP1V3

Muller Acoustic Consulting

Document Information

Noise Impact Assessment

Spring Farm Advanced Resource Recovery Facility

20 Barrow Road

Spring Farm, NSW

Prepared for: Veolia Recycling & Recovery Pty Ltd

C/- Element Environment Pty Ltd

PO Box 1563

Warriewood NSW 2102

Prepared by: Muller Acoustic Consulting Pty Ltd

PO Box 678, Kotara NSW 2289

ABN: 36 602 225 132

P: +61 2 4920 1833

www.mulleracoustic.com

DOCUMENT ID	DATE	PREPARED	SIGNED	REVIEWED	SIGNED
MAC201202-03RP1V3	10 May 2024	Dale Redwood		Oliver Muller	

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by Element Environment Pty Ltd, on behalf of Veolia Recycling & Recovery Pty Ltd (Veolia) to prepare a Noise Impact Assessment (NIA) to quantify potential noise emissions associated with the modification of operations at the Spring Farm Advanced Resource Recovery Facility, located at 20 Barrow Road, Spring Farm, NSW (the project).

The NIA has quantified potential operational, sleep disturbance and road traffic noise emissions from the project and recommends reasonable and feasible noise controls where required.

This assessment has been undertaken in accordance with the following documents:

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI) 2017;
- NSW Environment Protection Authority (EPA), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022;
- NSW Department of Environment, Climate Change and Water (DECCW) – NSW Road Noise Policy (RNP), March 2011;
- NSW Department of Environment and Conservation (DEC) – NSW Environmental Noise Management – Assessing Vibration: a Technical Guideline (the NSW vibration guideline), February 2006;
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise - General Procedures; and
- Standards Australia AS/NZS IEC 61672.1 - 2019 (AS 61672) – Electro Acoustics - Sound Level Meters Specifications.

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

1.1 Project Background

Veolia own and operate the Spring Farm Advanced Resource Recovery Facility (hereafter referred to as ARRF or the site), formerly known as the Jack's Gully Alternative Waste Technology Facility.

As shown in **Figure 1**, the ARRF is in the Spring Farm Advanced Resource Recovery Park (RRP), located off Barrow Road in the suburb of Spring Farm, NSW. The RRP is in the Camden local government area (LGA), covers an area of approximately 36 hectares (ha), and is approximately 55 kilometres (km) south-west of the Sydney central business district and 5 km south-west of the suburb of Campbelltown.

The ARRF was originally approved by the NSW Minister for Planning in 2006 under Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

Veolia seek to modify the existing project approval (05_0098) (hereafter referred to as the Development Consent) to:

- increase the throughput capacity at the ARRF from 160,000tpa of general solid waste to 295,000tpa, inclusive of:
    a) an additional 110,000tpa of general solid waste; and
    b) temporary storage of an additional 25,000tpa of garden waste prior to dispatch to third party waste management facilities for processing;
- seek an extension to the approved operating hours of the site to permit 24-hour dispatch of trucks to transport waste to third party waste management facilities in the greater Sydney region.

The above is hereafter referred to as the 'proposed modification' and will be the seventh modification to the development consent.

1.2 Assessment Requirements

The NIA has been prepared in accordance with the NSW DPE's Secretary's Environmental Assessment Requirements (SEARs) for the project. The SEARs identify matters which must be addressed in the assessment and essentially form the project's terms of reference. Table 1 lists individual requirements relevant to this NIA and where they are addressed in this report.

Table 1 Noise Related SEARs and Agency Requirements

SEAR	Section
A quantitative assessment of potential construction, operational and transport noise and vibration impacts in accordance with relevant Environment Protection Authority guidelines.	Section 6.1 Section 7.1 Section 7.2
An assessment of the road noise impact on residential receivers along Liz Kernohan Drive as well as from vehicles accessing the site from the Camden Bypass, including the future residential development fronting Barrow Road.	Section 6.2 Section 7.3
Camden Council – Consideration will need to be given to any potential noise impacts from the new processes. Any application will need to clearly demonstrate what additional noise impacts are generated by the new processes and potential impacts on surrounding residential development.	Section 6.1 Section 7.1
Page 9 and 10 of the scoping letter under the heading 'Environmental Assessment Approach' indicates that a road noise assessment will be provided to demonstrate the predicted impact of additional heavy vehicles on residential properties along Liz Kernohan Drive. It should be noted that this assessment should also assess the impact from the facility to Camden Bypass including the future residential development fronting Barrow Road.	Section 6.2 Section 7.3
EPA – The proponent must assess potential noise impacts on nearby receptors and demonstrate effective controls to manage noise, including from traffic, waste processing or shredding and loading/unloading.	Section 7
Identify all noise sources or potential sources from the development (including both construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials.	Section 6.1
Specify the times of operation for all phases of the development and for all noise producing activities.	Section 2.3
For projects with a significant potential traffic noise impact provide details of road alignment (including gradients, road surface, topography, bridges, culverts etc), and land use along the proposed road and measurement locations – diagrams should be to a scale sufficient to delineate individual residential blocks.	Section 6.2
Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals. Typically the location of any noise sensitive locations in relation to the site should be included on a map of the locality.	Section 2.4
Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.	Section 2.4

Table 1 Noise Related SEARs and Agency Requirements	
SEAR	**Section**
Describe baseline conditions: ▪ determine the existing background (LA90) and ambient (LAeq) noise levels, as relevant, in accordance with the NSW Noise Policy for Industry.	**Section 4**
▪ determine the existing road traffic noise levels in accordance with the NSW Road Noise Policy, where road traffic noise impacts may occur.	**Section 6.2**
▪ the noise impact assessment report should provide details of all monitoring of existing ambient noise levels including: - details of equipment used for the measurements; - a brief description of where the equipment was positioned; - a statement justifying the choice of monitoring site(s), including the procedure used to choose the site(s), having regards to Fact Sheets A and B of the NSW Noise Policy for Industry; - details of the exact location of the monitoring site and a description of land uses in surrounding areas; - a description of the dominant and background noise sources at the site; - day, evening and night assessment background levels for each day of the monitoring period; - the final Rating Background Level (RBL) value; and - graphs of the measured noise levels for each day should be provided. ▪ a record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data and a statement indicating the need for any re-monitoring.	**Section 4** **Appendix B**
Assess impacts: ▪ determine the project noise trigger levels for the site. For each identified potentially affected receiver, this should include: - determination of the project intrusive noise level for each identified potentially affected receiver; - selection and justification of the appropriate amenity category for each identified potentially affected receiver; - determination of the project amenity noise level for each receiver; and - determination of the appropriate maximum noise level event assessment (sleep disturbance) trigger level.	**Section 3**

Table 1 Noise Related SEARs and Agency Requirements	
SEAR	**Section**
▪ maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible effects on sleep. Determine expected noise level and noise character likely to be generated from noise sources during: - site establishment; - construction; - operational phases; - transport including traffic noise generated by the proposal; and - other services. *Note: The Noise Impact Assessment report should include noise source data for each source in 1/1 or 1/3 octave band frequencies including methods for references used to determine noise source levels. Noise source levels and characteristics can be sourced from direct measurement of similar activities or from literature (if full references are provided).*	**Section 7.2**
▪ determine the noise levels likely to be received at the reasonably most affected location(s) (these may vary for different activities at each phase of the development).	**Section 7**
▪ the Noise Impact Assessment report should include: - a plan showing the assumed location of each noise source for each prediction scenario; - a list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site; - any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc; - methods used to predict noise impacts including identification of any noise models used; - the weather conditions considered for the noise predictions; - the predicted noise impacts from each noise source as well as the combined noise level for each prediction scenario; - for developments where a significant level of noise impact is likely to occur, noise contours for the key prediction scenarios should be derived; and - an assessment of the need to include modification factors as detailed in Fact Sheet C of the NSW Noise Policy for Industry.	**Section 6** **Section 7** **Appendix C** **Appendix D**
▪ discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional feasible and reasonable mitigation measures.	**Section 7**
▪ the Noise Impact Assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation. - Where relevant noise/vibration levels cannot be met after application of all feasible and reasonable mitigation measures the residual level of noise impact needs to be quantified.	**n/a**
▪ for the assessment of existing and future traffic noise, details of data for the road should be included such as assumed traffic volume; percentage heavy vehicles by time of day; and details of the calculation process. These details should be consistent with any traffic study carried out in the EIS.	**Section 6.2**

Table 1 Noise Related SEARs and Agency Requirements	
SEAR	**Section**
▪ where blasting is intended an assessment in accordance with the Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (ANZECC, 1990) should be undertaken. The following details of the blast design should be included in the noise assessment. - bench height, burden spacing, spacing burden ratio; - blast hole diameter, inclination and spacing; and - type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency.	n/a
Describe management and mitigation measures: ▪ determine the most appropriate noise mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, etc.	n/a
▪ for traffic noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects from barriers. Appropriate ameliorative measures may include: - use of alternative transportation modes, alternative routes, or other methods of avoiding the new road usage; - control of traffic (e.g., limiting times of access or speed limitations); - resurfacing of the road using a quiet surface; - use of (additional) noise barriers or bunds; - treatment of the façade to reduce internal noise levels buildings where the night-time criteria is a major concern; - more stringent limits for noise emission from vehicles (i.e. using specially designed 'quite' trucks and/or trucks to use air bag suspension; - driver education; - appropriate truck routes; - limit usage of exhaust brakes; - use of premium muffles on trucks; - reducing speed limits for trucks; - ongoing community liaison and monitoring of complaints; and - phasing in the increased road use.	n/a



FIGURE 1

Project Locality

MAC201202-03

Spring Farm ARRF

KEY

Project Site

- ARRF Area
- Access Road
- Glass Processing Facility
- Liquid Treatment Facility
- Product Destruction Unit
- Separation Hall

0 70 140 210 280 m

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2 Project Description

2.1 Project Overview

Veolia are proposing to increase the throughput capacity of general solid waste at the ARRF by 135,000tpa.

The throughput capacity of organic waste (5,000tpa) will remain unchanged; however the throughput capacity of general solid waste will be increased to 240,000tpa and garden waste increased to receive up to 50,000tpa, to bring the total throughput capacity of general solid waste to 295,000tpa. The throughput capacity of liquid waste will remain unchanged.

Veolia also proposed to seek an extension to the approved operating hours of the site to permit 24-hour dispatch of trucks to transport waste to third party waste management facilities in the Greater Sydney region.

The ARRF will continue to operate in the same manner as approved, with the exception of an increase in traffic movements to accommodate the increased throughput, and additional truck movements during the night period.

It is noted that the proposed modification will utilise existing infrastructure and equipment, and no additional constructions are required.

2.2 Extension to operating hours

Condition 2.14 of the consolidated development consent permits the entry and exit of trucks from the site between the hours of 6am and 10pm.

Veolia currently transfer putrescible waste from the site to the Banksmeadow Transfer Terminal (BTT) as well as Cleanaway's Lucas Heights Resource Recovery Park (RRP). This RRP is the only putrescible landfill operation currently approved in metropolitan Sydney and operates between 3am to 3pm each day. The BTT is also approved for 24-hour operations.

Veolia require the flexibility to dispatch putrescible waste at times, which align with the operating hours of Lucas Heights RRP. Hence, Veolia proposes to extend the operating hours permitted by Condition 2.14 to allow for the entry and exit of trucks 24-hours per day.

Veolia will utilise its fleet of 10 trucks to transport the waste from the ARRF to the BTT, Lucas Heights RRP and other third-party waste receival sites between the hours of 10pm and 6am daily. It is anticipated that the trucks will complete two trips between the facilities during these hours.

2.3 Hours of Operation

Table 2 presents a summary of the existing and proposed hours of operation for the proposed modification.

Table 2 Hours of Operation

Activity	Existing Hours of Operation	Proposed Hours of Operation
Heavy Vehicle Movements	Monday to Sunday: 6am – 10pm	24-hours a day
Waste Processing	Monday to Friday: 6am – 5pm Saturday/Sunday: 8am – 4pm Public Holidays: 6am – 4pm weekdays, 7am – 2pm weekends	No change

2.4 Receiver Review

A review of sensitive receivers in proximity to the project has been completed and are summarised in **Table 3.** Residential receivers are identified by their Noise Catchment Area (NCA), which are areas of receivers that have a similar land use and ambient noise environment. A locality plan showing the position of these receivers in relation to the project is provided in **Figure 2.** It is noted that assessed residential receivers in NCA 1 include future residential receivers.

Table 3 Receiver Locations

Receiver Type / Description	Receiver Type	Land Zoning	Location
NCA 1 – Spring Farm			
Future Residential	Urban Residential	R1 – General Residential	Barrow Road
Existing Residential			Campion Way
Existing Residential			Cuthbert Street
NCA 2 – Mount Annan			
Existing Residential	Suburban Residential	R2 / R3 – Low / Medium Density Residential	Commelina Drive
William Howe Regional Park	Passive Recreation	C1 – National Parks and Nature Reserves	Liz Kernohan Drive
NCA 3 – Menangle Park			
Glenlee Estate	Rural Residential	RU2 – Rural Landscape	60 Menangle Road
Australian Botanic Garden Mount Annan	Passive Recreation	SP1 – Environmental Facility	362 Narellan Road
Sada Group	Industrial	E4 – General Industrial	50 Barrow Road

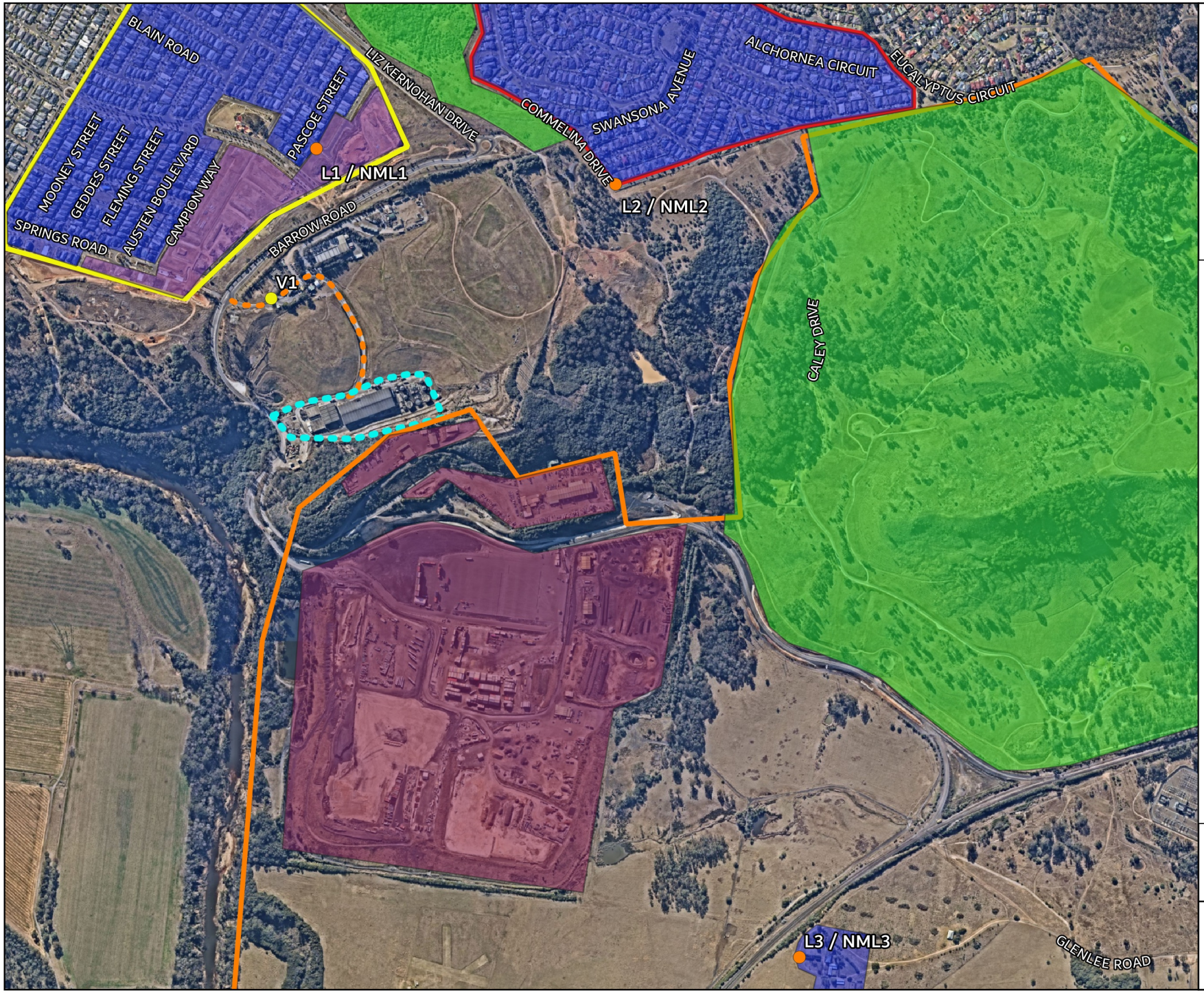


FIGURE 2

Receiver Map

MAC201202-03

Spring Farm ARRF

KEY

Project Site

- ARRF Area
- Access Road
- Logger / Monitoring Location
- Validation Monitoring

NCAs

- NCA 1
- NCA 2
- NCA3

Sensitive Receivers

- Residential
- Future Residential
- Passive Recreation
- Industrial

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3 Noise Policy and Guidelines

3.1 Noise Policy for Industry

The EPA released the Noise Policy for Industry (NPI) in October 2017 which provides a process for establishing noise criteria for consents and licenses enabling the EPA to regulate noise emissions from scheduled premises under the Protection of the Environment Operations Act 1997.

The objectives of the NPI are to:

- provide noise criteria that is used to assess the change in both short term and long-term noise levels;
- provide a clear and consistent framework for assessing environmental noise impacts from industrial premises and industrial development proposals;
- promote the use of best-practice noise mitigation measures that are feasible and reasonable where potential impacts have been identified; and
- support a process to guide the determination of achievable noise limits for planning approvals and/or licences, considering the matters that must be considered under the relevant legislation (such as the economic and social benefits and impacts of industrial development).

The policy sets out a process for industrial noise management involving the following key steps:

1. Determine the Project Noise Trigger Levels (PNTLs) (ie criteria) for a development. These are the levels (criteria), above which noise management measures are required to be considered. They are derived by considering two factors: shorter-term intrusiveness due to changes in the noise environment; and maintaining the noise amenity of an area.
2. Predict or measure the noise levels produced by the development with regard to the presence of annoying noise characteristics and meteorological effects such as temperature inversions and wind.
3. Compare the predicted or measured noise level with the PNTL, assessing impacts and the need for noise mitigation and management measures.
4. Consider residual noise impacts - that is, where noise levels exceed the PNTLs after the application of feasible and reasonable noise mitigation measures. This may involve balancing economic, social and environmental costs and benefits from the proposed development against the noise impacts, including consultation with the affected community where impacts are expected to be significant.

5. Set statutory compliance levels that reflect the best achievable and agreed noise limits for the development.

6. Monitor and report environmental noise levels from the development.

3.1.1 Project Noise Trigger Levels (PNTL)

The policy sets out the procedure to determine the PNTLs relevant to an industrial development. The PNTL is the lower (ie, the more stringent) of the **Project Intrusiveness Noise Level** (PINL) and **Project Amenity Noise Level** (PANL) determined in accordance with Section 2.3 and Section 2.4 of the NPI.

3.1.2 Rating Background Level (RBL)

The Rating Background Level (RBL) is a determined parameter from noise monitoring and is used for assessment purposes. As per the NPI, the RBL is an overall single figure background level representing each assessment period (day, evening and night) over the noise monitoring period. The measured RBLs relevant to the project are contained in **Section 4**.

3.1.3 Project Intrusiveness Noise Level (PINL)

The PINL ($LA_{eq(15min)}$) is the RBL + 5dB and seeks to limit the degree of change a new noise source introduces to an existing environment. Hence, when assessing intrusiveness, background noise levels need to be measured.

Background noise levels need to be determined before intrusive noise can be assessed. The NPI states that background noise levels to be measured are those that are present at the time of the noise assessment and without the subject development operating. For the assessment of modifications to existing premises, the noise from the existing premises should be excluded from background noise measurements. It is note that the exception is where the premises has been operating for a significant period of time and is considered a normal part of the acoustic environment; it may be included in the background noise assessment under the following circumstances:

- the development must have been operating for a period in excess of 10 years in the assessment period/s being considered and is considered a normal part of the acoustic environment; and,
- the development must be operating in accordance with noise limits and requirements imposed in a consent or licence and/or be applying best practice.

Where a PINL has been derived in this way, the derived level applies for a period of 10 years to avoid continuous incremental increases in intrusiveness noise levels. This approach is consistent with the purpose of the intrusiveness noise level to limit significant change in the acoustic environment. The purpose of the PANL is to moderate against background noise creep.

3.1.4 Project Amenity Noise Level (PANL)

The PANL is relevant to a specific land use or locality. To limit continuing increases in intrusiveness levels, the ambient noise level within an area from all combined industrial sources should remain below the recommended ANLs specified in Table 2.2 (of the NPI). The NPI defines two categories of Amenity Noise Levels:

- **Amenity Noise Levels (ANL)** – are determined considering all current and future industrial noise within a receiver area; and
- **Project Amenity Noise Level (PANL)** – is the recommended level for a receiver area, specifically focusing the project being assessed.

Additionally, Section 2.4 of the NPI states: "to ensure that industrial noise levels (existing plus new) remain within the recommended amenity noise levels for an area, a PANL applies for each new source of industrial noise as follows":

PANL for new industrial developments = recommended **ANL** minus 5dBA.

The following exceptions apply when deriving the PANL:

- areas with high traffic noise levels;
- proposed developments in major industrial clusters;
- existing industrial noise and cumulative industrial noise effects; and
- greenfield sites.

The recommended Amenity Noise Levels as per Table 2.2 of the NPI are reproduced in **Table 4**.

Table 4 Amenity Noise Levels

Receiver Type	Noise Amenity Area	Time of day[1]	Recommended Amenity Noise Level dB LAeq(period)
Residential	Rural	Day	50
		Evening	45
		Night	40
	Suburban	Day	55
		Evening	45
		Night	40
	Urban	Day	60
		Evening	50
		Night	45
Hotels, motels, caretakers' quarters, holiday accommodation, permanent resident caravan parks.	See column 4	See column 4	5dB above the recommended Amenity Noise Level for a residence for the relevant noise amenity area and time of day
School Classroom	All	Noisiest 1-hour period when in use	35 (internal) 45 (external)
Hospital ward			
- internal	All	Noisiest 1-hour	35
- external	All	Noisiest 1-hour	50
Place of worship - internal	All	When in use	40
Passive Recreation	All	When in use	50
Active Recreation	All	When in use	55
Commercial premises	All	When in use	65
Industrial	All	When in use	70

Notes: The recommended Amenity Noise Levels refer only to noise from industrial noise sources. However, they refer to noise from all such sources at the receiver location, and not only noise due to a specific project under consideration. The levels represent outdoor levels except where otherwise stated.

Types of receivers are defined as rural residential; suburban residential; urban residential; industrial interface; commercial; industrial – see Table 2.3 and Section 2.7 of the NPI.

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

3.1.5 Maximum Noise Assessment Trigger Levels

The potential for sleep disturbance from maximum noise level events from a project during the night-time period needs to be considered. The NPI considers sleep disturbance to be both awakenings and disturbance to sleep stages.

Where night-time noise levels from a development/premises at a residential location exceed the following criteria, a detailed maximum noise level event assessment should be undertaken:

- $L_{Aeq(15min)}$ 40dB or the prevailing RBL plus 5dBA, whichever is the greater; and/or
- L_{Amax} 52dB or the prevailing RBL plus 15dBA, whichever is the greater.

A detailed assessment should cover the maximum noise level, the extent to which the maximum noise level exceeds the rating background noise level, and the number of times this happens during the night-time period.

Other factors that may be important in assessing the impacts on sleep disturbance include:

- how often the events would occur;
- the distribution of likely events across the night-time period and the existing ambient maximum events in the absence of the development;
- whether there are times of day when there is a clear change in the noise environment (such as during early morning shoulder periods); and
- current understanding of effects of maximum noise level events at night.

3.2 Road Noise Policy

The road traffic noise criteria are provided in the Road Noise Policy (RNP), 2011. The policy sets out noise criteria applicable to different road classifications for the purpose of quantifying traffic noise impacts. Road noise criteria relevant to this assessment are presented in detail in Section 5.3.

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4 Existing Environment

4.1 Unattended Noise Monitoring

To quantify the existing background noise environment of the area, unattended noise monitoring was conducted at three locations representative of the ambient environment surrounding the site. The selected monitoring locations are shown in **Figure 2**.

and are considered representative of the surrounding NCAs and residential receivers as per Fact Sheet B1.1 of the NPI.

The unattended noise survey was conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, 'Acoustics – Description and Measurement of Environmental Noise'.

The measurements were carried out using Svantek 977 noise analysers from Friday 5 May 2023 to Wednesday 16 May 2023. 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 ±0.5dBA.

The results of long-term unattended noise monitoring are provided in **Table 5**. The noise monitoring charts for the background monitoring assessment are provided in **Appendix B**. Data affected by adverse meteorological conditions have been excluded from the results in accordance with methodologies provided in Fact Sheet A4 of the NPI.

Table 5 Background Noise Monitoring Summary

Location	Measured background noise level, RBL, dBA				Measured dB $LA_{eq(period)}$		
	Morning Shoulder	Day	Evening	Night	Day	Evening	Night
L1	35	35	35 (36)[1]	34	49	43	44
L2	31	35 (29)[2]	35	31	47	47	43
L3	35	35 (33)	35 (37)	35	54	49	50

Note: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology Camden Airport (AWS 34.0390°S 150.6890°E 74m AMSL).

Note: Morning shoulder – the period from 6am to 7am Monday to Saturday and 6am to 8am Sundays and public holidays; Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 1: In accordance with Section 2.3 of the NPI. it is recommended that the PINL for the evening is set at no greater than the PINL for the day, and the PINL for the night period is set not higher than the PINL for the day or evening.

Note 2: Where the measured background noise level is below the minimum assumed RBL, as per Table 2.1 of the NPI, the minimum assumed RBL is adopted.

4.2 Attended Noise Monitoring

To supplement the unattended noise assessment and to quantify the ambient noise sources in the community, 15-minute attended measurements were completed at the three unattended monitoring locations (refer to **Figure 2**). The attended noise survey was conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics – Description and Measurement of Environmental Noise".

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 ±0.5dBA.

The attended noise monitoring was conducted using a Svantek 971 noise analyser on Wednesday 16 May 2023. The attended measurements were completed during calm meteorological conditions and confirmed that ambient traffic and commercial noise dominated the surrounding environment. The results of the short-term noise measurement and observations are summarised in **Table 6**.

Table 6 Operator-Attended Noise Survey Results

Date/Time (hrs)	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
	L_{Amax}	L_{Aeq}	L_{A90}		
NML1					
16/05/2023 13:41	78	46	42	WD: SE WS: 1.5m/s 21°C	Local Traffic 40-46 Truck Horn 78 Nearby Construction Noise 40-45 ARRF Site & Impacts <35 Aircraft 28-55
NML2					
16/05/2023 13:07	67	43	33	WD: SW WS: 1.5m/s 21°C	Road Traffic 30-67 Birds 30-61 Aircraft 30-35 ARRF Site <35
NML3					
16/05/2023 12:00	80	59	37	WD: SE WS: 1.0m/s 19°C	Distant Traffic 35-40 Birds 40-55 Aircraft 32-50 Train Pass-by 35-80 Industrial Noise (Not Site) 35-45

5 Assessment Criteria

5.1 Historic Operational Noise Assessment Criteria

The ARRF currently operates under Project Approval PA 05_0098 and Environment Protection Licence (EPL) #12588. The operational noise assessment criteria, including maximum noise level assessment (sleep disturbance), as per Condition 2.12 of PA 05_0098 and L3.1 of EPL #12588 are provided in **Table 7**.

Table 7 Operational Noise Assessment Criteria

Noise Assessment Location	Period[1]	LAeq(15min) Criteria, dB	LA1(1min) Criteria, dB
All existing and proposed	Day	39	--
residences including	Evening	39	--
Glenlee House	Night	35	45

Note 1: Day – the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening – the period from 6pm to 10pm; Night – the remaining periods.

It is noted that project approval (PA 05_0098) was granted for the Jacks Gully Alternative Waste Technology Facility by the Minister on 7 September 2006. As per Fact Sheet A of the NPI, where the PINL represents the controlling criteria, the PNTLS (based on PINLS) apply for a period of 10 years.

Furthermore, a review of the Jacks Gully Alternative Waste Facility Noise Assessment (Heggies, 2006; Ref:10-4578R1R1) identified that at the time of the historic Noise Assessment, the ambient night-time noise environment was considered representative of a rural environment with negligible transportation noise. Due to significant development in the region in the last decade, it is now considered that the noise catchments surrounding the site, as supported by current land use zoning, are typically representative of urban of suburban noise amenity areas. Hence, it is appropriate that contemporary criteria are developed for the proposed modification, based on current measured background noise levels.

5.2 Contemporary Operational Noise Assessment Criteria

Contemporary criteria for the proposed modification have been determined in accordance with the NPI, with reference to measured background noise levels in the surrounding noise catchments (refer **Section 4.1**).

5.2.1 Intrusiveness Noise Levels

The PINL are presented in **Table 8** and have been determined based on the RBL +5dBA and only apply to residential receivers.

Table 8 Project Intrusiveness Noise Levels

Location	Receiver Type	Period[1]	Measured RBL dB L_{A90}	Adopted RBL dB L_{A90}	PINL dB $L_{Aeq(15min)}$
NCA 1 (Spring Farm)	Residential	Morning Shoulder	35	35	40
		Day	35	35	40
		Evening	36	35[3]	40
		Night	34	34	39
NCA 2 (Mount Annan)	Residential	Morning Shoulder	31	31	36
		Day	29	35[2]	40
		Evening	35	35	40
		Night	31	31	36
NCA 3 (Menangle Park)	Residential	Morning Shoulder	35	35	40
		Day	33	35[2]	40
		Evening	37	35[3]	40
		Night	35	35	40

Note 1: Morning shoulder – the period from 6am to 7am Monday to Saturday and 6am to 8am Sundays and public holidays; Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: Where this level is less than 35dBA for the day period, the rating background noise level is set to 35dBA; where the noise level is less than 30dBA for the evening and night periods, the rating background noise level is set to 30dBA.

Note 3: In accordance with Section 2.3 of the NPI. it is recommended that the PINL for the evening is set at no greater than the PINL for the day, and the PINL for the night period is set not higher than the PINL for the day or evening.

5.2.2 Amenity Noise Levels and Project Amenity Noise Levels

The PANL for residential receivers and other receiver types (ie non-residential) potentially affected by the project are presented in **Table 9.** The residential receiver category for each NCA is determined from the applicable land zoning as per Table 2.3 of the NPI (refer to **Table 3**).

Table 9 Amenity Noise Levels and Project Amenity Noise Levels

Receiver Type	Noise Amenity Area	Assessment Period[1]	NPI Recommended ANL dB $LA_{eq(period)}$	ANL dB $LA_{eq(period)}$[2]	PANL dB $LA_{eq(15min)}$[3]
Residential NCA 1	Urban	Morning Shoulder	n/a	n/a	n/a
		Day	60	55	58
		Evening	50	45	48
		Night	45	40	43
Residential NCA 2	Suburban	Morning Shoulder	n/a	n/a	n/a
		Day	55	50	53
		Evening	45	40	43
		Night	40	35	38
Residential NCA 3	Rural	Morning Shoulder	n/a	n/a	n/a
		Day	50	45	48
		Evening	45	40	43
		Night	40	35	38
Passive Recreation	All	When in use	50	45	48
Industrial	All	When in use	70	65	68

Note 1: Morning shoulder – the period from 6am to 7am Monday to Saturday and 6am to 8am Sundays and public holidays; Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: Project Amenity Noise Level equals the Amenity Noise Level -5dB as there is other industry in the area.

Note 3: Includes a +3dB adjustment to the amenity period level to convert to a 15-minute assessment period as per Section 2.2 of the NPI.

5.2.3 Project Noise Trigger Levels

The PNTL are the lower of either the PINL or the PANL. **Table 10** presents the derivation of the PNTLs in accordance with the methodologies outlined in the NPI.

Table 10 Project Noise Trigger Levels

Receiver Type	Noise Amenity Area	Assessment Period[1]	PINL dB $L_{Aeq(15min)}$	PANL dB $L_{Aeq(15min)}$	PNTL dB $L_{Aeq(15min)}$
Residential NCA 1	Urban	Morning Shoulder	40	n/a	40
		Day	40	58	40
		Evening	40	48	40
		Night	39	43	39
Residential NCA 2	Suburban	Morning Shoulder	36	n/a	36
		Day	40	53	40
		Evening	40	43	40
		Night	36	38	36
Residential NCA 3	Rural	Morning Shoulder	40	n/a	40
		Day	40	48	40
		Evening	40	43	40
		Night	40	38	38
Passive Recreation	All	When in Use	N/A	48	48
Industrial	All	When in Use	N/A	63	63

Note 1: Morning shoulder – the period from 6am to 7am Monday to Saturday and 6am to 8am Sundays and public holidays; Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5.2.4 Maximum Noise Trigger Levels

The maximum noise trigger levels for the closest residential receivers (NCA 1), shown in **Table 11** are based on night-time RBLs and trigger levels as per Section 2.5 of the NPI. The trigger levels will be applied to transient noise events that have the potential to cause sleep disturbance.

Table 11 Maximum Noise Trigger Levels

Residential Receivers – Nearest Receivers (NCA 1)			
$L_{Aeq(15min)}$		L_{Amax}	
40dB $L_{Aeq(15min)}$ or RBL + 5dB		52dB L_{Amax} or RBL + 15dB	
Trigger	40	Trigger	52
RBL +5dB	39	RBL +15dB	49
Highest	**40**	**Highest**	**52**

Note: Monday to Saturday; Night 10pm to 7am. On Sundays and Public Holidays Night 10pm to 8am. Morning Shoulder 5am to 7am; Evening Shoulder 10pm to 12am.

Note: NPI identifies that maximum of the two values is to be adopted which is shown in bold font.

5.3 Road Traffic Noise

MAC understands that access to the site from the Camden Bypass would be via Liz Kernohan Drive and Barrow Road. In accordance with Section 2.2 of the RNP, Liz Kernohan Drive and Barrow Road are classified under the 'sub arterial road' category. The road traffic noise assessment criteria for this assessment, as per the RNP, are presented in **Table 12.**

Table 12 Road Traffic Noise Assessment Criteria

Road category	Type of project/development	Assessment Criteria – dBA	
		Day (7am to 10pm)	Night (10pm to 7am)
Freeways/arterial/ sub-arterial Roads	Existing residences affected by additional traffic on freeways/arterial/sub-arterial roads generated by land use developments	60dB LAeq(15hr)	55dB LAeq(9hr)

Additionally, the RNP states where existing road traffic noise criteria are already exceeded, any additional increase in total traffic noise level should be limited to 2dBA, which is generally accepted as the threshold of perceptibility to a change in noise level.

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6 Modelling Methodology

A computer model was developed to quantify project noise emissions to neighbouring receivers using DGMR (iNoise, Version 2024) noise modelling software. iNoise is an intuitive and quality assured software for industrial noise calculations in the environment. 3D noise modelling is considered industry best practice for assessing noise emissions from projects.

The model incorporated a three-dimensional digital terrain map giving all relevant topographic information used in the modelling process. Additionally, the model uses relevant noise source data, ground type, attenuation from barrier or buildings and atmospheric information to predict noise levels at the nearest potentially affected receivers. Where relevant, modifying factors in accordance with Fact Sheet C of the NPI have been applied to calculations.

The model calculation method used to predict noise levels was in accordance with ISO 9613:1 and ISO 9613:2 including corrections for meteorological conditions using CONCAWE[1]. The ISO 9613 standards are the most used noise prediction method worldwide. Many countries refer to ISO 9613 in their noise legislation. However, the ISO 9613 standard does not contain guidelines for quality assured software implementation, which leads to differences between applications in calculated results. In 2015 this changed with the release of ISO/TR 17534-3. This quality standard gives clear recommendations for interpreting the ISO 9613 method. iNoise fully supports these recommendations. The models and results for the 19 test cases are included in the software.

[1] Report no. 4/18, "the propagation of noise from petroleum and petrochemical complexes to neighbouring communities", Prepared by C.J. Manning, M.Sc., M.I.O.A. Acoustic Technology Limited (Ref.AT 931), CONCAWE, Den Haag May 1981

6.1 Operational Noise Modelling Parameters

6.1.1 Meteorological Analysis

Noise emissions can be influenced by prevailing weather conditions. Light stable winds (<3m/s) and temperature inversions have the potential to increase noise at a receiver.

Fact Sheet D of the NPI provides two options when considering meteorological effects:

- adopt the noise enhancing conditions for all assessment periods without an assessment of how often the conditions occur – a conservative approach that considers a source to receiver winds for all receivers and F class temperature inversions with wind speeds up to 2m/s at night; or
- determine the significance of noise enhancing conditions. This requires assessing the significance of temperature inversions (F and G Class stability categories) for the night-time period and the significance of light winds up to 3m/s for all assessment periods during stability categories other than E, F or G.

Standard meteorological conditions and noise-enhancing meteorological conditions as defined in Table D1of the NPI are reproduced in **Table 13**.

Table 13 Standard and Noise-Enhancing Meteorological Conditions

Meteorological Conditions	Meteorological Parameters
Standard Meteorological Conditions	Day/evening/night: stability categories A–D with wind speed up to 0.5m/s at 10m AGL.
Noise Enhancing Meteorological Conditions	Daytime/evening: stability categories A–D with light winds (up to 3 m/s at 10m AGL). Night-time: stability categories A–D with light winds (up to 3m/s at 10m AGL) and/or stability category F with winds up to 2m/s at 10 m AGL.

A detailed analysis of the significance of noise enhancing conditions has not been undertaken and hence, the NPI noise enhancing meteorological conditions have been applied to the noise modelling assessment are presented in **Table 14**.

Table 14 Modelled Meteorological Parameters

Assessment Condition[1]	Temperature	Wind Speed[2]/ Direction	Relative Humidity	Stability Class[2]
Day	20°C	3m/s all directions	50%	D
Evening	10°C	3m/s all directions	50%	D
Night / Morning Shoulder	10°C	2m/s all directions	50%	F

Note 1: Morning shoulder – the period from 6am to 7am Monday to Saturday and 6am to 8am Sundays and public holidays; Dayy - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: Implemented using CONCAWE meteorological corrections.

6.1.2 Operational Noise Modelling Scenario and Sound Power Levels

The amendments to the operation of the ARRF include an increase in throughput capacity from 160,000tpa to 295,000tpa, to be processed within the existing ARRF and an increase in hours of operation to allow for the entry and exit of trucks 24-hours per day. It is noted that the proposed modification would utilise existing infrastructure and equipment.

Based on the proposed operations, the following modelling scenarios were adopted:

- Morning Shoulder Period (6am to 7am) (noise enhancing conditions): operation of the ARRF including, glass processing facility, product destruction unit and tank farm; and, up to 39 heavy vehicles movements per hour;
- Day Period (noise enhancing conditions): operation of the ARRF including, glass processing facility, product destruction unit and tank farm; and, up to 39 heavy vehicles movements per hour; Evening Period (noise enhancing conditions): up to 20 heavy vehicles movements per hour; and
- Night Period (noise enhancing conditions): up to 20 heavy vehicles movements per hour.

Mobile and fixed plant noise emission data used in modelling for this assessment were determined through direct measurement on site.

6.1.3 Sound Power Levels

Attended noise monitoring was undertaken at the Facility on Wednesday 27 September 2023, with noise levels measured from the Glass Processing Building, Separation Hall / Product Destruction Unit, Liquid Treatment Facility (Tank Farm) and heavy vehicle movements. Monitoring of the ARRF buildings including internal and external measurements to derive Sound Power Levels (SWLs) for emitting facades. The SWL for truck pass-by events were calculated from the log average of multiple truck pass-by events.

The noise emission levels used in modelling are summarised in **Table 15**.

Table 15 Single Octave Equipment Sound Power Levels, dB $LA_{eq(15min)}$ (re10-12W)

Source Location	Source/Item	Octave Band Centre Frequency, Hz								Total, dBA[1]
		63	125	250	500	1000	2000	4000	8000	
Glass Processing Building	North Façade[2]	41	43	44	48	49	49	46	42	55
	South Façade[2]	41	43	44	48	49	49	46	42	55
	West Façade[2]	41	43	44	48	49	49	46	42	55
Separation Hall / Product Destruction Unit	North Façade[2]	73	83	90	93	94	94	90	79	100
	East Façade[2]	70	88	95	96	96	96	92	79	102
	South Façade[2]	54	64	71	74	75	75	71	60	81
Liquid Treatment Facility	Tank Farm	83	96	91	100	101	102	98	90	107
Site / Access Road	Heavy Vehicles	79	82	87	91	97	95	88	80	100
Maximum Noise Level Assessment, LA_{max}										
Access Road	Heavy Vehicles	83	86	91	95	101	99	92	84	104
ARRF	Airbrake	76	80	84	96	101	106	111	111	115

Note 1: Sound Power Level measured by MAC personnel.

Note 2: Noise level at external façade.

6.1.4 Annoying Characteristics

Fact Sheet C of the NPI provides guidelines for applying 'modifying factors' adjustments to account for annoying noise characteristics such as low-frequency, tonality, intermittent noise, irregular or noise of short duration. An assessment of annoying characteristics has been undertaken for the Project, and is provided in **Appendix C**. It is noted that due to the nature of the ARRF operations, intermittent noise is unlikely to be a feature of the site and has not been considered further.

The analysis of low-frequency noise found that modelled noise levels from all sources exceeded the screening test of C-A weighted noise levels greater or equal to 15dB. Further analysis was undertaken to determine whether noise levels exceeded the threshold in any octave band. The results of the assessment indicated that Z weighted noise levels remained below the relevant thresholds for all octave bands for each receiver location. Hence, no correction for low-frequency noise is applied.

An assessment of tonality was undertaken to identify dominant tones associated with the ARRF. The tonal noise correction applies when the level of an octave band exceeds the level of the adjacent band on either side by at least 5dB. The results of the tonality assessment demonstrates that the ARRF operations do not result in dominant tones. Hence, no correction for tonality is applied.

6.1.5 Noise Validation

Validation of the noise model was undertaken via a combination of attended noise measurement and predictive noise modelling in accordance with Section 7 of the NPI. Noise monitoring was undertaken off Jacks Gully Tip Road, approximately 300m to the north-north-west of the ARRF. The monitoring location (V1), shown in **Figure 2** was selected as providing a safe location to undertake the monitoring and having a good signal to noise ratio to enable validation of the noise model.

It is noted that the noise environment at the monitoring location was influenced by the operation of the Spring Farm Material Recycling Facility (MRF) located approximately 200m to the east-northeast of the validation monitoring location. Hence, noise emissions (SWLs) associated with the operation of the MRF (measured on site) were included in the validation model.

A noise modelling scenario was developed based on the SWLs of plant and equipment measured on site, and their relative positions within the facility. Noise sources from the MRF included noise through each façade of the MRF building and an excavator operating in the small vehicle drop-off area. Noise sources from the ARRF included noise through each exposed faced of the Glass Processing Building and the Separation Hall / Product Destruction Unit, and the Liquid Treatment Facility.

The results of the noise model validation (refer **Table 16**) indicate that there is a difference of 1.6dB $LA_{eq(15min)}$ between the measured and modelled noise levels. Hence, as the difference between the measured and modelled noise levels is within the industry accepted model tolerance of +/-2dBA, the noise model is considered representative of the real world within the limitations of the prediction algorithm, and no model calibration is required.

Table 16 Results of Model Validation

Monitoring Location	Measured Noise Level dB $LA_{eq(15min)}$	Modelled Noise Level dB $LA_{eq(15min)}$	Difference
V1	52.9	51.3	1..6dBA

6.2 Road Noise Assessment Methodology

The ARRF is accessed via Barrow Road, which connects to Liz Kernohan Drive and the Camden Bypass. There is a single designated entry / exit driveway and internal access roads through the RRP.

MAC understands that the proposed modification would result in an additional 75 heavy two-way daily truck movements (53 trucks in and 22 trucks out). There would be no change to the number of light vehicles accessing the ARRF.

A baseline traffic survey was undertaken by Trans Traffic Survey, on behalf of SCT Consulting from Friday 16 June 2023 to Friday 23 June 2023, at Liz Kernohan Drive, north of Barrow Road. The results of the traffic survey are summarised in **Table 17**.

Table 17 Baseline Traffic Survey, June 2023

Assessment Period	Light Vehicles	Heavy Vehicles	Total Vehicles
Liz Kernohan Drive			
Day (7am to 10pm)	1,370	241	1,611
Night (10pm to 7am)	434	60	494

Due to the low traffic volume generated by the project over a typical day during the construction phase, road traffic noise calculation methods such as Calculation of Road Traffic Noise (CRTN - ISBN 0 11 550847 3) by Department of Transport (UK) 1988 or Traffic Noise Model (TNM) by the United States Department of Transport, Federal Highway Administration are not considered appropriate as they are primarily intended to calculate noise emissions from motorways and highways. Whilst each method has a low volume correction, the Project traffic volume is out of the scope of these methods.

Therefore, road traffic noise has been modelled using iNoise modelling software using ISO 9613-1 and ISO 9613-2 calculation methods, representing the road traffic as “moving sources” along the transport route using the parameters presented in **Table 18.** It is noted that the proposed modification would generate an additional 75 heavy vehicle movements per 24-hour period. Additional heavy vehicle movements generated by the proposed modification for the day period (7am to 10pm) and night period (10pm to 7am) were estimated based on a constant rate of vehicle movements across a 24-hour period.

Table 18 Road Traffic Noise Modelling Parameters						
Noise Source/Item	Source	Lw dBA re 10^{-12} W	Movements[1]		Speed, km/h[2]	Source Height, m[3]
			Day	Night		
Heavy Vehicles	Existing	104	241	60	70	1.5
	Proposed Modification	104	47	28	70	1.5
Light Vehicle	Existing	96	1,370	434	70	0.75
	Proposed Modification	96	0	0	70	0.75

Note 1: Day period 7am to 10pm, night period 10pm to 7am.

Note 2: Sign-posted speed limit of 70km/h.

Note 3: Height above ground level.

A review of sensitive receivers between the Camden Bypass and the site entry / exit off Barrow Road identified that residences along the travel route are typically setback behind a pre-cast concrete noise wall providing acoustic attenuation. The nearest residential receiver with direct line of sight (ie two storey dwelling) to the travel route was identified as 37 Pascoe Street, which is adjacent to Liz Kernohan Drive. It is noted that where road traffic noise levels are predicted to comply with the relevant criteria at the most affected receivers Liz Kernohan Drive, road traffic noise levels are anticipated to comply with the relevant criteria for receivers adjacent to Barrow Road also.

It is noted that several two storey dwellings are located off Minora Circuit, adjacent to Liz Kernohan Drive, between Camden Bypass and Richardson Road. Due to the close proximity of these receivers to Camden Bypass, it is considered that these receivers would be less sensitive to a change in road traffic noise levels associated with traffic generated by the proposed modification. It is also noted that since approval for 24-hour operations of the Glenlee Intermodal, heavy vehicles are a common feature of the night period traffic in the locality.

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7 Noise Assessment Results

7.1 Operational Noise Results

The predicted noise levels at each receiver during day (prevailing winds), evening and night (inversion conditions) are provided in **Table 19**. The noise contour maps for the ARRF operation are provided in **Appendix D**.

It is noted that the assessment of noise levels during the night period considered activities during the period from 6am to 7am, with all site operations occurring. For the period between 10pm and 6am, where only vehicle movements would occur, predicted noise levels would be consistent with the evening period.

The results of the predictive modelling show that noise emissions from the ARRF satisfy the PNTL at all residential receivers, for each operational scenario. The assessment conservatively considered noise-enhancing meteorological conditions (prevailing winds or temperature inversions) during each assessment period.

Table 19 Predicted Operational Noise Levels, dBA $LA_{eq(15min)}$

Receiver Type	Location	Predicted Noise Level, dB $LA_{eq(15min)}$				PNTL	Compliant
		Shoulder	Day	Evening	Night		
NCA 1 – Spring Farm							
Future Residential	Barrow Road	<30 - 36	<30 - 36	<30	<30	40/40/40/39	✓
Residential	Campion Way	32 - 35	32 - 35	<30	<30		✓
	Cuthbert Street	<30 - 35	<30 - 35	<30	<30		✓
NCA 2 – Mount Annan							
Residential	Commelina Drive	<30	<30	<30	<30	36/40/40/36	✓
Passive Recreation	William Howe Regional Park	<30	<30	<30	<30	48	✓
NCA 3 – Menangle Park							
Residential	Glenlee Estate	<30	<30	<30	<30	40/40/40/38	✓
Passive Recreation	Botanic Garden	<30	<30	<30	<30	48	✓
Industrial	Sada Group	39	39	<30	<30	63	✓

Note: Morning shoulder – the period from 6am to 7am Monday to Saturday and 6am to 8am Sundays and public holidays; Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

7.2 Maximum Noise Level Assessment

In assessing sleep disturbance, a typical LAmax noise source of 115dB was used to represent airbrake release at the ARRF, and a measured LAmax noise source of 104dB was used to represent heavy vehicle pass by events. Maximum noise levels were propagated to the nearest residential receivers, under F Class stability conditions (ie worst case).

It is noted that the assessment of maximum noise levels from heavy vehicle pass-by events has considered the entire length of the access road. Maximum noise levels were modelled as a LAmax moving source with a resolution of 5m between each calculation point, with the LAmax noise level for each receiver representative of the most exposed (worst case) location along the access road.

The results of the analysis identify that maximum noise trigger level will be satisfied for all residential receivers, hence no further assessment or detailed analysis is required. Predicted noise levels from LAmax events are presented in **Table 20**.

Table 20 Predicted Maximum Noise Levels, dBA LAmax

Receiver Type	Location	Predicted Noise Level, dB LAmax)		MNL Trigger Level dB LAmax	Compliant
		Pass-by Event	Airbrake Release		
NCA 1 – Spring Farm					
Future Residential	Barrow Road	38	34	52	✓
Residential	Campion Way	39	37		✓
	Cuthbert Street	38	37		✓
NCA 2 – Mount Annan					
Residential	Commelina Drive	<30	<30	52	✓
NCA 3 – Menangle Park					
Residential	Glenlee Estate	<30	<30	52	✓

Note: Night - 10pm to 7am Sunday to Friday and 10pm Saturday to 8am Sunday.

7.3 Traffic Noise Results

The results of the traffic noise calculations for conservative operational road traffic scenarios are presented in **Table 21** for the closest residential receivers to Liz Kernohan Drive. The traffic noise contribution from the proposed modification is predicted to remain below the relevant day period and night period assessment criteria for the potentially most affected residential receivers adjacent to Liz Kernohan Drive.

Furthermore, it is anticipated that the increase in road traffic noise levels, due to additional project-related traffic movements on Liz Kernohan Drive, would be below the +2dBA increase criterion.

Table 21 Operational Road Traffic Noise Levels – Residential Receivers

Offset Distance (m)	Assessment Criteria[1] dB LAeq(period)	Traffic Noise dB LAeq(period)		
		Existing Traffic Noise	Future Traffic Noise	Total Change
37 Pascoe Street				
10m	60 (Day)	53.5	53.9	+0.4dBA
	55 (Night)	50.1	51.1	+1.0dBA

Note 1: Day 7am to 10pm; Night 10pm to 7am.

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8 Discussion and Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has conducted a Noise Impact Assessment to quantify noise emissions associated with the modification of operations at the Spring Farm Advanced Resource Recovery Facility, located at 20 Barrow Road, Spring Farm, NSW.

The assessment has quantified potential operational noise emissions associated with the Glass Processing Building, Separation Hall / Product Destruction Unit, Liquid Treatment Facility and heavy vehicle movements.

The results of the Noise Impact Assessment demonstrate that operational noise levels would achieve the relevant NPI criteria for operations during all assessment periods (morning shoulder, day, evening and night) under noise enhancing meteorological conditions.

An assessment of maximum noise trigger levels demonstrated that noise emissions from heavy vehicle pass-by events and airbrake release on site are predicted to remain below the EPA trigger levels for sleep disturbance at all receiver locations.

The Noise Impact Assessment demonstrates that the $L_{Aeq(15hr)}$ day period and $L_{Aeq(9hr)}$ night period road traffic noise levels would satisfy relevant RNP criteria.

In summary, the Noise Impact Assessment supports the Modification Application without further ameliorative measures being required.

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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

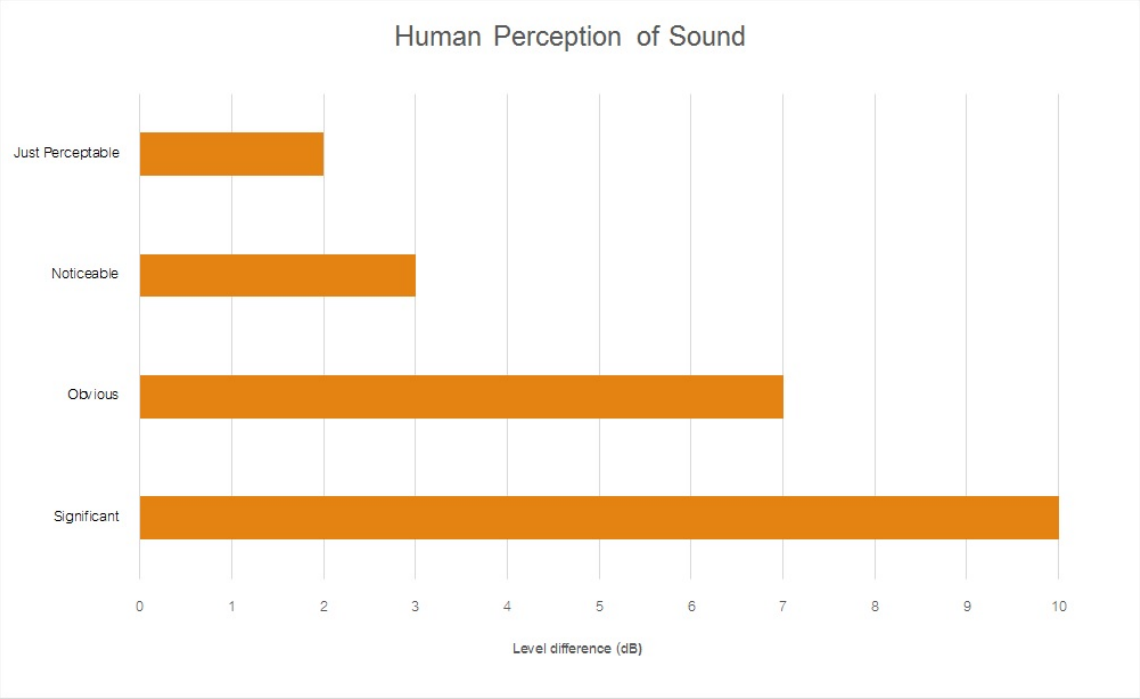
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for 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.
LAmax	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 (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by 10.log10 (W/Wo). Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw 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

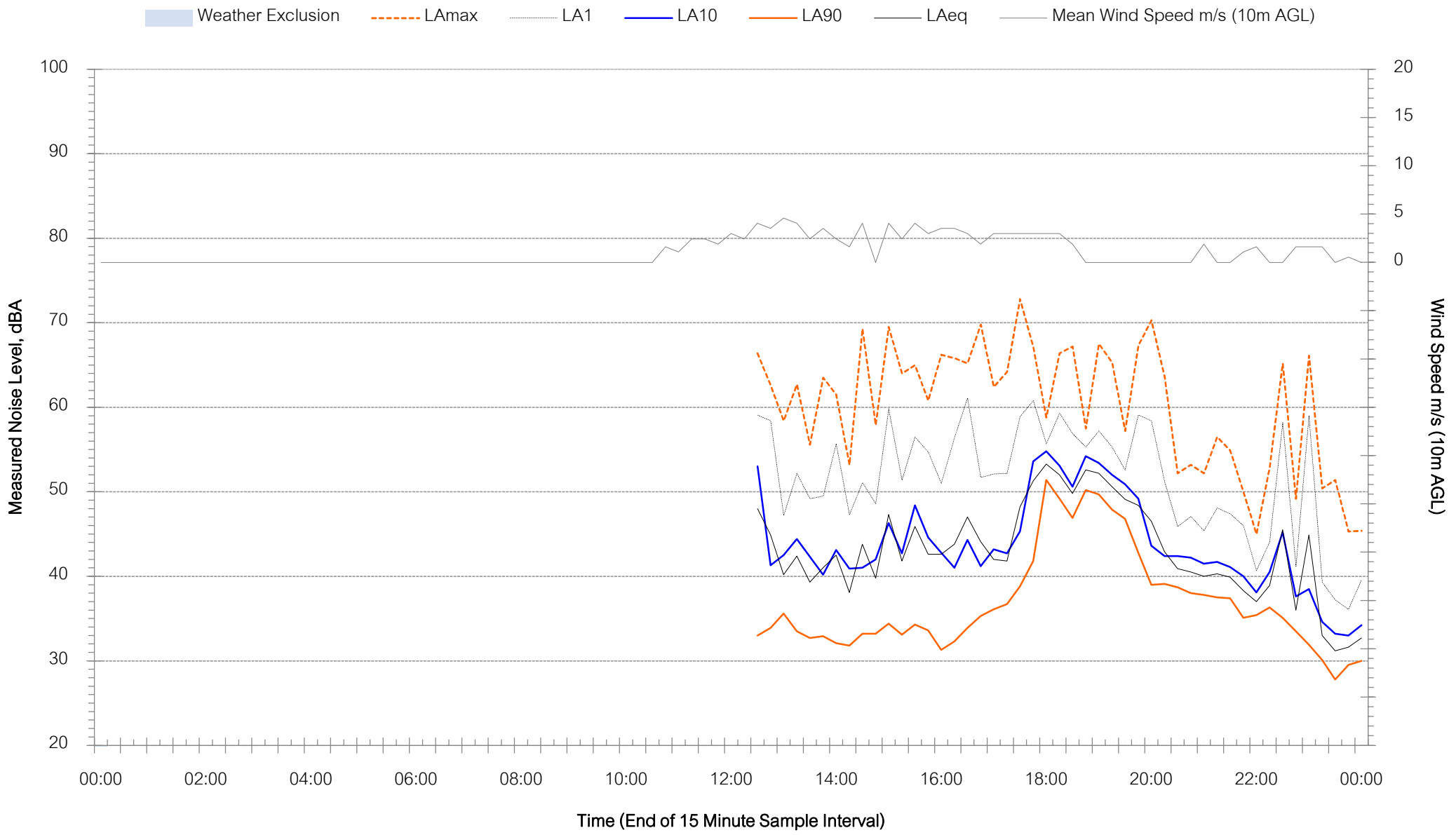


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Appendix B – Noise Monitoring Charts

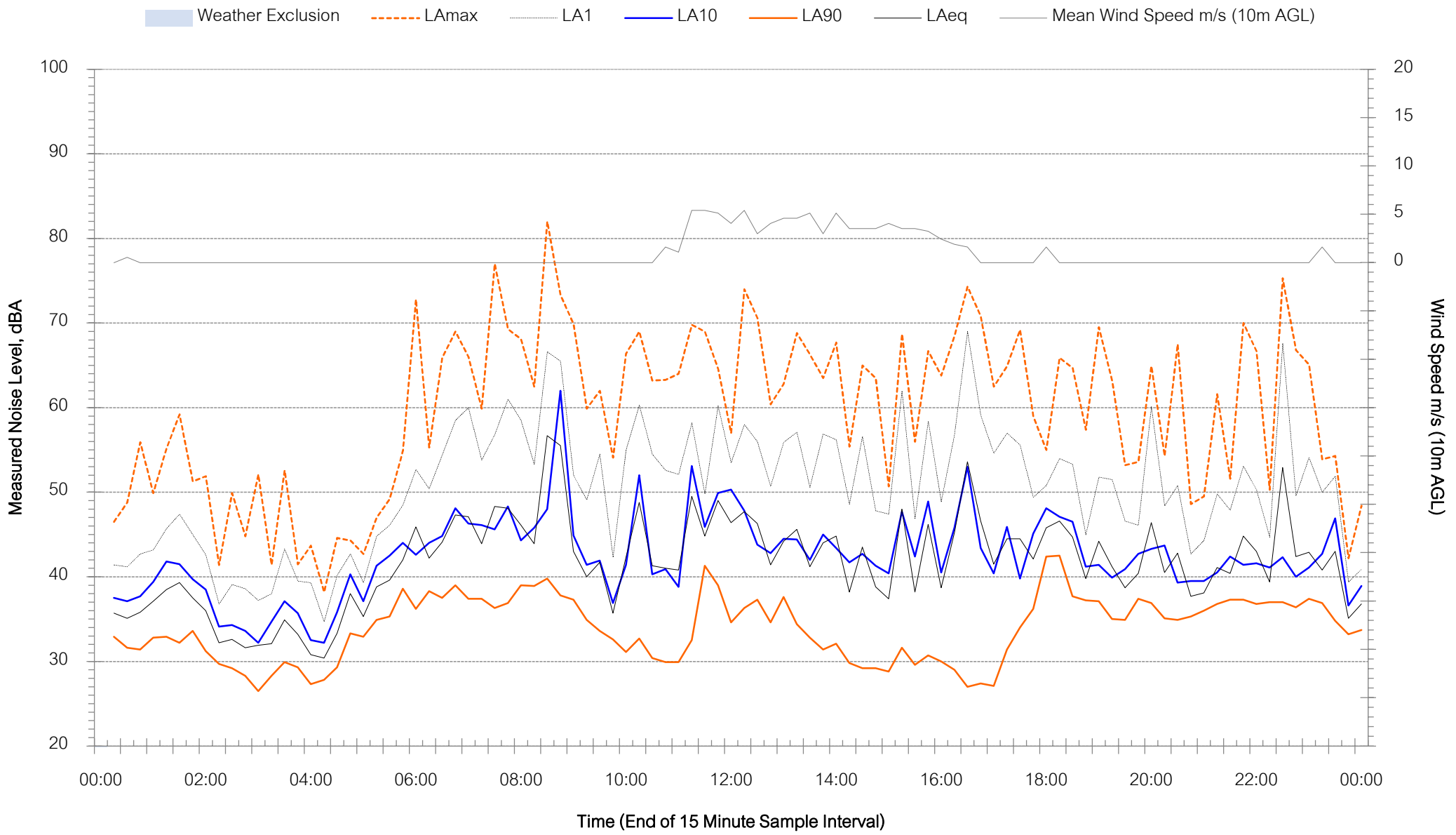
Background Noise Levels

Commelina Drive, Mount Annan - Friday 5 May 2023



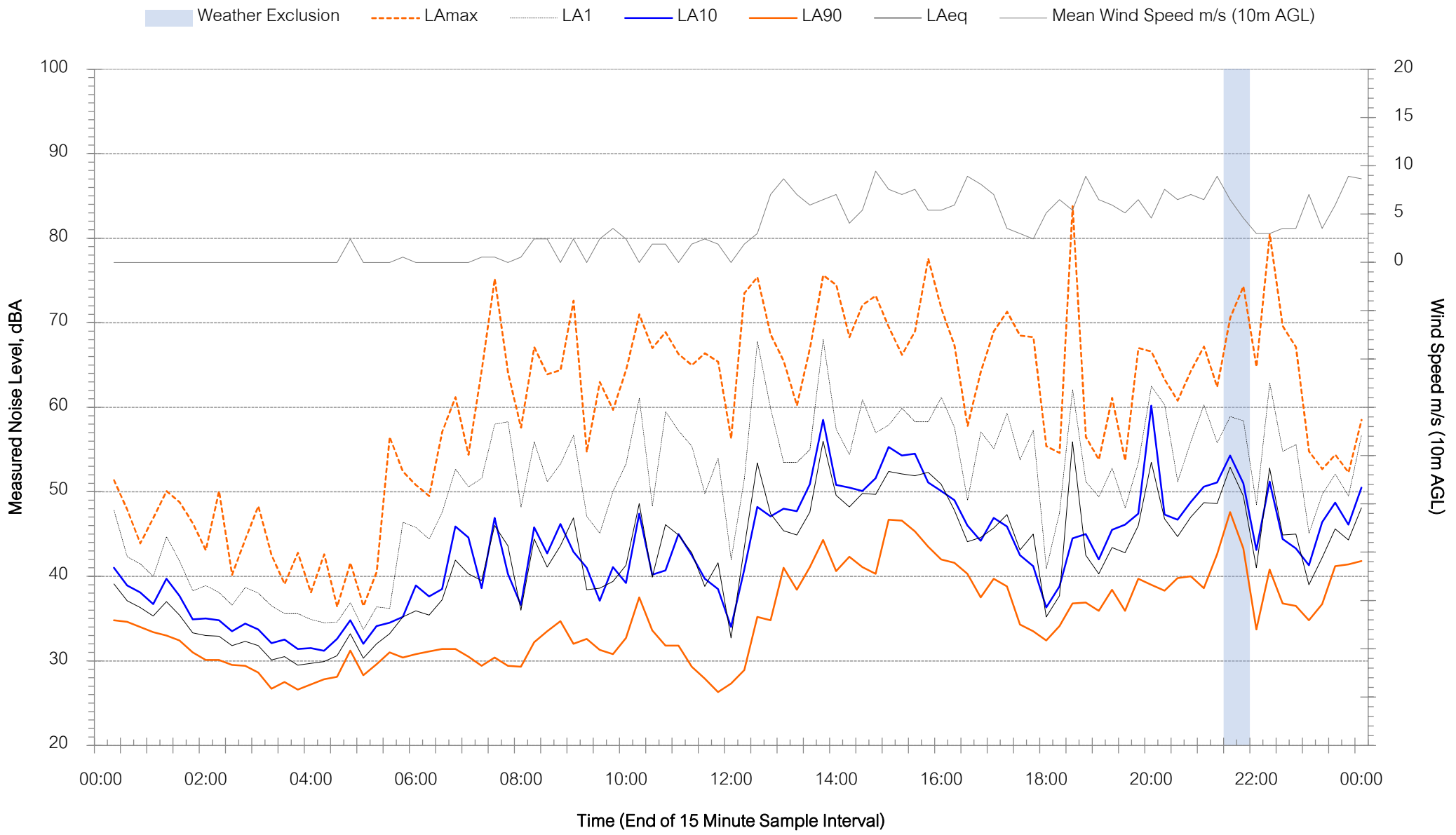
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Commelina Drive, Mount Annan - Saturday 6 May 2023



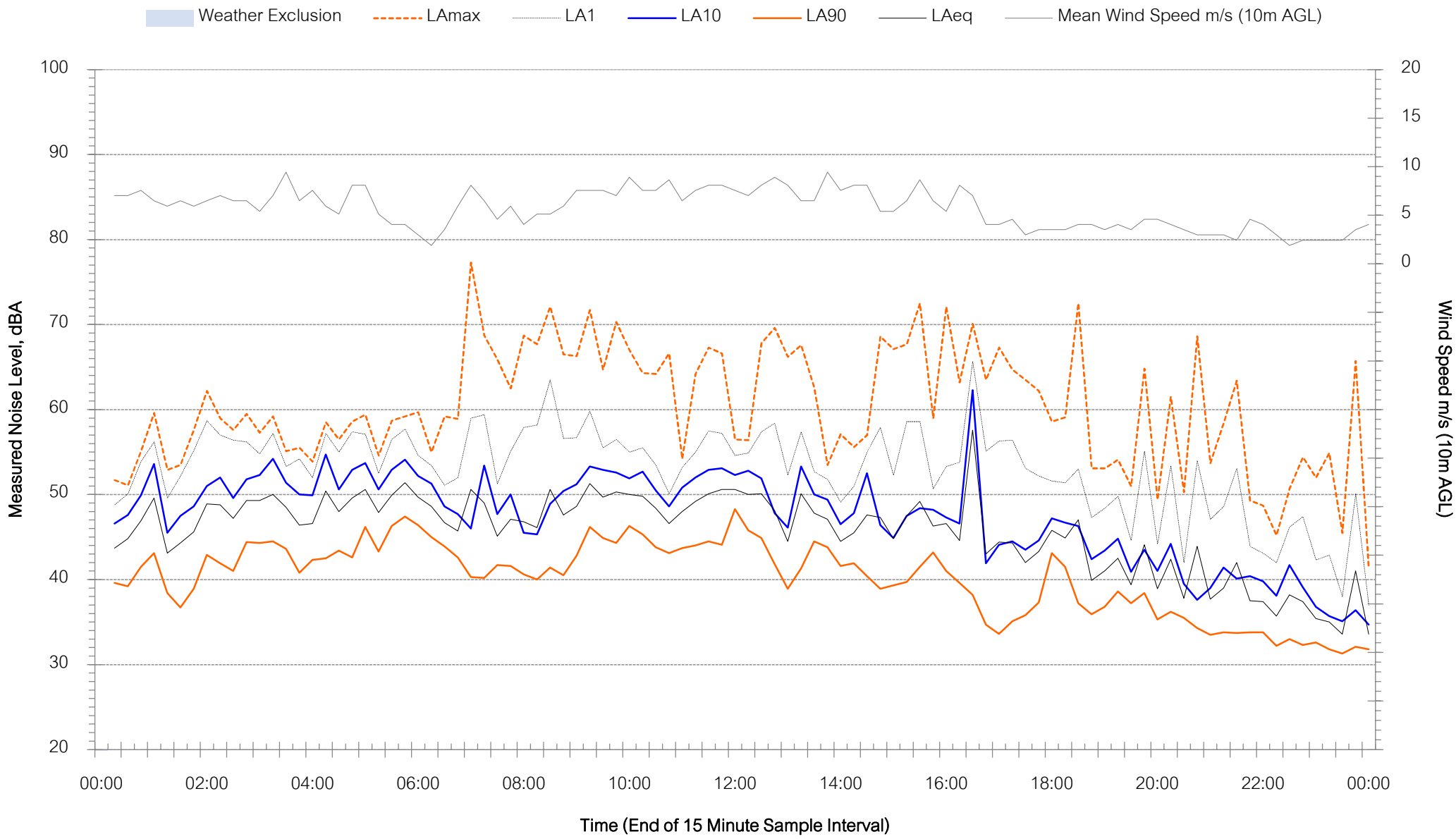
Background Noise Levels

Commelina Drive, Mount Annan - Sunday 7 May 2023



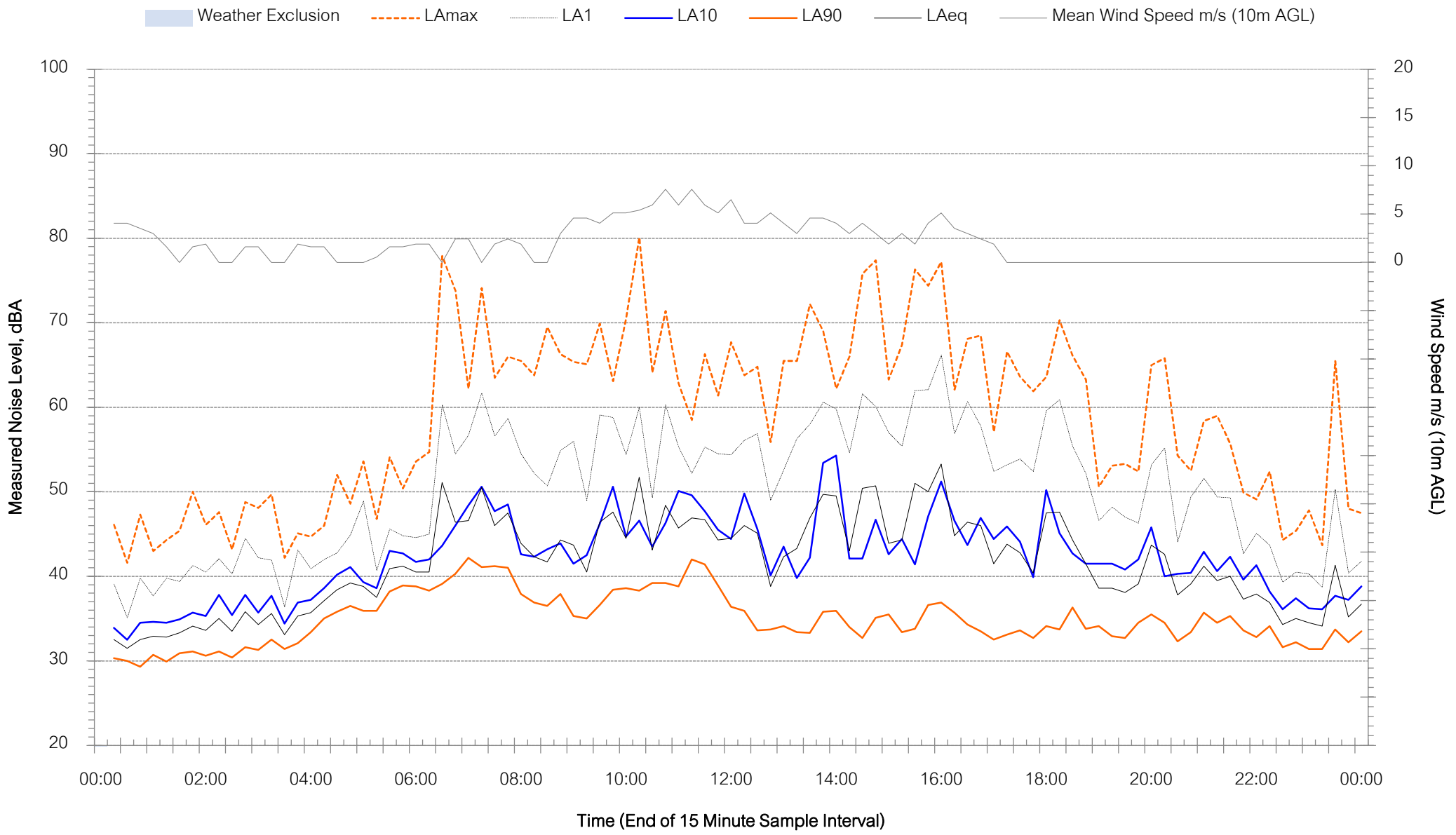
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Commelina Drive, Mount Annan - Monday 8 May 2023



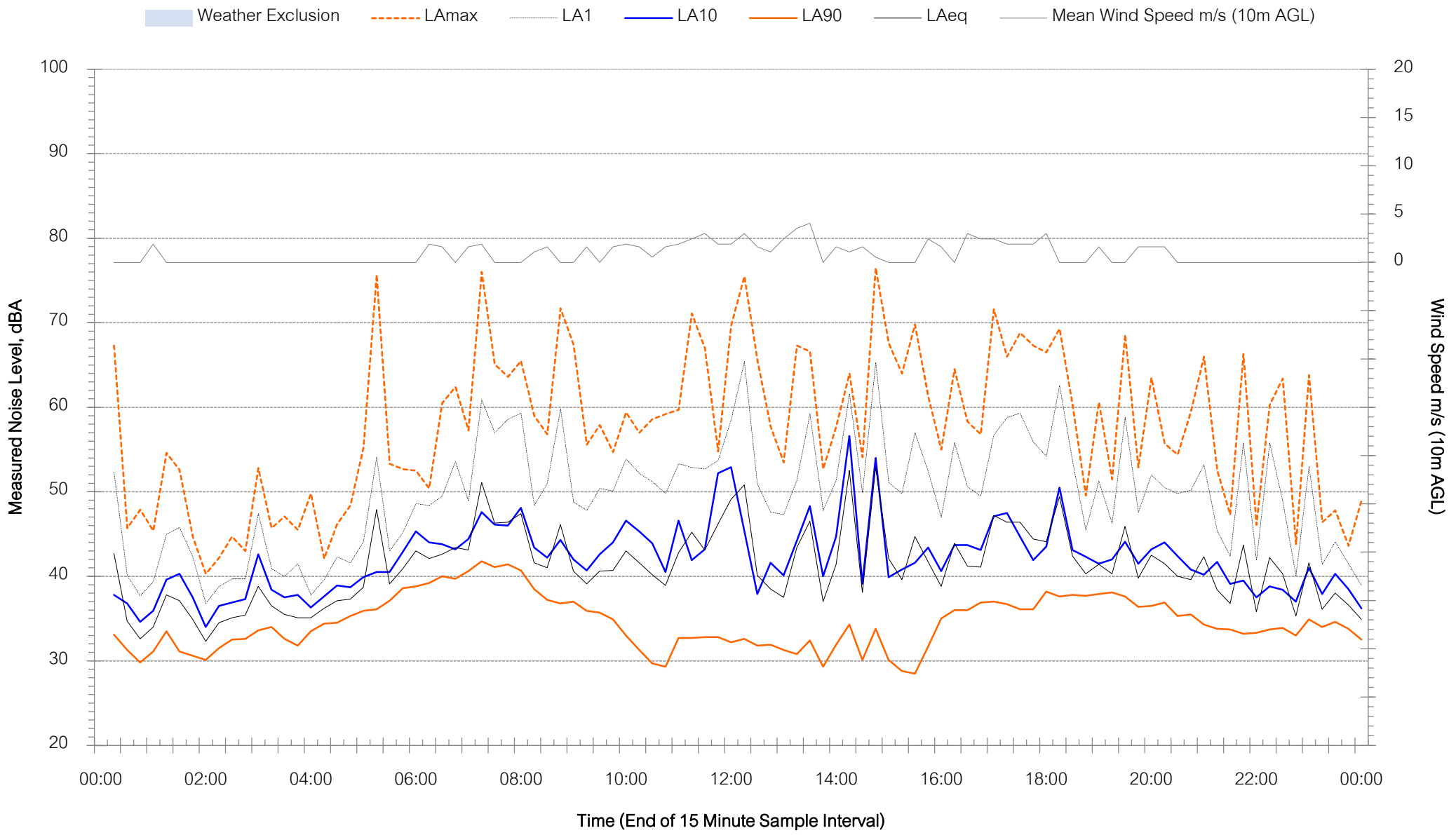
Background Noise Levels

Commelina Drive, Mount Annan - Tuesday 9 May 2023



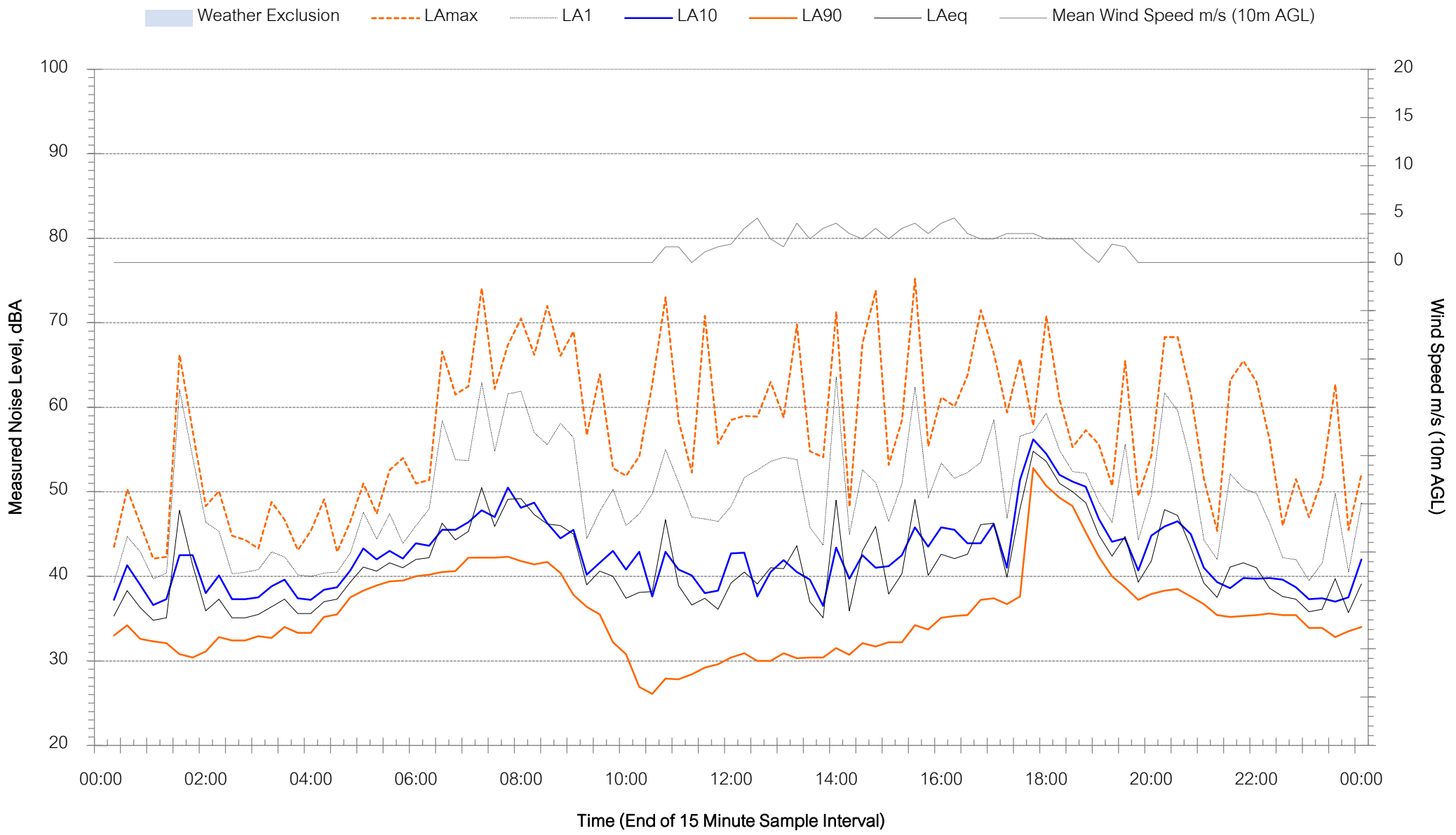
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Commelina Drive, Mount Annan - Wednesday 10 May 2023



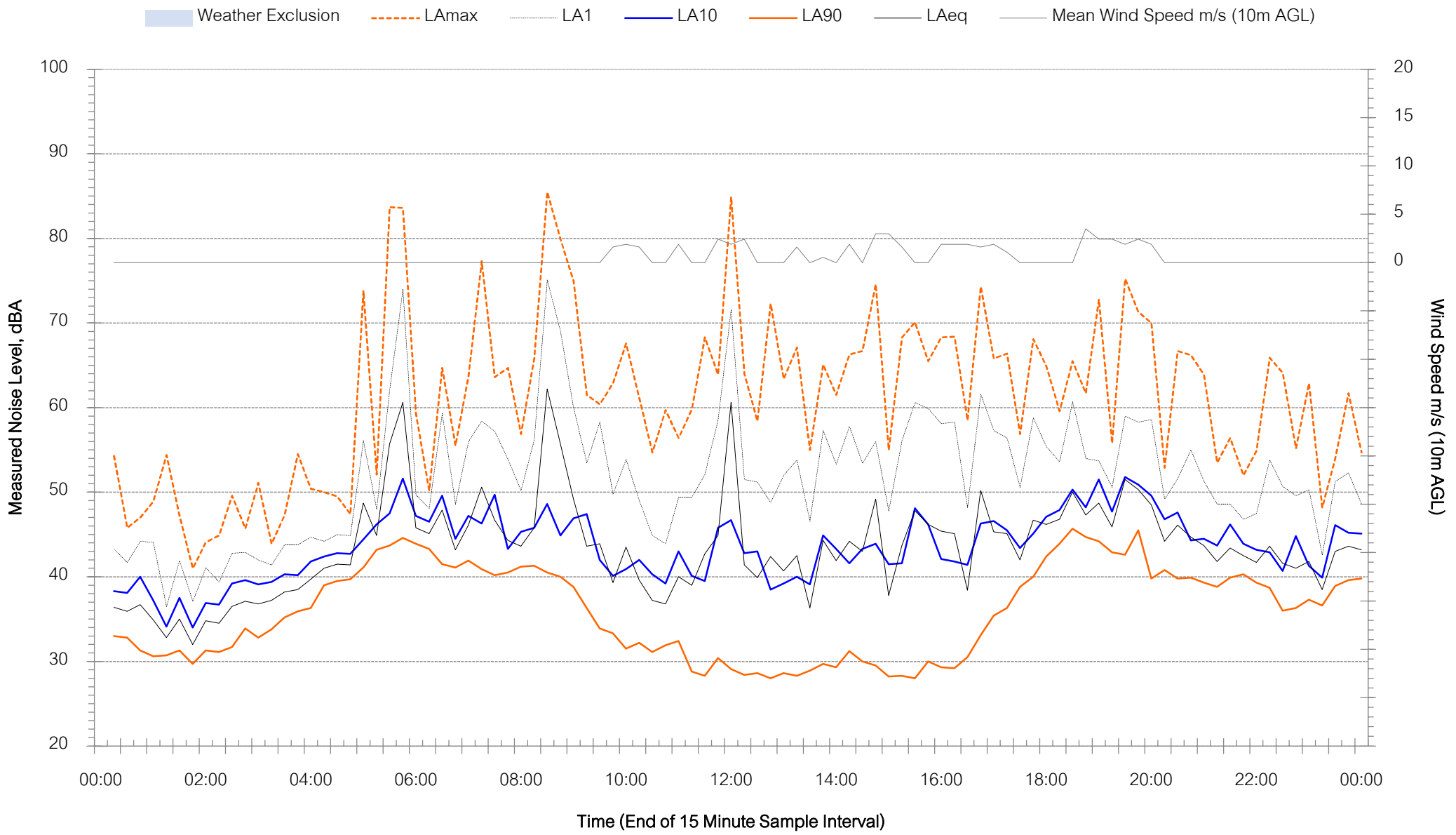
Background Noise Levels

Commelina Drive, Mount Annan - Thursday 11 May 2023



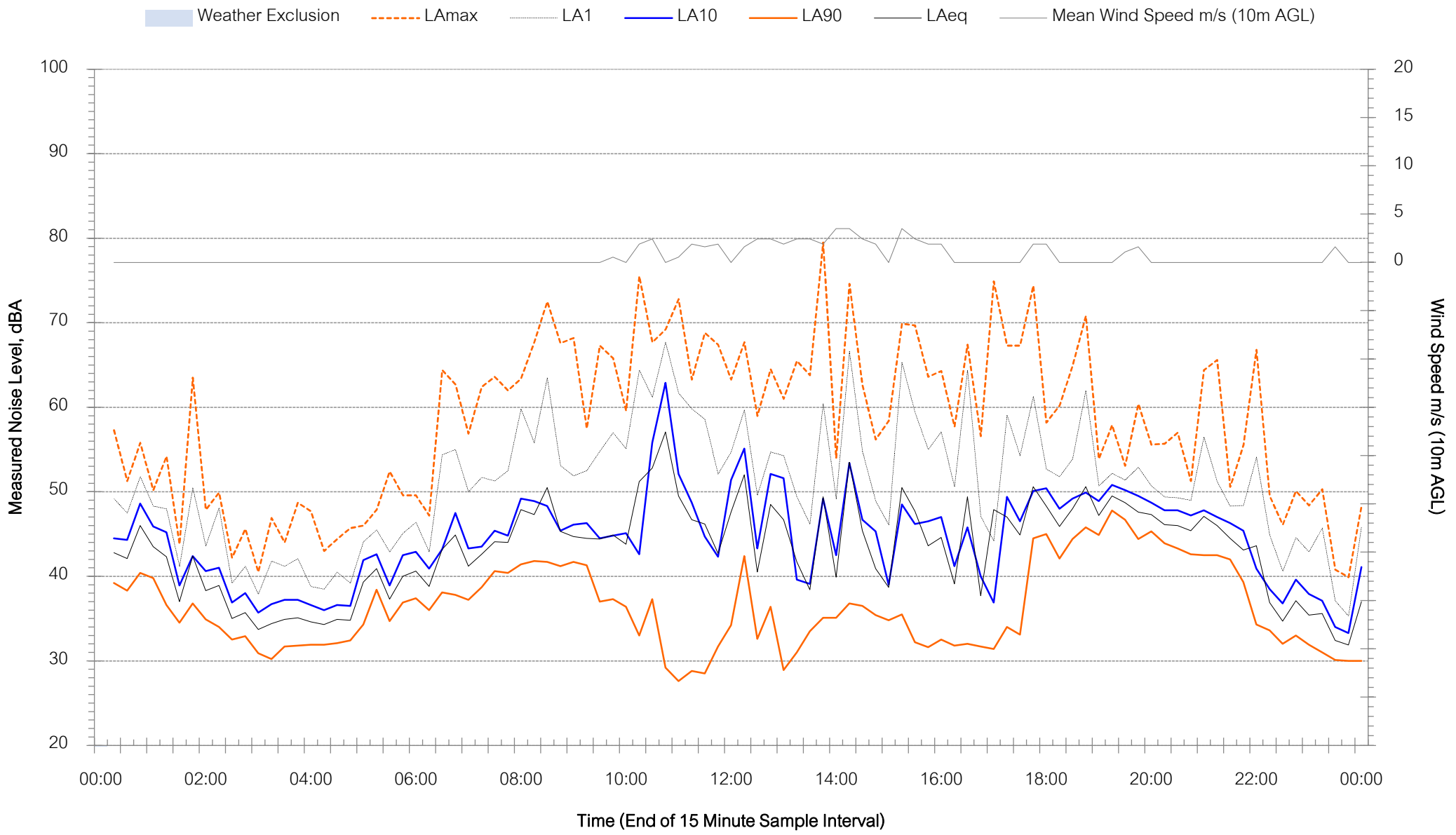
Background Noise Levels

Commelina Drive, Mount Annan - Friday 12 May 2023



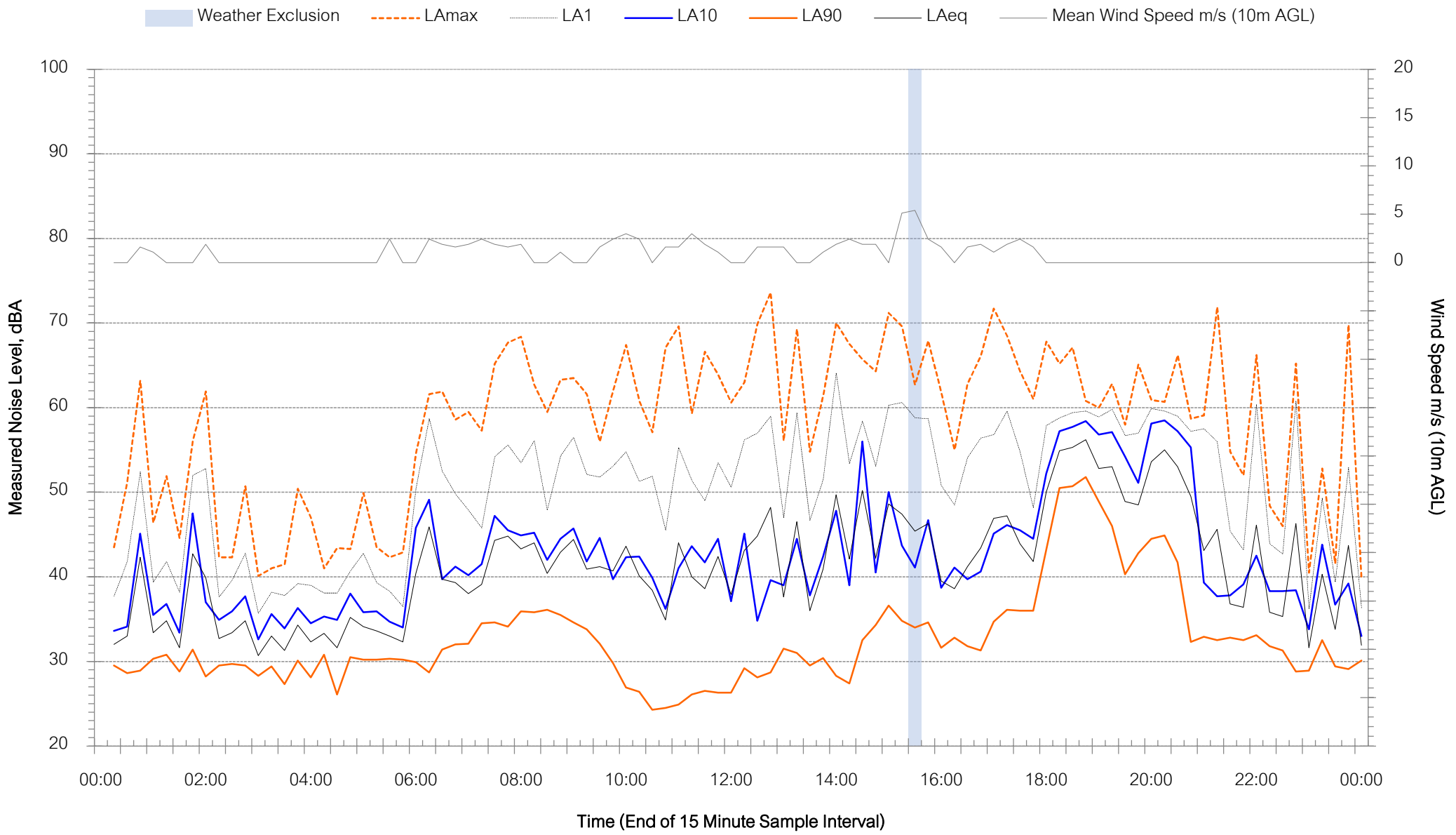
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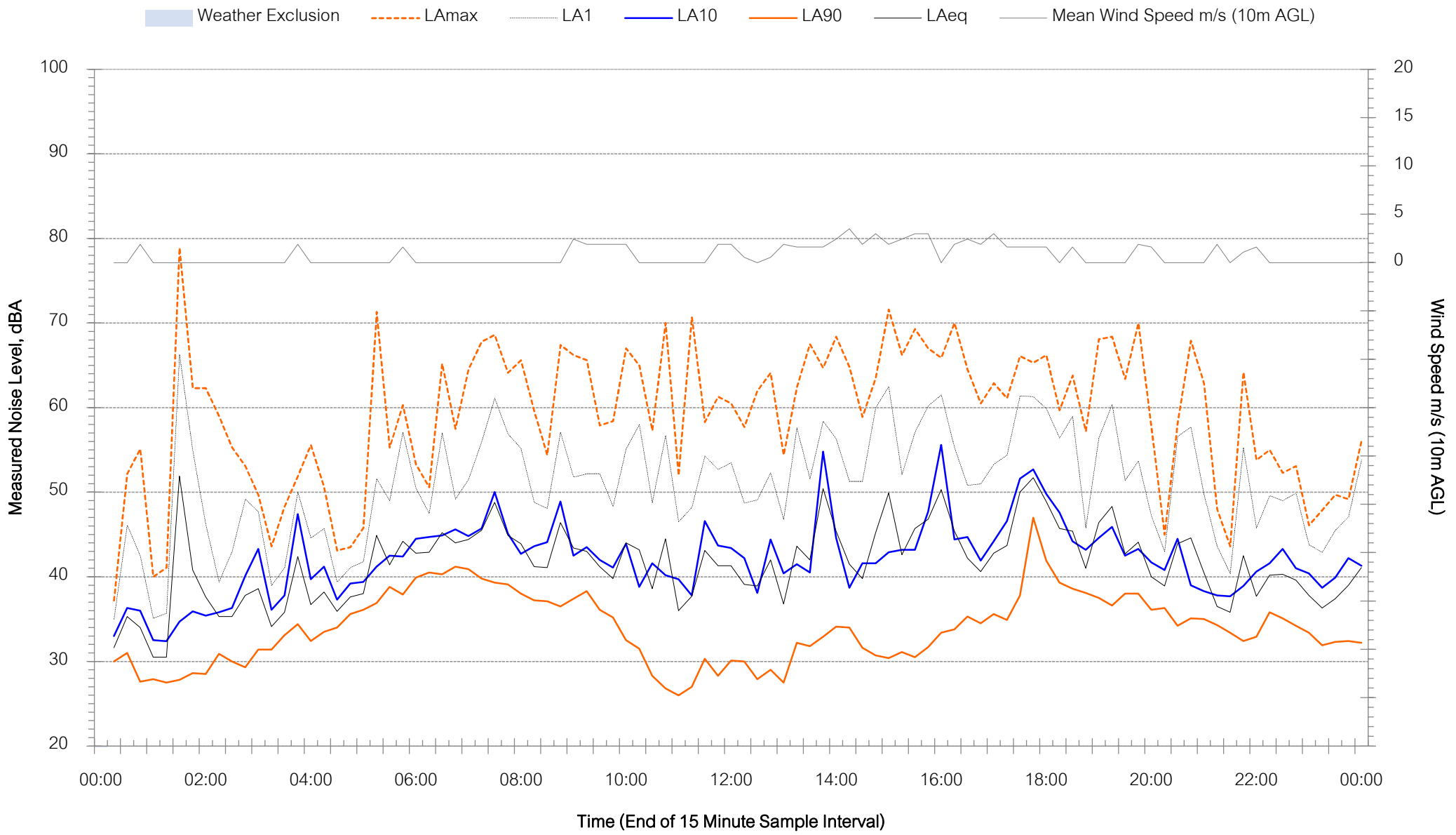
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Commelina Drive, Mount Annan - Sunday 14 May 2023



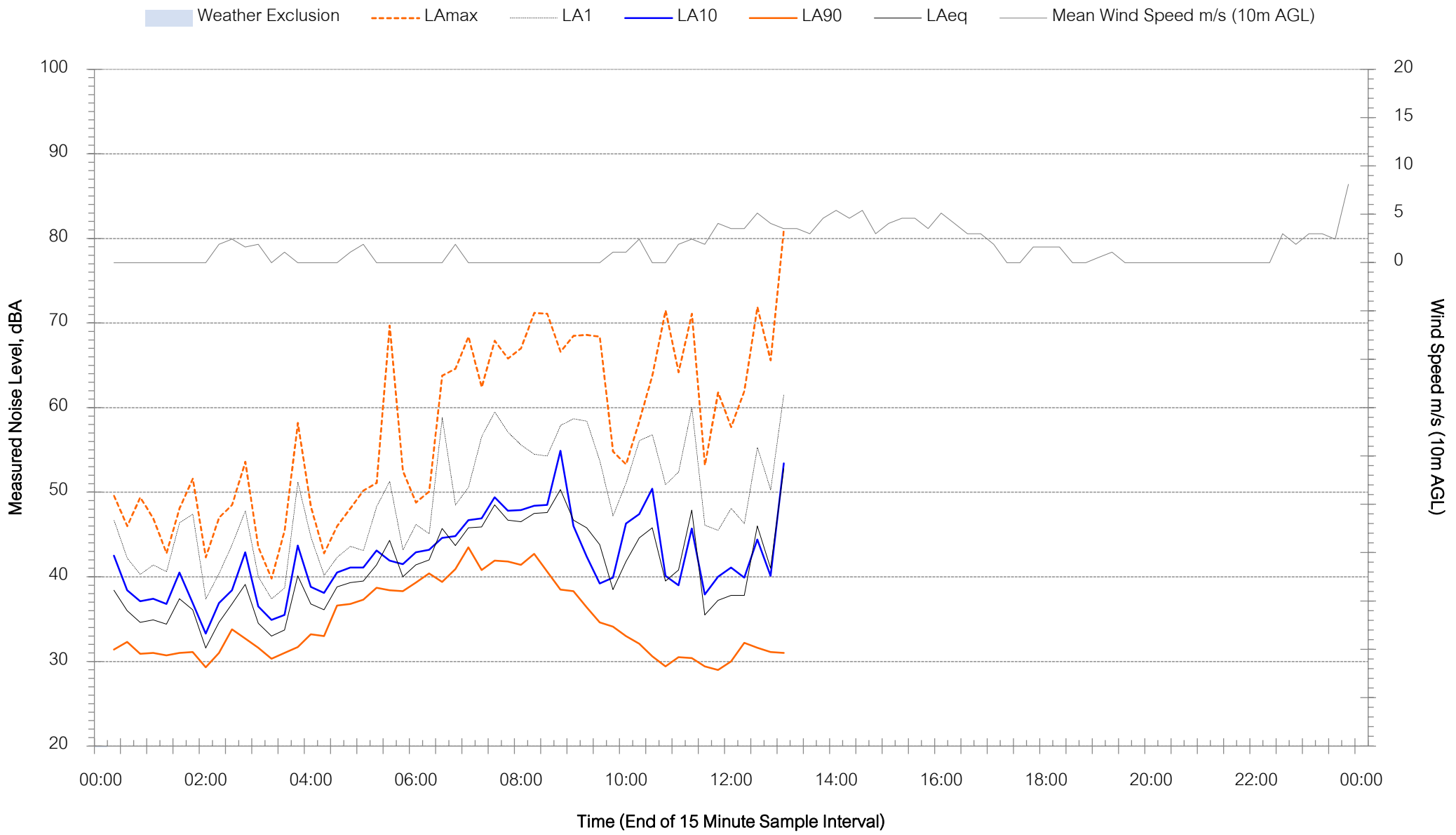
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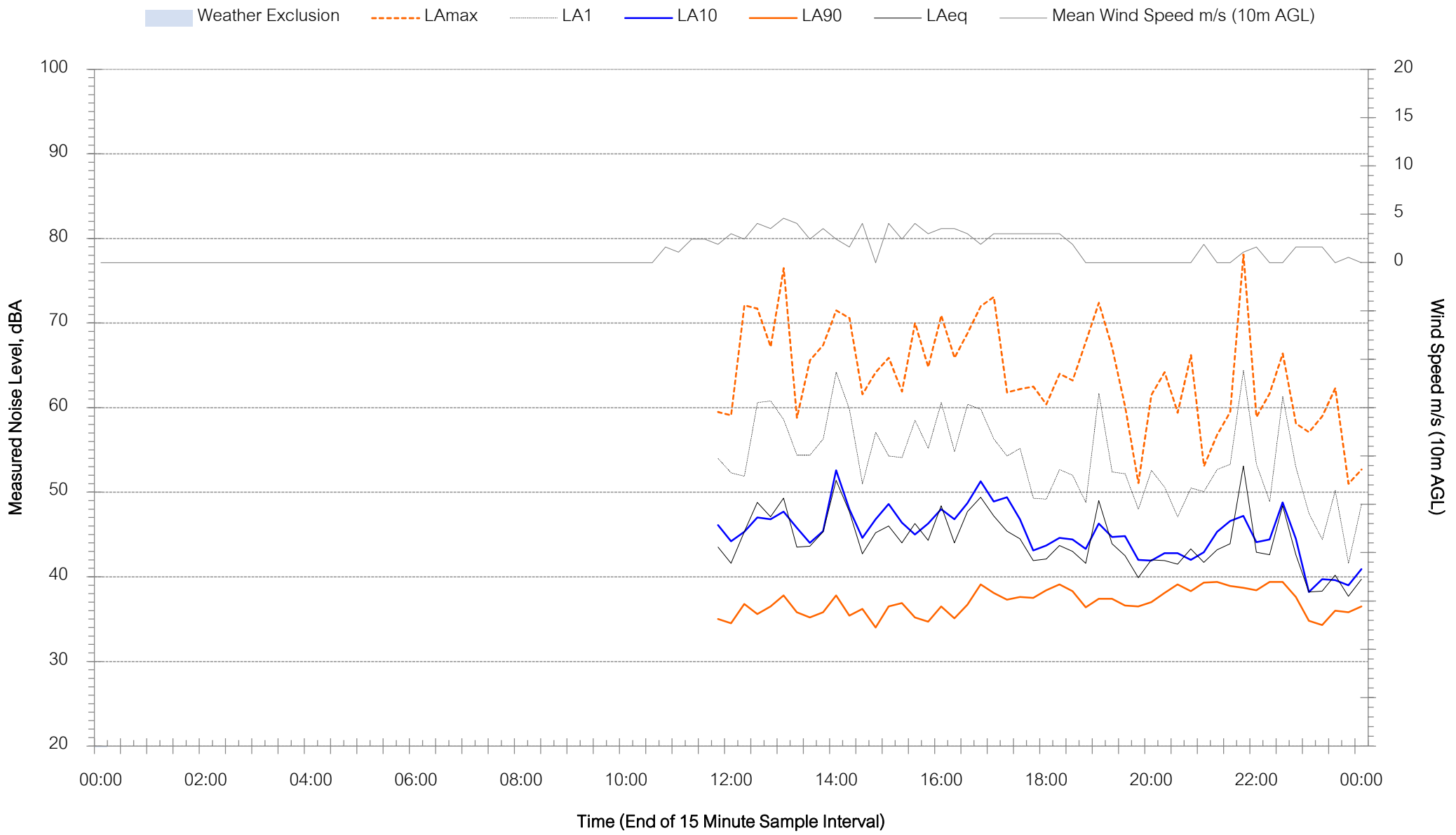
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Commelina Drive, Mount Annan - Tuesday 16 May 2023



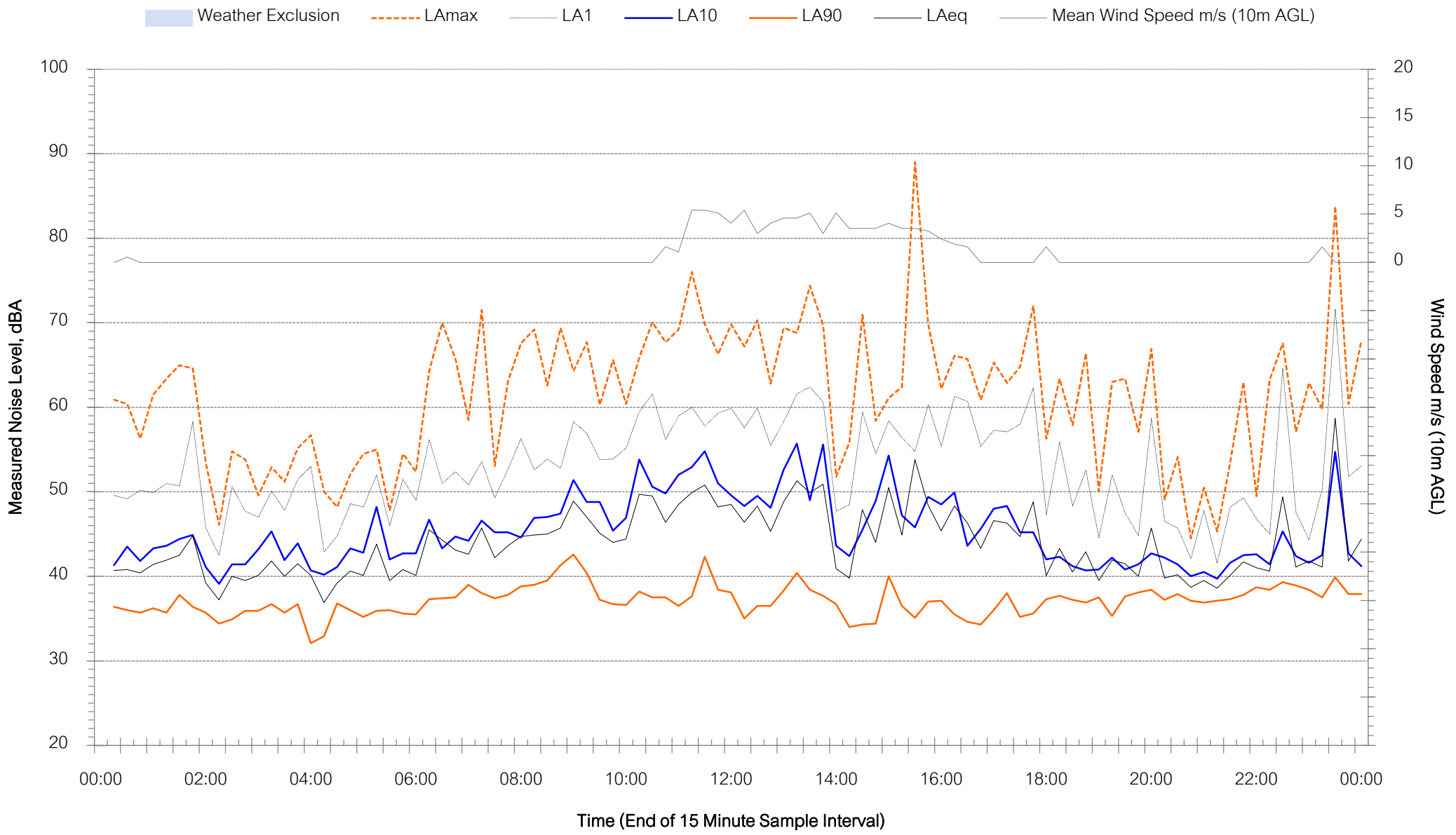
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Pascoe Street, Spring Farm - Friday 5 May 2023



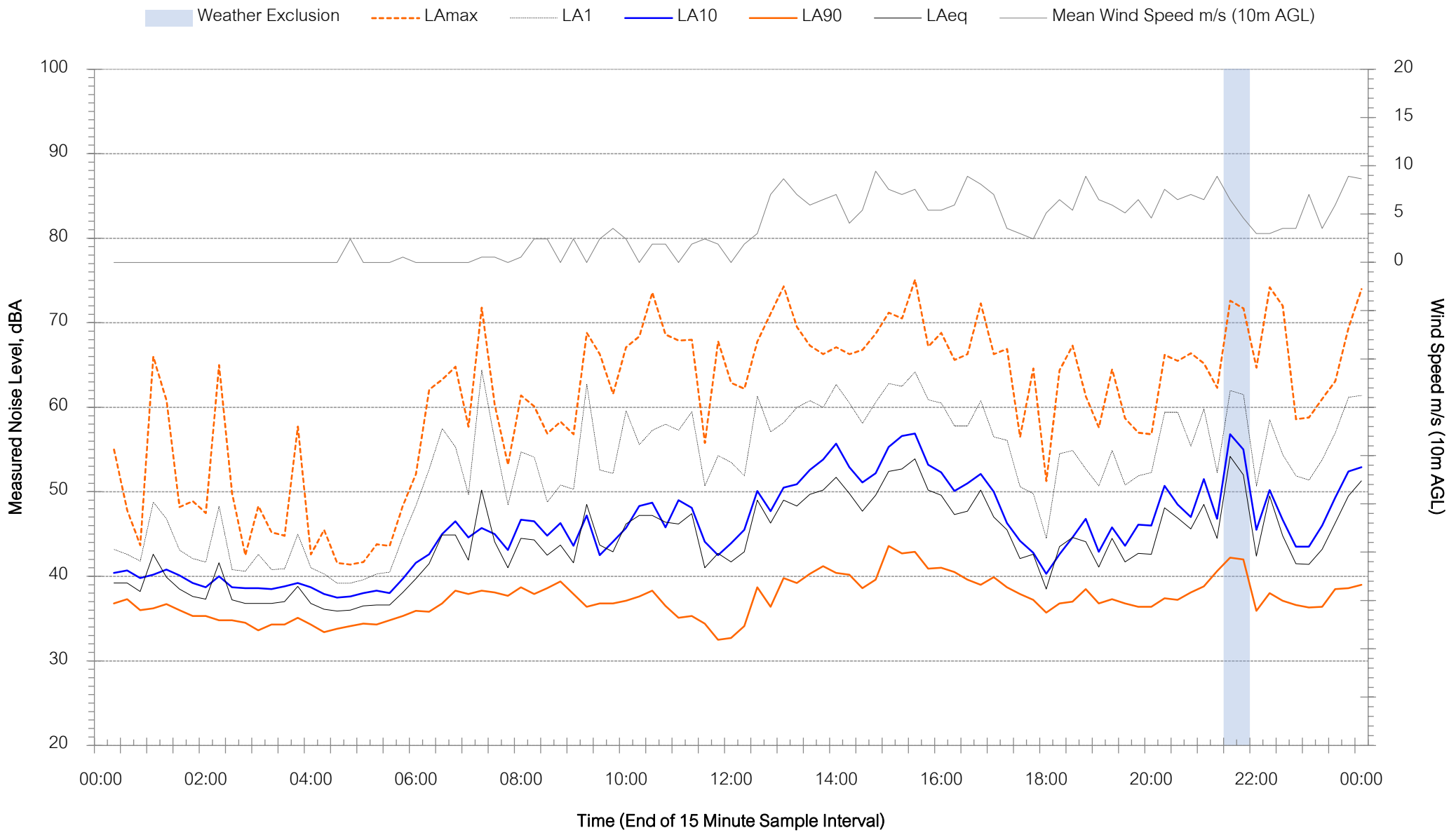
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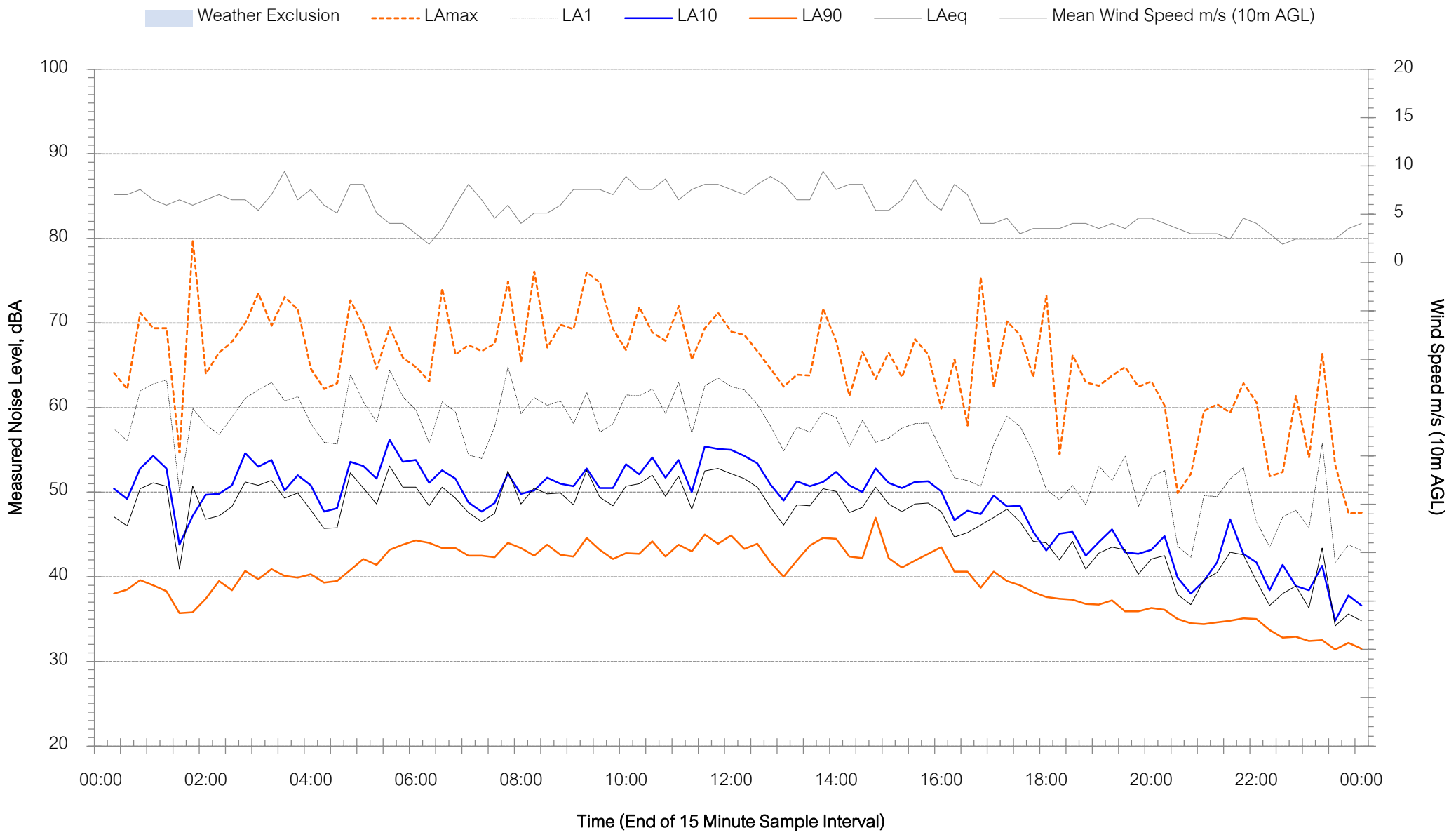
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Pascoe Street, Spring Farm - Sunday 7 May 2023



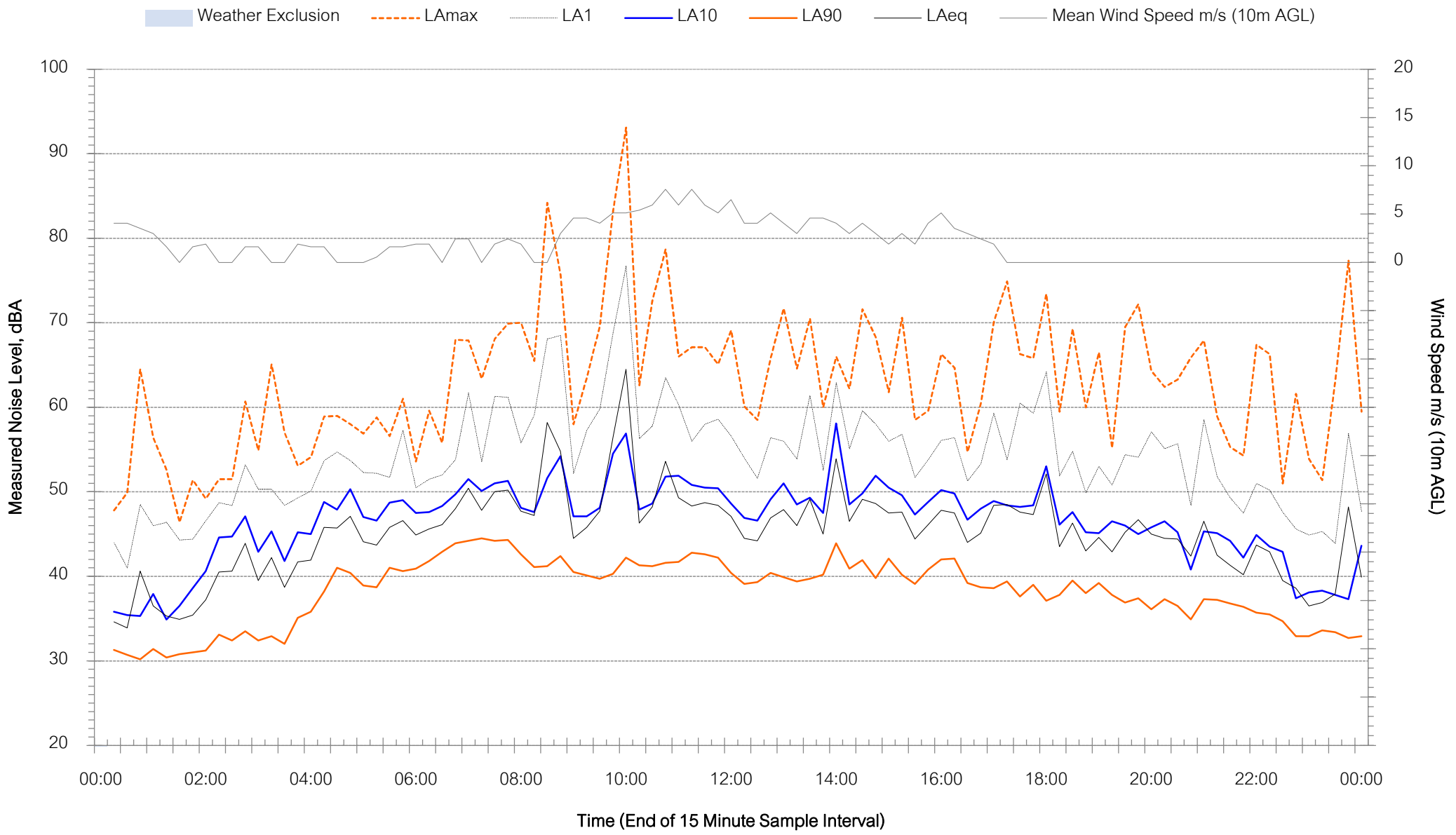
Background Noise Levels

Pascoe Street, Spring Farm - Monday 8 May 2023



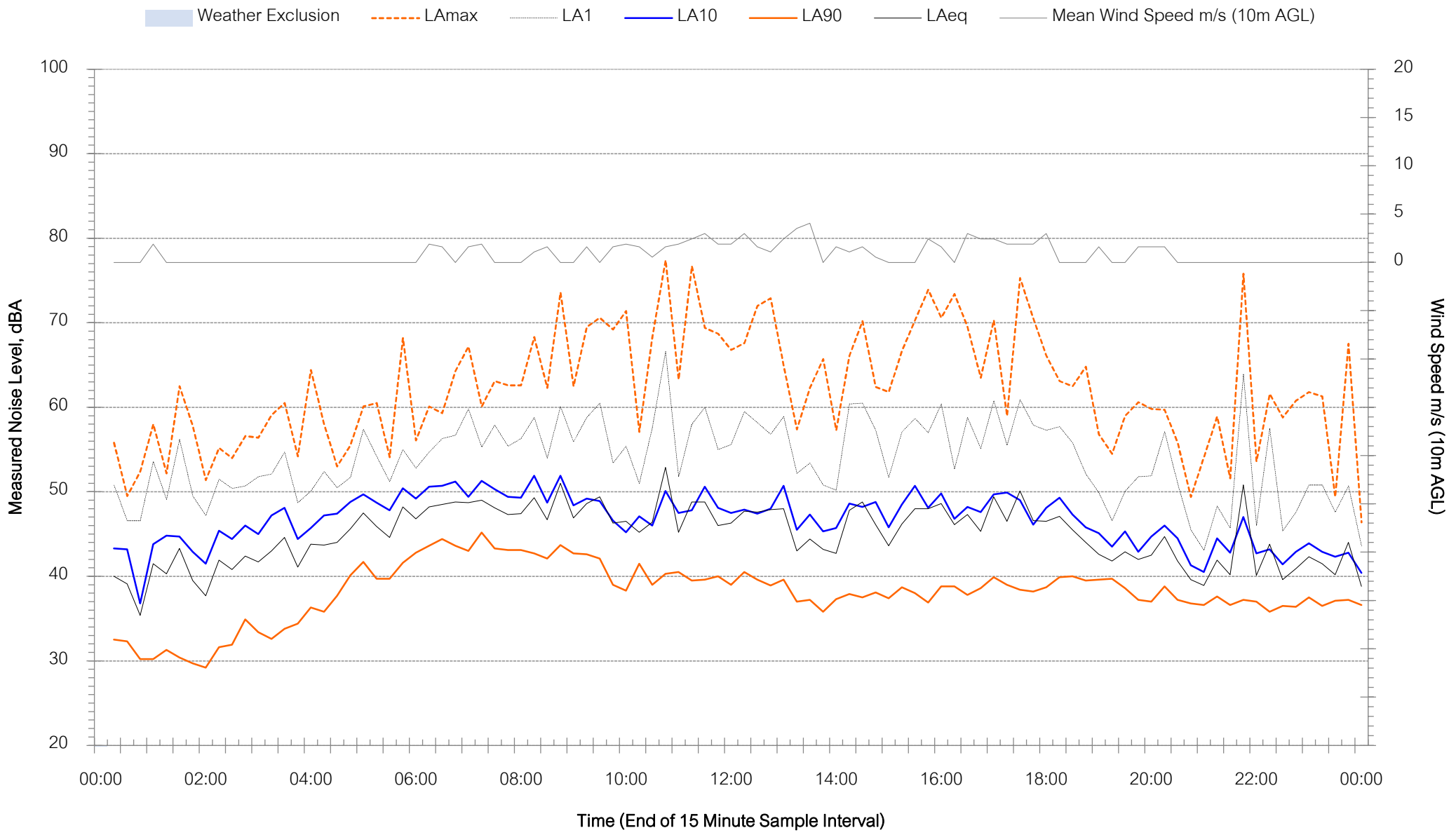
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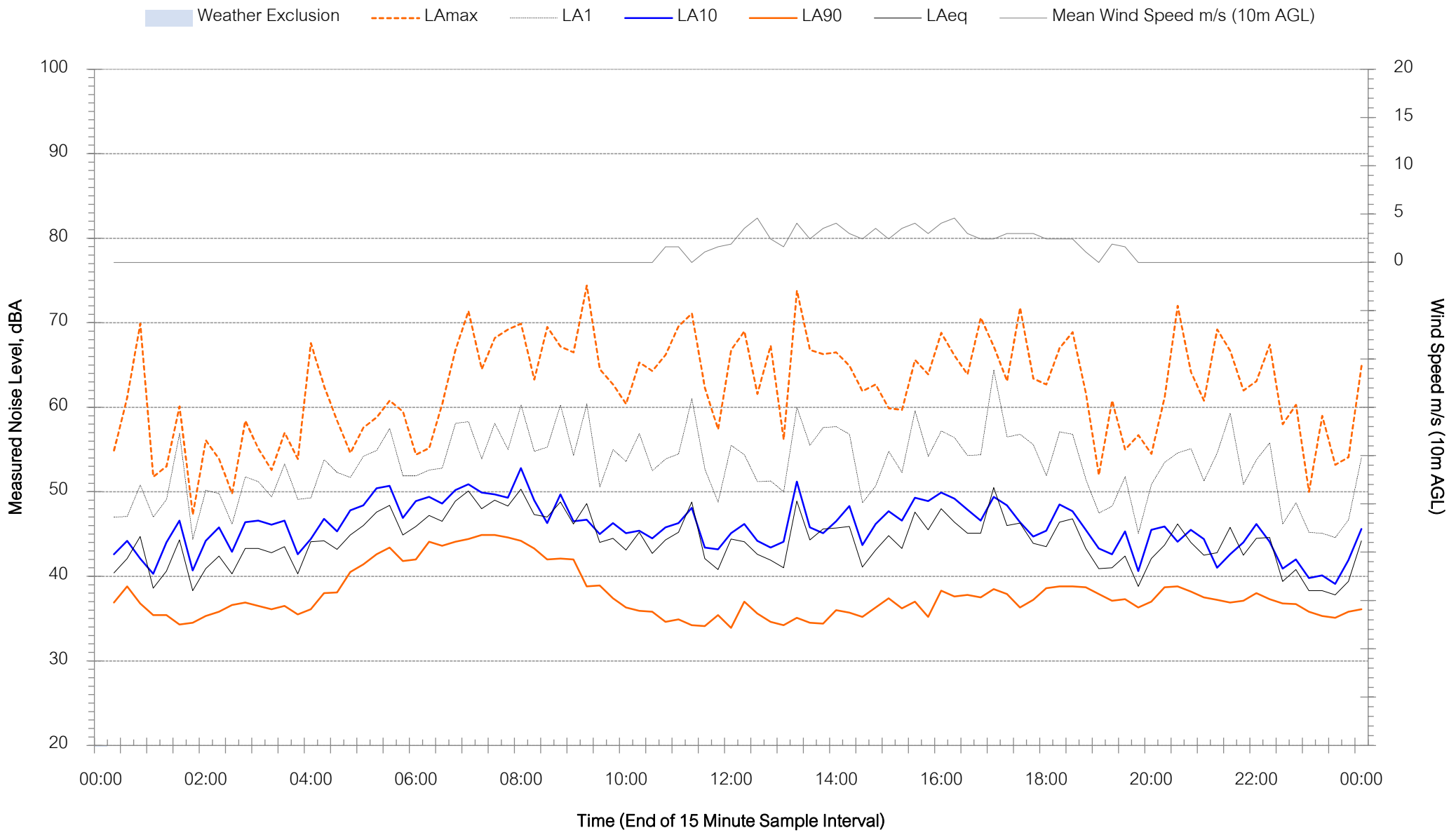
Background Noise Levels

Pascoe Street, Spring Farm - Wednesday 10 May 2023



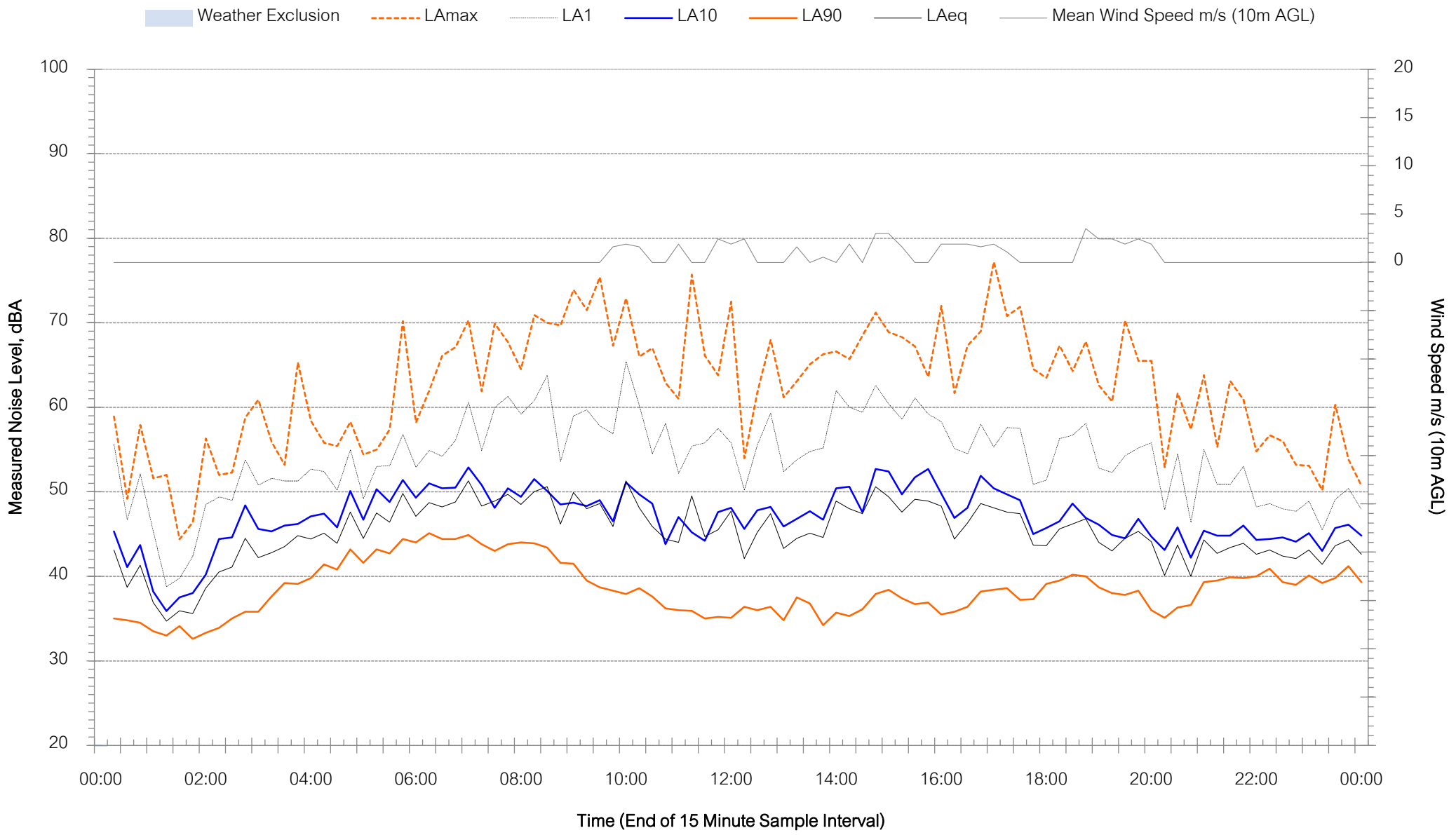
Background Noise Levels

Pascoe Street, Spring Farm - Thursday 11 May 2023



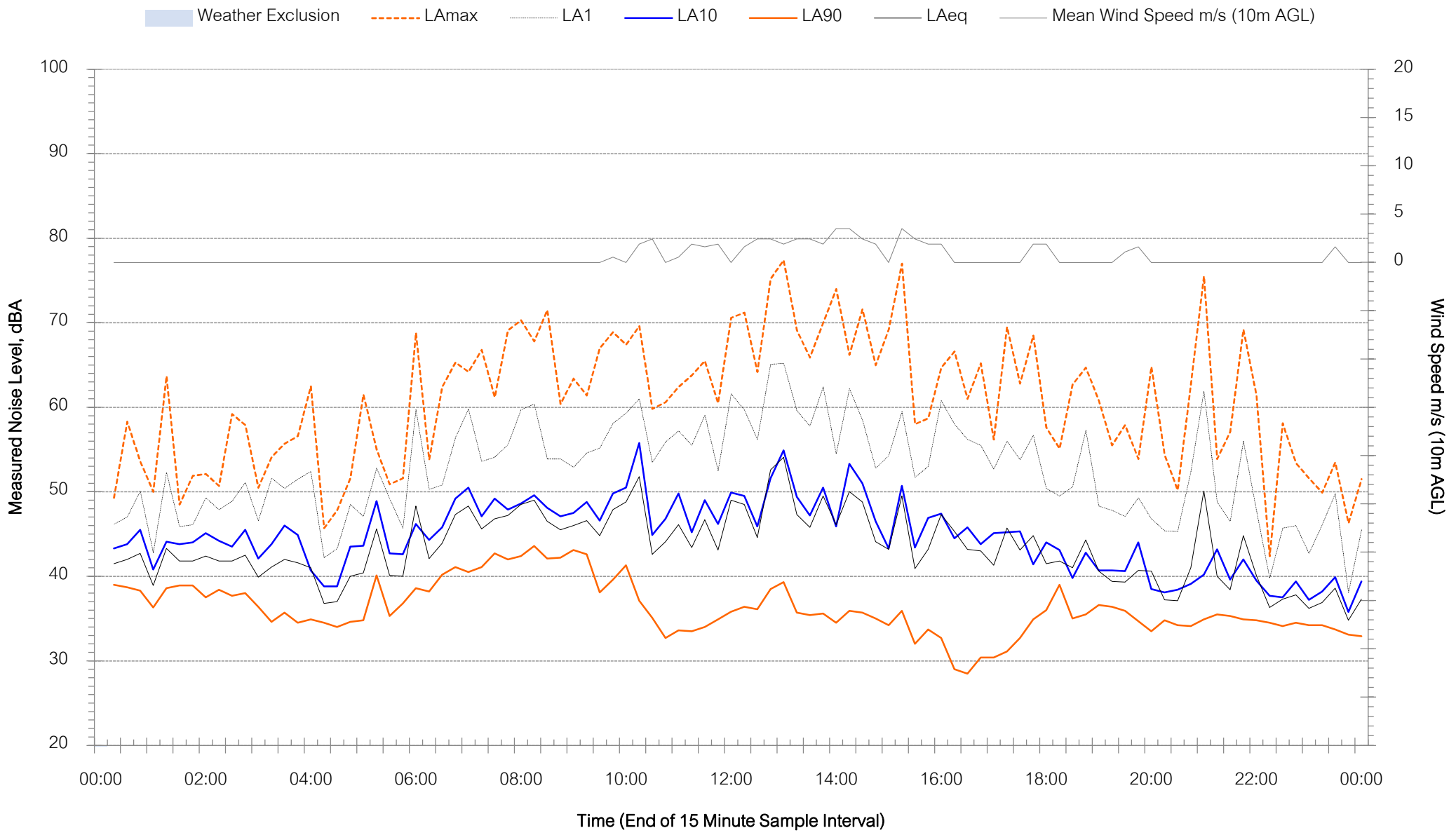
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Pascoe Street, Spring Farm - Friday 12 May 2023



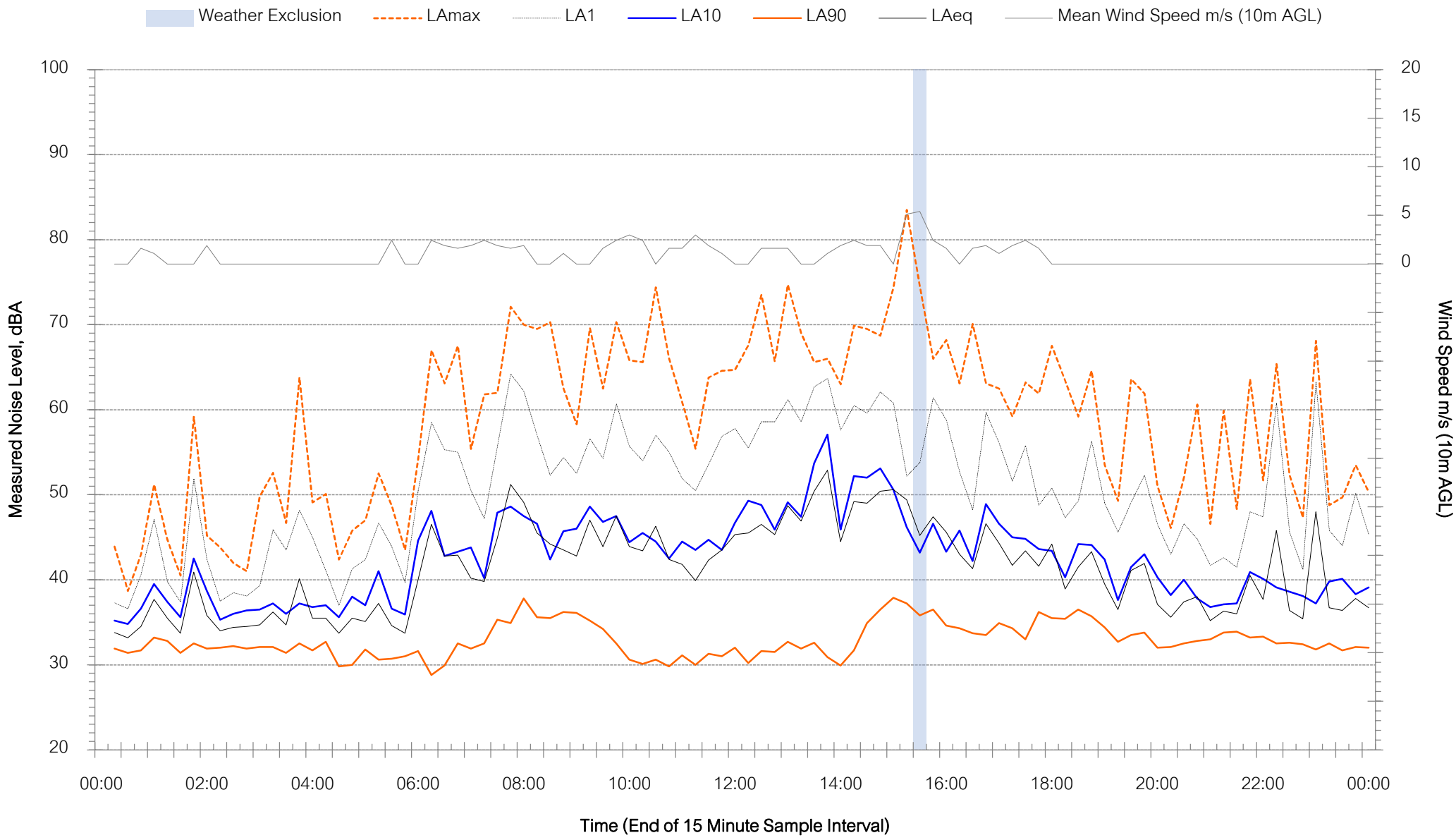
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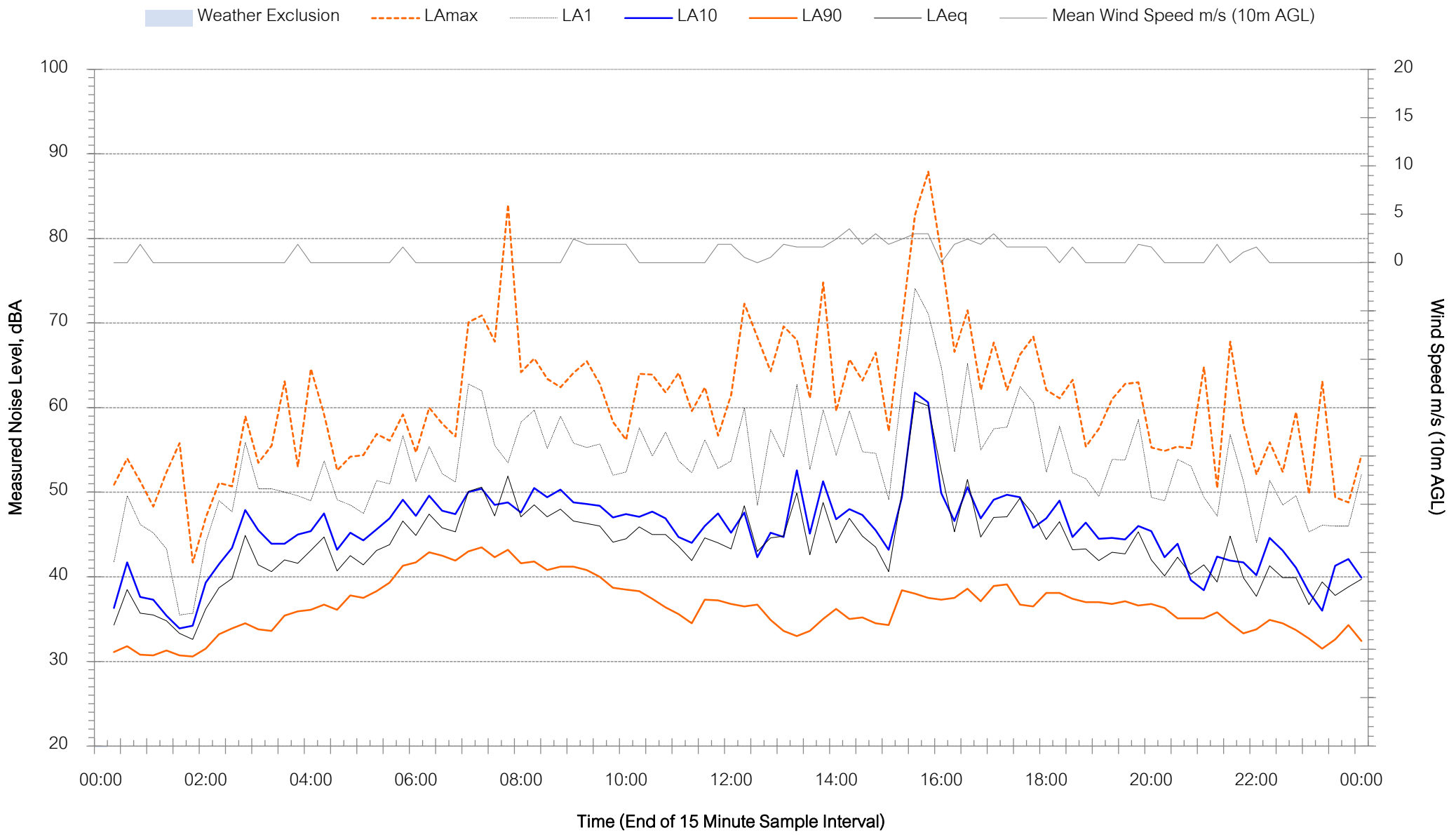
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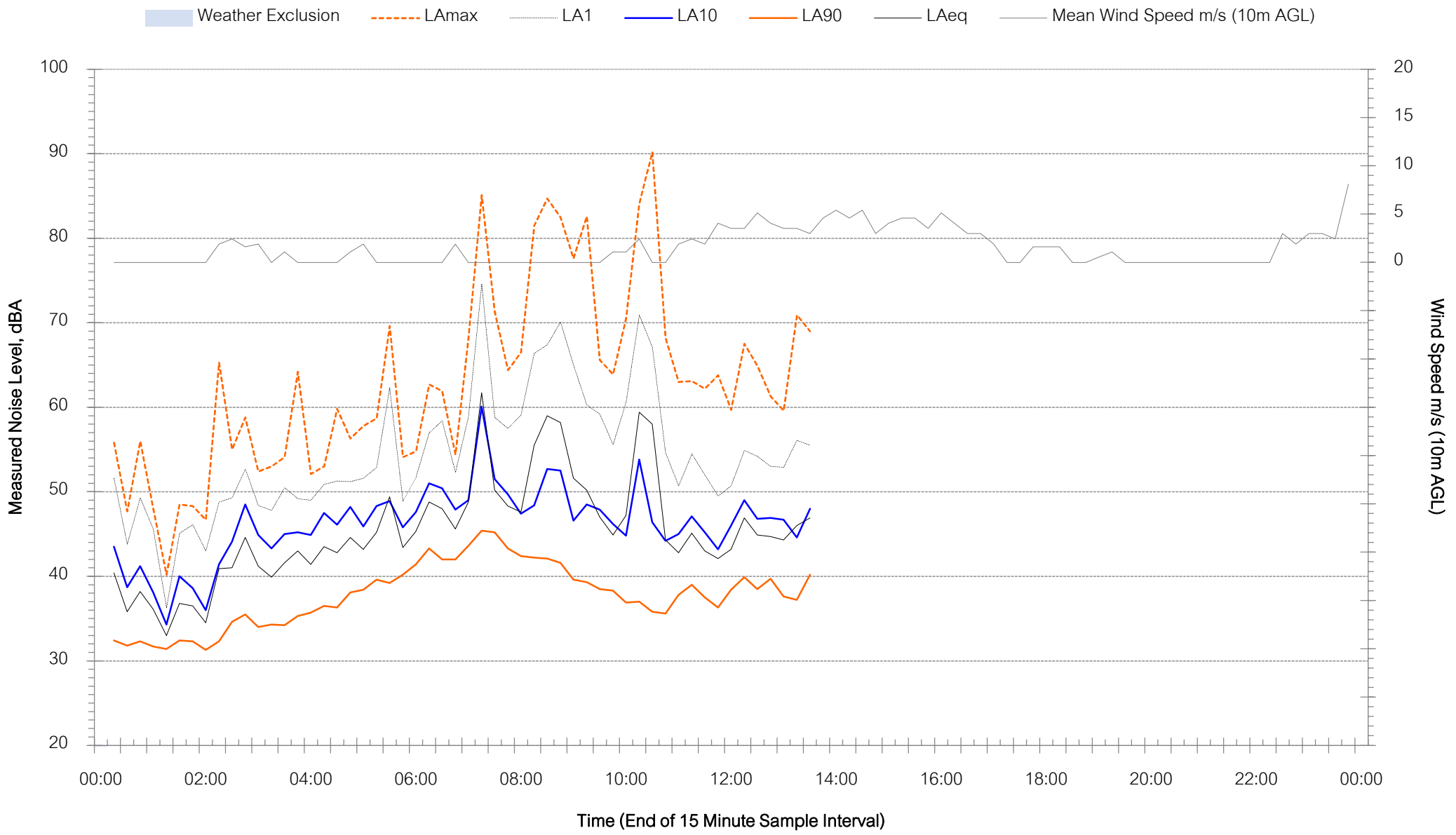
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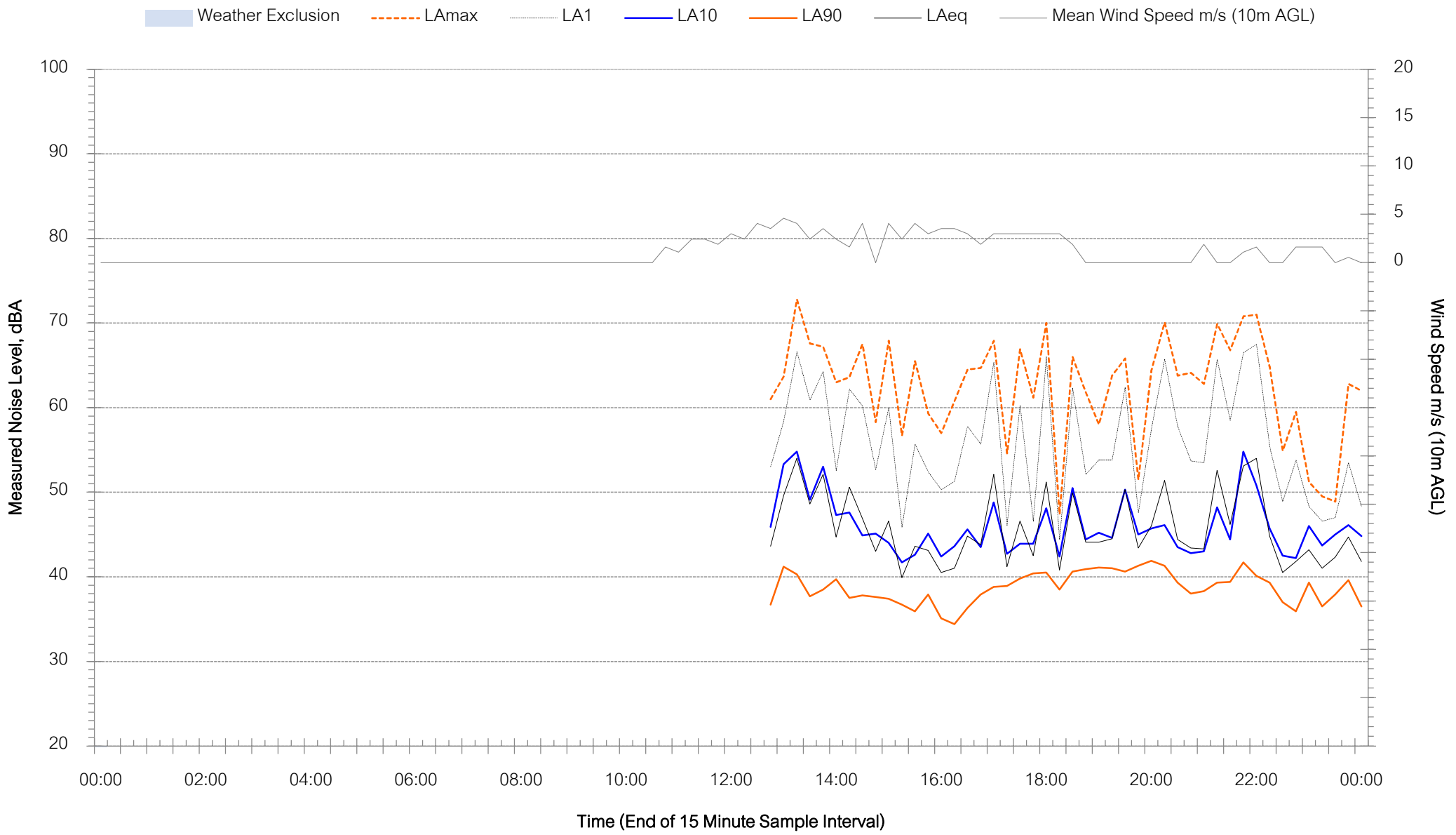
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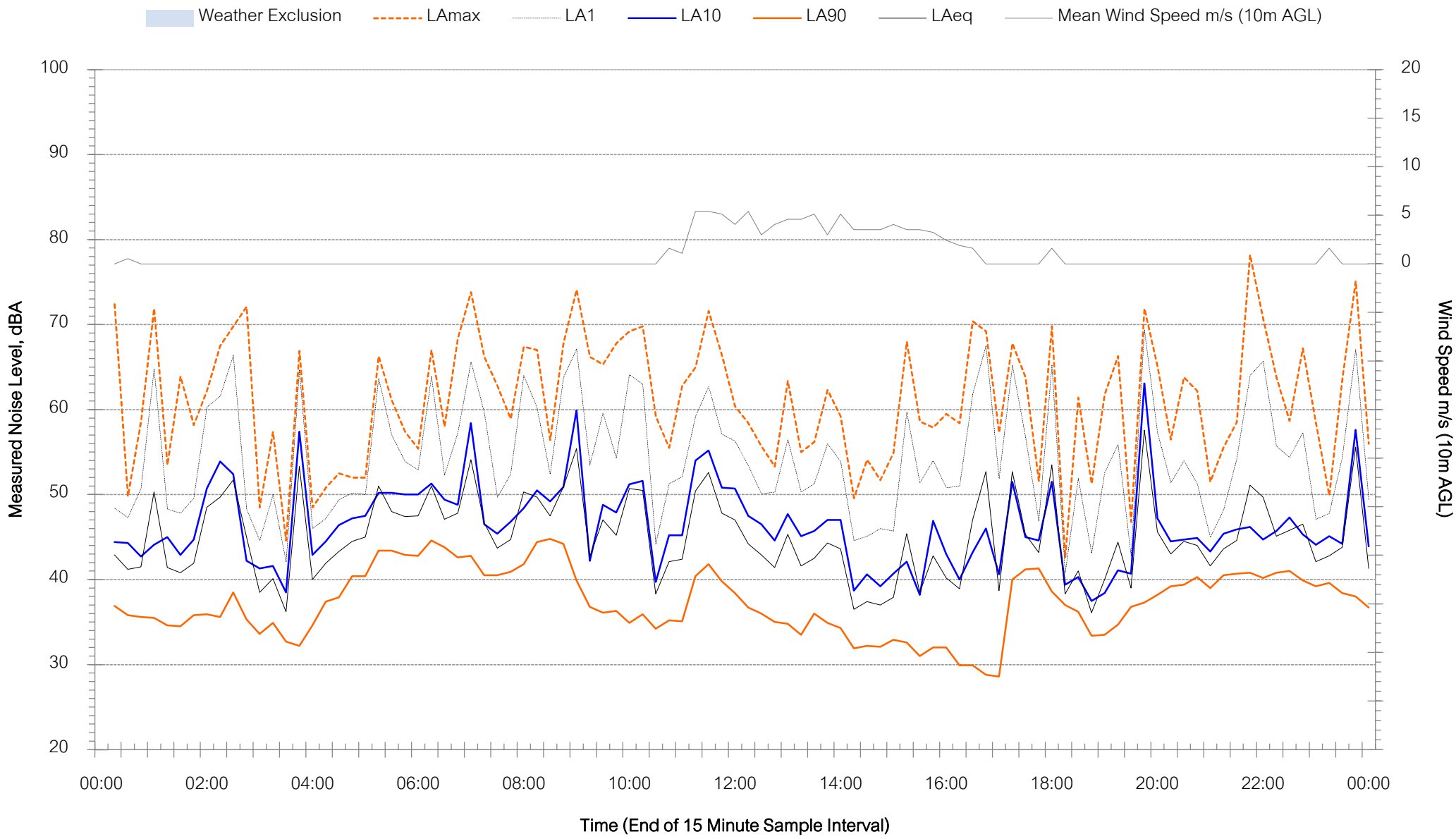
Background Noise Levels

Glenlee Road, Menangle Park - Friday 5 May 2023



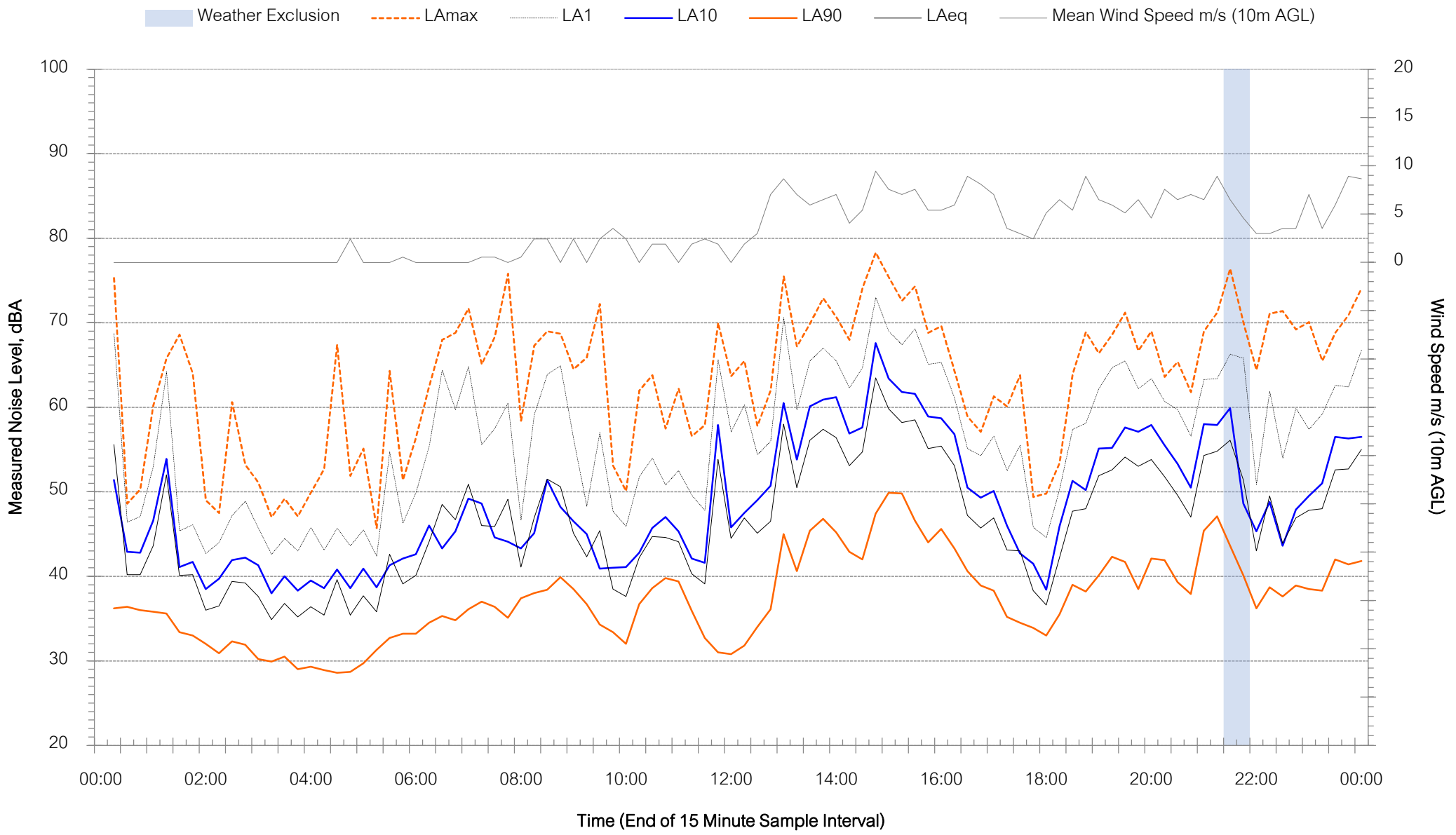
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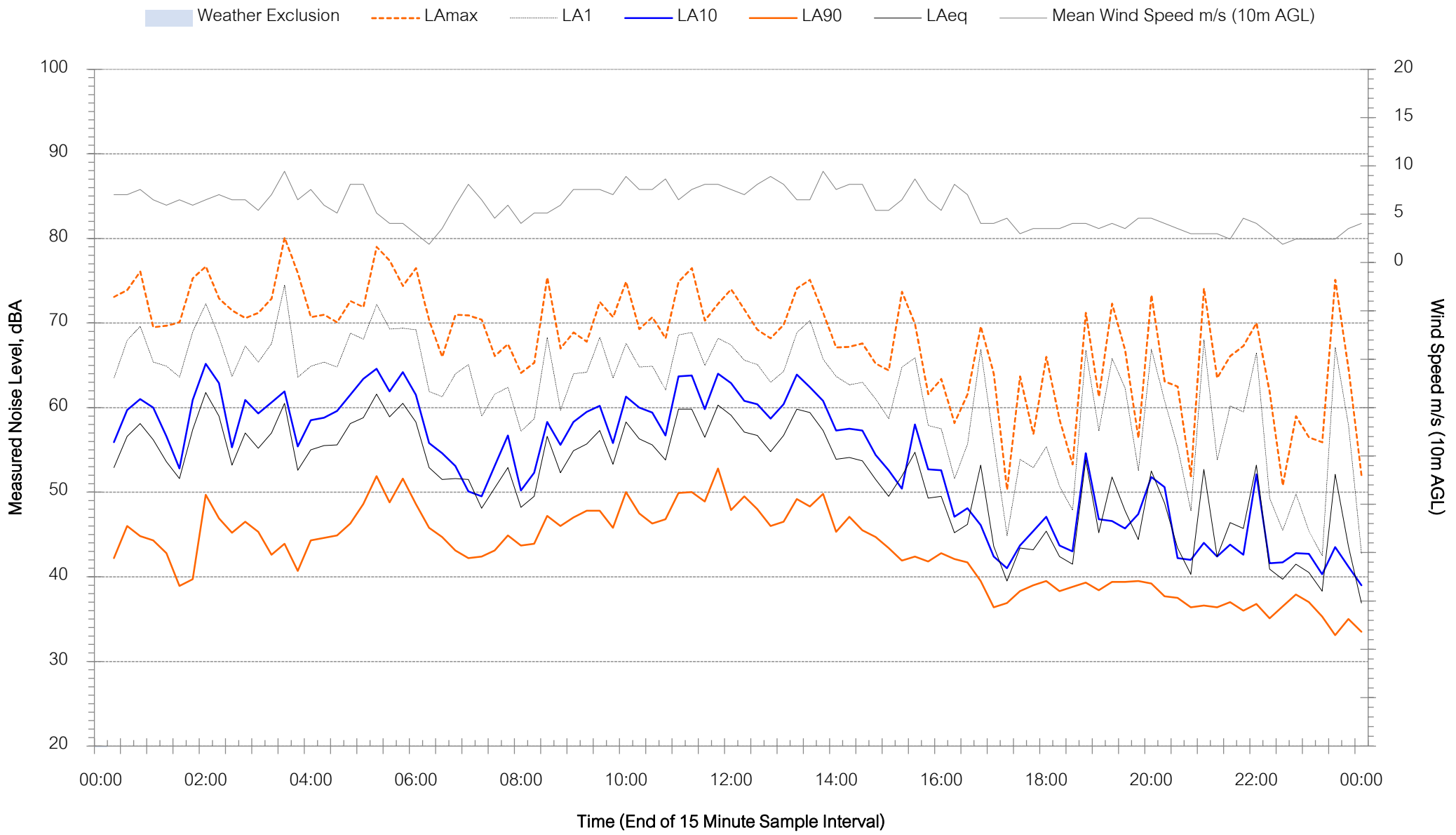
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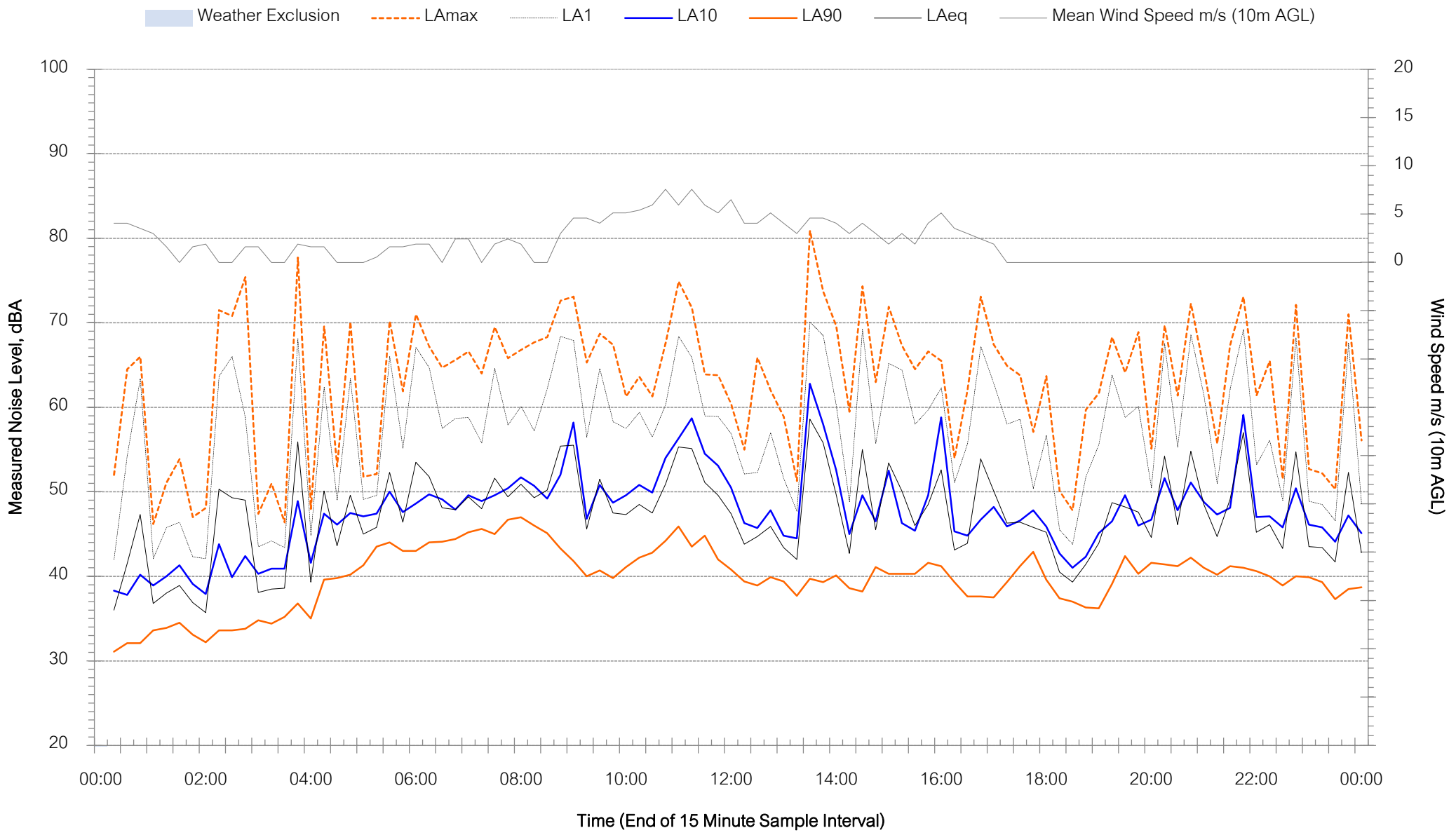
Background Noise Levels

Glenlee Road, Menangle Park - Monday 8 May 2023



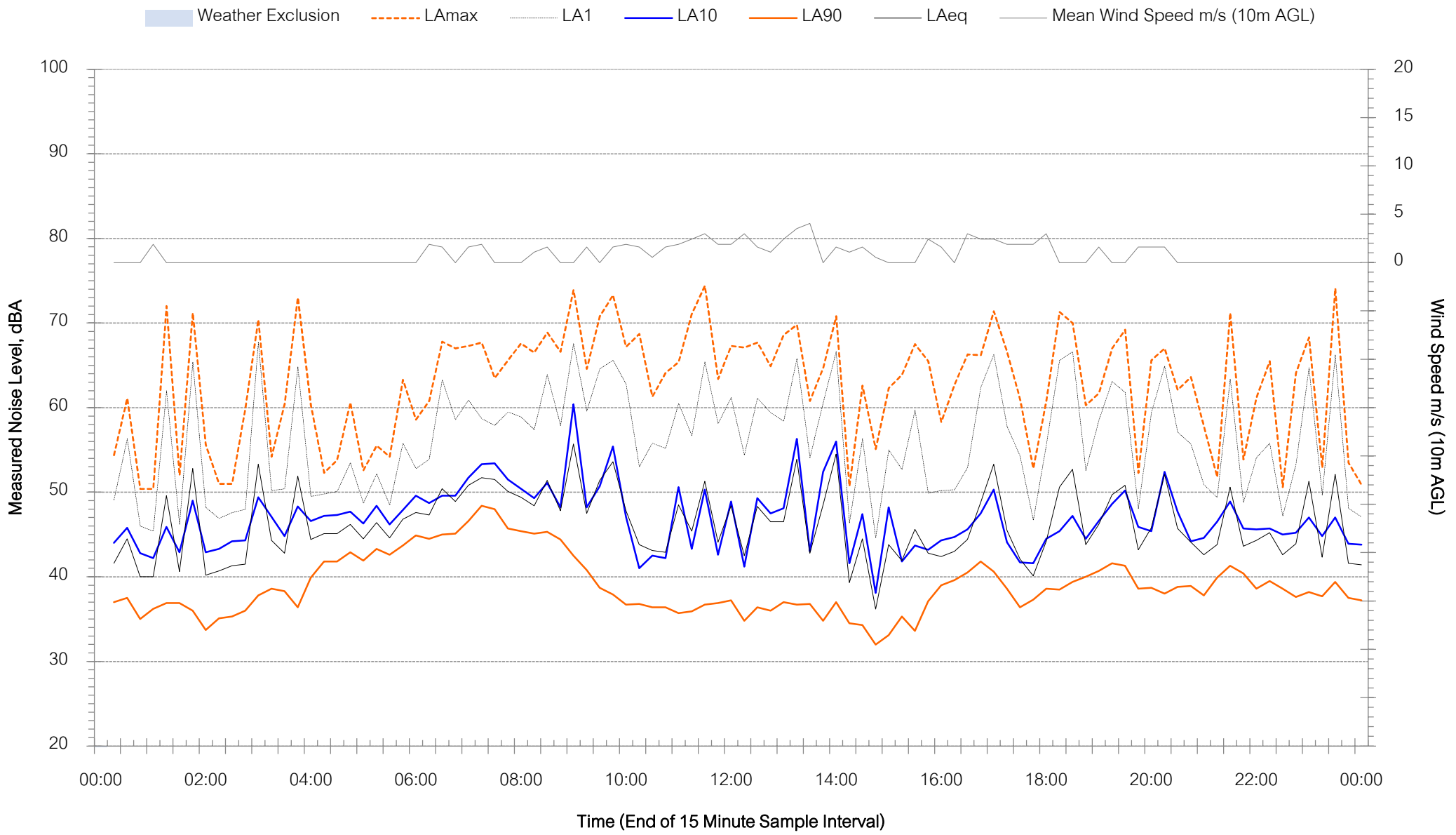
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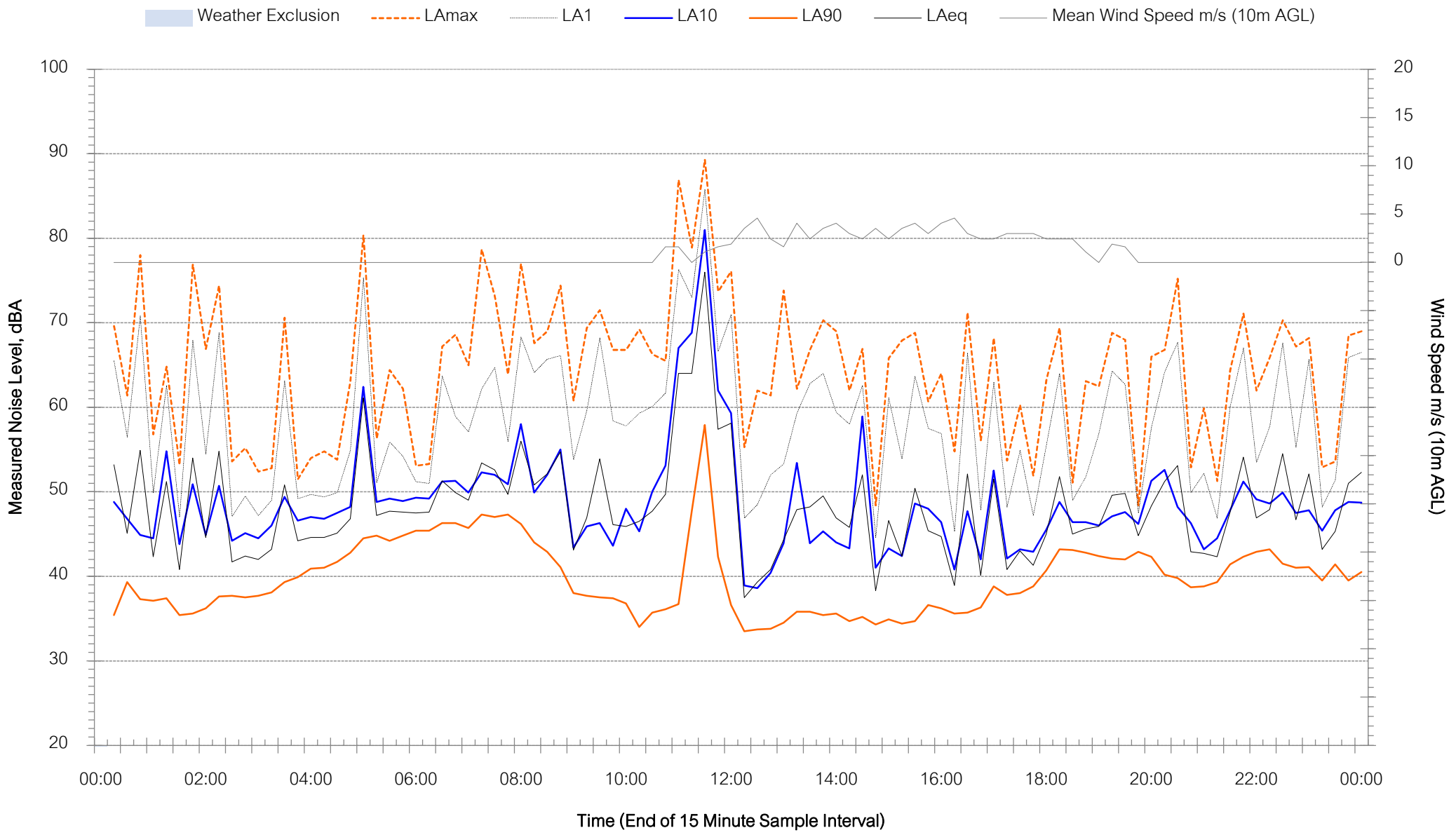
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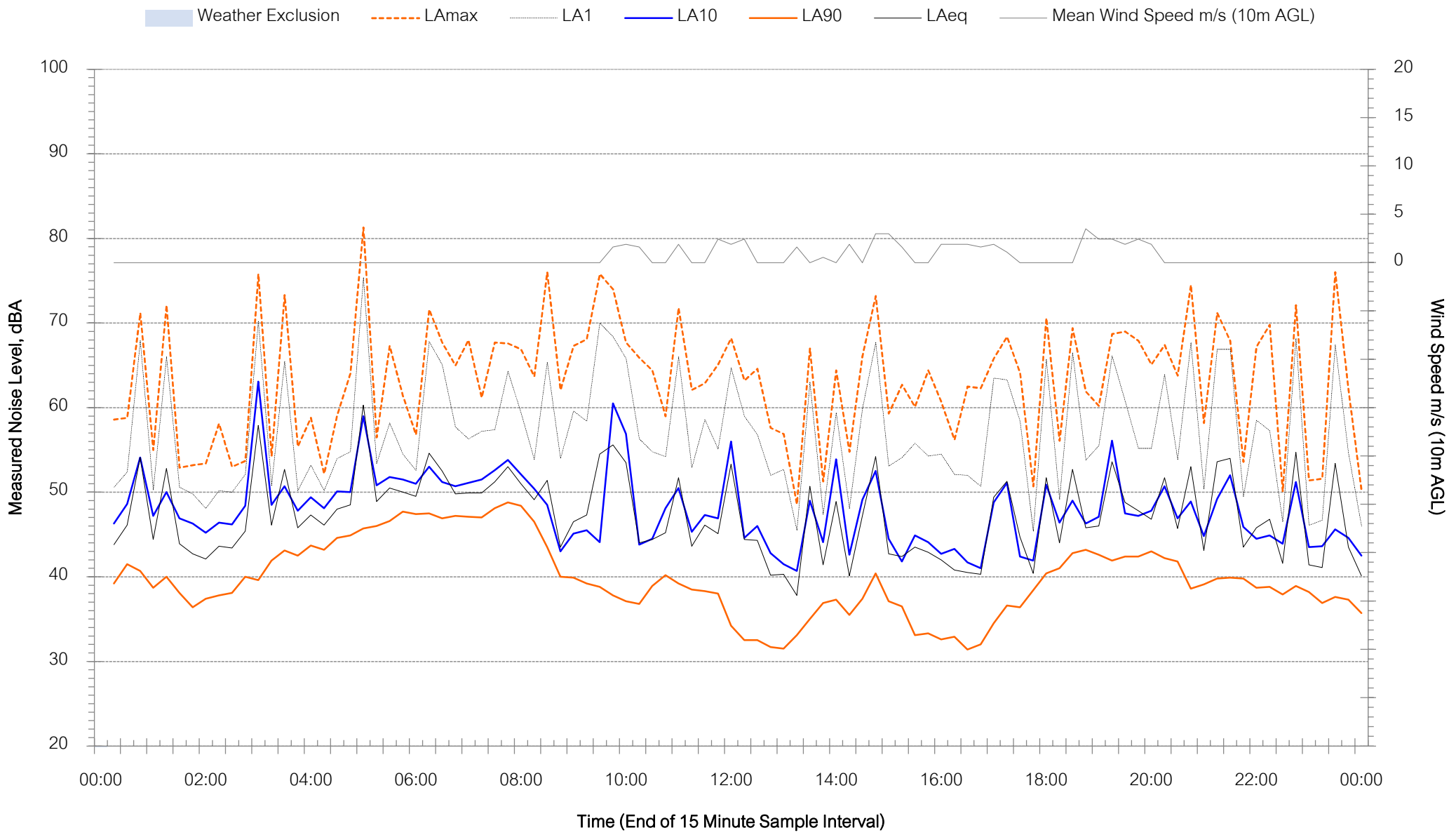
Background Noise Levels

Glenlee Road, Menangle Park - Thursday 11 May 2023



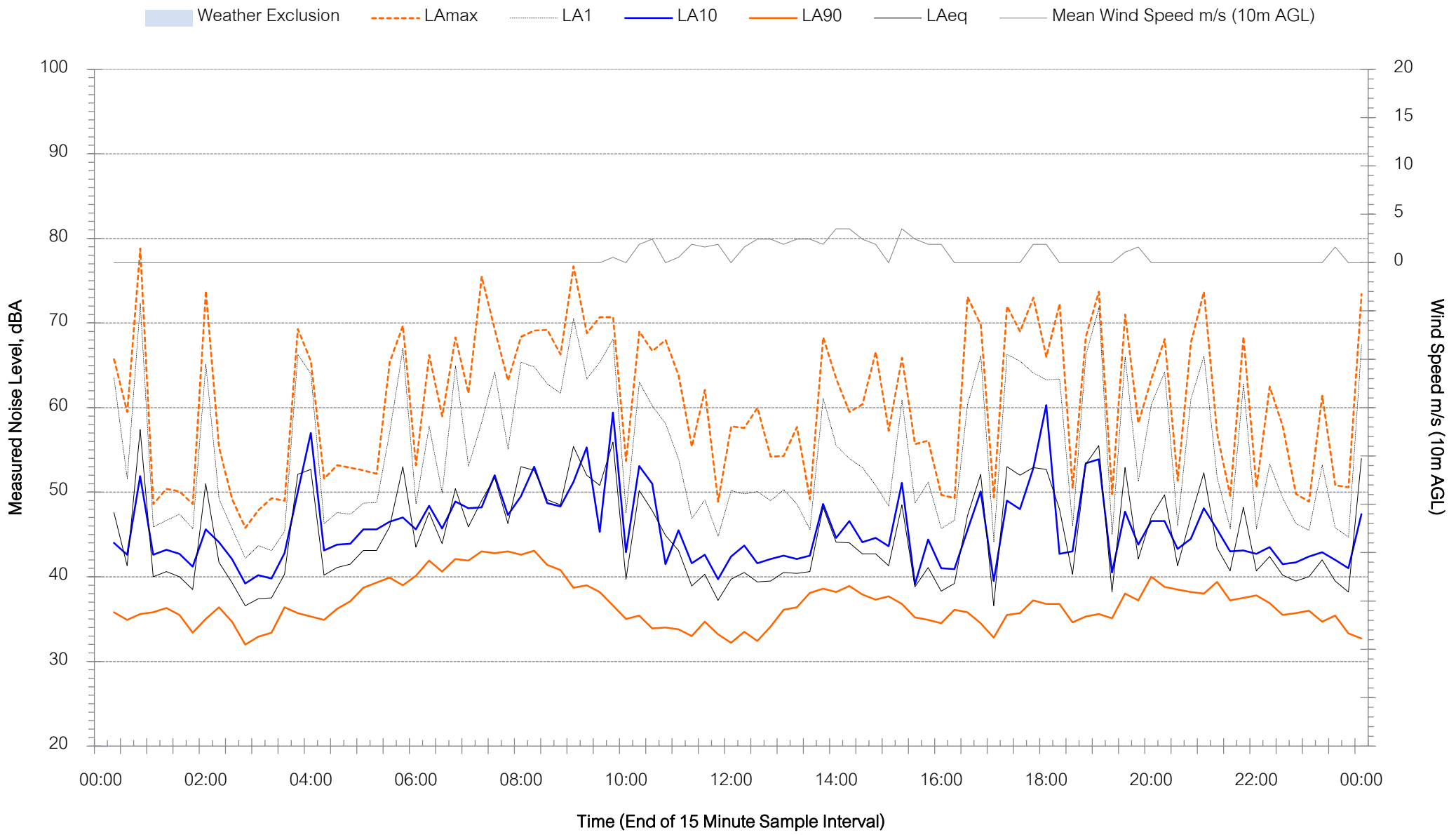
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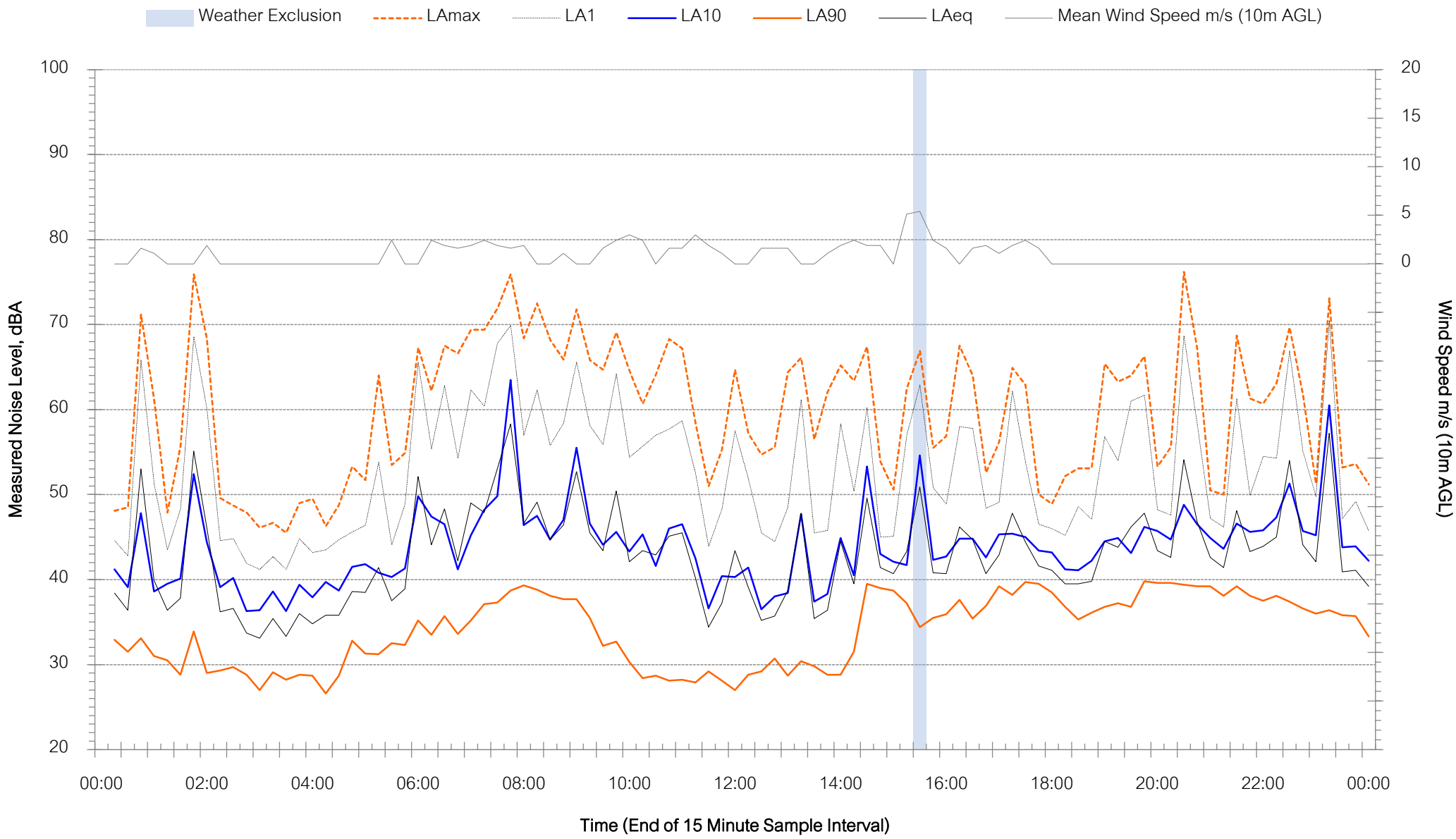
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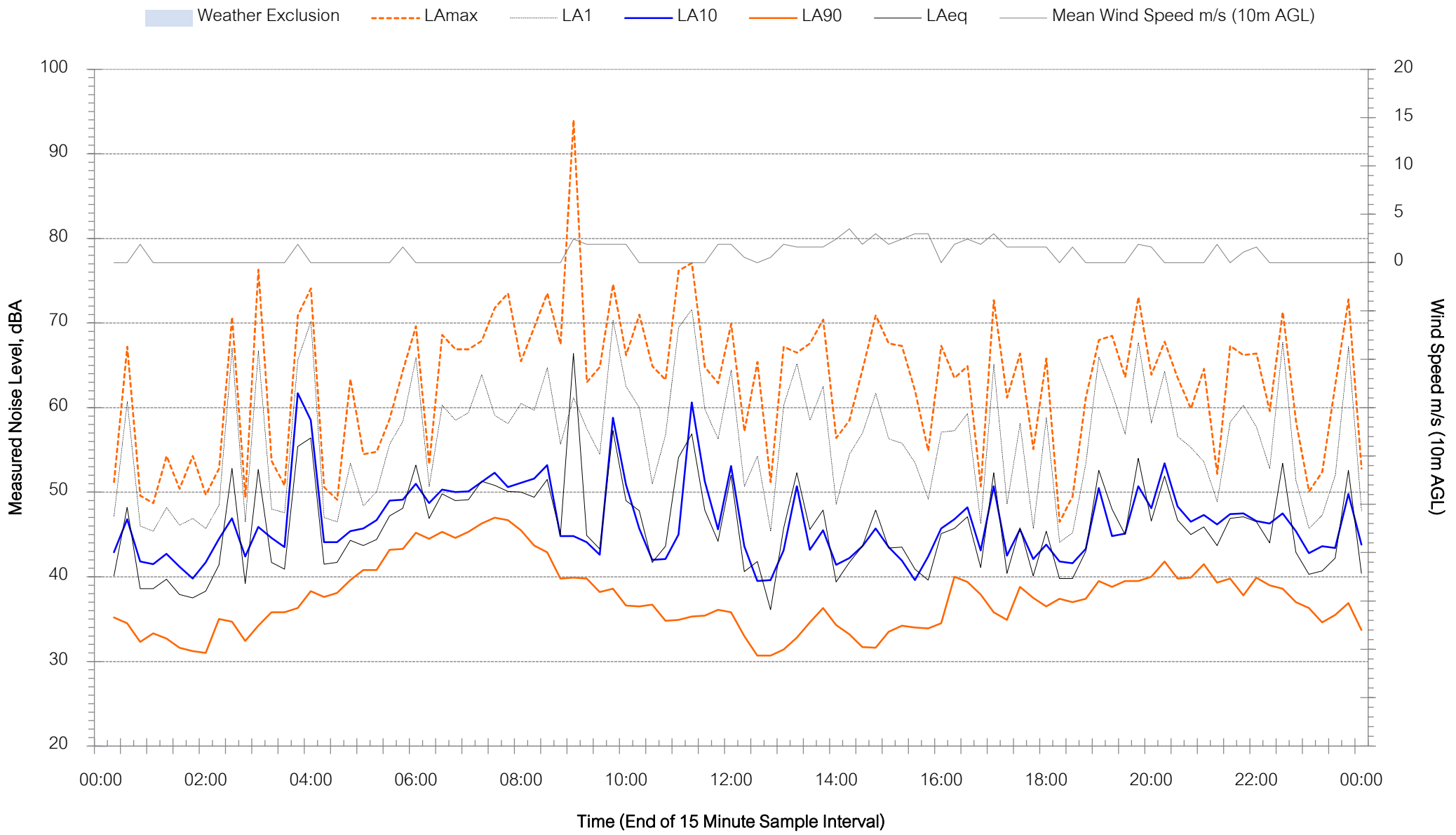
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Glenlee Road, Menangle Park - Sunday 14 May 2023



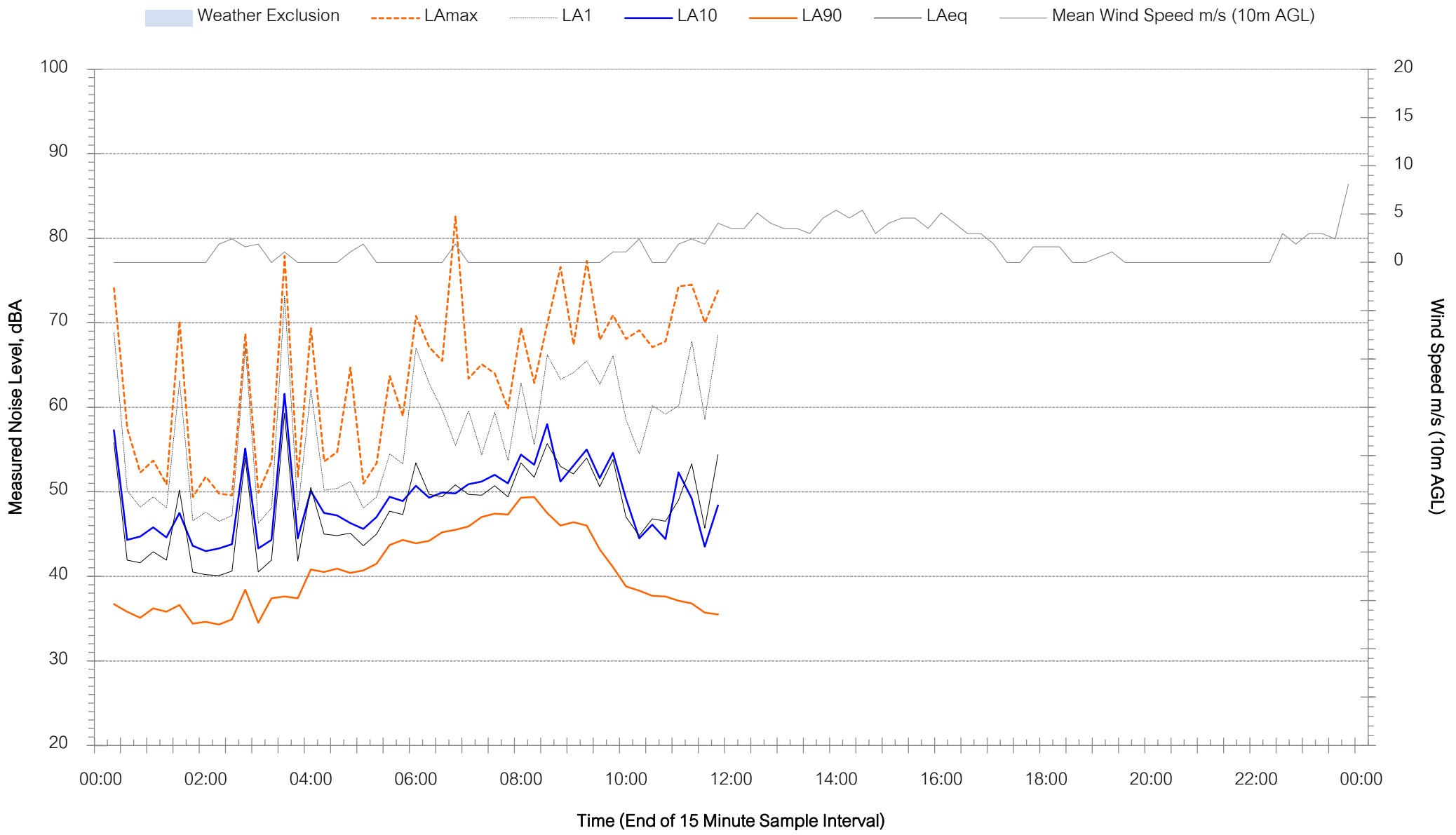
Background Noise Levels

Glenlee Road, Menangle Park - Monday 15 May 2023



Background Noise Levels

Glenlee Road, Menangle Park - Tuesday 16 May 2023



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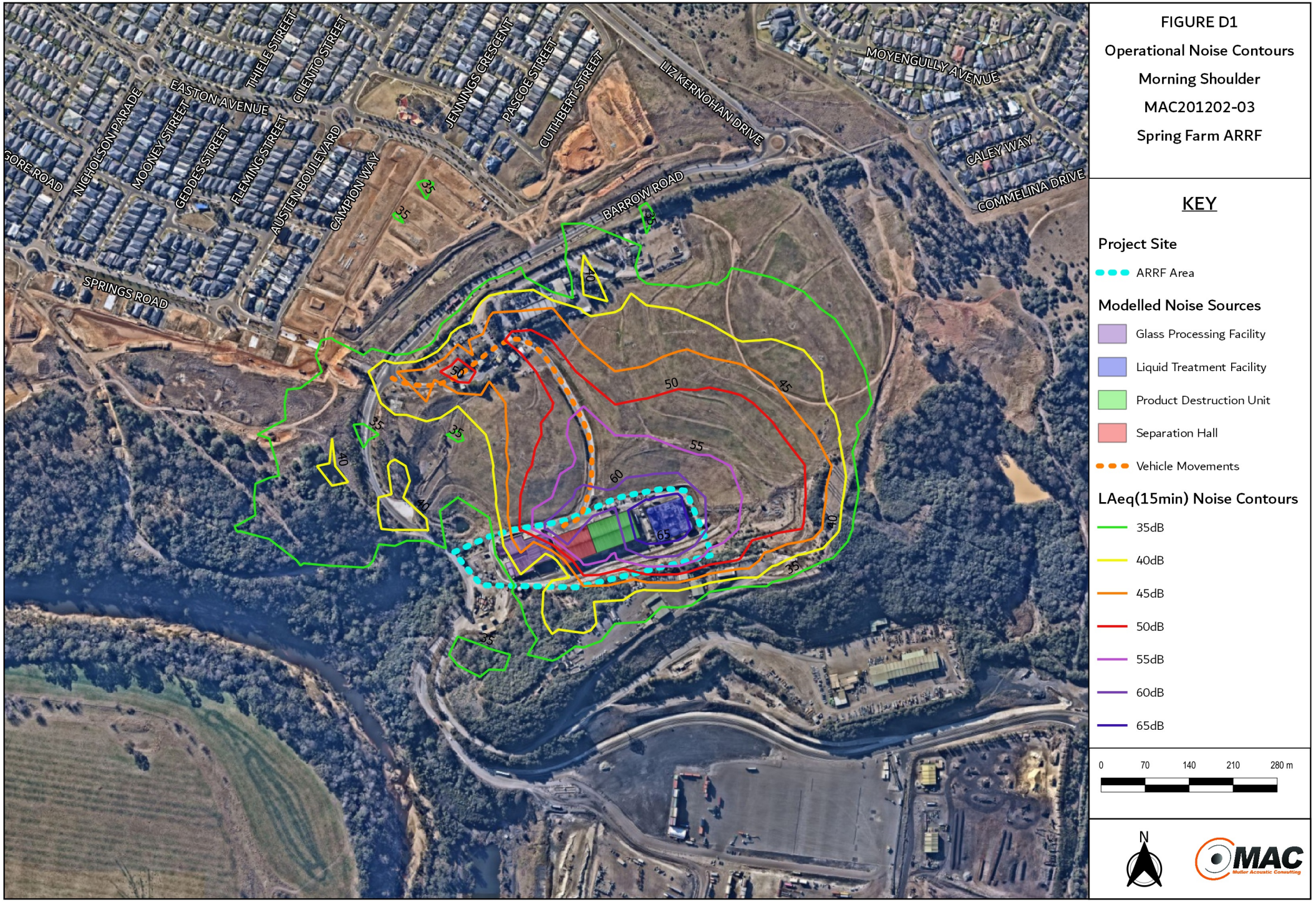
Appendix C – Annoying Characteristics Assessment

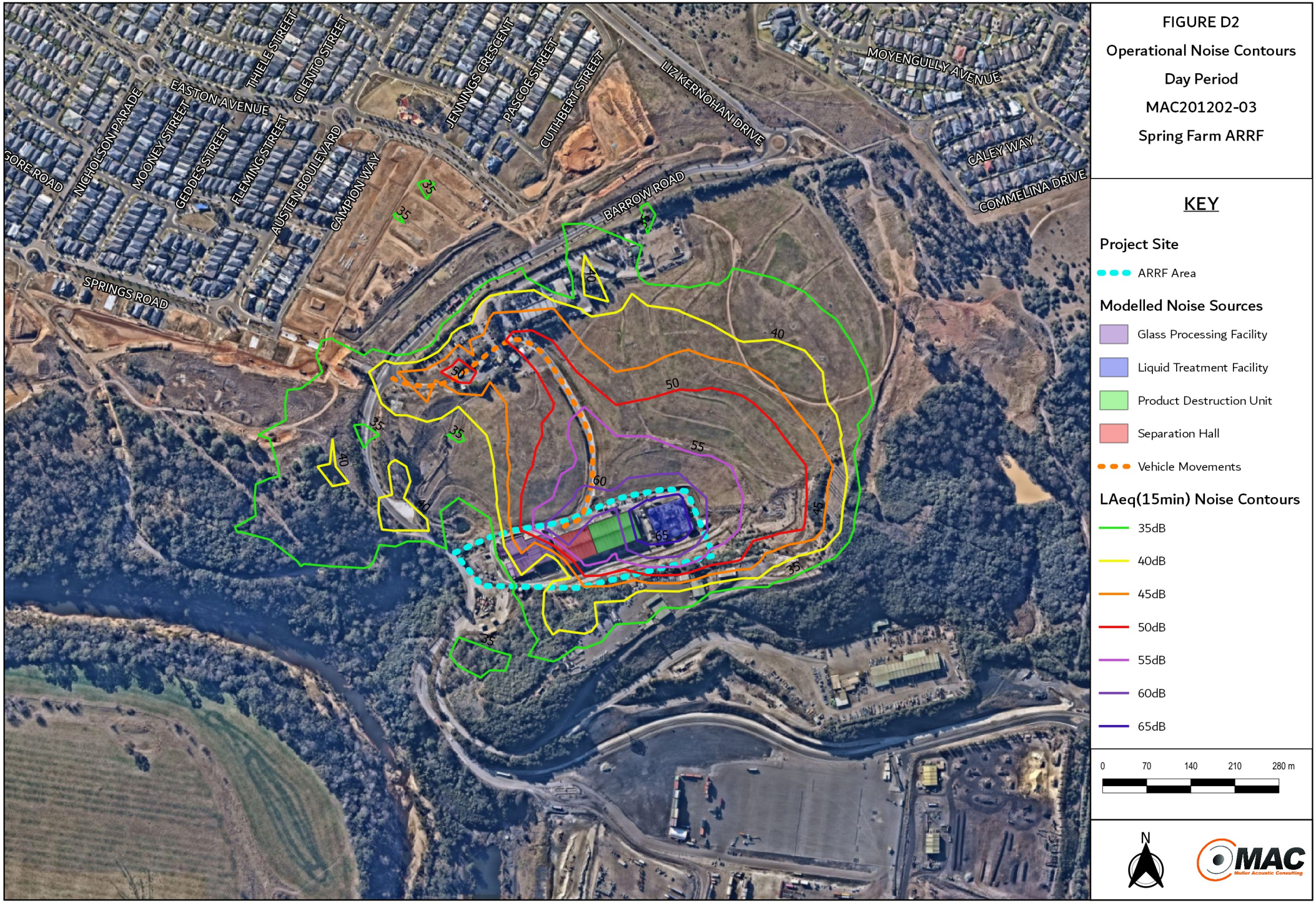
Table APP-1 Tonality & Low Frequency Noise Assessment							
Frequency (Hz)	Values (dBZ)	A-wt Spectrum	C-wt Spectrum	1/3 Octave Tonality Test	1/1 Octave Tonality Test	LFN Present (Table C1 -NPI 2017)	NPI LFN Criteria (dBZ)
10		0	0			FALSE	92
12.5		0	0			FALSE	89
16		0	0			FALSE	86
20		0	0			FALSE	77
25	51	6.3	46.6			FALSE	69
31.5	46	6.3	42.7	FALSE	FALSE	FALSE	61
40	41	6.3	38.9	FALSE		FALSE	54
50	47	16.9	45.8	FALSE		FALSE	50
63	43	16.9	42.3	FALSE	FALSE	FALSE	50
80	39	16.9	38.9	FALSE		FALSE	48
100	42	22.7	41.5	FALSE		FALSE	48
125	39	22.7	38.6	FALSE	FALSE	FALSE	46
160	36	22.7	36	FALSE		FALSE	44
200	32	20.7	31.6	FALSE			
250	29	20.7	29.3	FALSE	FALSE		
315	27	20.7	27.3	FALSE			
400	29	25.1	29.3	FALSE			
500	28	25.1	28.3	FALSE	FALSE		
630	27	25.1	27	FALSE			
800	28	26.8	27.6	FALSE			
1000	27	26.8	26.8	FALSE	FALSE		
1250	26	26.8	26.2	FALSE			
1600	23	23.8	22.7	FALSE			
2000	23	23.8	22.4	FALSE	FALSE		
2500	23	23.8	22.2	FALSE			
3150	11	12.3	10.6	FALSE			
4000	11	12.3	10.5	FALSE	FALSE		
5000	12	12.3	10.5	FALSE			
6300	10	10.3	8.4	FALSE			
8000	11	10.3	8.4	FALSE	FALSE		
10000	13	10.3	8.4				
12500		0	0				
16000		0	0				
20000		0	0				

	Total dBA	Total dBC	C-A
Total SPL	36	52	16

Assessment	
Low Frequency Noise Present	No
Tonal Noise Present	No

Appendix D – Noise Contour Plots


FIGURE D1
Operational Noise Contours
Morning Shoulder
MAC201202-03
Spring Farm ARRF
KEY
Project Site
ARRF Area
Modelled Noise Sources
Glass Processing Facility
Liquid Treatment Facility
Product Destruction Unit
Separation Hall
Vehicle Movements
LAeq(15min) Noise Contours
35dB
40dB
45dB
50dB
55dB
60dB
65dB
0
70
140
210
280 m
N
MAC
Muller Acoustic Consulting
BARROW ROAD
SPRINGS ROAD
GORE ROAD
NICHOLSON PARADE
EASTON AVENUE
MOONEY STREET
GEDDES STREET
FLEMING STREET
AUSTEN BOULEVARD
CAMPION WAY
THIELE STREET
CILENTO STREET
JENNINGS CRESCENT
PASCOE STREET
CUTHBERT STREET
LIZ KERNOHAN DRIVE
MOYENGULLY AVENUE
CALEY WAY
COMMELINA DRIVE


FIGURE D2
Operational Noise Contours
Day Period
MAC201202-03
Spring Farm ARRF
KEY
Project Site
ARRF Area
Modelled Noise Sources
Glass Processing Facility
Liquid Treatment Facility
Product Destruction Unit
Separation Hall
Vehicle Movements
LAeq(15min) Noise Contours
35dB
40dB
45dB
50dB
55dB
60dB
65dB
0
70
140
210
280 m
N
MAC
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NICHOLSON PARADE
MOONEY STREET
EASTON AVENUE
GEDDES STREET
THIELE STREET
FLEMING STREET
CILENTO STREET
AUSTEN BOULEVARD
CAMPION WAY
JENNINGS CRESCENT
PASCOE STREET
CUTHBERT STREET
LIZ KERNOHAN DRIVE
MOYENGULLY AVENUE
CALEY WAY
COMMELINA DRIVE
BARROW ROAD
SPRINGS ROAD

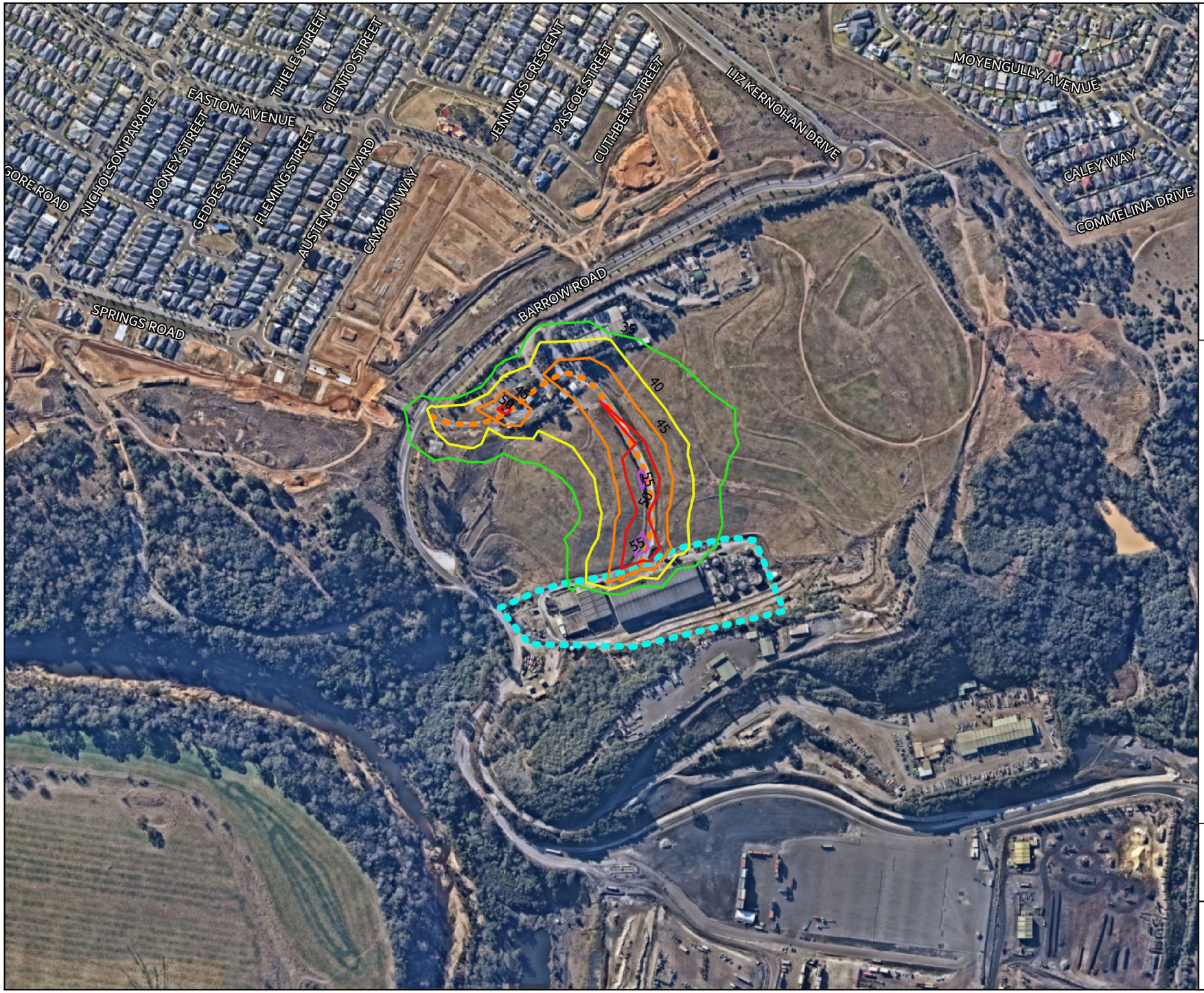


FIGURE D3

Operational Noise Contours

Evening Period

MAC201202-03

Spring Farm ARRF

KEY

Project Site

ARRF Area

Modelled Noise Sources

Vehicle Movements

LAeq(15min) Noise Contours

- 35dB
- 40dB
- 45dB
- 50dB
- 55dB
- 60dB
- 65dB

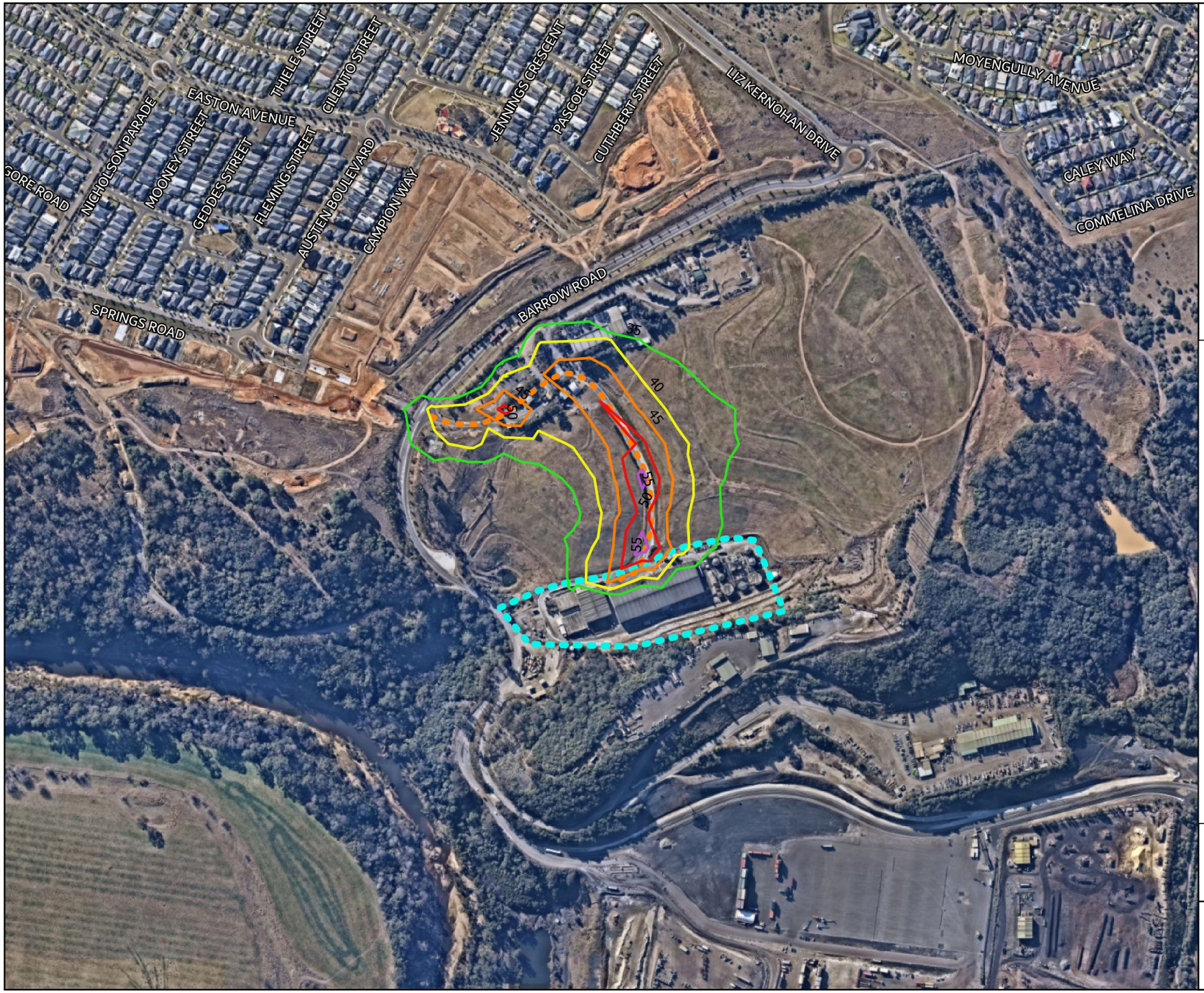


FIGURE D4

Operational Noise Contours

Night Period

MAC201202-03

Spring Farm ARRF

KEY

Project Site

ARRF Area

Modelled Noise Sources

Vehicle Movements

LAeq(15min) Noise Contours

- 35dB
- 40dB
- 45dB
- 50dB
- 55dB
- 60dB
- 65dB

0 70 140 210 280 m

N

MAC
Muller Acoustic Consulting

Muller Acoustic Consulting Pty Ltd
PO Box 678, Kotara NSW 2289
ABN: 36 602 225 132
Ph: +61 2 4920 1833
www.mulleracoustic.com

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Environmental Resources Management Australia Pty Ltd
Level 14 207 Kent Street
Sydney NSW 2000
T: +61 2 8584 8888

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