CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN
55 MARTIN ROAD, BADGERYS CREEK

Prepared for: AMJ Demolition and Excavation Pty Ltd
Claron Consulting

Prepared by: Peter Gangemi, Senior Acoustic Engineer
R T Benbow, Principal Consultant

Report No: 171127-02_CNVMP_Rev3
December 2018
(Released: 4 December 2018)

Benbow
ENVIRONMENTAL

Engineering a Sustainable Future for Our Environment

Head Office: 25-27 Sherwood Street, Northmead NSW 2152 AUSTRALIA
Tel: 61 2 9896 0399 Fax: 61 2 9890 0544
Email: admin@benbowenviro.com.au
Visit our website: www.benbowenviro.com.au

DOCUMENT CONTROL

Prepared by:	Position:	Signature:	Date:
Peter Gangemi	Senior Acoustic Engineer		04 December 2018

Reviewed by:	Position:	Signature:	Date:
Emma Hansma	Senior Engineer		04 December 2018

Approved by:	Position:	Signature:	Date:
R T Benbow	Principal Consultant		04 December 2018

DOCUMENT REVISION RECORD

Revision	Date	Description	Checked	Approved
1	29-11-2018	Draft / Rev1	P Gangemi	R T Benbow
2	4-12-2018	Draft / Rev2	P Gangemi	R T Benbow
3	4-12-2018	Rev3	P Gangemi	R T Benbow

DOCUMENT DISTRIBUTION

Revision	Issue Date	Issued To	Issued By
1	29-11-2018	AMJ Demolition and Excavation	Benbow Environmental
2	4-12-2018	AMJ Demolition and Excavation	Benbow Environmental
3	4-12-2018	AMJ Demolition and Excavation	Benbow Environmental

Benbow ENVIRONMENTAL
A.B.N. 17 160 013 641

Head Office:
25-27 Sherwood Street Northmead NSW 2152 Australia
P.O. Box 687 Parramatta NSW 2124 Australia
Telephone: +61 2 9896 0399 Facsimile: +61 2 9896 0544
E-mail: admin@benbowenviro.com.au
Visit our Website at www.benbowenviro.com.au

Contents

Page

Tables

Figures

Attachments

1. INTRODUCTION

This report presents the Construction Noise and Vibration Management Plan (CNVMP) for the construction of the proposed resource recovery facility located at 55 Martin Road, Badgerys Creek. The site will feature a shed for operations, and will process approximately 95,000 tonnes of waste per year.

The report details mitigation measures and noise management practices during the construction activities. The CNVMP is to be implemented by identifying the roles and responsibilities of each employee, training and communication.

Successful implementation of this CNVMP will minimise construction noise for surrounding residents.

1.1 COUNCIL ADVICE

The following comments on potential construction noise were received from Liverpool City Council.

> *The Noise Impact Assessment (Report no. 171127_NIA_Rev3) prepared by Benbow Environmental Pty Ltd dated March 2018 has been reviewed by Environmental Health. The construction phase of the development predicted noise levels to exceed the criteria at a number of locations. The consultant states that the exceedances are minor in nature (6 decibels) and well below 75 dB(A) the 'Highly affected" noise criteria in the Interim Construction Noise Guideline (the Guideline).*
>
> *The Guideline specifies in Table 2: Noise at Residences using quantitative assessment that background levels +10dB represents the noise affected level which there may be some community reaction to the noise.*
>
> *It notes that when the predicted or measured LAeq(15min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. Also, the proponent should also inform all potentially impacted residents of the nature of the works to be carried out, the expected noise levels and duration, as well as contact details.*
>
> *The noise mitigation measures proposed by the applicant is to work during standard hours and erect the 2.1 m fence around the site prior to the remainder of the construction works taking place.*
>
> *To ensure compliance with the relevant guideline for construction noise, further mitigation measures are required to ensure all FEASIBLE and REASONABLE work practices are considered so that an adequate attempt is made to comply with the noise levels that need to be met.*
>
> *Noise Management Plan Required*
>
> *The Application shall be supported by a Noise Management Plan prepared under the supervision of a suitably qualified acoustic consultant. The Noise Management Plan must identify and implement strategies to minimise noise from the proposed development (in*

particular the construction phases) and incorporate: approaches for promoting noise awareness by patrons and staff; training procedures; a complaint lodgement procedure to ensure that members of the public and local residents are able to report noise issues; an ongoing review process and a plan for responding to noise complaints. The Noise Management Plan shall clearly specify the responsibilities of site personnel in managing noise and include a detailed list of steps taken to manage potential noise impacts.

Note: 'Suitably qualified acoustic consultant' means a consultant who possesses the qualifications to render them eligible for membership of the Australian Acoustical Society, Institution of Engineers Australia or the Association of Australasian Acoustical Consultants (AAAC) at the grade of member'.

This CNVMP aims to address the comments raised by Liverpool City Council and reduce potential noise impacts for residents during the construction stage.

1.2 SCOPE OF WORKS

The scope of this report is limited to the following:

- Provide a review of the construction program, construction methods, equipment and vehicles;
- Establish the noise criteria in accordance with the NSW DECC Interim Construction Noise Guideline;
- Recommend mitigation measures and management practices to further minimise the construction noise impacts on surrounding residents; and
- Implementation of the CNVMP;

It is noted that Benbow Environmental are a member firm of the Association of Australasian Acoustical Consultants. Furthermore, the author and approver of this report members of the Australian Acoustical Society.

2. SITE DETAILS

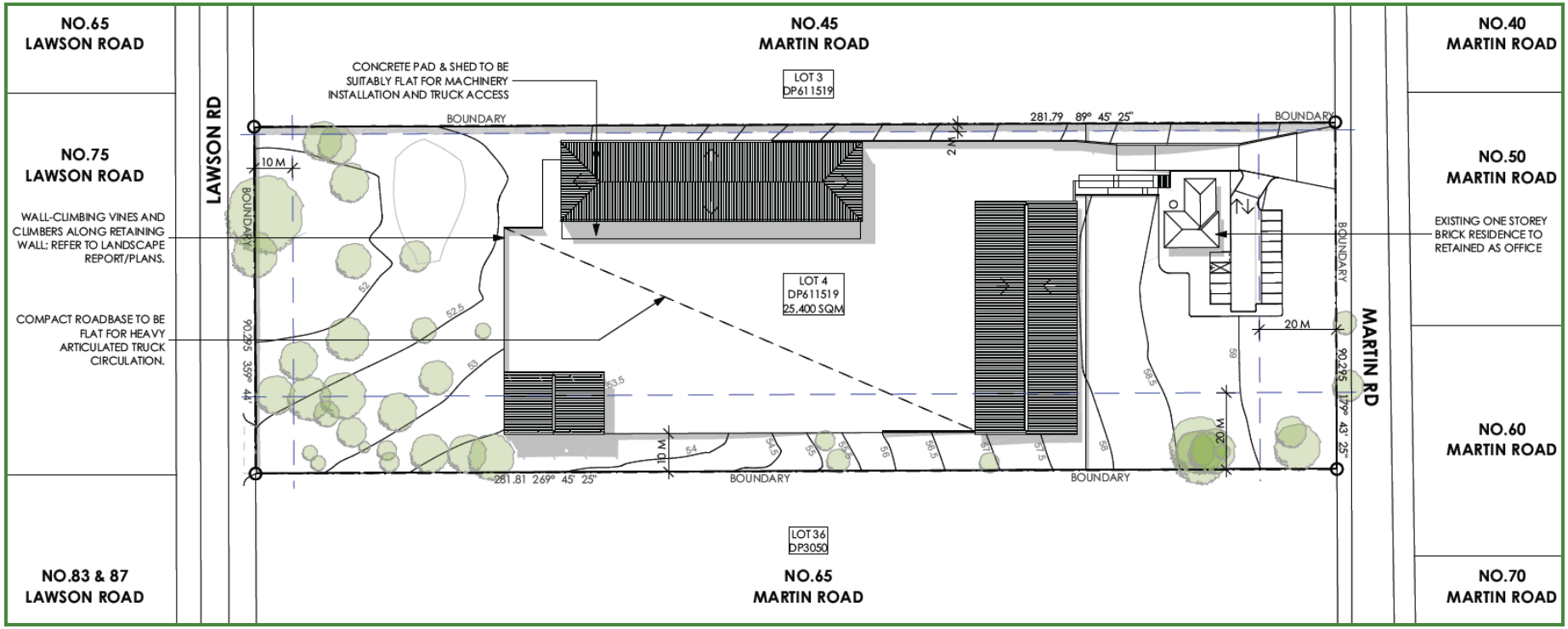
2.1 SUBJECT SITE

The subject site is located at 55 Martin Road, Badgerys Creek, which is legally described as Lot 4 DP 611519. The block is rectangular shaped and 25,400 m^2 in size. A brick building is located on the eastern end of the property. The land and surrounds is zoned RU1 Primary Production in the Liverpool Council Local Environment Plan 2008.

An unloading and processing shed is proposed to be located on the northern boundary of the property. Trucks are proposed to enter and exit the site from Martin Road. A weighbridge is to be located on the north eastern edge of the property off Martin Road, and a wheel wash is located along the driveway, in alignment with truck turning parameters.

Cars are also proposed to enter and exit the site from Martin Road, driving into a new carpark with access off the main driveway between the existing brick building and Martin Road. A site layout plan of the 55 Martin Road property is shown in Figure 2-1.

Figure 2-1: Site Layout



2.2 SURROUNDING LAND USES AND DEVELOPMENT

The area immediately surrounding the subject site is RU1 Primary Production. The closest residential receivers are located 70 m south and 50 m east of the site (50 Martin Road and 65 Martin Road). The majority of construction activities will take place even further from residential receivers.

2.3 PROJECT DESCRIPTION

The proponent is seeking to establish a resource recovery facility at 55 Martin Road, Lot 4 DP 611519. The development would involve the construction of unloading and processing shed, five storage bays, weighbridge and wheel wash and car park and landscaped area.

Trucks will enter the site from Martin Street, and unload materials in the unloading and processing shed. Materials are handled and sorted, concrete will be crushed and green waste will be shredded inside the shed. Sorted concrete, bricks, untreated timber and shredded green garden waste are stockpiled on site.

Recovered materials would be stored in the external storage bays for re-selling, either directly from site to trade clients or to a landscape supply outlet offsite. Any processed waste that is not suitable for resource recovery will be collected by a licensed waste contractor for final disposal to landfill.

2.3.1 Construction Program and Methods

The proposal is expected to result in the following construction work activities shown in Table 2-1. Apart from the existing dwelling which is to be retained, the site is currently vacant of structures, so no demolition works are expected. A number of trees are proposed to be removed in the works. External building construction will primarily utilise colorbond material.

Table 2-1: Construction activities

Component	Typical activities	Potential Equipment
Site Establishment	• Fencing of the site; and • Establishment of construction site facilities.	• Hand tools • Excavator • Truck
Site Preparation	• Removal of existing vegetation; • Stripping and stockpiling of topsoil for reuse; and • Proof rolling.	• Hand tools • Truck • Roller
Services	• Relocation/extension of services including electricity, water and telecommunications.	• Hand tools
Earthworks and drainage	• Site regrading; • Installation of shoring system for excavations; • Excavation of the site for shed; and • Dewatering of excavated area.	• Excavator • Backhoe • Dozer • Truck
Establishment of hardstand	• Construction of concrete hardstand areas and driveways; and • Establishment of sub-surface drainage.	• Concrete mixer truck • Concrete pump • Hand tools

Table 2-1: Construction activities

Component	Typical activities	Potential Equipment
Construction of the shed	• Construction of the processing shed.	• Crane • Truck • Hand tools
Finishing works	• Removal of temporary works; • Perimeter planting and landscaping; • Decommissioning of any construction facilities; and • Site clean-up and disposal of surplus waste materials.	• Hand tools • Truck

2.3.2 Equipment and Vehicles

As presented in Table 2-1, construction equipment would consist of dozers, backhoes, excavators, rollers, trucks, concrete-pumping equipment, mobile cranes, and hand tools equipment such as welders, saws and air compressors. Proposed noise mitigation measures for equipment use is outlined in Section 4.

3. CONSTRUCTION NOISE AND VIBRATION CRITERIA

Criteria for construction and demolition noise has been obtained from the NSW Interim Construction Noise Guideline (DECC, 2009). Guidance for construction vibration has been taken from British Standard BS7385-Part 2: 1993 '*Evaluation and measurement for vibration in buildings*' and other standards.

3.1.1 NSW Interim Construction Noise Guideline

Residential Criteria

Table 2 of the Interim Construction Noise Guideline (DECC, 2009), sets out construction noise management levels for noise at residences and how they are to be applied. The management noise levels are reproduced in Table 3-1 below. Restrictions to the hours of construction may apply to activities that generate noise at residences above the 'highly noise affected' noise management level.

Table 3-1: Management Levels at Residences Using Quantitative Assessment

Time of Day	Management Level $L_{Aeq(15\ minute)}$	How to Apply
Recommended standard hours: Monday to Friday 7am – 6pm Saturday 8am – 1pm No work on Sundays or Public Holidays	Noise Affected RBL + 10 dB	The noise affected level represents the point above which there may be some community reaction to noise. • Where the predicted or measured $L_{Aeq(15\ minute)}$ is greater than the noise affected level, the proponent should apply all feasible and reasonable work practises to meet the noise affected level. • The proponent should also inform all potentially affected residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly Noise Affected 75 dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise. • Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: 1. times identified by the community when they are less sensitive to noise (such as before and after school, or mid-morning or mid-afternoon for works near residents. 2. if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.

Table 3-1: Management Levels at Residences Using Quantitative Assessment

Time of Day	Management Level $L_{Aeq(15\ minute)}$	How to Apply
Outside recommended standard hours	Noise Affected RBL + 5 dB	• A strong justification would typically be required for works outside the recommended standard hours. • The proponent should apply all feasible and reasonable work practices to meet the noise affected level. • Where all feasible and reasonable practices have been applied and noise is more than 5 dB(A) above the noise affected level, the proponent should negotiate with the community. • For guidance on negotiating agreements see section 7.2.2 (RNP)

Noise levels apply at the property boundary that is most exposed to construction noise, and at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m from the residence.

Other Land Uses

Table 3-2 sets out management levels for construction noise at other land uses applicable to the surrounding area.

Table 3-2: Management Levels at Other Land Uses

Land use	Management Level $L_{Aeq(15\ minute)}$ (applies when properties are being used)
Industrial Premises	External Noise Level 75 dB(A)

There are no other sensitive land uses in the area surrounding the proposed resource recovery facility.

The noise criterion for construction noise is presented in Table 3-3. The RBLs are taken from the Noise Impact Assessment 171127_NIA_Rev3.

Table 3-3: Construction Noise Criterion dB(A)

Receiver	Land Use	Period	RBL L_{A90}	Management Level $L_{Aeq(15\ minute)}$
R1-R11	Residential	Standard Hours	37	47
R12-R17	Residential	Standard Hours	37	47
R18-R20	Industrial	Standard Hours	-	75

3.1.2 Vibration Criteria

A proposed list of construction equipment listed in Table 2-1 does not include significant sources of vibration, and is not expected to cause cosmetic damage to surrounding structures or cause human response to nearby receivers. Vibration impacts during the construction and operational activities have therefore not been further considered.

4. MITIGATION MEASURES

Noise modelling from 171127_NIA_Rev3 showed that during construction activities, noise levels are predicted to exceed the criteria by 5 dB at 65 Martin Road (R11), 6 dB at 83-87 Martin Road (R12), 5 dB at 75 Lawson Road (R13), 4 dB at 55 Lawson Road (R15) and 2 dB at 45 Lawson Road (R16).

The correspondence from Liverpool Council notes the previous advice that the 2.1 m perimeter fence is recommended to be constructed as early as possible in the construction works, and that the construction activities are proposed to take place during standard hours. These recommendations are presented in section 4.1.

However, further feasible and reasonable work practices are recommended to be further considered. These additional noise control measures are contained in section 4.2.

4.1 PREVIOUSLY RECOMMENDED CONTROL MEASURES

Construction noise control measures recommended in 171127_NIA_Rev3 included the perimeter fence and standard construction hours.

4.1.1 Construction Hours

Construction activities are recommended to only take place during standard **construction** hours in the Interim Construction Noise Guideline as follows:

Monday to Friday:	7am to 6pm
Saturday:	8am to 1pm
Sunday and Public Holidays:	No works permitted

The proposed construction hours reflect the details listed in the Noise Impact Assessment 171127_NIA_Rev3.

4.1.2 Perimeter Fence

The 2.1 m colorbond fence is recommended to be installed on site prior to the construction works taking place, or otherwise as early as possible during the construction stages.

4.2 ADDITIONAL RECOMMENDED CONTROL MEASURES

As per the correspondence from Liverpool Council, further feasible and reasonable work practices are recommended to be implemented. These control measures are listed below.

4.2.1 General Site Activities

- Regular inspections shall be conducted in accordance with the Regular Site Inspection Procedure to identify areas of potential noise generation. Indicators may include:
  - Evidence of oil leaks or damage to equipment/vehicles;

  - Un-secured or damaged noise guards or equipment;
  - Noticeable, excessive or unusual sources of noise; and
  - General wear and tear of equipment.
- If problem areas of additional noise generation are identified, action should be taken to alleviate any additional noise as soon as practicable by the Project Manager or Site Manager.
- Noise shall be included in the awareness training and induction of staff and contractors.

4.2.2 Universal Work Practices

- Regularly train workers and contractors (such as at toolbox talks) to use equipment in ways to minimise noise.
- Ensure site managers periodically check the site and nearby residences and other sensitive land uses for noise problems so that solutions can be quickly applied.
- Include in tenders, employment contracts, subcontractor agreements and work method statements clauses that require minimisation of noise and compliance with directions from management to minimise noise.
- Avoid the use of radios or stereos outdoors where neighbours can be affected.
- Avoid the overuse of public address systems.
- Avoid shouting, and minimise talking loudly and slamming vehicle doors.
- Keep truck drivers informed of designated vehicle routes, parking locations, acceptable delivery hours or other relevant practices (for example, minimising the use of engine brakes or compression braking, and no extended periods of engine idling).
- Develop a one-page summary of approval or consent conditions that relate to relevant work practices, and pin it to a noticeboard so that all site operators can quickly reference noise information.
- Workers may at times need to discuss or negotiate practices with their managers.

4.2.3 Equipment and Infrastructure

- Preventative maintenance of all noise generating equipment, such as pumps and air compressors shall be undertaken. Maintenance should be undertaken in accordance with manufacturer's specifications.
- To minimise noise levels, site management shall endeavour to position construction equipment behind structures that act as barriers, or at the greatest distance from residential areas and orientating equipment such that noise emissions are directed away from residential areas.
- Restrict areas in which mobile plant can operate so that it is away from residences and other sensitive land uses at particular times.
- Use quieter methods:
  - Use alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric controlled units where feasible and reasonable. Where there is no electricity supply, use an electrical generator located away from residences.
- Use quieter equipment:
  - Examine different types of machines that perform the same function and compare the noise level data to select the least noisy machine.
  - When renting, select quieter items of plant and equipment where feasible and reasonable.
  - When purchasing, select, where feasible and reasonable, the most effective mufflers, enclosures and low-noise tool bits and blades. Always seek the manufacturer's advice before making modifications to plant to reduce noise.

- Operate plant in a quiet and efficient manner:
  - Reduce throttle setting and turn off equipment when not being used.

4.2.4 Vehicle Movements

- Liaise with contract drivers to ensure that they are aware of noise impacts on neighbouring receivers and that they adopt the recommended practices to minimise such problems.
- Locate site vehicle entrances away from residences and other sensitive land uses.
- Limit material deliveries and other truck movements to day time only/outside noise sensitive times.
- Enforcing the following practices for on-site vehicle movements:
  - Low on-site speed limits (<15 km/h);
  - Minimise the use of truck exhaust brakes on site;
  - Minimising reversing distances and hence noise generated by reversing beepers; and
  - No extended periods of on-site revving/idling.
- Avoid use of reversing alarms by designing site layout to avoid reversing, such as by including drivethrough for parking and deliveries.
- Install where feasible and reasonable less annoying alternatives to the typical 'beeper' alarms taking into account the requirements of the Occupational Health and Safety legislation; examples are smart alarms that adjust their volume depending on the ambient level of noise and multifrequency alarms that emit noise over a wide range of frequencies.

4.2.5 Complaints Procedure

All complaints or enquiries should be handled in a courteous manner. Every complaint is a potential opportunity for improvement in noise management. A procedure for handling complaints is provided below:

- Record in Log Book and on a Complaint Response Form:
  - Name of Complainant;
  - Address;
  - Telephone Number; and
  - Details of Complaint: date, time of occurrence, precise location of event.

- Connect/refer caller to one of the following staff members who are authorised to discuss the complaint with the caller:
  - Director/s; and
  - Personnel with environmental responsibilities.

- Authorised staff member requests details of the complaint or information required by the caller and completes the Complaint Response Form and the Complaint Response Logbook Index (provided in the following pages).

4.2.6 Inspection and Records

Results of the regular site inspections need to be maintained.

Any issues or non-conformances must be recorded. Documentation for any corrective and preventative actions must also be maintained. Any other relevant records must also be kept for inspection by regulatory authorities.

A weekly noise control checklist is provided in attachment 1.

4.2.7 Resident Notifications

As mentioned in section 4, exceedances of 2 dB to 6 dB were predicted in 171127_NIA_Rev3 at five nearby residential properties.

Prior to construction works commencing, resident notifications are therefore recommended at the following properties:

- 65 Martin Road (R11);
- 83-87 Martin Road (R12);
- 75 Lawson Road (R13);
- 55 Lawson Road (R15); and
- 45 Lawson Road (R16).

Resident notifications are recommended to be in the form of a leaflet that can be letterboxed at the appropriate properties. Details on the flyer should include

- Outline of proposed construction activities;
- Approximate dates of construction works;
- Hours of construction activities;
- Potential noise impacts/expected noise levels;
- Proposed noise mitigation measures; and
- Details of complaints procedure.

Letterboxing is recommended to take place between 5 and 14 days before first construction works begin.

5. IMPLEMENTATION AND OPERATION

Successful implementation of this CNVMP requires knowledge, skills and training, as well as the appropriate allocation of resources, and the clear delegation of responsibilities. It is also important that appropriate communication is established with the various stakeholders involved (e.g. surrounding residential community and regulatory authorities).

This section discusses the following:

- The key environmental roles and responsibilities; and
- Training and appropriate communication strategies/procedures.

5.1 KEY ROLES AND RESPONSIBILITIES

Key roles and responsibilities for reducing noise and implementing procedures during the construction phase are provided below. This description provides a guide to the roles the construction team would require during the project.

Table 5-1: CNVMP related Roles and Responsibilities

Role/Position	Responsibilities
Project Director/Site Managers	• Ensure signs are installed that show the principal contractor's details • Review and update the CNVMP, and ensure that each person who is to carry out the construction work is made aware of relevant procedures • Make arrangements for ensuring compliance with the requirements for general workplace management • Manage any specific risks relating to WHS and environmental management such as waste disposal and unexpected finds
Foreman/Leading Hands	• Ensure CNVMP is implemented • Carry out daily inspections and monitoring required (including checklist provided in attachment 1) • Ensure all noise mitigations measures and controls are installed and working efficiently
All Workers (e.g. Machine Operators, Truck Drivers and Labourers) and any Sub-Contractors	• Responsible for carrying out construction activities in accordance with the CNVMP and procedures • Responsible for informing the Principal Contractor of any issues with implementing the CNVMP, or amendments needed as soon as practicable • Take reasonable care for own health and safety and that of others • Comply with any reasonable instruction, policy or procedure relating to WHS and environmental management at the construction site
Acoustic Consultant	• An acoustic consultant may need to be appointed for solving any noise non-compliance at the construction site

5.2 TRAINING

The Project Director has the responsibility to ensure that noise training is undertaken. The Site Manager will coordinate training as set out below.

5.2.1 Site Induction

All workers must have successfully completed construction induction training prior to starting work at the site. A general construction induction training card or certification must be held. Construction induction training would contain an environmental component that would cover the following areas:

- Awareness of the purpose and objectives of the site CNVMP.
- Awareness of legal requirements and individual accountability under environmental legislation applicable to the site, including penalties for offences under the POEO Act.
- Key noise issues of the construction of the project including how the potential impacts are managed on site.
- Understanding of the various roles and responsibilities, with relevance to procedures.
- Mitigation measures and controls.
- Incident response and reporting requirements.

Contractors should be inducted by the Site Manager, who would provide a tour of the site. All staff and contractors must complete a sign-in and sign-out register and must sign a document stating that they understand and agree to abide by the site's procedures.

5.2.2 Regular Site Meetings

Site meetings would be undertaken usually at the commencement of the day's activities. The agenda for the meetings could include:

- The day's activities;
- Safe work practices; and
- Noise protection practices and control measures.

Details of all training needs to be recorded, and should include, at the minimum: the date of when training was completed, the name of the person being trained, and the general content of the training program. Site meetings shall be recorded including the date and time the meeting took place, names of attendees and topics of discussion.

5.3 COMMUNICATION

The Project Director and/or Site Manager would communicate with relevant stakeholders when required. Stakeholders may include community groups, sub-contractors, regulatory authorities, non-regulatory agencies and the State Government.

5.3.1 Community Relations

It is important to foster open communications with the other stakeholders of the site to ensure that an integrated approach is used to deal with issues which reflect on all stakeholders. Regular communications with adjacent facilities should be undertaken to ensure any environmental management issues from either party are addressed promptly.

5.3.1.1 Complaints Response

All complaints or enquiries should be handled as per section 4.2.5 of this report. Sample complaint response forms are provided in attachment 2.

5.3.2 Regulatory Authorities

Communications with regulatory authorities, such as the local council, shall occur on an as-needed basis. All communication with regulatory authorities concerning noise is to be noted and records of any subsequent actions appropriately filed.

5.3.3 Internal Communication

The site management is to establish simple yet effective communication channels for implementation of the CNVMP. Typical methods of communication that may suit the size of the operation include the Daily Site Meetings with formal records.

Document control and written communication would be necessary when new contractors or employees are trained or changes are made to the CNVMP or any other matters that affect the holistic environmental management of the site during construction.

6. CONCLUSION

This report presents the Construction Noise and Vibration Management Plan (CNVMP) for the construction of the proposed resource recovery facility located at 55 Martin Road, Badgerys Creek. The site will feature a shed for operations, and will process approximately 95,000 tonnes of waste per year.

The report details mitigation measures during the construction activities, including the following:

- Construction hours;
- Perimeter fence;
- General site activities;
- Universal work practices;
- Equipment and infrastructure measures; and
- Vehicle movement practices;

Additionally, a complaints procedure, records, and resident notifications are recommended to be implemented. The CNVMP is to be implemented by identifying the roles and responsibilities of each employee, training and communication.

Successful implementation of this CNVMP will minimise noise during the construction works.

This concludes the report.

Peter Gangemi	Emma Hansma	R T Benbow
Senior Acoustic Engineer	Senior Engineer	Principal Consultant

7. LIMITATIONS

Our services for this project are carried out in accordance with our current professional standards for site assessment investigations. No guarantees are either expressed or implied.

This report has been prepared solely for the use of AMJ Demolition and Excavation, as per our agreement for providing environmental services. Only AMJ Demolition and Excavation is entitled to rely upon the findings in the report within the scope of work described in this report. Otherwise, no responsibility is accepted for the use of any part of the report by another in any other context or for any other purpose.

Although all due care has been taken in the preparation of this study, no warranty is given, nor liability accepted (except that otherwise required by law) in relation to any of the information contained within this document. We accept no responsibility for the accuracy of any data or information provided to us by AMJ Demolition and Excavation for the purposes of preparing this report.

Any opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal advice.

ATTACHMENTS

Attachment 1: Construction Noise Weekly Inspection Checklist

CONSTRUCTION NOISE WEEKLY SITE INSPECTION CHECKLIST				
Inspected by:			Date & time:	
ITEM CHECKED	**YES**	**NO**	**ACTION REQUIRED**	**SIGN**
Are all construction activities being conducted during standard construction hours?				
Is there any excessive noise from construction activities (or any noise complaints)?				
Check all barrier fencing installed is being used for its intended purpose.				
Is there evidence of oil leaks or damage to equipment/vehicles.				
Is there un-secured or damaged noise guards or equipment?				
Is there any wear and tear of equipment causing noise issues?				
Are workers and contractors trained (such as at toolbox talks) to use equipment in ways to minimise noise?				
Are radios or stereos outdoors being used?				
Has the public address systems been overused?				
Are workers avoiding shouting, and minimising talking loudly and slamming vehicle doors.				
Has all necessary equipment maintenance been completed?				
Are truck drivers informed of designated vehicle routes, parking locations, acceptable delivery hours or other relevant practices (for example, minimising the use of engine brakes or compression braking, and no extended periods of engine idling)?				
Where practicable is site management endeavouring to position construction equipment behind structures that act as barriers, or at the greatest distance from residential areas and orientating equipment such that noise emissions are directed away from residential areas?				
Where practical are areas in which mobile plant can operate being restricted so that it is away from residences and other sensitive land uses at particular times?				
Are alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric controlled units used where feasible and reasonable?				
Where there is no electricity supply, use an electrical generator located away from residences?				
When renting, are quieter items of plant and equipment being selected where feasible and reasonable?				
When purchasing, select, where feasible and reasonable, are the most effective mufflers, enclosures and low-noise tool bits and blades being selected?				

CONSTRUCTION NOISE WEEKLY SITE INSPECTION CHECKLIST				
Inspected by:			Date & time:	
ITEM CHECKED	**YES**	**NO**	**ACTION REQUIRED**	**SIGN**
Is the plant operating in a quiet and efficient manner, e.g. Reduce throttle setting and turn off equipment when not being used?				
Is communications with contract drivers occuring to ensure that they are aware of noise impacts on neighbouring receivers and that they adopt the recommended practices to minimise such problems?				
Are low on-site speed limits (<15 km/h) being enforced?				
Is the minimising of use of truck exhaust brakes on site being enforced?				
Is the minimising reversing distances and hence noise generated by reversing beepers being enforce?				
Are no extended periods of on-site revving/idling being enforced?				
Where feasible and reasonable are less annoying alternatives to the typical 'beeper' alarms taking into account the requirements of the Occupational Health and Safety legislation; examples are smart alarms that adjust their volume depending on the ambient level of noise and multifrequency alarms that emit noise over a wide range of frequencies?				
Are any signs out of place, obstructed or missing? Speed limit site sign at entrance Construction site sign at entrance				
Have all complaints been recorded and followed up?				

Comments:

Name:_____ Signature:_____ Date: _____

COMPLAINT RESPONSE **PAGE 1 OF 2**

REF: …… REV: 1

LOG BOOK REFERENCE NO: ……

DATE: ……TIME: ……..AM/PM

NAME OF PERSON WHO RECEIVED CALL: ……

NAME OF COMPLAINANT: ……TELEPHONE NO: ……

ADDRESS: ……

DETAILS OF COMPLAINT:

DATE OF OCCURANCE: ……TIME AM/PM: ……

TYPE OF INCIDENT:

NOISE	☐	STORMWATER	☐
AIR EMISSIONS	☐	ODOUR	☐
TRAFFIC/TRANSPORT	☐	FIRE	☐
EROSION/SEDIMENT	☐	WASTE	☐
OTHER	☐	DETAILS: ……	

PRECISE LOCATION OF INCIDENT: ……

PARTICULAR DETAILS RELATING TO THE INCIDENT: ……

……

……

COMPLAINT RESPONSE **PAGE 2 OF 2**

ACTION TAKEN:

COMPLAINANT TRANSFERRED TO:

MESSAGE TAKEN FOR: ……..

CORRECTIVE AND PREVENTATIVE ACTION:

INFORMATION BULLETIN SENT ☐

COMPLAINT INVESTIGATED BY: .....CPAR NO.....

RESULTS OF INVESTIGATION: .....

.....

.....

.....

ON COMPLETION OF CORRECTIVE AND PREVENTATIVE ACTION:

LETTER SENT TO COMPLAINANT YES NO N/A DATE: .....

WORK PRACTICE MODIFIED YES NO N/A DATE: .....

COMPLAINT RESPONSE COMPLETE: .....
PRINT NAME

SIGNATURE: .....

DATE: ..... TIME: .....AM/PM

COMPLAINT RESPONSE
LOG BOOK INDEX

COMPLAINT NUMBER	DATE	COMPLAINANT	CALL DIRECTED TO:	COMPLAINT ACTION AND RESPONSE SIGN & DATE