



SOUTHERN PORTS, ESPERANCE

BUY QUIET PROCEDURE

Responsible Person: Appointed Noise Officer

Revision	Prepared	Reviewed	Approved	Date	Description
0	K Dardha	D Lindkvist	A Byers	Feb 2016	First Draft to include reference to Environmental Noise
1	K Dardha	A Byers	A Byers	Feb 2016	Comments section 1 used equipment
2	K Dardha	A Leonard	A Byers	Feb 2016	Environmental noise
3	A Leonard	A Leonard	J Oldfield	Jan 2017	Insertion of: Responsible Person, role of Environmental Department and using broadband "croaker" reversing alarms.
4	A Leonard N Pearson	A Leonard	A Leonard	Nov 2017	Minor amendments.



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1. INTRODUCTION

This Buy Quiet Procedure provides guidance for controlling noise levels at the earliest stages of planning and design, and aims to encourage the minimisation of noise generation by purchasing intrinsically quieter equipment.

It is to be used by personnel who purchase new or used equipment and plant or tender for services at Southern Ports (SP) and it should be used in conjunction with our Change Management Procedure.

2. SP NOISE LEVEL GOAL

SP aims to provide a work place noise level of no greater than 85 dB(A) over an eight (8) hour day or an 82 dB(A) equivalent over 12 hours. Therefore, all equipment and plant purchased should be no greater than 85 dB(A) at the operator's ear.

For plant or equipment that may emit high impulse noise, the noise level will not exceed 140 dB(l). A measurement of 85 dB(A) at 1 metre but located inside a building and nobody nearby, would normally be accepted but should be actioned on a case by case basis.

Consideration of Environmental Noise outside the Port boundary will require consultation with the Environmental Department at the earliest planning and design stage.

3. TEAM RESPONSIBILITIES

It is highly recommended that a team approach to the purchase or tender for plant, equipment or services be utilised at SP and include as a minimum the Requestor, Noise Officer, Environmental Department and Procurement personnel.

3.1 Requestor

The Requestor is the person who has identified the need for plant, equipment or service in the workplace. The Requestor is responsible for ensuring the steps for Buy Quiet and Change Management processes are followed and communicated with all stakeholders.

3.2 Appointed Noise Officer

The Appointed Noise Officer is responsible for providing assistance and advice to estimate noise levels from equipment and placement of equipment in the workplace. This advice can extend to recommendations for noise treatment devices and other controls as necessary.

For tendered services, the Noise Officer shall:

- Specify the maximum acceptable noise level;
- Assist with the preparation of specification and tender documents;
- Evaluate noise information provided with tenders and quotes;
- Participate in the decision to order equipment;



- Provide assistance to purchasing personnel for negotiations with suppliers for additional noise control as necessary, and
- As required, arrange for noise measurements for evaluation once on site.#

3.3 Environmental Department

Provides advice based on noise modelling and verification by monitoring, to ensure equipment used by existing and planned operations is compliant at the Port's boundary with statutory criteria. The statutory criteria is specified in the Regulation 17 Noise Approval for the Port of Esperance which are issued in accordance with the Noise Regulations and the Environmental Protection Act (1986).

3.4 Engineering and Maintenance

Engineering and Maintenance Departments shall be used for technical engineering advice as well as installation specifications.

3.5 Responsible Manager or Supervisor

The Requestor's Manager or Supervisor is responsible for ensuring equipment entering their area of responsibility is given signatory approval or decline.

3.6 Procurement Personnel

Procurement personnel are responsible to ensure that evidence of approval is sighted prior to final ordering or service acceptance.

4. DETERMINING THE NEED FOR NEW EQUIPMENT OR PROCESS

Prior to purchasing new equipment, it is important to determine whether there is a quieter way to do the job.

Once it has been established that there is a need for new equipment the following process should be followed:

- Noise data requested from the supplier or manufacturer;
- Compare noise levels received to Esperance's prescribed Noise Action Level both inside and outside the Port boundary;
- Determine what this noise level will mean with plant or equipment in situ in the workplace with the assistance of the Appointed Noise Officer;
- Accept or reject equipment based on noise levels and risk assessment to be signed off by the relevant Manager;
- Proceed to purchase and participate in the delivery of equipment: and
- Post installation testing of noise levels.

5. REQUIREMENTS FOR REVERSING ALARMS FOR MOBILE PLANT

To avoid exposing surrounding residents to unnecessary noise, while still ensuring safety is not compromised, SP requires all mobile plant on site to have broadband reversing alarms or "croakers" installed. This includes plant owned by Contractors.



Self-adjusting croakers are preferable since they adjust themselves to the level of background noise.

A BBS-TEK Alarm – Self Adjusting 610-BBS107SA (92-107dB) or an equivalent model as agreed with the Environmental Department is to be used. These alarms can be purchased cheaply and are easy to install. The sound wavelengths used in these alarms do not travel the same distance as the traditional higher pitched alarms, but travel far enough to safely warn everyone in the immediate vicinity that a vehicle is reversing.

6. CONTRACTUAL TENDERING

For any plant, equipment or services being tendered the following shall be included in tender documentation:

- SP Esperance's noise action levels for plant and equipment to enter the workplace;
- Request for noise levels of plant or equipment to be provided for evaluation and approval prior to entering the workplace; and
- Requirements for negotiating for additional noise control as necessary.

7. QUESTIONS FOR SUPPLIERS

It is recommended to ask the suppliers the following questions;

- Are there quieter models of the same machine?
- Does the quieter equipment have any additional safety features?
- If so, what are they?
- Is there any specific maintenance and service requirements?
- Are there any optional extras that can be purchased to further reduce noise?
- What costs are involved?

Even though quieter equipment tends to be more expensive to purchase, the equipment is usually better built and has noise reducing features included.

Features to consider in the selection process are:

- Higher manufacturing tolerances;
- Insulation or damping material included;
- Gears that mesh together better;
- Fans that are quieter;
- Better mountings;
- More secure parts to reduce vibration;
- Less reverberation within the unit itself;
- Tolerance for greater loads;



- Less impact noises produced in operation;
- The use of quieter processes (e.g. hydraulic operations often dampen noise);
- Sound enclosures for noisy parts or operators;
- Parts or attachments constructed of noise absorbing material (e.g. rubber or polyethylene); and
- Remote controls that allow operators to remain a safe distance from the source of the noise.

8. LACK OF SUPPLIER INFORMATION

When a supplier is unable to provide information on the noise level of the equipment it may be possible to arrange for noise measurements to be made of the same model of machine already installed elsewhere or of a machine set up in the supplier's workshop.

The supplier may be prepared to meet or at least share the cost of having the measurements made since the information would be useful in relation to future product promotion and sales.

If no data is available after these avenues are investigated then it is recommended to research further supplier options.

9. PLANT OR EQUIPMENT NOT BELOW ACTION LEVELS

Plant which fails to meet the Noise Action Level should be accepted only with the written approval of the Safety and Security Manager, and the Environmental Manager, via a risk assessment, who should check that:

- Efforts have been made to locate alternative suppliers;
- Negotiations have been held with tenderers to determine the feasibility of additional noise control work on their products and the availability of noise-reducing accessories;
- The equipment is to be supplied with the maximum affordable amount of noise reduction treatment to minimise noise emission inside and outside the Port; and
- Consideration has been given to the design of the area in which the new equipment is to be installed to ensure that operator exposure and Environmental noise levels will be as low as practicable.

REFERENCE DOCUMENTS:

- Workers' Compensation and Injury Management Regulations 1982
- Mines Safety and Inspection Regulations 1995
- Australian Standard – AS 1269 – Part 0-4 Occupational Noise Management
- Department of Mines and Petroleum Guideline – Noise Control in Mines
- PRO49 Change Management Procedure
- PoE Noise Hazard Register



SOUTHERN PORTS AUTHORITY
Port of Esperance

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- PoE Noise Management Audit
- PoE Environmental Management Plan
- Environmental Noise License