

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:

HERRING STORER ACOUSTICS

Suite 34, 11 Preston Street, Como, W.A. 6152

P.O. Box 219, Como, W.A. 6952

Telephone: (08) 9367 6200

Facsimile: (08) 9474 2579

Email: hsa@hsacoustics.com.au



ALLAN HERRING M.I.E. AUST. M.A.A.S.
LYNTON STORER M.A.L.E.A., M.A.A.S.
TIM REYNOLDS M.I.E. AUST. M.A.A.S.

BAYSWATER SITE REMEDIATION (Former Cresco Site)

NOISE MANAGEMENT PLAN

FOR

CSBP LIMITED

NOVEMBER 2005

REFERENCE: 5325-2-05179

CONTENTS

1.	INTRODUCTION	1
2.	PURPOSE	1
3.	NOISE MANAGEMENT PLAN SCOPE	1
4.	PREDICTED NOISE EMISSIONS	
5.	CONSTRUCTION NOISE MANAGEMENT	2
5.1	Environmental Protection (Noise) Regulations 1997	2
5.2	Australian Standard 2436	3
5.3	Phase1 (Contaminated Soil) Noise Management	3
5.4	Phase 2 (Demolition) Noise Management	3
6.	NOISE MONITORING	4
7.	COMMUNITY COMPLAINT PROCEDURE	4

APPENDIX

Table of Noise Levels of Significant Equipment

1. INTRODUCTION

The project is the remediation of the former Cresco fertiliser facility in Bayswater. The site is generally surrounded by industrial land use, with Tonkin Highway to the west, and a rail reserve to the south. The nearest residential areas are to the south-east and to the south-west (the other side of Tonkin Highway). The industrial premises nearest the site (eastern boundary) include a motor mechanic, heavy mobile equipment yard, recycling facility, and other industry generally not of a noise or vibration sensitive nature.

The remediation works generally consist of removal of contaminated soil (Phase 1: earthworks), demolition of existing buildings/sheds and concrete foundations (Phase 2: demolition), and future development of the site (Phase 3: development).

Herring Storer Acoustics have reviewed the project and developed this Noise Management Plan for CSBP Limited in response to issues raised by the City of Bayswater (letter dated 10 February 2005). It is intended that this Noise Management Plan supersedes the 'Noise and Vibration Management Plan' prepared on behalf of CSBP Limited by Parsons Brinkerhoff in December 2004.

2. PURPOSE

- a) Ensure compliance with the Ministerial Statement of approval for the "Final remediation works for the former Cresco site, Bayswater (Assessment No. 1477)", which states – *The proponent shall prepare and implement a Noise Management Plan in accordance with Regulation 13 of the Environmental Protection (Noise) Regulations 1997, on the advice of the City of Bayswater.*
- b) Ensure compliance with *Environmental Protection (Noise) Regulations 1997*. Note that the proposal is considered a 'Construction Site' under section 13 of the Regulations.
- c) Ensure incorporation of practical noise abatement measures to limit potential noise disturbance to nearby residential areas.

3. NOISE MANAGEMENT PLAN SCOPE

This Noise Management Plan applies to the CSBP Bayswater site remediation works Phase 1, from December 2005 (commencement of earthworks) to the end of phase 1 (around mid 2006).

Phase 2 includes the demolition of existing buildings and foundations and will require a revision of the Noise Management Plan to cover potential noise emissions from breaking up the concrete foundations.

Phase 3 may include site development such as earthworks, service and infrastructure installation and soil compaction. Phase 3 will need to be addressed separately.

4. PREDICTED NOISE EMISSIONS

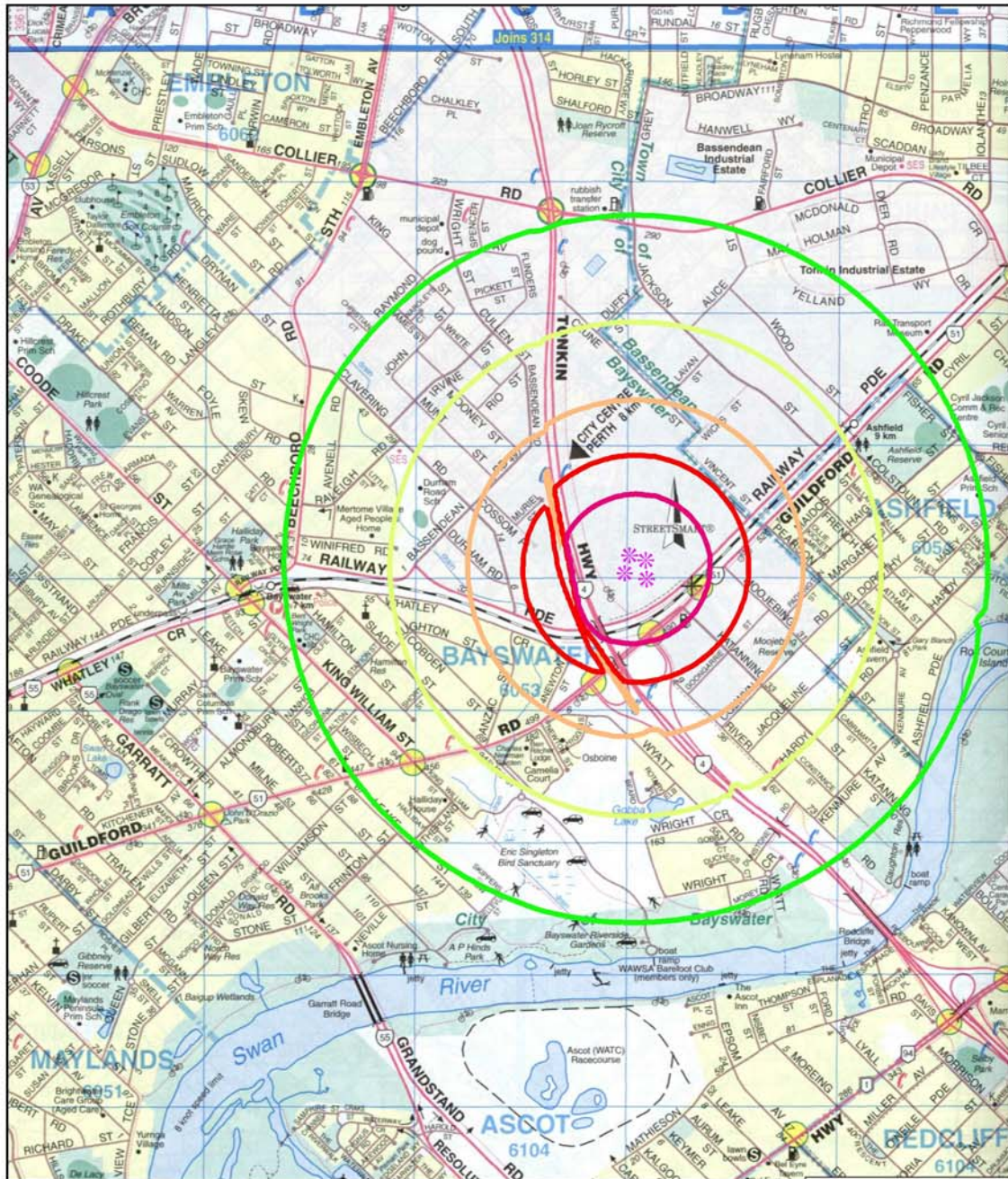
Noise emissions have been predicted for typical Phase 1 contaminated soil removal activities. The acoustic model assumes that a CAT 10R Track Dozer, Volvo EC210B Excavator, Water Truck and CAT 966 Front End Loader are all operating at maximum engine speed, and that the wind conditions are 4 m/s from source to receiver. As such, the noise contours shown represent the 'worst case' for noise propagation from the site. In summer the prevailing wind directions are from the east in the morning and south-west in the afternoon, neither of which is towards residential areas.

For remediation works to the eastern portion of the site, the noise contours will also move eastward, indicating that for the residential area to the south-east of the site, noise levels could range from 45 dB(A) (as shown on the contour map), to 55 dB(A) for activity in the far south-east corner of the site. We understand however, that the majority of the soil remediation work is on the western side of the site.

The predicted noise levels are not unreasonable (despite the fact that construction / demolition noise activity is exempted from the Regulation 7 'assigned levels') given that the weekday 'assigned level' is 45 LA10 + the 'influencing factor'. For residences near Guilford Road, the 'influencing factor' is typically at least 5 (due to the significant industrial land use within 450m of the residences). Hence almost all of the likely noise emissions from the phase 1 remediation activity would be in compliance with the Regulation 7 'assigned levels' in any case.

The residences to the south-west are already affected by background noise from Tonkin Highway and it is unlikely that the phase 1 noise emissions will be audible at these residences.

It is concluded that the noise emissions from the phase 1 remediation works on the former Cresco site are unlikely to cause any significant disruption to adjoining premises.



CSBP BAYSWATER REMEDIATION PROJECT
 Predicted Noise Emissions: Western side earthworks
 Day 4 m/s wind from all directions (artificial worst case)

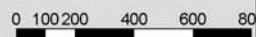
CAT D10R Dozer
 Volvo EC210B Excavator
 CAT 966 Loader
 Water Truck

Base Map 'Streetsmart 2006'

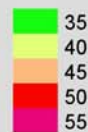
Signs and symbols

* Point source

Scale 1:20000



Noise level
 LA10
 in dB(A)



5. CONSTRUCTION NOISE MANAGEMENT

5.1 Environmental Protection (Noise) Regulations 1997

The *Environmental Protection (Noise) Regulations 1997* stipulate the requirements for construction noise during normal working hours and state that:

For construction work carried out between 7am and 7pm on any day, which is not a Sunday or public holiday, the following applies:

The construction work must be carried out in accordance with control of noise practices set out in Section 6 of Australian Standard 2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites";

The equipment used for the construction must be the quietest reasonably available; and

The Chief Executive Officer (CEO) of the Department of Environment (DoE) may request that a Noise Management Plan be submitted for the construction work at any time.

For construction work outside of these hours:

The construction work must be carried out in accordance with control of noise practices set out in Section 6 of Australian Standard 2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites";

The equipment used for the construction must be the quietest reasonably available;

The contractor must advise all nearby occupants or other sensitive receptors who are likely to receive noise levels which fail to comply with the standard under Regulation 7, of the work to be done at least 24 hours before it commences;

The contractor must show that it was reasonably necessary for the work to be done out of hours; and

The contractor must submit to the CEO of DoE a specific Noise Management Plan at least seven days before the work starts, and the CEO must approve the plan. The plan must include details of:

- Need for work to be done out of hours;
- Types of activities that could be noisy;
- Predictions of noise levels;
- Control measures for noise and vibration;
- Procedures to be adopted for monitoring noise emissions; and
- Complaint response procedures to be adopted.

The major portion of the upgrade works will occur between the hours of 7am - 7pm, weekdays and therefore this project is not considered to require special consideration. However in accordance with good governance and the commitments undertaken by CSBP the issue of potential noise emissions and noise management is addressed by this plan.

5.2 Australian Standard 2436

Australian Standard 2436 'Guide to noise control on construction, maintenance and demolition sites' will be implemented during construction, and construction activities will be scheduled to minimize additional sources of noise outside the hours of 0700-1900.

5.3 Phase1 (Contaminated Soil) Noise Management

The activities to be undertaken during Phase 1 of the remediation project include the removal of contaminated soil from the site. Typically this will involve the use of an excavator (approximately 20 tonne), front end loader, water truck and sand trucks (estimated as 20 semi-trailers per day). The noise emissions from a CAT D10R track dozer have also been considered in the assessment of predicted noise emissions in the event that it is required for ripping hard ground, however it is not planned to use a track dozer at this time. It is not anticipated that the removal of contaminated soil will generate significantly more noise than for similar earthworks projects such as road construction.

- The major portion of the remediation works will occur between the hours of 7am - 7pm, weekdays (Monday to Friday).
- Noise Management Plan for specific noisy construction processes is required if activities are to occur during the night period. Notification of potentially affected residents is required for night work if it is likely to be audible, of extended duration, or likely to cause sleep disturbance.
- Recording of any noise complaints, including complainant details (location received), date and time (if known), and any identified or likely activities at the time that may have contributed to a noise emission. Modification of activities to control excessive noise emissions if practicable (and obvious). Engagement of an experienced acoustic consultant to investigate any ongoing or unresolved noise emission issues and to provide a report outlining any recommended actions to achieve the objectives of this Noise Management Plan.
- In the event that equipment such as de-watering pumps are required, these are to be selected to ensure noise emissions are not excessive, particularly if required to operate at hours outside of normal operating hours.
- To verify that the predicted noise emissions of the equipment to be used on site is similar to that modeled, the noise levels of the equipment are to be measured on site as soon as practicable after commencement of remediation earthworks (when all the major equipment is operating on site). The measured levels are to be appended to this Noise Management Plan.

5.4 Phase 2 (Building Demolition) Noise Management

The anticipated activities during Phase 2 of the remediation project are the removal of existing sheds and buildings on site, and removal of concrete pads and footings. Typically this will involve the use of an excavator, front end loader, water truck, rockbreaker and sand trucks (estimated as 20 semi-trailers per day).

The removal of concrete may require the use of a hydraulic rockbreaker. Noise emissions from such equipment can be significant and will require further review prior to the commencement of phase two.

Potential noise management of concrete demolition could include use of alternatives (such as track dozer for initial demolition). Demolition of concrete floors may be able to be carried out with part of the shed wall remaining to act as an acoustic barrier to residential areas (particularly to the south-east of the site).

Ground vibration is not anticipated to be significant to businesses or residential areas. In the event that blasting or similar activity likely to cause ground vibration is required, each such activity will need to be assessed prior to proceeding. Activities likely to cause significant vibration or air blast overpressure will need to be monitored (measured) in the first instance. We note that at present we are not aware of any proposal for blasting on site.

- The major portion of the remediation works will occur between the hours of 7am - 7pm, weekdays (Monday to Friday).
- Noise Management Plan for specific noisy construction processes is required if activities are to occur during the night period. Notification of potentially affected residents is required for night work if it is likely to be audible, of extended duration, or likely to cause sleep disturbance.
- Recording of any noise complaints, including complainant details (location received), date and time (if known), and any identified or likely activities at the time that may have contributed to a noise emission. Modification of activities to control excessive noise emissions if practicable (and obvious). Engagement of an experienced acoustic consultant to investigate any ongoing or unresolved noise emission issues and to provide a report outlining any recommended actions to achieve the objectives of this Noise Management Plan.
- In the event that equipment such as de-watering pumps are required, these are to be selected to ensure noise emissions are not excessive, particularly if required to operate at hours outside of normal operating hours.

6. NOISE MONITORING

In order to verify that the predicted noise emissions of the equipment to be used on site is similar to that modeled, the noise levels of the equipment are to be measured on site as soon as practicable after commencement of each phase of the project. Phase 1 being the commencement of remediation earthworks (when all the major equipment is operating on site). The measured levels are to be appended to this Noise Management Plan.

Noise levels significantly higher than base noise levels (ie: more than 3 dB(A) above the figures listed) will require a review of this noise management plan and proposed remediation equipment by an experienced acoustic consultant.

7. COMMUNITY COMPLAINT PROCEDURE

- A Community Contact/Complaints Process is required to ensure any complaints regarding environmental noise emissions from the remediation works be recorded and investigated. The site contractor should provide signage with contact details, or an accessible site office to permit complaints to be made.
- Local residents likely to be affected by excessive noise should be notified of the intended construction program for any proposed activity likely to result in increased annoyance to residents (such as concrete demolition with rockbreaker in phase two).
- Checking and Corrective Action: Follow-up acoustic assessment of complaints which may be of an ongoing or potentially recurring nature. Recording of conclusions. Monitoring or measurement of complaint event type by a qualified acoustic consultant if applicable to identify noise level at residence(s) of concern. Corrective action to mitigate noise emissions if found to be unreasonable.

