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SHEQ Management System Procedure – Noise Control, Noise and Vibration

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SHEQ Management System Procedure – Noise Control, Noise and Vibration

NOISE CONTROL

1. PURPOSE AND SCOPE

There is a statutory duty to control noise and protect all persons from its effects. Excessive noise can cause permanent damage to the hearing of those exposed to it.

This procedure defines the arrangements and measures for controlling and reducing exposure to excessive noise levels.

This procedure covers:

- Planning Stage
- Site Stage
- Additional Actions or Control Measures

2. RESPONSIBILITIES

The Contracts Manager/Project Manager will be responsible for identifying hazards associated with noise during the development of the Construction Phase Plan.

The Site Manager must ensure that specific noise assessments are carried out if persons are liable to be exposed to noise levels that are likely to exceed 80dB(A) (average noise level).

The Site Manager/Supervisor must ensure work activities stop if the daily noise exposure limit value of 87dB(A) is reached. This value must be taken inside any hearing protection worn.

The SHEQ Advisor will provide advice and assistance with this procedure as required.

3. IMPLEMENTATION

3.1 Planning Stage

The Contracts Manager/Project Manager will be responsible for identifying hazards associated with noise during the development of the Construction Phase Plan. These hazards are often related to the following groups:

- Demolition
- Operation of plant/machinery
- Site traffic
- Operation of plant particularly percussion tools
- Cartridge operated tools
- All forms of mobile equipment.

Following the development of the Construction Phase Plan the SHEQ Advisor will advise the Site Manager if ear protection zones are to be introduced, i.e. when operations are likely to expose persons to noise levels that range between the Lower Action Level of 80dB(A) and the Upper Level of 85dB(A). This is implemented during the review of the plan when the SHEQ Director/Senior SHEQ Advisor will advise the Site Manager of any additional requirements for noise control measures/monitoring.

Examples of operators' noise exposure and action to be taken are given in Noise General Guidance Chart FRM 4557.

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3.2 Site Stage

Prior to any contractor/operative using or working with tools or equipment which may produce a risk of exposure exceeding the Lower Action Value of 80dB(A), the Site Manager is to ensure that a noise assessment is prepared/reviewed and approved.

These noise assessments are to be carried out using FRM 4527 or similar. Assessments must be kept on file.

The Site Manager must ensure wherever there is a risk of noise exposure exceeding the Lower Action Value those exposed are provided with hearing protection and are informed of the following:

- What and where the risks are
- What measures have been taken to reduce the risks
- How hearing protection must be worn
- That they must wear hearing protection when exposed to noise levels of 85dB(A) or greater.

Warning signs and notices are to be displayed regarding ear protection zones

The Site Manager must ensure work activities stop if the daily noise exposure limit value of 87dB(A) is reached. This value must be taken inside any hearing protection worn.

The Site Manager must ensure plant and equipment provided for use are well maintained, in good working order with the appropriate mufflers or silencers.

3.3 Additional Actions or Control Measures

3.3.1 Substitution

Replace noisy plant or processes by less noisy alternatives:

- Use bored piling instead of driven piling
- Use gas lighting at night instead of generators
- Have pre-drilled holes in material rather than drill on site
- Use electric motors in preference to diesel or petrol engines.

3.3.2 Modification of Existing Plant

- Tighten loose, rattling parts
- Fit more efficient silencers/mufflers
- Fix rubber mountings between contacting surfaces.

3.3.3 Enclosures

- Use acoustic compartment over concrete breakers
- Enclose work area with acoustic screens.

3.3.4 Location of Equipment

Position noisy equipment away from sensitive areas behind natural barriers (soil heaps).

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3.3.5 Use of Equipment

- Turn equipment off when not in use
- Keep acoustic covers closed
- Don't over rev machinery
- Report defective noisy equipment
- Carry out regular maintenance checks.

4. HEALTH SURVEILLANCE

The Project Manager/Site Manager must inform the SHEQ Advisors and the HR Manager if the risk assessment indicates there is a risk of site personnel being exposed to noise.

The HR Manager with advice from the SHEQ Director/Senior SHEQ Advisor will ensure suitable health surveillance is available for those exposed.

The HR Manager will ensure those exposed have access their personal records.

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NOISE AND VIBRATION

5. PURPOSE AND SCOPE

This procedure details the measures for the prevention, monitoring and control of nuisance and damage from noise and vibration.

This procedure applies to all operations undertaken by United Living where the resulting noise and vibration has or may have a significant environmental impact and/or constitutes a nuisance, for example, work activities such as demolition, excavation, piling and crushing of concrete, etc. This procedure does not apply to occupational health noise and vibration control.

6. RESPONSIBILITIES

The Contract/Project Manager is responsible for generally planning operations so as to minimise the impact of noise and vibration arising from activities undertaken on the site.

The Site Manager is responsible for ensuring that all planning consents relating to hours of operation and noise and vibration are adhered to, and that noise and vibration precautions and monitoring is implemented.

The SHEQ Advisor will check that all legal consents are complied with relating to noise and vibration, and that control measures to mitigate noise and vibration are in place on a project site.

7. PROCEDURE

7.2.2 Licensing and Contractual Requirements

7.1.1 Where appropriate and as required under the Control of Pollution Act 1974, the Contract/Project Manager shall ensure a Section 61 consent has been granted by, or has been obtained from the Local Planning Authority demonstrating best practical means are to be used to minimise noise emissions from site. Any arrangements for noise and vibration abatement shall be implemented as required by the Contract/Project Manager.

7.2 Identification of Sensitive Receptors

7.2.2 Prior to starting work any requirements for sensitive receptors of noise and vibration nuisance are to be identified by the Contract/Project Manager or Site Manager. As appropriate, all interested parties are to be pre-notified of any noise and vibration levels associated with activities on site that are likely to be a nuisance including details of these activities, their duration and relevant prevention measures.

7.3 Plant Operation and Maintenance

7.3.1 Only plant and equipment conforming to the relevant standards and directives on noise emissions should be used on site. Where possible all static plant shall be sited appropriately to reduce the impact on the local environment.

7.4 Noise and Vibration Abatement

7.4.1 The following three factors influence noise and vibrations levels which should be taken into consideration when establishing the noise abatement strategy for sites or locations where noise levels are above the specified limits including:

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- Site Management and operational methods
- Plant and power generation
- Screening and dampening
- Where appropriate alternative working hours, methods and equipment that produces less noise and vibration should be considered.

7.4.2 All plant and equipment shall be maintained and used in accordance with the manufacturers or suppliers instructions. If fitted, plant must not be used without noise/vibration control.

7.4.3 Noise screens or barriers should be used where practical to reduce noise levels from site where there are sensitive receivers.

7.5 Monitoring

7.5.1 Where necessary, compliance monitoring shall be undertaken to ensure the predicted noise and vibration levels are being achieved and maintained.

7.5.2 The Contract/Project Manager and the Site Manager shall ensure that noise and vibration monitoring is carried out at suitable intervals by a competent person using calibrated equipment. A record of the measurements taken shall be maintained.

7.5.3 When operations start and unless otherwise specified, readings should be taken more frequently to verify noise levels are reasonable and not in contravention of any limits set.

8. DOCUMENTATION

Forms:

- FRM-4527 – Noise Assessment
- FRM-4557 – Noise General Guidance Chart

9. DEFINITIONS

9.1 The Noise Action Values

- The Lower Action Value - persons daily noise exposure of 80dB(A)
- The Upper Action Value - persons daily noise exposure of 85dB(A)
- The Daily Exposure Limit Value - of 87dB(A) if noise levels taken at the workers ear, inside any hearing protection provided, exceed this limit work must stop until the noise level is brought below the limit.

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10 REFERENCES

- 1** PRO-3025 - Construction Phase Plan Procedure
- 2** PRO-5001 - Legislation and Regulatory Consents
- 3** PRO-5002 - Environmental Aspects and Impacts
- 4** PRO-5006 - Environmental Objectives and Targets
- 5** BS 5228 Part1: '1997 Noise and vibration control on construction and open sites Part 1. Code of practice for basic information and procedures for noise and vibration control'
- 6** BS 5228 Part 2: 'Noise and vibration control on construction and open sites Part 2. Guide to noise and vibration control legislation for construction and demolition including road construction and maintenance'
- 7** BS 6187:2000: 'Code of practice for demolition'.