Management of Hand Arm Vibration Syndrome (HAVS)

1. Introduction

1.1. The purpose of this document is to explain the requirements of The Control of Vibration at Work Regulations 2005 (the 'Vibration Regulations') for Hand Arm Vibration and to reduce the risk from vibration injury to as low as is reasonably practicable. To protect employees, and to comply with the Vibration Regulations, each project management team needs to assess the risks from vibration and plan how to control them.

1.2. The Vibration Regulations has determined two action levels for vibration exposure, the Exposure Action Value (EAV) and the Exposure Limit Value (ELV). (Note: the Health and Safety Executive (HSE) have developed a points system to make it easier to add up vibration exposure. 100 points is equivalent to the EAV and 400 points is equivalent to the ELV.)

1.3. The EAV is equivalent to an exposure to vibration of 2.5 m/s^2 over an eight hour working day. Every attempt must be made to ensure this figure is not exceeded by introducing appropriate control measures.

1.4. The ELV is equivalent to an exposure to vibration of 5 m/s^2 over an eight hour working day. This must not be exceeded under any circumstance.

2. Scope

2.1. Applies to any work situation throughout Morgan Sindall projects involving work with vibrating tools or equipment that needs to be held or gripped by hand.

3. Responsibility

3.1. Designers should plan to design out working methods to avoid exposing personnel to vibration.
For example:
- Specify construction methods that avoid the need for scabbling or scaling
- Specify prefabricated components that reduce the need for cutting on site
- Specify cast in anchors in preference to post-drilling of fixings.

3.2. The project manager shall ensure that a suitable risk assessment of the proposed operation is developed, in order to minimise hazards.

3.3. The project manager or senior management will provide adequate resource to the management of Hand Arm Vibration, in compliance with this standard.

4. Procedure

4.1. In all cases, tasks involving the use of hand-held vibrating tools or equipment shall be subject to a risk assessment that can show anticipated levels of exposure. The assessment must fully consider the hierarchy set out in Section 5.

4.2. The method of monitoring for HAVS shall be determined by the project management team prior to the start of the project and detailed within the Construction Phase Health and Safety Plan. The preferred option is always to use an appropriate electronic monitoring system to monitor the level of exposure to operatives. Where this is deemed not possible for either Morgan Sindall employees, or for supply chain members, then the project team and SHE Adviser shall agree what alternative methods are to be used that similarly ensure that accurate monitoring is taking place in line with the Vibration Regulations.

4.3. In the absence of personal electronic means for the operatives, the combined Noise and Vibration Assessment Calculator contained in Appendix A can be completed to identify the number of points operatives will receive from carrying out tasks with vibrating and noisy equipment over the course of each working day.

4.4. Site management shall ensure appropriate controls are in place to reduce operatives' exposure to below the EAV. If for any reason this limit is likely to be exceeded, contact the Morgan Sindall SHE team for advice. Where electronic monitoring is not used, this must be discussed with the appropriate member of the SHE team and as a minimum, a hard copy system must be maintained on site and records kept of all exposures.

4.5. Where a suitable alternative remote or mechanical work method is available its use shall be given priority over hand held methods.

4.6. Before work with vibration equipment commences, a briefing shall be conducted and recorded to explain to the operatives involved in the method of work to be employed, the control measures to be observed and the health hazards.

4.7. Where exposure to vibration cannot be avoided, and the specific risk assessment requires. job rotation methods should be used to ensure that in accordance with risk assessment, and as far as is reasonably practicable, that operatives are not exposed to vibration levels above the Exposure Action Value of 2.5 m/s² A(8).

4.8. In all cases operatives shall be provided with good quality working gloves. Current information indicates that keeping the hands warm is an important factor in reducing the effects of vibration.

5. Risk assessment / risk control strategy

5.1. The hierarchy of risk controls recommended by the HSE is:

- Elimination
- Substitution
- Engineering controls
- Management controls
- Personal protection.

5.2. Elimination/Substitution

Good process design is the single most effective risk control strategy as it enables the risk to be designed out completely, or significantly reduced by substituting a less harmful alternative. Eliminate the use of vibrating tools or equipment by introducing mechanical or an alternative vibration-free process. By implementing innovative process design, vibration risks can be **eliminated** or **substituted**.

5.3. Engineering controls

Equipment design, incorporating engineering controls from the hierarchy of risk control is another highly effective way of reducing the risk of HAV'S injury. By implementing effective engineering controls such as the use of jigs to support tools, this reduces the forces needed to be applied by the operator to control the tool whilst in operation.

5.4. Management controls

Where elimination, substitution and engineering controls are either not reasonably practicable or there are significant residual risks remaining, management controls will need to be implemented. Identify all workers likely to be exposed and:

- Provide them with training, information and instruction on safe use of tools and equipment and ensure adequate supervision
- Replace old or poorly maintained power tools with suitable modern, efficient, ergonomic, vibration reduced types through an effective purchasing policy
- Select appropriate consumables and replace or sharpen regularly to maintain efficiency.
- Carry out maintenance of tools and equipment in line with manufacturers requirements.
- Reduce the exposure time, e.g. through job rotation
- Record the findings of the assessment and review the assessment and revise as required.

6. Tool selection, procurement strategy

6.1. Ensure that tools hired or purchased are done so through normal Morgan Sindall procurement routes. Where an operative reports a defect with vibrating tools or equipment, the general foreman / supervisor shall ensure that repairs are undertaken as soon as possible, and if necessary shall remove the tool from service until repaired. When selecting tools and equipment for tasks we must ensure that the equipment is:

- Suitable for the work it is intended to do and for the conditions in which it will be used
- Used only for operations and in conditions for which it is suitable
- Designed and constructed to reduce the risks from vibration
- Used only by workers trained to use it safely
- Properly maintained through its working life to sustain its best lowest vibration performance
- Manufacturers and tool hire companies are obliged to provide information on vibration levels of their equipment and will be the main point of reference.

7. Information, instruction and training

7.1. All operatives involved in work falling under the scope of this standard shall be briefed on the risk assessment / method statement and receive the HAVS toolbox talk before such work commences explaining how the operation and any control measures shall operate and shall be advised to report any symptoms.

7.2. Records of task training must be recorded and retained.

7.3. All operatives should receive basic awareness training on HAVS. This training will be reinforced via the TBT schedule and will be given to new employees and sub-contractors via normal induction process.

7.4. Information on equipment that could reduce the HAVS risk, i.e. RED, AMBER, GREEN or “Trigger Times” on the tools should be provided to the Supervisor issuing, and operatives using the tools.

8. Health surveillance

8.1. The Morgan Sindall Policy for health surveillance shall be followed. Directly employed operatives involved in the use of hand-held tools shall be subject to annual health surveillance. Subcontractors should have their own arrangements in place and these will need to be checked prior to them commencing work.

8.2. Hand Arm Vibration Syndrome and other associated conditions are classified as reportable diseases under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013.

8.3. Should any signs of HAVS be reported or witnessed in any operative, the SHE team must be contacted, and all use of vibration tools ceased until the situation has been investigated.

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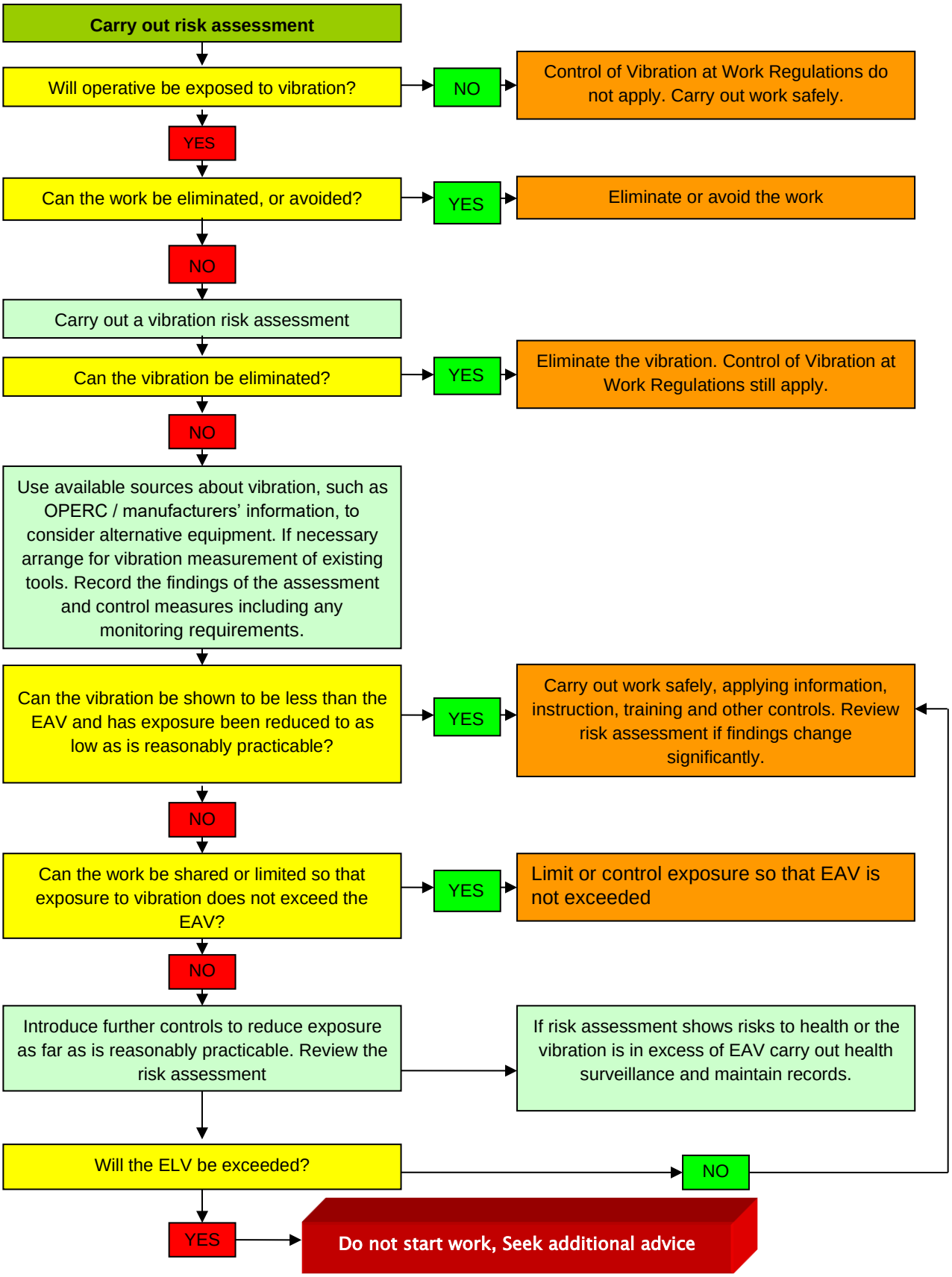

EAV Exposure Action Value = 2.5 m/s^2

ELV Exposure Limit Value = 5.0 m/s^2

9. Definitions / abbreviations

9.1. Definitions

Scabbling - is the process of reducing stone or concrete by mechanical means

Job rotation - the practice of moving employees between different tasks to promote experience and variety or to ensure operatives are not exposed to activities beyond allowed times

Risk control strategy - a course of action intended to reduce the frequency or severity of injury or loss

Engineering controls – introducing or redesigning equipment, tools, work organisation and workplaces to reduce workers' exposures to factors that cause harm

9.2. Abbreviations

HAVS – Hand Arm Vibration Syndrome
EAV – Exposure Action Value
ELV – Exposure Limit Value
HSE – Health and Safety Executive
m/s² – Metres per second (squared)
TBT – Toolbox Talk
OPERC – Off-highway Plant and Equipment Research Centre

10. References/Information Sources

Further information or advice may be sought from:

- SHEQ Department
- Tool Box Talk "Hand Arm Vibration"
- HSE Resources/Publications:
  - L140 The Control of Vibration at Work Regulations 2005 - Guidance on Regulations
  - HSG170 Vibration solution; Practical ways to reduce the risk of hand-arm vibration injury
  - INDG 175 Health Risks from Hand-Arm Vibration, Brief Guide for Employers
  - INDG 296 Hand-arm vibration - A guide for employees
- Speedy Hire HAV Tool Selector Guide (other suppliers will produce similar guides)
- HSE Points calculator HSE website (www.hse.gov.uk)

11. Records

For all records that are generated provide the following information:

Record	Archive / total required retention time
Personal health monitoring results	40 Years

12. Associated Documents

- Guidance SH GUID1
- Exposure monitoring form SH FRM 11
- HAVS Toolbox talks SH TBT 7.1 and SH TBT 4.6 and SH TBT 9.5 and SH TBT 7.12