HERITAGE RAILWAY ASSOCIATION

GUIDANCE NOTE

WORK AT HEIGHT

Purpose
This document describes good practice in relation to its subject to be followed by Heritage Railways, Tramways and similar bodies to whom this document applies.

Endorsement
This document has been developed with, and is fully endorsed by, Her Majesty’s Railway Inspectorate (HMRI), a directorate of the Office of Rail Regulation (ORR).

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Supply
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1. Introduction
A. This Guidance has been provided to assist the duty holder of heritage railways, tramways and similar bodies in meeting the requirements laid down in The Work at Height Regulations 2005, (SI 2005 / 735)
B. General guidance is available from the HSE hence this guidance note is tailored to the additional specific issues likely to be encountered on heritage railways, tramways and similar operations.
C. Duty holders will be aware that they have a legal obligation to passengers, contractors, other visitors and staff under the Health and Safety at Work etc Act, 1974.
D. The term ‘man’ or ‘men’ in this Guidance note should be read as applying equally to men and women and ‘he’, ‘him’ and ‘his’ should be similarly interpreted.
E. The term ‘staff’ in this Guidance note should be taken to include unpaid volunteer workers as well as paid staff.
F. The term ‘railway’ should be taken to include heritage tramways and similar bodies where appropriate.

2. Recommendations
A. This guidance note is issued as recommendations to duty holders.
B. Many railways are already operating systems, which, in some cases, are to a higher standard than those set out in this guidance note. This highlights the fact that it is the responsibility of the duty holder, having undertaken the necessary risk assessments, to implement controls that are applicable and necessary relative to the operating conditions on their railway.
C. Where railways decide to take actions that are not in conformity with these recommendations, following appropriate risk assessments or for other reasons, it is recommended that those decisions are reviewed by the senior management body of the organisation and a formal minute is recorded of both the decision reached and the reasons for reaching it.

3. General
A. The regulations apply to ALL work at height where there is a risk of a fall liable to cause any personal injury. Work at height is broadly defined, and is in effect work in any place, including a place at, above or below ground level, where a person could be injured if they fell from that place.
B. Examples of activities which would qualify as work at height include work off a temporary platform; on a flat roof; erecting scaffolding; work from a ladder; at ground level adjacent to an excavation; on or near a fragile roof.
C. The regulations place duties on employers, the self employed, employees, and anyone who controls the way that work at height is undertaken. In essence, virtually all situations are covered regarding the work conducted and those controlling it or engaged in it.

4. The Requirements
A. The essential requirements under the Regulations are that:
   1. ALL work at height is properly planned and organised;
   2. those involved are competent;
   3. the risks from work at height are assessed and any necessary work equipment is selected and properly used;
   4. the risks from fragile surfaces are recognised and catered for; and
   5. equipment for work at height is adequately maintained and regularly inspected.
B. Given these essential requirements, the regulations are goal setting (i.e. aims to be achieved) and hierarchical in regard to organising and selecting equipment for work at height. That is to say, duty holders under the regulations should:

1. avoid work at height where they can;
2. use work equipment, or other suitable measures, to prevent falls where work at height cannot be avoided (including falls of materials); and
3. where the risk of a fall cannot be eliminated, use work equipment or other measures to minimise the distance and consequences of a fall should one occur.

5. Compliance with the Regulations in a proportionate manner

A. The Regulations are based upon a risk assessment approach, i.e. what are the risks (real and potential); who could be harmed and how; what precautions are needed to avoid or control the risks; what arrangements are in place; does any more need to be done?

B. Having run through the sequence, and preferably recorded it, check to see if any other factors may influence the overall safety of the proposed operations. For example:-

1. What is the duration of the work?
2. Are other hazards present (e.g. overhead power lines etc)?
3. Could the public be exposed to the risk?
4. Would adverse weather cause any problems?
5. What are the physical capabilities of the workers?
6. What level of supervision may be necessary?
7. How could an emergency or rescue be handled in the event of a fall?

C. Once the risks and any other influencing factors have been assessed, proceed stepwise through the Hierarchy of Procedures, as listed in Appendix A, only moving to a lower level if the ones above are not reasonably practicable, cannot be utilised, or if they are unlikely to be totally effective.

D. Use one or other of the techniques listed to (preferably) prevent falls, or minimise the consequences of a fall. Ensure that the choice of system used can be justified, especially if procedures lower down the hierarchy are used.

6. The use of ladders

A. The use of ladders in not banned for work at height; however they only appear as the last option in the recommended hierarchy of procedures. This means they should only be considered where the use of more suitable work equipment is not appropriate (e.g. tower scaffolds).

B. Where ladders, or step ladders, are used they should only be utilised for lightweight work of a short duration, and then only if it is safe to do so.

C. When using a ladder, it should be secured if possible, and the person on the ladder must ensure that they always have three points of contact (i.e. two legs and a hand). Ideally a ladder should be primarily used as a means of access / egress for safer working positions.

7. Checking Equipment before Use

A. All equipment used to assist Work at Height should be clearly identified, regularly maintained and inspected before use by a competent person with the results recorded,

B. Ladders should be listed in a Ladder Register. Each ladder should be marked with the date when the next inspection is due.

C. Scaffolding and Mobile Elevating Working Platforms need to be inspected before use as laid down in Regulations 12 and 13, see indg401 paragraphs 26 to 30
8. Situations specific to Heritage Railways

A. For most work at height situations on or around a heritage railway, the requirement will simply be in line with the hierarchical procedures given in Appendix A. However there are some operations which may require more thought as to how they should be tackled in a safe way, whilst honouring the intent of the Regulations. Examples are given in Appendix B.

B. The examples provide a flavour of what may be required and indicate that there are many types of situation on Heritage Railways which must be addressed. Whatever the particular need, work at height must be properly planned and organised, with a sensible recognition of the risks (real and potential) involved. Only in this way can management demonstrate that work at height on or around the railway is performed as safely as reasonably practicable.

9. References

A. Work at Height Regulations 2005 SI 2005/735
B. HSE Guidance INDG401: Work at Height Regulations 2005 (as amended) a brief guide
C. HSE Guidance INDG402: Safe use of ladders and stepladders
D. HSE’s Falls from height website: www.hse.gov.uk/falls
E. If in doubt, contact your local HSE office (the address is in the phone book). The staff there can refer you to the appropriate inspector or the environmental health officer at your local authority.
### Appendix A: Hierarchy of Procedures

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<thead>
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<th>Hierarchy</th>
<th>Examples</th>
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<tbody>
<tr>
<td>A</td>
<td>Avoid working at height</td>
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<td></td>
<td>Design out need to work at height</td>
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<td></td>
<td>Work from ground level</td>
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<td></td>
<td>Assemble structure at ground level then crane into position</td>
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<td>B</td>
<td>Prevent by using an existing safe place of work</td>
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<tr>
<td></td>
<td>A flat roof with edge protection</td>
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<td>A store tank with fixed guard</td>
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<td>C</td>
<td>Prevent by using access equipment fitted with guard rails</td>
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<td></td>
<td>Mobile elevating work platforms</td>
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<td></td>
<td>Scissor lifts</td>
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<td></td>
<td>Tower scaffolds</td>
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<td>Independent scaffolds</td>
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<td>D</td>
<td>Prevent by using work equipment so that it is not possible to get into a fall position</td>
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<td></td>
<td>Work restraint lanyards that stop the person from getting to a place where they could fall</td>
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<td>E</td>
<td>Mitigate by using fixed work equipment to minimise fall distance and/or consequences</td>
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<td></td>
<td>Netting (permanently fixed)</td>
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<td></td>
<td>Soft landing systems (e.g. air bags)</td>
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<td>F</td>
<td>Mitigate by using personal work equipment to minimise fall distance and/or consequences</td>
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<td>Fall arrest systems – 1- anchor above head</td>
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<td>Rope access systems</td>
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<td>Work positioning system</td>
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<td>Fall arrest systems – 2- anchor at waist level</td>
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<td>Fall arrest systems – 3- anchor at foot level</td>
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<td>G</td>
<td>Mitigate through training and instruction or other means</td>
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<td></td>
<td>Ladders</td>
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<td>Hop-ups</td>
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<td>Stilts</td>
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Appendix B: Examples of situations specific to Heritage Railways

The following are some examples (but this is not an exhaustive list):-

a) Watering of tank locomotives

Careful use of the water-crane, loco steps, hand rails and running plate should provide a safe place for this transient operation. Consider providing additional steps.

b) Watering saddle tank locomotives

As for a), but more care will be required in accessing the filling point, particularly for shorter persons. It is not safe to walk on the top of a saddle tank.

c) Watering tender locomotives

Access to the tank cover via loco steps and handrails should be straightforward; however walking about on the tank top, especially near the edge of the tender will be more hazardous, as there are no (safety) side rails. There have been instances where footplate crew have fallen from tender tanks during this operation (and in levelling coal stacks) with quite serious results and therefore extreme care is needed for these operations. In view of this, locomotive superintendents should ensure that foot-plate crew are properly trained to perform the watering in a safe manner. Consider coating surfaces with non-slip paint.

d) Effect of weather

It should be recognised that for each of the above operations (a-c), wet surfaces will be more slippery and could be icy in winter. This in itself calls for extra care to be taken, but the situations could be improved if said surfaces were coated with non-slip paint, or some similar arrangements to improve footwear gripping in the tread area.

e) Cleaning of locomotives and carriages

Most of this can be done from ground level, adjacent platforms, or the running plate by careful use of available hand-holds and hand-rails. It is recognised that boiler / firebox tops and carriage roofs will present more of a challenge, even more so on streamlined locomotives (e.g. A4), but this is no excuse for taking unnecessary risks. Since this is an on-shed, or depot operation, the relevant manager should devise a safe system of work utilising staging, permanent work platforms or mobile elevating work platforms (MEWPs), to protect staff from falls.

f) Painting of locomotives and carriages

As for e) above

g) Servicing and maintenance of signals

Signal posts and gantries are many and various, and therefore pose a range of challenges in ensuring safe working at height. In some cases there are fixed ladders attached, which would be appropriate for relatively simple operations. In other cases, gantry arrays may be multi-signalled requiring mobile scaffolding or an elevating work platform to provide safe access for the work force. Where oil signal lamps are used consideration should be given to their replacement with electric lamps to minimise the need to work at height.