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Target Audience:

LA enforcement Officers

AFQ Inspectors (Bands 0-4)

Specialist Group Inspectors (Con, Mech - Bands 0-3)

HID Inspectors (Bands 0-4)

Railway Inspectors (Bands 0-4)

NSD Inspectors (Bands 0-3)

SAFE USE OF LADDERS AND STEPLADDERS

This OM advises inspectors of the publication of new guidance (Free leaflet INDG 402) Safe use of ladders and stepladders – an employer’s guide and provides enforcement guidance to inspectors taking account of the EMM and the Work at Height Regulations 2005. This OC should be read in conjunction with information sheet INDG 402 and the inspectors ladder training presentation.

BACKGROUND

1 A new guidance leaflet Safe use of ladders and stepladders – an employer’s guide, referred to as ‘the ladders leaflet’, has been published to address the high numbers of accidents, new messages from HSE sponsored research and a lack of current HSE guidance.

2 The ladders leaflet and this OC cover only leaning ladders and stepladders. They do not apply to fixed ladders (on buildings, plant or vehicles), other types of fixed access (step irons etc), specialist rescue ladders used by the fire service, roof ladders, step stools, warehouse steps/mobile stairs, or temporary or permanent stairs.

3 This OC covers the legal requirements of the Work at Height Regulations 2005 (WAHR) and how they apply to the selection and safe use of ladders.

4 In this OC reference to ladder(s) covers both leaning ladders and stepladders. Points that are specific to leaning ladders or stepladders are described as such.

THE RISKS

5 In Europe the major causes of ladder accidents have been identified as being stability related. For leaning ladders they are: lateral sliding at the top support; outward sliding at the base; and human slip. For stepladders they are: a lack of stability (in particular side ways stability); and sliding. This indicates an underlying lack of understanding of the limitations of ladder systems, which usually manifests its

self in ladders being used in unsuitable locations, for unsuitable tasks, being set up incorrectly (eg too shallow an angle), being used when visibly defective (eg missing ladder feet), and the wrong class or type of ladder being chosen (eg too short).

ACCIDENT HISTORY

6 Falls from height (FfH) are the major cause of workplace fatalities and a significant cause of major injuries.

7 Moveable ladders – the RIDDOR coding for leaning ladders and stepladders - account for an average of 14 fatalities per year. In 2003/04 moveable ladders were responsible for 38% of high fall major injuries and 30% of low fall major injuries - a total of over 1200 major injuries.

SELECTING ACCESS EQUIPMENT

In General

8 The hierarchy in the WAHR (Regulation 6) requires that work at height that involves a risk of personal injury to be avoided where reasonably practicable. Where this is not possible then the most appropriate access equipment should be selected and used safely. Identifying the most appropriate access equipment is based upon a risk assessment that takes into account the remainder of the hierarchy ie to the extent that they are reasonably practicable, the dutyholder should:

- (1) prevent a fall, if not then;
- (2) minimise the distance and consequences of a fall, if not then;
- (3) minimise the consequences of a fall, if not then;
- (4) provide additional training, instructions or take other suitable and sufficient measures to prevent a fall and reduce any residual risks.

9 In addition to the hierarchy: collective protection measures (eg edge protection) are given precedent over personal protection measures (eg work restraint); and the risk assessment process has to take into account the criteria for the selection of work equipment for working at height. Both points are covered in WAHR Regulation 7(1)(a) and 7(1)(b) respectively.

Ladders

10 Ladders should only be used where the use of more suitable work equipment is not justified because of the low risk and short duration of use; or because of existing features on site which the dutyholder cannot alter, and which means ladders are the only suitable equipment (WAHR Schedule 6(1)).

11 This is because normal ladder use is at the bottom of the WAHR hierarchy in that it does not prevent or minimise the consequences of fall. Low risk is not defined within the Regulations but in the case of ladders it is a holistic assessment of all the

risk factors (activity, site, user and ladder, including any accessories), which means that the risk of a fall is low and it is not reasonable practicable to use safer alternatives due to cost, risk, site access, short duration, etc.

12 The term 'short duration' is not defined in the Regulations, but the ladders project team identified that a maximum of 30 minutes work at a single point before the ladder is moved would be sensible to allow a window still to be prepared and painted.

13 Short duration will not normally be the deciding factor in establishing whether an activity is acceptable or not; it will be the risk. For example painting ground floor windows from a stepladder would be fine as a low risk activity, however painting a fourth floor window from a ladder would not be acceptable as it is not low risk, regardless of the duration.

14 Where a ladder is suitable then the correct type and size of ladder needs to be selected (see the ladders leaflet paragraphs 11 and 12). The manufacturer should substantiate any claims regarding the performance of a ladder or stability device. It is not up to the user to determine the manufacturers original design parameters. The manufacturer should be able to furnish the user with sufficient information about the safe use of their product including the types of surfaces it can be used on, so the user can perform the risk assessment required by WAHR.

Domestic (Class 3) Ladders

15 Domestic ladders (British standard Class 3) should not be used in arduous environments, such as construction sites. Domestic ladders are not recommended for use in other work environments and British standard Class 1 (industrial) or EN131 ladders should be used instead.

16 The main draw backs to using domestic ladders are their limited carrying capacity of typically 95 kg (15 stone) and their light weight construction that makes them less robust for work and regular use. However in exceptional circumstances where the combined weight of the person and materials in all situations will be less than the domestic ladders rating and its use will be infrequent (eg monthly or less) then employers may be able to justify having domestic ladders with a suitable risk assessment.

Locks on Extension Ladders

17 The WAHR, Schedule 6(7) states that no extension ladder shall be used unless its sections are prevented from moving relative to each other while in use. This applies when an extension ladder is being used, that is the user is on the ladder (climbing, descending, standing or working). It does not apply when the ladder is being set up or repositioned when no one should be on (using) the ladder.

18 When an extension ladder is being used correctly the ladder hooking device and mass of the user will be sufficient to prevent sections from moving relative to one another. The risk of the ladder falling apart where it is tied at the top and suffers a base slip is considered to be a remote event. This means that the retrofitting of

locking devices or use of other means to secure the sections will not be needed for most ladder work. However locking devices may be fitted to new ladders for other reasons, such as meeting the requirements of the revised draft European ladder standard (prEN131-2).

19 The exception to this would be suspended extension ladders and very long extension ladders (where there could be sufficient deflection in the ladder that the sections could unhook). In these cases locking devices or other measures would be needed (eg tying sections together with rope).

20 Other situations where the risk of collapse could exist involve the positioning and setting up of the ladder when it will not be in use because no one should be on it.

SAFE USE OF LADDERS

Safe Activity

21 The duration of the activity is a consideration that has already been covered in Paragraph 12 and 13. The type of work activity needs to be considered and should be established as part of the organisation and planning of any work at height required by WAHR Regulation 4.

22 Ladder work should be 'light work' ie not strenuous (eg freeing seized valves) or involving heavy loads. Ladder users should avoid holding items when climbing ladders, eg by using tool belts, so they have two free hands for holding on. Where users do have to hold something loads greater than 10 kg need to be justified by a detailed manual handling assessment. Loads above 25 kg are not normally considered acceptable - see table 1, scenario D. Between 10 and 25 kg is the grey area that needs to be assessed on a case-by-case basis and where specialist ergonomist support will probably be required. Employers can use generic risk and manual handling assessments, though they will need to establish they are still valid at each location.

23 When climbing a leaning ladder at least one hand needs to be free to hold onto the ladder, this is a requirement of WAHR Schedule 6(10)(b).

24 At the working position at least one hand needs to be free to hold onto the leaning ladder, short excursions are permitted for example to hold onto a nail whilst starting to knock it in, however beyond this further measures will be needed. This is because without a handhold, the use of a leaning ladder is no longer 'low risk' as the user would be unable to recover should they lose their balance. Further measures could be: the use of fall arrest on a leaning ladder, a solution adopted by the Confederation of Aerial Installers in their guidance **Guidelines on safe operating procedures for the aerial & satellite industry** (though where fall arrest is used the leaning ladder would have to be secured and the system would have to be proven by suitable tests); or adopting safer working techniques such as hooking your arms around a stile when doing light drilling operations.

25 When climbing a stepladder at least one hand should be free to hold onto the stepladder. If it is not practicable to have a handhold, for example when carrying a

box or pasted wallpaper, this may be permitted where such an activity has been justified by a suitable risk assessment, examples of the criteria to be considered are given in the ladders leaflet in paragraph 10, bullet 2.

26 Ladders should never be overloaded. The load of a person and any materials must not exceed the highest load stated on the ladder normally called either the 'Duty Rating' or 'Maximum Permissible Load'.

27 Users must not overreach on ladders and they should reposition them to avoid this. A user is overreaching when their belt buckle (navel) is not within stiles or they do not have both feet on the same rung. The ladders leaflet contains illustrations of acceptable and unacceptable situations in figures 1a and 1b.

SAFE SITE

28 Like safe activity this is another key area that should be addressed in the organisation and planning for the work.

29 The suitability of the ground and resting surface has to be considered and is a requirement of WAHR Schedule 6(2). The user needs to ensure that: the ladder feet are actually coming into contact with the ground, if necessary by sweeping away solid contaminants (eg swarf, leaf litter) or removing liquid contaminants, so that it is a suitable surface for the ladder; and that any slopes are suitable, see the ladders leaflet paragraph 13 and figure 3.

30 A ladder has to be positioned to ensure its stability. This is a requirement of WAHR Schedule 6(3). A leaning ladder should be set up at an angle of 75 degrees, this known as the 1 in 4 rule (the ladder should be one unit away from the wall, for every four vertical units). On British Standard Class 1 (industrial) leaning ladders there is an angle indicator line marked on one of the stiles. When this line is vertical the leaning ladder is at 75 degrees.

31 Ladders should be segregated from vehicles or anything else that could strike the ladder and cause it to become unstable, unless suitable measures are taken to prevent this. If the ladder is on a public highway then delineation in line with the New Roads and Street works Act 1990 guidance should be provided, if a temporary road closure is not possible. Doors or windows that could knock a ladder or ladder user should, wherever possible be locked or otherwise secured to prevent this (not fire doors). Where this is not possible, other suitable measures should be taken, such as notifying all persons in an office building not to open windows for a suitable time period or using a second person to stand guard at a doorway. Risks to persons from falling materials should be dealt with in a similar manner.

Securing Leaning Ladders

32 The leaning ladder must be secured to prevent it from slipping during use. This is a requirement of the WAHR Schedule 6(5). This can be achieved by: securing (tying) it; using an effective stability device; or another arrangement of equivalent effectiveness.

(1) Securing (tying) to a suitable point will always improve stability. Both stiles need to be tied to prevent rotation and if a rope or line is used any knot must be tight and strong enough to secure the leaning ladder. The leaning ladder can be secured (tied) at the upper or lower ends, whichever is most appropriate under the circumstances.

(2) An effective stability device is one that will secure the untied (free standing) leaning ladder on the actual surfaces it is resting on (ground and upper) and prevent it falling over under conditions of normal and foreseeable use - this includes foreseeable misuse.

(3) Arrangements of equivalent effectiveness are not defined in the WAHR but include wedging against an immovable object such as against a suitable brick wall or underneath a van, which is prevented from moving off (handbrake applied and keys removed, ideally in the possession of the person using the leaning ladder).

(4) Footing is not considered to be of equivalent effectiveness to the other methods and further explanation for this is given below in paragraphs 39 - 40.

33 In the WAHR the securing methods are a series of options, however in practice paragraphs 32(1) to (4) are a securing hierarchy with 32(1) being at the top of it. Tying a ladder to a suitable point will always improve a ladder's stability, so if this can be achieved you should do it where it is reasonably practicable.

34 If tying is not reasonably practicable then the next option should be the use of a leaning ladder supplemented with an effective ladder stability device(s) that is suitable for the site surface conditions (type of surfaces, slopes, condition, etc.). It may take one or more stability devices used in combination with a leaning ladder to produce a ladder system that will be stable enough for conditions of normal and foreseeable use for those site conditions. The performance of a stability device is a manufacturer's claim, they should be able to establish by testing, and if necessary calculation, the performance of the product. They should then provide the user with sufficient information on how to use their product safely, including information on the types of surface where it is designed to be effective (used).

35 Alternatively ladder manufacturers could produce leaning ladders that have sufficient inherent stability and therefore do not need to be supplemented with effective stability devices. They would also need to provide sufficient information so that their leaning ladders could be used safely.

36 HSE has sponsored research that has established the demands that users place on leaning ladder and stepladder systems. This work has established the stability forces that leaning ladders and stepladders need to withstand under conditions of normal and foreseeable use. These forces were measured through a series of user trials and have been published as Contract Research Report 423/2002, and Research Report 205. HSE's current position is that, for a stability device or a leaning ladder to be effective as a freestanding device it should be capable of withstanding the forces established in Research Report 205. All this work has been raised with the British Standards committee, the ladder and ladder accessories

manufacturers trade associations, and the European technical committee for ladders standards, with a view to producing a stability performance test protocol and eventually a published standard.

37 Currently HSE is not aware of any effective ladders or ladder stability devices on the market. This is equipment that has the stability levels established in Contract Research Report 423/2002 for stepladders or Research Report 205 for leaning ladders. Therefore where a leaning ladder or ladder stability device is going to be used freestanding, this use has to be supported by the manufacturers claims (see paragraph 14). Employers and the self-employed when assessing whether a leaning ladder could be suitable to be used freestanding at a specific site will have to refer to the manufacturers instructions regarding safe use, if information on safe use is not readily available or is insufficient they will have to contact the manufacturer or supplier to obtain it. If the leaning ladder cannot be used freestanding it will have to be secured using one of the options in paragraph 32(1) – (4) or different work equipment will have to be selected.

38 Arrangements of equivalent effectiveness are currently at the bottom of the securing hierarchy (see paragraph 32(3)) as the current methods such as wedging against a suitable immovable object are limited, as such objects will not always be available and other factors regarding safe set up, such as a suitable ladder angle may preclude their use. For example EN131 leaning ladders are not intended to be used at an angle shallower than 65 degrees. However this clause does allow innovation to occur.

Footing

39 The effectiveness of footing was measured in Research Report 205 and is less effective than it was thought to be and it is not of equivalent effectiveness to tying or using an effective ladder stability device. This is further compounded by the fact that there is no agreed method of footing. The best measured method of footing from the Loughborough work is for the footer to stand on the bottom rung of the leaning ladder with feet rung width apart and the footer should stay in this position until the leaning ladder user has descended half way. This means that the footer's total static weight is used to stabilise the leaning ladder and it does not require an active effort (pushing, etc.) on the part of footer. The problem with this method is that it puts two persons on the leaning ladder, which will overload many leaning ladders and the British Ladder Manufacturer's Association (BLMA) only recommend one person on a ladder. However this is a currently used method, so it is foreseeable use. If HSE is asked which is the best method then this is the best measured method but with the caveats of overloading and that it is not a method supported by the BLMA.

40 Other methods of footing leaning ladders can actually destabilise them, eg placing one foot on the rung and both hands on the stiles, if the foot is off centre and on the same side as the person is working/reaching, it will actually decrease the ladders stability making a flip failure (ladder rotates around one stile) more likely. The BLMA and the National Federation of Master Window and General Cleaners recommend the footer wedges both feet against the bottom stiles and that both hands are placed on the stiles. This avoids the footer standing on the ladder and

putting all their weight on the ladder, but it will be dependent upon the slip resistance of their footwear, which will vary.

41 Because HSE, ladder manufacturers and users cannot currently support one footing strategy, HSE cannot recommend a footing method.

42 Footing is not available to the lone worker and requires the continued presence of the footer the whole time that the ladder is in use. Often when a person is supposed to be footing a ladder they are preparing or doing another part of the job.

43 Footing is not of equivalent effectiveness to other methods, it should only be used a last resort. Where the use of other work equipment is not reasonably practicable and it is not possible to secure a ladder in any other more effective way, it is better than doing nothing.

Ladders used for access

44 Where a leaning ladder is being used to access another level (eg a scaffold platform, flat roof, etc.) it should be long enough so that it extends sufficiently (at least a metre) beyond the landing point to provide a handhold, unless other measures have been taken to provide a firm (secure) handhold. This is a requirement of the WAHR Schedule 6(6). The requirement for the leaning ladder to extend at least a metre above the landing point is long standing guidance.

45 Leaning ladders used as a means of access should be tied. Where tying is not possible alternative access equipment should be used such as stair towers. Where it is not reasonably practicable to tie a leaning ladder or use other equipment, then as a last resort the leaning ladder stiles could be wedged (eg against a wall or a heavy static weight such as a pallet of bricks). Each situation would need to be assessed on its merits.

46 Any dutyholder wanting to secure an access ladder with a ladder stability device would need a device designed for such an application. Any manufacturer of such a device would need to be able to provide robust evidence that their device can work for the range substrates and site conditions that are likely to be encountered. Intuition and back yard tests will not be sufficient. Currently HSE is not aware of any devices that meet these criteria, however that does not mean that such devices do not exist.

47 The Loughborough work in Research Report 205 only considered users working from a ladder. It did not measure the effects of persons stepping off the ladder for access to another level and so cannot be used to establish if devices are effective or not for access. Further research has been undertaken and should be published shortly.

48 Stepladders should not be used as a means of access to another level. This is because of their lack of sideways stability. The exception would be stepladders that were specifically designed for this purpose, see the ladders leaflet paragraph 15.

SAFE USER

49 Employers need to ensure that their employees are competent to use their work equipment. This is a requirement of the WAHR Regulation 5.

50 Users should be able to carry out pre-use checks of their ladders, so they can establish they are safe to use, refer to the ladders leaflet paragraphs 19 – 21. These are checks rather than inspections and so do not have to be recorded, though some employers may want to do this. Refer to the maintenance section, paragraph 54 - 59 for further details of inspection and maintenance requirements.

51 Users should have suitable footwear in an acceptable condition, refer to the ladders leaflet paragraph 22, bullet 5 for details.

SAFE LADDER

52 Employers should ensure that employees are provided with appropriate work equipment, this is a requirement of WAHR regulations 4 and 7.

53 The ladder feet are a key part of the ladder to prevent it from slipping, therefore pre-use checks must cover these, refer to the leaflet paragraph 21.

MAINTENANCE

54 In the ladders leaflet refer to paragraphs 19 – 21. Ladders need to be maintained in a state of good repair. Currently there is no general duty in WAHR Schedule 6 for ladders to be of suitable and sufficient strength, so if a ladder is visibly damaged or otherwise defective, it is not in a good state of repair and PUWER Regulation 5 should be used when considering enforcement - see table 1 scenario A for further details.

55 It is not intended to apply the requirements of WAHR Regulation 12(2) to ladders, so they will not need to be inspected every time they are used or moved. This is because this would be an unreasonable burden, it would mean a significant change from current safe ladder use practices and would be unlikely to increase safety.

56 Ladders should be subject to periodic inspections, as required by WAHR Regulation 12(3), to ensure that any deterioration can be detected and remedied in good time. These inspections are visual and functional checks that can be carried out in-house by a suitably competent person. Ladder inspections do not need to include any proof loading or non-destructive testing (NDT) techniques. There is no requirement to use third party bodies to undertake these inspections.

57 These periodic inspections should be carried out at suitable intervals based upon the manufacturers recommendations and a risk assessment that takes into account the frequency and type of usage. As a rule of thumb: ladders that are used frequently to occasionally (daily to weekly usage) should be inspected at least once every 6 months; and ladders that are used infrequently (monthly or longer) should be inspected at least once every 12 months. Inspection intervals of this order are

acceptable, as any gross defects that would prevent the further use of the ladder should be picked up by the users daily pre-use check.

58 For inspections a record should be kept and at least the last inspection record should be retained in a suitable format (electronic or hardcopy) for inspection.

59 Any ladder that is hired or loaned from an undertaking must be accompanied with physical proof of a current inspection. Any undertaking that loans or hires a ladder must ensure that such information is received before the ladder is used. This is a requirement of WAHR regulation 12(5).

OTHER MATTERS

60 Suspended ladders as referred to in WAHR Schedule 6(4) are not covered by this OC.

61 Mobile ladders as referred to WAHR Schedule 6(8) are large specialist ladders that are moved to the working position by mobile supports (wheels). Refer to BS EN131-1: 1993, clause 3(3) for a description and illustrations. These types of work equipment are not covered by this OC.

62 The provision of landing areas and rest platforms as referred to in WAHR Schedule 6(9) relates to fixed ladders, which are not covered by this OC.

ACTION BY INSPECTORS

63 Over 100,000 copies of the ladders leaflet are due to be distributed to dutyholders via employer associations, trade associations and other intermediaries. However, inspectors are asked to bring the leaflet to the attention of relevant dutyholders during inspections and where relevant to require risks assessments to be undertaken, the FfH topic pack has a template notice for risk assessment (link to FfH topic pack). The ladders leaflet is also the cornerstone of HSE's Ladders Week (link to OM2005/05).

ENFORCEMENT MANAGEMENT MODEL GUIDANCE

64 The following guidance is based on intranet version of EMM current at October 2005. The final decision on enforcement action should be made on the basis of the actual risks on site and after considering dutyholder and strategic factors, which will influence enforcement outcomes. The Falls programme, which is part of FIT3, is one of the strategic factors. Table 1 sets out some risks of serious personal injury that require immediate action. After taking any immediate action further action may be necessary to secure compliance. In these cases the benchmark is remote risk of serious personal injury because a correctly set up ladder, without fall protection, will still allow a fall to occur. Table 2 sets out some common scenarios that inspectors may encounter with the suggested initial enforcement expectations (IEE). In all scenarios in tables 1 and 2 it should have been established that a ladder is the most suitable piece of access equipment for the activity.

65 CDTU have indicated that they are likely to offer support to all scenarios in tables 1 and 2. Construction Sector has indicated that they are likely to offer support to all the scenarios in tables 1 and 2 where they relate to construction work. EMAS and electrical and ergonomics specialists have been consulted in the preparation of relevant sections and enforcement scenarios.

Although CDTU, Construction Sector and others have indicated their support any initial technical support should be sort from local SGs in the first instance. For local authority inspectors, the local ELO should be contacted in the first instance.

Date first issued: October 2005

Table 1: Risks of serious injury requiring immediate action

	Scenario	Initial Action
	Safe Ladder issues	
A	<p>Metal or fibreglass ladders with missing feet at bottom that are in use, not tied and resting on the surface (e.g. stile not driven into the ground). Missing feet at the top are not relevant if these top contact points are not being used (e.g. would not apply if metal stiles are resting against a window sill)</p> <p>Note: Some ladder users replace the top feet with wood. So long as these are level and secured so they cannot move or make the ladder wobble we cannot say they are unsafe, though the ladder had been modified - seek specialist advice if in any doubt.</p>	<p>Manufacturers intended contact material is not available increasing the risk of a base slip or top slip mode of failure. This is a visible (patent) defect that means the ladder is unfit for continued use.</p> <p>Legal standards: Provision and Use of Work Equipment Regulations 1998 (PUWER) Regulation 5(1).</p>
B	<p>Ladder in use, not tied and resting on the surface (e.g. stile not driven into the ground) with feet with significant contamination. Eg embedded stones that prevent the foot material making contact with the surface or ladder foot is covered in paint.</p>	<p>Manufacturers intended contact material is not making contact with the surface increasing the risk of a base slip or top slip mode of failure. This is a visible (patent) defect that means the ladder is unfit for continued use until the foot is replaced or cleaned (user to contact manufacturer regarding acceptable methods).</p> <p>Legal standards: PUWER Reg 5(1).</p>

C	<p>Using a 'home made' ladder that is visibly defective - e.g. poor joints, lack of rigidity.</p> <p>For any other type of ladder that is not made to a recognised standard including those manufactured in-house consult with local SG (civil engineering or mechanical engineering). LAs should contact ELO in first instance.</p>	<p>Home made 'Heath Robinson ladders' that appear to be visibly inadequate should be removed from use.</p> <p>Legal standards: WAHR Reg 7(2)(a)(i).</p>
Safe Activity		
D	<p>A person manually handling weights in excess of 25 kg single-handed from ladder or stepladder.</p> <p>Weights less than 25 kg will have to be assessed on a case-by-case basis using SG ergonomics support. LAs should contact ELO in the first instance.</p>	<p>Manually handling such weights from a ladder is unacceptable as they will need to be carried up the ladder in a single hand (both hands cannot be used as it must be possible to maintain a safe handhold whilst carrying items up a leaning ladder), at the work position manipulation will be required at the same time as maintaining balance on a rung or step that is less than the length of the persons foot. Manipulating the load beyond the ladder stiles could compromise the stability of the ladder. This is not a low risk activity that should be undertaken from a ladder, the ladder is not a suitable piece of work equipment.</p> <p>DO NOT ISSUE NOTICES ON DOMESTIC REPLACEMENT WINDOW OR SECURITY SCREEN INSTALLATION ACTIVITIES UNTIL YOU HAVE SPOKEN TO THE MANUFACTURING SECTOR FOR WINDOWS OR CACTUS FOR SECURITY SCREENS AS TECHNICAL SOLUTIONS ARE BEING DISCUSSED AND AGREED WITH THESE INDUSTRIES</p> <p>Legal standard: WAHR Reg 7(2)(a)(i).</p>
E	<p>No safe handhold available for working on a stepladder. Eg Working off the top 2 steps of a stepladder that does not have a</p>	<p>Working too far up a stepladder means that a safe handhold is not available on the stepladder to enable the user to steady themselves if necessary. Working further down (below the top 2 steps) a stepladder that does not have a handrail or working platform offers the user something to lean against for support to assist in maintaining balance. Because the</p>

	<p>top platform with a suitable handrail or a working platform with edge protection.</p> <p>Note: This does not apply to step stools, which have a maximum height of 1 metre.</p>	<p>user is working too far up the stepladder the wrong size of stepladder is being used or the wrong type of access equipment.</p> <p>Legal standard: WAHR Reg 8(e), Schedule 6 Para 10(a) and Reg 6(3)</p>
F	<p>No safe handhold available for working on a leaning ladder. Eg Working off the top 3 rungs of a ladder.</p>	<p>Working too far up a leaning ladder means that a safe handhold is not available on the leaning ladder to enable the user to steady themselves if necessary. Working further down (below the top 3 rungs) a leaning ladder means that there is something for the user to lean against for support and assist in maintaining balance. There may be insufficient space between the leaning ladder rung and vertical supporting surface for the user to suitably place their feet. Because the user is working too far up the leaning ladder the wrong length of leaning ladder is being used and it needs augmenting with a device to enable it to be correctly positioned (e.g. stand-off device) or it is the wrong type of access equipment.</p> <p>Legal standard: WAHR Reg 8(e) schedule 6 Para 10(a) and Reg 6(3)</p>
G	<p>An unsecured ladder is being used as a means of access to another level</p>	<p>Stepping from a ladder onto another level imposes a side loading, which is similar to overreaching and could lead to a ladder stability failure. The ladder must be secured (tied, wedged against a secure structure, etc.) otherwise an alternative safe means of access should be used.</p> <p>Legal standard: WAHR Reg 8(e) schedule 6 Para 5 and Reg 6(3)</p>
H	<p>User seen overreaching on an untied ladder. Reaching so that navel (belt buckle) passes outside the stiles or both feet are not on the same rung</p>	<p>Overreaching could lead to a ladder stability failure. Ladder needs to be repositioned or alternative safe access equipment used.</p> <p>Legal standard: WAHR Reg 5, 14 (2) and 6(3)</p>
	<p>Safe Site</p>	
I	<p>Using a conductive ladder or stepladder for work on or close to exposed electrical equipment that</p>	<p>Risk of electric shock from contact with electrical equipment that could be live. Compliance can be achieved by using a suitable non-conductive ladder or stepladder – and demonstrating that the conditions of EAWR Reg 14 are satisfied where any live work is to be</p>

	<p>is or could foreseeably (via induction) be live at a potentially dangerous voltage (though it is the current that causes injury) and the ladder or stepladder is standing on or resting against a conductive surface.</p> <p>If you are in any doubt as to whether the surface is conductive or not contact your SG electrical specialist – concrete is normally considered to be conductive. LAs contact the ELO in the first instance.</p>	<p>undertaken</p> <p>Legal standard: WAHR Reg 7(2)(a)(i), 4, 5 and Electricity at Work Regulations 1989 (EAWR) Reg 14.</p>
J	<p>Ladder being used near overhead power lines and no evidence they are de-energised - e.g. within 6 metres vertically or horizontally of 11Kv lines.</p> <p>For other voltages or types of overhead power line (e.g. tramline) contact your local SG electrical specialist or the network operator to establish safety clearance distances or LAs contact ELO in first instance.</p>	<p>Danger of electric shock from contact or flashover from live uninsulated electrical power lines. Compliance can be achieved by proving that the overhead line is dead; providing temporary protective insulation; or using suitable equipment (e.g. insulated MEWP basket and suitable PPE) – and demonstrating that the conditions of EAWR Reg 14 are satisfied where any live work is to be undertaken.</p> <p>Legal standard: WAHR Reg 7(2)(a)(i), 4, 5 and EAWR Reg 14.</p>
K	<p>Ladder or stepladder in a live roadway with no delineation</p>	<p>Risk of impact leading to a stability failure of the ladder/stepladder due to the lack of control over other vehicles on the highway and high speed of these vehicles. Compliance can be achieved by suitable segregation to established standards (Chapter 8, Safety at street works and road works, non- HSE legislation – New Roads and Street Works Act 1991) or other</p>

		<p>effective traffic control measures are provided.</p> <p>Legal standards: Health and Safety at Work etc Act 1974, Sections 2 and 3; WAHR Reg 4</p>
L	Ladder or stepladder in front of an unlocked/unsecured door that could strike it and cause it to become unstable.	<p>Risk of impact likely to lead to a stability failure of the ladder/stepladder. Compliance can be achieved by suitable segregation or other effective measures (e.g. ladder user locks the door and has the key – Note: may be an escape route, consult with local Fire Service).</p> <p>Legal standards: Health and Safety at Work etc Act 1974, Sections 2 and 3; WAHR Reg 4</p>
M	Top of ladder resting against a fragile surface (e.g. plastic guttering, glazing) and no evidence that it is non-fragile	<p>Risk of the fragile surface failing and initiating a fall of the user or both the user and ladder. Compliance can be achieved by establishing that the top surface is non-fragile; or suitable means are used to spread the load (e.g. spreader bar for glazing); or suitable means are used to prevent the ladder resting against the fragile material (e.g. stand off device); or another suitable means of access is used for the task.</p> <p>Legal standards: WAHR Reg 8(e), Schedule 6(2); WAHR Reg 4 and 6(3)</p>
	Safe User	
N	Ladder being supported at the base by the rungs.	<p>The rung is not designed or intended to be the primary support with the ground. Also the ladder may be more likely to rotate around a single contact point and be generally unstable. Compliance can be achieved by ensuring a suitable ground surface is available for the ladder; or another suitable means of access is used for the task and site.</p> <p>Legal standards: Health and Safety at Work etc Act 1974, Sections 2 and 3; WAHR Reg 8(e) Schedule 6(5)(c), Reg 4 and Reg 6(3).</p>
O	User does not possess (knowledge and or experience) or have supplementary information or instructions available to enable them to safely set up a ladder or stepladder for the specific site conditions and ladder or stepladder is visibly defective and or set up in an unsafe manner	<p>Use due to a lack of knowledge the ladder user is unable to select a suitable safe ladder/stepladder and set it up safely. This means that ladders and stepladders will be used that are the wrong length or are visibly defective. Furthermore ladders may be set up at inappropriate angles or on/against unsuitable surfaces leading to stability failures.</p> <p>Any lack of competence must be established, unsuitable/unsafe ladders/stepladders may be used or ladders/stepladders may be set up unsafely by a competent user for a variety of reasons (e.g. pressure of work).</p>

		<p>Compliance can be achieved by gaining a suitable level of competence or working under the supervision of a competent person.</p> <p>Legal standards: Health and Safety at Work etc Act 1974, Sections 2 and 3; WAHR Reg 4, 5 and 14(2).</p>
P	<p>User does not possess (knowledge and or experience) or have supplementary information or instructions available to enable them to use a ladder or stepladder safely for the specific site conditions in that unsafe activities are seen (e.g. overreaching)</p>	<p>Use due to a lack of knowledge the ladder user is unable to use a ladder/stepladder safely. This means that the user will overreach, carry inappropriate loads or engage in inappropriate work activities leading to the possibility of stability failures, user falling or the ladder/stepladder failing.</p> <p>Any lack of competence must be established, a ladder/stepladder may be used unsafely by a competent user for a variety of reasons (e.g. pressure of work).</p> <p>Compliance can be achieved by gaining a suitable level of competence or working under the supervision of a competent person.</p> <p>Legal standards: Health and Safety at Work etc Act 1974, Sections 2 and 3; WAHR Reg 4, 5 and 14(2).</p>

Table 2: Initial enforcement expectation

	Scenario	Benchmark Risk	Actual Risk	Risk Gap	Action (including initial enforcement expectation (IEE))
	Safe Ladder /Safe Stepladder				
A	No system of ladder or stepladder inspection -	Remote risk of serious personal injury	Possible risk of serious personal injury	Moderate	Defined legal standard: WAHR Reg 12(3). IEE is therefore an Improvement Notice.