

BS 9102:2014



BSI Standards Publication

Code of practice for safe working on lifting platforms

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Published by BSI Standards Limited 2014

ISBN 978 0 580 81449 5

ICS 91.140.90

The following BSI references relate to the work on this document:

Committee reference MHE/4

Draft for comment 13/30275813 DC

Publication history

First published February 2014

Amendments issued since publication

Date	Text affected
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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 28 February 2014. It was prepared by Technical Committee MHE/4, *Lifts, hoists and escalators*. A list of organizations represented on this committee can be obtained on request to its secretary.

Information about this document

This is a new British Standard which gives recommendations for safe working on lifting platforms.

The standard is supported by the following annexes:

- Annex A shows some typical safety signs;
- Annex B is concerned with the wellbeing of persons working alone;
- Annex C describes electrical working.

Use of this document

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it was a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions in this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard gives recommendations for safe working practices (supported by training) for:

- owners of permanently installed lifting platforms serving defined landing levels;
- persons having effective control of the premises where such lifting platforms are installed;
- persons responsible for, and involved in, the design, installation, thorough examination, inspection, testing, service, maintenance, repair and dismantling of such lifting platforms.

This British Standard gives recommendations for the safety of persons when gaining access to and from the area in which a lifting platform is installed and whilst working there. The recommendations also relate to the safety of others present in the vicinity, whether they are working or not, who could be endangered by the actions of those working on lifting platforms.

NOTE 1 Hazards in work areas might vary, e.g. in occupied/unoccupied buildings, premises being refurbished, construction sites and industrial environments.

This British Standard is applicable to persons working on lifting platforms constructed to conform to BS 5900:2012, BS 6440:2011 and BS EN 81-41:2010.

NOTE 2 Lifting platforms conforming to BS 5900 are powered homelifts with partially enclosed carriers and no liftway enclosures. Lifting platforms conforming to BS 6440 have non-enclosed or partially enclosed liftways and non-enclosed or partially enclosed carriers. Lifting platforms conforming to BS EN 81-41 have enclosed liftways and carriers that are not completely enclosed.

This British Standard is not directly applicable to persons working on other types of lifting platform, but the recommendations may be taken as a useful guide for such lifting platforms.

This British Standard does not cover:

- stair lifts;
- lifts designed under the Lifts Regulations 1997 [1];
- vertical lifting appliances with an enclosed carrier ("slow speed lifts") designed under the Supply of Machinery (Safety) Regulations 2008 [2];

NOTE 3 There are lifting appliances that feature a fully enclosed carrier constructed under the manufacturer's quality assurance scheme and installed under the manufacturer's installation instructions for which this British Standard might provide guidance.

- paternosters, mine lifts, access lifts to workplaces, theatrical lifts, appliances with automatic caging, skips, lifts and hoists for construction sites, ships' hoists, platforms for exploration or drilling at sea, construction and maintenance appliances.

For lifting platforms that have been designed and installed in accordance with the Supply of Machinery (Safety) Regulations 2008 [2], the recommendations that might affect product design do not apply.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Standards publications

BS 5900:2012, *Powered homelifts with partially enclosed carriers and no liftway enclosures – Specification*

BS 6440:2011, *Powered vertical lifting platforms having non-enclosed or partially enclosed liftways intended for use by persons with impaired mobility – Specification*

BS 7375, *Distribution of electricity on construction and demolition sites – Code of practice*

BS 7671, *Requirements for electrical installations – IET Wiring Regulations – Seventeenth edition*¹⁾

BS EN 81-41:2010, *Safety rules for the construction and installation of lifts – Part 41: Special lifts for the transport of persons and goods – Vertical lifting platforms intended for use by persons with impaired mobility*

BS EN 60204-1:2006+A1:2009, *Safety of machinery – Electrical equipment of machines – Part 1: General requirements*

BS EN ISO 7010, *Graphical symbols – Safety colours and safety signs – Registered safety signs*

BS EN ISO 14798, *Lifts (elevators), escalators and moving walks – Risk assessment and reduction methodology*

Other publications

[N1] INSTITUTION OF ENGINEERING AND TECHNOLOGY. *Inspection and testing*. Guidance Note 3. Stevenage: IET Publications, 2011. ISBN: 978 1 84919 275 0.

3 Terms and definitions

For the purposes of this British Standard the following terms and definitions apply.

3.1 authorized person

person given authority and responsible for ensuring that specific plant and equipment are safe for the intended work to be undertaken

NOTE An authorized person is likely to have undergone the relevant training, and to have sufficient knowledge and experience of the relevant plant, to enable them to recognize potential dangers of the plant. Alternatively, an authorized person might have been instructed on the specific task assigned to them, the avoidance of any potential hazards that are applicable, and the reduction of risks, and if necessary, have been given training relevant to that task.

3.2 carrier

part of a lifting platform that carries users and/or other loads

¹⁾ This standard also gives an informative reference to BS 7671:2008+A1:2011.

3.3 competent person

person, suitably trained and qualified by knowledge and practical experience, and provided with the necessary instructions, to enable the required work to be carried out safely

3.4 lifting platform

device permanently installed to serve predefined landings comprising a guided platform whose characteristics are primarily intended to permit the access of persons with impaired mobility

3.5 lifting platform contractor

party that is contracted to supply, install, modernize, repair, maintain, service or dismantle a lifting platform

3.6 landing

space at the entrance to a lifting platform at any defined level to permit the manoeuvring, boarding and alighting of persons and/or wheelchairs, etc.

3.7 maintenance

tasks involving inspection, cleaning, lubrication, minor adjustment and small repair works

NOTE Maintenance does not include:

- *cleaning of the external parts of any liftway;*
- *cleaning of heavy contamination of pit area or removal of water due to ingress or flooding;*
- *rescue operations;*
- *thorough examinations, supplementary tests and third party inspections.*

3.8 liftway

space through which a carrier and its load travels

[SOURCE: BS 5900:2012, 3.10]

3.9 machinery space(s)

space(s) inside or outside the liftway where the machinery, as a whole or in parts, is placed

3.10 owner

legal entity having right of possession of a lifting platform and responsibility for its safe working

NOTE The owner is usually the landlord or proprietor of the building in which a lifting platform is situated. The person having responsibility for the lifting platform on a day-to-day basis is likely to be the building occupier.

3.11 pit

part of a liftway situated below the lowest landing served by a carrier

3.12 risk assessment

comprehensive estimation of the probability and the degree of possible injury or damage to health or property, in order to identify appropriate mitigating measures

3.13 safe system of work

formal procedure, resulting from a risk assessment, which specifies safe methods of work to ensure that relevant hazards to the task being undertaken are eliminated and the remaining risks are minimized

3.14 trapped user

person who is unable to exit the carrier safely by their own actions

NOTE Certain types of lifting platform are equipped with an automatic rescue device or rescue facility which can be initiated by persons on the carrier without outside assistance.

3.15 user

person making use of the services of a lifting platform installation

NOTE A user is not necessarily the same as a passenger.

3.16 workplace

premises or part of premises where work is carried out

4 Safety management: responsibilities of owners

COMMENTARY ON CLAUSE 4

Not every lifting platform is identical, modern or similarly positioned; nor are machinery spaces (if any) of identical size or shape, nor segregated, illuminated or located within similar environments. The range of possible equipment and installations has implications which need to be taken into account with all the subclauses in Clause 4. In particular, the type of equipment installed has implications for:

- *ensuring the competence of those working on the particular equipment (4.2);*
- *liaison to ensure safe working (4.3);*
- *risk assessment, taking into account the particular type of equipment installed, and ensuring that workers have the appropriate details from the health and safety file (4.4);*
- *provision of appropriate signage for the equipment installed (4.5);*
- *the safe use of the unlocking key (4.7);*
- *the method used for the safe release of trapped users, and related instructions (4.11).*

The owners of lifting platforms in domestic premises might not be able to fulfil all of the recommendations in Clause 4.

Recommendations that are applicable to persons responsible for, and involved in, the design, installation, thorough examination, inspection, testing, service, maintenance, repair or dismantling of lifting platforms are given in Clause 5. Some of the recommendations in Clause 5 might not be applicable to lifting platforms in domestic premises.

The site person in charge, supported by their organization, is usually expected to be responsible for the safety of persons working on lifting platforms. This does not absolve individuals from acting responsibly in respect of their personal safety, or site owners or other relevant parties from their respective responsibilities under law.

4.1 General

The recommendations given throughout Clause 4 should be applied by owners of lifting platforms and by persons having effective control of the premises in which lifting platforms are installed.

NOTE Attention is drawn to the Lifting Operations and Lifting Equipment Regulations (LOLER) 1998 [3] and the Provision and Use of Work Equipment Regulations (PUWER) 1998 [4] for duty holders.

Hazards relating to moving and rotating machinery, electrical equipment, falls from height, etc., which are similar to those experienced in other workplaces, should be identified in a risk assessment in accordance with 4.4.

4.2 Training and competence

The owner should ensure that all persons who might at any time be working on a lifting platform or related equipment, or be carrying out risk assessments, possess demonstrable competence in basic lifting platform safety and procedures or be under relevant supervision.

NOTE 1 Relevant supervision may be provided by any person who possesses demonstrable competence in basic lifting platform safety and procedures.

NOTE 2 A suitable level of certified competence is the qualification EOR/206 "Lifting platform safety", although other suitable qualifications exist [see 5.2.2, Note 1)].

Clear written instructions relating to site emergency and first aid procedures should be issued by those responsible for the site, namely the owner or principal contractor, to employees, visitors, contractors and other authorized persons. Any specific regulations that apply to the premises should also be included in these instructions. If the instructions are complex and/or specific risks exist, they should be supplemented by a specific "site safety awareness" training regime and safe system(s) of work.

Specific training should be provided to all persons who are authorized to carry out the safe release of trapped users. Such persons should be made aware that this training is limited to safe release activities only on that site and that this does not authorize them to carry out any additional activities. Training should cover not only the release procedure, but also possible complications that might arise during a release, e.g. failure of the procedure to cause movement of the carrier.

NOTE 3 The full range of competencies contained within EOR/206 might not be required for persons carrying out the safe release of trapped users. Procedures recommended for the safe release of trapped users are given in 4.11 and 5.11.

The competency of all trained persons should be assessed and documented annually. Documentation should list the competencies achieved relating to the type of equipment upon which the training was carried out.

Information and instructions should be given to all occupants of the premises who could be affected whenever any works are carried out on lifting platforms, indicating any relevant effects on their working environment or their health and safety.

4.3 Responsibility for work

The owner should ensure that any work carried out on lifting platforms is performed only by competent and authorized persons.

NOTE 1 Attention is drawn to the Workplace (Health, Safety and Welfare) Regulations 1992 [5].

The owner's site representative should liaise with the site person appointed by the lifting platform contractor to be in charge of the works on the lifting platform(s).

It is expected that the owner's site representative will be informed before work is started or any lifting platform(s) taken out of service (see 5.3). The owner should ensure that a safety sign is displayed where a lifting platform is removed from service to warn others that the lifting platform is out of service (see Annex A, Figure A.1).

The owner's site representative should liaise with the site person in charge of the works on at least the following aspects:

- a) familiarization with the relevant parts of any safety assessment undertaken by the contractor;
- b) familiarization with the work site from commencement of the work, including the effect the work is likely to have on other persons in the area;
- c) directing and managing the work safely;
- d) ensuring that the work site is handed back to the owner in a safe condition on completion of the work;
- e) understanding the risks that could arise as a result of the work and agreeing the necessary control measures;
- f) being able to summon emergency assistance if required;
- g) giving advice on any special precautions or procedures required for works being undertaken within the premises;

NOTE 2 Such precautions might become necessary owing to environmental factors, e.g. where children are present in the vicinity.

- h) holding a register of asbestos that might be present on the premises, and advising visiting tradespersons of the location, etc., of asbestos so they can plan their work accordingly;

NOTE 3 Attention is drawn to the Control of Asbestos Regulations 2012 [6].

- i) in conjunction with the lifting platform contractor, establishing procedures for:
 - 1) the avoidance of build-up of waste materials;
 - 2) the control and safe disposal of waste and other items and substances that are potentially injurious to health and safety;

NOTE 4 Attention is drawn to the Control of Substances Hazardous to Health Regulations 2002 [7] and the Control of Substances Hazardous to Health Regulations (Northern Ireland) 2003 [8]. Examples of potentially hazardous items and substances include hypodermic needles, human waste and radioactive materials.

- j) assessing and minimizing the potential disruption to the occupants of the premises arising from the work, e.g. dust, noise, access restrictions, etc.;
- k) ensuring that appropriate personal protective equipment [see 5.3k)] and/or clothing is provided to ensure the health and safety of persons working on lifting platforms who might be exposed to harmful processes or substances encountered within the premises;
- l) safe access for persons, tools, equipment and materials to workplaces;

NOTE 5 This includes the provision of access to all workplaces that are free from obstacles, tripping hazards and projections. It also includes the provision of a safe means of access through potentially hazardous areas, e.g. goods loading bays, and the provision of adequate lighting, both inside and outside the liftway, for access to and egress from workplaces.

- m) the provision of alternative access routes as might become necessary during the works being undertaken;
- n) the provision of suitable and clearly identified storage space (if required) for tools, equipment, materials and any portable access equipment;
- o) the wellbeing of persons working alone (see Annex B);

NOTE 6 These procedures are particularly important if a person is working alone in unoccupied premises.

- p) precautions to be taken when there is more than one person working (see BS 7255:2012, Annex F);
- q) issuing permits to work as part of a safe system of work for all those undertaking tasks within designated workplaces.

4.4 General safety measures and risk assessment

The owner and any person working should undertake, periodically review and revise site-specific risk assessments to establish safety measures that ensure the safety of persons engaged in work, and persons using the premises and lifting platforms. Risk assessments on lifting platforms should be carried out in accordance with BS EN ISO 14798.

NOTE 1 Risk assessments require periodic review because improvements in technology and/or materials could reduce the element of risk beyond that achieved by any existing arrangements, and to reflect changes in environment, usage or age of the equipment.

The risk assessment should ensure that all workplaces (see 3.16) are safe to accommodate:

- a) the work activity being undertaken;
- b) all work equipment; and
- c) all persons who might be affected by the works.

The safety measures identified by risk assessment should be implemented to reduce risk to an acceptable level as far as is reasonably practicable.

NOTE 2 Attention is drawn to the Management of Health and Safety at Work Regulations 1999, as amended, Regulation 3 (i) [9], the Management of Health and Safety at Work Regulations (Northern Ireland) 2000 [10], the Lifting Operations and Lifting Equipment Regulations (LOLER) 1998 [3] and the guidance, where LOLER applies, in HSE publication HSIS4(rev1) [11].

Access to machinery spaces (if any) should be restricted to competent and authorized persons, or persons under the supervision of competent and authorized persons. Any persons who are not trained lifting platform personnel, e.g. cleaners, should not enter or work within a liftway unless:

- 1) they are under the supervision of trained lifting platform personnel at all times;
- 2) trained lifting platform personnel have secured the lifting platform against movement in either direction, both electrically and mechanically.

NOTE 3 Securing the lifting platform might typically be by the use of a mechanical blocking device under the carrier. Turning off the power does not always prevent all movement.

Where option 2) is taken, trained lifting platform personnel do not need to remain in attendance unless requested to do so, but should be informed when the work is complete so that the lifting platform can be safely returned to service by the lifting platform contractor.

Lifting platform liftways and associated areas, in general, are not confined spaces within the meaning of the Confined Space Regulations 1997 [12], but there might be exceptions, and in such cases a suitable and sufficient risk assessment should be carried out to determine whether special provisions are required.

Details of any changes to the risks that can be encountered during the progress of the works, or which become apparent from subsequent risk assessments, should be recorded in the health and safety file and made known to the responsible person.