

## **LEIA TECHNICAL GUIDANCE NOTE No. 25rev1**

### **Lifts Directive Annex 1, Essential Health and Safety Requirement (EHSR) 2.2; Guidance on application and on applying to BEIS for derogation**

#### **Introduction**

The Lift Regulations 2016, transposing the EU Lifts Directive 2014/33/EU (the “Directive”), provide that the UK (the Department for Business, Energy and Industrial Strategy (BEIS)) may grant derogations from the manner in which essential health and safety requirement 2.2 (EHSR 2.2) of the Directive may be achieved. The Lifts Regulations 2016 transpose EHSR 2.2 in Annex 1 of the Directive to paragraphs 3(2), 3(3) and 3(4) of Schedule 1 of the Lifts Regulations 2016. Throughout this guidance, references are made to the Lifts Directive.

EHSR 2.2 is set out at Annex 1 of the Directive and states:-

*“The lift must be designed and constructed to prevent the risk of crushing when the car is in one of its extreme positions.*

*The objective will be achieved by means of free space or refuge beyond the extreme positions.*

*However, in specific cases, in affording Member States the possibility of giving prior approval, particularly in existing buildings, where this solution is impossible to fulfil, other appropriate means may be provided to avoid this risk.”*

This guidance note sets out further information on the procedure for applying to BEIS for a derogation under EHSR 2.2 and the factors that BEIS will consider in assessing any application.

#### **BEIS guidance on EHSR 2.2**

The first sentence indicates the risk to be addressed and the second sentence specifies the means by which that risk is to be prevented wherever it is possible to do so. The effect of the third sentence is that, where it is impossible to adopt these means and BEIS is satisfied that this is the case, other appropriate means of preventing the risk of crushing may be used.

In relation to “free space or refuge beyond the extreme positions” in the second sentence, BEIS’ view is that “the extreme positions” means the highest and lowest positions which the lift car can reach in the event of inadvertent over travel (for whatever reason). Such extreme positions might be established by means defined in the specific Harmonised Standards, relevant to safe lift design, to prevent the further movement of the lift car.

The extreme position determining the “free space or refuge” described in these standards also considers that ascending lift cars supported by ropes and chains may continue to travel upwards momentarily, even though the counterweight buffers have been fully compressed or their hydraulic jacks have reached the extremities of their strokes.

In the opinion of BEIS the minimum requirement for the “free space or refuge” can be met by provision of the relevant refuge space requirements in applicable harmonised standards:

- BS EN 81-20:2014 Clause 5.2.5.7.1 in respect of headroom and 5.2.5.8.1 in respect of the pit for new lifts in new buildings.
- BS EN 81-21:2017 Clause 5.6.2.4 (once published and harmonised) in respect to headroom and 5.8.2.4 in respect of the pit for new lifts in existing buildings (once this standard is published and harmonised).

Please note that these are different from the previously accepted requirements of BS EN 81-1:1998 Clause 5.7.1.1 d) in respect of headroom and 5.7.3.3 a) in respect of the pit, since this standard and BS EN 81-2 will be fully withdrawn and superseded after 31st August 2017.

For new lifts in existing buildings, BS EN 81-21:2017 (once published and harmonised) represents the state of the art. BS EN 81-21:2009 may not be used to fulfil the refuge spaces required by this guidance since it is in the process of being withdrawn and superseded.

It should be made clear that BEIS can only consider applications for derogations from the requirement to provide a permanent “refuge” space and that all the other linear dimensions indicated in relevant harmonised standards should be respected or approval sought from a Notified Body that the design of the lift meets the essential Health and Safety Requirements of the Directive.

BEIS’ general guidance, in consultation with the Health and Safety Executive (HSE), on the general application of the Directive is as follows:

- It is for the suppliers of products and, in the case of lifts, those persons taking responsibility for their installation to assess how the relevant legislation applies to their products/installation and to account, as necessary, for their decisions to the market surveillance/ enforcement authorities and, in appropriate cases, to the courts. BEIS might have a view on the position but this would not have the force of law: the interpretation of legislation is a matter for the courts and, in respect of EU Directives, ultimately the European Court of Justice.
- If the person taking responsibility for installation of the lift concludes it is impossible to provide the minimum requirement of “free space or refuge” - then the following apply:
  - The person taking responsibility must undertake a discussion with all relevant persons to seek a solution where a compliant lift can be installed.
  - The application to BEIS for derogation must address a specific case of lift installation.
  - BEIS will require confirmation from the applicant that the relevant persons have been involved and agreed that a lift solution less satisfactory than a fully compliant lift is the only solution.
  - BEIS takes no responsibility for the use of a non-compliant lift solution; responsibility rests with those installing the lift.

**Prior derogation** only will be given. Derogations sought subsequent to construction/ installation will not meet the requirement in EHSR 2.2 and cannot be issued (see Notes below). Derogations are meant to be given only in exceptional circumstances regardless of the kind of building concerned.

**The solution** based on the free space or refuge beyond the extreme positions must be **impossible to fulfil**. “Impossible” means either physically impossible i.e. due to constraints imposed by factors such as the presence of gas mains or major electric cables or tunnels, or legal constraints such as those imposed by preservation orders or the refusal of owners of adjacent premises to make more space available. It is not an economic concept, so it follows that applications based on differential costs between providing free space or refuge when the lift is in one of the extreme positions and providing another solution cannot be approved. The person seeking BEIS’ prior derogation must explain to BEIS’ satisfaction why his conclusion that the solution, based on free space or refuge at the extreme positions being impossible to fulfil, is a well-founded one.

### **Guidance on how to proceed**

Where the permanent refuge spaces are not available for a new lift, then an application to BEIS for a derogation must be made.

If refuge spaces are available on new lifts in new buildings which are fully in conformity to BS EN 81-20:2014 or, only for new lifts in existing buildings, to BS EN 81-21:2017 (once published and harmonized), no application to BEIS is required.

We recommend that application is made at an early stage by the building owner/ designer to avoid delays and to establish feasibility prior to commencing the work. Although the ultimate responsibility for making an application might fall to the lift installer, all parties should recognise that gaining derogation is outside the control of either the building designer or lift installer and that derogation might not be obtained.

By applying for this derogation it should be understood that the installer of the lift has had a full discussion with clients and any other interested parties and that those parties have fully understood the implications for safety with regard to using a lift solution that does not provide full compliance with the Lifts Directive, Essential Requirement 2.2. The derogation is based on the assumption that clients and any other interested parties have agreed that physical and / or legal restrictions or requirements are such that the installation of a lift fully compliant with Essential Requirement 2.2 is not possible and therefore that a derogation is appropriate.

### **New lifts in new buildings**

It follows from the above that BEIS would grant prior a derogation only in very exceptional circumstances for a new building. New buildings must be designed, except in very exceptional circumstances, so as to provide enough space for compliant lifts and that this must be a priority over other such considerations such as cost or architectural preference.

In such a situation, consultants and building designers should be cognisant of Regulation 9 of The Construction (Design and Management) Regulations 2015 (CDMR):

*9.—(2) When preparing or modifying a design the designer must take into account the general principles of prevention and any pre-construction information to eliminate, so far as is reasonably practicable, foreseeable risks to the health or safety of any person—  
... (b) maintaining or cleaning a structure...*

*(3) If it is not possible to eliminate these risks, the designer must, so far as is reasonably practicable—*

*(a) take steps to reduce or, if that is not possible, control the risks through the subsequent design process;*

*(b) provide information about those risks to the principal designer; and*

*(c) ensure appropriate information is included in the health and safety file.*

In this context, provision of sufficient building space for the lift to have adequate permanent refuge spaces for those maintaining the lift is clearly higher priority in the hierarchy (since it addresses the crushing hazard) than requiring the lift contractor to mitigate the risks passed to them from the building designer.

### **New lifts in existing buildings**

BEIS expects the majority of applications will be in relation to existing buildings. However, designers still have the same responsibilities under CDMR so they must avoid the hazard if possible and, if this is not possible, mitigate the risk through design and by maximising available refuge spaces.

### **Considerations before applying to BEIS for a derogation to EHSR 2.2**

The following are suggestions for the points which should be considered before deciding whether to make an application to BEIS for derogation and which should be addressed in such an application. An application should not be made unless these points can be addressed adequately.

1. Is it “impossible” to obtain sufficient clearances to allow the refuge spaces to be achieved or is the application being made to avoid inconvenience and greater cost associated with modifying the building or lift design? This argument should be provided by the building owner/ designer since the lift contractor or Notified Body would not usually be in a position to do so.
2. Have building related options been fully explored e.g. positioning the lift where increased clearances are available or extending pit and/ or headroom clearances as required? This is primarily by the building designer with some involvement from a lift specialist.
3. Have lift design related options to maximise refuge spaces been fully explored (e.g. by reducing rated speed, reducing car height (but not below 2 m), alternative design for car frame etc.)?
4. If the design does not comply with a harmonised standard, has the proposed lift

installer discussed their proposed solution with their Notified Body?

Note: The application should include details of the Notified Body to be used by the proposed lift installer.

A dimensioned drawing showing the refuge spaces would usually be required in support of an application. As far as possible, risk assessments and other relevant documents and drawings should be assembled to support the application.

When submitting a proposal for BEIS' consideration the applicant should document as fully as possible the reasons why a solution based on free space or refuge beyond the extreme position is impossible to fulfil. If the applicant's representations are such as to leave BEIS in any doubt as to the impossibility of adopting a solution based on free space or refuge, it will result in further questions being asked by BEIS and will further delay the process.

Applicants do not need to address BEIS on the 'other appropriate means' they would propose to use in the event of their application for a derogation being successful. BEIS will take no responsibility for the safety of design solution selected. The granting of a derogation does not constitute approval of any possible solution that the lift installer have already selected in order to address the non-compliance. This derogation is granted on the basis that the installer of the lift has full responsibility to ensure the safety of the solution that will be used to address the non-compliance. It should be understood that the responsibility for the lift installation remains with the installer as set out in the Lifts Directive and not with BEIS.

Proposals for BEIS' consideration under the third sentence of the Directive Annex 1 EHSR 2.2 should be addressed to:

*Policy Advisor – Lifts Directive, Department for Business, Energy & Industrial Strategy  
1 Victoria Street, London SW1H 0ET.*

*Any enquiries should be made via: Tel No. 020 7215 1774 or email:*

*[Kevin.Lane@beis.gov.uk](mailto:Kevin.Lane@beis.gov.uk)*

<b>MATRIX OF PROCEDURES TO BE ADOPTED</b>				
	<b>For lifts installed (put into service) until 31<sup>st</sup> August 2017</b>		<b>For lifts installed (put into service) from 1<sup>st</sup> September 2017</b>	
	<b>Permanent refuge spaces defined in BS EN 81-1: 1998, clauses 5.7.1.1 d), 5.7.2.2 c), 5.7.3.3 a) or BS EN 81-2: 1998, clauses 5.7.1.1 d), 5.7.2.3 a), can be accommodated in pit and headroom</b>	<b>Permanent refuge spaces defined in BS EN 81-1:1998, clauses 5.7.1.1 d), 5.7.2.2 c), 5.7.3.3 a) and BS EN 81-2:1998, clauses 5.7.1.1 d), 5.7.2.3 a), can NOT be accommodated in either pit or headroom</b>	<b>Permanent refuge spaces defined in BS EN 81-20: 2014, clauses 5.2.5.7.1 and 5.2.5.8.1, can be accommodated in pit and headroom</b>	<b>Permanent refuge spaces defined in BS EN 81-20:2014, clauses 5.2.5.7.1 and 5.2.5.8.1, can NOT be accommodated in either pit or headroom</b>
<b>New lift in a new building</b>	<p><b>Either</b></p> <p>Comply with a harmonised standard: BS EN 81-1:1998 +A3:2009 or BS EN 81-2:1998 +A3:2009 or BS EN 81-20:2014</p> <p><b>or</b></p> <p>Notified Body approval (EU Type Examination or EU Design Examination Certificate).</p>	<p>Note derogation from BEIS would be granted only in exceptional circumstances in a new building and so a higher level of justification may be needed.</p> <p>Assemble documentation in support of application.</p> <p><b>Apply for derogation from BEIS.</b></p> <p>Seek Notified Body approval (EU Design Examination Certificate) since the design deviates from the harmonised Standards</p>	<p><b>either</b></p> <p>Comply with harmonised standard BS EN 81-20:2014</p> <p><b>or</b></p> <p>Notified Body approval (EU Type Examination or EU Design Examination Certificate).</p>	<p>Note derogation from BEIS would be granted only in exceptional circumstances in a new building and so a higher level of justification may be needed.</p> <p>Assemble documentation in support of application.</p> <p><b>Apply for derogation from BEIS.</b></p> <p>Seek Notified Body approval (EU Design Examination Certificate) since the design deviates from the harmonised Standards</p>

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<b>New lift in an existing building</b>	<p><b>Either</b></p> <p>Comply with a harmonised standard: BS EN 81-1:1998 +A3:2009 or BS EN 81-2:1998 +A3:2009 or BS EN 81-20:2014</p> <p><b>or</b></p> <p>Notified Body approval (EU Type Examination or EU Design Examination Certificate).</p>	<p><b>Option 1</b></p> <p>Comply with BS EN 81-21:2017 once published and harmonised</p>	<p><b>Either</b></p> <p>Comply with harmonised standard BS EN 81-20:2014</p> <p><b>or</b></p> <p>Notified Body approval (EU Type Examination or Design Examination Certificate).</p>	<p><b>Option 1</b></p> <p>Comply with BS EN 81-21:2017 once published and harmonised</p>
		<p><b>Option 2</b></p> <p>Assemble documentation in support of application. <b>Apply for derogation from BEIS.</b></p> <p><b>And</b> seek Notified Body approval (EU Type Examination or Design Examination Certificate where the design deviates from BS EN 81-1:1998 +A3:2009 or BS EN 81-2:1998 +A3:2009 or BS EN 81-20:2014</p> <p><b>Refuge spaces</b> shall not be less than BS EN 81-21:2017, clauses 5.6.2.4 and 5.8.2.4</p>		<p><b>Option 2</b></p> <p>Assemble documentation in support of application. <b>Apply for derogation from BEIS.</b></p> <p><b>And</b> seek Notified Body approval (EU Type Examination or Design Examination Certificate where the design deviates from BS EN 81-20:2014 or BS EN 81-21:2017 once published and harmonised</p> <p><b>Refuge spaces</b> shall not be less than BS EN 81-21:2017, clauses 5.6.2.4 and 5.8.2.4</p>

**Figure 1: Flow Chart for determining if derogation is required**

