



Lift Owner News

Subject: Safety and accessibility in the built environment

Our modern built environment is almost inconceivable without lifts, escalators, lifting platforms and stairlifts. At the “top end” of high speed lifts, there’s continual research into solutions to move more people faster using less building space.

This innovation heavily influences the world of standards where the primary focus is safety. The development of British and European standards has been central to lowering accident rates – both to those using lifts, escalators and lifting platforms, and to those working on them. The latest step in creating relevant up to date standards has been the publication of BS EN 81-20, the main safety standard for lifts. This came fully into force on 1 September 2017 and is now the harmonized standard for the design of new lifts.

Accessibility to the Built Environment

In addition to the main safety standards, there are also standards such as EN 81-70 for lifts to access buildings for those with disabilities. This standard has recently been revised. The new EN 81-70 includes details of new car sizes which allow turning by passengers in wheelchairs, new requirements for the light reflectance values (LRVs) at lift controls, and requirements for lifts with destination control using new technology such as touch screens. BS 8300, the British Standard for design of buildings to meet the needs of disabled people has been revised and references EN 81-70.

Evacuation Lifts

If we are making buildings accessible, the question arises: what about evacuation? This was addressed in British Standards 30 years ago with BS 5588-8: 1998 “Code of practice for means of escape for disabled people” which described an evacuation lift. Similar recommendations are now in BS 9999, Annex G. Work is ongoing on drafting a European Norm (EN) for the evacuation of those with impaired mobility who cannot use the stairs based on CEN TS 81-76.

Both BS 9999 and CEN TS 81-76 are based on an evacuation concept where the evacuation lift is under the control of evacuation assistants who ensure the evacuation of all those needing to be evacuated by lift and that the evacuation lift is reserved for those who need it. The safety of an evacuation lift depends on being incorporated into a building design which protects the evacuation lift spaces, lobbies and refuges from fire at least for the duration of the evacuation and provides protection for electrical supplies including a secondary power supply. Recent events such as the Grenfell Tower have raised the question of evacuation of those with impaired mobility – likely to be an increasing proportion of a building’s population.

While new buildings should be being fitted with evacuation lifts, there are very large numbers of older buildings pre-dating modern requirements where there are no effective evacuation provisions. The improvement of the evacuation provision for these existing buildings is a serious challenge.

Modernisation

As far back as the 1939, the use lifts with dedicated control features for firefighters was recognized in the UK and has been essential in high rise buildings. There have been British Standards for firefighters lifts and evacuation lifts since the 1980s.

This long legacy of lifts with some form of provision for firefighters or evacuation has resulted in a need to give building designers and lift modernisers guidance on how they can modernise lifts intended for use by firefighters or for evacuation to improve their safety. This work was recognised by both the fire services and the lift industry resulted in the development a standard.

BS 8899 Improvement of fire-fighting and evacuation provisions in existing lifts – Code of practice which was published in 2016. BS 8899 makes clear that improving the fire-fighting and evacuation provision of lifts can only be done within the context of the building design protecting the lift and providing a safe environment.

Future Challenges

We can see two important challenges for the future standardization of use of lifts for the evacuation of buildings. These challenges can only be met by collaboration between specialists from the areas of accessibility, building design, fire safety and lifts.

The first follows from the previous discussion of evacuation lifts.

The revision of CEN TS 81-76 to create a new EN 81-76 for evacuation lifts will go through a “public enquiry” stage when all stakeholders can comment on the draft standard through their National Standards Body. A wide discussion in each country is required about the use of lifts for the evacuation of disabled people and those with impaired mobility. This wide discussion should lead to making comments on any draft new evacuation lift standard.

The second challenge is about the use of lifts for the general evacuation of a building. This remains a specialised application where a scheme might be developed as part of the building design and evacuation plan.

It is not currently fully specified in British Standards but there has been work at International Standards to produce ISO/TS 18870 Requirements for lifts used to assist in building evacuation. It is clear that further work is required on standards for lifts used in the general evacuation of the building. This remains an area where intense collaboration will be needed between client, building designers and lift contractor.

[This article also appears in [Elevatori](#) 2018-5]