

Our Ref : APPBMSMA-2016-04

Building Plan & Management Group

03 Oct 2016

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Dear Sir/Madam

## **ADVISORY ON THE MODERNISATION OF EXISTING LIFTS TO ENHANCE RELIABILITY AND PERFORMANCE**

### **Aim**

This advisory seeks to encourage all lift owners to consider modernising existing lifts to enhance their reliability and performance. Existing lifts refer to electric passenger and goods lifts which were installed based on the prevailing standards<sup>1</sup> at the time of building plans submission and approval.

### **Modernisation of existing lifts**

2 Due to technology advancements and revisions in standards and codes over the years, older existing lifts may not be installed with the latest features which are found in newer lifts. While existing lifts, with proper use, regular maintenance and inspections, are safe for operation, they can be further enhanced to make them on par with the newer lifts.

### **List of proposed items for modernisation**

3 To modernize older lifts, BCA has reviewed the new technologies available for enhanced safety, reliability and performance, and recommends a list of 8 items for the modernisation of existing lifts in Singapore. The 8 proposed items (see [Annex A](#)) are based on BCA's earlier consultation with the industry, and benchmarked against the Safety Norms for Existing Lifts (SNEL) implemented by the European countries. BCA also took into consideration the observations from lift inspections conducted by our officers over a period of time.

4 The recommendations were shared with and supported by both local and international experts at BCA's recent inaugural International Panel of Experts (IPE) meeting on Lifts and Escalators.

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<sup>1</sup> Singapore Standard CP2 or SS550 (Singapore Standard Code of Practice for the Installation, Operation and Maintenance of Electric Passenger and Goods Lifts)

5 When modernisation works are being carried out, the lift owner and lift service contractor should stop all operations of the lift.

6 Upon completion of any modernisation works, the lift owner should inform BCA of it through email to [BCA\\_ELIFT@bca.gov.sg](mailto:BCA_ELIFT@bca.gov.sg).

### **Notification of schedule of modernisation works to residents or occupants**

7 It is advisable for lift owners to inform residents or occupants on the schedule of modernisation works by putting up sufficient notices at noticeboards or near the lift landing area. During this period, visitors or occupants of the building should have access to nearby lifts located in the same building to minimise inconvenience.

### **For further information and clarification**

8 For further information, you may send an email to [BCA\\_ELIFT@bca.gov.sg](mailto:BCA_ELIFT@bca.gov.sg) or call us at (65)1800-3425222 (1800-DIAL BCA). Thank you.

Yours faithfully



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All registered lift contractors with BCA RW02

All lift owners including Town Councils

**List of proposed items for modernisation of existing lifts****Please Note:-**

1. Items 1 to 5 in the table below are considered major alteration works, as defined under Regulation 17(2) of the Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations 2016 (“Regulations”)<sup>2</sup>. In brief, the lift owner must take note of the following (for full details please refer to the Regulations):-

- i) A lift owner must need to inform BCA before he can start these works. He must engage a registered lift service contractor to carry out the works under the supervision of an independent Authorised Examiner (“AE”).
- ii) Any existing Permit-to-Operate (“PTO”) will cease to be valid whilst the works are being done.
- iii) Upon completion, an AE must examine, inspect and test the lift and issue a certificate that states that the lift is fit for operation before the owner can apply to BCA for a PTO.

2. Items 6 to 8 in in the table below are not considered major alteration works but must be carried out by a registered lift service contractor that should examine, inspect and test the lift once these works are completed.

| S/N | Modernisation Items                        | Description   | Remarks  | Is this a major alteration or replacement work? |
|-----|--|---|--|---|
| 1   | Ascending car over speed protection (ACOP) | A traction drive lift shall be provided with ascending car overspeed protection, which includes speed monitoring and speed reducing elements to detect uncontrolled movement of the ascending lift car, and shall cause the lift car to stop or at least reduce its speed to that for which the counterweight buffer is designed. | Lifts certified to CP2:2000 and earlier versions | Yes   |

<sup>2</sup> Under Regulation 17(2) of the Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations 2016, a major alteration or replacement works on a lift includes, but is not limited to, any of the following:

- (a) changing or removing any safety device of a lift, or adding any safety device to a lift;
- (b) changing the mass of a lift car, including lift car finishing;
- (c) changing the rated load or speed of a lift;
- (d) changing the travel distance of a lift;
- (e) changing the lift control operation (including changing the software or type of driving machine or brakes);
- (f) changing the number, type or size of the hoisting ropes supporting a lift car or its counterweight;
- (g) changing the size of the guide rails of a lift;
- (h) changing the type of safety gear;
- (i) changing the lift landing door, lift car door and lift car door drive and control.

**ANNEX A**

| <b>S/N</b> | <b>Modernisation Items</b>   | <b>Description</b>   | <b>Remarks</b>  | <b>Is this a major alteration or replacement work?</b> |
|------------|--|--|---|--|
| 2          | Unintended car movement protection (UCMP)                                      | A traction drive lift shall be provided with a means to detect and stop unintended lift car movement away from the landing with the landing door not in the locked position and the lift car door not in the closed position, as a result of failure in any single component of the lift machine or drive system upon which the safe movement of the car depends, except failure of the suspension ropes and the traction sheave of the machine. | Lifts certified to SS550:2009 (before adoption of first amendment in 2014) and earlier versions | Yes  |
| 3          | Slacken governor rope electrical safety device                                 | Electrical safety device to detect the slackening of the governor rope, and which will initiate a stop of the lift car movement.   | Lifts certified to CP2:1979 and earlier versions  | Yes  |
| 4          | Light curtains as a door protective device, with its nudging mode de-activated | Light curtains as a door protective device, with its nudging mode de-activated.  | For existing lifts which do not have these features   | Yes  |
| 5          | Electrical safety interlocking for multi-panel door                            | An interlocking switch for every lift door panel that ensures that where the lift door panel is open, the lift will stop moving immediately and remain in position.  | For existing lifts which do not have these features   | Yes  |
| 6          | Car apron  | A smooth vertical part extending downwards from the sill lift car entrance. It is meant to avoid the risk of people at the lift landing falling into the lift shaft if the lift landing doors are opened when the lift car is  | Lifts certified to CP2:2000 and earlier versions  | No   |

**ANNEX A**

| <b>S/N</b> | <b>Modernisation Items</b>  | <b>Description</b>   | <b>Remarks</b>                                      | <b>Is this a major alteration or replacement work?</b> |
|------------|---|--|---|--|
|            |   | stopped above the levelling position.  |   |  |
| 7          | The telephone, intercom system or other communication device installed in the lift shall enable notification or direct communication with personnel who can activate emergency response | The telephone, intercom system or other communication device installed in the lift shall enable notification or direct communication with personnel who can activate emergency response. | For existing lifts which do not have these features | No   |
| 8          | Automatic rescue device (ARD) if there is no provision for standby generating power system  | A battery-operated device which will bring the lift to the nearest landing and open both the lift landing and car doors in the event of power failure.                                   | For existing lifts which do not have these features | No   |