

## BUILDING AND CONSTRUCTION AUTHORITY (BCA) ANNUAL LIFT AND ESCALATOR SAFETY WEBINAR 2021

14 December 2021 9:30 AM – 12:30 PM

### Table of Summary

S/N	Issue raised	BCA's Response
<p><b>Common findings from Lift and Escalator audit inspections and incidents</b></p> <p>BCA presented on the outcome of the maintenance audit inspections conducted by BCA from Oct 2019 to Sept 2021. Overall, industry's performance for maintenance audit inspections had generally improved in the last 12 months, as the number of non-compliances (NC) found during the maintenance audit inspections had decreased. Notwithstanding, there were still areas where the non-compliance rates were relatively high, including maintenance of lift car doors and emergency power supply.</p> <p>BCA also shared on common findings found during the maintenance audit inspections from Oct 2019 to Sept 2021 and methods for checking lift components to ensure that maintenance requirements stipulated under Part 1 of the First Schedule of the Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations 2016 ("BMSM (LEBM) Regulations") are met.</p> <p>BCA also shared on the findings from Lift and Escalator (L&amp;E) incident cases and emphasised the responsibilities of registered L&amp;E service contractors and Specialist Professional Engineers in Lifts and Escalators (SPEs(L&amp;E)) in ensuring code compliance.</p>		
1.	A participant asked how findings presented were gathered by BCA, and whether findings presented included private home lifts, as well as all types and models of lifts. The participant also asked whether there was a correlation between failure and the age of lifts?	Findings presented were gathered through BCA's audit inspections which covered all models and types of lifts in Singapore, including private home lifts. While there was no specific trending relating older lifts with poorer performance, it was observed that some older lifts designed with single point of failure, such as those with single brake plunger, were found to be more frequently associated with failure. It is therefore advisable for owners to consider replacement or modernisation of such lifts.

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2.	Participants asked whether it was mandatory for escalators to be interfaced with fire alarm and be homed or stopped during fire emergency.	There is currently no requirement to have an interface between an escalator and the building's fire alarm system in accordance with SS 626:2017, Code of Practice for the Design, Installation and Maintenance of Escalators and Moving Walk. In general, the Fire Code does not allow the use of escalators as means of escape during a fire. However, transit related buildings/occupancy under the scope of the Code of Practice for Fire Precautions in Rapid Transit Systems (MRT stations, etc.) may use escalators for escape and the requirements are stipulated in this Code of Practice. Please consult with SCDF (contactable at 1800-286-5555) for more details.
3.	A participant commended BCA's audit regime and asked whether owners could request for spot check of their respective lifts/escalators should they feel that their equipment were not properly maintained by their appointed L&E service contractors.	<p>BCA conducts audits as part of our enforcement regime to ensure that lifts and escalators are in good operating conditions and safe for use. It is advised that owners who wish to carry out independent checks on their lifts and escalators can engage an SPE(L&amp;E) for the purpose.</p> <p>Members of public can report unsafe lifts and escalators to BCA via BCA Hotline at 1800-3425-222 or our online feedback form at <a href="http://www1.bca.gov.sg/contact-us">www1.bca.gov.sg/contact-us</a>.</p>
4.	A participant asked for clarification on parties allowed to replace EBOPS batteries.	The BMSM (LEBM) Regulations do not specify the parties that can replace EBOPS batteries. However, the registered lift service contractor has a duty under the BMSM (LEBM) Regulations to ensure proper maintenance of the EBOPS such that the emergency power supply for lift car lighting and ventilation fan must remain functioning when normal power supply to lift car is disrupted.

### Impending regulatory changes 2021/2022

BCA provided a recap of the Building Control (BC) Act amendments that were passed in March 2020. BCA also shared that it was working on the amendments to the BC Regulations that would entail details of the regulatory requirements for fixed installations (i.e., lifts, escalators, and mechanised car parking system (MCPS)), including key information required in L&E and MCPS plans submission.

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<p>BCA also elaborated on the type-testing requirements for lift models and lift safety components, such as Programmable Electronic Systems in Safety Related Applications for Lifts (PESSRAL).</p>		
5.	<p>A participant asked if safety circuits not containing electronics were required to be type-tested and submitted during plans submission stage.</p>	<p>Safety circuits that do not contain any electronic components are not subject to type testing requirement. Please refer to EN81-50 for the list of the components that are defined as electronic components.</p>
6.	<p>Participants asked if laundry lifts needed to comply with SS 550 requirements, and what fire rating requirements on doors of dumbwaiters are.</p>	<p>The requirements stipulated in SS 550:2020 Code are applicable to lifts in which people may take, and are not applicable to lifts (such as dumbwaiters and laundry lifts) that are not designed to take passengers.</p> <p>It should be noted that lifts which are not designed to take passengers and are used in a workplace must be registered with the Ministry of Manpower. The relevant fire safety requirements under the Fire Safety Regulations would also be applicable.</p> <p>For this enquiry, the fire safety requirements for doors of dumbwaiter or laundry lifts will depend on the specific building design and the areas that the lift shaft pass through (e.g. larger/taller buildings will require higher fire rating), which is generally based on the Fire Code's requirements for protected shafts. Please refer to the link below for more details on Fire Code requirements. You may also consult SCDF (contactable at 1800-286-5555) for further clarifications.</p> <p><a href="http://www.scdf.gov.sg/firecode2018/firecode2018">www.scdf.gov.sg/firecode2018/firecode2018</a></p>

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7.	Questions were raised if the maintenance frequency of home lifts could be based on usage	Currently, the BMSM (LEBM) Regulations stipulate that home lifts are to be maintained at a frequency recommended by the manufacturer or once every three months, whichever is more frequent. The maintenance frequency is not dependent on usage.
8.	Questions were raised if a Lift and Escalator Inspector (LEI) could examine/inspect/test lifts and escalators on behalf of SPEs(L&E).	<p>Currently the BMSM (LEBM) Regulations require an SPE(L&amp;E) to be present during the examination, inspection, and testing (EIT) of lifts and escalators.</p> <p>However, BCA is in the process of amending the relevant legislations to allow for Fixed Installation Inspectors, which includes LEI, to assist the SPE(L&amp;E) in carrying out the EIT works independently. The amendments to the legislations are expected to be completed by 2022.</p>
9.	Participants asked for clarifications on the timeline and implementation of the type-testing and L&E plans submission requirements.	<p>BCA adopted SS 550:2020 with effect from 1 July 2021. All new lifts proposed in any project, with its first plan (which could be structural plan (ST), building plan (BP) or civil defence shelter plan) submitted on or after 1 July 2021 to BCA, are required to comply with the type-testing requirements for lift safety components specified in SS 550:2020.</p> <p>The existing Certificate of Supervision of Lift/Escalator Installation (CSC04) form has been updated to include type-testing declarations. Type-testing certificates will have to be submitted as part of Temporary Occupation Permit (TOP)/Certificate of Statutory Completion (CSC) application. You may also wish to refer to the circular (Reference No.: APPBCA-2021-01) issued on 11 January 2021 on "<i>Adoption of SS 550:2020 (Code of Practice for Installation, Operation</i></p>

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		<p><i>and Maintenance of Electric Passenger and Goods Lifts) as Acceptable Solution for Compliance with Fifth Schedule of The Building Control Regulations”.</i></p> <p>BCA is currently amending the relevant legislations relating to the L&amp;E plans submission and lift model type-testing requirements. The amendments are expected to be completed by 2022. BCA will issue a circular to inform the industry of the final details. Sufficient grace period will be provided to allow for the industry to comply with the new requirements.</p>
10.	A participant asked whether reports (such as Inspection Checklist) from LEIs would be required for submission during Permit To Operate (PTO) application stage	Currently the BMSM (LEBM) Regulations require an SPE(L&E) to be present during the EIT of lifts and escalators. Hence, the appointed SPE(L&E) will be responsible to certify reports and make submission to BCA for application of PTO.
11.	Participants sought clarification on whether lift consultants, who are not SPEs (L&E) registered with the PE Board, are allowed to practise in Singapore.	For the purposes of PTO applications and incident investigations, the BC Act and BMSM (LEBM) Regulations require that the person certifying for compliance of the lift/escalator to be an SPE(L&E). There is no specific requirement for persons carrying out unregulated activities.
12.	A participant sought for clarification on the differences between a Qualified Person (QP) and a SPE(L&E) for fixed installation plans submission.	When the regulatory amendments are completed in the future, an SPE(L&E) will be addressed as a Qualified Person (QP).
13.	Questions were raised whether lift interior refurbishment works such as floor tiles	Any works that change the mass of a lift car (including the interior of lift car) by 5% or more, will be considered major alteration or replacement (A/R) works. For

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	replacement works would require plans submission.	<p>any major A/R works, lift owner will need to notify the Commissioner of Buildings in writing before any such works are carried out. In such an event, the PTO would be suspended.</p> <p>The lift owner would need to engage a registered lift service contractor to carry out the major A/R works. Upon completion of the major A/R works, an SPE(L&amp;E) must be engaged to examine, inspect and test every part of the lift that was altered or replaced to ensure design compliance in accordance with the BMSM (LEBM) Regulations before applying for a new PTO for the lift.</p>
14.	A participant asked whether mill certificate was required for lifts using belts as hosting means instead of wire ropes.	Type testing is not required for ropes or belts used for hoisting.
15.	A participant asked about type test requirement for lifts and whether both SS 550 and EN81-20 were accepted standards for type testing.	For type testing requirements, safety components must comply with the requirements stipulated in EN81-50. For lift model type testing, it must meet the requirements of either EN81-20 or SS 550:2020.
16.	A participant asked on the need to re-commission a handicapped lift that was shut down for a certain duration due to unavailability of spare parts.	Lifts with valid PTOs must comply with the maintenance requirements even when it is not in use. In the event that the lift is shut down due to unavailability of parts for a period of time longer than 90 days, it is advised that the lift be recommissioned and certified by an SPE(L&E).

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17.	A participant asked if adding landing opening in between floors will require plans submission.	Yes, such work is considered as a major A/R work and will require plans submission in the new regime.
18.	A participant sought for clarification in respect of documents and records transfer in the event of a change in service contractors, and whether the outgoing service contractors would be required to pass circuitry diagrams and software details to the owner as well.	BCA is currently amending the relevant legislations such that all out-going fixed installation service contractors would be required to hand over to the owners all relevant documents and records that are necessary for the proper maintenance of the lifts, escalators or MCPS.
19.	A participant asked if there would be changes to submission requirements for CSC for a lift or an escalator prior to TOP application for a new building.	Under the upcoming plans submission requirements, Fixed Installation (FI) plans will be required to be submitted before a lift or an escalator can be installed. After the installation, the appointed SPE(L&E) will need to examine, inspect, supervise the testing of the equipment, and submit a final inspection report (with other supporting documents) to BCA to allow owner to proceed with the PTO application. PTO will be a pre-requisite for the issuance of TOP/CSC if there is no TOP.
20.	A participant asked whether there was still a need for a signage in the goods lift warning that it was not for passengers' use since it could transport people at the same time.	In respect of a goods lift, only a handler and not passenger may accompany the transport of the goods up and down the building. The sign "For Goods Only, Passengers Are Not Allowed" should be displayed as per SS 550 requirement.

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21.	A participant asked whether lifts must undergo major alteration or replacement works to comply with the latest code when the associated building was undergoing A&A works which required building plans submission.	It is not a requirement that lifts in a building will also have to undergo major A/R works to comply with the latest code when the associated building is undergoing A&A works that require building plans submission.
22.	A participant asked for more details of the implementation of the plans submission regime, including 1) when lift/escalator plans should be submitted, whether at the BP or WP stage; 2) what details were to be included in the plans; and 3) what modes of submissions (e.g. CORENET) should be.	The FI plans have to be submitted before the commencement of installations works. Submission will need to be made through CORENET. The details of plans submission are available in the guidebook (draft) that can be downloaded after the webinar.
23.	A participant asked about requirements concerning duplex lifts and whether there was a need for barriers between lift shafts	SS 550:2020 requires partition to be installed between the moving parts of different lifts. You may refer to SS 550:2020 for more details.
24.	A participant asked whether there would be a need for plans submission for the installation of a home lift that had already had its lift shaft provided for when the residential unit was constructed years back, and no A&A works would be involved for the installation of the home lift.	<p>Plans submission and PTO will be required when the new requirements on plans submission takes effect, even if there are no other building works other than fixed installation works.</p> <p>In the meantime, the installation contractor should confirm with the owner that the lift shaft has had approval from BCA before proceeding with the installation of the lift.</p>



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25.	A participant queried whether the responsibility to ensure maintenance works were carried out in accordance with relevant regulations should fall upon the competent service contractors instead of the owners, since the service contractors had been contracted to carry out the maintenance regime to ensure that the maintenance works carried out were following relevant regulations.	Lift owners are responsible for engaging registered lift service contractors to carry out regular maintenance of their equipment. The engaged lift service contractor must carry out maintenance in accordance with the prescribed requirements in the BSM (LEBM) Regulations.
<p><b>New regulatory regime for Man Machine Interface (MMI) of Mechanised Car Parking System (MCPS)</b></p> <p>BCA presented the upcoming regulatory regime for Man-Machine Interface (MMI) of Mechanised Car Parking System (MCPS), including the new regulatory requirements affecting new and existing MCPS, as well as the acceptable standards applicable.</p>		
26.	A participant asked if a mechanised vehicle parking system solely for transporting vehicles would be regulated by BCA and require a PTO for operation. The participant also asked if such a system was also regulated by MOM and whether there would be changes in regulations to regulate the safety of MCPS.	BCA is currently amending the relevant legislations to implement a new regime under which mechanised car parking system (MCPS) will be required to comply with approved standards/codes on the man-machine interface (MMI), and have a valid PTO for operation. MCPS will also be classified as a fixed installation. In this regard, FI plans submission will also be required for new installation of MCPS.
27.	A participant asked, moving forward, whether it would be a requirement for a mechanised car parking system, which had been	MCPS being used as static car park will also be required to meet the requirements including maintenance and having a valid PTO. This is to ensure that the MCPS can continue to take the loading of the parked cars.

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	decommissioned or not in use for more than one year, to undergo any test.	<p>If the MCPS has been totally decommissioned, and no longer in use as a static parking lot, the MCPS must be cordoned off and not opened for access and use.</p> <p>Owners who plan to decommission their MCPS must consult and seek approvals from LTA and URA before terminating the operation of the MCPS.</p>
28.	A participant asked if remotely controlled MCPS would be regulated by BCA and required a PTO for operation.	Yes. Remotely controlled MCPS will also be regulated under the upcoming regime.
29.	A participant shared that the incumbent MCPS service contractors (who is also the installer for the MCPS at his place of residence) refused to share passwords to their system and hence made it impossible for other interested service contractors to participate in quoting for the maintenance contract for the MCPS. The participant asked whether BCA would assist to ensure fair sharing of information to allow other service contractors to maintain the machine.	<p>The documents/information to be handed over to the owner, when the existing maintenance agreement is discontinued, will depend on whether the relevant document/information is necessary for the maintenance works to be carried out properly.</p> <p>Similar to that for lifts and escalators, BCA will put in relevant legislative provisions to ensure that the outgoing MCPS service contractors must transfer to the MCPS owner relevant records/documents and such information necessary for the proper maintenance of the MCPS by the incoming service contractors.</p>
30.	A participant asked if the requirement for OEM to transfer controller logic or passwords to the owner or an incoming service contractor would only apply if they were necessary for the maintenance works. In another word, if it made the maintenance works impossible without the controller logic	

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	<p>or passwords, then would such logic or passwords be required to be handed over to the owner or the incoming service contractor.</p> <p>The participant also asked if the OEM was required to hand over the controller logic or passwords to the parties carrying out overhaul works of a MCPS. The participant wanted to understand, if such a requirement was mandatory, how BCA would assist the OEMs in ensuring such proprietary information were not misused by others, whether in Singapore or other part of the world.</p>	
31.	<p>A participant asked if a MCPS guidebook would be released, similar to the lift and escalator maintenance guidebook.</p>	<p>An MCPS guidebook will be issued to help the industry, similar to the lift and escalator maintenance guidebook.</p>
<p><b>Progressive Wage Model (PWM) Registration Requirements &amp; Certificate of Competency (CoC) Course</b></p> <p>BCA presented the implementation details of the Progressive Wage Model (PWM) for the industry, and highlighted the key recommendations made by the Tripartite Cluster for Lifts and Escalators (TCLE), together with what lift maintenance firms will have to take note of once mandatory PWM is implemented.</p>		
32.	<p>A participant asked when BCA would mandate the requirement for a lift technician to attend CoC courses.</p>	<p>BCA is currently amending the relevant legislations such that a lift technician must attain acceptable qualifications or certifications before he/she can work on a lift unsupervised. Such acceptable certifications will include the Nitec in Built Environment (Vertical Transport) as well as the CoC in Lift Maintenance for Lift</p>

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		Specialist. For the rest of the CoC courses, lifts specialists would also eventually need to obtain the required certifications as part of the PWM requirements. BCA would provide further updates through circulars on this.
33.	A participant asked if there would be CoC courses for escalator specialists in the near future.	Yes. There will be a CoC course in Escalator Maintenance for Escalator Specialists, which is expected to be rolled out in 2022.
<p><b>Lift Maintenance Control Plan – A Guide on Replacement Criteria for Major Parts</b></p> <p>BCA presented the objectives and strategies of the Lift Maintenance Control Plan (MCP). The MCP is a life-cycle parts replacement concept that guides owners and lift service contractors to manage parts replacement and obsolescence. The approach of MCP has two folds. First, it provides criteria (based on standards/codes or manufacturers' recommendations) for replacement of critical parts before failure happens. Second, it provides criteria for which the lift should be shut down if the worn-out part is not replaced immediately</p> <p>Examples of replacement criteria of lift parts from the MCP were explained during the presentation. BCA also recommended that owners engage lift service contractors to assess the electrical/electronic parts ten years after installing the lifts, and owners appoint an SPE(L&amp;E) to conduct an independent, comprehensive assessment of the lift fifteen years after the installation.</p>		
34.	A participant asked about the braking system's life span for service contractors to recommend lift modernization.	The equipment manufacturer should provide information of the criteria for condition monitoring and replacement, as well as expected the life span of lift components.
35.	A participant opined that it would be helpful for building owners/facilities managers to have the estimated lifespan of lift/escalator components such as ropes, escalator	The Maintenance Control Plan (MCP) Guide will provide guidance to owners and lift service contractors on parts replacement criteria for safety critical parts so that they can be replaced before failure. The specific lifespan of each component will differ from designs and makes. To complete the MCP, the owner and its lift

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	handrails etc. The participant also said that such information would help building owners to check with vendors if the parts had not been proposed for replacement after the estimated lifespan is over.	service contractor should work with the manufacturer on the replacement criteria and life span.
36.	A participant queried if escalator parts were included in the guidebook.	The current guidebook only will cover lifts designed to SS 550. We will be looking to extend the coverage to include escalators and other types of lifts in future editions.
37.	A participant asked if the guidebook would specify when the Emergency Power supply needed to be replaced.	The MCP will provide guidance on the conditions for battery replacement that is based on the required battery capacity.
38.	A participant requested that BCA listed independent parties e.g., licensed SPEs(L&E)s for an independent assessment to inspect wear and tear major repair & replacement jobs as recommended by service contractors/service providers to replace major parts.	The list of SPEs(L&E) can be found on PEB's website. <a href="https://www.peb.gov.sg/pe_general_spe.aspx">https://www.peb.gov.sg/pe_general_spe.aspx</a>
39.	A participant queried on the rationale for having the 15th year check.	The MCP recommends owners to appoint an SPE(L&E) to conduct an independent assessment of the lift 15 years after the installation to find out if any parts need to be replaced. However, as lift and lift parts can be affected by other factors including usage, owners should assess a suitable timeframe for conducting such an assessment.

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<p><b>Approval Process for Remote Monitoring &amp; Diagnostic (RM&amp;D) Lifts</b></p> <p>BCA presented the approval process for Remote Monitoring &amp; Diagnostic (RM&amp;D) Lifts. BCA emphasized the need to embrace technology to tackle manpower challenges.</p> <p>The participants were informed that guidelines on the Approval Process for Remote Monitoring &amp; Diagnostic (RM&amp;D) Lifts will be published in due course. BCA added that applicants (lift owner/RM&amp;D solution provider/lift service contractor) interested in applying for their RM&amp;D solution and lifts could write in for a consultation.</p>		
40.	<p>A participant said he agreed that relying on technology to monitor and reduce service on less-used lifts/escalators was useful. However, he opined that the reliance on technology to monitor should translate into cost savings for building owners.</p>	<p>In considering adoption of RM&amp;D solution, participants should also look at the availability of manpower ahead. The Covid-19 pandemic aptly demonstrated the risk of remaining status quo and keeping the lift maintenance work largely manual. In addition, with PWM and tightening of access to foreign workers, adoption of technologies to improve productivity may not necessarily be a costlier option.</p>
<p><b>Inspection Firms for Examination, Inspection &amp; Testing of Lifts &amp; Escalators</b></p> <p>BCA presented on Inspection Firms for Examination, Inspection &amp; Testing of Lifts &amp; Escalators. The challenges ahead with our current Lift and Escalator (L&amp;E) Safety Regime were presented.</p> <p>With the constant growth of L&amp;E equipment, both in numbers and complexity, the industry has to progress from the current regime to one that is sustainable, able to support in terms of manpower and competency, and is well-structured. In that regard, BCA is exploring whether to transit to a firm-based approach for L&amp;E works. Accordingly, this approach introduces accredited inspection firms which can provide standardized and high quality inspection works (especially the EIT works of L&amp;E), with well-structured training systems and all-rounded expertise to promote knowledge transfer amongst L&amp;E professionals.</p>		

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The preliminary idea was shared with the participants for discussion and feedback.		
41.	The LEI registration criteria strictly stipulate the requirement of an engineering discipline in mechanical or electrical. A participant then queried if electronics discipline is acceptable?	BCA will bring the suggestions to the Joint Accreditation Committee (JAC) to deliberate if a person with qualification in electronics discipline could register as an LEI.
42.	A participant asked if there was any age restriction pertaining to LEI registration.	There is currently no age restriction for LEI registration as long as all pre-requisites are met. Please refer to the link below for more details.  ( <a href="https://www.ies.org.sg/https://www.ies.org.sg/ccms.r?pageid=10428&amp;TenID=IES">https://www.ies.org.sg/https://www.ies.org.sg/ccms.r?pageid=10428&amp;TenID=IES</a> )
43.	A participant asked what the next step for registration as an LEI was after passing the LEI course at IES.	The registration of LEIs is administered by The Institution of Engineers, Singapore (IES). You can refer to IES's website for the necessary application forms and procedures.  ( <a href="https://www.ies.org.sg/https://www.ies.org.sg/ccms.r?pageid=10428&amp;TenID=IES">https://www.ies.org.sg/https://www.ies.org.sg/ccms.r?pageid=10428&amp;TenID=IES</a> )
<p><b>Updates and Upcoming Initiatives</b></p> <p>BCA presented the recent circulars published from March 2021 to December 2021. BCA emphasized the importance and the statutory obligation for owners and L&amp;E Service Contractors to report incidents timely and preserve the incident sites for BCA's investigations.</p>		

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	<p>Owners of lifts and escalators were reminded that they must immediately stop the operation of the lift/escalator if it is in a condition that is likely to be dangerous or likely to cause injury to users. In the event that the service contractor is unable to rectify the issue immediately, owners should stop the operation of the lift.</p> <p>The participants were informed that BCA would initiate account management for L&amp;E Contractor firms. Dedicated BCA officers will be assigned as single POC to the L&amp;E Service Contractor firms. This new initiative aims to establish a good relationship and understanding with BCA to better sense issues faced and pain points. It will also be an avenue for BCA to raise awareness of its initiatives. The support of the L&amp;E Service Contractor firms was requested when contacted by BCA's account management team.</p>	
44.	A participant asked whether there would be a standard guide on content coverage for an EIT report to be submitted for the purpose of PTO application for new L&E installation or after A&R works.	An inspection report template will be provided when ready.
45.	A participant opined that there were mixed interpretations of whether UCMP was required when a lift controller was being modernized or upgraded in the industry and sought clarification on this.	It is only sensible for lift owners that, as part of upgrading the lift controller, the UMCP and ACOP means are also provided for.
46.	A participant requested guidelines for building owners' consideration for the change of lift or escalator service contractor.	<p>You may refer to the recently published Good Practices Guide for Lift Owners which is on BCA website for guidelines on choosing a lift or escalator service contractor as defined in the BSM (LEBM) Regulations.</p> <p><a href="https://www1.bca.gov.sg/regulatory-info/lifts-escalators/e-guides">https://www1.bca.gov.sg/regulatory-info/lifts-escalators/e-guides</a></p>



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47.	A participant queried how an SPE(L&E) could be responsible for the safe operation of the lift or escalator during the validity of the PTO when they had no control over the periodic maintenance of the lift or escalator.	SPE(L&E) is required to be present during the EIT of lifts for applying PTO. During such testing the examinations, the SPE(L&E) will have to ensure that the tests are carried out in accordance with the prevailing standards.
48.	A participant asked if BCA would "rank" the lifts & escalators maintenance companies with a weighted points system and share these companies' lapses for public information.	BCA will take this proposal into consideration. However, at present, BCA has no plans to rank the L&E service contractors.
49.	A participant asked if the annual testing reports for full-load and no-load tests required from April 2022 would only be for traction lifts or it would include VPLs and stairlifts altogether.	The annual testing reports for full-load and no-load tests would only be required for traction lifts.
50.	<p>A participant asked the following questions regarding BCA's annual inspection checklist:</p> <ul style="list-style-type: none"> <li>a) Are we allowed to use our own checklist similar to BCA's checklist?</li> <li>b) What is the rationale of the 5 yearly load tests?</li> <li>c) If an item in the checklist could not comply, does that mean the lift is not eligible for PTO? There are times when the item is not critical.</li> </ul>	<p>The proposed checklist intends to standardise the inspections in the industry. As such, it is required for all to use BCA's annual inspection checklist.</p> <p>The 5 yearly load test is a requirement stipulated in SS 550 to verify and ensure the full functionality of the safety devices, especially those will only be activated on-demand during emergency.</p> <p>The purpose of the checklist is to cover the critical items that are needed to be checked to certify a lift. The SPE(L&amp;E) may carry out additional checks further to those in BCA's inspection checklist. All items should be taken care of during routine maintenance and not left to be identified during annual EIT.</p>

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S/N	Issue raised	BCA's Response
51.	A participant asked on the reporting procedure and actions to be taken in the event of a mantrap in a passenger lift.	The owner should be notified to activate the appointed lift service contractor to perform rescue operations.
52.	A participant asked if digital maintenance logbook could be acceptable.	Yes. It is acceptable.
53.	A participant queried on HDB's Type Testing and Batch Testing requirements for EBOPS.	The owner has the prerogative to request for additional tests for their equipment. Thus, such additional requests must be discussed directly with the owner.
54.	A participant asked if the annual testing reports would also be required to be submitted for application of first PTO for new lift next year.	The annual testing report is only for PTO renewals. When the plans submissions are required, there would be a separate template provided for the purpose of applying for the first PTO. This will be provided at a later date.
55.	A participant queried if home lift landing doors were required to be fire-rated.	SS 550:2020 clause 5.3.5.2 requires that landing doors of any lifts (including home lifts) shall comply with the regulations relevant to the fire protection for the building concerned. The applicable statutory and regulatory requirements shall be applied for the testing and certification of such door. In addition, clause 5.3.5.2.1 of SS 550:2020 requires that the degree of the first resistance of the entrances shall be at least half that required for the enclosure of the lift well.
56.	A participant asked if the lift manufacturer could withhold documents claiming them proprietary when requested for maintenance purposes.	The lift manufacturer should provide the necessary documents for lift maintenance.

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S/N	Issue raised	BCA's Response
57.	Participants asked if a no-load test should also be carried out on the year when the lift was due for a full-load test, and whether no-load test report should be submitted.	<p>Full load tests are only required to be done once every 5 years for traction lifts. If full load test is being carried out, no load test would not be necessary for that year. BCA has provided a consolidated template for both full load test and no-load test report, which can be downloaded from the link provided below.</p> <p><a href="http://www1.bca.gov.sg/regulatory-info/lifts-escalators/lifts-and-escalators-legislation/forms-and-certificates">www1.bca.gov.sg/regulatory-info/lifts-escalators/lifts-and-escalators-legislation/forms-and-certificates</a></p>
<b>Other Questions</b>		
58.	A participant shared that his building's MCB often tripped and affected the operation of the lifts altogether and asked if it would be advisable to install an independent distribution board for the lifts to avoid such a situation.	For matters concerning lift electrical works, it is advised that owners consult the appointed lift service contractor and manufacturers.
59.	A participant asked on the difference between an evacuation lift and a fire lift.	As defined in Clause 3.69 of the SS 550:2020, an evacuation lift is a passenger lift designated for the evacuation of occupants requiring assistance that is made available for the exclusive use by authorized personnel during emergency via the operation of the evacuation switch. A fire lift (Clause 3.70) is a passenger lift designated and made available for the exclusive use of fire-fighters during emergency by the operation of the fire lift switch.
60.	A participant asked if the lift service contractors are allowed to store lift spare parts inside the lift motor room.	Proper housekeeping in the lift motor room is required for proper maintenance of the lift machinery in the motor room. The storage of the lift spare parts should not impede the safe and proper maintenance of the lift machinery and controller

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S/N	Issue raised	BCA's Response
		panels. Lift service contractors should also obtain the consent of the owners to do so as the lift motor room is the property of the owner.
61.	Participants asked if this webinar would qualify them for PDU points.	Participants of this seminar can claim up to 3 PDU points.
62.	Participants asked for a copy of the presentation materials of this webinar.	<p>The presentation materials are available in the link below.</p> <p><a href="https://www1.bca.gov.sg/regulatory-info/lifts-escalators/resources-from-past-events">https://www1.bca.gov.sg/regulatory-info/lifts-escalators/resources-from-past-events</a></p>
63.	A participant asked if there is any professional indemnity require from SPE(L&E).	<p>There is no specific requirement that an SPE(L&amp;E) would have to get professional indemnity insurance for the purpose of carry out duties regulated under BMSM (LEBM) Regulations.</p> <p>However, section 24 of the Professional Engineers Act (Chapter 253) states that every licensed corporation which is not an unlimited corporation and every licensed limited liability partnership shall be insured against liability for any breach of professional duty arising out of the conduct of its business of supplying professional engineering services relating to any of the prescribed branches of professional engineering work as a direct result of any negligent act, error or omission committed by —</p>

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S/N	Issue raised	BCA's Response
		<p>(a) in the case of a corporation, the corporation or its directors, managers, secretaries or employees; or</p> <p>(b) in the case of a limited liability partnership, the limited liability partnership or its partners, managers or employees.</p>
64.	A participant asked on the population of lift/escalator installations in Singapore that required maintenance and a PTO.	There are about 70,000 passenger lifts and 7,000 escalators in Singapore.. All lifts and escalators installed in Singapore will need to comply with the BSM (LEBM) Regulations.
65.	A participant suggested that BCA made it mandatory for lift cars to be linked to the lift vendor's hotline for small developments that had no guard post. The participant said that it was not practical to rely on fellow residents to notify lift vendors	<p>SS 550:2020 clause 5.12.3.3 requires that every lift shall be provided with one or more electric alarm bell(s) audible outside the lift well (especially at the designated floor) and operable from inside the lift car.</p> <p>In addition, SS 550:2020 clause 5.12.3.4 also requires a telephone, intercom or other communication devices operable from inside the lift car to raise alarm to someone in the building, if the manned station is not within the vicinity of the lift (i.e. outside the audible range of 5.12.3.3), shall be installed in every lift.</p> <p>NOTE – In the case, where building is not manned 24 hours, the communication link may be to someone outside the building.</p>

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S/N	Issue raised	BCA's Response
66.	A participant suggested for BCA's OPTO system to have remark fields and an upload function under the SPE(L&E)'s declaration section to allow a SPE(L&E) to indicate his comments and upload other supporting documents. The participant said that the SPE(L&E) might find the lift still fit for use except for some follow-ups to be completed become any unsafe event occurred.	The SPE(L&E) should ensure that any unsafe condition or non-compliance observed during the testing and examinations should be properly rectified before he certifies in the OPTO system.
67.	A participant requested that BCA improved/stabilised OPTO system as the system constantly experienced technical glitches and when it came to information search, much time was needed in locating and sieving out the correct information by the user.	We apologise for the shortcomings of OPTO and thank you for the feedback. OPTO is undergoing revamp to create a more seamless experience for users. The revamped system is expected to be operational by end 2022.
68.	A participant asked how credits points would be issued for his LEI certification renewal.	BCA has submitted the attendance of our webinar to IES. IES will award the JAC-LEI points accordingly.