

ANNEX C: LIST OF PROPOSED PROVISIONS FOR FIXED INSTALLATIONS

A “fixed installation” means an escalator, a lift and a mechanised car parking system, including any supporting structure, machinery, equipment, apparatus and enclosure used or designed for use for operating a fixed installation.

During the 2018 public consultation on the Building Control Act amendments, BCA had sought feedback on proposed provisions such as submission of fixed installation plans, duties of key stakeholders, porting over of requirements from the Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations 2016 to the regime under the Building Control Act, registration of fixed installation contractors, retrofitting of fixed installations, and regulating user interface in mechanised car parking systems (“MCPS”).

In this public consultation, BCA would like to seek feedback on the further refinements and changes in policies after the 2018 public consultation, as detailed below.

No	Item	Provisions under the proposed subsidiary legislations under the amended Building Control Act (“Amended Act”) for Fixed Installations	Rationale/Comments
1	Approval of plans of fixed installation works (including product testing certifications)	<p>a) No one is allowed to carry out any fixed installation works (i.e. lift, escalator or MCPS installation or major alteration or replacement works) <u>before</u> the Commissioner of Building Control has approved the plans of the fixed installation works. The developer or fixed installation owner must apply for such approval by submitting plans that have been prepared, reviewed and certified by a qualified person appointed by the developer or fixed installation owner.</p> <p>b) For lifts, as part of plan approval, type testing certificates are required to be submitted. These type testing certificates will have to be issued by recognised certification bodies, after they have carried out type testing for the following lift safety components and the entire lift model. The certification bodies will be prescribed in the Regulations.</p> <ul style="list-style-type: none"> i. Car door locking device ii. Landing door locking device iii. Safety gear iv. Overspeed governor v. Car and counterweight buffers vi. Safety circuits containing electronic components and programmable electronic systems in safety related applications for lifts (PESSRAL) vii. Ascending car overspeed protection (ACOP) viii. Unintended car movement protection (UCMP) 	<p>a) The developer or fixed installation owner will be required to obtain approval from the Commissioner of Building Control for fixed installation works before performing such fixed installation works. This will allow the designs of fixed installation works to be evaluated at an earlier stage to ensure compliance with the Amended Act, regulations and relevant requirements.</p> <p>b) A type testing regime is proposed, similar to that</p>

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		<p>ix. Rupture valve/one way restrictor (for hydraulic lifts only)</p>	<p>adopted in the European Union based on EN 81-20 standards. The type testing regime will ensure that specified safety components and the equipment are adequately tested.</p>
2	<p>Duties of qualified person and fixed installation inspector during testing and commissioning of fixed installation works, and application for Permit to Operate for fixed installation works</p>	<p>a) No duty will be imposed on a qualified person and fixed installation inspector (assisting the qualified person) to supervise the fixed installation works i.e. works carried out for installation of a fixed installation .</p> <p>b) At the testing and commissioning stage, the qualified person or fixed installation inspector is required to examine and inspect the fixed installation works and supervise the installation contractor’s testing of the fixed installation. The qualified person will then submit his certification to the Commissioner of Building Control that the fixed installation works has been examined, inspected and tested in accordance with the necessary requirements as part of the application for permit to operate the fixed installation.</p> <p>c) In addition, on completion of the testing and commissioning of the fixed installation works, the qualified person is to submit a test report (documenting his checks performed in sub-paragraph b) above) of the fixed installation works as part of the application for a permit to operate the fixed installation. The details of the test report will be provided separately in BCA’s submission guide for qualified persons.</p>	<p>a) Unlike building works, the qualified person or fixed installation inspector would not be required to supervise the performance of the fixed installation works.</p> <p>b) As the qualified person will be certifying the fixed installation works, he will be responsible for the examination, inspection and testing of the fixed installation works. The qualified person is to examine and inspect the fixed installation works so as to ensure that it is installed in accordance with the Building Control Act, regulations, approved plans</p>

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			<p>and any terms and conditions imposed by the Commissioner of Building Control.</p> <p>c) The test report is to supplement the qualified person’s certification, both of which will need to be submitted as part of the application for a permit to operate the fixed installation.</p>
3	<p>Duties of qualified person and fixed installation inspector during annual renewal of permit to operate for fixed installations</p>	<p>a) During annual renewal of permit to operate, the qualified person appointed by the fixed installation owner or a fixed installation inspector appointed by such qualified person is required to examine and inspect the fixed installation and supervise the fixed installation contractor’s testing of the fixed installation. The qualified person will then submit his certification that the fixed installation had been examined, inspected and tested in accordance with the necessary requirements as part of the application for renewal of the permit to operate the fixed installation.</p> <p>b) During annual examination, inspection and testing, the qualified person or fixed installation inspector is required to check for compliance with maintenance outcome requirements in respect of the fixed installations. The qualified person is required to inform the fixed installation owner and the fixed installation contractor of any non-compliances in maintenance outcome requirements found by him and/or the fixed installation inspector. The fixed installation contractor is required to rectify the non-compliances before the Commissioner of Building Control grants any renewal of the permit to operate the fixed installation.</p> <p>c) During annual examination, inspection and testing, the qualified person is required to notify BCA if he is aware of alteration or replacement works done on the fixed installation which are not reflected in approved plans of the fixed installation works or which caused the fixed installation to be non-compliant with the standards to which the fixed</p>	<p>a) The qualified person will be responsible for the examination, inspection and testing of the fixed installation as part of the application for renewal of permit to operate the fixed installation.</p> <p>b) The qualified person or fixed installation inspector is to conduct an independent check on fixed installations during annual examination, inspection</p>

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		<p>installation was designed. The qualified person or the fixed installation inspector is to check for such works during annual examination, inspection and testing.</p>	<p>and testing of the fixed installations, including whether there is compliance with maintenance outcome requirements. This is to ensure the safety of the fixed installation during operation.</p> <p>c) The qualified person or fixed installation inspector is required to examine and inspect and ensure that no unauthorised alteration/replacement in the fixed installation has been carried out.</p>
4	<p>Standardisation of requirements for different types of fixed installations</p>	<p>a) The following procedures are to be conducted in accordance with both the manufacturer’s recommendations and the standard that the fixed installation was designed to.</p> <ul style="list-style-type: none"> i. Examination, inspection and testing of installation works and major alteration or replacement works ii. Annual examination, inspection and testing iii. Periodic maintenance 	<p>With this arrangement, the requirements in both manufacturer recommendations and design standards will have to be complied with. This will help to raise the safety standards of fixed installations.</p>

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5	Registration of fixed installation contractors	<p>a) Fixed installation contractors will be required to be registered before they are permitted to perform fixed installation works and maintenance of the fixed installations. To be registered, a person is required to meet the requirements in the following table. In addition, a paid up capital of minimum \$50,000 is required. The registration of fixed installation contractors are tiered as set out below.</p> <table border="1" data-bbox="459 576 1680 1267"> <thead> <tr> <th data-bbox="459 576 593 767" rowspan="2">Criteria</th> <th colspan="2" data-bbox="593 576 1003 632">Lifts</th> <th colspan="2" data-bbox="1003 576 1397 632">Escalators</th> <th colspan="2" data-bbox="1397 576 1680 632">MCPS</th> </tr> <tr> <th data-bbox="593 632 743 767">Lift Installation Contractors</th> <th data-bbox="743 632 1003 767">Lift Service Contractors</th> <th data-bbox="1003 632 1160 767">Escalator Installation Contractors</th> <th data-bbox="1160 632 1397 767">Escalator Service Contractors</th> <th data-bbox="1397 632 1536 767">MCPS Installation Contractors</th> <th data-bbox="1536 632 1680 767">MCPS Service Contractors</th> </tr> </thead> <tbody> <tr> <td data-bbox="459 767 593 1267" rowspan="3">Manpower</td> <td data-bbox="593 767 743 1267" rowspan="3">Three P2 or Three T2</td> <td data-bbox="743 767 1003 935">Contractors maintaining > 1000 lifts: Three P2 or Three T2</td> <td data-bbox="1003 767 1160 1267" rowspan="3">Three P2 or Three T2</td> <td data-bbox="1160 767 1397 935">Contractors maintaining > 1000 escalators: Three P2 or Three T2</td> <td data-bbox="1397 767 1536 1267" rowspan="3">One P0 or One T0</td> <td data-bbox="1536 767 1680 1267" rowspan="3">One P0 or One T0</td> </tr> <tr> <td data-bbox="743 935 1003 1102">Contractors maintaining 500-1000 lifts: Two P1 or Two T1</td> <td data-bbox="1160 935 1397 1102">Contractors maintaining 500-1000 escalators: Two P1 or Two T1</td> </tr> <tr> <td data-bbox="743 1102 1003 1267">Contractors maintaining < 500 lifts: One P0 or One T0</td> <td data-bbox="1160 1102 1397 1267">Contractors maintaining < 500 escalators: One P0 or One T0</td> </tr> </tbody> </table>	Criteria	Lifts		Escalators		MCPS		Lift Installation Contractors	Lift Service Contractors	Escalator Installation Contractors	Escalator Service Contractors	MCPS Installation Contractors	MCPS Service Contractors	Manpower	Three P2 or Three T2	Contractors maintaining > 1000 lifts: Three P2 or Three T2	Three P2 or Three T2	Contractors maintaining > 1000 escalators: Three P2 or Three T2	One P0 or One T0	One P0 or One T0	Contractors maintaining 500-1000 lifts: Two P1 or Two T1	Contractors maintaining 500-1000 escalators: Two P1 or Two T1	Contractors maintaining < 500 lifts: One P0 or One T0	Contractors maintaining < 500 escalators: One P0 or One T0	<p>The registration requirements will help to ensure that the fixed installation contractors are competent and well-resourced to install, test and maintain the respective fixed installations.</p>
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		<p><i>P2 means a Professional qualification with a degree in Electrical/Electronics or Mechanical Engineering or equivalent or Building Services or equivalent from a recognised institution, with at least 5 years of experience.</i></p> <p><i>P1 means a Professional qualification with a degree in Electrical/Electronics or Mechanical Engineering or equivalent or Building Services or equivalent from a recognised institution, with at least 3 years of experience</i></p> <p><i>P0 a Professional qualification with a degree in Electrical/Electronics or Mechanical Engineering or equivalent or Building Services or equivalent from a recognised institution.</i></p> <p><i>T2 means a Technical qualification with a diploma in Electrical/Electronics or Mechanical Engineering or equivalent or Building Services or equivalent from a recognised institution, with at least 8 years of experience.</i></p> <p><i>T1 means a Technical qualification with a diploma in Electrical/Electronics or Mechanical Engineering or equivalent or Building Services or equivalent from a recognised institution, with at least 5 years of experience.</i></p> <p><i>T0 means a Technical qualification with a diploma in Electrical/Electronics or Mechanical Engineering or equivalent or Building Services or equivalent from a recognised institution, with at least 3 years of experience.</i></p> <p>A recognised institution means a university, institution or polytechnic recognised and accepted by:</p> <ul style="list-style-type: none"> <i>i) Professional Engineers Board (PEB)</i> <i>ii) Board of Architects (BOA)</i> <p>For purposes of registering a person as a Professional Engineer under the Professional Engineers Act or registering a person as a Registered Architect under the Architects Act.</p>	
6	Regulating new and existing MCPS	a) The legislative requirements for MCPSEs will take effect six months after the Regulations are gazetted. New MCPS in building projects and retrofitting works performed on existing MCPSEs for which the first plan submission to the Commissioner of Building Control is made on or after the six-month gazetting period will need to comply with the prescribed standards and the new legislative requirements.	MCPS owner who installs new MCPSEs or retrofits existing MCPSEs after the MCPSEs legislative requirements come into

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			force will be required to comply with the legislative requirements for MCPSEs.
7	Lifts and MCPS not regulated under the Building Control Regulations	<p><u>Lifts and MCPS that will not be regulated under the proposed subsidiary legislations</u> The following lifts and MCPSEs will not be regulated under the proposed subsidiary legislations under the Building Control Act, as they are not carrying any persons, or not used by the general public, or assessed to pose low risks.</p> <p><u>Lifts</u></p> <ol style="list-style-type: none"> 1. A lift designed to be used solely for the carriage, stacking, loading or unloading of goods or materials. 2. A hoist designed to be used solely for lifting or feeding material directly into a machine. 3. A stage or orchestra lift. 4. A lift or hoist provided, in connection with any building which is being constructed, for the use of persons employed in the construction or for carrying materials used in the construction. 5. A lift or hoist affixed, attached or used in respect of any erection or equipment that is not a building (e.g. cranes and metal tanks), intended for use solely by persons performing work at the erection or using the equipment. 6. [New] A lifting platform not used for the transport of passengers, such as mast climbing work platform, building maintenance unit, suspended scaffold, mobile elevating work platform, and storage and retrieval system. [New] 7. A lift used as part of an amusement ride, as defined in the Amusement Rides Safety Act (Cap. 6A). 8. A stairlift or a vertical platform lift that — <ol style="list-style-type: none"> (i) has a maximum vertical displacement of less than 1,000 mm during operation; (ii) exerts a maximum downward force of less than 150 N when the lift is in downward operation; and (iii) serves a single residential unit. 9. A lift installed in any ship or aircraft. [New] 10. A lifting device that does not move along any guide or guides. [New] <p><u>MCPS</u></p> <ol style="list-style-type: none"> 1. Mechanised car parking systems used for the purpose of storage of vehicles and not for parking of vehicles. 2. Mechanised car parking systems installed in vehicle warehouses 3. Mechanised car parking systems installed in vehicle showrooms 	This is to provide clarity on the lifts and MCPSEs that are not regulated under the proposed subsidiary legislations under the Building Control Act.

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		<p>4. Mechanised car parking systems installed in vehicle workshops used for maintenance of vehicles.</p> <p><i>[New] means the equipment is currently not excluded from the BMSM (Lift, Escalator and Building Maintenance) Regulations 2016.</i></p>	