

LEGISLATION AMENDMENTS IN 2022*

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**tentative timeline*



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Scope of Presentation

- 1) Recap of upcoming legislation amendments
 - a) Types of fixed installations excluded
 - b) Type testing of lifts
 - c) Material and immaterial changes
 - c) Other key amendments

- 2) Frequently asked questions and answers

Note: Plans submission will be covered by my colleague in the other presentation.



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Fixed Installations

“fixed installation” means any of the following machine-powered installations:

- (a) an escalator;
- (b) a lift;
- (c) a mechanised car parking system,

and includes any supporting structure, machinery, equipment, apparatus and enclosure used or designed for use for operating a fixed installation



Exclusions

Lifts Not Regulated Under Building Control Regs:

- a) Lift designed to be used solely for the carriage, stacking, loading or unloading of goods or materials, and where the controls are outside of the platform.
- b) Hoist designed to be used solely for lifting or feeding material directly into a machine
- c) Stage or orchestra lift
- d) 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, and does not have a valid PTO
- e) [New] Lift or hoist affixed, attached or used in respect of any erection or equipment that is not a building (eg. cranes and metal tanks), intended for use solely by persons performing work at the erection or using the equipment
- f) [New] 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.



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Cargo Lifts

**For transport
of goods,
materials and
people**

VS

**Solely for
transport
of goods or
materials**

- Controls are located inside the lift car
- Regulated by BCA
- To comply with BSM (Lift, Escalator and Building Maintenance) Regulations 2016 and SS550

- Controls are located outside the lift car
- Regulated by MOM (in workplaces)



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Exclusions

Lifts Not Regulated Under Building Control Regs: *(Continued)*

- g) Lift installed in any ship or aircraft
- h) Lifting device that does not move along any guide or guides
- i) Lift used as part of an amusement ride, as defined in the Amusement Rides Safety Act (Cap. 6A)
- j) Stairlift or a vertical platform lift that —
 - 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.

MCPS Not Regulated Under Building Control Regs:

- a) Mechanised car parking systems used for the purpose of storage of vehicles and not for parking
- b) Vehicle warehouse
- c) Vehicle showroom
- d) Vehicle workshop lifting device, used for maintenance

Type Testing of Lifts

Type test reports (components & product test reports) and certificates of lifts^{NOTE} to be submitted for:

a. **Lift model**

NOTE: This refers to lifts other than vertical platform lifts and stairlifts only.

b. **Lift Safety Components:**

- i. Car/Landing Door Locking Device
- ii. Safety Gear
- iii. Overspeed Governor
- iv. Buffers
- v. Safety Circuits containing Programmable Electronics Systems in Safety Related Applications for Lifts (PESSRAL)
- vi. Safety Circuits containing Electronic Components
- vii. Ascending Car Overspeed Protection Means (ACOP)
- viii. Unintended Car Movement Protection Means (UCMP)
- ix. Rupture Valve/One Way Restrictor (for Hydraulic Lifts)

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Type Testing of Lifts

- **For safety components (excluding PESSRAL)**

- type tested in accordance with EN81-50, and
- certified by Certification Bodies accredited by State authorities such as EU and China.

- **For PESSRAL**

- type tested in accordance with EN81-50, and
- certified by Certification Bodies accepted by BCA.

- **For Lift Model**

- type tested to certify its compliance with SS550 or EN81-20, and
- certified by Certification Bodies accepted by BCA.



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Acceptable Certification Bodies

Certification body	Scope of Work
a) LIFTINSTITUUT B.V.	For type testing of: i) Lift model, and ii) Safety circuits containing programmable electronic systems in safety related applications for lifts (PESSRAL)
b) TUV SUD Industrie Service GmbH	
c) Shenzhen Institute of Special Equipment, SISE	
d) National Elevator Inspection and Testing Center, NETEC	
e) Shanghai Jiaotong University Elevator Testing Centre , SJUETC	
f) National Elevator Quality Supervision and Inspection Centre (Guang Dong)	

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Acceptable Certification Bodies

Certification body	Scope of Work
<p>Notified bodies in EU listed at the following URL: (https://ec.europa.eu/growth/tools-databases/nando/index.cfm?fuseaction=directive.pdf&refe_cd=2014%2F33%2FEU&requesttimeout=900)</p>	<p>For type testing of safety components according to the accredited scope of the certification body.</p>



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Acceptable Certification Bodies

Certification body	Scope of Work
<p>List of Certification bodies in China:</p> <ul style="list-style-type: none">a) Shenzhen Institute of Special Equipment, SISEb) National Elevator Inspection and Testing Center, NETECc) Shanghai Jiaotong University Elevator Testing Centre, SJUETCd) National Elevator Quality Supervision and Inspection Centre (Guang Dong)e) National Elevator Quality Supervision and Inspection Centre (Zhe Jiang)f) National Elevator Quality Supervision and Inspection Centre (Chong Qing)g) China Special Equipment Inspection and Research Institute	<p>For type testing of safety components according to the accredited scope of the certification body.</p>

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Key BC Regs Amendments for Fixed Installations

A) Design and installation-related

1. Material changes

- a) Any material change before the completion of fixed installation works would require submission and approval of amendment plans before the changes can be carried out.
- b) Material changes mean any changes that –
 - i. Affect one or more components which are required to be type tested; or
 - ii. Meet all of the following 3 criteria:
 - May affect the safety of the fixed installation during operations or maintenance, after the fixed installation works are completed; and
 - Affect the fixed installation works as set out in the approved plans; and
 - Affect the building layout/dimensions or structural elements, or will cause substantial changes to the design of the fixed installation.

Key BC Regs Amendments for Fixed Installations

A) Design and installation-related

2. Immaterial changes

- a) Any changes other than material changes.
- b) Require submission of record plans to BCA, after the works are complete.



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Key BC Regs Amendments for Fixed Installations

B) Maintenance and operation-related

1. Owner to ensure that contractors carry out periodic maintenance in accordance with the relevant standards, requirements, and prescribed frequency.

- *To ensure that necessary maintenance, repair and replacement works are carried out, and maintenance done according to prescribed frequency*

2. Change of contractor

- Outgoing contractor to transfer to owner any materials necessary for the access (e.g. keys, passwords or other information) and maintenance (e.g. maintenance manuals) within 7 days after the termination of the maintenance agreement.
- Owner to transfer these materials to incoming contractor within 7 days after the commencement of the maintenance agreement.



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Key BC Regs Amendments for Fixed Installations

B) Maintenance and operation-related

3. Duties of SPEs with respect to examination, inspection & testing (EIT)

- EIT is conducted (a) after completion of installation or major alteration / replacement works; and (b) for annual renewal of PTO.
- Responsibility of EIT will rest with the SPE. SPE has to take ownership of the EIT results, and certify the EIT.
- During EIT, SPE's duties are to:
 - Conduct examination and inspection (EI) of fixed installations.
 - Supervise testing (T) conducted by contractor.
 - Check for compliance with maintenance outcome requirements during annual EIT.
 - Notify BCA of unauthorised alteration or replacement works done on the fixed installation during annual EIT.

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Key BC Regs Amendments for Fixed Installations

B) Maintenance and operation-related

4. Standardisation of requirements - to comply with both manufacturer's recommendations and design standards during:

- EIT after installation or major A/R works
- Periodic maintenance
- Annual EIT

5. Periodic maintenance frequencies for lifts serving single residential units

- can be frequency as per manufacturer's recommendations.
- PTO and annual EIT by SPE are still required.



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Key BC Regs Amendments for Fixed Installations

C) General

Report safety risks (defects) in building products within **72 hours**.

Examples of Building Products

- Speed-monitoring and speed-limiting device in lifts
- Overspeed limitation device (such as an overspeed governor and links with safety gear)
- Escalator braking system
- Escalator step, step chain, and step axle
- MCPS load carrier
- MCPS anti-fall device



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Key BC Regs Amendments for Fixed Installations

C) General

Report safety incidents within **6 hours**.

Examples of Reportable Safety Incidents

- An individual dies or is injured as a result of an incident associated with the operation of the fixed installation.
- Fire outbreak, or smoke emitted, from any part of the lift system.
- Upriding escalator suddenly reversing direction.
- Escalator travelling at excessive speed.
- Failure of brakes in MCPS.
- Failure of devices connected to the safety circuit in MCPS.



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Frequently asked questions and answers

Question 1: Can the following parties appoint the QP(FI) on behalf of the developer or FI owner?

- a) Lead Consultant (Architect) or the M&E Consultant of the building project
- b) L&E or MCPS Contractor

Answer 1: The appointment of QP(FI) can be performed by the **developer/owner**, the **builder** of the building works (if the developer/owner does not appoint the QP), or the **FI contractor** (if both the developer/owner and builder do not appoint the QP).



Frequently asked questions and answers

Question 2: Can different QP(FI) be appointed at the various stages (e.g. plan submission and T&C)? Can different QP(FI) be appointed if there is a need to re-submit plans (e.g. if the previous plans submitted were rejected or require amendments)?

Answer 2: Yes, **different QP(FI)** can be appointed for **different stages**. The developer may also change the appointment of QP(FI) in the course of the project when it deems necessary.



Frequently asked questions and answers

Question 3: Can the FI plan be submitted by a PE(Mechanical) or PE(Electrical) after the plan is prepared, reviewed and certified by an QP(FI)?

Answer 3: In obtaining the approvals, the developer must appoint a **QP(FI)** to submit the relevant plans, on its behalf, via CORENET to BCA.



Frequently asked questions and answers

Question 4: Is plan submission for FI works required at the same time as building plan submission (BP)?

Answer 4: FI plan is **not required to be submitted together** with the BP. However, it should be noted that should the fixed installation plan cause a change to the approved BP, the QP(BP) would need to seek approval for amendments to the approved BP where applicable. FI plans must be submitted and approved **before** any installation works of the FI commence.



Frequently asked questions and answers

Question 5: What are the responsibilities of the FI inspector when assisting QP(FI) during examination, inspection and testing (EIT)?

Answer 5: If a FI inspector is appointed to assist the QP(FI) during testing and commissioning, the FI inspector will need to **exercise due diligence** when conducting the examination (E) and inspection (I) of the fixed installation, and ensure that the testing (T) of the fixed installation is in accordance with requirements. He is responsible for **notifying the Commissioner of Building Control** should he know of any **contravention during EIT**, and he is also **responsible for the EIT findings** which he will be providing to the QP(FI).



Frequently asked questions and answers

Question 6: Is it necessary to report all safety risks (defects) of the safety components even if no incident has occurred?

Answer 6: The objective of reporting safety risks (defects) is for **early identification and rectification** of any design, manufacturing, or installation issues of the fixed installation that may affect its performance, which may pose as inherent safety risks. Hence, it is crucial that such defects are **reported even if no incident has occurred**, so as to prevent them from occurring in the future. However, do note that normal breakdown of equipment does not classify as reportable safety risk.



Thank you



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