

**PUBLIC CONSULTATION FOR PSI/PFI, EF, FIXED INSTALLATION AND REPORTABLE MATTER
REGULATION 2021**

SUMMARY OF FEEDBACK AND RESPONSES

**Annex A: Response to feedback on Proposed Legislation in Relation to PSI/PFI and Definition of “exterior feature”
Periodic Structural Inspection (“PSI”)**

1) Duties of owner for PSI		
Proposed Amendments:	Compilation of Feedback Received:	BCA’s Response:
An owner of a building specified in a structural inspection notice, after appointing a structural engineer or a replacement structural engineer, must notify the Commissioner of Building Control by the 7th day after the end of 2 months after the date of the structural inspection notice. Such notice must: <ul style="list-style-type: none"> (a) state the name of the structural engineer appointed; and (b) contain a statement, signed by that structural engineer, confirming the appointment. 	Respondents requested for the list of PSI engineers.	The list of PSI engineers can be found under the heading “Search for a PE for your PSI” in the link https://www1.bca.gov.sg/regulatory-info/building-control/periodic-structural-inspection
2) Additional requirement on structural inspection under PSI		
Proposed Amendments:	Compilation of Feedback Received:	BCA’s Response:
The appointed structural engineer must personally carry out a visual inspection of the building, which must include a visual survey of: <ul style="list-style-type: none"> (a) the condition of the building (b) the loading on the structure of the building (c) whether there is evidence of any structural works that are or were carried out without any prior approval of the plans of those works where prior approval is required by Part II of the Act. 	<p>Query on whether owner can carry out PSI before receiving notice</p> <p>Query on ways to retrieve old building drawings and renovations by tenants in order to check on structural works that were carried out without any prior approval. Such requirements impose stringent duties onto the SEs.</p>	<p>Owner can only carry out PSI upon receiving PSI notice.</p> <p>The appointed SE can check with the owner/tenant whether any A&A works were conducted or refer to previous PSI report, if available.</p>

Periodic Façade Inspection (“PFI”)

1) Meaning of “façade” of building		
Proposed Regulations:	Compilation of Feedback Received:	BCA’s Response:
<p>Meaning of “façade” of building</p> <p>The “façade” of a building means the exterior of the building, any exterior feature attached to the building, and the following parts of a building located on or near the exterior of a building:</p> <ul style="list-style-type: none"> (a) any signage or advertising structure and its supporting structure installed for 36 months or shorter, (b) a structural supporting system and the structural supporting system’s components that may be used to attach to, or that supports or may support for use with, the building, for 36 months or shorter, any externally mounted equipment. 	<p>Crimson boards used for façade/roof area deteriorate easily when soaked in water. Moreover, holding these boards with screws along its frame, does not provide strong support. These characteristics of crimson board pose safety risk. However, replacing these boards with aluminium panels is costly.</p> <p>Query on whether CP is to replace PE to carry out sky-sign inspection since under the Temporary Buildings Regulations, PE is required to inspect sky-signs every 3-years for permit renewal,</p> <p>BCA also received request to clarify the phrase “on or near the exterior of a building”, the rationale of adopting the duration of 36 months or shorter and whether fixtures more than 36 months will not be applicable as a façade of a building</p>	<p>Under PFI, the Competent Person will be able to advise owner on the permanent rectification works required to ensure the safety of building facades.</p> <p>Only CPs are to conduct PFI. The requirements for advertising structure regulation still remains in force.</p> <p>The phrase “near the exterior of a building” is to capture fixtures that are fixed at the peripheral or edge of buildings. The rationale behind a 36-months duration is to be in line with advertising permit requirement/temporary buildings. The “façade” of a building has included definition of “exterior feature”, and a CP has to inspect all building exterior regardless the fixture is permanent or temporary in nature.</p>
2) Duties of owner		
Proposed Regulations:	Compilation of Feedback Received:	BCA’s Response:
<p>Duties of owner served with notice to inspect façade</p> <p>When a building owner is served with a façade inspection notice, the owner must appoint a competent person to carry out the required inspection works within 2 months after the date of the façade inspection Notice.</p>	<p>Respondents expressed support for the PFI regime, stating that it will minimise the risk of falling objects, especially façade deteriorated due to global warming and extreme climate change.</p> <p>Respondents queried on the timeline of PFI</p>	<p>BCA expressed sincere gratitude towards supportive respondents.</p> <p>BCA will issue advisory letter 1 year in advance to building owners prior to the issuance of actual Notice. This is to allow</p>

<p>The owner must replace the competent person within 2 months after the date the owner becomes aware that the competent person is unable, or does not intend, to carry out or continue carrying out the façade inspection.</p> <p>After appointing a competent person or a replacement competent person, the owner must notify the Commissioner of Building Control of the appointment by the 7th day after the end of 2 months after the date of the façade inspection notice.</p>	<p>implementation and suggests to coincide the timeline of PFI with PSI.</p> <p>One of the respondents also suggested subsidy for the inspection cost while cost of repair works are still to be borne by owners,</p> <p>LTA clarified whether LTA is required to comply with the requirements under PSI and PFI for LTA's own assets (MRT stations, depot buildings and facility buildings)</p> <p>BCA also received feedback on timeline for notice of appointment of CP and timeline for PFI report submission.</p>	<p>owners time for early planning on funding and resources required for PFI.</p> <p>Both PSI & PFI regimes are different in requirements, and accessibility platforms are required to carry out PFI at building exterior. Owners may tie-in R&R works with PFI to achieve cost savings.</p> <p>Respondents were also directed to BCA's PFI website for more details on PFI procedure.</p> <p>LTA's existing arrangement with BCA for PSI will not be affected by the new PSI regulations. LTA will revert back on whether they will adopt similar approach for PFI for LTA's assets (MRT stations, depot buildings and facility buildings)</p> <p>BCA has issued advisory letter to owners and Managing Agents (MAs) 1-year in advance for PFI preparation. The timeline to appoint a CP and to submit PFI report will be stipulated in the PFI notice. BCA will consider granting EOT to owner to comply with PFI notices on a case by case basis with valid justifications.</p>
<p>3) Requirement to be competent person</p>		
<p>Proposed Regulations:</p>	<p>Compilation of Feedback Received:</p>	<p>BCA's Response:</p>
<p>A competent person must attend and successfully complete the course "Certificate in Façade Inspection" conducted or developed by the Building and Construction Authority, solely or jointly with any other person.</p>	<p>Respondents requested for a list of Competent Persons who are able to perform PFI</p> <p>One of the respondents also suggested providing guidelines on the cost of performing such inspection</p>	<p>The list of CPs who are able to perform PFI can be found in an attachment titled "List of CP" can be found on BCA's PFI website (link https://www1.bca.gov.sg/regulatory-info/building-control/periodic-fa%C3%A7ade-inspection-pfi)</p>

		<p>BCA is not regulating inspection fees as it is driven by market demand. Nonetheless, BCA can ensure there will be sufficient pool of Competent Persons and façade inspectors to support the industry. BCA is also exploring new technologies to support the regime in order to keep the inspection fee competitive.</p> <p>BCA will also issue advisory letter 1 year in advance to building owners prior to the issuance of actual Notice. This is to allow owners time for early planning on funding and resources required for PFI.</p>
<p>4) How façade inspection is to be carried out</p>		
<p>Proposed Regulations:</p>	<p>Compilation of Feedback Received:</p>	<p>BCA's Response:</p>
<p><u>Performing a façade inspection</u> A complete façade inspection involves the procedures below: (a) Façade inspection:</p> <ul style="list-style-type: none"> (i) a visual inspection of the entire façade of the building using photographic cameras (ii) a close-range inspection on suitable parts of each elevation of the building (being at least 10% of the surface area of each elevation) to assess the condition of the façade along vertical drops or trails, using a probing tool, or a borescope or a scanning equipment which does not require special training to operate or use. (iii) The use of other equivalent methods, technology or equipment for visual and close-range inspections will require the approval of the Commissioner of Building Control. 	<p>Among the feedbacks received in relation to this proposed regulation include:</p> <ul style="list-style-type: none"> • Suggestion to develop PFI guidelines • Suggestion to develop a checklist to guide inspection works under PFI • Query on whether cladding panel must be removed to inspect concealed joints • Query on location of the min. 10% close range inspection if there is no irregularity observed on the particular elevation • Promote remote real-time PFI using SMART app technology <p>BCA also received query on whether reports from façade inspection carried out before PFI Notice can be used as a report for PFI.</p>	<p>BCA will be launching the PFI guidelines in 3Q2021 which will contain a checklist to guide façade inspection works under this regime. PFI covers checks on cladding panels and its supporting structures.</p> <p>The 100% visual inspection and min. 10% close-range inspection for each building face are mandatory requirements under the PFI regime. CPs have full discretion on how façade inspection is to be performed to comply with regulatory requirements.</p> <p>BCA has also been conducting innovation grant calls to explore advanced technologies to aid façade inspections.</p> <p>The façade inspection carried out by building owner, prior to receiving PFI notice issued by</p>

<p>(b) Full façade investigation:</p> <p>(i) After carrying out a visual inspection and close-range inspection of the building's facade, the competent person must, and only with prior approval of the Commissioner of Building Control, carry out a full façade investigation if he/she is of the opinion that a full façade investigation is necessary to (a) ascertain the cause of the excessive defects, and (b) recommend appropriate rectification measures.</p> <p>(ii) The application for approval of the Commissioner of Building Control to carry out a full façade investigation must be accompanied by:</p> <ol style="list-style-type: none"> i. an interim report ii. information on the building's façade; and iii. a proposal on the façade areas and tests involved in the full façade investigation 	<p>A question was also raised on whether only CPs can decide to carry out full façade investigation.</p>	<p>BCA, is not to be taken as equivalent to have complied with Periodic Façade Inspection (PFI) requirement. It can be considered as part of the routine façade maintenance conducted by building owners. BCA may review the submission of the façade inspection report as a completion of PFI on a case-by-case basis after assessing the details of inspection works being carried out by the Competent Person and necessary repair works carried out by the building owners.</p> <p>The decision to carry out a full façade inspection is not made solely by the Competent Person. While processing the PFI report, BCA can issue written direction to query CP's assessment if the building has extensive defects that may need to undergo full façade investigation. Under the regulation, CP has to obtain BCA's approval prior to carrying out full façade investigation.</p>
<p>5) Report requirements</p>		
<p>Proposed Regulations:</p>	<p>Compilation of Feedback Received:</p>	<p>BCA's Response:</p>
<p>Report requirements</p> <p>After carrying out a visual inspection and a close-range inspection of the building's façade, the competent person must prepare a report if he/she:</p> <ol style="list-style-type: none"> (a) is of the opinion that the façade of the building is safe; (b) is of the opinion that the defects do not necessitate a full façade investigation; or (c) has no approval granted by the Commissioner of Building Control for a full façade investigation. 	<p>A query on whether video shall be included in PFI submission was received. Respondents also consulted on methods to overcome the absence of façade drawings to facilitate the inspection.</p>	<p>Currently, report submission only requires photos as supporting evidence. Video is not required in PFI report submission.</p> <p>As for the absence of façade drawings, the appointed Competent Person shall due diligently conduct the inspection, including obtaining façade connection details by conducting inspection on site.</p>

<p>A façade inspection report must contain:</p> <ul style="list-style-type: none"> (a) a detailed description of the visual inspection close-range inspection of the façade, and any full façade investigation conducted by the competent person; and (b) analyses of observations about the condition of the façade, and of every test conducted during the visual inspection, close-range inspection and the full façade investigation; and <p>recommended rectification works by the appointed competent person</p>		
<p>6) Vicarious visual inspection or close-range inspection</p>		
<p>Proposed Regulations:</p>	<p>Compilation of Feedback Received:</p>	<p>BCA's Response:</p>
<p>The competent person may carry out a visual inspection and close-range inspection in person; through a façade inspector under direct supervision, or by engaging a person providing the approved equivalent method, technology or equipment ("service providers")</p> <p>If the competent person engages service providers to perform façade inspection, he/she has to ensure that the service is performed under his/her or his/her façade inspector's direct supervision. The competent person also has to personally review all outputs from the service provided</p>	<p>Some of the questions in relation to this regulation include:</p> <ol style="list-style-type: none"> 1) Who are these service providers? 2) Are they façade inspectors who have attended the façade course? 3) Do these service providers need approval from the Commissioner of Building Control (CBC)? 	<p>The service provider can be drone operators or testing laboratory under the control of CPs. Drone operators may be required to attend the façade inspection training course once the Accreditation scheme is in place. Currently, we require CP to obtain CBC's approval when he adopts technologies that are not specified in the regulations for visual and close-range inspections.</p>

Definition of “exterior feature”

Proposed Regulations:	Compilation of Feedback Received:	BCA's Response:
<p>1) Definition of “exterior feature”: This regulation prescribes items listed below as exterior features: (a) any window, with or without movable parts, such as a roof skylight, glass panel, glass brick, louvre, glazed sash, glazed door, translucent sheeting and any other building material which transmits natural light directly from outside a building into an interior of the building; (b) any grille or shutter, with or without movable parts; (c) any tile, cladding, curtain wall, siding, plaster, bracket or cornice; (d) any gutter, rainwater down-pipe or part of the roof; (e) any membrane shade structure, or any awning or device to provide shade; (f) any green wall which is partially or completely covered by vegetation, including any brackets that support it, the growing medium for the vegetation (other than soil) and any integrated water delivery system; (g) any screen or screen wall; (h) any louvres or fins; (i) any masonry veneer; (j) any window hood; (k) any cantilevered roof; (l) any part of a concrete wall, concrete slab, concrete beam or concrete column; (m) any external balustrade; (n) any directional sign, signboard, skysign, animated billboard or other advertising structure installed or intended to be installed for more than 36 months, and includes any frame, panel, hoarding or other supporting structure of or for the directional sign, signboard, skysign, animated billboard or other advertising structure (o) any clothes drying rack; (p) any suspended ceiling system — (i) fitted under or hung from a porch, porte-cochere, portico or similar shelter —</p>	<ul style="list-style-type: none"> • Will metal roof be considered as exterior feature? • How will the responsibility of maintaining and installing the windows and air-con unit supports be differentiate since there are separate regulations on their maintenance and installation. • Suggestion to review item (l) “any part of a concrete wall, concrete slab, concrete beam or concrete column” as it would confuse the work scope of PSI and PFI. • On item (p), how would the suspended ceiling be classified under exterior feature which will be installed horizontally or inclined under a shelter. 	<ul style="list-style-type: none"> • Yes, metal panels installed at cantilevered roof or part of a roof is considered as an exterior feature. • PFI will include visual inspection on the condition of EF such as windows and air-con unit supports. Following the façade inspection, if there are potential dislodgement issues or danger posed to the public, BCA will follow up with person responsible to rectify accordingly to prevent such EF from dislodging • The item (l) refers to concrete elements along the peripheral of a building to help spot tell-tale signs of spalling concrete that may fall off from the façade of buildings. • The item (p) refers to suspended ceiling that are exposed to weathering and publicly accessible. This specification is included to safeguard the public.

<p>(A) that is located at the entrance or side of building or projects from or near an external edge of a building; and</p> <p>(B) that spans across a space below which is accessible to members of the public;</p> <p>and</p> <p>(ii) the underside of which is exposed to rain;</p> <p>(q) any of the following that is used or may be used to attach to, or that supports or may support for use with, the building, for more than 36 months, any externally mounted equipment:</p> <p>(i) a metal or concrete bracket, or similar structural supporting system attached to the building and to the externally mounted equipment (if any);</p> <p>(ii) a cable and other associated components of a structural supporting system mentioned in sub-paragraph (i), where the cable or components are attached to the building and to the externally mounted equipment (if any).</p> <p>In paragraph (q) above, externally mounted equipment includes the following:</p> <p>(a) an air-conditioning unit and its condensing equipment;</p> <p>(b) a ventilation system;</p> <p>(c) a photovoltaic array or panel;</p> <p>(d) a solar water heater;</p> <p>(e) an apparatus (including a dish antenna) or a combination of apparatus for the transmission or direct reception of broadcast matter or wireless communication.</p>		
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