

Periodic Façade Inspection (PFI) FAQs

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(A) PERIODIC FAÇADE INSPECTION

Q1 Why did BCA decide to introduce a Periodic Façade Inspection (PFI) regime and when will PFI take effect?

As buildings age, their façades experience wear and tear. A façade inspection regime will enable early detection of tell-tale signs of deteriorating façade materials and its connections, allowing the building owner to carry out repairs before it fails.

The periodic façade inspection regime will commence from 1st January 2022.

Q2 What does the Periodic Facade Inspection (PFI) process involve?

- A2 PFI may differ slightly from building to building, and would likely involve the following:
 - Visual inspection of the condition of the entire (100%) building façade elements from ground level or other available vantage points and openings, which may be done using photographic cameras whereby photographs or still images of the entire façade may be taken. Drones or similar unmanned aircraft designed for aerial survey may be used with prior approval from the Commissioner of Building Control (CBC).
 - After the 100% visual inspection, the Competent Person (CP) is required to perform a 10% close-range inspection on each building face (elevation) to assess the condition of the façade using appropriate tools such as tapping rods and scanning devices that do not require any special training to operate or use;
 - Recommend any remedial measures to be carried out;
 - For building's with widespread or potential systemic defects observed, the CP can recommend a full facade investigation of localised areas or the whole building for BCA's consideration and approval. Prior approval from CBC is required before the proposed full façade investigation is performed.





Q3 What does a full façade investigation under Periodic Facade Inspection (PFI) entail?

- A3 Competent Person (CP) needs to obtain approval from the Commissioner of Building Control (CBC) before proceeding with the full façade investigation works. The Full investigation generally involves:
 - Performing close-range inspection at additional locations;
 - To ascertain the causes of extensive defects and carry out design check with calculation and structural plans with due diligence;
 - On-site and/or laboratory tests to verify the façade condition, strength of the façade materials and extent of the defects, if deemed necessary;
 - Exposing concealed façade elements (e.g. brackets for curtain wall system), or the removal of façade panels to assess the condition of the panels based on CP's professional judgement;
 - Recommending any repairs to be carried out in order to restore the integrity of the building's façade;
 - Where the repair involves any structural elements or building works, the structural plan approval and permit to commence works are to be obtained prior to commencing the repairs, if applicable. A Professional Engineer (PE), if the CP is not a PE, shall be engaged for this purpose.

Q4 Who is a Competent Person (CP) and are they assisted by others when conducting PFI?

A4 A CP is either a Professional Engineer (PE) or Registered Architect (RA) that has attended and successfully completed the course titled "Certificate in Façade Inspection" conducted by BCAA and IESA currently. The CP could be assisted by Façade Inspectors in carrying out the inspection.

Façade Inspectors can be a Resident Engineer, Resident Technical Officer or any other person who possesses the relevant qualification that is specified by BCA.





Q5 What if I refuse to conduct Periodic Façade Inspection (PFI) upon receiving the inspection notice?

Upon receipt of the PFI Notice, the owner of the building must appoint a Competent Person (CP) within 2 months after the date of the façade inspection notice.

The building owner who fails to appoint a CP within the above period, shall be guilty of an offence and shall be liable of a conviction to a fine not exceeding \$20,000.

(B) PERSON RESPONSIBLE TO CARRY OUT PERIODIC FAÇADE INSPECTION

Q6 Who is the person responsible for carrying out Periodic Façade Inspections (PFIs)?

A6 Building owners will be served with a notice to have their building's facade inspected. Upon receipt of the notice, they are required to appoint a Competent Person to carry out the inspection of their building's façade, to submit a report to BCA within the stipulated timeline and follow up with the recommended repair works.

Q7 What happens after my Competent Person (CP) submits the inspection report?

A7 BCA will vet through the report and may seek clarification from the CP with regards to the contents of the report. The CP is required to respond to clarifications and, where the situation warrants, BCA may also conduct a joint site inspection of the building and request for the CP to conduct a presentation to BCA.

Upon the acceptance of the report, BCA will write to the Owner to follow up with the recommendations of the CP on the defects detected. You must carry out the remedial works within such period as the Commissioner of Building Control may specify, to prevent further deterioration of the building façade and thereafter submit the CP's certification on the completion of the remedial works, where applicable.

Q8 I am a building owner. What do I need to do when I receive a Periodic Facade Inspection (PFI) Notice?

- A8 BCA will serve Owners with a Notice of Inspection when the building is due for Periodic Facade Inspection (PFI). You can play your part by:
 - Appointing a Competent Person (CP) promptly.





List of CPs can be downloaded from:

https://www1.bca.gov.sg/regulatory-info/building-control/periodic-façade-inspection-pfi

- Providing access to the perimeter of the building to be inspected by your CP;
- Providing the necessary access system such as suspended working platform/gondola, mobile elevating work platform or scaffold or a combination of these to carry out the close-range facade inspection;
- Providing a set of approved plans and façade drawings;
- Providing information on the maintenance and history of the building's facade, particularly on the façade's repair work been carried out in the past e.g. water ingress etc.;
- Providing previous periodic inspection reports (if available) for reference;
- Carrying out rectification works and/or monitoring of defects highlighted by your CP promptly;
- Maintaining your building façade in good condition at all times.
- Q9 Can my Competent Person (CP) purchase a set of my building's building plans on my behalf for the purpose of Periodic Facade Inspection (PFI)?
- A9 Yes, your CP can make an application on your behalf via https://go.gov.sg/n8fz6e
 - The CP would need to attach the Documentary Proof of Ownership of property (latest property tax bill, Title Deed or Notice of Transfer) when making the application.
- Q10 What should I do if my Competent Person (CP) cannot find any document on my building?
- A10 If there is no information or document available on the building façade, the CP shall carry out the review based on the appropriate Standards and Codes of Practices (applicable to Singapore) at the time of installation for the building façade with reference





to the date of issue of the Temporary Occupation Permit, Certificate of Statutory Completion or other available relevant documents

Q11 Can I engage a different Competent Person (CP) for the full façade investigation?

- A11 Yes, you can engage any CP who has no professional nor financial interest in the building. You should notify BCA within 7 days on the change of CP and submit the appointment form. When a new CP is appointed to continue with the façade inspection or investigation process at any point in time, he/she shall review and take into consideration the earlier findings by the former CP before continuing.
- Q12 If the Competent Person (CP) engaged by the management corporation (MCST) of my building did not inspect my unit's facade, can I request that he inspect my unit?
- A12 Yes, you can request through the management corporation for the appointed CP to inspect your unit's facade, subjected to the CP's discretion and MCST's arrangement.
- Q13 I have appointed a Competent Person (CP) but he never seems to come in person to inspect my building. Is this allowed?
- A13 Your appointed CP is expected to carry out a comprehensive visual inspection and close-range inspection based on his engineering judgement and assessment. He is expected to take active and personal interest in the planning and carrying out of the inspection of the building. However, he may be assisted in the physical work of inspection by a façade inspector(s).
- Q14 Can I engage any facade inspector to inspect my building facade?
- A14 No. You can only engage a Competent Person (CP) who has no professional nor financial interest in the building. For example, a Professional Engineer (C&S) or Registered Architect would be considered as having a professional or financial interest if he was responsible for the design or construction of the building or any part of the building works. The CP may be assisted by a façade inspector. However, the CP remains ultimately responsible for the inspection and assessment of the inspection findings and condition of the building facade.





- Q15 Can accredited laboratories undertake the close-range inspection? Can the Competent Person (CP) delegate the inspection duty to the testing laboratories?
- A15 The CP can engage testing laboratories to assist in carrying out the close-range inspections, subjected to prior approval from the Commissioner of Building Control (CBC). However, both the visual and close-range façade inspections must be attended by the CP personally or his façade inspector (who is directly under the CP's control and supervision). The CP remains ultimately responsible for the inspection and assessment of the inspection findings and condition of the building facade.
- I am an individual unit owner of a building with multiple owners (but the building is not subdivided and managed by a management corporation (MCST) established under the Land Titles (Strata) Act). Can I appoint my own Competent Person (CP) to inspect my unit's facade? What are the required conditions for such an appointment?
- A16 No, owners of a building (that is not subdivided and managed by a management corporation (MCST) established under the Land Titles (Strata) Act) must jointly appoint a CP to inspect the building's facade within the stipulated timeframe. The appointed CP must inspect the building facade and submit the inspection report to BCA.
- Q17 The appointed Competent Person (CP) has completed the façade inspection; how does he submit the report to BCA?
- A17 The CP is required to submit the façade inspection report and all subsequent correspondences via <u>CORENET e-Submission System</u>
- Q18 What happens if my Competent Person (CP) fails to conduct the façade inspection in accordance with the requirements of the Building Control Act and Regulations?
- A18 The CP would be guilty of an offence and shall be liable on conviction to a fine not exceeding \$50,000.





(C) BUILDINGS AFFECTED BY FAÇADE INSPECTION REGIME

- Q19 Who and which buildings will be affected by the implementation of façade inspection regime?
- A19 Periodic Façade Inspection (PFI) regime applies to buildings aged 20 years and older and over 13 metres in height. Detached, semi-detached, terraced or linked houses which are used for residential purposes and temporary buildings, are excluded from the regime.

Nevertheless, building owners should still carry out routine building façade maintenance even without a PFI Notice. When façade defects or deterioration are identified, owners are advised to engage a Competent Person, appropriate qualified person or specialist to investigate and propose rectification measures. Building owners are encouraged to carry out the recommended rectification works immediately.

- Q20 I received the Periodic Facade Inspection (PFI) Notice to an address where there is a combination of buildings that are above 13 metres and less than 13 metres, are the buildings less than 13 metres exempted?
- A20 Building owners will be required to conduct periodic façade inspections on all buildings to which the PFI regime applies, at the address specified in a PFI Notice. The PFI regime does not apply to buildings the highest point of which is 13 metres or lower when measured from the ground.

(D) FREQUENCY OF PERIODIC FAÇADE INSPECTION

- Q21 How often is my building required to have its façade inspected?
- A21 Buildings are required to undergo Periodic Façade Inspection every 7 years.
- Q22 I understand that there is currently a requirement for Periodic Structural Inspection (PSI) of buildings. Is Periodic Façade Inspection (PFI) similar to the existing PSI? Can PFI be incorporated into the current PSI regime?
- A22 The scope and inspection requirements of PFI is different from PSI. PSI covers only structural elements such as columns, beams and flat slabs, and an assessment on whether there is any overloading. Conversely, building facades are generally made up of non-structural elements such as cement plasters, tiles, bricks and glass.





For PSI, since the inspection is on structural elements, it must be conducted by a Structural Engineer. However, for PFI, since the inspection is of the building façade, it can be conducted by a Competent Person.

- Q23 My building just completed Periodic Structural Inspection (PSI). Can its Periodic Facade Inspection (PFI) be exempted?
- A23 No, the scope of PSI and PFI regimes are different. PSI involves the inspection of the entire building's structural system to ensure that the building is structurally sound for continued occupation. PFI involves the inspection of the façade of a building to ensure that public safety will not be compromised due to deteriorated facades that may fall from height.
- Q24 My building is presently undergoing Repair and Redecoration works (R&R). Can I defer the Periodic Facade Inspection (PFI)?
- A24 Most R&R works do not focus on the inspection of façade conditions and the submission of inspection report by Competent Persons as required under the PFI regulations. However, building owners could write in to BCA for the deferment, and we will review on a case-by-case basis.
- Q25 If only some part of my building façade were refurbished recently, do I need to carry out Periodic Facade Inspection (PFI)?
- A25 Yes, if only some parts of the façade were refurbished, the building is still required to carry out PFI.
- Q26 I have the intention to carry out recladding works for my building in the near future. Can the Periodic Facade Inspection (PFI) be postponed?
- A26 You can write to BCA with the routine maintenance work done and timeline of upcoming recladding works for the building and we will review on a case-by-case basis.
- Q27 I have the intention to demolish my building in the near future. Can it be exempted from Periodic Façade inspection (PFI)?
- A27 You can write to BCA to inform the date of your planned demolition for our consideration. You should also inform us when the building has been demolished so that notices would not be issued to the said building in future.





Q28 I am in the process of selling my building. Can it be exempted from Periodic Façade Inspection (PFI)?

- A28 The building still needs to be inspected. However, if the buyer agrees to comply with our Notice of Inspection, please inform us of this agreement, and we will consider holding the buyer accountable for complying with the PFI Notice.
- Q29 My Competent Person who has just carried out Periodic Façade Inspection (PFI) of my building recommended some remedial works. I now intend to sell my building. Can I be exempted from carrying out the repairs?
- A29 No, there is a duty imposed on building owner to whom the PFI Notice was served under the Act to carry out any remedial works recommended by the CP.
- Q30 My building just underwent Addition &Alteration (A&A) works, can I apply for a waiver or deferment to carry out PFI?
- A30 You may write to BCA to request for the waiver. You will need to submit the details of the A&A works accompanied with drawings and description of the works carried out. The A&A works carried out must be related to building façades.
- Q31 Can I conduct PSI and PFI concurrently?
- A31 If you receive the PSI and PFI notices concurrently, you can appoint the same PE (C&S) who is eligible to carry out both inspections and comply with the requirements under PFI and PSI regulations. Please note that PFI and PSI are different in scope of inspection and therefore requires the submission of two <u>separate reports</u>. It is also worth noting that the inspection reports will only be accepted by BCA when the PSI and PFI Notices are served concurrently.

(E) USE OF TECHNOLOGY FOR INSPECTION

- Q32 Can inspectors carry out façade inspection with the aid of technology?
- A32 The inspectors, i.e. Competent Persons (CPs) and Façade Inspectors (FIs) can adopt technologies such as drones and infrared thermography to aid their visual inspection of building façades. For deployment of drone technology for façade inspection, building owners may wish to refer to the Link for more information on DSPs that provide this service. Engaging DSPs is a private contractual matter between the building owner and the DSPs. Owners should seek the advice of the Competent Person in ensuring the





quality and adequacy of such technological inspection methodologies. For more information on regulatory requirements on drone applications, please refer to https://www.caas.gov.sg/public-passengers/unmanned-aircraft.

Other Technologies such as robotic automated tapping device, infrared and ultrasound scanners can be adopted for close-range inspections.

However, prior approval from the Commissioner of Building Control (CBC) is required to use such technology to perform façade inspections.

Q33 Can infrared thermography be used for close-range inspection since from infrared we can detect the underlying defects?

A33 Infrared thermography is to supplement the close-range inspection and to identify the underlying defect. Therefore, Competent Persons (CPs) are still required to carry out the 10% close-range inspection. In addition, CP must obtain CBC's approval before using the technology.

Q34 Will the use of technologies such as drones invade my privacy as a homeowner?

A34 Drones used for façade inspection intend to capture data on building façade defects and not private information such as footage inside homes, facial features of residents or vehicle number plates. The capture of such private information should be avoided as much as possible. However, in the event that such private information was unintentionally captured during the inspection, drone service providers are required to ensure that these captured data are kept secured.

The TR78:2020 provides a set of specifications and good practice approaches for the use of Unmanned Aircraft Systems (UAS) i.e. drones, to conduct inspection of existing building facades. In TR78:2020, UAS operators are required to comply with Personal Data Protection Act (PDPA) and other relevant regulatory and statutory requirements. TR78:2020 also provides specific guidelines on other obligations on data protection, such as giving at least 3 days of advance notice with details of the inspection, how images or video recordings taken during façade inspections using drones should be handled, as well as the implementation of systems and processes to prevent any unauthorised usage of the footage captured.





(F) FALLEN FACADE STATISTICS AND PERSON RESPONSIBLE

Q35 How many façade incidents occurred in recent years?

A35 On average, there are more than 20 incidents of fallen façade elements reported to BCA every year.



Image 1: Fallen Board Cladding



Image 3: Collapsed Exterior Ceiling



Image 2: Fallen Brick Facade



Image 4: Dislodged sunshade

Q36 Who is the person responsible for the fallen façade incident?

A36 The Building Maintenance & Strata Management Act (BMSMA) places a general duty on persons responsible, who are generally building owners, to ensure that exterior features of buildings are kept or maintained in a state of good and serviceable repair or in a proper and clean condition. Building owners also must ensure that exterior features (such as claddings and plaster) on their building are maintained and securely fixed.

Where the persons responsible fail to keep exterior features of a building properly maintained or securely fixed to the building, the person responsible will be prosecuted under the BMSMA and shall be liable on conviction to a fine not exceeding \$10,000 or imprisonment for a term not exceeding 12 months or to both.





(G) OTHERS

- Q37 My building is tenanted, and I am unable to schedule the facade inspection within the timeframe that BCA has given to complete the inspection. What should I do?
- A37 You can write to BCA for an extension of time stating your reasons for our review on a case-by-case basis.
- Q38 My Competent Person (CP) is unable to continue with his/her duties for my building. What should I do?
- A38 You can write to BCA to request for an extension of time for the appointment of a replacement CP. You must appoint a new CP within 2 months and should notify BCA within 7 days after the appointment of the new CP.
- Q39 My Competent Person has informed me that he requires more time to finish the entire façade inspection and prepare the report to be submitted to BCA, as inspection of some areas have taken more time than expected (e.g. due to weather condition). What should I do?
- A39 You can write to BCA for an extension of time stating your reasons and we will review on a case-by-case basis.
- Q40 Can the PFI be carried out before receiving the Notice from BCA?
- A40 Building owners may write to BCA to request for an early inspection. BCA will review on a case-by-case basis
- Q41 How BCA has prepared the industry to support the upcoming PFI regime?
- A41 BCA has undertaken various measures to ensure that the industry is prepared for the implementation of the PFI regime. These include (i) announcing the PFI regime as part of the Building Control (Amendment) Bill 2020 in Mar 2020 (ii) issuing advisories to responsible parties one year in advance of when their building is due for inspection, (iii) carry out numerous engagement sessions with stakeholders including gondola (suspended platform) suppliers, managing agents and building owners to share the PFI requirements, (iv) training and ensuring that there is a sufficient pool of qualified façade inspection personnel to conduct the inspections since 2017, and (v) conducted a 3-week





public consultation on the draft Regulations in Aug 2021. The feedback from the public consultation is constructive and positive.

The advisories that is issued one year in advance will enable responsible parties to plan ahead for the façade inspection, e.g. to ensure that there are adequate funds for the inspection and/or by scheduling their building's Repairs and Redecorations cycle to coincide with the inspection.

