

6 QFES requested considerations.

QFES request information to assist in provision of its referral services. Table 1 provides a summary of these information requests, supported by referenced discussion points in this document.

Table 1: Consideration of Issues in Demonstration of Key Requirements in relation to credible fire events.

Requirement	Information to Assist QFES
<p>1. Involvement of the combustible cladding in fire does not compromise occupant life safety or prevent the safe evacuation of occupants from the building.</p>	<p>Combustibility information as per Key Requirements 3 and 4 below.</p> <p>Safe evacuation of occupants from the building demonstrated by ASET/RSET calculation to support deterministic assessment that occupants can evacuate without being exposed to untenable smoke concentrations, toxic / irritant gas concentrations, gas temperature or heat fluxes caused by involvement of the external wall system in the fire.</p> <p>Notification and detection capabilities determined by the engineering assessment in the submission may become an item to be demonstrated at inspection.</p> <p>See Section 7 for consideration of sprinklers.</p> <p>See Section 8 for consideration of Horizontal and Staged evacuation.</p>
<p>2. Involvement of the combustible cladding in fire does not compromise firefighter life safety or firefighting operations with respect to the notification, access, conditions and equipment required by the QFES.</p>	<p>Combustibility information as per Key Requirements 3 and 4 below.</p> <p>Fire brigade intervention demonstrated with the sequenced of activities including; evaluation of arrival to the affected building, FIP review and deployment, travel to the incident location within the site, set up equipment and initiation of suppression. Demonstrated that involvement of the external wall system in fire does not restrict access to intervention equipment or impede detection/ notification.</p> <p>This is to be demonstrated utilising the AFAC Fire Brigade Intervention Model (FBIM), supported by consultation with QFES to estimate the realistic time to for brigade activities to fight the fire and engage in rescue activities following arrival at site.</p> <p>As for Key Requirement 1, Notification and detection capabilities determined by the engineering assessment in the submission may become an item to be demonstrated at inspection.</p> <p>See Section 7 for consideration of sprinklers.</p>
<p>3. The combustible cladding does not cause or contribute to vertical fire spread beyond the storey of fire origin.</p>	<p>For each specific configuration of an external wall system containing a combustible component, the key fire engineering information requirements that verify the combustibility parameters for each component. Furthermore the assessments should deliver, specific determinations for the proposed installed external wall system:</p> <ul style="list-style-type: none"> • assessment of the ignition potential. • Determination of vertical fire spread Contribution. • Determination of fire spread and fire damage from fire scenarios

Requirement	Information to Assist QFES
	<ul style="list-style-type: none"> • Determinations of projected flames from openings and damage extent • Determinations of successful FBI activities for fire scenarios. <p>See Section 7 for consideration of sprinklers.</p>
<p>4. The combustible cladding does not cause or contribute to horizontal fire spread beyond the fire compartment of fire origin, or fire spread beyond other fire separating elements of construction.</p>	<p>For each specific configuration of an external wall system containing a combustible component, the key fire engineering information requirements to support this assessment supported by identified combustibility parameters of each combustible component, and knowledge of the configuration of the external wall system are as follows for the proposed installed external wall system:</p> <ul style="list-style-type: none"> • assessment of the ignition potential. • Determination of horizontal fire spread Contribution. • Determination of fire spread and fire damage from fire scenarios • Determinations of projected flames from openings and damage extent • Determinations of successful FBI activities for fire scenarios. <p>See Section 7 for consideration of sprinklers.</p>
<p>5. The combustible cladding does not contribute to fire spread between buildings on the same site or to adjoining properties.</p>	<p>For each unique configuration of an external wall system containing a combustible component, its closest unimpeded distance to another building located on the same site, or to the boundary of a neighbouring property is required to be known.</p> <p>Considering heat flux received by a building which has external wall system containing combustible material, the acceptability criteria should be determined by the ignition potential of that external wall system; the NCC CV1 and CV2 verification criteria, designed for acceptability in relation to a DtS external wall construction may not be applicable.</p> <p>See Section 7 for consideration of sprinklers.</p>
<p>6. The combustible cladding does not produce flaming or falling debris which may result in fire spread to storeys below the storey of fire origin and/or that presents a hazard for egressing building occupants, bystanders, or intervening firefighters.</p>	<p>For each unique configuration of an external wall system containing a combustible component, the method of fixing the external wall system to the structure of the building is required to explained.</p> <p>For each unique configuration of an external wall system containing a combustible component, an understanding as to how this could impact areas below as a result of involvement in a fire; impacts could include propensity to melt, form burning liquid droplets, formation of burning pools of melted polymer, falling debris.</p> <p>If awnings are suggested to protect occupants from the effects of falling and burning debris, the following is requested:</p> <ul style="list-style-type: none"> • confirm that awnings will withstand the largest reasonably foreseeable impact from falling debris. • the egress and response strategy supporting their use. <p>See Section 8.2 for consideration of protection at Ground Level Exits.</p>