

BUILDING CODE OF AUSTRALIA 2022 REPORT

CONSTRUCTION OF NEW RESIDENTIAL FLAT DEVELOPMENT

17-21 KIMBERLEY STREET, MERRYLANDS

Report prepared for: Land and Housing Corporation
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DOCUMENT ACCEPTANCE

	Name	Signed	Date
Verified by	Scott Reid		02/05/2023

REVISION HISTORY

Revision No.	Prepared by	Description	Date
R01	Matt Shahidi	Draft BCA report for review and comment	06/03/2023
R02	Matt Shahidi	Final BCA report	14/03/2023
R03	Matt Shahidi	Final BCA report	06/04/2023
R04	Matt Shahidi	Final BCA report	02/05/2023

1.0 Introduction and Documentation

At the request of Land and Housing Corporation, we offer comments and recommendations with respect to Building Code of Australia 2022 compliance for the construction of residential flat building for seniors living at 17-21 Kimberley Street, Merrylands.



The following plans prepared by Brewster Murray Pty Ltd Architects have been assessed for the purpose of this report:

Drawing No/Rev.	Titled	Date
DA04/Rev E	Site Plan	18/04/2023
DA05/Rev E	Ground Floor	18/04/2023
DA06/Rev E	First Floor	18/04/2023
DA07/Rev E	Roof Plan	18/04/2023
DA08/Rev E	Elevation 1	18/04/2023
DA09/Rev E	Elevation 2	18/04/2023
DA10/Rev E	Section	18/04/2023

We have reviewed the submitted architectural plans as tabulated above for compliance with the deemed-to-satisfy provisions of the Building Code of Australia 2022. Where compliance with the deemed to satisfy provisions is not possible a schedule of performance solutions will be required. We have made every attempt to cover the main issues under Sections B, C, D, E, F, G & J of the Building Code of Australia. Areas of the design are still being refined so that resolution will be possible prior to the issue of a Construction Certificate for the works.

It is the responsibility of all designers and engineers to ensure that the design complies with the requirements of the Building Code of Australia, the Australian Standards and the applicable legislation. This report does not infer compliance of the design at this stage of documentation. Further assessment will be required to validate the full compliance of the building design.

This report is not to be construed as specialist advice as referenced in Clause 9(d) of the Design and Building Practitioners Regulation 2021 and as such is not to be referenced in any Compliance Declarations made under the Design and Building Practitioners Legislation.



3.0 Building Assessment

BCA Parameters	
BCA Classifications	2 (self-contained apartments) 10b (retaining walls)
Rise in Storeys (RIS)	2
Number of Storeys	2
Effective Height	<12m (approximately 3.1m)
Type of Construction	B
Floor Area	Ground Level – Approx. 657m ² First Floor – Approx. 657m ²
Fire Compartment	NA
Structural Importance Level	Level 2 (Structural Engineer to confirm)
Climate Zone	6



4.0 Structure

The structural components of the building must comply with the applicable Australian Standards. A structural engineer will need to ensure the structural requirements of BCA Clauses B1D2, B1D3, and B1D4 are considered in the building design (including the importance level of the building). This will mean assessment according to all relevant parts of Section B of the Building Code of Australia and where any provisions cannot be met, a performance solution to be formulated for consideration of the relevant project stakeholders.

Under Part B1D1 of the Building Code of Australia (BCA), a building or structure must be designed to withstand earthquake loads in accordance with AS1170.4-2007, as appropriate. Whilst earthquake loads have obvious implications to the structural design of a building or structure and any alterations to structural elements within an existing building or structure, it is important to note that within AS1170.4-2007, there is also an obligation for certain non-structural parts, components and their connections to be designed & constructed to withstand earthquake loads. All designers need to be aware of this requirement.

5.0 Fire Resistance

Clause C2D2 (Type of construction required) - Type B construction is required. Structural engineer will need to confirm at s6.28 CDVC stage the Fire Resistance Levels (FRL's) of the external walls, columns, floors, etc meet the requirements of Table S5C21a of Specifications 5. Refer to Appendix A of this report for specific FRLs applicable to this building.

Clause C2D3 (Calculation of rise in storeys) – The maximum rise in storeys is calculated to be 2.

Clause C2D6 (Two storey Class 2, 3 or 9c buildings) – A class 2 building having a rise in storey not exceeding 2 may be of Type C construction if each sole-occupancy unit (SOU) has access to at least 2 exits or each sole-occupancy unit has its own direct access to road or open space. **Designers to note. Does not apply to the current design as first floor SOUs have access to a single exit.**

Clause C2D9 (Lightweight construction) – If lightweight construction is utilised to achieve the required FRL, it must comply with Specification 6 of the BCA. Details demonstrating compliance must be submitted with the application for s6.28 CDVC. **Architect to note.**

Clause C2D10 (Non-combustible building elements) – External walls and common walls, non-loadbearing internal walls where they are required to be fire-resisting must not be constructed of combustible materials. This includes all components incorporated within them such as insulation, sarking, window frames, etc. **Architect to note. Sectional wall details as well as test reports/certificates to be provided with the application for s6.28 CDVC.**

Clause C2D11 (Fire hazard properties) – All new surface finishes, assemblies and linings are to comply with BCA Clause C2D11 and Specification 7 including NSW variations with regard to Fire Hazard Properties of various finishes and materials within the building. **Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

Clause C2D14 (Ancillary Elements) – Ancillary elements must not be fixed, installed, or attached to the external face of an external wall or within the concealed parts of external walls that is required to be non-combustible unless it is non-combustible or an item listed under this Clause in the BCA. **Architect to note. Test reports/certificates of any attachments to external walls to be provided with the application for s6.28 CDVC.**

Clause C2D15 (Fixing of bonded laminated cladding panels) – In a building required to be of Type B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame unless where exempted by this clause. **Designers to note.**

Clause C3D3 (General floor area and volume limitations) – does not apply to class 2 buildings.

Clause C3D9 (Separation of classifications in different storeys) – In Type B construction, if one of the adjoining parts is Class 2, 3 or 4, the floor separating the parts from the story below must achieve an FRL



or resistance to the incipient spread of fire or be covered with fire protective covering. **Capable of compliance. Structural engineer to verify the FRL of the concrete slab.**

C3D14 (Electricity supply system) – An electricity substation or main switchboard that sustains emergency equipment operating in the emergency mode located within a building must be separated from other parts of the building by construction having an FRL of not less than 120/120/120, and doorways in that construction to be self-closing fire doors with an FRL of not less than -/120/30. **Designers to also note Network Authority requirements which require 3 hours fire separation. Compliance achievable.**

C3D15 (Public corridors in Class 2 and 3 buildings) – In a Class 2 building, a public corridor, if more than 40 m in length must be divided at intervals of not more than 40 m with smoke-proof walls. **Public corridors do not exceed 40m in length. Design complies.**

C4D3 (Protection of openings in external walls) – Any openings in an external wall required to have an FRL must be protected in accordance with BCA C3.4 and if used, wall-wetting sprinklers are to be externally fitted to fixed shut windows. **Openings located more than 3m from boundaries. Design complies.**

C4D12 (Bounding construction: Class 2 and 3 buildings and Class 4 parts) – doorways of sole-occupancy units opening into public corridors must be self-closing, tight fitting, solid core door, not less than 35mm thick. **Architect to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

C4D13 (Openings in floors and ceilings for services) – Where a service passes through a floor that is required to have an FRL with respect to integrity and insulation, the service must be protected—

- a) in a building of Type B construction, by a shaft that will not reduce the fire performance of the building elements it penetrates; or
- b) in accordance with C4D15.

Compliance achievable. A schedule of service penetrations to be provided from each services consultant and submitted with the application for s6.28 CDVC.

C4D15 (Openings for service installations) – an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation, the installation must comply with the requirements under C4D15(2) of BCA. **Compliance achievable. A schedule of service penetrations to be provided from each services consultant and submitted with the application for s6.28 CDVC.**

C4D16 (Construction joints) – Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 4072.1 and AS 1530.4 to achieve the required FRL; or that differs from a prototype in accordance with Section 4 of AS 4072.1 and achieves the required FRL. **Architect to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

C4D17 (Columns protected with lightweight construction to achieve an FRL) – A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL. **Architect to note.**

6.0 Access and Egress

Clause D2D3 (Number of exits required) – Every building must have at least one exit from each storey. **Design complies.**

Clause D2D5 (Exit travel distances) – The entrance doorway of any sole-occupancy unit in a class 2 building must be not more than—

- (i) 6 m from an exit or from a point from which travel in different directions to 2 exits is available; or
- (ii) 20 m from a single exit serving the storey at the level of egress to a road or open space; and
- (b) no point on the floor of a room which is not in a sole-occupancy unit must be more than 20 m from an exit or from a point at which travel in different directions to 2 exits is available. **Design Complies.**



Clause D2D6 (Distance between alternative exits) – exits used as alternative means of egress must be no closer than 9m apart and no more than 45m apart. **Design complies.**

Clause D2D7 (Height of exits, paths of travel to exits and doorways) – In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm. **Capable of compliance. Architect to note.**

Clause D2D8 (Width of exits and paths of travel to exits) – The minimum unobstructed width of required exit must not be less than 1m within the common areas of the building except doorways where it can be reduced by no more than 250mm. **Design complies.**

Clause D2D11 (Determination and measurement of exits and paths of travel to exits) – The required width of a stairway or ramp in a required exit or path of travel to an exit must be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. **Capable of compliance. Architect to note.**

Clause D2D14 (Travel by non-fire-isolated stairways) – A non-fire-isolated stairway serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided.

The distance from any point on a floor to a point of egress to a road or open space by way of a required non-fire-isolated stairway or non-fire-isolated ramp must not exceed 60 m.

A required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than 15 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading to a road or open space; or 30 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions. **Design complies.**

Clause D2D15 (Discharge from exits) – An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. Where required exit leads to open space, path of travel to the road must be minimum 1m or the minimum width of the required exit. Also, the path of travel to the road must have a gradient not steeper than 1:8 or 1:14 where required by Part D4 of the BCA2022. **Capable of compliance. Architect to note and provide sufficient details demonstrating compliance with the application for s6.28 CDVC.**

Clause D3D8 (Installations in exits and paths of travel) – services or equipment must be enclosed with non-combustible construction and suitably sealed against smoke spreading from the enclosure where they are installed in a required exit, or in any corridor, hallway, lobby or the like leading to a required exit and the service or equipment comprises of:

- a) electricity meters, distribution boards or ducts; or
- b) central telecommunications distribution boards or equipment; or
- c) electrical motors or other motors serving equipment in the building.

Capable of compliance. Architect to note.

Clause D3D9 (Enclosure of space under stairs and ramps) – The space below a required non fire-isolated stairway (including an external stairway) or non fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless—

- (i) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and
- (ii) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door. **Compliance achievable. Architect to note.**

Clause D3D14 – D3D22 (Construction of stairways, balustrade and handrails) – The construction and discharge of stairs, landings, thresholds, balustrades, and handrails will need to meet the requirements of the BCA and AS1428.1. **Architect to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**



Clause D3D25 (Swinging doors) - A swinging door in a required exit or forming part of a required exit must swing in the direction of egress unless it serves a building or part with a floor area not more than 200m², it is the only required exit from the building or part and it is fitted with a device for holding it in the open position (note: does not apply to internal areas of SOUs). **Design complies.**

Clause D3D26 (Operation of latch) – All doors in an exit, forming part of the exit or in the path of travel to the exit must be openable without a key from the egress side by a single hand downward action or single hand push action installed in accordance with this part of the BCA (note: does not apply to internal areas of SOUs). **Architect to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

Clause D3D29 (Protection of openable windows) – bedroom windows from first floor where the lowest level of the window opening is less than 1.7 m above the floor the window opening must comply with the following:

- (a) The openable portion of the window must be protected with—
 - (i) a device capable of restricting the window opening; or
 - (ii) a screen with secure fittings.
- (b) A device or screen required by (a) must—
 - (i) not permit a 125 mm sphere to pass through the window opening or screen; and
 - (ii) resist an outward horizontal action of 250 N against the—
 - (A) window restrained by a device; or
 - (B) screen protecting the opening; and
 - (iii) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.

Architect to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.

Part D4 (Access for people with a disability) – Refer to access report by ABE consulting dated 13th of March 2023, Report Version 21527_ADR_DA_v1.1.

7.0 Services and Equipment

Clause E1D2 (Fire Hydrants) - A system of fire hydrants is required for the entire building - The system must be designed and installed to comply with Part E1D2 of BCA2022 and AS 2419.1-2021. If street hydrants are used in lieu of onsite hydrant system, they must meet the requirements of Clause 2.2.10.2 of AS2419.1-2021. **Wet fire consultant to design accordingly. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

Clause E1D14 (Portable Fire Extinguishers) - PFE's are required to be located throughout the building in accordance with Part E1D14 of BCA2022. PFE's are to comply with AS2444 and be:

- (a) an ABE type fire extinguisher; and
- (b) a minimum size of 2.5 kg; and
- (c) distributed outside a sole-occupancy unit—
 - (i) to serve only the storey at which they are located; and
 - (ii) so that the travel distance from the entrance doorway of any sole-occupancy unit to the nearest fire extinguisher is not more than 10m. **Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

Clause E1D16 (Fire precautions during construction) - In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit. **Architect to note and provide sufficient notation on the plans.**

Clause E2D8 (Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building) – A class 2 building must be provided with an automatic smoke detection and alarm system complying with Specification 20. **Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

Clause E4D2 – E4D8 (Emergency lighting and existing sign requirements including design and operation) – Emergency lighting, exit and direction signs are to be located, designed and installed in



accordance with Part E4 of BCA2022 and AS2293.1-2018. **Electrical engineer to design accordingly. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

8.0 Surface water management, rising damp and external waterproofing

Clause F1D3 (Stormwater drainage) – Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3. **Hydraulic engineering details demonstrating compliance to be provided with the application for s6.28 CDVC.**

Clause F1D4 (Exposed Joints) – Exposed joints in the drainage surface on a roof, balcony or similar horizontal surface part of a building must be protected in accordance with Section 2.9 of AS 4654.2 and not be located beneath or run through a planter box, water feature or similar part of the building. **Capable of compliance. Architect to note.**

Clause F1D5 (External waterproofing membranes) – A roof, balcony or similar horizontal surface part of a building must be provided with a waterproofing membrane consisting of materials complying with AS 4654.1 and designed and installed in accordance with AS 4654.2. **Section details demonstrating compliance to be provided with the application for s6.28 CDVC.**

Clause F1D6 – F1D7 (Damp-proofing) – moisture from the ground must be prevented from reaching the structure by installation of damp-proof course or impervious sheet material in accordance with AS3660.1 where required. If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870. **Architectural and structural engineering details demonstrating compliance to be provided with the application for s6.28 CDVC.**

F2D2 (Wet area construction) – In a Class 2 building, building elements in a bathrooms, showers, laundries and sanitary compartment must be water resistant or waterproof in accordance with Specification 26 and comply with AS 3740. **Section details demonstrating compliance to be provided with the application for s6.28 CDVC.**

F2D4 (Floor wastes) – In a class 2 building, a bathroom or laundry located at any level above a sole-occupancy unit or public space must have a floor waste. Where a floor waste is installed, the minimum continuous fall of the floor plane to the waste must be 1:80 and the maximum continuous fall of a floor plane to the waste must be 1:50. **Section details demonstrating compliance to be provided with the application for s6.28 CDVC.**

F3D2 (Roof covering) – metal sheet roofing must comply with AS 1562.1. **Capable of compliance. Construction plans to include sufficient notation.**

F3D3 (Sarking) – Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2. **Capable of compliance. Product specifications demonstrating compliance to be provided with the application for s6.28 CDVC.**

F3D4 (Glazed assemblies) – glazed assemblies in external walls must comply with AS2047. **Capable of compliance. Construction plans to include sufficient notation.**

F3D5 (Wall cladding) – External wall cladding must comply with one or a combination of the following:

- a) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700.
- b) Autoclaved aerated concrete: AS 5146.3.
- c) Metal wall cladding: AS 1562.1.

Any other type of cladding must be detailed in a performance solution report. **Architect to note.**

F4D2 (Sanitary facilities) – each sole-occupancy unit must include the following facilities:

- a) a kitchen sink and facilities for the preparation and cooking of food; and
- b) a bath or shower; and
- c) a closet pan; and
- d) a washbasin.
- e) laundry facilities.

In respect to laundry facilities, provide either:

- a) clothes washing facilities, comprising at least one washtub and a space for a washing machine; and
- b) clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line, or space for one heat operated drying cabinet or appliance in the same room as the clothes washing facilities;

or:

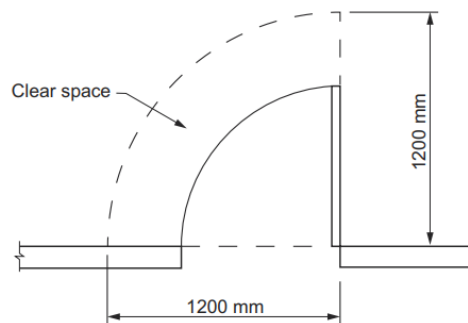
a separate laundry for each 4 sole-occupancy units, or part thereof, that must comprise:

- a) clothes washing facilities, comprising at least one washtub and a space for a washing machine; and
- b) clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line per sole-occupancy unit, or space for one heat operated drying cabinet or appliance.

Design complies.

F4D8 (Construction of sanitary compartments) – Where there is less than 1.2m space as shown in figure F4D8 of the BCA between an inward opening door and the closet pan, the door must be readily removable from the outside (i.e. lift off hinges). **Capable of compliance. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

Figure F4D8: Construction of sanitary compartments



F5D2 (Height of rooms and other spaces) – The height of rooms and other spaces in a Class 2 building must be not less than:

- a) for a kitchen, laundry, or the like — 2.1 m; and
- b) for a corridor, passageway or the like — 2.1 m; and
- c) for a habitable room excluding a kitchen — 2.4 m; and
- d) in a habitable room, or space within a habitable room, with a sloping ceiling or projections below the ceiling line—
 - i. in an attic — a height of not less than 2.2 m for not less than two-thirds of the floor area of the room or space; and
 - ii. in other rooms — a height of not less than 2.4 m for not less than two-thirds of the floor area of the room or space; and
- e) in a non-habitable room, or space within a non-habitable room, with a sloping ceiling or projections below the ceiling line — a height of not less than 2.1 m for not less than two-thirds of the floor area of the room or space. **Capable of compliance. Architect to note.**

F6D2 (Provision of natural light) – Natural light must be provided to all habitable rooms in a class 2 building. **Design complies.**

F6D3 (Methods and extent of natural light) – Required natural light must be provided by windows that have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like. **Capable of compliance. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

F6D5 (Artificial lighting) – Artificial lighting in a class 2 building must be provided in required stairways, passageways, ramps, sanitary compartments, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building in accordance with AS1680.0. **Electrical engineer to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

F6D6 (Ventilation of room) – A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have



natural ventilation complying with F6D7; or a mechanical ventilation or air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1. **Mechanical engineer to note. Design drawings and certification to be provided with the application for s6.28 CDVC.**

F6D9 (Restriction on location of sanitary compartments) – A sanitary compartment must not open directly into:

- a) a kitchen or pantry; or
- b) a public dining room or restaurant; or
- c) a room used for public assembly; or
- d) a workplace normally occupied by more than one person. **Design complies.**

F7D3 – F7D8 (Sound insulation rating of building elements) – The proposal will need to meet the sound insulation requirements of Part F7 of the BCA – **Compliance readily achievable. Acoustic Consultant to provide a detailed report for compliance prior to issue of s6.28 CDVC.**

F8D3 (External wall construction) – Where pliable building membranes installed, the must comply with AS4200.1 & 2 and requirement of this section of the BCA – **Architect to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

F8D3 (Exhaust system) – exhaust systems flow rates and installation in residential SOUs must meet the requirement of this section of the BCA – **Mechanical engineer to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.**

9.0 Energy efficiency

Section J (Energy efficiency) – There are aspects of Section J that are applicable to Class 2 building. These are to compliment the BASIX requirement. Consultant details are required to be provided with the application for s6.28 CDVC. Section J consultant to confirm compliance with the DtS provisions.

BASIX Certificate – A BASIX certificate to accompany the application for s6.28 CDVC.

Appendix A

FRL of Building Elements for Type B Construction (Class 2)	
<i>Loadbearing parts of external walls</i>	
Distance from fire source Feature	FRL (in minutes)
Less than 1.5 m	90/90/90
1.5 to less than 3 m	90/60/30
3 m to less than 9 m	90/30/30
9 m to less than 18 m	90/30/-
18 m or more	-/-/-
<i>Non-loadbearing parts of external walls</i>	
Distance from fire source Feature	FRL (in minutes)
Less than 1.5 m	-/90/90
1.5 m to less than 3 m	-/60/30
3 m or more	-/-/-
<i>External columns not incorporated in an external wall</i>	
Distance from fire source Feature	FRL (in minutes)
Loadbearing column — less than 18 m	90/-/-
Loadbearing column — 18 m or more	-/-/-
Non-loadbearing column	-/-/-
<i>Common walls and fire walls</i>	
Wall Type	FRL (in minutes)
Loadbearing or non-loadbearing	90/90/90
<i>Loadbearing internal walls</i>	
Location	FRL (in minutes)
Fire-resisting lift and stair shafts	90/90/90
Bounding public corridors, public lobbies and the like	60/60/60
Between or bounding sole-occupancy units	60/60/60
<i>Non-loadbearing internal walls</i>	
Location	FRL (in minutes)
Fire-resisting lift and stair shafts	-/90/90
Bounding public corridor, public lobbies and the like	-/60/60
Between or bounding sole-occupancy units	-/60/60
<i>Other building elements not covered above</i>	
Building Element	FRL (in minutes)
Other loadbearing internal walls and columns	60/-/-
Roofs	-/-/-
<i>Note: Part S5C23 of the Specification 5 provides varies concession for class 2 buildings of type B construction.</i>	