# BCA report

# Proposed mixed use development

# 31 Santley Cres & 2A Bringelly Rd Kingswood

**Reference: Santley (31) 21 Oct 2021**

## 21 October 2021

PO Box 8294 Baulkham Hills BC NSW 2153 02 8850 6244 michael@wjg.com.au

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## 1 Acronyms and terms

1.1.1 I use the following acronyms in this report:

| | | | |
|---|---|---|---|
| (a) | BCA | - | Building Code of Australia 2019 Amendment 1 |
| (b) | CC | - | Construction certificate, being approval to commence building work |
| (c) | DTS | - | Deemed to satisfy |
| (d) | FRL | - | Fire resistance level as defined in BCA |

1.1.2 I use the following terms in this report:

| | | | |
|---|---|---|---|
| (a) | Compliance declaration | - | As defined in the DBP Act |
| (b) | DBP Act | - | Design & Building Practitioners Act 2020 |
| (c) | Design compliance declaration | - | As defined in the DBP Act |
| (d) | DTS Solution | - | Prescriptive method of BCA compliance |
| (e) | Performance Requirements | - | BCA level of performance to be satisfied |
| (f) | Performance Solution | - | A method of complying with the BCA |
| (g) | Planning Act | - | NSW Environmental Planning & Assessment Act |
| (h) | Planning Regulation | - | NSW Environmental Planning & Assessment Regulation |
| (i) | Proposed building | - | Proposed building at 31 Santley Cres & 2A Bringelly Rd Kingswood |
| (j) | Registered practitioner | - | As defined in the DBP Act |
| (k) | Regulated design | - | As defined in the DBP Act |
| (l) | Relevant plans | - | A000/A, A001/A, A100/A, A101/A, A102/A, A103/A, A104/A, A105/A, A106/A, A107/A, A201/A, A202/A, A203/A and A204/A by Gus Fares Architects |
| (m) | Stair A | - | Fire isolated exit serving upper storeys |
| (n) | Stair B | - | Fire isolated exit serving upper storeys |
| (o) | Stair C | - | Fire isolated exit serving upper storeys |

## 2 Executive summary

2.1.1 My name is Michael Wynn-Jones and I am the author of this report.

2.1.2 I have prepared this report with respect to the **proposed building** as at 31 Santley Cres & 2A Bringelly Rd Kingswood.

2.1.3 This report demonstrates that a high level review of the proposal as depicted in the **relevant plans** reveals that the proposed building is capable of complying with the **BCA**, and refers to **Performance Solutions** that will form part of the **CC**.

2.1.4 This report is not a **compliance declaration** and has not been prepared by a **registered practitioner**.

2.1.5 The relevant plans are not **regulated designs**.

**Michael Wynn-Jones**

Building surveyor—unrestricted (NSW)
(formerly an A1 Accredited Certifier - Building Surveying Grade 1)

for Michael Wynn-Jones & Associates

# 3 Introduction

## 3.1 Background

3.1.1 This report provides a high level review of the extent to which the proposed building work is capable of complying with the BCA. The report has been prepared to form part of the relevant Development Application.

## 3.2 Compliance with BCA

3.2.1 The **Planning Act** requires that building work for the proposed building must comply with the BCA, and must not commence until a CC is issued for the work.

3.2.2 BCA compliance can be achieved by complying with **DTS Solutions**, formulating a Performance Solution, or by a combination of both.

3.2.3 A reference to a Section, Part or clause in this report is a reference to a DTS Solution, except as otherwise noted. A reference to a Performance Solution is a reference to a Performance Solution that will be submitted with the CC application.

## 3.3 Exclusions

3.3.1 This report:

(a) Is limited to a high level review of the extent to which the proposed building work depicted in the relevant plans is capable of complying with the BCA.

(b) Does not address compliance with:

(i) Council's policies, BASIX, or the Disability Discrimination Act.

(ii) Section B (Structure), Part D3 (access for people with a disability), F2.4 (Accessible facilities), Part F6 (Condensation Management), Part G1 (Minor structures), Part G2 (Boilers, vessels, heating appliances, fireplaces, chimneys/flues) or Section J (Energy efficiency) of the BCA.

(c) Is not a **compliance declaration**.

## 3.4 Building classification

3.4.1 The proposed building will contain a Class 7a carpark, Class 5 offices, a Class 3 boarding house, and an outdoor occupiable area on the second floor associated with the Class 3.

3.4.2 The common room adjacent the manager's office on the Ground floor is considered Class 3 even though it is likely 'of a public nature' (Class 9b), as it is ancillary to the Class 3 use (A6.0). The office on the Ground floor is considered Class 3 as it is not of a public nature, and forms an integral part of the Class 3.

3.4.3 For the purposes of this report the communal living on the Ground floor is considered Class 3 as it is not does not present to be of a public nature, and is considered an integral part of the Class 3. The final classification of the common room, manager's office and communal living will need to be confirmed at the construction certificate stage.

# 4 Fire resistance (Section C)

## 4.1 Fire Resisting Construction (Part C1)

4.1.1 The proposed building will have a rise in storeys or more than 4, an effective height not more than 25 m [1], and is required to be Type A construction where compliance with the DTS Solutions is proposed (C1.2 and Table C1.1).

4.1.2 Details demonstrating compliance for any lightweight construction will form part of the CC application (C1.8).

4.1.3 External walls will be non-combustible as required. The architect has advised that the proposal is for external walls to comprise a Hebel wall system with non-combustible insulation and sarking. Details demonstrating compliance will form part of the CC application (C1.9).

4.1.4 Details for fire hazard properties, including for the proposed membrane to the outdoor occupiable area will be provided with CC application (C1.10 & G6.2).

4.1.5 The requirements for the 'performance of external walls in fire' and 'fire-protected timber' do not apply (C1.11 & C1.13).

4.1.6 The requirements for ancillary elements apply. The architect has advised that the only ancillary elements will be fixed vertical louvres which will likely be aluminium. Details demonstrating compliance will form part of the CC application (C1.14).

4.1.7 The architect has advised that the proposed loadbearing elements, including the roof, will be concrete (Spec.C1.1).

4.1.8 The proposal is for the fire isolated exit shafts and fire isolated occupant lift shafts to be enclosed at the top and bottom by construction having an FRL not less than that required for the walls of a non-loadbearing shaft in the same building. Details demonstrating compliance will form part of the CC application (Cl 2.7 Spec C1.1).

4.1.9 The architect has advised that 3 sides of vehicle lift will be enclosed in a fire resisting shaft. The vehicle lift will be subject to a Performance Solution addressing the extent to which the vehicle lift is required to be fire separated from the remainder of the building.

4.1.10 The proposal is for the FRLs to comply with the DTS Solutions (Table 3 Spec. C1.1), except where a Performance Solution demonstrates that FRLs can be reduced.

4.1.11 The DTS Solutions require that the walls bounding the Class 3 units and the public corridors serving the Class 3 achieve a FRL, and that the openings therein, including doorways, are protected. This requires that the walls separating the communal living, common room and managers office from the public corridor will need to achieve a FRL, and that openings therein will require protection. This will likely be addressed by a Performance Solution allowing the glazing to be retained and protected by drenchers or similar.

[1] Basement 2 has not counted for the purposes of determining the rise in storeys.

4.1.12 The non-loadbearing parts of the proposed external walls are not required to achieve a FRL, except to the extent addressed in 4.3.1 and 4.3.2 below.

4.1.13 No common walls are required or proposed (Table 3 Spec. C1.1), and details for required shafts will form part of the CC application.

4.1.14 No roof lights are required or proposed (Cl 3.6, Spec C1.1).

4.1.15 The concessions for internal columns and walls, open spectator stands and indoor sports stadiums, carparks and Class 3 buildings do not apply (Clauses 3.7 to 3.10 in Spec C1.1 respectively).

4.1.16 The extent to which the proposed building elements will comply with Part C1 and Specification C1.1 has not been addressed in this report.

## 4.2 Compartmentation and Separation (Part C2)

4.2.1 The Class 7a is not subject to the floor area and volume limitations as the carpark will be protected by a sprinkler system, the Class 3 is not subject to the limitations, and the Class 5 will comply with the limitations (Table C2.2 and C2.2).

4.2.2 The requirements/concessions for large isolated buildings (C2.3/C2.4).

4.2.3 The vertical separation of openings in external walls is not required, as the architect has advised that the whole building will be protected by a sprinkler system complying with AS 2118.1-2017 (C2.6).

4.2.4 Separation of classes in the same by fire walls is required except where the building is subject to the Performance Solution referred to in 4.1.10 above, or the FRLs comply with the FRLs required for the Class 5 (C2.7).

4.2.5 Fire separation of classes in the same storey is required except where the building work is subject to the Performance Solution referred to in 4.1.10 above (C2.8).

4.2.6 Fire separation of classes in different storeys is required except where the building work is subject to the Performance Solution referred to in 4.1.10 above (C2.9).

4.2.7 The proposal is for the lifts to be separated from the remainder of the building by enclosure in a shaft achieving the required FRL, except to the extent that the vehicle lift is subject to the Performance Solution referred 4.1.9 above.

4.2.8 No stairway will be in the same shaft as a lift (C2.11).

4.2.9 The requirements for the separation of equipment apply. The extent of compliance has not been determined in preparing this report. Details are to be shown on the relevant plans forming part of the CC application (C2.12).

4.2.10 The requirements for an electricity supply system may apply. The extent of compliance has not been determined in preparing this report (C2.13).

4.2.11 Smoke doors are required in all Class 3 residential public corridors as the corridors are more than 40 m in length (C2.14).

4.2.12 The extent to which the proposed building will comply with Part C2 and Specification C1.1 has not been fully addressed in this report.

## 4.3 Protection of Openings (Part C3)

4.3.1 A Performance Solution will likely address the extent to which openings in an external wall exposed to and less than 3 m from side or rear boundary will need to be protected (C3.2 and C3.4).

4.3.2 Separation of external walls and associated openings in different fire compartments (being the Class 3 fire compartment and the Class 5 fire compartment is required except where the building work is subject to the Performance Solution referred to in 4.1.10 above (C3.3).

4.3.3 The opening in the carpark floor for the vehicle lift will need to be subject to a Performance Solution as the lift is otherwise required to be in a fire resisting shaft.

4.3.4 The requirements for the protection of doorways in fire walls and for horizontal exits apply except where the building work is subject to the Performance Solution referred to in 4.1.10 above (C3.5 and C3.6).

4.3.5 Doorways opening to fire-isolated exits will be protected by -/60/30 fire doors that are self-closing (C3.8).

4.3.6 Penetrations in fire-isolated exit will be limited to those permitted (C3.9).

4.3.7 Openings in fire-isolated occupant lift shafts will be limited to doorways protected by -/60/- fire doors, and a lift call panel, indicator panel or other panel backed by construction having an FRL of not less than –/60/60 if it exceeds 35 000 mm² (C3.10).

4.3.8 The architect has advised that a doorway in the Class 3 will be protected by a self-closing -/60/30 fire door if it provides access from a sole-occupancy unit to a public corridor, public lobby, or the like (C3.11).

4.3.9 Openings in floors and ceilings for services will comply where the floor or ceiling is required to be fire resisting (C3.12). An opening in a wall providing access to a ventilating, pipe, garbage or other service shaft will be protected (C3.13).

4.3.10 An electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrating a building required to have an FRL with respect to integrity or insulation will be protected (C3.15).

4.3.11 Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation will be protected in a manner identical with a prototype tested in accordance with AS1530.4 to achieve the required FRL (C3.16).

4.3.12 The Performance Solution referred 4.1.9 above will address the extent to which openings to the vehicle lift will need to be protected.

4.3.13 The architect has advised that a there is no proposal or requirement for columns to be protected with lightweight construction to achieve an FRL (C3.17).

4.3.14 The extent to which the detailed design will comply with Part C3 has not been fully addressed in this report as it is not included in the relevant plans.

# 5 Means of egress (Section D)

## 5.1 Provision for Escape (Part D1)

5.1.1 At least one exit is required and proposed from each storey, including the outdoor occupiable area (D1.2).

5.1.2 The basement carpark will be served by 2 exits are required, as egress from the storey involves a vertical rise within the building of more than 1.5 m (D1.2).

5.1.3 The proposed exits (Stair A, Stair B and Stair C) serving the Class 3, Class 5 and outdoor occupiable area will be fire isolated as required (D1.3).

5.1.4 The proposed exit stairs serving the Class 7a will be fire isolated as required by the relevant fire and life safety Performance Solutions (D1.3).

5.1.5 The proposed travel distance from the following areas to an exit will comply (D1.4):

(a) The Class 3 residential:

(i) < 12 m from a unit door to a single exit on upper storeys

(ii) <20 m from a point on a floor not in a sole-occupancy unit to an exit or from a point at which travel in different directions to 2 exits is available.

(iii) <20 m from a point on a floor of the outdoor occupiable area to an exit

(b) The Class 5 commercial:

(i) < 20 m from the worst point on the floor to an exit.

5.1.6 A Performance Solution will demonstrate that travel to the exits serving the Class 7a carpark complies even though some points on a floor are more than 20 m from an exit, and from a point from which travel in different directions is available (D1.4).

5.1.7 The proposed distance between required alternative exits will comply (D1.5).

5.1.8 The proposed exit width (not less than 750 mm for doors and not less than 1 m for the public corridors, including the occupiable outdoor area, will comply (D1.6).

5.1.9 The proposed exit width for the stairs will need to be modified as required to ensure that the width measured clear of all obstructions is not less than 1 m (D1.6).

5.1.10 The proposed store on the Ground floor opening into the fire corridor can't open directly into the corridor (D1.7). Please refer to the corridor as a fire isolated exit passageway.

5.1.11 The proposal is to connect **Stair B** with **Stair C** at the First floor so that people using Stair B (which terminates at the First floor) can access Stair B to egress to Bringelly Rd. This proposed exit system will be subject to a Performance Solution as the DTS Solution:

(a) Requires that each fire-isolated stairway or ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway to a suitable egress point (D1.7 (b)).

(b) Limits access to a required fire-isolated exit in the same storey to no more than 2 access doorways (D1.7 (c)).

5.1.12 No external stairways or ramps in lieu of fire-isolated exits are required or proposed (D1.8).

5.1.13 The requirements for travel by internal non-fire-isolated stairways or ramps do not apply (D1.9).

5.1.14 The proposed exits will not be blocked at the point of discharge (D1.10).

5.1.15 The paths of travel to the public road are proposed to be not less than 1 m wide as required (D1.10).

5.1.16 The discharge point of the alternative exits referred to in 5.1.15 above are located as far apart as practical (D1.10).

5.1.17 The plans will need to be modified to show that the external paths of travel referred to in 5.1.15 above will have a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by Part D3 (D1.10).

5.1.18 No horizontal exits are required or proposed (D1.11).

5.1.19 No non-required stairways, ramps or escalators are required or proposed (D1.12).

5.1.20 The extent to which the detailed design will comply with Part D1 has not been addressed in this report as it is not included in the relevant plans.

5.1.21 Compliance with Part D1 should be detailed in plans consistent with a regulated design.

## 5.2 Construction of exits (Part D2)

5.2.1 The architect has advised that the stairways forming part of the fire isolated exits will be non-combustible concrete. The structural plans submitted with the CC application will demonstrate that the stair and shaft is designed so that any local failure will not cause structural damage to, or impair the fire-resistance of, the shaft (D2.2).

5.2.2 The architect has advised that the proposed non-fire-isolated stairways and ramps will be concrete (D2.3).

5.2.3 The proposed fire isolated passageway discharging to Bringelly Road will be subject to a Performance Solution as it connects with and serves the stair flight rising from the carpark, Stair C (which serves the upper levels), and the exit doors serving Ground floor (D2.4).

5.2.4 No open access ramps and balconies are required or proposed (D2.5), no smoke lobbies are required or proposed (D2.6), and installations in exits and paths of travel must comply, including the occupiable outdoor area. The extent of compliance will be determined when the CC application stage (D2.7).

5.2.5 The proposed store on Level B2 located below a flight to the proposed Southwest fire-isolated exit will not be in the same fire resisting shaft as the exit. No other enclosure of space is proposed under stairs or ramps (D2.8).

5.2.6 The requirements for the width of required stairways and ramps do not apply (D2.9).

5.2.7 No fire-isolated ramp is required or proposed (D2.10).

5.2.8 The extent to which the slip-resistance classification applies to any proposed internal or external ramps has not been addressed in this report (D2.10).

5.2.9 No fire-isolated passageway is required or proposed (D2.11).

5.2.10 No part of a roof is required to be, or proposed as, open space (D2.12).

5.2.11 Whilst the extent to which goings and risers (D2.13), landings (D2.14) and thresholds (D2.15) has not been addressed in preparing this report the proposal is to comply.

5.2.12 Whilst the extent to which the proposed barriers will comply has not been addressed in preparing this report, it is recommended that the proposed barriers are modified to ensure barriers, except in fire isolated exits:

(a) Are not less than 1 m high when measured vertically from the surface beneath, except that for stairways the height must be measured above the nosing line of the stair treads.

(b) Do not allow a 125 mm sphere is able to pass through any opening.

(c) Do not have horizontal or near horizontal elements between 150 mm and 760 mm above the floor facilitate climbing where the floor is more than 4 m above the surface beneath (D2.16).

5.2.13 Details are required to show the location and height of the proposed barriers in the fire isolated exit (D2.16), and the proposed handrails. (D2.17).

5.2.14 It appears that no fixed platforms, walkways, stairways or ladders are required (D2.18).

5.2.15 The following exit doors discharging to Bringelly Rd are proposed to swing in the direction of egress as required:

(a) The door serving the fire isolated exit passageway

(b) The door serving the commercial lobby (D2.19).

5.2.16 The proposal is for swinging doors in a required exit or forming part of a required exit to comply as required (D2.20).

5.2.17 The proposal is for a door in a required exit, forming part of a required exit or in the path of travel to a required exit to be readily openable without a key from the side that faces a person seeking egress (D2.21).

5.2.18 The requirements for re-entry from fire-isolated exits do not apply as the building has an effective height not more than 25 m (D2.22).

5.2.19 The proposal is for a sign, to alert persons that the operation of certain doors must not be impaired, to be installed where it can readily be seen on, or adjacent to—

(a) a required fire door providing direct access to a fire-isolated exit.

(b) The doors leading from a fire isolated exit to a road or open space, on each side of the doors (D2.23).

5.2.20 Window openings in bedrooms in the Class 3 must be protected. The extent to which the protection will comply has not been addressed in this report as the method of achieving compliance is not provided in the relevant plans (D2.24).

5.2.21 A barrier with a height not less than 865 mm above the floor is required to an openable window:

(a) Referred to in 5.2.4 above in the building when a child resistant release mechanism is required by D2.24 (b)(ii)(C) in the bedrooms in the Class 3; and

(b) In any other part of the building where the floor below the window is 4 m or more above the surface beneath.

5.2.22 A barrier referred to in 5.2.21 above, except where in fire-isolated stairways, fire isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps, must not:

(a) permit a 125 mm sphere to pass through it; and

(b) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.

5.2.23 A barrier required by 5.2.21 above in fire-isolated stairways, fire isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps, must not permit a 300 mm sphere to pass through it.

5.2.24 The extent to which the window protection will comply has not been addressed in this report (D2.24).

5.2.25 The concessions for timber stairways do not apply as the architect has advised that no timber stairs are proposed (D2.25).

# 6 Services and Equipment (Section E)

## 6.1 Fire Fighting Equipment (Part E1)

6.1.1 The proposed building must be served by a fire hydrant system as the total floor area exceeds 500 m² (E1.3). This will require a fire hydrant in the fire isolated exits at each storey, an internal or external hydrant pumproom, and a fire hydrant booster.

6.1.2 The hydrant pumproom located on the Ground floor has accessed has access to open space via a fire-isolated passage.

6.1.3 The proposal is for the Class 7a carpark to be served by a hose reel located not more than 4 m from an exit as required. The DTS Solutions do not require that any other part of the proposed building is served by fire hose reels (E1.4).

6.1.4 The proposal is to provide a sprinkler system complying with AS 2118.1-2017 throughout the whole building, including the outdoor occupiable area as required, as the building contains a Class 3 portion, and has a rise in storeys of 4 or more and an effective height not more than 25 m (E1.5).

6.1.5 The proposal is for portable fire extinguishers to be provided as required, including to the outdoor occupiable area as required (E1.6).

6.1.6 No fire control centre is required or proposed (E1.8).

## 6.2 Smoke hazard management (Part E2)

6.2.1 The proposed fire isolated exits are not required to be served by an automatic air pressurisation system or open access ramps or balconies, except to the extent required by a fire and life safety Performance Solution (Table E2.2a).

6.2.2 The proposal is for the Class 3 part to be provided with an automatic smoke detection and alarm system complying with Specification E2.2a as required, except to the extent varied by the fire and life safety Performance Solutions (Table E2.2a).

6.2.3 The proposal is for the smoke hazard management for the Class 5 and Class 7a to be subject to a Performance Solution as the DTS Solution for the Class 5 and Class 7a as the Class 3, Class 5 and Class 7a is served by the same fire isolated exit [2], and in any case as an automatic smoke detection and alarm system complying with Specification E2.2a is likely to be inappropriate for the Class 7a.

6.2.4 The Class 7a carpark is required to be served by a mechanical ventilation system. A Performance Solution may demonstrate that jet fans will be a suitable method of mechanical ventilation (F4.11).

6.2.5 The proposal is for the smoke hazard management system to incorporate a building occupant warning system. The final design of the system may be subject to the fire and life safety Performance Solution (clause 7 Specification E2.2).

[2] The following is the most appropriate DTS Solution for the Class 5 and Class 7a in Specification E2.2a for buildings not more than 25 m in effective height where a required fire-isolated stairway serving the Class 3 also serves the Class 5 and Class 7a:
The Class 5 and 7a must be provided with:

- an automatic smoke detection & alarm system complying with Spec E2.2a, or
- a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5

## 6.3 Lift installation (Part E3)

6.3.1 The architect has advised that the proposed occupant lifts can provide for a stretcher facility (600 mm wide x 2000 mm long x 1400 mm high above the floor level) as required as the proposed occupant lifts will serve storeys above an effective height of 12 m (E3.2).

6.3.2 The proposal is to provide a warning against use of lifts in fire as required (E3.3).

6.3.3 No emergency occupant lift is required or proposed as the building has an effective height not more than 25 m) (E3.4).

6.3.4 The proposal is for access and egress to and from occupant and vehicle liftwell landings to comply as required (E3.5).

6.3.5 The proposal is for fire service controls as required as the occupant lifts will serve a storey above an effective height of 12 m (E3.7). The extent to which the vehicle lift will need similar controls will be subject to the fire and life safety Performance Solutions.

6.3.6 The extent to which fire service recall control switches are required will need to be determined by an appropriately qualified person as part of the CC application (E3.9).

6.3.7 The extent to which a lift car fire service drive control switch is required will need to be determined by an appropriately qualified person as part of the CC application (E3.10).

## 6.4 Emergency lighting, exit signs & warning systems (Part E4)

6.4.1 The proposal is for emergency lighting and exit signs to be provided to the whole building and the outdoor occupiable area as required (E4.2 to E4.8).

6.4.2 No sound or intercom system for emergency purposes is required or proposed (E4.9) as the architect has advised that no part of the building will be used for accommodation for the aged, children or people with a disability, or as a residential care building (as defined in the BCA).

# 7 Health and amenity (Section F)

## 7.1 Damp and Weatherproofing (Part F1)

7.1.1 The proposal is for damp and weatherproofing to comply (Part F1).

7.1.2 The requirements for damp and weatherproofing have not been assessed in preparing this report (Part F1).

7.1.3 Details demonstrating the extent to which the damp and weatherproofing weatherproof are required to be developed and submitted with the CC application. It should be noted that there are no DTS Solutions for the weatherproofing of external walls (F1.0).

## 7.2 Sanitary facilities (Part F2)

7.2.1 The architect has advised that each Class 3 sole occupancy unit will be served by a shower or bath, a closet pan and washbasin as required.

7.2.2 The Class 3 will be served by laundry facilities notwithstanding that these facilities are not required.

7.2.3 Some Class 3 sole occupancy units will be served by a kitchen notwithstanding that kitchens are not required (F2.1).

7.2.4 The proposal is for the sanitary facilities for the Class 5 to comply.

7.2.5 A review of the floor area of the Class 5 sole occupancy units reveals that the total number of persons deemed to be accommodated (Table D1.13) in the Class 5 is ~ 17 males and ~17 females.

7.2.6 The proposed sanitary facilities for the Class 5 will comply as required, subject to at least 1 of the unisex facilities required for people with a disability be counted once for each sex (F2.2 and F2.3).

7.2.7 The proposal is for the construction of sanitary compartments to comply (F2.5).

7.2.8 No accessible adult change facility is required or proposed (F2.9).

## 7.3 Room heights (Part F3)

7.3.1 The proposal is for the following internal heights to comply as required:

(a) ≥ 2.4 m to a habitable room except a kitchen.

(b) ≥ 2.1 m to a kitchen, laundry, bathroom, corridor, passageway or the like.

(c) ≥ 2.4 m to a medical suite except a space referred to in 7.3.1(b)).

(d) ≥ 2.1 m to a store room, garage, or car parking area.

(e) ≥ 2 m measured vertically above a stairway, ramp, landing or the like.

7.3.2 The extent of compliance has not been determined in preparing this report.

## 7.4 Light and ventilation (Part F4)

7.4.1 The proposal is for the following to comply as required, not including the carpark:

(a) Natural light to habitable rooms (F4.1).

(b) Artificial light to all areas including the outdoor occupiable area (F4.4).

(c) Natural ventilation to habitable rooms (F4.6).

(d) A combination of natural and artificial ventilation to all other areas (F4.5).

7.4.2 The extent of compliance has not been determined in preparing this report.

7.4.3 The Class 7a carpark is required to be served by a mechanical ventilation system. A Performance Solution may demonstrate that jet fans will be a suitable method of mechanical ventilation (F4.11).

7.4.4 The proposal is for sanitary compartments not to open directly into:

(a) a kitchen or pantry; or

(b) a public dining room or restaurant; or

(c) a dormitory in a Class 3 building; or

(d) a room used for public assembly; or

(e) a workplace normally occupied by more than one person (F4.8).

7.4.5 The proposal is for sanitary compartments not permitted to open directly into the spaces referred to in 7.4.4 above to comply as required (F4.9).

7.4.6 The architect has advised that no commercial kitchen is proposed (F4.12).

## 7.5 Sound transmission and insulation (Part F5)

7.5.1 The proposal is for the sound insulation rating to comply as required for a floor:

(a) Serving the Class 3;

(b) Separating the Class 3 from:

(i) The Class 5; and

(ii) The outdoor occupiable area (F5.3 and F5.4).

7.5.2 The proposal is for the sound insulation rating to comply as required for a wall:

(a) Separating Class 3 sole-occupancy units; and

(b) Separating a Class 3 sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like (F5.5).

7.5.3 The proposal is for a wall in the Class 3 to be of discontinuous construction (F5.3(b)) if it separates:

(a) a bathroom, sanitary compartment, laundry or kitchen in one Class 3 sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit; or

(b) a Class 3 sole-occupancy unit from a plant room or lift shaft.

(The relevant plans will need to be amended to make is clear that discontinuous construction is proposed for the walls separating a Class 3 unit from other spaces).

7.5.4 The proposal is for any duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one sole-occupancy unit, to be separated from the rooms of any sole occupancy by construction with an Rw + Ctr (airborne) not less than:

(a) 40 if the adjacent room is a habitable room (other than a kitchen); or

(b) 25 if the adjacent room is a kitchen or non-habitable room.

7.5.5 The location of the ducts and services referred to in 7.5.4 above must be shown on the relevant plans.

# 8 Ancillary provisions

## 8.1 Part G1 – Part G5 (Various)

8.1.1 Part G1 (Minor structures and components) and Part G2 (Boilers, pressure vessels, heating appliances, fireplaces, chimneys and flues) are not addressed in this report.

8.1.2 Part G3 (Atrium construction) does not apply as no atrium is proposed or required.

8.1.3 Part G4 (Construction in alpine areas) does not apply as the proposed building will not be in an alpine area.

8.1.4 Part G5 (Construction in bushfire prone areas) is not addressed in this report.

## 8.2 Part G6 (Occupiable outdoor areas)

8.2.1 The requirements for the outdoor occupiable area apply to the proposed building and are addressed in the various Sections of this report.

## 9 Appendix A (About Michael Wynn-Jones)

- Michael refined his skills and knowledge for 13 years as a Local Government Building Surveyor in Western Sydney, and in 1993 established a Building Regulations consulting company and became a 'building academic' at Western Sydney University.
- From 1996 to 2008 Michael devoted his time equally between academia and consulting and helped develop, lectured in, and was eventually the Head of Program for, separate Post Graduate courses in 'Building Surveying', 'Fire Engineering' and 'Bushfire prone areas' at Western Sydney University.
- He has been teaching building regulations courses through the UTS Centre for Local Government since 1995, worked with CSIRO in 1995 and 1996 on fire code reform projects resulting in the first Fire Engineering Guidelines, and assisted the NSW State Government with the introduction of private certification in 1997.
- After leaving Western Sydney University in 2008 he devoted most of his energy to consulting and assisted with the introduction of the Building Surveying major at the University of Newcastle (in his role as conjoint Professor).
- Michael has assisted the NSW State Government on various projects, including the complying development codes, the Federal Premises Standards in NSW, a review of fire safety systems, and private certification. He is a co-author of one of the original private sector accreditation schemes later administered by State Government, was appointed to the State Government Board (formerly the Building Professionals Board) in 2008, and for some of that time was Deputy President.
- Michael has been registered at the highest level in NSW as a building surveyor (unrestricted) or equivalent (an A1 private certifier) since 1997.
- Michael's relevant qualifications, accreditations and details are as follows:
    - MAppSc (Fire Safety Design), Western Sydney University (WSU), 1996
    - BAppSc (Building Surveying), Hons, Uni of Technology Sydney (UTS), 1986
    - AssDip AppSc (Health & Building Surveying), TAFE, Sydney (1988)
    - Building surveyor (unrestricted) or equivalent (NSW) (since 1997)
    - Qualified Principal Building Surveyor and Fire Engineer
    - Conjoint Professor, Arch/Built Environment, Newcastle Uni (2010 to 2015)
    - Associate, Centre for Local Govt, Uni of Technology, Sydney (Since 2005)
    - Building Professionals Board member (2008 to June 2013)
    - Deputy President of the Building Professionals Board (2011 to June 2013)
    - Fellow, Aust. Institute of Building (Since 2011; member since 2011)
    - Fellow, Aust. Institute of Building Surveyors (Since 2012; member since 1980)

END OF REPORT