National Construction Code – Volume 1

Building Code of Australia Compliance Report

Property: 3 Gondola Rd North Narrabeen

Report No: 220045 DA Stage dated 11.05.2022 **amended 27.5.2022**

Plans assessed
DA stage revision A dated 18.5.2022
prepared by Mackenzie Architects International Pty Ltd

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1.0 INTRODUCTION

1.1 BACKGROUND

It is proposed to construct a mixed use building containing 8 sole occupancy units, 1 commercial tenancy and a basement car park.

The project is currently at design phase working toward lodgement of a Development Application with Council.

This report contains an assessment of the current plans in regard to compliance with the Building Code of Australia.

1.2 PURPOSE OF THE REPORT

This report has been prepared as Building Code of Australia Compliance Report, on behalf of the owner, to identify any areas that may require a design change.

The purpose of the report is to:

(a) identify any significant areas of non-compliance with the deemed-to-satisfy provisions of Sections C, D, E and F of the BCA. It is not a clause by clause assessment of the proposal with the detailed requirements of the BCA (eg riser & going sizes, balustrade design, specific features of fire services etc).These items can be assessed at Construction Certificate stage. Section J Energy Efficiency is excluded.

The primary objective is to satisfy Council that the DA stage plans can comply with the BCA without a significant design change.

1.3 REPORT BASIS

This report is based on:-

- the Building Code of Australia, Edition 2019.
- plans prepared by Mackenzie Architects International Pty Ltd dated 18.5.2022

1.4 SUMMARY OF ISSUES TO BE ADDRESSED

Read Part 3.1 of this report for full explanation of the items listed below.

C2.6 Vertical separation of openings in external walls
Type of sprinkler system chosen will determine if vertical separation is required. Sprinkler system must be AS2118.1 system.

D1.3 When fire-isolated exits are required
The current stair design does not comply with the criteria for fire-isolated stairways. Therefore, a sprinkler system complying with AS2118.1 must be installed to gain an exemption or a Performance Solution by a Fire Safety Engineer will be required.

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D1.4 Exit travel distances
Travel distance from unit doorways to exit stair exceeds 6m.
A Performance Solution by a Fire Safety Engineer will be required at CC stage.

D1.7 Travel via fire –isolated stairs
Doorways from a number of rooms open into the lobby connecting the basement stair to the fire isolated passageway.
Fire isolated stairways must discharge direct to the street.
See D1.3 above. If a sprinkler system complying with AS2118.1 is not installed, the stairways do not comply. A Performance Solution by a Fire Safety Engineer will be required at CC stage.

2.0 BUILDING DETAILS

2.1 DESCRIPTION OF THE BUILDING

The proposed development is the construction of a mixed use building above a basement carpark.
The proposed building will consist of-

Basement 1	car parking for 15 vehicles
Lower Ground floor	car parking for 7 vehicles, storage areas.
Upper Ground Floor …….	1 commercial tenancy, toilets, common area corridor, driveway ramp, garbage room
First floor	4 residential sole occupancy units
Second floor	4 residential sole occupancy units
Rooftop ……	communal open space for use by residents. Vergola over BBQ area. Enclosed lift, lift lobby and accessible toilet.

The roof top communal open space is –
Occupiable outdoor area *means a space on a roof, balcony or similar part of a building—*
(a)that is open to the sky; and
(b)to which access is provided, other than access only for maintenance; and
(c)that is not open space or directly connected with open space.

Occupiable Outdoor area – Part G6
A reference to a storey includes an *Occupiable Outdoor Area* for the purposes of –
Fire separation – C2.7, C2.8, C2.9, Provision for escape – Part D1, Construction of exits – Part D2, Fire fighting equipment – Part E1.

3.1 BUILDING CODE OF AUSTRALIA COMPLIANCE (Part C, D, E & F)

Note: Only clauses are specifically relevant to this building are considered. See also *Purpose of this Report* above.

Classification – 2 residential sole-occupancy units, 5/6 commercial tenancy, 7a carpark, 7b storage
Rise in Storeys – 5
The lobby on the roof top is included in the rise in storeys.
The roof top occupiable outdoor area open to the sky is not calculated in the rise in storeys.
Number of storeys contained - 6
Type of Construction – A

Storey *means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—*
(a)a space that contains only—
(i)a lift shaft, stairway or meter room; or
(ii)a bathroom, shower room, laundry, water closet, or other sanitary compartment; or

(iii)accommodation intended for not more than 3 vehicles; or
(iv)a combination of the above; or
(b)a mezzanine.

C1.2 Calculation of rise in storeys
(a)The rise in storeys is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space—
(i)above the finished ground next to that part; or
(ii)if part of the external wall is on the boundary of the allotment, above the natural ground level at the relevant part of the boundary.
(b)A storey is not counted if—
(i)it is situated at the top of the building and contains only heating, ventilating or lift equipment, water tanks, or similar service units or equipment; or
(ii)it is situated partly below the finished ground and the underside of the ceiling is not more than 1 m above the average finished level of the ground at the external wall, or if the external wall is more than 12 m long, the average for the 12 m part where the ground is lowest.

Effective height *means the vertical distance between the floor of the lowest storey included in the calculation of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).*

Effective Height
RL of rooftop lobby floor = 14.30
RL of Lower ground floor = 1.00
Effective height = 13.3m

Part C – Fire Resistance

Fire source features – external wall to boundary at closest point
External walls are adjacent to all boundaries on lower 3 storeys- Basement 1, Lower and Upper Ground Floor.
External walls are adjacent to boundaries in part and setback 3m in part on upper residential storeys.

Distance to other buildings on the allotment – not applicable.

C1.1 Type of construction required
The building is required to be Type A construction.
Specification C1.1
The following generic fire resistance levels apply to **load-bearing** elements -
Basement carpark
120 minutes for Class 7a, 240 minutes for Class 7b storage (apply higher FRL throughout)
Residential storeys
90 minutes
Retail part
180 minutes
Comment:
The load-bearing structure will be principally concrete with portions of masonry which is capable of complying with these requirements.
Materials will need to be nominated at Construction Certificate stage which satisfy these FRL's.
Special attention is directed to any proposed lightweight construction for loadbearing external walls – it must achieve a fire resistance level from both inside and outside.
No composite cladding is shown on the elevations.

3.6 Roof lights
If a roof is required to have an FRL or its covering is required to be non-combustible, roof lights or the like installed in that roof must—
(a)have an aggregate area of not more than 20% of the roof surface; and
(b)be not less than 3 m from—
*(i)**any boundary of the allotment** other than the boundary with a road or public place;*
Comment: Complies.

C2.6 Vertical separation of openings in external walls

(a) If in a building of Type A construction, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by—

(i) a spandrel which—

or

(ii) part of a curtain wall or panel wall that complies with (i); or

(iii) construction that complies with (i) behind a curtain wall or panel wall and has any gaps packed with a non-combustible material that will withstand thermal expansion and structural movement of the walling without the loss of seal against fire and smoke; or

(iv) a slab or other horizontal construction

(b) The requirements of (a) do not apply to—

(i) an open-deck carpark; or

(ii) an open spectator stand; or

*(iii)**a building which has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or*

(iv) openings within the same stairway;

Comment: Type of sprinkler system chosen will determine if vertical separation is required.

C2.8 Separation of classifications in the same storey
Basement 1 – Class 7a and 7b.
Lower ground floor – Class 7a and 7b
Upper ground – Class 5 or 6 (not determined) and Class 7a driveway
Comment: The higher FRL to be applied to the complete storey. The concrete/masonry structure is capable of complying. Correct FRL to be nominated at CC stage.

C2.9 Separation of classifications in different storeys
The use applicable to each storey determines the FRL of the floor above that storey.
Comment: The concrete slabs are capable of complying. The correct FRL to be specified at CC stage.

C2.10 Separation of lift shafts
The lift connects more than two storeys and therefore must be fire separated.
Openings for lift landing doors must be fire protected in accordance with Part C3.
Comment: The walls of the lift shaft will be concrete which is capable of complying with the fire resistance requirements.
Fire rating of doors to be specified at construction certificate stage (FRL -/60/- required).

C2.11 Stairways & lifts in one shaft
Stairways & lifts must not be in the same shaft if either the lift or stair is required to be fire-isolated.
Comment: Complies.

C2.13 Electricity supply system

(b) A main switchboard located within the building which sustains emergency equipment operating in the emergency mode must—

(i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and

(ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than /120/30.

Comment: The main switch room is not shown. This can be addressed at CC stage without changing the design.

C2.14 Public corridors in Class 2 and 3 buildings
In a Class 2 or 3 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 complying with Clause 2 of Specification C2.
Comment: Not applicable- the corridors are less than 40m.

C3.2 Protection of openings in external wall

Openings in an external wall that is required to have an FRL must—

(a) if the distance between the opening and the fire-source feature to which it is exposed is less than—

(i) 3 m from a side or rear boundary of the allotment; or

(ii) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or

(iii) 6 m from another building on the allotment that is not Class 10,

be protected in accordance with C3.4 and if wall-wetting sprinklers are used, they are located externally; and

Comment:
Installation of a sprinkler system throughout the building does not grant an exemption to this clause.

The following methods of protection are shown on plan-

- blade walls to provide shielding.
- fire rated glass blocks to opening next to lobby area on east elevation
- drenchers over the inside of fixed glass windows.

C3.11 Bounding construction: Class 2, 3 buildings
Doorways to the sole occupancy units must be protected by a self closing fire door.
Comment: Fire door installation to be specified at construction certificate stage.

(e)Other openings in internal walls which are required to have an FRL with respect to integrity and insulation must not reduce the fire-resisting performance of the wall.
Comment:
The glass panels/windows in the corridor bounding wall to Unit 102 have been removed.

Part D – Access & Egress

***D1.1** Application of Part*

The Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 2 building.

D1.2 Number of exits required

The building has an effective height of less than 25m.

Egress from below street level

Basement levels- occupants must be provided with a minimum of 2 exits.

Basement 1 and Lower Ground floor are served by two egress stairways which discharge inside the building on the Upper Ground Floor.

Egress at street level

Occupants on the Upper Ground Level can travel directly to the street.

An internal corridor provides an egress path to the front of the building on the eastern side.

A fire-isolated passageway provides a second exit which discharges into the landscape area at the front of the building.

Egress down from upper storeys

Occupants on the roof terrace and the residential units on First and Second Floor are served by a single stair on the eastern side which discharges inside the building on the Upper Ground Floor.

G6.4 Provision for escape
For the purposes of the Deemed-to- Satisfy Provisions of Part D1, a reference to a room or storey includes an occupiable outdoor area.
Comment: The roof top recreation area is served by a stairway leading to street level.

D1.3 When fire-isolated exits are required
*(a) **Class 2 and 3 buildings** —Every required exit must be fire-isolated unless it connects, passes by not more than—*
(i) 3 consecutive storeys in a Class 2 building;
and one extra storey of any classification may be included if—
*it is only for the accommodation of motor vehicles or for other ancillary purposes **or***
***the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout;** or*
the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having—
(A)an FRL of –/60/60, if non-loadbearing; and
(B)an FRL of 90/90/90, if loadbearing; and
(C)no opening that could permit the passage of fire or smoke.

Eastern stair connects-

1. Roof top terrace which is defined as a storey due to lobby area
2. second floor
3. first floor
4. upper ground floor

Comment: This stairway is not required to be fire –isolated if a sprinkler system complying with Spec E1.5 is installed throughout the building.

(b)Class 5, 6, 7, 8 or 9 buildings — Every stairway or ramp serving as a required exit must be fire-isolated unless—
(i)in a Class 9a health-care building — it connects, or passes through or passes by not more than 2 consecutive storeys in areas other than patient care areas; or
(ii)it is part of an open spectator stand; or
(iii)in any other case except in a Class 9c building, it connects, passes through or passes by not more than 2 consecutive storeys and one extra storey of any classification may be included if—
(A)the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; *or*
(B)the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having—
(aa)an FRL of –/60/60, if non-loadbearing; and
(bb)an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and
(cc)no opening that could permit the passage of fire or smoke.

Two stairways rising from the basement connect-

1. Basement 1
2. Lower ground floor
3. Upper ground floor

Comment: This stairway is not required to be fire –isolated if a sprinkler system complying with Spec E1.5 is installed throughout the building.

D1.4 Exit travel distances

a) ***Class 2 and 3 buildings*** *—*

(i) The entrance doorway of any sole-occupancy unit must be not more than—

(A) 6 m from an exit or from a point from which travel in different directions to 2 exits is available; or

Comment: Does not comply. See travel distance plan.

(B) 20 m from a single exit serving the storey at the level of egress to a road or open space

Comment: Not applicable. Residential use is not proposed on the Upper Ground Floor.

(ii) 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.

Comment: Travel from the far point of the rooftop recreation area to the single stair is less than 20m. See travel distance plan. Complies.

(c) ***Class 5 to 9 buildings*** *— Subject to (d), (e) and (f)—*

(i) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m;

Comment: Does not comply. See travel distance plan. A Performance Solution by a Fire Safety Engineer will be required at CC stage.

D1.5 Distance between alternative exits

Exits that are required as alternative means of egress must be—

(a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas;

Comment: Complies.

(b) not less than 9 m apart; and

Comment: Complies.

(c) not more than—

(i) in a Class 2 or 3 building — 45 m apart; or

(ii) in a Class 9a health-care building, if such required exit serves a patient care area — 45 m apart; or

(iii) in all other cases — 60 m apart; and

Comment: Complies

(d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.

Comment: Complies.

D1.6 Dimensions of exits

The width of the stairway clear of handrail must be a minimum 1.0m and extend to a height of 2.0m minimum above nosings. Path of travel to public road must also meet this criteria.

Comment: Complies.

D1.7 Travel via fire –isolated stairs

A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from—

(i)a public corridor, public lobby or the like; or

(ii)a sole-occupancy unit occupying all of a storey; or

(iii)a sanitary compartment, airlock or the like.

Comment: Does not comply. Doorways to garbage rooms, lift, commercial tenancy and driveway open into lobby connecting basement stair to fire isolated passageway.

A Performance Solution by a Fire Safety Engineer will be required at CC stage.

Fire isolated stairways must discharge direct to the street.

Comment: See D1.3 above. If a sprinkler system complying with AS2118.1 is not installed, the stairways do not comply.

D1.9 Travel by non-fire isolated stairways

(a)A non-fire-isolated stairway or non-fire-isolated ramp 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.

Comment: Complies. All stairways discharge at street level.

(b)In a Class 2, 3 or 4 building, the distance between the doorway of a room or sole-occupancy unit and the point of egress to a road or open space by way of a stairway or ramp that is not fire-isolated and is required to serve that room or sole-occupancy unit must not exceed—

(i)30 m in a building of Type C construction; or

(ii)60 m in all other cases.

Comment: See travel distance plan. Complies.

(c)In a Class 5, 6, 7, 8 or 9 building, 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 80 m.
Comment: Stairs 1 and 2 serving the Class 7 parts comply.

*(d)**In a Class 2,** 3 or 9a building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than—*
***(i)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*
(ii)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.
Comment: The eastern stair serving the upstairs residential units complies.

*(e)**In a Class 5 to 8** or 9b building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than—*
***(i)20 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*
(ii)40 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.
C**omment**: Complies.

D1.10 Discharge from exits

(a) 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.
Comment: Barriers are not necessary near exit doorway.

(b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than—

(i) the minimum width of the required exit; or

(ii) 1 m,

whichever is the greater.
Comment: Complies

(c) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by—

(i) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D3; or

(ii) except if the exit is from a Class 9a building, a stairway complying with the Deemed-to-Satisfy Provisions of the BCA.
Comment: Stairway in pathway to the street is capable of complying.

(d) The discharge point of alternative exits must be located as far apart as practical.
Comment: Complies.

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*D**2.2** Fire isolated stairways, **D2.4** Separation of rising and descending stair flights*
Not applicable. The stairways are relying on the concession for sprinkler protected building to be non-fire isolated.
Comment: Not applicable.

D2.13 Goings and risers
(b) In the case of a non-required stairway—
(i) the stairway must have—
(A) not more than 3 winders in lieu of a quarter landing; and
(B) not more than 6 winders in lieu of a half landing; and
(ii) the going of all straight treads must be constant throughout the same flight; and
(iii) the going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going of all such winders is constant.
Comment: No winders are shown in stairways. Design of stairs to be shown on CC plans.

D2.19 Doorways and doors
All exit doorways are shown as swinging out in the direction of egress.
Comment: Complies.

Part D3 Access for people with disabilities.
See Access report by Access Consultant.

Part E – Services & Equipment

Effective height = 16.8m
Floor area of basement = 517.4m^2
Lower Ground Floor =444.4m^2
Floor area of Upper Ground Floor =230m^2
The following Essential Fire safety Measures are required to be installed in the building.
The building containing Class 2 has a rise in storeys of 6 and therefore is required to be fully sprinkler protected.

- Sprinkler system
- Automatic smoke detection & alarm system
- Self-closing fire doors.
- Portable fire extinguishers
- Emergency lighting in the carpark, throughout common areas/lobbies and in the emergency exit stairways.
- Illuminated exit signs.
- Fire hydrant system. Provision may be needed for a hydrant pump room.
- Fire hose reels

Comment: Fire service design will form part of the construction certificate process.
Installation of these items can easily be accommodated within the proposed structure of the building.
The largest potential spatial requirement could be for the installation of a hydrant booster connection or pump and a sprinkler valve room. This is required to have direct access to the street. This should be shown at this stage.

E3.2 Stretcher facility in lifts

(a) A stretcher facility in accordance with (b) must be provided—

(i) in at least one emergency lift required by E3.4; or

(ii) where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12 m, in at least one of those lifts to serve each floor served by the lifts.

(b) A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.

Comment: Required.

Section F Health & Amenity

*Part F2 Sanitary & other facilitie*s
Each residential unit is provided with kitchen, laundry & bathroom.
One male + 1 female + 1 accessible toilet is shown on Upper Ground Floor near commercial tenancy.
Comment: Complies.

F3.1 Height of rooms and other spaces

The ceiling height must be not less than—

(a) in a Class 2 or 3 building or Class 4 part of a building—

(i) a kitchen, laundry, or the like — 2.1 m; and

(ii) a corridor, passageway or the like — 2.1 m; and

(iii) a habitable room excluding a kitchen — 2.4 m; and

(b) in a Class 5, 6, 7 or 8 building—

(i) except as allowed in (ii) and (f) — 2.4 m; and

(ii) a corridor, passageway, or the like — 2.1 m

Comment: Sections show slab to slab height exceeding 3.0m which is sufficient to comply. Ceiling heights to be shown on sections at CC stage.

Part F4 Light & ventilation

F4.1 Provision of natural light
Natural light must be provided in:
(a)Class 2 buildings and Class 4 parts of buildings — to all habitable rooms.
Comment: Complies. The size of glass windows and sliding doors are large enough to comply with the 10% criteria.

F4.2 Methods and extent of natural light

(b) in a Class 2, 3 or 9 building or Class 4 part of a building a required window ***that faces a boundary*** *of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of—*
(i)generally — 1 m; and
(ii)in a patient care area or other room used for sleeping purposes in a Class 9a building — 3 m; and

(iii)50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill.
Comment: Not applicable. The bedroom windows adjacent to the eastern boundary do not face the boundary. They are at right angles to the boundary.

F4.5 Ventilation of rooms
Natural ventilation is not mandatory however all residential habitable rooms have windows or glass sliding doors that can be opened.
Comment: Mechanical ventilation design plans to be submitted with the CC.

F4.8 Restriction on location of sanitary compartments
The rooms containing toilets do not open directly onto the kitchens in the residential units.
The toilets on the Upper Ground floor do not open directly onto a work space.
Comment: Complies.

F4.11 Carparks
Comment: Mechanical ventilation design plans to be submitted with the CC.
Attention is directed to the need for a riser for the basement ventilation system.

F5.4 Sound insulation of floors

(a) A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w} + C_I$ (impact) not more than 62 if it separates—

(i) sole-occupancy units; or

(ii) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification.

(b) A floor in a Class 9c aged care building separating sole-occupancy units must have an R_w not less than 45.

F5.5 Sound insulation rating of walls

(a) A wall in a Class 2 or 3 building must—

(i) have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates sole-occupancy units; and

(ii) have an R_w (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and

(iii) comply with F5.3(b) if it separates—

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

(B) a sole-occupancy unit from a plant room or lift shaft.

Comment: The concrete slabs are capable of complying. Acoustic ceilings can be added if necessary without changing the design. Care needs to be taken with ceiling heights to ensure that sufficient height is provided to allow for acoustic ceilings below the slabs. Timber flooring and tiles may need additional acoustic treatment to address impact noise.

Special attention is directed to the need for discontinuous construction (cavity) where a bathroom/kitchen adjoins a habitable room in an adjoining unit. Allowance needs to be made for the extra thickness of the wall. Water pipes are not permitted to be chased into masonry walls.
Compliance can be achieved without changing the design.

Section G- Ancillary Provisions

Part G6 Occupiable Outdoor area
A reference to a storey includes an *Occupiable Outdoor Area* for the purposes of –
Fire separation – C2.7, C2.8, C2.9
Provision for escape – Part D1 See comments under Part D of this report.
Construction of exits – Part D2
Fire fighting equipment – Part E1.
Comment: The rooftop will require coverage by fire services such as hydrants, exit and emergency lighting.
The building will be required to be sprinkler protected to allow the stair design.

1.0 CONCLUSION

This report has highlighted the issues listed in Part 1.4 above.
A Performance Solution by a Fire Safety Engineer will be required at CC stage.

George Watts
Registered Certifier – Level A1