

Building Code of Australia

BCA Compliance Audit

Class 8 and Class 6

Bucketty's Brewery Pty Ltd

26 Orchard Road, Brookvale

DATE	REVISION	AUTHOR	SIGNATURE	PEER REVIEWED	SIGNATURE
14/02/2020	FINAL	SHANE BARR	Dack	GRANT	104
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1 Introduction

1.1 Background / Proposal

Private Certifiers Australia Pty Ltd (PCA) has been commissioned by Bucketty's Brewery to provide a BCA Compliance Report. The proposal if for a change of use to part of an existing Industrial Building (Class 8) to be used as a Tap Room (Class 6- Food and Drink Premises).

1.2 Aim

The purpose of this report is to provide a BCA Compliance Report for the submission of the Development Application.

1.3 The Project Team

The following PCA team members have contributed to this report:

- Grant Harrington, Director, Grade A1 Unrestricted BPB 0170
- Shane Barr, Grade 3 BPB 3108

1.4 Documentation

The following documentation has been reviewed, referenced and/or replied upon in the preparation of this report

- BCA 2019, Sections C, D and E
- Guide to the BCA 2019
- Architectural Floor Plans
- AS4674-2004: The Design, Construction and Fitout of a Food Premises

1.5 Regulatory Framework

Pursuant to clause 145 of the Environmental Planning and Assessment (EPA) Regulation 200 all new building work must comply with the current BCA however the existing features of an existing building need not comply with the BCA unless upgrade is required by other clauses of the legislation.

Clause 143(3) of the EPA Regulation 2000 prevents a certifying authority from issuing a construction certificate if the proposed new work will result in a reduction to the fire protection and structural capacity of the building.

1.6 Limitation & Exclusions

The limitations and exclusions of this report are as follows:

- The following assessment is based upon a review of the architectural documentation.
- No assessment has been undertaken with respect to the Disability Discrimination Action (DDA) 1992. The building owner should be satisfied that their obligations under the DDA have been addressed.

The report does not address matters in relation to the following:

1.6.1.1.1 Local Government Act and Regulations.

- a) NSW Public Health Act 1991 and Regulations
- b) Occupation Health and Safety (OH&S) Act and Regulations
- c) Work Cover Authority requirements.
- d) Water, drainage, gas, telecommunications and electricity supply authority requirements.
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1.7 Terminology

Alternative Solution

A building solution which complies with the Performance Requirements other than by reason of satisfying the DtS Provisions.

Building Code of Australia (BCA)

Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in NSW (NSW) under the provisions of the EPA Act and Regulation. Building regulatory legislation stipulates that compliance with the BCA Performance Requirements must be attained and hence this reveals BCA's performance based format.

1.8 Construction Certificate

Building Approval issued by the Certifying Authority pursuant to Part 4A of the EP&A Act 1979.

Construction Type

The construction type is a measure of a buildings ability to resist a fire. The minimum type of fire resisting construction of a building must be that specified in Table C1.1 and Specification C1.1 except as follows for:

- 1.8.1.1.1 Certain Class 2. 3 or 9c buildings in C1.5; and
- 1.8.1.1.2 Class 4 part of a building located on the top storey in C1.3(b); and
- 1.8.1.1.3 Open spectator stands and indoor sports stadiums in C1.7.

Note: Type A construction is the most fire-resistant and Type C the least fire-resistant of the types of construction.

Climatic Zone

An area defined in BCA Figure A1.1 and in Table A1.1 for specific locations, having energy efficiency provision based on a range of similar climatic characteristics.

Deemed to Satisfy Provisions (DtS)

Provisions which are deemed to satisfy the Performance Requirements.

Effective Height

The height to 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) from the floor of the lowest storey providing direct egress to a road or open space.

Fire Resistance Level (FRL)

The grading periods in minutes for the following criteria:

- a) structural adequacy; and
- b) Integrity; and
- c) Insulation, and expressed in that order.

Fire Source Feature (FSF)

The far boundary of a road which adjoins the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.

National Construction Code Series (NCC)

The NCC was introduced 1 May 2011 by the Council of Australian Governments. The BCA Volume One (Class 2 to 9 Buildings) is now referenced as the National Construction Code Series Volume One – BCA.

Occupation Certificate

Building Occupation Approval issued by the Principal Certifying Authority pursuant to Part 4A of the EPA Act 1979.

Open Space

A space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.

Performance Requirements of the BCA

A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance Requirement states the level of performance that a Building Solution must meet.

Compliance with the Performance Requirements can only be achieved by:

- a) Complying with the DtS Provisions; or
- b) Formulating and Alternative Solution which -
 - (i) Complies with the Performance Requirements; or
 - (ii) Is shown to be at least equivalent to the DtS Provisions; or
- c) A combination of a) and b).

Sole Occupancy Unit (SOU)

A roof or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes a dwelling.

2 **Building Characteristics**

2.1 Building Classification

The following table presents a summary of relevant building classification items of the proposed building development:

BCA Classification: Class 8 & Class 6 (Class 6 part >10% of

Storey's Floor Area)

Proposed Use: Industrial & Food and Drink Premises

Rise in Storeys: Rise in storeys of one (1)

• Type of Construction: Type C Construction

Floor Area: Approx 740sqm (Existing Buildings Floor Area)

Only 169sqm at the Front Ground Floor Area to be used for purpose of a Food and Drink Premises

3.1 BCA Deemed to Satisfy Compliance Issues

PCA can confirm they have undertaken a site inspection & desktop review of the architectural design drawings for the proposed Food and Drink Premises within 26 Orchard Road, Brookvale, Sydney, NSW.

The following drawings have been assessed as part of the BCA Compliance Report;

AUTHOR	DRAWING TITLE	DRAWING NUMBER	DATE
JF	Existing Ground Floor Plan	DA200-A	30/01/2020
JF	Demolition Ground Floor Plan	DA201-A	30/01/2020
JF	Proposed Ground Floor Plan	DA202-A	30/01/2020
JF	Elevations Existing	DA300-A	30/01/2020
JF	Elevation Proposed	DA301-A	30/01/2020
JF	Elevations & Sections	DA302-A	30/01/2020
JF	Compliance Diagrams	DA400-A	30/01/2020

The following comments have been made in relation to the relevant BCA provisions relating to building compliance associated with the proposed new Food and Drink Premises within the existing Industrial Building.

The general BCA requirements applicable to this project are listed and discussed below;

3.1.1 Section C – FIRE RESISTANCE

3.1.1.1 Clause C1.1 – Type of Construction Required

The minimum type of fire-resisting construction of a building must be that specified in Table C1.1 and Specification C1.1.

Comments: Any walls within 1.5m of the boundary should achieve an FRL of no less than 90/90/90; any walls between 1.5m-3m from the side or rear boundary must achieve an FRL of no less than 60/60/60. The existing structure seemed, upon inspection, generally compliant with the requirements of Spec C1.1.

3.1.1.2 Clause C1.10 – Fire Hazard Properties

The fire hazard properties of the following linings, materials and assemblies in a Class 2 to 9 building must comply with Specification C1.10 and the additional requirements of the NSW Provision of the Code.

Comments: Any new wall, floor linings, ceiling linings or air-handling ductwork must comply with the BCA 2019 Vol 1 Spec C1.10 for an un-sprinklered building – please ensure product data sheets and material tests reports are provided during the construction certificate stage.

3.1.1.3 Clause C2.9 – Separation of Classification in Different Storeys

Separation between parts of a building which are of a different classification situated one above another, to minimise the risk of a fire in one classification causing the failure of building elements in another classification in a different storey.

Comments: Maximum Fire Compartment size for a Class 6/8 is 2,000sqm; therefore the whole building is treated as one fire compartment and no fire separation will be required between the Class 8 and Class 6 parts.

3.1.2 **SECTION D – ACCESS & EGRESS**

3.1.2.1 Clause D1.2 – Number of Exits Required

This clause requires the provision of sufficient exits to enable safe egress in case of an emergency. D1.2 provides that all buildings must have at least one exit from each storey as sets out circumstances in which more than one exit may be required.

Comments: Complies with requirements of the BCA

Level	Designated Exits	
Ground Floor	1	

3.1.2.2 Clause D1.4 – Exit Travel Distances

This clause specifies the permitted travel distances allowable from Class 2 to Class 9 buildings, specifying the maximum distances to be taken into account for the various uses in each Class of building.

The following applies:

- No point on the floor must be more than 20m to 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 40m;
- For the class 5 and 6, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30m.

Comments: Generally complaint with BCA requirements

3.1.2.3 Clause D1.6 – Dimensions of Exits

Sets out in detail the minimum dimensions such as height and width of paths of travel for Class 2 to 9 buildings. It also specifies the minimum dimensions of doorways from the various compartments and the width of exit doors from buildings depending on the uses and functions carried out within them.

Comments: Generally complies with BCA requirements

3.1.2.4 Clause D1.10 – Discharge From Exits

Requires that an exit must not be blocked at the point of discharge. Barriers such as bollards must be installed to prevent vehicles from blocking the discharge from exits.

Comments: Generally compliant with BCA requirements

3.1.2.5 Clause D2.7 – Installations in Exits & Paths of Travel

This clause restricts the installation of certain services in fire-isolated exits, non-fire-isolated exits and certain paths of travel to exits. It prescribes which services shall not be installed as well as the circumstances in which certain services may be installed in fire isolated and non-fire-isolated exits.

If installed in a path of travel to an exit, Electrical distribution boards, Communication cupboards and the like containing motors, etc. are to be enclosed with non-combustible construction, and doors are to be provided with smoke seals to the perimeter.

Comments: Details not provided on floor plans

3.1.2.6 Clause D2.16 – Balustrades or Other Barriers

This clause details where balustrades are required to be provided and sets out in specific detail the construction requirements. Typically the following will apply to a Class 6/8 building:

- Balustrades are required where the fall to the level below is more than 1m in height. The minimum height of a
 balustrade is 1m above the floor of the landing, walkway or the like; and 865mm above the floor of a stairway or
 a ramp.
- For a fall of more than 4m to the surface level below, a window sill must be a minimum of 865mm in height above of the floor surface.
- Where the floor is more than 4m above the surface beneath the balustrade any horizontal or near horizontal members between 150mm and 760mm above the floor must not facilitate climbing.
- Balustrades must be constructed so as to not permit a sphere of 125mm diameter to pass through. The exception
 to this is within fire isolated exits within the building, or within a Class 7 or 8 building, where the rails can be
 positioned a maximum of 460mm apart, so long as a bottom rail is located so a sphere of 150mm cannot pass
 through the opening between the nosing of the stair treads and the rail or between the floor of the landing, balcony
 or the like.

Comments: Generally compliant with BCA requirements

3.1.2.7 Clause D2.19 – Doorways & Doors

This clause applies to all doorways and refers to the types of doors that cannot be used in buildings of prescribed uses, the use of power operated doors and the force required to operate sliding doors.

A doorway in a required exit (e.g. the doors leading to a fire isolated exit, or the doors leading directly to open space must not be fitted with a sliding door unless it leads to a road or open space; and the door is able to be opened manually under a force of not more than 110N)

Comments: To be addressed at CC stage.

3.1.2.8 Clause D2.20 – Swinging Doors

A swinging door *in a required exit* or *forming part of a required exit* must swing in the direction of egress and must not otherwise impede egress. In addition, the door must not encroach at any part of its swing by more than 500mm on the required width of the exit (with the exception of airlocks and sanitary compartments, and with the exception of buildings or building parts that are less than 200m²). This clause does not apply to other doorways – see notes in the Guide to the BCA.

Comments: Complies with BCA requirements

3.1.2.9 Clause D2.21 – Operation of Latch

A door in a required exit or forming part of a required exit and in a path of travel to a required exit must be readily operate without a key from the side that faces a person seeking egress, by a single downward action or pushing action on a single device which is located between 900m & 1.1m from the floor. This clause prohibits the use of devices such as deadlocks and knobs (rather, lever latches are required).

Comments: Door latch compliance to be assessed at CC/OC stage and to be noted on the CC documentation provided.

PART D3 ACCESS FOR PEOPLE WITH A DISABILITY

3.1.2.10 Clause D3.1 – General Building Access Requirements

The extent of access required depends on the classification of the building. Buildings and parts of buildings must be accessible as set out in Table D3.1 unless exempted by Clause D3.4

Access is required to and within all areas normally used by the occupants.

3.1.2.11 Clause D3.2 – General Building Access Requirements for People with Disabilities

Access ways are to be provided to accessible buildings from the main points of pedestrian entry at the allotment boundary and any accessible car parking space or accessible associated buildings connected by a pedestrian link.

Access must be provided through the principal pedestrian entrance and through not less than 50% of all pedestrian entrances (including the principal pedestrian entry).

The minimum width of an accessible doorway must have a clear opening width of not less than 850mm in accordance with AS1428.1.

Comments: Drawings are generally compliant with the intent of the BCA Vol 1 D3.2.

The entry has a generally flat threshold. There is a minor change in level at the front entrance (not shown on drawings) due to elevated topping slab and existing tiling – the level will need adjusted at CC stage or an AS1428.1 compliant ramp will need installed at CC stage in order to ensure compliance at CC stage.

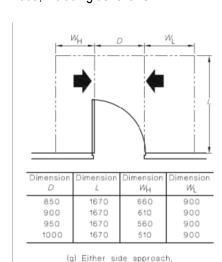
The area within the Food and Drink premises in generally compliant with AS1428.1-2009 requirements regarding circulation space.

The following is a summary of some of the key matters which will need to be considered:

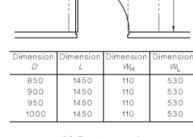
Access for persons with disabilities must be provided, at a minimum, to and within all areas normally used by the occupants. This includes to and within all parts of the commercial tenancies, and to all common areas of the Class 6 parts.

The minimum width of an accessible doorway must have a clear opening width of not less than 850mm in accordance with AS1428.1.

Circulation space to the new doorways that are required to be accessible are to comply with Section 13 of AS1428.1-2009, including as follows:



door opens towards user



(h) Front approach, door opens :owards user

3.1.3 SECTION E – SERVICES AND EQUIPMENT

3.1.3.1 Clauses E1.3 – Fire Hydrants

Floor area exceeds 500sqm therefore Fire Hydrant coverage is required in accordance with E1.3 & AS2419.1-2005

3.1.3.2 Clauses E1.6 – Portable fire extinguishers

Portable fire extinguishers must be provided as listed in Table E1.6 and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS2444.

Comments: Existing in tenancy and generally complaint with the BCA requirements regarding positioning and applicable signage. Stamps and test dates to be checked at CC/OC stage.

3.1.3.3 Clause E4.2 – Emergency Lighting Requirements

This clause details when emergency lighting must be installed in Class 2 to 9 buildings. The requirements for building and parts of buildings are detailed in sub-clauses (a) to (i) and each sub-clause must be considered as more than one may apply to any single building.

Comments: Emergency Lighting required as per Clause E4.2, E4.4, and AS2293.1-2005

3.1.3.4 Clause E4.5 / E4.6 – Exit Signs

An exit sign must be clearly visible to persons approaching the exit and must be installed on, above or adjacent to each door providing egress from a building.

Comments: Exits sign required at front entrance door and rear exits as per requirements of E4.5, E4.6, E4.8 & AS2293.1-2005.

3.1.4 PART F2 SANITARY AND OTHER FACILITIES

3.1.4.1 Clause F2.2 / F2.3 – Calculation of Number of Occupants & Facilities

This clause sets out the requirements for the calculation of the number of occupants and the number of sanitary facilities required to be installed in Class 2 to 9 buildings.

Comments: Generally compliant with the BCA requirements should the premises wish to accommodate a total of 120 patrons.

WC required will be as follows;

- -60 Male Patrons;
- 1 Closet Pan
- 2 Urinals
- 2 washbasins

Minus one closet pan and washbasin (Accessible WC) therefore only two urinals and one washbasin required within Male toilet area.

- -60 Female Patrons:
- 3 Closet Pan (one ambulant)
- 2 Washbasins

Minus one closet pan and washbasin (Accessible WC) therefore two closet pans required, one standard and one ambulant, and one washbasin within Female toilet area.

NOTE: One Accessible unisex bathroom also required, this can then count as 1 Closet Pan and Wash Basin for each Male and Female WC. Accessible unisex can also be used as staff – due to a employee total of >10 persons.

Comments: Details provided comply with requirements of the BCA.

3.1.4.2 Clause F2.4 – Accessible Sanitary Facilities

Accessible unisex sanitary compartments must be provided, in accordance with Table F2.4 (a) and unisex showers must be provided in accordance with Table F2.4 (b) in building or parts that are required to be accessible.

Comments: Generally complaint with the BCA – full compliance assessment not carried out on the layout of the accessible WC at this stage.

Pursuant to BCA Vol 1 2019 A2.2, it is specified that the works at the premises (Food and Drink Premises part of the building) meet the following provisions set out in AS4674-2004: The Design, Construction and Fitout of a Food Premises;

- (a) The construction, fitout and finishes of the food premises must comply with Standard 3.2.3 of the Australian and New Zealand Food Standards Code under the Food Act 2003 and AS 4674 Design, Construction and Fitout of Food Premises.
- (b) Provision must be made for the installation of adequate mechanical exhaust for any future premises where food is to be prepared.
- (c) The cooking appliances require an approved air handling system designed in accordance with AS1668.1-1998 and AS1668.2-1991 or alternative solution satisfying the performance objectives of the Building Code of Australia. No approval is granted for the burning of wood fired fuel.
- (d) Cooking must not commence until an air handling system, in accordance with the BCA is installed and operational.
- (e) The floor of the food premises must be finished in an approved non-absorbent material, evenly laid, or graded and drained to a trapped floor waste.
- (f) The floor must be coved at the intersection with the walls.
- (g) The walls of the food preparation area must be of solid construction and finished with glazed ceramic tiles or other rigid, smooth-faced impervious material.
- (h) Ceilings within the food preparation and storage areas must be free of gaps and open joints and must be finished with an impervious sealed material. Drop in panels are not permitted in food preparation areas, food storage areas or areas where open food is displayed or served.
- (i) Hand wash basin/s, with hot and cold running water mixed through a common spout, hand wash soap and hand drying facilities must be provided in all food preparation bar areas, and toilets used by food handlers and must be no further than 5m travel distance from a place where a food handler is handling food. All taps to hand wash basins must be hands free. (For example: sensor taps, knee operated taps or foot pedal taps). Liquid soap and paper towel dispensers or other hand drying facilities must be located next to and in close proximity the hand wash basin.
- (j) A double bowl sink or two compartment tub (the capacity of which must be capable of fitting all food contact equipment) must be provided in the food preparation area, in addition to the hand basin, or a single bowl sink and a dishwasher must be provided in the food preparation or designated area, (where all the food contact equipment will fit in the dishwasher) in addition to the hand basin.
- (k) A separate and dedicated food preparation sink is to be provided within the food premises where foods are prepared by immersion in water.
- (I) A cleaners' sink for the purpose of cleaning floor mops and other cleaning equipment must be provided within the premises, preferably in the garbage room or separate from the food preparation and storage area.
- (m) The appliances used to store potentially hazardous food must have a capacity to keep food hotter than 60oC or colder than 5oC and be provided with a thermometer, accurate to 1oC and which can be easily read from outside the appliance.
- (n) All food is to be transported, stored and displayed in a manner that protects the food from likely contamination in accordance with the provisions of Standard 3.2.2 of the Food Standards Code under the Food Act 2003.
- (o) All unpackaged ready to eat food for self-service must be provided and maintained with protective barriers and have separate serving utensils, in accordance with Standard 3.2.2 of the Food Standards Code under the Food Act 2003.
- (p) The sanitary facilities must be separated from all food handling areas via an airlock, self-closing door or mechanical ventilation in accordance with the provisions of the Building Code of Australia, Part F 3.1, 4.8 and 4.9.
- (q) Clothing lockers or change rooms for male and female staff must be provided in the premises in a separate location to the food handling and storage areas.

- (r) To ensure the adequate storage and collection of waste from the occupation or the use of the food premises, all garbage and recyclable materials emanating from the premises must be stored in a designated waste storage area. The waste storage area must be designed and constructed in accordance with AS 4674 Design, Construction and Fitout of Food Premises, and must be:
 - (i) Provided with a hose tap connected to the water supply;
 - (ii) Paved with impervious floor materials;
 - (iii) Coved at the intersection of the floor and walls;
 - (iv) Graded and drained to a waste disposal system in accordance with the relevant regulatory authority (Sydney Water);
 - Adequately ventilated (mechanically or naturally) so that odour emissions do not cause offensive odour as defined by the Protection of the Environment Operations Act 1997;
 - (vi) Fitted with appropriate interventions to meet fire safety standards in accordance with the Building Code of Australia. Detailed plans and specifications for the construction of the waste storage area are to be submitted to the Certifying Authority with the Construction Certificate.
- (s) Cool room(s), refrigerated chambers and strong-rooms are to be constructed in accordance with G 1.2 of the Building Code of Australia.
 - (i) The floor of the coolroom must be graded to the door and a floor trapped waste outlet must be located outside the coolroom as near as possible to the door opening.
 - (ii) All proposed shelving in the coolroom must be free-standing, constructed of galvanised steel angle section or other approved material with the lowest shelf at least 150mm clear of the floor.
 - (iii) The floor of the coolroom must be constructed of impermeable concrete or coated, topped or otherwise finished with an impervious material to a smooth even surface and coved at the intersections with the walls to a minimum radius of 25mm.
 - (iv) A door which can be opened at all times from inside without a key
 - (v) An approved audible alarm device must be located outside the coolroom(s) but controllable only from within the coolroom(s) and be able to achieve a sound pressure level outside the chamber or coolroom(s) of 90 d B (A) when measured 3 metres from the sounding device.
- (t) All service pipes, electrical conduits, refrigeration condensate pipes and the like must be chased into walls and floors or at least 25mm off the wall.
- (u) All openings in walls, floors and ceilings, through which service pipes pass, must be vermin proof.
- (v) Where fittings are butt joined together they must be sealed to eliminate any cavities or crevices. Alternatively, a clear space of at least 75mm is to be provided between fittings.
- (w) The following requirements apply to clearances and supports of equipment:
 - (i) All stoves, refrigerators, cupboards and similar fittings must have metal legs made of non- corrosive metal or moulded plastic at a minimum height of 150mm above the floor. If placed flush on solid plinths the solid plinth is to be a minimum of 75 mm high.
 - (ii) All shelving must be fixed 25mm clear of the walls on solid metal brackets.
- (x) The following requirements apply to food conveyors:
 - (i) The area (well) at the bottom of the food lift must be designed to allow access for cleaning.
 - (ii) The outside wall surface of the lift shaft must be finished to match the surrounding wall surface and coved to a minimum radius of 25 mm at the intersection with the floor.
 - (iii) The internal surfaces of the food lift must be a smooth cement finish and coved at all angles.
- (y) A grease trap (if required by Sydney Water) must not be installed in any kitchen, food preparation or food storage area. The grease trap room must have a piped connection to the boundary so that it can be emptied. Note: Sydney Water Authority also have requirements for grease arrestors that you need to comply with.

4 Conclusion

The recommendations given in the body of this report are to be taking into consideration at construction certificate and certification stage and note general compliance with relevant parts of the BCA Vol 1 2019.

PCA have formed the view that, the part of the tenancy related to the change of use to an food and drink premises, is capable of complying with the relevant clauses of the BCA Vol 1 2019 and AS4674-2004 pertaining to the new use.

The finer details of BCA compliance are to be assessed and advised at the Construction Certificate stage.

*** END OF REPORT ***