Building Code of Australia report

Proposed villas

Jordan Springs Boulevard, Jordan Springs

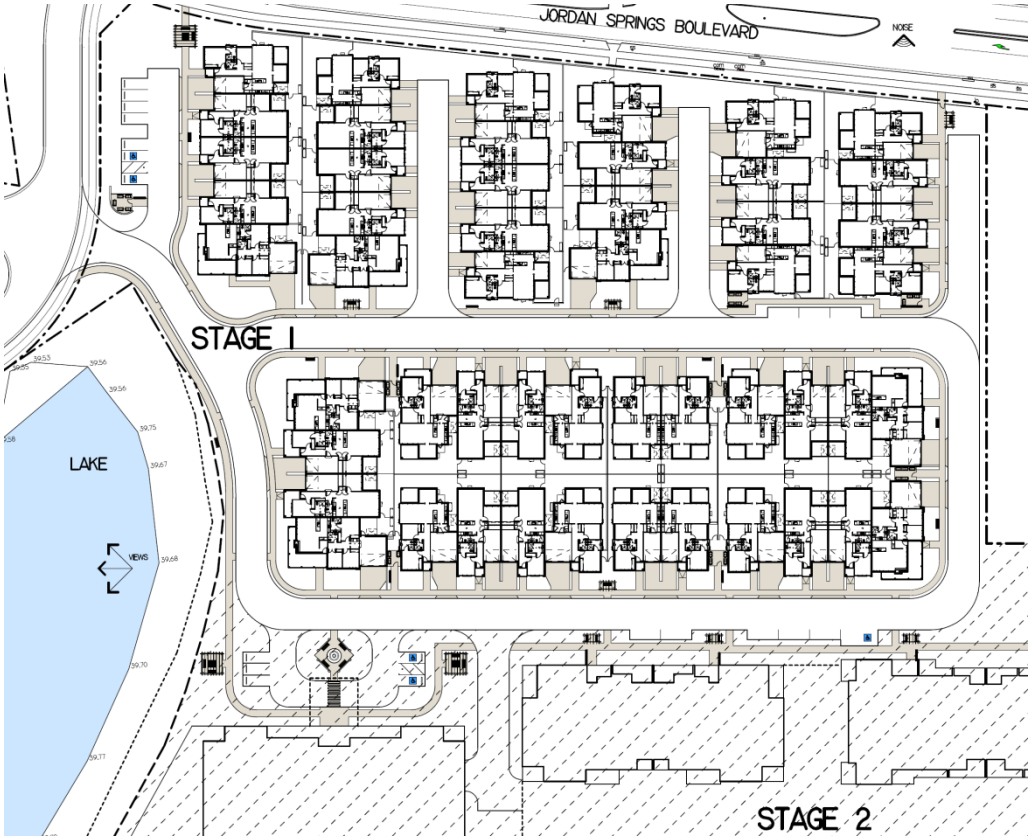
Reference: 27-Jun-18 (Jordan Springs)

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

1 Executive summary

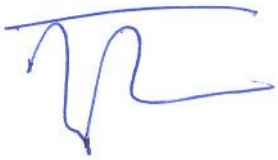
1.1.1 The proposal is to construct fifty one (51) single storey Class 1a dwellings as part of Stage 1 of the Jordan Springs development (**the development**), which is located at Jordan Springs Boulevard, Jordan Springs as shown in Figure 1 below.

Figure 1 (Location plan)



1.1.2 Each dwelling is served by an attached Class 10a private garage, alfresco and front porch. The buildings are located on one lot and each building is a separate fire source to other buildings.

1.1.3 This report demonstrates that the development is capable of complying with the Building Code of Australia Volume 2 2016 (**BCA**) and is suitable for submission with the development application.



Michael Wynn-Jones

B App Sc (Bld Surv)(Hons), M App Sc (Fire Safety Design)
Accredited certifier (Building) Grade 1 (BPB0448)

for Michael Wynn-Jones & Associates

2 Introduction

2.1 Background

2.1.1 My name is Michael Wynn-Jones and I am the author of this report. A summary of my qualifications and experience is provided in **Appendix A**. This report is based on the development as depicted in plans by A&N Design Group Sydney [1].

2.1.2 The NSW Environmental Planning and Assessment Act requires that building work must comply with the BCA, and that such work must not commence until a complying development certificate or construction certificate is issued for the work.

2.1.3 Compliance with the BCA can only be achieved by complying with the deemed to satisfy solutions (**DTS Solutions**) in the BCA, formulating a Performance Solution which demonstrates compliance with the BCA, or by a combination of both.

2.1.4 DTS Solutions are prescribed provisions in the BCA that satisfy the performance requirements in the BCA, whilst a Performance Solution is an alternative method of complying with the BCA.

2.1.5 A reference to a Part or clause number in this report is a reference to a Part (e.g. Part 3.1.1) or clause (e.g. Clause 3.7.1) in the BCA, unless otherwise advised.

2.1.6 Reference to a Performance Solution is a reference to a Performance Solution that would be developed as part of the construction certificate application.

2.1.7 The term 'will comply' in this report means that the proposal is to comply with a DTS Solution, except where otherwise advised. Where no details are provided on the plans referred to 2.1.1 above the term is a statement of design intent, and the extent of compliance will be determined at construction certificate stage.

2.2 Purpose of report

2.2.1 The purpose of this report is to provide a general overview of the proposed building work in terms of compliance with the BCA. The report is suitable for submission with the development application.

2.2.2 This report does not address:

(a) Strict compliance with the BCA;

(b) Access for people with a disability or the Disability Discrimination Act;

(c) Energy Efficiency or the BASIX commitments; or

(d) Council's policies.

[1] Drawing AND-28405, Sheets 1 to 10 issue H

3 Site Preparation

3.1 Earthworks

3.1.1 Earthworks and excavations will comply with Part 3.1.1 of the BCA.

3.1.2 The requirements of any Geotechnical Site report and/or site classification report will be incorporated into the site works.

3.1.3 Adequate foundation material will be provided in accordance with the Geotechnical report and or site classification report, as defined by the structural engineering design.

3.2 Stormwater drainage

3.2.1 Stormwater drainage will comply with AS 3500.3-2015 (Stormwater Drainage) or AS 3500.5-2012 (Housing installations) and will comprise inter-allotment drainage allowing stormwater to discharge to the street.

3.2.2 Stormwater construction will comply with the requirements of any geotechnical or structural engineer.

3.3 Termite protection

3.3.1 Termite protection will comply with AS 3660.1-2000 (Termite management) or AS 3660.1-2014 (New building work).

4 Main construction

4.1 Footings and slabs

4.1.1 The footing and flooring system will comprise reinforced concrete slab construction. Footings and slabs for each building will comply with Part 3.2.2 of the BCA and with AS 2870-2011 (Residential slabs and footings).

4.1.2 The foundation material for each building will be classified by the geotechnical or structural engineer in accordance with AS 2870-2011 (Residential slabs and footings).

4.2 Masonry

4.2.1 External walls will be predominantly brick veneer construction to the Class 1a dwellings and masonry to the garages, with some external walls being clad with weatherboard. Masonry construction will comply with AS 3700-2011 (Masonry structures) Amdt 1 and articulation joints in masonry elements will comply with Part 3.3.1 of the BCA.

4.2.2 Weatherproofing of masonry elements will comply with Part 3.3.4 of the BCA and with AS 3700-2011 (Masonry structures) Amdt 1. Damp-proof courses will comply with Part 3.3.4 of the BCA and with AS 3700-2011 (Masonry structures) Amdt 1.

4.3 Framing

4.3.1 Timber framing will comply with Part 3.4.3 of the BCA and with AS 1684.2-2010 (Residential timber-framed construction in Non-cyclonic areas) Amdt 1 or AS 1684.4-2010 (Residential timber-framed construction-Simplified — Non-cyclonic areas) Amdt 1. Timber trusses will comply with the relevant engineering standards.

4.4 Roof and wall cladding

4.4.1 The metal roof cladding will comply with Part 3.5.1 of the BCA and with AS/NZS 1562.1-1992 Design and installation of sheet roof and wall cladding and AS 2050-2002 (Installation of roof tiles) Amdt 1.

4.4.2 Wall cladding will comply with Part 3.5.3 of the BCA.

4.5 Roof drainage

4.5.1 Gutters and downpipes will comply with Part 3.5.2 of the BCA and with AS/NZS 3500.3-2015 (Stormwater Drainage) or AS 3500.5-2012 (Housing installations).

4.6 Glazing

4.6.1 Glazed assemblies in external walls will comply with Part 3.6 of the BCA and with AS 2047 -2014 (Windows and external doors in buildings).

4.6.2 Glazed assemblies not located in external walls including glazed doors, windows and shower screens will comply with Part 3.6 of the BCA and with AS 2047 -2014 (Windows and external doors in buildings) and AS 1288-2006 (Glass in buildings— Selection and Installation) Amdt 2.

5 Fire Safety

5.1 External walls

5.1.1 The majority of the external walls of Class 1 and Class 10 buildings will comply with the fire resistance requirements in Part 3.7.1 of the BCA where required by the BCA.

5.1.2 A Performance Solution will likely address the suitability of the fire resistance of some external walls, eaves, gutters and downpipes, and other construction between external walls to adjoining buildings where the walls are required to be fire resisting.

5.2 Separating walls

5.2.1 Fire resisting walls required to separate Class 1 buildings (**separating walls**) or a Class 1 building from a Class 10a building not appurtenant to that Class 1 building will comply with Part 3.7.1.8 of the BCA.

5.2.2 Separating walls will achieve a fire resistance level of not less than 60/60/60, will commence at the footings or ground slab and will extend to the underside of a noncombustible roof covering.

5.3 Smoke alarms

5.3.1 Smoke alarms will be installed in Class 1 buildings in accordance with Part 3.7.2 of the BCA, will comply with AS 3786-1993 (Smoke alarms) Amdt 4 or AS 3786-2014 (Smoke alarms using scattered light, transmitted light or ionization) Amdt 1 and will be connected to the consumer mains power supply.

5.4 Roof lights

5.4.1 Any roof lights will comply with clause 3.7.1.10 of the BCA and will be located not less than 900 mm from the centre of the separating wall.

6 Health and Amenity

6.1 Wet areas

6.1.1 Wet areas [2] in Class 1 buildings will be waterproofed and will comply with Part 3.8.1 of the BCA and AS 3740-2010 (Waterproofing of wet areas in residential buildings) Amdt 4.

6.2 Room sizes

6.2.1 Ceiling heights will comply with Part 3.8.2 of the BCA as follows:

(a) in a habitable room excluding a kitchen — 2.4 m minimum;

(b) in a kitchen — 2.1 m minimum;

(c) in a corridor, passageway or the like — 2.1 m minimum;

(d) in a bathroom, shower room, laundry, sanitary compartment, airlock, pantry, storeroom, garage, car parking area or the like — 2.1 m minimum.

6.2.2 No attic rooms or rooms with a sloping ceiling are proposed.

6.3 Sanitary compartments

6.3.1 The door to a fully enclosed sanitary compartment [3] will comply with 3.8.3 of the BCA. The proposal is to ensure there is a clear space of at least 1.2 m (measured in accordance with Figure 3.8.3.3 in the BCA) between the closet pan within the sanitary compartment and the nearest part of the doorway. Where this space is not provided the door will open outwards, slide, or be readily removable from the outside of the compartment.

6.4 Lighting and ventilation

6.4.1 **Natural light** will be provided to all habitable rooms and will comply with 3.8.4.2 of the BCA.

6.4.2 Artificial light will be provided to sanitary compartments, bathrooms, shower rooms, airlocks and laundries where natural light is not available and will comply with 3.8.4.3 of the BCA.

6.4.3 Ventilation will be provided and will comply with Part 3.8.5 of the BCA.

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2 Wet area means an area within a building supplied with water from a water supply system, which includes bathrooms, showers, laundries and sanitary compartments and excludes kitchens, bar areas, kitchenettes or domestic food and beverage preparation areas.

3 Sanitary compartment means a room or space containing a closet pan or urinal

7 Safe Movement and access

7.1 Stairways, ramps and handrails

7.1.1 There is no requirement to provide a barrier along the side of any stairway or ramp, any floor, corridor, hallway, balcony, deck, verandah, or the like, or along the side of any path of access to a building, or to comply with Part 3.9.2 of the BCA, as no trafficable surface is 1 m or more above the surface beneath.

7.1.2 There is no requirement to provide handrails or to comply with 3.9.2.4 of the BCA as no stairway or ramp provides a change in elevation of 1 m or more.

7.2 Protection of openable windows

7.2.1 There is no requirement to protect openable windows or comply with 3.9.2.5 of the BCA as no floor below a window in a bedroom is more than 2 m or more above the surface beneath.

8 Sound insulation

8.1.1 The sound insulation for separating walls [4] between Class 1 buildings or between a Class 1 building and a Class 10a building not appurtenant to that Class 1 building will comply with Part 3.8.6 of the BCA.

8.1.2 Separating walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room (other than a kitchen) in an adjoining Class 1a building will be discontinuous construction [5].

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4 The sound insulation requirements will apply to the entire separating wall, including that portion of the wall above the ceiling.

5 Discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and:

- for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and
- for other than masonry, there is no mechanical linkage between leaves except at the periphery.

9 Appendix A (Wynn-Jones CV)

After refining his skills and knowledge for 13 years as a Local Government Building Surveyor Michael established a consulting company and joined Western Sydney University as a lecturer in 1993.

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'.

He has been teaching building regulations courses through the UTS Centre for Local Govt. since 1995 and worked with CSIRO in 1995/1996 on Fire Code Reform and the first Fire Engineering Guidelines.

After leaving the 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 introduction of private certification, the complying development codes, the Federal Premises Standards and a review of fire safety systems.

Accredited at the highest level as an 'A1 private certifier' since 1997 and co-author of one of the original accreditation schemes later administered by the Building Professionals Board (**BPB**), he was appointed to the BPB Board for 4 years in 2008 and for some of that time was Deputy President.

Michael has personally provided consulting services for over 20 years to the private and public sectors as a 'Building Regulations' expert and consultant. His relevant qualifications, accreditations and details are as follows:

- MAppSc (Fire Safety Design), Western Sydney University (WSU), 1996
- BAppSc (Building Surveying), Hons, University of Technology Sydney (UTS), 1986
- AssDip AppSc (Health & Building Surveying), TAFE, Sydney (1988)
- A1-Accredited Certifier-Building Surveying (NSW Building Professionals Act)
- Qualified Principal Building Surveyor and Fire Engineer
- Conjoint Professor, Arch/Built Environment, Newcastle University (2010 to 2015)
- Associate, Centre for Local Govt, University 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)