

**BCA COMPLIANCE  
CAPABILITY REPORT**

**PREPARED FOR**  
St Johns Park Club Limited

**PREMISES**  
13 Park Drive  
Wallacia NSW 2745

**DATE**  
27 November 2019

**PROJECT NO.**  
J190372

## TABLE OF CONTENTS

<b>CONTENTS</b>	<b>Page No.</b>
<b>1.0 EXECUTIVE SUMMARY.....</b>	<b>4</b>
<b>2.0 REPORT SUMMARY .....</b>	<b>5</b>
2.1 – <i>LOCATION</i> .....	5
2.2 – <i>BUILDING DESCRIPTION</i> .....	5
<b>3.0 – BUILDING CODE OF AUSTRALIA ASSESSMENT .....</b>	<b>6</b>
3.1 – <i>FIRE RESISTANCE AND STABILITY (SECTION C, BCA)</i> .....	6
3.2 – <i>ACCESS &amp; EGRESS (SECTION D, BCA)</i> .....	9
3.3 – <i>SERVICES AND EQUIPMENT (SECTION E, BCA)</i> .....	12
3.4 – <i>HEALTH AND AMENITY (SECTION F, BCA)</i> .....	14
3.6 – <i>ENERGY EFFICIENCY (SECTION J, BCA)</i> .....	16
<b>4.0 FIRE SAFETY AND OTHER MEASURES.....</b>	<b>17</b>
<b>5.0 CONCLUSION .....</b>	<b>18</b>
5.1 – <i>CONCLUSION</i> .....	18
<b>6.0 REFERENCES.....</b>	<b>19</b>
6.1 – <i>BASIS OF REPORT</i> .....	19

**Project:** Proposed alteration and additions to existing Wallacia Country Club – 13 Park Drive,  
Wallacia.

The following report register documents the development and issue of this and each subsequent report(s) undertaken by Vic Lilli & Partners Pty Ltd.

REVISION	DATE	COMMENT	PREPARED BY
01	27 November 2019	Final BCA Report	MP

## 1.0 Executive Summary

---

The following BCA compliance assessment report has been prepared at the request of St Johns Park Club Limited for the purpose of the proposed alterations and additions development at 13 Park Drive, Wallacia.



*Photo 1. Site Plan*

This report has been prepared to identify the extent of compliance achieved by the architectural documentation against the relevant provisions of the Building Code of Australia (BCA) 2019 and adopted standards.

This report will provide the consent authority with a BCA analysis to assist in the determination of the application.

## 2.0 Report Summary

---

### 2.1 – Location

The subject building is to be located at 13 Park Drive, Wallacia.

### 2.2 – Building Description

<b>Classification</b>	Class 9b – Registered Club Class 10b – Swimming Pool
<b>No. of Storeys</b>	The portion of the building to which this report relates to consists of two (2) stories.
<b>Effective Height</b>	The entire building has an effective height less than 12m.
<b>Type of Construction (BCA)</b>	The building is to adopt Type C construction throughout
<b>Floor Area Limitations</b>	Class 9b – Maximum floor area- 3,000 m <sup>2</sup>  This size of the fire compartments associated with the Class 9b do not exceed the maximum size of fire compartments permitted in Table C2.2 of the BCA.
<b>Volume Limitations</b>	Class 9b – Maximum volume – 18,000 m <sup>3</sup>  This size of the fire compartments associated with the Class 9b do not exceed the maximum size of fire compartments permitted in Table C2.2 of the BCA.
<b>Climate Zone</b>	Zone 6

## 3.0 – Building Code of Australia Assessment

### 3.1 – Fire Resistance and Stability (Section C, BCA)

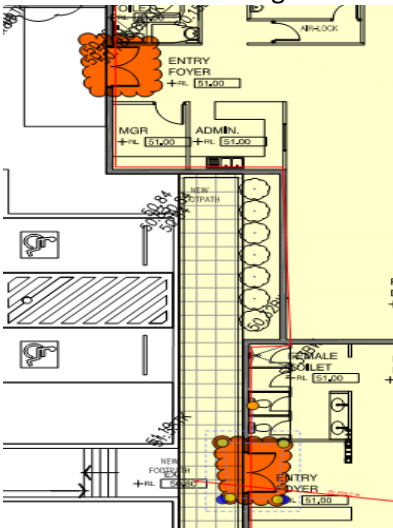
Item	Comment
<p><i>Fire Resistance</i></p>	<p>The proposed building structure is required to comply with the fire resistance levels of Type C construction as required in Clause C1.1 and Clause 5 of Specification C1.1 for Type C construction. Refer to Table 5 of Specification C1.1 for the specific FRL's.</p> <p><b>Structural:</b> the ability to maintain stability and adequate load-bearing capacity as determined by AS 1530.4.  <b>Integrity:</b> the ability to resist the passage of flames and hot gases specified in AS 1530.4.  <b>Insulation:</b> The ability to maintain a temperature on the surface not exposed to the furnace below the limits specified in AS 1530.4.</p>
<p><i>Non-combustible building elements</i></p>	<p>The following building elements and their components must be non-combustible:</p> <ul style="list-style-type: none"> <li>➤ External walls and common walls</li> <li>➤ The flooring and floor framing of lift pits</li> <li>➤ Non-loadbearing internal walls where they are required to be fire-resisting</li> <li>➤ Shafts, being a lift, stair, ventilation, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing</li> </ul> <p>Concessions apply to specific materials nominated in BCA Clause C1.9(d) and (e).</p> <p><u><i>Provide details of the external wall detail for assessment and approval.</i></u></p>

Item	Comment
<i>Fire hazard properties</i>	<p>The fire hazard properties of all materials, assemblies, fixtures and linings are to comply with Specification C1.10 of the BCA, as applicable.</p> <p>For the Class 9c aged care component, the critical radiant flux of floor lining and floor coverings must not be less than that specified in Table 2 of Specification C1.10.</p> <p>Full documentation (including fire test certification) are to be provided for assessment at the Construction Certificate stage.</p>
<i>Attachments not to impair fire-resistance</i>	<p>In accordance with BCA Specification C1.1 Clause 2.4, the method of attaching or installing a finish, lining, ancillary element or service installation to the building must not reduce the fire-resistance of that element to below that required.</p>
<i>Fire Sealing of penetrations</i>	<p>Penetrations to all floors and walls, that are required to be fire rated, must achieve the FRL required for the respective classification as detailed in Specification C1.1. Protection shall be achieved by either by a fire rated shaft or in accordance with Clause/Specification C3.15 of the BCA.</p> <p>Further details relating to the proposed service and/or shaft location and type of passive protection shall be provided for compliance assessment in accordance with BCA Clause C3.12 and C3.15 during the Construction Certificate design phase.</p>
Protection of equipment.	<p>The following equipment is to be fire separated with construction complying with BCA Clause C2.12 (d).</p> <ul style="list-style-type: none"> <li>i. lift motors and lift control panels; or</li> <li>ii. emergency generators used to sustain emergency equipment operating in the emergency mode; or</li> <li>iii. central smoke control plant; or</li> <li>iv. boilers; or</li> <li>v. a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours.</li> </ul> <p>Separation of on-site fire pumps must comply with the Prescriptive requirements of BCA Clause E1.3 and AS 2419.1-2005.</p> <p>Where required to be installed in the subject development, compliance must be achieved with the prescriptive requirements of the BCA.</p> <p>Full documentation is to be provided for assessment at the Construction Certificate stage.</p>

<b>Item</b>	<b>Comment</b>
<i>Electricity supply</i>	Electrical equipment must be separated from the remainder of the building by construction achieving compliance with BCA Clause C2.13.

### 3.2 – Access & Egress (Section D, BCA)

Item	Comment
Number of exits required	Based on my assessment of the plans, compliance with the requirements of BCA Clause D1.2 has been achieved.
<i>Exit travel distances and distance between exits</i>	Based on my assessment of the plans, travel distances comply with the prescriptive requirements of BCA Clauses D1.4 and D1.5.
<i>Dimensions of exits</i>	<p>Exits and paths of travel to exits are to comply with BCA Clause D1.6.</p> <p>Generally, unobstructed width of each exit or path of travel to an exit, except for doorways, <u>must be not less than 1m.</u></p> <p>Further assessment is required at the Construction Certificate Stage.</p>
<i>Construction of Stairways.</i>	<p>Goings and risers are to be designed to comply with the provisions of Clause D2.13 of the BCA.</p> <p>Stairway design and construction shall strictly comply with the requirements specified within the provisions of Clause D2.13 of the BCA.</p> <p>Riser (R) dimensions shall be between 115mm-190mm and going (G) dimensions between 250mm – 355mm.</p> <p>The quantity (2R+G) shall be between 550mm-700mm.</p> <p>Stairway landing design and construction shall strictly comply with the requirements specified in Clause D2.14 of the BCA.</p> <p>Generally, landings shall be not less than 750mm long and a maximum gradient of 1:50.</p> <p>Threshold design and construction shall strictly comply with the requirements specified in Clause D2.15 of the BCA.</p> <p>Generally, the threshold of a doorway must not incorporate a step or ramp at any point closer than the width of the door leaf.</p> <p>It is important to note that BCA Clause D2.15(c) requires a threshold ramp complying with AS 1428.1-2009.</p>
<i>Electrical distribution boards</i>	<p>Electrical distribution boards located in the path of travel to an exit must be enclosed in a non-combustible enclosure and sealed to prevent the escape of smoke.</p> <p>Further confirmation is required relating to the proposed location of Electrical/Communication Distribution Boards, main switch room and the like for compliance assessment during the Construction Certificate design phase.</p>

Item	Comment
<p><i>Balustrades</i></p>	<p>Balustrades must be provided for all areas where it is possible to fall more than 1m. Balustrades are to be designed in accordance with Clauses D2.16 of the BCA.</p> <p>Balustrades protecting a difference in levels of over 4m must not have horizontal elements between 150mm and 760mm of the floor that facilitate climbing.</p>
<p><i>Handrails</i></p>	<p>Handrail design and construction shall strictly comply with the requirements specified in BCA Clause D2.17.</p> <p>Generally, handrails must be provided to all stairways at a height not less than 865mm measured above the nosings of the stair treads.</p>
<p><i>Egress Doors</i></p>	<p>All required doorways are to swing in the direction of egress and will be provided with the appropriate hardware in accordance with Clauses D2.20 &amp; D2.21 of the BCA.</p> <p>Final discharge doors will be required to swing in the direction of egress and any automatic door located in a path of travel will be required to be fitted with fail safe operation.</p> <p>These doors shall swing out:</p> 

Item	Comment
<p><i>Access for people with disabilities.</i></p>	<p>The building is to comply with:</p> <ul style="list-style-type: none"> <li>▪ The Disability Discrimination Act 1992);</li> <li>▪ The Disability (Access to Premises — Buildings), Standards 2010;</li> <li>▪ Part D3 of the BCA;</li> <li>▪ Australian Standard AS 1428.1-2009.</li> </ul> <p>Buildings and parts of buildings must be accessible as required by Table D3.1, unless exempted by D3.4, which requires access as follows:</p> <p><b>Class 9b</b> – To and within all areas normally used by the occupants.  <b>Class 10b</b>-to and into swimming pools with a total perimeter greater than 40m.</p> <p>Proposes pool has a perimeter of approximately 48m.</p>

### 3.3 – Services and Equipment (Section E, BCA)

Item	Comment
Smoke Detection System for automatic shutdown of air-handling System	System shall comply with NSW Table E2.2b
Hydrant Systems	<p>The building is required to be provided with a hydrant system in accordance with the provisions of Clause E1. 3 of the BCA and AS2419.1.</p> <p>The external booster valve assembly and any pump rooms are required to be located and installed in compliance with BCA Clause E1.3(b) and AS 2419.1-2005. <u>The location of the booster assembly is to be nominated on the architectural drawings for review and comment.</u></p> <p>The fire hydrant system is to be designed and certified by a hydraulic engineer or other competent hydraulic designer at the construction certificate stage.</p>
Hose Reel Systems	<p>The building is required to be provided with a fire hose reel system in accordance with the provisions of BCA Clause E1.4 and AS2441–2005.</p> <p>The fire hose reel system is to be designed and certified by a hydraulic engineer or other competent hydraulic designer at the construction certificate stage.</p>
<i>Portable Fire Extinguishers</i>	<p>Fire extinguishers will be provided in accordance the provisions of BCA Clause E1.6 and AS2444 - 2001.</p> <p>Further details shall be provided for compliance assessment during the Construction Certificate design phase.</p>
<i>Emergency Lighting</i>	<p>Emergency lighting will be provided throughout the building in accordance with Clauses E4.2 &amp; E4.4 of the BCA and AS2293.1-2018. Clause E4.2(h) of the BCA exempts an emergency light to be provided within sole-occupancy units.</p> <p>The design of the service will be subject to review by the electrical services consultant.</p>
<i>Exit Signs</i>	<p>Exit signs will be provided throughout the building in accordance with Clauses E4.5, E4.6 &amp; E4.8 of the BCA and AS2293.1-2018.</p> <p>The design of the service will be subject to review by the electrical services consultant.</p>

<b>Item</b>	<b>Comment</b>
<i>Lifts</i>	<p>The proposed lifts shall comply with all requirements nominated by AS1735.12 and BCA 2019 Clause E3.6, with regards to facilities for people with disabilities, lift floor dimension of not less than 1100 mm wide x 1400 mm deep.</p> <p>A sign must be provided in accordance with NCC Clause E3.3 warning against the use of lifts in a fire.</p>

### 3.4 – Health and Amenity (Section F, BCA)

Item	Comment
<i>Damp &amp; Weatherproofing</i>	The development will be provided with damp-proofing as required by NCC Clauses F1.9 and F1.10 .
Sanitary & Other Facilities.	<p>The development will be provided with sanitary facilities in accordance with Table F2.3 of the BCA</p> <p>The accessible W/C and ambulant toilets are required to comply with the requirements of AS1428.1-2009.</p> <p>Facilities will need to be provided in accordance with the provisions of AS1428.1 – 2009 and Section F2 of the BCA.</p> <p>Provide ambulant each bank of toilets in pool and gym areas.</p>
<i>Ceiling height</i>	<p>The following minimum building ceiling heights must be maintained.</p> <ul style="list-style-type: none"> <li>▪ Common kitchen, laundry or the like – 2.1m</li> <li>▪ Commercial kitchen – 2.4m</li> <li>▪ Corridor, passageway or the like – 2.4m</li> <li>▪ Bathroom, shower, sanitary compartment or the like – 2.1m</li> <li>▪ Habitable rooms excluding a kitchen – 2.4m</li> <li>▪ Stairways, ramp, landing or the like – 2.0m</li> </ul>
<i>Lighting</i>	<p>In accordance with BCA Clause F4.4 Artificial light must be provided in required stairways, passageways, ramps and to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairs, other circulation spaces and paths of egress. Further details are to be provided at construction certificate to ensure compliance with F4.4</p> <p>The artificial lighting system must comply with AS/NZS 1680.0.</p>
<i>Ventilation</i>	<p>The building is required to be provided with ventilation in accordance with the provisions of Clause F4.5 of the NCC.</p> <p>Ventilation may be provided by natural means or a mechanical system complying with AS 1668.2-2012.</p>

### *3.5 – Ancillary provisions (Section G, BCA)*

N/A

### 3.6 – Energy Efficiency (Section J, BCA)

The following BCA Section J provisions are applicable to the 9c portions of the development.

Item	Comment
Building Fabric	Parts of the building forming an envelope to a conditioned space are to achieve the minimum construction requirements for insulation R-Values required by Part J1 of the BCA.
Glazing	The energy efficiency of the selected glazing must comply with Part J2 of the BCA as appropriate to Climate Zone 6 and the orientation, exposure and shading of the window.
Building Sealing	<p>Openings in the building such as doors, windows, exhaust fans and ventilation systems must be sealed to the requirements of Part J3 of the BCA as appropriate to Climate Zone 6.</p> <p>In that regard, all external doorways must be fitted with a draft seal. This requirement does not apply to fire doors fitted between the fire-isolated stairways and the conditioned areas of the building.</p>
<i>Air-Conditioning and Ventilation System</i>	The air-conditioning and ventilation system to the aged care component portion of the development with a conditioned space will be designed to comply with Part J5 of the BCA.
<i>Artificial Lighting and Power</i>	The building is to maintain maximum lighting power levels and control systems as applicable. The design of lighting systems must comply with Part J6 of the BCA.
<i>Hot Water Supply</i>	Hot water supply systems will be installed in accordance with Part J7 of the BCA and AS/NZS 3500.4.
<i>Access for Maintenance and Energy Monitoring</i>	The building is to have facilities for maintenance and energy monitoring in compliance with Part J8 of the BCA and the NSW variations.

## 4.0 Fire safety and other measures

---

### 4.1 – Existing Fire Safety Measures

In terms of the proposed works the following fire safety measures are proposed to be installed: -

<b>Fire Safety Measure</b>	<b>Minimum Standard of Performance</b>
Automatic fail safe devices	BCA 2016 Clause D2.19, D2.21, AS 1670.1- 2018
Automatic shutdown air handling systems	BCA 2019 Clause E2.3 NSW Table E2.2b
Emergency lighting	NCC 2019 Clause E4.2 & E4.4, AS 2293.1-2018
Exit and directional signage	NCC 2019 Clause E4.4, E4.5, (NSW E4.6) & E4.8, AS 2293.1-2018
Fire hydrant systems	BCA 2019 Clause C2.12, E1.3, AS 2419.1-2005
Fire hose reel systems	BCA 2019 Clause E1.4, AS 2441-2005
Portable fire extinguishers	BCA 2019 Clause E1.6, AS 2444-2001
Warning and operational signs	NCC 2019 Clause D3.6, E3.3

## 5.0 Conclusion

---

### 5.1 – Conclusion

It is the opinion of this office that, on satisfaction of the above recommendations and non-compliances, the proposed building is capable of achieving compliance with the requirements of the Building Code of Australia (BCA) 2019 and relevant adopted standards without undue modification to the design or appearance of the building.

Whilst the above recommendations have been made as a means of achieving compliance with the various provisions of BCA Performance Requirements their acceptability has not been verified at this time. It will be necessary for the design to be reviewed by an appropriately qualified person prior to the issue of a Construction Certificate for the works.

Regards,



Mariusz Para  
**Vic Lilli & Partners**

## 6.0 References

---

### 6.1 – Basis of Report

This BCA Capability report has been prepared on the basis of the following-

- (i) Architectural Plans as prepared by Axil Architects Pty Ltd.

Drawing No.	Revision	Title	Date
A0.00	P	Cover Sheet	27.09.19
A0.01	P	Location Plan Option A	27.09.19
A0.02	P	Site Plan	27.09.19
A1.01	P	Existing Lower Level Plan – Demolition	27.09.19
A1.02	P	Existing Ground Floor Plan – Demolition	27.09.19
A1.03	P	Proposed Lower Level Plan 1-200	27.09.19
A1.04	P	Proposed Ground Floor Plan	27.09.19
A1.05	P	Proposed Lower Level Plan	27.09.19
A1.06	P	Proposed Ground Floor Plan	27.09.19
A1.07	P	Proposed Pool + Gym	27.09.19
A2.01	P	Elevations – Club House	27.09.19
A2.02	P	Sections – Club House	27.09.19
A2.03	P11	Elevations & Sections New Pool + Gym	20.11.19
AA.01	P	Area Analysis Plan	27.09.19
SA.01	P	Site Analysis	27.09.19

- (ii) Building Code of Australia (BCA) 2019;
- (iii) Environmental Planning and Assessment Act, 1979, and Regulations