

# SECTION J ENERGY EFFICIENCY REPORT

**PROJECT NAME:** Commercial Development

**ADDRESS:** 26/38 Hill End Road,  
Caerleon NSW 2850

**CLIENT:** Adapt Building

## DOCUMENT CONTROL

**PREPARED BY:** Sahil Yadav

**CHECKED BY:** Siddesh Shetty

**ISSUE:** FINAL

**REVISION:** 1

**DATE:** 16/11/2022

## DTS ENERGY EFFICIENCY DECLARATION

Pursuant to NCC A2.2 (vi) this report relies on supplied documentation for assessment with regards to adopting measures contributing to deemed-to-satisfy of designed and built deliverables. This report documents the energy efficiency assessment undertaken on the proposed building work described herein to confirm compliance with the Section J – Energy Efficiency Provisions of the National Construction Code Volume One – Class 2 to Class 9 Buildings. It is our opinion that this project can be constructed to satisfy the requirements of the National Construction Code.



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# 1 - Introduction

The term Proposed Development in this report refers to Commercial Warehouse Development located at 26/38 Hill End Road, Caerleon NSW 2850.

This report presents the findings from the design assessment of the Proposed Development against the Deemed-to-Satisfy (DTS) requirements of Section J of the Building Code of Australia 2019 – Amendment 1, Volume 1, ENERGY EFFICIENCY.

The purpose of this report is to provide an assessment of the design plans and documentation for the Proposed Development and to satisfy the requirements of Local Government Area of the development for issuance of Construction Certificate for construction operations in the development site.

The scope of this report is limited to the design documentation referenced in Section 2 of this report and only covers Section J of BCA 2019 – A1, V1 provisions.

## 2 - Referenced Documents

The following documents and design plans have been referenced in compilation of this report:

1. National Construction Code Series, Volume 1, Building Code of Australia 2019 – Amendment 1, Class 2 to Class 9 Buildings.
2. Architectural Plans listed below provided by “Adapt Building” and received by Certified Energy at 10/10/2022.
  - 22323-02 – Proposed Site Plan, Revision E - Dated 30/09/2022.
  - 22323-03 – Proposed Ground Floor Plan, Revision E - Dated 30/09/2022.
  - 22323-03 – Proposed Mezzanine Floor Plan, Revision E - Dated 30/09/2022.
  - 22323-05 – Proposed Roof Plan, Revision E - Dated 30/09/2022.
  - 22323-06 to 08 – Elevations, Revision E - Dated 30/09/2022.
  - 22323-09 – Section Views, Revision E - Dated 30/09/2022.
3. Email correspondence and response to information request received from “Ed Croskill” of the Proposed Development.



## 3 – Proposed Development

The Proposed Development in this report is construction of a “Commercial Development – Warehouse” located at 26/38 Hill End Road, Caerleon NSW 2850.

The development is a class 7b building in BCA Climate Zone 6 according to BCA Climate Map for NSW.

The following construction elements are being proposed in the building design according to architectural plans and design documents referenced in this report:

**Roof and Ceiling:** Colourbond Metal roof.

**External Walls:** Tilt-up Concrete Panel.

**Internal Walls:** N/A

**Floors:** Concrete slab on ground; suspended timber floor

**Windows:** Standard Aluminium framed windows.

**Skylights:** No skylights.

**Air Conditioning System:** N/A. All spaces are unconditioned.

**Lighting System:** No design plans provided.

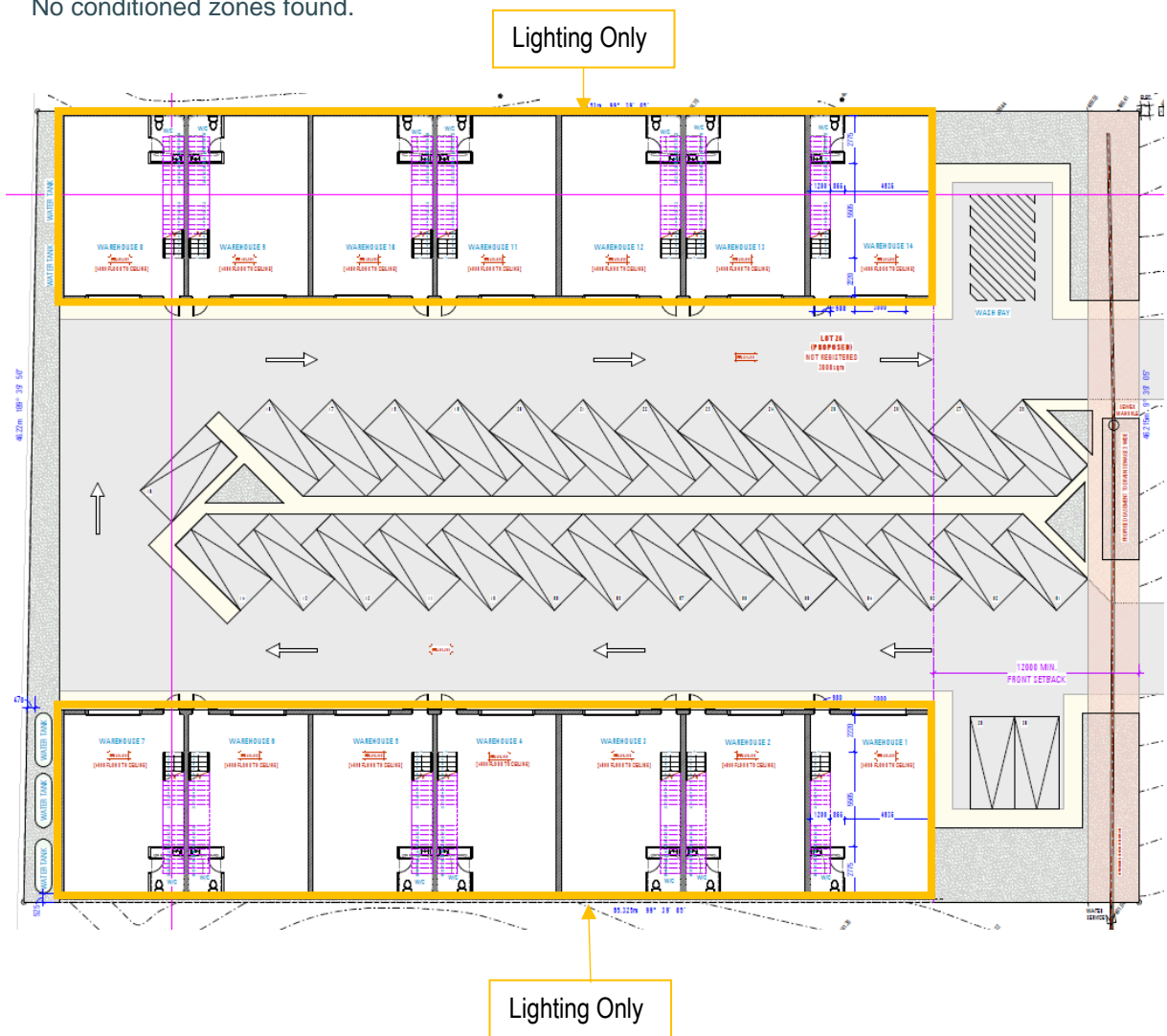
# 4 - Scope of Report (Building Envelope)

“**Envelope**”, for the purposes of Section J, means the parts of the buildings fabric that separate a conditioned space or habitable room from-

- » the exterior of the building; or
- » a non-conditioned space including-
  - (i) the floor of a rooftop plant room, lift-machine room or the like; and
  - (ii) the floor above a carpark or warehouse; and
  - (iii) the common wall with a carpark, warehouse or the like.

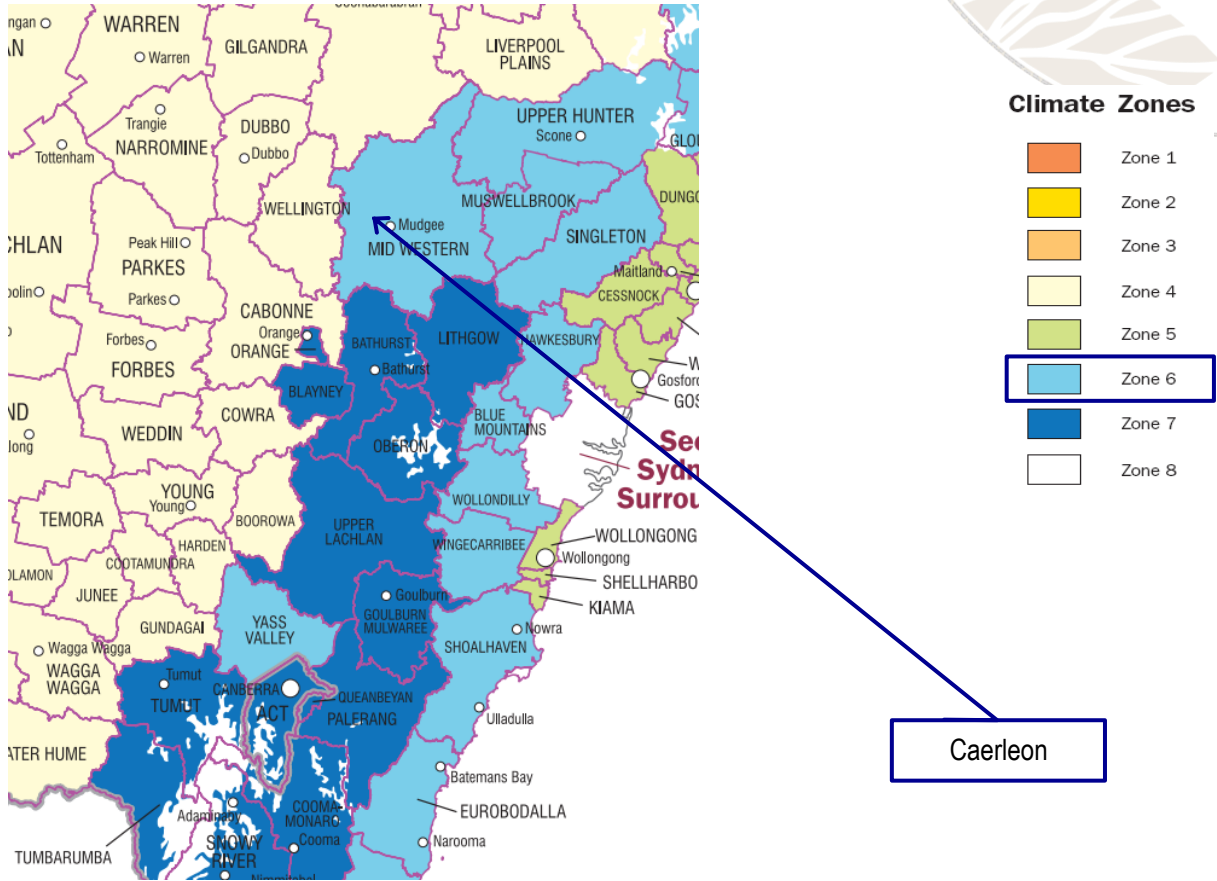
## Conditioned Space Note:

No conditioned zones found.



# 5 - Project Classification and Climate Zone

## BUILDING CLASS 7b



CLIMATE	COLOUR	SUBURB
ZONE 6	LIGHT BLUE	CAERLEON

### Climate Characteristics of Zone 6

#### Mild Temperate:

- Low day-night temperature range near coast, high range inland
- Four distinct seasons: summer and winter exceed human comfort range; spring and autumn are ideal for human comfort
- Mild to cool winters with low humidity
- Hot to very hot summers, moderate humidity

### Key design objectives

Minimising heating and cooling energy use should be a primary design objective

# 6 - NCC Section J Compliance Provisions

This section analyses the current elements of the of Proposed Development design against provisions of Section J of the Building Code of Australia 2019 – Amendment 1, Volume 1, Energy Efficiency. In case of a non-complying element, advisory notes are provided to bring the building in compliance with Section J requirements.

A summary note of these provisions is provided in **Section 7-Conclusions** of this report that can be incorporated into specification blocks of architectural plans and, as a result, be deployed during construction. It is however the responsibility of the entity responsible for the submission of the design plans and documents to the council to ascertain each and every element of this report is clearly referenced and reflected on the submitted plans and documents.

## 6.1 – Part J1 Building Fabric

	Building Element	Energy Efficiency Provisions	Corresponding BCA Part
<b>J1.3 Roof and ceiling construction</b>			
1	Roof	N/A. All spaces are unconditioned	N/A
<b>J1.5 Walls and Glazing</b>			
2	External Wall	N/A. All spaces are unconditioned	N/A
3	Internal Wall	N/A. All spaces are unconditioned	N/A
4	All elevation glazing	N/A. All spaces are unconditioned	N/A
<b>J1.5 Floors</b>			
5	Floors	N/A. All spaces are unconditioned	N/A

## 6.3 – Part J3 Building Sealing

	Building Element	Energy Efficiency Provisions	Corresponding BCA Part
1	Each edge of a door, all openable windows, or the like forming part of the envelope of a conditioned space	N/A. All spaces are unconditioned	N/A
2	Exhaust fans of the conditioned areas of the Proposed Development if any	N/A. All spaces are unconditioned	N/A
3	Roofs, ceilings, walls, floors, windows frame, door frame and roof light frame of the conditioned areas of the Proposed Development	N/A. All spaces are unconditioned	N/A
4	Evaporative coolers	All evaporative coolers serving heated space or, habitable room/public area in climate zones 4 to 8, must be fitted with a self-closing damper or the like	Part J3.7

## 6.4 – Part J5 Air-Conditioning and Ventilation Systems

	Building Element	Energy Efficiency Provisions	Corresponding BCA Part
1	No design plans provided	N/A	N/A



## 6.5 – Part J6 Artificial Lighting and Power

	Building Element	Energy Efficiency Provisions	Corresponding BCA Part
1	Lighting electrical power of the Proposed Development	Maximum design power allowed is 4830 Watts	Part J6.2 (b)
2	Artificial light switch or other lighting control devices of Proposed Development	Artificial lighting of a room or space must be individually operated by a switch or other control device. An artificial lighting switch must be located in a visible position.	Part J6.3(c)(ii)(B)
3	Windows display lighting if installed	Must be controlled separately from other display lighting.	Part J6.4(b)
4	External lighting of the Proposed Development if installed	Must be controlled by either a daylight sensor or a time switch which is capable of being pre-programmed for different times of the day on variable days. *	Part J6.5 (a)(i)
5	If the total perimeter lighting load of the Proposed Development exceeds 100 Watts	Use LED luminaires for 90% of the total lighting load or control with a motion detector device in accordance with Specification J6 except when providing emergency lighting in accordance with Part E4	Part J6.5 (a)(ii)
6	Façade lighting or signage lighting of the Proposed Development if installed	Must be provided with a separate time switch in accordance with Specification J6. *	Part J6.5 (a)(iii)

## 6.6 – Part J7 Hot Water Supply and Swimming Pool and Spa Pool Plant

	Building Element	Energy Efficiency Provisions	Corresponding BCA Part
1	Hot water supply of the Proposed Development	Must be designed and installed in accordance with Part B2 of NCC Volume Three- Plumbing Code of Australia	Part J7.2

## 6.7 – Part J8 Access for Maintenance and Facilities for Monitoring

	Building Element	Energy Efficiency Provisions	Corresponding BCA Part
1	For the Proposed Development with a floor area of more than 500m <sup>2</sup>	Provide facilities to record gas and electricity consumption	Part J8.3(a)



## 7 - Conclusions

Considering the design elements nominated on the Proposed Development provided by Adapt Building the following can be concluded for the Proposed Development to meet the Deemed to Satisfy requirements of Section J of the Building Code of Australia 2019 – Amendment 1, Volume 1, Energy Efficiency;

### **Part J1 – Building Fabric:**

#### Roof & Ceiling:

» N/A

#### Roof lights:

» N/A

#### Walls:

» N/A

#### Glazing:

- N/A

#### Flooring:

» N/A

#### Insulations:

- N/A

### **Part J3 – Building Sealing:**

- » Not applicable for building envelope as there are no conditioned zones.
- » All evaporative coolers serving heated space or, habitable room/public area in climate zones 4 to 8, must be fitted with a self-closing damper or the like.

### **Part J5 – Air Conditioning & Ventilation:**

- » N/A. Has not assessed as design details not provided.

### **Part J6 – Artificial Lighting & Power:**

- » Maximum design lighting power allowed for the Proposed Development is 4830 Watts.
- » Artificial lighting of a room or space must be individually operated by a switch or other control device. An artificial lighting switch must be located in a visible position.
- » Windows display lighting if installed must be controlled separately from other display lighting.
- » External lighting of the Proposed Development if installed must be controlled by either a daylight sensor or a time switch which is capable of being pre-programmed for different times of the day on variable days.
- » Façade lighting or signage lighting of the Proposed Development if installed must be

provided with a separate time switch.

- » All lighting and power control devices of the Proposed Development including timers, time switches, motion detectors and daylight control devices must follow the guidelines and specifications outlined in Appendix D Artificial Lighting and Power Notes of this report.

**Part J7 – Heater Water Supply & Swimming Pool & Spa Pool Plant:**

- » Hot water supply of the Proposed Development must be designed and installed in accordance with section 8 of AS/NZS 3500.4

**Part J8 – Facilities for Energy Monitoring:**

- » For the Proposed Development provide facilities to record gas and electricity consumption.

# 8 - Appendix

This section of the report demonstrates the results of employing BCA Calculators for Glazing, Lighting Power, and other referenced calculations and plans in this report.



## 8.2 – Appendix B – Lighting Calculator





# Non-residential Lighting

Class 3 and 5-9 buildings



Main Menu

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Multiple Lighting Systems Calculator

Calculator

Building name/description

Commercial Development located at 38 Hill End Road, Caerleon NSW 2850

Classification

Class 7b

Number of rows preferred in table below

56

(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
1	Warehouse 1	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
2	Warehouse 2	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
3	Warehouse 3	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
4	Warehouse 4	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
5	Warehouse 5	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
6	Warehouse 6	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
7	Warehouse 7	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
8	Warehouse 8	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
9	Warehouse 9	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
10	Warehouse 10	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
11	Warehouse 11	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
12	Warehouse 12	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
13	Warehouse 13	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
14	Warehouse 14	68.0 m²	35 m	4.0 m	1 W	Storage											155 W	2% of 1%
15	Warehouse 1 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
16	Warehouse 2 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
17	Warehouse 3 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
18	Warehouse 4 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
19	Warehouse 5 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
20	Warehouse 6 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
21	Warehouse 7 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
22	Warehouse 8 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
23	Warehouse 9 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
24	Warehouse 10 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
25	Warehouse 11 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
26	Warehouse 12 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
27	Warehouse 13 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
28	Warehouse 14 WC	5.2 m²	9 m	2.5 m	1 W	Toilet, locker room, staff room, rest room and the like											28 W	2% of 1%
29	Warehouse 1 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
30	Warehouse 2 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
31	Warehouse 3 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
32	Warehouse 4 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
33	Warehouse 5 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
34	Warehouse 6 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%



# Non-residential Lighting

Class 3 and 5-9 buildings



Main Menu

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Multiple Lighting Systems Calculator

Calculator

Building name/description

Commercial Development located at 38 Hill End Road, Caerleon NSW 2850

Classification

Class 7b

Number of rows preferred in table below

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(as currently displayed)

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							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
35	Warehouse 7 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
36	Warehouse 8 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
37	Warehouse 9 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
38	Warehouse 10 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
39	Warehouse 11 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
40	Warehouse 12 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
41	Warehouse 13 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
42	Warehouse 14 Mezzanine	68.0 m²	38 m	2.7 m	1 W	Storage											142 W	2% of 1%
43	W1 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
44	W2 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
45	W3 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
46	W4 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
47	W5 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
48	W6 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
49	W7 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
50	W8 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
51	W9 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
52	W10 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
53	W11 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
54	W12 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
55	W13 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%
56	W14 Staircase	5.6 m²	11 m	4.5 m	1 W	Stairways, including fire-isolated stairways											20 W	2% of 1%

Total 56 W

Total 4830 W

if inputs are valid







# Non-residential Lighting

Class 3 and 5-9 buildings



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Multiple Lighting Systems Calculator

Calculator

### Building name/description

Commercial Development located at 38 Hill End Road, Caerleon NSW 2850

### Classification

Class 7b

Number of rows preferred in table below

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(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
							These columns do not represent a requirement of the NCC and are suggestions only		Adjustment Factors			Adjustment Factors						

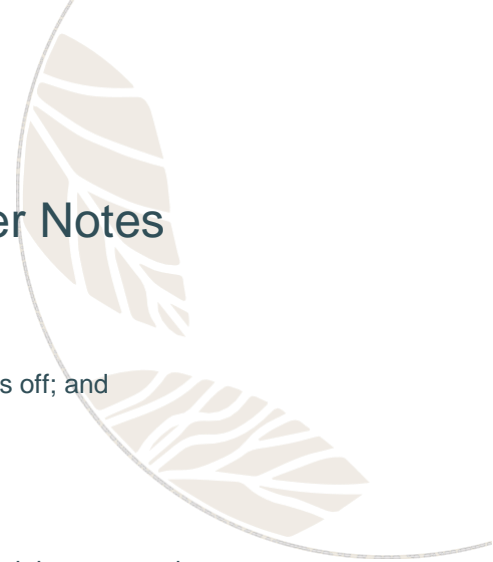
#### IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THIS LIGHTING CALCULATOR

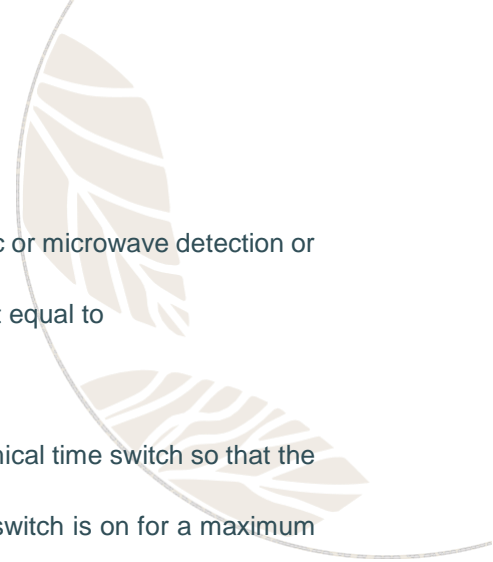
By accessing or using this calculator, you agree to the following: While care has been taken in the preparation of this calculator, it may not be complete or up-to-date. You can ensure that you are using a complete and up-to-date version by checking the Australian Building Codes Board website ([www.abcb.gov.au](http://www.abcb.gov.au)). The Australian Building Codes Board, the Commonwealth of Australia and States and Territories of Australia do not accept any liability, including liability for negligence, for any loss (howsoever caused), damage, injury, expense or cost incurred by any person as a result of accessing, using or relying upon this publication, to the maximum extent permitted by law. No representation or warranty is made or given as to the currency, accuracy, reliability, merchantability, fitness for any purpose or completeness of this publication or any information which may appear on any linked websites, or in other linked information sources, and all such representations and warranties are excluded to the extent permitted by law. This calculator is not legal or professional advice. Persons rely upon this calculator entirely at their own risk and must take responsibility for assessing the relevance and accuracy of the information in relation to their particular circumstances.



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## 8.4 – Appendix D – Artificial Lighting & Power Notes

- 
- 1- A lighting timer must;
    - a. be located within 2 m of every entry door to the space; and
    - b. have an indicator light that is illuminated when the artificial lighting is off; and
    - c. not control more than
      - i. an area of 100 m<sup>2</sup> with a single push button timer; and
      - ii. 95% of the lights in spaces of area more than 25 m<sup>2</sup>; and
    - d. be capable of maintaining the artificial lighting
      - i. for not less than 5 minutes and not more than 15 minutes unless it is reset; and
      - ii. without interruption if the timer is reset.
  
  - 2- Time switch;
    - a. A time switch must be capable of switching on and off electric power at variable pre-programmed times and on variable pre-programmed days.
    - b. A time switch for internal lighting must be capable of being overridden by
      - i. a means of turning the lights on, either by
        1. a manual switch or an occupant sensing device that on sensing a person's presence, overrides the time switch for a period of up to 2 hours, after which there is no further presence detected, the time switch must resume control; or
        2. an occupant sensing device that overrides the time switch upon a person's entry and returns control to the time switch upon the person's exiting, such as a security card reader; and
      - ii. a manual "off" switch
    - c. A time switch for external lighting must be capable of
      - i. limiting the period the system is switched on to between 30 minutes before sunset and 30 minutes after sunrise is determined or detected including any pre-programmed period between these times; and
      - ii. being overridden by a manual switch or a security access system for a period of up to 30 minutes, after which the time switch must resume control.
    - d. A time switch for boiling water and chilled water storage units must be capable of being overridden by a manual switch or a security access system that senses a person's presence, overrides for a period of up to 2 hours, after which if there is no further presence detected, the time switch must resume control.
  
  - 3- Motion detectors;
    - a. In a Class 5, 6, 7, 8, 9a or 9b building, a motion detector must
      - i. be capable of sensing movement such as by infra-red, ultrasonic or microwave detection or by a combination of these means; and
      - ii. be capable of detecting
        1. a person before they have entered 1 m into the space; and
        2. movement of 500 mm within the useable part of the space; and
      - iii. not control more than
        1. in other than a carpark an area of 500 m<sup>2</sup> with a single sensor or group of parallel sensors; and
        2. 75% of the lights in spaces using high intensity discharge; and
      - iv. be capable of maintaining the artificial lighting when activated
        1. for a maximum of 30 minutes unless it is reset; and
        2. without interruption if the motion detector is reset by movement; and
      - v. not be overridden by a manual switch to permanently leave the lights on.

- 
- b. When outside a building, a motion detector must
    - i. be capable of sensing movement such as by infra-red, ultrasonic or microwave detection or by a combination of these means; and
    - ii. be capable of detecting a person within a distance from the light equal to
      - 1. twice the mounting height; or
      - 2. 80% of the ground area covered by the light's beam; and
      - ii. not control more than five lights; and
      - iii. be operated in series with a photoelectric cell or astronomical time switch so that the light will not operate in daylight hours; and
      - iv. be capable of maintaining the artificial lighting when the switch is on for a maximum of 10 minutes unless it is reset; and
      - v. have a manual override switch which is reset after a maximum period of 4 hours.
  
  - 4- Daylight sensor and dynamic lighting control device;
    - a. A daylight sensor and dynamic control device for artificial lighting must
      - i. for switching on and off
        - 1. be capable of having the switching level set point adjusted between 50 and 1000 Lux; and
        - 2. have a delay of more than 2 minutes; and a differential of more than 100 Lux for a sensor controlling high pressure discharge lighting, and 50 Lux for a sensor controlling other than high pressure discharge lighting; and
        - 3. for dimmed or stepped switching, be capable of reducing the power consumed by the controlled lighting in proportion to the incident daylight on the working plane either
          - 5- continuously down to a power consumption that is less than 50% of full power; or
          - 6- in no less than 4 steps down to a power consumption that is less than 50% of full power.
      - a. Where a daylight sensor and dynamic control device has a manual override switch, the manual override switch must not be able to switch the lights permanently on or bypass the lighting controls.

# 9 - Disclaimer

## Recommendations:

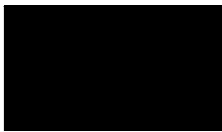
Based on the information available on the supplied drawings and data, I am of the opinion that there is nothing that should prevent this project from compliance with the requirements of the Building Code of Australia. However, if the Construction Certificate is lodged/intend to be lodged after 30 April 2020, this project will need to be assessed under NCC 2019. Please contact Certified Energy if a reassessment under NCC 2019 is required.

This report is based on details available at the time of writing. Selected contractors and other parties contributing to the scope of the works should confirm that their supplied work will be in compliance with the BCA/NCC. It is advisable that this confirmation be requested prior to the commencement of construction. Final certification of BCA/NCC compliance at completion of works should be obtained to aid final certifier's approval.

## Dimensions:

The dimensions used in this report are scaled from the supplied project documents. There may be some minor variation between the scaled dimensions, the dimensions on the window schedule and the actual dimensions on site.

## Checked by:



Siddesh Shetty

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*B.Arch MArchSci (Sustainable Design | High Performance Buildings)*



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