

ELECTRICAL CHECKLIST FOR PART J6 OF NCC2016

ARTIFICIAL LIGHTING AND POWER

Site Address: 1A Glenburnie Avenue, Plympton
 Project Name: Glenburnie Apartment
 Project Number: B9025

| Requirement | Yes | No | N/A |
|---|-------------------------------------|--------------------------|-------------------------------------|
| NCC PART J6.2 | | | |
| In a sole-occupancy unit of a Class 2 building or a Class 4 part of a building the lamp power density or illumination power density of artificial lighting must not exceed the allowance of: | | | |
| ▪ 5W/m ² within a sole occupancy unit; and | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ 4W/m ² on a verandah, balcony or the like attached to a sole occupancy unit; and | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ The illumination power density within the building may be increased by dividing it by the illumination power density adjustment factor for control device in Table J6.2b as applicable; and | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ when designing the lamp power density or illumination power density, the power of the proposed installation must be used rather than nominal allowances for exposed batten holders or luminaires; and | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ halogen lamps must be separately switched from fluorescent lamps. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| In a building other than a sole-occupancy unit of a Class 2 building or a Class 4 part of a building artificial lighting and the aggregate design illumination power load must not exceed- | | | |
| ▪ the sum of allowances obtained by multiplying the area of each space by the maximum illumination power density in Table J6.2a ; and | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ▪ the aggregate design illumination power load in (I) is the sum of the design illumination power loads in each of the spaces served; and | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ▪ in determining the design illumination power load for (II) the following must be used: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Where there are multiple lighting systems serving the same space-

| Requirement | Yes | No | N/A |
|--|--------------------------|--------------------------|-------------------------------------|
| <ul style="list-style-type: none"> the total illumination power load of all systems; or | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <ul style="list-style-type: none"> for a control system that permits only one system to operate at a time, the design illumination power load is— <ul style="list-style-type: none"> based on the highest illumination power load; or determined by the formula— $[H \times T/2 + P \times (100 - T/2)] / 100$ <p>Where: H = the highest illumination power load; and T = the time for which the maximum illumination power load will occur, expressed as a percentage; and P = the predominant illumination power load.</p> | | | |
| Where there is adjustable position lighting such as trapeze lighting or track lighting other than trunking systems that accept fluorescent lamps - | | | |
| <ul style="list-style-type: none"> the rating of the circuit breaker protecting the track; or of extra low voltage, 80% of the power rating of the transformer; or of mains voltage, 100 W per metre of track. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Allowable exemptions: | | | |
| Emergency lighting to Part E4 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Signage and display lighting within cabinets & display cases | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lighting for accommodation within the residential areas of a detention centre | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| A heater where the heater also emits light | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lighting of a specialist nature such as in an operating theatre, fume cupboard or clean workstation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lighting of performances such as theatrical or sporting | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lighting for the permanent display and preservation of works of art or objects in a museum or gallery other than for retail sale, purchase or auction | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

NCC PART J6.3

Artificial lighting of a room or space:

| Requirement | Yes | No | N/A |
|---|-------------------------------------|--------------------------|-------------------------------------|
| <ul style="list-style-type: none"> must be individually operated by a switch or other control device | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| An occupant activated device (room security, motion detector or the like) must: | | | |
| <ul style="list-style-type: none"> be provided in the sole occupancy unit of a Class 3 building, other than where providing accommodation for people with disability or the aged, to cut power to the artificial lighting, air-conditioner, local exhaust fans and bathroom heater when the sole-occupancy unit is unoccupied | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| An artificial lighting switch or other control device: | | | |
| <ul style="list-style-type: none"> must be located in a visible position: <ul style="list-style-type: none"> In the room of space being switched; or In an adjacent room or space from where the lighting being switched is visible; and, for other than a single functional space such as an auditorium, theatre, swimming pool, sporting stadium or warehouse – <ul style="list-style-type: none"> not operate lighting for an area of more than 250m² if in a Class 5 building or Class 8 laboratory; or not operate lighting within an area* of more than: <ul style="list-style-type: none"> 250m² for a space of not more than 2000m² floor area; or 1000m² for a space of more than 2000m² floor area If in a Class 3, 6, 7, 8 (other than a laboratory) or 9a building. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 95% of the light fittings in a building or storey of a building, other than a Class 2 or 3 building or a Class 4 part of a building, of more than 250 m² must be controlled by*: | | | |
| <ul style="list-style-type: none"> by a time switch (see Specification J6); or | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <ul style="list-style-type: none"> an occupant sensing device such as: <ul style="list-style-type: none"> A security card reader that registers a person entering and leaving the building; or A motion detector in accordance with Specification J6 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <p><i>Does not apply to:</i></p> <p>(i) Artificial lighting in a space where the sudden loss of artificial lighting would cause an unsafe situation such as in a patient care area in a Class 9a building or in a Class 9c aged care building.</p> <p>(ii) A heater where the heater also emits light, such as in bathrooms</p> | | | |
| <p>In a Class 5, 6 or 8 building of more than 250 m², artificial lighting in a natural lighting zone adjacent to windows must be separately controlled from artificial lighting not in a natural lighting zone in the same storey except where:</p> | | | |

| Requirement | Yes | No | N/A |
|--|--------------------------|--------------------------|-------------------------------------|
| <ul style="list-style-type: none"> ○ the room containing the natural lighting zone is less than 20m²; or ○ the room's natural lighting zone contains less than 4 luminaires; or ○ the luminaires in the natural lighting zone are not more than 70% of the luminaires in the room. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Allowable exemptions:

- | | | | |
|---|--------------------------|--------------------------|--------------------------|
| ▪ Emergency lighting to Part E4 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Where artificial lighting is needed for 24-hour occupancy such as for a manufacturing process, an airport control tower or within a detention centre. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

NCC PART J6.4**Interior decorative and display lighting, such as for a foyer mural or art display must be controlled:**

- | | | | |
|--|-------------------------------------|--------------------------|-------------------------------------|
| ▪ separately from other artificial lighting; and | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ by a manual switch for each area other than where operating times of the displays are the same in a number of area such as in a museum, art gallery or the like, in which case they may be combined; and | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ by a time switch in accordance with Specification J6 where the display lighting exceeds 1kW | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Window display lighting must be controlled:

- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| ▪ Separately from other display lighting. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

NCC PART J6.5**Artificial lighting around the perimeter of the building must be controlled:**

- | | | | |
|--|-------------------------------------|--------------------------|--------------------------|
| <ul style="list-style-type: none"> ○ daylight sensor; or ○ a time switch that is capable of switching on and off electric power to the system at variable pre-programmed times and on variable pre-programmed days ; and | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

| Requirement | Yes | No | N/A |
|--|-------------------------------------|--------------------------|-------------------------------------|
| <ul style="list-style-type: none"> ▪ When the total perimeter lighting load exceeds 100 W: <ul style="list-style-type: none"> ○ Have an average light source efficacy of not less than 60 Lumens/W; or ○ Be controlled by a motion detector in accordance with Specification J6; and | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <ul style="list-style-type: none"> ▪ When used for decorative purposes, such as façade lighting or signage lighting, have a separate time switch in accordance with Specification J6 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ALLOWABLE EXEMPTIONS: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <ul style="list-style-type: none"> ▪ Emergency lighting in accordance with Part E4 and lighting around a detention centre | | | |
| NCC PART J6.6 | | | |
| Power supply to a boiling water or chilled water storage unit must be controlled by a time switch in accordance with Specification J6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

***NB – Part J6.2, J6.3 & J6.5(a)(ii) do not apply to a Class 8 electricity network substation**

STATEMENT OF COMPLIANCE:

Building practitioner: **Sebastian Gray**

Qualification / title: Graduate Electrical Engineer

Company: Secon Consulting

I have reviewed the design (specifications, drawings and any supporting calculation), completed the attached checklist and certify that, if installed or carried out in accordance with the documentation referred to above, the electrical lighting and power (as applicable) will comply with the NCC Section J6. I also confirm that I have appropriate qualification/ expertise to assess the compliance of the electrical lighting and power systems.

Signed: S.G.

Dated: 29/04/19