# **BASIX**<sup>°</sup>Certificate

Building Sustainability Index www.basix.nsw.gov.au

# Multi Dwelling

Certificate number: 889092M\_02

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

This certificate is a revision of certificate number 889092M lodged with the consent authority or certifier on 17 July 2018 with application DA-550/2018.

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environmental Planning and Assessment Regulation 2000

#### Secretary

Date of issue: Tuesday, 05 November 2019 To be valid, this certificate must be lodged within 3 months of the date of issue.



| Project summary                            |                                      |  |  |  |  |  |  |
|--|--------------------------------------|--|--|--|--|--|--|
| Project name                               | 46-50 Meredith St, Bankstown_02      |  |  |  |  |  |  |
| Street address                             | 46-50 Meredith Street Bankstown 2200 |  |  |  |  |  |  |
| Local Government Area                      | Canterbury-Bankstown Council         |  |  |  |  |  |  |
| Plan type and plan number                  | deposited 403280                     |  |  |  |  |  |  |
| Lot no.                                    | С                                    |  |  |  |  |  |  |
| Section no.                                | -                                    |  |  |  |  |  |  |
| No. of residential flat buildings          | 1                                    |  |  |  |  |  |  |
| No. of units in residential flat buildings | 56                                   |  |  |  |  |  |  |
| No. of multi-dwelling houses               | 0                                    |  |  |  |  |  |  |
| No. of single dwelling houses              | 0                                    |  |  |  |  |  |  |
| Project score                              |                                      |  |  |  |  |  |  |
| Water                                      | V 40 Target 40                       |  |  |  |  |  |  |
| Thermal Comfort                            | V Pass Target Pass                   |  |  |  |  |  |  |
| Energy                                     | V 26 Target 25                       |  |  |  |  |  |  |

| Certificate Prepared by          |
|----------------------------------|
| Name / Company Name: ESD Synergy |
| ABN (if applicable): 17165174685 |

# **Description of project**

#### Project address

| Project name                                 | 46-50 Meredith St, Bankstown_02      |
|--|--------------------------------------|
| Street address                               | 46-50 Meredith Street Bankstown 2200 |
| Local Government Area                        | Canterbury-Bankstown Council         |
| Plan type and plan number                    | deposited 403280                     |
| Lot no.                                      | C                                    |
| Section no.                                  | -                                    |
| Project type                                 |                                      |
| No. of residential flat buildings            | 1                                    |
| No. of units in residential flat buildings   | 56                                   |
| No. of multi-dwelling houses                 | 0                                    |
| No. of single dwelling houses                | 0                                    |
| Site details                                 |                                      |
| Site area (m <sup>2</sup> )                  | 3102.7                               |
| Roof area (m <sup>2</sup> )                  | 824                                  |
| Non-residential floor area (m <sup>2</sup> ) | 118.33                               |
| Residential car spaces                       | 82                                   |
| Non-residential car spaces                   | 44                                   |
|  |                                      |

| Common area landscape   |                    |  |  |  |  |
|---|--------------------|--|--|--|--|
| Common area lawn (m <sup>2</sup> )                            | 241.0              |  |  |  |  |
| Common area garden (m <sup>2</sup> )                          | 826.0              |  |  |  |  |
| Area of indigenous or low water use species (m <sup>2</sup> ) | 580.0              |  |  |  |  |
| Assessor details  |                    |  |  |  |  |
| Assessor number   | 20241              |  |  |  |  |
| Certificate number  | 0004334570         |  |  |  |  |
| Climate zone  | 56                 |  |  |  |  |
| Project score   |                    |  |  |  |  |
| Water   | V 40 Target 40     |  |  |  |  |
| Thermal Comfort   | V Pass Target Pass |  |  |  |  |
| Energy  | V 26 Target 25     |  |  |  |  |

## **Description of project**

The tables below describe the dwellings and common areas within the project

#### Residential flat buildings - Building1, 56 dwellings, 7 storeys above ground

| Dwelling no. | No. of bedrooms | Conditioned floor<br>area (m²) | Unconditioned<br>floor area (m²) | Area of garden &<br>lawn (m²) | Indigenous species<br>(min area m²) | Dwelling no. | No. of bedrooms | Conditioned floor<br>area (m²) | Unconditioned<br>floor area (m²) | Area of garden &<br>lawn (m²) | Indigenous species<br>(min area m²) | Dwelling no. | No. of bedrooms | Conditioned floor<br>area (m²) | Unconditioned<br>floor area (m²) | Area of garden &<br>lawn (m²) | Indigenous species<br>(min area m²) | Dwelling no. | No. of bedrooms | Conditioned floor<br>area (m²) | Unconditioned<br>floor area (m²) | Area of garden &<br>lawn (m²) | Indigenous species<br>(min area m²) |
|--------------|-----------------|--------------------------------|----------------------------------|-------------------------------|-------------------------------------|--------------|-----------------|--------------------------------|----------------------------------|-------------------------------|-------------------------------------|--------------|-----------------|--------------------------------|----------------------------------|-------------------------------|-------------------------------------|--------------|-----------------|--------------------------------|----------------------------------|-------------------------------|-------------------------------------|
| 101          | 1               | 52.2                           | 0.0                              | 0.0                           | 0.0                                 | 102          | 2               | 77.4                           | 0.0                              | 0.0                           | 0.0                                 | 103          | 2               | 90.9                           | 0.0                              | 0.0                           | 0.0                                 | 104          | 2               | 86.3                           | 0.0                              | 0.0                           | 0.0                                 |
| 105          | 3               | 99.2                           | 0.0                              | 0.0                           | 0.0                                 | 106          | 2               | 71.5                           | 0.0                              | 0.0                           | 0.0                                 | 107          | 2               | 78.6                           | 0.0                              | 0.0                           | 0.0                                 | 108          | 1               | 61.8                           | 0.0                              | 0.0                           | 0.0                                 |
| 109          | 2               | 81.6                           | 0.0                              | 0.0                           | 0.0                                 | 201          | 2               | 90.5                           | 0.0                              | 0.0                           | 0.0                                 | 202          | 2               | 77.4                           | 0.0                              | 0.0                           | 0.0                                 | 203          | 2               | 90.9                           | 0.0                              | 0.0                           | 0.0                                 |
| 204          | 2               | 86.3                           | 0.0                              | 0.0                           | 0.0                                 | 205          | 3               | 99.2                           | 0.0                              | 0.0                           | 0.0                                 | 206          | 2               | 71.5                           | 0.0                              | 0.0                           | 0.0                                 | 207          | 2               | 78.6                           | 0.0                              | 0.0                           | 0.0                                 |
| 208          | 1               | 61.8                           | 0.0                              | 0.0                           | 0.0                                 | 209          | 2               | 81.6                           | 0.0                              | 0.0                           | 0.0                                 | 301          | 2               | 90.5                           | 0.0                              | 0.0                           | 0.0                                 | 302          | 2               | 77.4                           | 0.0                              | 0.0                           | 0.0                                 |
| 303          | 2               | 90.9                           | 0.0                              | 0.0                           | 0.0                                 | 304          | 2               | 86.3                           | 0.0                              | 0.0                           | 0.0                                 | 305          | 3               | 99.2                           | 0.0                              | 0.0                           | 0.0                                 | 306          | 2               | 71.5                           | 0.0                              | 0.0                           | 0.0                                 |
| 307          | 2               | 78.6                           | 0.0                              | 0.0                           | 0.0                                 | 308          | 1               | 61.8                           | 0.0                              | 0.0                           | 0.0                                 | 309          | 2               | 81.6                           | 0.0                              | 0.0                           | 0.0                                 | 401          | 2               | 90.5                           | 0.0                              | 0.0                           | 0.0                                 |
| 402          | 1               | 54.6                           | 0.0                              | 0.0                           | 0.0                                 | 403          | 2               | 79.8                           | 0.0                              | 0.0                           | 0.0                                 | 404          | 2               | 77.1                           | 0.0                              | 0.0                           | 0.0                                 | 405          | 2               | 77.1                           | 0.0                              | 0.0                           | 0.0                                 |
| 406          | 2               | 71.5                           | 0.0                              | 0.0                           | 0.0                                 | 407          | 2               | 76.6                           | 0.0                              | 0.0                           | 0.0                                 | 408          | 2               | 75.0                           | 0.0                              | 0.0                           | 0.0                                 | 501          | 2               | 90.5                           | 0.0                              | 0.0                           | 0.0                                 |
| 502          | 1               | 54.6                           | 0.0                              | 0.0                           | 0.0                                 | 503          | 2               | 79.8                           | 0.0                              | 0.0                           | 0.0                                 | 504          | 2               | 77.1                           | 0.0                              | 0.0                           | 0.0                                 | 505          | 2               | 77.1                           | 0.0                              | 0.0                           | 0.0                                 |
| 506          | 2               | 71.5                           | 0.0                              | 0.0                           | 0.0                                 | 507          | 2               | 76.6                           | 0.0                              | 0.0                           | 0.0                                 | 508          | 2               | 75.0                           | 0.0                              | 0.0                           | 0.0                                 | 601          | 2               | 90.5                           | 0.0                              | 0.0                           | 0.0                                 |
| 602          | 1               | 54.6                           | 0.0                              | 0.0                           | 0.0                                 | 603          | 2               | 79.8                           | 0.0                              | 0.0                           | 0.0                                 | 604          | 2               | 77.1                           | 0.0                              | 0.0                           | 0.0                                 | 605          | 2               | 77.1                           | 0.0                              | 0.0                           | 0.0                                 |
| 606          | 2               | 71.5                           | 0.0                              | 0.0                           | 0.0                                 | 607          | 2               | 76.6                           | 0.0                              | 0.0                           | 0.0                                 | 608          | 2               | 75.0                           | 0.0                              | 0.0                           | 0.0                                 | G01          | 2               | 82.8                           | 0.0                              | 7.9                           | 5.9                                 |
| G02          | 2               | 84.9                           | 0.0                              | 5.8                           | 4.4                                 | G03          | 2               | 83.2                           | 0.0                              | 3.3                           | 2.5                                 | G04          | 1               | 61.8                           | 0.0                              | 0.0                           | 0.0                                 | G05          | 2               | 81.6                           | 0.0                              | 7.9                           | 5.9                                 |

## **Description of project**

The tables below describe the dwellings and common areas within the project

#### Common areas of unit building - Building1

| Common area                     | Floor area (m²) | Common area                | Floor area (m²) | Common area                   | Floor area (m²) |
|---------------------------------|-----------------|----------------------------|-----------------|-------------------------------|-----------------|
| Car park area (No. 1)           | 4590.81         | Lift car (No. 1)           | -               | Lift car (No. 2)              | -               |
| Switch room (No. 1)             | 64.0            | Garbage room (No. 1)       | 82.2            | Plant or service room (No. 1) | 21.2            |
| Ground floor lobby type (No. 1) | 101.0           | Hallway/lobby type (No. 1) | 291.0           |                               |                 |

# **Schedule of BASIX commitments**

1. Commitments for Residential flat buildings - Building1

(a) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Comfort

(b) Common areas and central systems/facilities

(i) Water

(ii) Energy

2. Commitments for multi-dwelling houses

3. Commitments for single dwelling houses

4. Commitments for common areas and central systems/facilities for the development (non-building specific)

(i) Water

(ii) Energy

### Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

#### 1. Commitments for Residential flat buildings - Building1

#### (a) Dwellings

| (i) Water  | Show on<br>DA plans | Show on CC/CDC plans & specs   | Certifier<br>check |
|--|---------------------|--|--------------------|
| (a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.   |                     |  |                    |
| (b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).          | ~                   | ~  |                    |
| (c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.  |                     | ~  | ~                  |
| (d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.   |                     | ~  | ~                  |
| (e) The applicant must install:  |                     |  |                    |
| (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and   |                     | <ul> <li>Image: A set of the set of the</li></ul>  | ~                  |
| (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.   |                     | <ul> <li>Image: A second s</li></ul> | ~                  |
| (e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.  | ~                   | <b>~</b>   |                    |
| (f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).   |                     | <ul> <li>Image: A set of the set of the</li></ul>  |                    |
| (g) The pool or spa must be located as specified in the table.   | ~                   | <ul> <li>Image: A set of the set of the</li></ul>  |                    |
| (h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in<br>the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies<br>any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified. | ~                   | ~  | ~                  |

|                  | Fixtures                               |                                   |                        |                         | Appli                               |                           | Individual pool      |                           |               |                  | Individual spa |                           |              |               |
|------------------|--|-----------------------------------|------------------------|-------------------------|-------------------------------------|---------------------------|----------------------|---------------------------|---------------|------------------|----------------|---------------------------|--------------|---------------|
| Dwelling<br>no.  | All<br>shower-<br>heads                | All toilet<br>flushing<br>systems | All<br>kitchen<br>taps | All<br>bathroom<br>taps | HW<br>recirculation<br>or diversion | All<br>clothes<br>washers | All dish-<br>washers | Volume<br>(max<br>volume) | Pool<br>cover | Pool<br>location | Pool<br>shaded | Volume<br>(max<br>volume) | Spa<br>cover | Spa<br>shaded |
| All<br>dwellings | 3 star (><br>6 but <=<br>7.5<br>L/min) | 4 star                            | 5 star                 | 5 star                  | no                                  | -                         | 4 star               | -                         | -             | -                | -              | -                         | -            | -             |

|              | Alternative water source         |      |               |                         |                             |                       |                |            |  |  |  |
|--------------|----------------------------------|------|---------------|-------------------------|-----------------------------|-----------------------|----------------|------------|--|--|--|
| Dwelling no. | Alternative water supply systems | Size | Configuration | Landscape<br>connection | Toilet<br>connection<br>(s) | Laundry<br>connection | Pool<br>top-up | Spa top-up |  |  |  |
| None         | -                                | -    | -             | -                       | -                           | -                     | -              | -          |  |  |  |

| (ii) Energy  | Show on<br>DA plans | Show on CC/CDC plans & specs | Certifier<br>check |
|--|---------------------|------------------------------|--------------------|
| (a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.   |                     |                              |                    |
| (b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is<br>supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that<br>central system to the dwelling, so that the dwelling's hot water is supplied by that central system.   | ~                   | ~                            | ~                  |
| (c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.  |                     | ~                            | ~                  |
| (d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.   |                     | ~                            | ~                  |
| (e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of<br>the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial<br>lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is<br>specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for<br>fluorescent lighting or light emitting diode (LED) lighting. |                     | ~                            | ~                  |

| ii) Energy  | Show on<br>DA plans | Show on CC/CDC plans & specs  | Certifier<br>check |
|---|---------------------|---|--------------------|
| (f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight. | ~                   | ~   | ~                  |
| (g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must:  |                     |   |                    |
| (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and  |                     | ✓   |                    |
| (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.   |                     | <b>~</b>  |                    |
| (h) The applicant must install in the dwelling:   |                     |   |                    |
| (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;   |                     | <b>~</b>  |                    |
| (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and   |                     | <ul> <li>Image: A set of the set of the</li></ul> | ~                  |
| (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.  |                     | ✓   |                    |
| (i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well<br>ventilated".  |                     | ~   |                    |

|                  | Hot water  | Bathroom ven                             | tilation system      | Kitchen vent                  | ilation system                 | Laundry ventilation system               |                      |  |
|------------------|--|--|----------------------|-------------------------------|--------------------------------|--|----------------------|--|
| Dwelling<br>no.  | Hot water system         Each bathroom         Operation control |  | Each kitchen         | Operation control             | Each laundry Operation control |  |                      |  |
| All<br>dwellings | central hot water<br>system 1                                    | individual fan, ducted to façade or roof | manual switch on/off | individual fan, not<br>ducted | manual switch on/off           | individual fan, ducted to façade or roof | manual switch on/off |  |

|                  | Coo                                    | Cooling Heating Artificial lighting    |  |  |                                  |  | Artificial lighting |                              |                    |                    | Natural lig                            | ghting          |
|------------------|--|--|--|--|----------------------------------|--|---------------------|------------------------------|--------------------|--------------------|--|-----------------|
| Dwelling<br>no.  | living areas                           | bedroom<br>areas                       | living areas                           | bedroom<br>areas                       | No. of<br>bedrooms<br>&/or study | No. of<br>living &/or<br>dining<br>rooms | Each<br>kitchen     | All<br>bathrooms/<br>toilets | Each<br>Iaundry    | All<br>hallways    | No. of<br>bathrooms<br>&/or<br>toilets | Main<br>kitchen |
| All<br>dwellings | 1-phase<br>airconditioning<br>1.5 Star | 1-phase<br>airconditioning<br>1.5 Star | 1-phase<br>airconditioning<br>1.5 Star | 1-phase<br>airconditioning<br>1.5 Star | 0<br>(dedicated)                 | 0  | yes<br>(dedicated)  | yes<br>(dedicated)           | yes<br>(dedicated) | yes<br>(dedicated) | 0                                      | no              |

|                  | Individual p           | ool   | Individual s          | ра    |                             |              | Appliance                             | es & other effici | iency meas        | ures             |  |  |
|------------------|------------------------|-------|-----------------------|-------|-----------------------------|--------------|---------------------------------------|-------------------|-------------------|------------------|--|--|
| Dwelling<br>no.  | Pool heating<br>system | Timer | Spa heating<br>system | Timer | Kitchen<br>cooktop/oven     | Refrigerator | Well<br>ventilated<br>fridge<br>space | Dishwasher        | Clothes<br>washer | Clothes<br>dryer | Indoor or<br>sheltered<br>clothes<br>drying line | Private<br>outdoor or<br>unsheltered<br>clothes<br>drying line |
| All<br>dwellings | -                      | -     | -                     | -     | gas cooktop & electric oven | -            | no                                    | 3.5 star          | -                 | 2 star           | no   | no   |

| (iii) Thermal Comfort   | Show on<br>DA plans | Show on CC/CDC<br>plans & specs | Certifier<br>check |
|---|---------------------|---------------------------------|--------------------|
| (a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the<br>"Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if<br>the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant<br>must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development. |                     |                                 |                    |
| (b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.   |                     |                                 |                    |
| (c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.  |                     |                                 |                    |
| (d) The applicant must show on the plans accompanying the development application for the proposed development, all matters<br>which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from<br>the Accredited Assessor, to certify that this is the case.  | ~                   |                                 |                    |
| (e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.  |                     | ~                               |                    |

| (iii) Thermal Comfort   | Show on<br>DA plans | Show on CC/CDC plans & specs | Certifier<br>check |
|---|---------------------|------------------------------|--------------------|
| (f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor<br>Certificate, and in accordance with those aspects of the development application or application for a complying development<br>certificate which were used to calculate those specifications. |                     | ~                            | ~                  |
| (g) Where there is an in-slab heating or cooling system, the applicant must:  | ~                   | ~                            | ~                  |
| (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or   |                     |                              |                    |
| (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.  |                     |                              |                    |
| (h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.   | ~                   | <b>v</b>                     | ~                  |

|              |  | Thermal loads                            |
|--------------|--|--|
| Dwelling no. | Area adjusted heating load (in mJ/m²/yr) | Area adjusted cooling load (in mJ/m²/yr) |
| 101          | 17.8                                     | 29.1                                     |
| 102          | 38.0                                     | 20.1                                     |
| 103          | 44.2                                     | 19.7                                     |
| 104          | 32.3                                     | 11.5                                     |
| 105          | 24.5                                     | 12.4                                     |
| 106          | 14.1                                     | 28.0                                     |
| 107          | 7.5                                      | 26.2                                     |
| 108          | 21.2                                     | 18.1                                     |
| 109          | 40.2                                     | 16.2                                     |
| 201          | 41.1                                     | 25.0                                     |
| 202          | 21.2                                     | 19.5                                     |
| 203          | 32.7                                     | 19.9                                     |
| 204          | 33.2                                     | 11.3                                     |
| 205          | 25.2                                     | 12.0                                     |
| 206          | 4.3                                      | 29.3                                     |

|              |  | Thermal loads                            |  |  |  |  |  |
|--------------|--|--|--|--|--|--|--|
| Dwelling no. | Area adjusted heating load (in mJ/m²/yr) | Area adjusted cooling load (in mJ/m²/yr) |  |  |  |  |  |
| 207          | 8.1                                      | 25.7                                     |  |  |  |  |  |
| 208          | 22.0                                     | 17.1                                     |  |  |  |  |  |
| 209          | 41.2                                     | 15.8                                     |  |  |  |  |  |
| 301          | 34.8                                     | 21.5                                     |  |  |  |  |  |
| 302          | 25.1                                     | 17.2                                     |  |  |  |  |  |
| 303          | 45.1                                     | 15.5                                     |  |  |  |  |  |
| 304          | 40.9                                     | 9.9                                      |  |  |  |  |  |
| 305          | 41.9                                     | 11.5                                     |  |  |  |  |  |
| 306          | 6.4                                      | 25.8                                     |  |  |  |  |  |
| 307          | 31.5                                     | 22.8                                     |  |  |  |  |  |
| 308          | 26.8                                     | 14.4                                     |  |  |  |  |  |
| 309          | 45.0                                     | 12.1                                     |  |  |  |  |  |
| 401          | 33.6                                     | 21.4                                     |  |  |  |  |  |
| 402          | 41.9                                     | 23.4                                     |  |  |  |  |  |
| 403          | 34.0                                     | 27.5                                     |  |  |  |  |  |
| 404          | 31.4                                     | 22.2                                     |  |  |  |  |  |
| 405          | 42.8                                     | 22.8                                     |  |  |  |  |  |
| 406          | 6.9                                      | 25.7                                     |  |  |  |  |  |
| 407          | 16.1                                     | 28.9                                     |  |  |  |  |  |
| 408          | 30.1                                     | 18.6                                     |  |  |  |  |  |
| 501          | 34.1                                     | 21.7                                     |  |  |  |  |  |
| 502          | 36.4                                     | 23.4                                     |  |  |  |  |  |
| 503          | 34.3                                     | 27.4                                     |  |  |  |  |  |
| 504          | 29.6                                     | 23.1                                     |  |  |  |  |  |
| 505          | 37.5                                     | 23.5                                     |  |  |  |  |  |
| 506          | 7.1                                      | 25.5                                     |  |  |  |  |  |
| 507          | 16.5                                     | 28.7                                     |  |  |  |  |  |

|                     | Thermal loads                            |  |  |  |  |  |
|---------------------|--|--|--|--|--|--|
| Dwelling no.        | Area adjusted heating load (in mJ/m²/yr) | Area adjusted cooling load (in mJ/m²/yr) |  |  |  |  |
| 508                 | 30.5                                     | 18.3                                     |  |  |  |  |
| 601                 | 44.7                                     | 23.7                                     |  |  |  |  |
| 602                 | 43.2                                     | 24.2                                     |  |  |  |  |
| 603                 | 45.3                                     | 21.8                                     |  |  |  |  |
| 604                 | 31.6                                     | 25.7                                     |  |  |  |  |
| 605                 | 30.8                                     | 25.9                                     |  |  |  |  |
| 606                 | 14.7                                     | 26.2                                     |  |  |  |  |
| 607                 | 29.3                                     | 27.0                                     |  |  |  |  |
| 608                 | 41.3                                     | 20.5                                     |  |  |  |  |
| G01                 | 44.4                                     | 9.8                                      |  |  |  |  |
| G02                 | 42.2                                     | 10.5                                     |  |  |  |  |
| G03                 | 35.4                                     | 29.2                                     |  |  |  |  |
| G04                 | 40.1                                     | 18.3                                     |  |  |  |  |
| All other dwellings | 44.6                                     | 13.7                                     |  |  |  |  |

#### (b) Common areas and central systems/facilities

| (i) Water   | Show on<br>DA plans | Show on CC/CDC<br>plans & specs | Certifier<br>check |
|---|---------------------|---------------------------------|--------------------|
| (a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.   |                     | ~                               | ~                  |
| (b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the<br>"Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as<br>specified in the table. | ~                   | ~                               | ~                  |
| (c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.  | ~                   | ~                               |                    |
| (d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.   |                     | ~                               |                    |
| (e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.   |                     | ~                               | ~                  |
| (f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.  |                     | ~                               | ~                  |

| Common area      | Showerheads rating | Toilets rating     | Taps rating        | Clothes washers rating     |
|------------------|--------------------|--------------------|--------------------|----------------------------|
| All common areas | no common facility | no common facility | no common facility | no common laundry facility |

| Central systems  | Size   | Configuration  | Connection (to allow for)   |
|--|--------|--|---|
| Central water tank -<br>rainwater or stormwater (No.<br>1) | 5000.0 | To collect run-off from at least:<br>- 100.0 square metres of roof area of buildings in the<br>development<br>- 0.0 square metres of impervious area in the development<br>- 0.0 square metres of garden/lawn area in the development<br>- 0.0 square metres of planter box area in the development<br>(excluding, in each case, any area which drains to, or<br>supplies, any other alternative water supply system). | <ul> <li>irrigation of 1067.0 square metres of common landscaped area on the site</li> <li>car washing in 0 car washing bays on the site</li> </ul> |
| Fire sprinkler system (No. 1)                              | -      | So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.  | -   |

| (ii) Energy  | Show on<br>DA plans | Show on CC/CDC<br>plans & specs | Certifier<br>check |
|--|---------------------|---------------------------------|--------------------|
| (a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table<br>below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure<br>specified.   |                     | ~                               | ~                  |
| (b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area<br>specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified.<br>The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area,<br>where specified. |                     | ~                               | ~                  |
| (c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.   | ~                   | <b>v</b>                        | ~                  |

|                                 | Common area                    | ventilation system                   | Common area lighting                |                               |                             |  |
|---------------------------------|--------------------------------|--------------------------------------|-------------------------------------|-------------------------------|-----------------------------|--|
| Common area                     | Ventilation system type        | Ventilation efficiency measure       | Primary type of artificial lighting | Lighting efficiency measure   | Lighting control system/BMS |  |
| Car park area (No. 1)           | ventilation (supply + exhaust) | carbon monoxide monitor +<br>VSD fan | fluorescent                         | time clock and motion sensors | No                          |  |
| Lift car (No. 1)                | -                              | -                                    | light-emitting diode                | connected to lift call button | No                          |  |
| Lift car (No. 2)                | -                              | -                                    | light-emitting diode                | connected to lift call button | No                          |  |
| Switch room (No. 1)             | ventilation exhaust only       | none ie. continuous                  | fluorescent                         | manual on / manual off        | No                          |  |
| Garbage room (No. 1)            | ventilation exhaust only       | -                                    | fluorescent                         | motion sensors                | No                          |  |
| Plant or service room (No. 1)   | ventilation exhaust only       | none ie. continuous                  | fluorescent                         | manual on / manual off        | No                          |  |
| Ground floor lobby type (No. 1) | no mechanical ventilation      | -                                    | light-emitting diode                | time clock and motion sensors | No                          |  |
| Hallway/lobby type (No. 1)      | no mechanical ventilation      | -                                    | light-emitting diode                | time clock and motion sensors | No                          |  |

| Central energy systems           | Туре             | Specification   |  |
|----------------------------------|------------------|---|--|
| Central hot water system (No. 1) | gas-fired boiler | Piping insulation (ringmain & supply risers):<br>(b) Piping internal to building: R0.6 (~25 mm) |  |
|                                  |                  | (b) Piping internal to building: R0.6 (~25 mm)  |  |
|                                  |                  |   |  |

| Central energy systems | Туре                                    | Specification                            |
|------------------------|---|--|
| Lift (No. 1)           | gearless traction with V V V<br>F motor | Number of levels (including basement): 9 |
| Lift (No. 2)           | gearless traction with V V V F motor    | Number of levels (including basement): 9 |

#### 4. Commitments for common areas and central systems/facilities for the development (non-building specific)

#### (b) Common areas and central systems/facilities

| (i) Water   | Show on<br>DA plans | Show on CC/CDC plans & specs | Certifier<br>check |
|---|---------------------|------------------------------|--------------------|
| (a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.   |                     | ~                            | ~                  |
| (b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the<br>"Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as<br>specified in the table. | ~                   | ~                            | ~                  |
| (c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.  | ~                   | ~                            |                    |
| (d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.   |                     | <b>~</b>                     |                    |
| (e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.   |                     | ~                            | ~                  |
| (f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.  |                     | ~                            | ~                  |

| Common area         | Showerheads rating | Toilets rating     | Taps rating        | Clothes washers rating     |
|---------------------|--------------------|--------------------|--------------------|----------------------------|
| All common<br>areas | no common facility | no common facility | no common facility | no common laundry facility |

| ii) Energy   | Show on<br>DA plans | Show on CC/CDC<br>plans & specs | Certifier<br>check |
|--|---------------------|---------------------------------|--------------------|
| (a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table<br>below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure<br>specified.   |                     | ~                               | ~                  |
| (b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area<br>specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified.<br>The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area,<br>where specified. |                     | ~                               | ~                  |
| (c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.   | ~                   | ~                               | ~                  |

| 1. In these commitments, "applicant" means the persor      | n carrying out the development.   |
|--|---|
|  | nd common area listed in this certificate, on the plans accompanying any development application, and on the plans and onstruction certificate / complying development certificate, for the proposed development, using the same identifying letter or mmon area in this certificate. |
|  | ves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both nents in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of ial purposes.    |
|  | ent for a dwelling or building, and that system will also service any other dwelling or building within the development, then that<br>parately listed as a commitment for that other dwelling or building).   |
| 5. If a star or other rating is specified in a commitment, | this is a minimum rating.   |
|  | ese commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for pply.                     |
|  |   |
| egend  |   |

2. Commitments identified with a " " in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

3. Commitments identified with a " " in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).