

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 1269504S

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 10/09/2020 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Thursday, 10 February 2022

To be valid, this certificate must be lodged within 3 months of the date of issue.



Planning,
Industry &
Environment

Project summary

| | |
|---------------------------|---------------------------------------|
| Project name | North Narrabeen Residence |
| Street address | 32 Garden Street North Narrabeen 2101 |
| Local Government Area | Northern Beaches Council |
| Plan type and plan number | deposited 7593 |
| Lot no. | 91 |
| Section no. | - |
| Project type | separate dwelling house |
| No. of bedrooms | 3 |

Project score

| | | |
|-----------------|--------|-------------|
| Water | ✓ 43 | Target 40 |
| Thermal Comfort | ✓ Pass | Target Pass |
| Energy | ✓ 60 | Target 50 |

Certificate Prepared by

Name / Company Name: David Baillie - Architect

ABN (if applicable): 13311448107

Description of project

Project address

| | |
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| Street address | 32 Garden Street North Narrabeen 2101 |
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| Section no. | - |

Project type

| | |
|-----------------|-------------------------|
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| No. of bedrooms | 3 |

Site details

| | |
|------------------------------------|--------|
| Site area (m ²) | 809 |
| Roof area (m ²) | 112 |
| Conditioned floor area (m2) | 125.06 |
| Unconditioned floor area (m2) | 14.0 |
| Total area of garden and lawn (m2) | 407 |

Assessor details and thermal loads

| | |
|---|-----|
| Assessor number | n/a |
| Certificate number | n/a |
| Climate zone | n/a |
| Area adjusted cooling load (MJ/m ² .year) | n/a |
| Area adjusted heating load (MJ/m ² .year) | n/a |
| Ceiling fan in at least one bedroom | n/a |
| Ceiling fan in at least one living room or other conditioned area | n/a |

Project score

| | | |
|-----------------|--------|-------------|
| Water | ✓ 43 | Target 40 |
| Thermal Comfort | ✓ Pass | Target Pass |
| Energy | ✓ 60 | Target 50 |

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.

| Water Commitments | Show on DA plans | Show on CC/CDC plans & specs | Certifier check |
|---|------------------|------------------------------|-----------------|
| Landscape | | | |
| The applicant must plant indigenous or low water use species of vegetation throughout 81 square metres of the site. | ✓ | ✓ | |
| Fixtures | | | |
| The applicant must install showerheads with a minimum rating of 4 star (> 4.5 but ≤ 6 L/min plus spray force and/or coverage tests) in all showers in the development. | | ✓ | ✓ |
| The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development. | | ✓ | ✓ |
| The applicant must install taps with a minimum rating of 4 star in the kitchen in the development. | | ✓ | |
| The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development. | | ✓ | |
| Alternative water | | | |
| Rainwater tank | | | |
| The applicant must install a rainwater tank of at least 3000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities. | ✓ | ✓ | ✓ |
| The applicant must configure the rainwater tank to collect rain runoff from at least 112 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam). | | ✓ | ✓ |
| The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) | | ✓ ✓ ✓ | ✓ ✓ ✓ |

| Thermal Comfort Commitments | Show on DA plans | Show on CC/CDC plans & specs | Certifier check |
|---|------------------|------------------------------|-----------------|
| General features | | | |
| The dwelling must not have more than 2 storeys. | ✓ | ✓ | ✓ |
| The conditioned floor area of the dwelling must not exceed 300 square metres. | ✓ | ✓ | ✓ |
| The dwelling must not contain open mezzanine area exceeding 25 square metres. | ✓ | ✓ | ✓ |
| The dwelling must not contain third level habitable attic room. | ✓ | ✓ | ✓ |
| Floor, walls and ceiling/roof | | | |
| The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below. | ✓ | ✓ | ✓ |

| Construction | Additional insulation required (R-Value) | Other specifications |
|--|--|--|
| floor - suspended floor above enclosed subfloor, 32.59 square metres, framed | 1.10 (or 1.8 including construction) (down) | |
| floor - suspended floor above open subfloor, 54.4 square metres, framed | 1.3 (or 2 including construction) (down) | |
| floor - above habitable rooms or mezzanine, 18.8 square metres, framed | nil | |
| external wall - framed (weatherboard, fibre cement, metal clad) | 3.00 (or 3.40 including construction) | |
| ceiling and roof - flat ceiling / pitched roof | ceiling: 2.95 (up), roof: foil backed blanket (100 mm) | gable end vents; medium (solar absorptance 0.475-0.70) |
| ceiling and roof - flat ceiling / flat roof, framed | ceiling: 3.08 (up), roof: foil backed blanket (100 mm) | framed; medium (solar absorptance 0.475-0.70) |

| | |
|------|--|
| Note | <ul style="list-style-type: none"> Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia. |
| Note | <ul style="list-style-type: none"> In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials. |

| Thermal Comfort Commitments | Show on DA plans | Show on CC/CDC plans & specs | Certifier check |
|--|------------------|------------------------------|-----------------|
| Windows, glazed doors and skylights | | | |
| The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door. | ✓ | ✓ | ✓ |
| The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table. | ✓ | ✓ | ✓ |
| <p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> Aluminium single clear Aluminium double (air) clear Timber/uPVC/fibreglass single clear Timber/uPVC/fibreglass double (air) clear For other glass or frame types, each window and glazed door must be accompanied with certification showing a U value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) within the range of those listed. Total system U values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. Frame and glass types shown in the table below are for reference only. Vertical external louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed. Overshadowing buildings/vegetation must be of the height and distance from the centre and the base of the window and glazed door, as specified in the 'overshadowing' column. | ✓ | ✓ | ✓ ✓ ✓ |
| The applicant must install the skylights described in the table below, in accordance with the specifications listed in the table. Total skylight area must not exceed 3 square metres (the 3 square metre limit does not include the optional additional skylight of less than 0.7 square metres that does not have to be listed in the table). | ✓ | ✓ | ✓ |
| <p>The following requirements must also be satisfied in relation to each skylight:</p> <ul style="list-style-type: none"> External awnings and louvres must fully shade the skylight above which they are situated when fully drawn or closed | | ✓ ✓ | ✓ ✓ |

| Skylight no. | Maximum area (square metres) | Type | Shading device |
|--------------|------------------------------|---------------------------------|----------------------------|
| S01 | 0.72 | timber, low-E/double/argon fill | adjustable awning or blind |

| Window/glazed door no. | Maximum height (mm) | Maximum width (mm) | Type | Shading Device (Dimension within 10%) | Overshadowing |
|------------------------|---------------------|--------------------|--|---|-------------------------|
| North facing | | | | | |
| W01 | 2100 | 900 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 4800 mm, 1053 mm above head of window or glazed door | 1-2 m high, <1.5 m away |
| W02 | 620 | 1800 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 500 mm, 850 mm above head of window or glazed door | not overshadowed |
| W03 | 620 | 1800 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 500 mm, 655 mm above head of window or glazed door | not overshadowed |
| W04 | 1820 | 600 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 500 mm, 540 mm above head of window or glazed door | not overshadowed |
| W19 | 620 | 1800 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | none | not overshadowed |
| East facing | | | | | |
| W05 | 1200 | 1800 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 1200 mm, 720 mm above head of window or glazed door | >4 m high, 5-8 m away |
| W06 | 2100 | 600 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 1200 mm, 620 mm above head of window or glazed door | >4 m high, 5-8 m away |
| W07 | 2100 | 850 | U-value: 5.6, SHGC: 0.324 - 0.396 (aluminium, single, Lo-Tsol Low-e) | eave 1200 mm, 620 mm above head of window or glazed door | >4 m high, 5-8 m away |
| W08 | 1200 | 1800 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 1200 mm, 620 mm above head of window or glazed door | >4 m high, 8-12 m away |
| W09 | 2400 | 2400 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 2700 mm, 670 mm above head of window or glazed door | >4 m high, 5-8 m away |
| W10 | 2400 | 600 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 2700 mm, 670 mm above head of window or glazed door | >4 m high, 5-8 m away |
| W11 | 2400 | 3150 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 1200 mm, 810 mm above head of window or glazed door | 2-4 m high, 8-12 m away |
| South facing | | | | | |
| W12 | 1760 | 600 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | none | not overshadowed |
| W13 | 950 | 2400 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 500 mm, 990 mm above head of window or glazed door | not overshadowed |


| Window/glazed door no. | Maximum height (mm) | Maximum width (mm) | Type | Shading Device (Dimension within 10%) | Overshadowing |
|------------------------|---------------------|--------------------|--|--|------------------|
| W14 | 1760 | 750 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 500 mm, 770 mm above head of window or glazed door | not overshadowed |
| W15 | 780 | 3715 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 500 mm, 1150 mm above head of window or glazed door | not overshadowed |
| West facing | | | | | |
| W16 | 2100 | 2400 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | external louvre/vertical blind (adjustable) | not overshadowed |
| W17 | 2100 | 900 | U-value: 5.6, SHGC: 0.324 - 0.396 (aluminium, single, Lo-Tsol Low-e) | eave 500 mm, 450 mm above head of window or glazed door | not overshadowed |
| W18 | 925 | 600 | U-value: 5.6, SHGC: 0.369 - 0.451 (aluminium, single, Lo-Tsol Low-e) | eave 500 mm, 450 mm above head of window or glazed door | not overshadowed |

| Energy Commitments | Show on DA plans | Show on CC/CDC plans & specs | Certifier check |
|---|------------------|------------------------------|-----------------|
| Hot water | | | |
| The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric heat pump with a performance of 41 to 45 STCs or better. | ✓ | ✓ | ✓ |
| Cooling system | | | |
| The living areas must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system. | | ✓ | ✓ |
| The bedrooms must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system. | | ✓ | ✓ |
| Heating system | | | |
| The living areas must not incorporate any heating system, or any ducting which is designed to accommodate a heating system. | | ✓ | ✓ |
| The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system. | | ✓ | ✓ |
| Ventilation | | | |
| The applicant must install the following exhaust systems in the development: | | | |
| At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off | | ✓ | ✓ |
| Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off | | ✓ | ✓ |
| Laundry: natural ventilation only, or no laundry; Operation control: n/a | | ✓ | ✓ |
| Artificial lighting | | | |
| The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps: | | | |
| • at least 3 of the bedrooms / study; dedicated | | ✓ | ✓ |
| • at least 1 of the living / dining rooms; dedicated | | ✓ | ✓ |
| • the kitchen; dedicated | | ✓ | ✓ |


| Energy Commitments | Show on DA plans | Show on CC/CDC plans & specs | Certifier check |
|---|------------------|------------------------------|-----------------|
| <ul style="list-style-type: none"> all bathrooms/toilets; dedicated | | ✓ | ✓ |
| <ul style="list-style-type: none"> the laundry; dedicated | | ✓ | ✓ |
| <ul style="list-style-type: none"> all hallways; dedicated | | ✓ | ✓ |
| Natural lighting | | | |
| The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting. | ✓ | ✓ | ✓ |
| The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting. | ✓ | ✓ | ✓ |
| Other | | | |
| The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling. | | ✓ | |
| The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions. | | ✓ | |
| The applicant must install a fixed outdoor clothes drying line as part of the development. | | ✓ | |

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

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.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.