




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: Wednesday, 06 April 2022
To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	ARCUS 20144	
Street address	94 TORONTO Avenue CROMER 2099	
Local Government Area	Northern Beaches Council	
Plan type and plan number	deposited 404074	
Lot no.	A	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	5	
Project score		
Water	 48	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 50	Target 50




Certificate Prepared by
Name / Company Name: Frys Energywise
ABN (if applicable): 631418543

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
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) 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 578.53 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:			
• 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.)		✓	✓

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: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning: Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning: Energy rating: EER 3.0 - 3.5		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning: Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning: Energy rating: EER 3.0 - 3.5		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, not ducted; 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:			
<ul style="list-style-type: none"> at least 5 of the bedrooms / study; 		✓	✓

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.




















Description of project

Project address	
Project name	ARCUS 20144
Street address	94 TORONTO Avenue CROMER 2099
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan 404074
Lot no.	A
Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	5
Site details	
Site area (m ²)	1864
Roof area (m ²)	579
Conditioned floor area (m2)	305.0
Unconditioned floor area (m2)	12.0
Total area of garden and lawn (m2)	350

Assessor details and thermal loads		
Assessor number	DMN/12/1441	
Certificate number	0007328271	
Climate zone	56	
Area adjusted cooling load (MJ/m ² .year)	25	
Area adjusted heating load (MJ/m ² .year)	39	
Ceiling fan in at least one bedroom	No	
Ceiling fan in at least one living room or other conditioned area	No	
Project score		
Water	✔ 48	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 50	Target 50

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. 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.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Floor and wall construction	Area
floor - concrete slab on ground	All or part of floor area square metres
floor - suspended floor above garage	All or part of floor area

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> at least 6 of the living / dining rooms; the kitchen; all bathrooms/toilets; the laundry; all hallways; 		    	    
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 6 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.			

Nationwide House Energy Rating Scheme

NATHERS Certificate No. 0007328271

Generated on 06 Apr 2022 using BERS Pro v4.4.1.5 (3.21)

Property

Address 94 Toronto Avenue , Cromer , NSW , 2099

Lot/DP A1040474

NCC Class* 1A

Type New Dwelling

Plans

Main Plan Lot A 94 Toronto Avenue

Prepared by MM

Construction and environment

Assessed floor area (m ²)	Exposure Type
Conditioned* 305.0	Suburban
Unconditioned* 63.0	NATHERS climate zone
Total 368.0	56
Garage 51.0	



Accredited assessor

Name Iain Fry

Business name Frys Energywise

Email comply@frysenergywise.com.au

Phone 02 9899 2825

Accreditation No. DMM12/1441

Assessor Accrediting Organisation

Design Matters' National Declaration of Interest Declaration completed: no conflicts



5.1
The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

63.9 MJ/m²

Predicted annual energy load for heating and cooling based on standard climatic assumptions.

For more information on your dwelling's rating see www.nathers.gov.au

Thermal performance

Heating	Cooling
39.1 MJ/m ²	24.9 MJ/m ²

About the rating

NATHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the air flow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QRGenerate?projid=3Hy0C

When using either link, ensure you are visiting hstar.com.au



National Construction Code (NCC) requirements

The NCC requirements for NatHERS rated houses are contained in 3.2.2(9)(a) and 3.2.5 of the NCC Volume Two. For apartments the requirements are detailed in 3.0.2 and 3.5 to 3.8 of the NCC Volume One.

NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and electrical lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standards) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.
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INSULATION NOTES:

- WALLS
 - R2.5 EXTERNAL WALL INSULATION
 - R1.5 INTERNAL WALL INSULATION TO PDR, BATH & WC
- WALL SARKING TO ALL EXTERNAL WALLS
- MID FLOOR
 - R2.5 BULK INSULATION ABOVE GARAGE TO ROOMS ABOVE
- CEILING
 - R4.0 CEILING INSULATION (EXCLUDING GARAGE PORCH & ALFRESCO)
- ROOF
 - R15 ANTICON BLANKET TO METAL ROOF WHERE APPLICABLE.