

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](http://www.basix.nsw.gov.au)

Secretary  
Date of issue: Friday, 07 May 2021  
To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	Tracey & Jason Lapin - 92 River Road Emu Plains	
Street address	92 RIVER ROAD EMU PLAINS 2750	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited 1247788	
Lot no.	12	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 51	Target 50

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

## Description of project

Project address		Assessor details and thermal loads	
Project name	Tracey & Jason Lapin - 92 River Road Emu Plains	Assessor number	DMN/12/1441
Street address	92 RIVER ROAD EMU PLAINS 2750	Certificate number	0005876990
Local Government Area	Penrith City Council	Climate zone	28
Plan type and plan number	Deposited Plan 1247788	Area adjusted cooling load (MJ/m <sup>2</sup> /year)	49
Lot no.	12	Area adjusted heating load (MJ/m <sup>2</sup> /year)	54
Section no.	-	Ceiling fan in at least one bedroom	No
Project type	separate dwelling house	Ceiling fan in at least one living room or other conditioned area	No
No. of bedrooms	4	Project score	
Site details		Water	✓ 40 Target 40
Site area (m <sup>2</sup> )	1224	Thermal Comfort	✓ Pass Target Pass
Roof area (m <sup>2</sup> )	525	Energy	✓ 51 Target 50
Conditioned floor area (m <sup>2</sup> )	459.0		
Unconditioned floor area (m <sup>2</sup> )	15.0		
Total area of garden and lawn (m <sup>2</sup> )	180		

## 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 Litres) 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			
Reameter 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 650 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.)		✓	✓
Swimming pool			
The swimming pool must not have a volume greater than 73 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must be outdoors.	✓	✓	

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 also state a rating 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 for 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	280.0 square metres
floor - suspended floor/room subfloor	6.0 square metres
floor - suspended floor above garage	48.0 part of floor area

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 air conditioning. 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 air conditioning. Energy rating: EER 3.0 - 3.5		✓	✓
The cooling system must provide for daylight 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 air conditioning. 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 air conditioning. Energy rating: EER 3.0 - 3.5		✓	✓
The heating system must provide for daylight zoning between living areas and bedrooms.		✓	✓
Ventilation			
The applicant must install the following exhaust system in the development: At least 1 Bathroom: individual fan, ducted to facade or roof. Operation control: manual switch on/off Kitchen: individual fan, ducted to facade 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 5 of the bedrooms / study, dedicated		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
• at least 5 of the living / dining rooms; dedicated			✓
• the kitchen; dedicated		✓	✓
• all bathrooms/toilets; dedicated		✓	✓
• the laundry; dedicated		✓	✓
• 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 5 bathroom(s)/bath(s) in the development for natural lighting.	✓	✓	✓
Swimming pool			
The development must not incorporate any heating system for the swimming pool.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 2 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
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 "u" 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 "u" 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 "u" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate/other interim or final for the development may be issued.

## BASIX & THERMAL COMMITMENTS



Date 19 April 2021					
Lot Number 12	House Number 92	Street River Road	Suburb Emu Plains	Post Code 2750	State NSW

## FLOORS

Ground Slab on ground	1st Floor Timber
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## WALLS

Ground Brick Veneer, Fibre Cement Cladding	1st Floor Fibre Cement Cladding
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Insulation External Walls R2.0	Internal Walls to be Insulated Garage internal walls	Insulation Internal Walls R2.0
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External Colours Not yet selected		
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## CEILINGS

Ceilings with cavity to roof R3.0		
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## ROOF AREA

Colours Not yet selected	Material Metal (Colourbond)	Insulation Anticon 50mm (R1.3)
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## WINDOWS (Refer to NatHERS Certificate for more detail)

Supplier	AWS Code	Operation	Glass	Uv	SHGC
Bradams	BRD-001-01A	Sliding Window	Single Clear	6.43	0.76
	BRD-112-01A	Awning	Single Clear	6.54	0.67
	BRD-033-01A	Sliding/Stacker Door	Single Clear	6.19	0.74
	BRD-024-01A	Double Hung	Single Clear	6.3	0.75
	BRD-063-01A	Fixed Window	Single Clear	6.02	0.78
	BRD-006-01A	Bi-Fold Doors	Single Clear	6.08	0.61

## WATER

Landscape Area 41.8m <sup>2</sup>	Rainwater Tank Garden, WC, Laundry	Rainwater Tank Size 3,000 L	Roof Area to Tank 100% of Roof
Showerheads 3 Star > 7.5 but less < or = 9.0 litres per minute	Toilets 4 Star	Basin Taps 4 Star	Kitchen Taps 4 Star
Swimming Pool Yes	Swimming Pool Inclusions Pool Cover, Solar Only	Swimming Pool Capacity 73KL	

## ENERGY

Hot Water Gas Instantaneous 6 Star	Air Conditioning Single Phase	Air Conditioner EER Heating & Cooling 3.0 - 3.5
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## VENTILATION

Laundry Natural Ventilation (has external window/door)	Bathroom Ducted	Kitchen Ducted
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## OTHER

Solar Photovoltaic System Yes	Size (kw) 2.0kw	Cooking Gas Cooktop/Electric Oven
Living Room Ceiling Fans No	Bedroom Ceiling Fans No	Other Outdoor Clothes Line, Ventilated Fridge Space, Air Conditioning Zoned

## ADDITIONAL NOTES

The project has been assessed under the simulation method of the BASIX Protocol. Downlights fitted after the assessment must be IC Rated and non-ventilated. All new residential buildings must be constructed in accordance with Building BCA Part 3. 12. 1, Build Sealing BCA Part 3. 12. 3. Insulation must be installed in accordance with AS3595.

Frys Building Consultancy Pty Ltd Trading as Frys Energywise are Accredited Thermal Energy Assessors ABSA 20856, BDAV 12/1441, COLA 2011291

## Nationwide House Energy Rating Scheme NatHERS Certificate No. 0005876990

Generated on 16 Apr 2021 using BERS Pro v4.4.0.3 (3.21)

## Property

Address	92 River Road , Emu Plains , NSW , 2750
Lot/DP	12/1247788
NCC Class*	1A
Type	New Dwelling

## Plans

Main Plan	LAPIN 20126
Prepared by	AH

## Construction and environment

Assessed floor area (m <sup>2</sup> )*	Exposure Type
Conditioned* 459.0	Open
Unconditioned* 87.0	NatHERS climate zone
Total 546.0	28
Garage 72.0	

## Accredited assessor

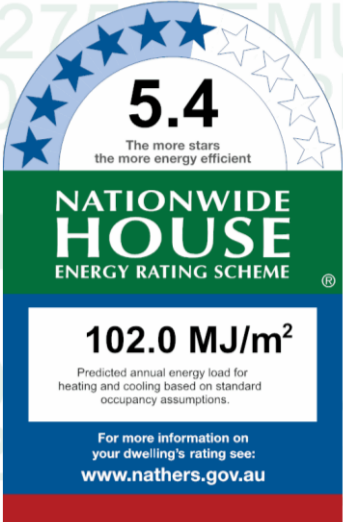
Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenerywise.com.au
Phone	02 9899 2825

Accreditation No. DMN/12/1441

## Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts



## Thermal performance

Heating	Cooling
54.3 MJ/m <sup>2</sup>	47.7 MJ/m <sup>2</sup>

## 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 airflow impacts from ceiling fans.

## Verification

To verify this certificate, scan the QR code or visit [hstar.com.au/QR/Generate?p=ExqNEYtZ](http://hstar.com.au/QR/Generate?p=ExqNEYtZ)  
When using either link, ensure you are visiting [hstar.com.au](http://hstar.com.au)



## National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In 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 artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at [www.abcb.gov.au](http://www.abcb.gov.au).

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

\* Refer to glossary.  
Generated on 16 Apr 2021 using BERS Pro v4.4.0.3 (3.21) for 92 River Road , Emu Plains , NSW , 2750



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5G/ 256 New Line Road Dural 2158

NORTH

DATE

AMENDMENTS

NO

BY

ADDRESS  
92 River Road, Emu Plains Lot 12  
DP 1247788

DRAWING TITLE  
BASIX COMMITMENTS

DRAWING STATUS  
WORKING DRAWINGS

DRAWN BY AH	DATE 4/06/2021	SCALE @ A2
DWG NO DA02	JOB NUMBER 20126	ISSUE 06

CLIENT  
Tracey and Jason LAPIN

PROJECT  
New Build



Full Member  
No. 1672 - 14

17/12/2020 INITIAL SKETCH  
18/01/2021 REVISED SKETCH  
08/02/2021 REVISED SKETCH  
19/02/2021 DESIGN DEVELOPMENT  
18/05/2021 PRELIMINARY WORKING DRAWINGS  
18/05/2021 POOL AMMENDMENTS

01 AH  
02 AW  
03 AW  
04 AW  
05 SC  
06 SC