

Thermal Comfort Assessment

BUILDING
SUSTAINABILITY
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All Australian Architecture
Development application for:
3 Ocean Grove,
Collaroy, NSW 2097

Issue	File Ref	Description	Author	Date
A	7178	Thermal comfort assessment and certification	DA	13/11/13
B	8580	Thermal comfort update	MP	26/11/14



Thermal Comfort Assessment

This home has been assessed under the thermal simulation method of the BASIX Protocol

Assessor Tracey Cools

Accreditation Number VIC/BDAV/12/1473

BASIX Details

Certificate Number: 14730837

BASIX adjusted conditioned area: 274m²

Area adjusted cooling load: 22 MJ/m²/pa

BASIX adjusted un-conditioned area: 33m²

Area adjusted heating load: 56 MJ/m²/pa

Specification

The following specification was used to achieve the thermal performance values. Modelling proxies are used at times and if the buildings element details vary the thermal performance specifications below shall take precedence.

If there is a change to this specification during design or construction phases please contact Efficient Living for advice and if required an updated certificate will be issued.

Thermal Performance Specifications

Floors	Enclosed suspended concrete floor to basement level – No insulation Suspended concrete floor to ground floors – 2.5 bulk insulation to areas of open subfloor in guest bedroom and pdr room only. No insulation to all other areas Suspended timber floor to Level 1 – R1.2 bulk acoustic insulation (also noted in 'ceilings' below)
Walls	External: Basement - 110mm brick internal skin with 25mm batten, 20mm Kingspan insulation and weatherboard external finish (Total R-Value R2.1) - medium colour default Ground floor and Level 1 - Timber stud walls, weatherboard external finish; R2.0 bulk insulation throughout - medium colour default. Internal walls: Basement - 110mm brickwork, no insulation. Ground floor and Level 1 -Plasterboard on studs, no insulation.
Windows/clerestory	Timber frames with single clear glazing U-Value (equal to or lower than): 5.55 SHGC (+ or - 10%): 0.73 Given values for all windows are NFRC, total window values
Skylights	None
Ceilings	Raked ceiling with R2.5 bulk insulation where metal deck roof is over R2.5 insulation to flat ceiling where metal deck roof is over Garage & part ground floor hallway ceiling, R1.2 acoustic insulation between ceiling & habitable areas/balcony above It has been assumed at DA stage that the area of all ceiling penetrations is less than 0.5% of the total ceiling area. If down lights are proposed at a later stage, BCA loss of insulation calculations will be required.
Roof	Metal deck roof with foil backed blanket (min R1.23 up & R1.28 down) Light colour (SA < 0.475)
Floor coverings	Tiles to all wet areas, carpet to master suite & landing and timber to all other areas as per plans.
External shade	Covered beach deck to North and East, covered deck and balcony to East.
Ventilation	All external doors have weather seals, all exhaust fans and chimneys have dampers, any down lights proposed will have capped fittings.

BCA requirements

In addition to the BASIX requirements; all new residential dwellings (class 1 buildings) Must comply with; NSW PART 3.12.1 Building sealing & 3.12.5.0 - 3.12.5.3



NatHERS Certificate

New Dwelling



4.0 Stars

Simulation Software

Software Name BERS Pro 4.2
Software Version Release 110811/A
Engine Version CHENATH V2.13

Simulation Details

Project Name Lisa & Jon Graham_1
Date 13/11/2013
Location COLLAROY PC 2097
Climate file climat56.TXT
Adjusted Star Rating 4.0 Stars
Conditioned Area 274.27 m²
Unconditioned Area 75.42 m²
Adjusted Cooling 21.8 MJ/m²
Adjusted Heating 56.4 MJ/m²
Adjusted Total 78.2 MJ/m²

Dwelling Address

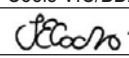
DP Number 211132
Unit Number
Lot Number
House Number 3
Street Name Ocean Grove
Development Name
Suburb Collaroy NSW 2097

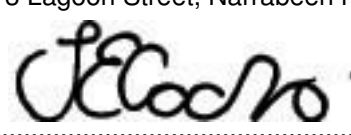
Client Details

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Street Details Suite 206, 20 Dale Street, Brookvale, NSW 2100

Assessor Details

Name Tracey Cools
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Email admin@efficientliving.com.au
Postal Address
Street Details 13/13 Lagoon Street, Narrabeen NSW 2101

		Energy Rating		Certificate Number	14730837
☒	single-dwelling rating			4.0	stars
☐	multi-unit development (attach listing of ratings) If selected, data specified is the average across the entire development	heating	56	MJ/m ²	
		cooling	22	MJ/m ²	
Recessed downlights confirmation:		☐ Rated with	☒ Rated without		
Assessor Name/Number		Tracey Cools VIC/BDAV/12/1473			
Assessor Signature				Date	26.11.14

Signed by the Assessor..........Date 26 / 11 / 2014

*Tilted roof windows with blinds cannot be modelled using this version of BERSPro.
All windows are modelled with Holland Blinds for regulatory purposes.*

Building Element Details

Project Lisa & Jon Graham Run 1
COLLAROY PC 2097 Lat -33.70 Long 151.30 Climate File climat56.TXT

Summary
Conditioned Area 274.3 m²
Unconditioned Area 75.4 m²
Total Floor Area 349.7 m²
Total Glazed Area 77.8 m²
Total External Solid door Area 19.0 m²
Glass to Floor Area 22.2 %
Gross External Wall Area 386.9 m²
Net External Wall Area 290.1 m²

Window
77.8 m² GGG-05-002a Generics Uval 5.55 SHGC 0.73
Glass Single Glazed Clear
Frame Timber

External Wall
123.2 m² Reverse Brick Veneer Bulk, Reflective One Side, Anti-glare Other R 1.0
4.2 m² Reverse Brick Veneer Bulk Insulation R 1.0
162.8 m² Weatherboard Cavity Panel Bulk Insulation R 2.0

Internal Wall
87.8 m² Single Skin Brick No Insulation
138.9 m² Cavity Panel 70mm gap No Insulation

External Floor
35.8 m² Suspended Concrete Slab Ceramic Tiles 8mm No Insulation
91.1 m² Suspended Concrete Slab Cork Tiles or Parquetry 8mm No Insulation
42.4 m² Suspended Concrete Slab Bare No Insulation
1.4 m² Suspended Concrete Slab Ceramic Tiles 8mm Bulk Insulation in Contact with Floor R 2.5
7.2 m² Suspended Concrete Slab Cork Tiles or Parquetry 8mm Bulk Insulation in Contact with Floor R 2.5

External Ceiling
180.7 m² Plasterboard Bulk Insulation R2.5 Unventilated roofspace

Internal Floor/Ceiling
122.4 m² Concrete Above Plasterboard No Insulation
57.6 m² Timber Above Plasterboard Bulk Insulation R 1.2

Roof (Horizontal area)
27.9 m² Corrugated Iron Bulk, Reflective Side Down, Anti-glare Up R 1.0 6° slope Skillion roof
42.3 m² Corrugated Iron Bulk, Reflective Side Down, Anti-glare Up R 1.0 13° slope Skillion roof
50.1 m² Corrugated Iron Bulk, Reflective Side Down, Anti-glare Up R 1.0 6° slope Hip roof
36.2 m² Corrugated Iron Bulk, Reflective Side Down, Anti-glare Up R 1.0 13° slope Hip roof
21.4 m² Corrugated Iron Foil, Gap Above, Reflective Side Down, Anti-glare Up 13° slope Hip roof



Energy Rating

Certificate Number 14730837

☒ single-dwelling rating

☐ multi-unit development (attach listing of ratings)
If selected, data specified is the average across the entire development

4.0 stars

heating 56 MJ/m²

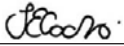
cooling 22 MJ/m²

Recessed downlights confirmation:

☐ Rated with

☒ Rated without

Assessor Name/Number Tracey Cools VIC/BDAV/12/1473

Assessor Signature  Date 26.11.14