BASIX REQUIREMENTS-SECTION 96

Water Commitments

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 tar

The applicant must install a rainwater tank of at least 5000 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 185 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.)
- · a tap that is located within 10 metres of the swimming pool in the development

wimming poo

The swimming pool must not have a volume greater than 44 kilolitres.

The swimming pool must have a pool cover.

The swimming pool must be outdoors.

Energy Commitments

Hot wate

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 5 stars.

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: individual fan, ducted to façade or roof; Operation control: manual switch on/off

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 living / dining rooms;
- · the kitchen;
- · all bathrooms/toilets;
- · the laundry;
- all hallways;

latural 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 3 bathroom(s)/toilet(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.

Other

The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.

The applicant must install a fixed outdoor clothes drying line as part of the development.

Thermal Comfort Commitments

Simulation Method

Ventilation

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.

Thermal Performance Specifications Concrete slab on ground with no insulation Floors Timber to ground & first floor, no insulation required between levels internally. External walls: Brick veneer with R1.5 bulk insulation. light colour Walls (SA<0.475) Internal walls: Plasterboard on studs, no insulation Windows Aluminium frames with single clear glass U-Value (equal to or lower than): 6.57 SHGC (+ or - 10%): 0.74 Given values are NFRC, total window values None Skylights Ceilings Plasterboard with R2.5 bulk insulation 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 roof with no insulation, medium colour (SA 0.475-0.7). Floor coverings Tiles to wet areas, timber to living areas and carpet to bedrooms External shade Covered Balconies and eaves - as per plans

All external doors have weather seals, all exhaust fans and chimneys have

dampers, any down lights proposed will have capped fittings.



Frank Takos & Assoc.

P.O. Box 338, Five Dock NSW 2046 ph: (02) 9712 1653 mb: 0418 626 880

em: frank.takos@gma
ABN: 49 572 890 911
BRN: BN 9801 9637

Commercial - Industrial - Residential - Interior Design - Documentation

| PROJECT PROPOSED NEW RESIDENCE & CAR-PORT | COLLAROY, NSW LOT 12 SEC 13 DP 10648 | SCALE | DESIGNED DRAWN GF |
|---|--------------------------------------|----------|------------------------------|
| BASIX - SECT 96 | Mr & Mrs B Nash | OCT 2014 | DRAWING NO. A 14-09-02-06 |