



Anderson Energy Efficiency

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GUIDE TO OUR ENERGY EFFICIENCY CHECK LIST

All buildings constructed in Australia need to comply with National Construction Code. In order to satisfy the code's requirements, your building must comply with the Energy Efficiency standards. These standards are assessed by competent & qualified Assessors.

To help us assess your building (or project) quickly and efficiently we developed this Check List. It is also a compulsory part of our ISO9001 compliant [Quality Management System](#). This Check List works as our "Go" sheet, and we can not complete an assessment without it, so it's very important you complete & return it as quickly as possible!

The first few fields are fairly self-explanatory.

Site Address: The street address, suburb and postcode of the building

Real Property Description: The Lot No, RP/SP, Parish details can be found on the property rates notice or the survey plan

Date: Today's Date

Please tick the boxes indicating the plans you've sent us.

- Site Plan.
- Floor Plans & Roof Plans.
- Elevations, Glazing & door schedules.
- Floor Coverings are required for Thermal Calculation assessments, and unless informed otherwise, we will assume carpet as the default floor covering except for wet areas (NatHERS Procedure).
- Sections (if available). Sections help us understand wall and floor configurations.
- Lighting Plan & Schedule (if available). As the lighting allowance is calculated we need the location, number and types of lights. As downlights can result in a loss of effective ceiling insulation, we need to know what lights go where.
- We prefer to have all this information in order to provide you with an accurate Energy Efficiency assessment. Otherwise, we apply default conditions which may not be beneficial.

NCC Energy Efficiency Assessment Type

There are several different ways to assess a building depending on the Building Classification. If you don't know what assessment type is suitable or are undecided, you can select "Unsure what type".

Our assessors are happy to discuss the best assessment method for your project, or it can be found on the Fee Proposal. A full assessment is required for all Building Classifications, except for Class 7, 8, 9b and 10a buildings (or parts) with no conditioned spaces, where only the lighting is assessable.

- Commercial JV3: The Commercial Building Verification Method JV3 compares the design to a

Reference Building. The Reference Building is the same shape as the building being assessed but complies with Deemed-to-Satisfy (DtS). If elements of the building's design (e.g. wall insulation or glazing) do not comply with DtS, then the building must be better than the Reference Building in other areas to compensate. [DesignBuilder™](#) satisfies the ABCB Protocol for Building Energy Analysis Software 2006.1 as it uses [EnergyPlus™](#) for the calculation engine.

- **Commercial DtS:** Each building element (roof/ceiling, walls, floor & glazing) must comply separately, which when combined are "Deemed to Satisfy" the Code's Performance Requirement. Very little trading between elements is allowed, which can restrict options.
- **Residential Star Rating:** This assessment method allows trading of elements to achieve compliance. It depends on whether the building is a Class 1 (House) or Class 2 (Units) and if it has a complying Outdoor Living Area with or without a ceiling fan (please indicate any fans on the plans). Reduced wall insulation for masonry walls is usually possible for Thermal Calculation Assessments. For more details see the [Queensland Development Code MP4.1](#). We use [BERS Pro](#) software for assessing residences by the Star Rating method.
- **Residential DtS:** Each building element (roof/ceiling, walls, floor & glazing) must comply separately, which when combined are "Deemed to Satisfy" the Code's Performance Requirement. Very little trading between elements is allowed with restricted options. DtS assessments are not available for Class 2 (Units) and Class 4 part buildings.
- **Residential Reference Building:** Residential Reference Building assessments use the Star Rating software to compare the Cooling Energy and/or the Heating Energy to a Reference Building. This allows houses to comply with nearly lowest construction cost through trading the performance of different building elements.
- **BASIX Thermal Comfort:** This assessment method only applies for residential buildings (Houses and Units) in NSW. The Assessment method must follow the BASIX Protocol.
- **Multiple Types:** Please select this option if your project contains more than one Assessment method. For example, Class 2 units above commercial areas would be assessed with Residential Star Ratings & JV3 for the commercial part.

Glass

Select what glass Type & Frame your building will have. If you know it, you can write down the AFRC performance values (glass only) U-value & Solar Heat Gain Coefficient (available from your glass manufacturer), or you can specify the glazing product details. The more accurate information here, the better. Use the notes if performance glazing is proposed. If the AFRC values are glass+frames (window or total system) please make a note.

External Walls

What will the external walls & wall frames be made out of? What colour will they be (e.g. paint brand and colour name)? To help with Solar Absorptance we have referenced [typical colours](#) for comparison. If the colour is undecided then select from Very-light (off white, zincalume), Light (cream to yellow), Medium (yellow to orange) or Dark (everything else). If not specified we must assume Medium.

Metal frames are assumed to have a thermal break of at least R0.2 between the frame and light external cladding if the lining is also attached to the same metal frame.

Roof

For Solar Absorptance comparisons use these [typical colours](#).

Roof tiles and concrete have to be white to be very-light colour. Floor tiles on a terrace or balcony with a room below have the roof colour. If the colour is undecided then select from Very-light (off white, zincalume), Light (cream to yellow), Medium (yellow to orange) or Dark (everything else). If not specified we must assume Medium.

Metal frames are assumed to have a thermal break of at least R0.2 between the frame and roof if the ceiling is also attached to the same metal frame.

Skylights and rooflights need to be completely specified (e.g. size, reflectivity of shaft, insulation to shaft, diffuser).

Insulation

Provide details of materials to be used, including insulation and air spaces.

What is the type and thickness of added insulation in the External Walls, Internal Envelope Walls, Floor, Ceiling (on the plasterboard) and Roof (directly under the metal, roof tiles or suspended concrete)?

You can list generic (e.g. Rockwool 50mm), product brand name, or the material-only R-value (NOT total R-value and not including any reflective foil effective R-value). Foil insulation works if there is at least a 20mm air space, so we need to know the construction arrangement to calculate the total R-value. A detail section is great.

An Internal Envelope Wall separates a conditioned space from a non-conditioned space (e.g. Office from Warehouse). If you're requesting a DtS Assessment, wall insulation must continue above uninsulated ceilings to comply with the BCA J1.2(a)(ii) and BCA 3.12.1.1(a)(ii) requirements.

Additional Information

Are there Solar Photovoltaic Panels >1kW peak? We may be able to apply a residential star credit. For Commercial JV3 assessments, site-generated Renewable Energy can be included.

Are there any Ceiling Fans? For Residential assessments we assume 1200mm swept diameter ceiling fans unless otherwise indicated.

Is there Mechanical roof space ventilation?

Is there an Outdoor Living Area with roof insulation and/or a ceiling fan?

Any gaps in the ceiling insulation? Please be clear if there are any ceiling insulation penetrations (for example, downlights or ceiling exhaust fans excluding a range hood) as we need to include these.

Contact Details

Finally, we need your contact details and where to send the four hard copies of the Report and Design Compliance Certificate (Form 15).

Who should get the Tax Invoice? If this field is left blank the Tax Invoice will be sent to the Report address. If this is incorrect because the Tax Invoice addressee is unknown, the Energy Efficiency Report may be delayed until you tell us.

Include the Purchase Order Number if this is required for the Tax Invoice, or you can attach a copy of the Purchase Order.

The aim of this Check List is to provide you with the Energy Efficiency consulting you need for your project, which is why we are so specific. If you have any questions about our Check List, or are still feeling a little lost, don't hesitate to give us a call or send us an email and we'll help you out.