Building Standards - Design Assessment Scoresheet

The home designs of Lot Owners are assessed against the Building Standards using the NEV Design Assessment Scoresheet. This is provided to owners in their lot folder and can be downloaded from the "Useful reports and tables" section in the Wiki.

The Scoresheet measures the resources that a NEV dwelling uses, and considers the house energy emissions and water consumption in a similar manner to the 2004 BASIX benchmark, but seeks an initial reduction of estimated consumption that is less than 70% of the BASIX 2004 benchmark for both rather than the 40% mandated under NSW building regulations.

The goals for each category in the Scoresheet are provided in Table 1 of the NEV Building Standards.

The Design Assessment Scoresheet may be filled out by either the lot owners, the lot owner's design consultants. The Lot Owner is responsible for any cost incurred in completing the Scoresheet.

Mandatory Building Performance

The scorecard includes 3 ratings that new homes must achieve. They are:

- 1. At least a 7-stars NatHERS rating for building thermal performance.
- Reduce water consumption through installation of the highly rated water efficiency taps and showers.

This requirement will be assessed using BASIX (which is the Department of Planning and Environment's building sustainability index tool used by all local Councils when approving housing developments in NSW). Our Building Standards, however, will require 40 points to be achieved earlier in the assessment process than is generally required in a BASIX assessment.

3. Energy generated by a home exceeds annual average consumption.

Typically, solar photovoltaic panels (PV) will be used by home owners at Narara to generate power. To meet mandatory requirements, we call for PV sets to be sized at 2 kWp for the first bedroom and 1kWp for each additional bedroom.

Compliance with these 3 requirements will yield home designers 37 points on our assessment scorecard.

Other Scorecard Options

With 37 points achieved through designing in the mandatory performance items, the home designer then needs to achieve a further 33 points to reach the minimum targeted score of 70 points. The additional points are attained by adopting design strategies supported by the option matrix provided in the Design assessment scoresheet. Many options and combination of options are supported by the scoresheet and Lot Owners are encouraged to discuss with their designer the elements that best suit their requirements. Some, though not all, of the available options are presented below:

- More bedrooms and smaller homes
- Appropriate selection of construction materials
- Reduce embodied energy in house construction.
- Using sustainable materials such as mud-brick, straw bale and cob etc.
- Avoiding material with high human health impact such as VOC paints and PVC piping.
- Adding more than the mandatory number of solar photovoltaic panels.
- Selection of high star rated appliances (clothes dryers, air conditioners for example) or not having them at all.
- Managed energy consumption to reduce peak loads.
- Management waste during both home construction and after construction.
- Maximising the home's environment quality through solar access and cross ventilation.
- Livability considerations such as permitting disability access in the future.

Bonus Points

Bonus points have been built into the scorecard to account for the fact that some home owners may have difficulty in reaching 70 points because, for example, the NatHERS star rating system does not recognise innovations such as earth-ship construction, food production, water tanks and composting toilets.



Navigate to other Pages

- 1. Table of Contents
- Schedule 1 of CMS -Building Standards
- Schedule 2 of CMS -Landscape Standards
- 4. Useful Reports, Forms & Templates
- Building Standards Workshops

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The pages revision history can viewed at this <<u>link</u>>

Table 1 – NEV Building Ratings Scheme Summary - Initial Minimum Reduction Levels

| CATEGORY | SUB- CATEGORY | GOAL | MEASUREMENT CRITERIA | INITIAL VILLAGE MINIMUM* |
|----------|------------------|------|----------------------|--------------------------------|
|----------|------------------|------|----------------------|--------------------------------|

| Water | Potable Water Usage | Conserve drinking water from NEV dam | Water efficient devices; Water effective landscaping & gardens; Use of recycled water in house; Strategies for high water demand features e.g. irrigation | 70% reduction |
|------------|--|--|---|--|
| | Stormwater Greywater & Black-Water Management | Conserve drinking water; reduce stormwater, greywater, blackwater; consume recyclable surplus | Water Sensitive Urban Design (WSUD); how stormwater is harvested; ponds; rain gardens; infiltration systems; buffers incl. water tanks; swales; waterless toilets | 70% reduction |
| Energy | Thermal Performance | Decrease Energy usage | Passive solar house design considering orientation, windows, insulation, thermal mass, shading and ventilation | 7 stars' minimum** |
| Energy | Other Energy Usage | Decrease Other Energy usage | Heating & cooling methods; Hot water units; Appliances; Lighting (type, flexibility & optimizing); Standby power usage; Clothes drying | 70% reduction |
| | Renewable Energy | To at least meet annual demand | Photovoltaic panels | At least meet annual demand |
| | Peak Power Demand | Reduce summer and winter peak loading | Standby switches/ power boards; Energy monitoring system; Basic control system e. g. timer; Remote control system through the Smartgrid App; Separate circuits for non-essential appliances; load shifting by Electricity Provider; have PV plus battery system; surplus renewable energy above that required to meet the energy demand over the year | Points are awarded for these items |
| Materials | Materials | Lower the health & environmental impact of materials for sourcing, production and disposal | Having a minimum amount of materials; being durable; designing for ease of deconstruction at end of building life; low embodied energy; high recycled content; natural and renewable resource materials; low human health impact materials; locally sourced materials | Points are awarded for these items |
| Waste | Waste | Domestic and construction | Recycle waste streams; reuse and recycling of construction wastes; design to minimise offcuts & waste with prefabrication, using standard sizes etc. | Points are awarded for these items |
| Indoor | Indoor Environmental Quality (IEQ) | Optimum ventilation & acoustics; low pollutant level | Daylighting; type of walling, flooring and design for the acoustic consideration of neighbours; low emission materials, control of mould and condensation | Points are awarded for these items |
| Innovation | Innovation | Foster new ideas | Owners to demonstrate how elements exceed Category minimums | Points can be awarded if the requirements of other Categories are exceeded |
| | | | NB: Any innovative proposals need preliminary assessment from the BRP at the early design stage. | |
| Other | Other | Adaptability; Resilience; Noise; Livability | The ease of adapting house for future uses; ability to withstand severe external forces including fires; noise control measures e.g. pump locations (including heat pumps); Ability to improve access for occupants over time | Meet bushfire requirements; design for low noise |

Go to Top of Page