

HSTT05 6 Homestar Checklist for Terrace Homes

This assessment may only be used to assess terrace dwellings that are targeting a 6 Homestar Built Rating under Homestar v4[®]. Construction work must be completed to a degree where an onsite Built Rating assessment is possible. When the assessed dwelling complies with every mandatory item on the assessment checklist and sufficient optional points, the dwelling can be confirmed to have met the mandatory minimum and total point requirements to obtain a 6 Homestar Built rating.

Project Details

Owner Name: _____

Assessor Name: _____

Typology Details

Project Street Address: _____

Please also submit the dwelling registry found in the Submission Folder Template, showing street addresses and lot numbers of dwellings in this typology

Number of Bedrooms: _____ Conditioned Floor Area (m²): _____

Gross Floor Area (m²): _____ Building Footprint (m²): _____

Evidence Requirements

There are five types of evidence for the Homestar checklist method. The appropriate type of evidence for each checklist item is noted on the right-hand column of the checklist. How to confirm compliance under each evidencing method is outlined in the table below. Any photos and documents should be retained for 12 months.

Evidencing Type	How to Confirm Compliance
Site Check	Assessor must visually observe and confirm the relevant feature on site and take a photograph. If requested for audit, submit to NZGBC within the provided folders.
Specification	Assessor must observe that the checklist item is clearly included and/or required in the specification (which may be a sheet within the drawing set) before signing the proforma. If requested for audit, submit a copy of the specification with the relevant sections highlighted and denoted. This could be a scan of a hand mark up.
Floor Plans/Drawings	Assessor must observe that the checklist item is clearly included and required in the floor plans /drawing set. If requested for audit, submit a copy of the set with relevant drawings highlighted and denoted. This could be a scan of a hand mark up.
Check Certificates	For building products and materials, assessor must check and confirm eco-labelling, VOC testing or other compliance certificates. Submit these to NZGBC upon request.
Checked by Assessor	Documentation such as EMPs SWMPs and Home User guides should be provided to and checked by the assessor. Submit these to NZGBC.

6 Homestar Checklist for Terrace Homes

THE DWELLING MUST COMPLY WITH ALL OF THE FOLLOWING:						Check	Evidence provided	Reference Credit																														
Efficient Space and Water Heating																																						
<p>The dwelling is confirmed to achieve the schedule method OR 12 points or more in EHC-1. In units where the area of glazing is less than 30% of the total conditioned floor area this may be achieved by the following minimum construction R-values based on the project's climate zone:</p> <table border="1"> <thead> <tr> <th>Zone</th> <th>Roof Construction R-Value</th> <th>Wall Construction R-Value</th> <th>Floor Construction R-Value</th> <th>Windows and Glazing R-Value or WEERS rating</th> <th>Skylights R-value</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3.6</td> <td>2.1</td> <td>1.3</td> <td>0.26</td> <td>0.4</td> </tr> <tr> <td>2</td> <td>3.8</td> <td>2.1</td> <td>1.8</td> <td>0.32</td> <td>0.4</td> </tr> <tr> <td>3A</td> <td>4.1</td> <td>2.2</td> <td>2.3</td> <td>0.43</td> <td>0.5</td> </tr> <tr> <td>3B</td> <td>4.9</td> <td>2.9</td> <td>3</td> <td>0.43</td> <td>0.5</td> </tr> </tbody> </table> <p>An area weighted heat loss calculation (as in NZS4218 section 4.2) can also be used to establish compliance, with the above R-values used for the reference building. Refer to Homestar technical manual for specific guidance using this method for Homestar projects</p>						Zone	Roof Construction R-Value	Wall Construction R-Value	Floor Construction R-Value	Windows and Glazing R-Value or WEERS rating	Skylights R-value	1	3.6	2.1	1.3	0.26	0.4	2	3.8	2.1	1.8	0.32	0.4	3A	4.1	2.2	2.3	0.43	0.5	3B	4.9	2.9	3	0.43	0.5	<input type="checkbox"/>	Floor plans/ construction details	EHC-1
Zone	Roof Construction R-Value	Wall Construction R-Value	Floor Construction R-Value	Windows and Glazing R-Value or WEERS rating	Skylights R-value																																	
1	3.6	2.1	1.3	0.26	0.4																																	
2	3.8	2.1	1.8	0.32	0.4																																	
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3B	4.9	2.9	3	0.43	0.5																																	
An adequately sized, fixed, heating source is provided in the main living area (allowed heating sources include heat pumps, electric resistive heaters, flued gas heaters and solid fuel burners). See additional points for heat pump systems.						<input type="checkbox"/>	Site check	EHC-2																														
An electric resistive or heat pump hot water cylinder with cylinder wrap or an instantaneous gas heater connected to mains gas is installed. – See additional points for heat pump and solar thermal systems.						<input type="checkbox"/>	Site check	EHC-5																														
The maximum shower flow rate is 9L/min (3 Star WELS).						<input type="checkbox"/>	Specification /site check	EHC-5/ WAT-1																														
Moisture Control and Ventilation																																						
A bathroom extract has been installed in every bathroom and is ducted to outside. The extract must be at least 25L/s and have a run on timer capable of achieving at least 1 air change after being switched off						<input type="checkbox"/>	Specification /site check	EHC-3																														
A kitchen extract hood capable of at least 50L/s extraction rate and ducted to outside is mounted over the main steam source in the kitchen.						<input type="checkbox"/>	Site check	EHC-3																														
There is a net openable area of windows to the outside of no less than 5% of the total floor area of habitable spaces. Windows/openings required for passive ventilation (at least one in each habitable room) are constructed in a way that allows them to be secured against intruder entry while open on ground floors and fixed open on other floors (i.e. to at least 10mm along one edge). At least 30% (of the required 5% above) should be on a different floor or façade to allow for cross ventilation.						<input type="checkbox"/>	Site check	EHC-3																														
Ground floors are either slab on grade, or ground cover (e.g. polythene sheeting) is provided to all suspended floors.						<input type="checkbox"/>	Specification /drawings	EHC-4																														
A washing line in a dedicated space is provided outside the thermal envelope. OR There is a heat pump dryer.						<input type="checkbox"/>	Site check	EHC-11																														
Lighting and Daylighting																																						
All interior lights are LED or Compact Fluorescent (CFL).						<input type="checkbox"/>	Site check	EHC-6																														
Lighting Power Density of Installed fixed interior lighting is no more than 5W/m ² .						<input type="checkbox"/>	Specification /site check	EHC-6																														
All Exterior lights are LED, CFL or other lamp type with a minimum efficacy of 40 Lm/W.						<input type="checkbox"/>	Site check	EHC-6																														
<p>Where window areas in external walls are no less than:</p> <ul style="list-style-type: none"> • 15% of the floor areas for living areas and bedrooms where the windows are not significantly shaded. • 20% of the floor areas for living areas and bedrooms where the windows are significantly shaded, e.g. by eaves, balconies, purpose designed shading, etc. 						<input type="checkbox"/>	Drawings	EHC-7																														

Water Use in the Home			
WCs are dual flush with no more than 4.5L / 3L cisterns (4 Star WELS).	<input type="checkbox"/>	Site check	WAT-1
All bathroom hand wash basin tap flow rates are ≤ 6L/min (5 Star WELS).	<input type="checkbox"/>	Site check	WAT-1
Waste			
Prepare and implement a Site Waste Minimisation Plan in accordance with REBRI guidelines.	<input type="checkbox"/>	Checked by Assessor	WST-1
Interior recycling bins are provided in a dedicated space inside kitchen with at least 2 x 10L capacity, as well as sufficient outdoor space dedicated for recycling bins (or centralized refuse facility that has easy access for the homeowner and easy access for the waste collection service).	<input type="checkbox"/>	Site check	WST-2
Management			
Well-defined and well-labelled main entrance with the house number clearly visible from the road entrance.	<input type="checkbox"/>	Site check	MAN-1
The dwelling and property boundary is clearly defined between public and private areas to create a defensible space for the home owner	<input type="checkbox"/>	Site check	MAN-1
Outdoor security lighting is installed to illuminate entrance door and any garage areas.	<input type="checkbox"/>	Site check	MAN-1
A Home User Guide has been developed using NZGBC template or approved equivalent.	<input type="checkbox"/>	Checked by Assessor	MAN-2
A construction environmental management plan (EMP) has been developed using NZGBC template or approved equivalent OR Main contractor has ISO14001 certification	<input type="checkbox"/>	Checked by Assessor	MAN-3
SELECT AT LEAST 20 POINTS FROM THE FOLLOWING LIST:	Points	Evidence provided	Reference Credit
Density and Resource Efficiency; up to 8 points using Resource Efficiency and Density table. See tables below for values.		Floor plans	DRE
Options: Energy, health & comfort			
Heating source in main living space is a heat pump (air/ground to air/water) or wood burner = 1 point		Site check	EHC-2
Continuous mechanical extract = 1 point Balanced mechanical ventilation system = 1.5 points Balanced mechanical heat recovery ventilation system = 2 points		Site check	EHC-3
All window frames are thermally broken = 0.5 point		Site check	EHC-4
Heat pump hot water cylinder = 1 point OR Electric cylinder with solar = 1 point		Site check	EHC-5
Options: Management			
Where contractors working onsite (excluding the project Homestar assessor) hold any approved contractor accreditation (refer to list of approved accreditations) = 0.5 points per accredited contractor up to 1 point in total		Checked by Assessor	MAN-3
Options: Materials (Maximum total of 13 points can be achieved here)			
At least 50% of all Floor Coverings are certified to a Level A Eco-Label approved by NZGBC/GBCA, or self-finishing floor (e.g. polished concrete) = 3 points		Check certificates	MAT-1/ MAT-2
At least 50% of all Paints are certified to a Level-A Eco-Label approved by NZGBC/GBCA = 3 points		Check certificates	MAT-1/ MAT-2
At least 50% of all Interior Engineered Wood (e.g. doors, wardrobe doors, floors, plywood, and cabinetry carcasses) are certified to a Level-A Eco-Label approved by NZGBC/GBCA = 3 points		Check certificates	MAT-1/ MAT-2
At least 50% of all Wall and Ceiling Linings (e.g. Plasterboard) is certified to a Level-A Eco-Label approved by NZGBC/GBCA, or no linings used = 2 points		Check certificates	MAT-1
At least 50% of all Non- Timber Roof Cladding is certified to a Level-A Eco-Label approved by NZGBC/GBCA = 2 points		Check certificates	MAT-1
At least 50% of all Timber Cladding (roof AND wall) is certified under FSC or PEFC = 2 points		Check certificates	MAT-1
At least 50% of all Timber framing (roof AND wall) is certified under FSC or PEFC = 2 points		Check certificates	MAT-1

At least 50% of all Soft Thermal Insulation is certified to a Level-A Eco-Label approved by NZGBC/GBCA (EPS and XPS is exempt and not counted) = 2 points		Check certificates	MAT-1
Options: Sound Insulation			
Inter-tenancy walls have a Sound Transmission Class (STC) of at least 58 AND walls adjoining space that is not normally occupied (e.g. communal corridor) have a Sound Transmission Class (STC) of at least 55 = 1 point		Specification /site check	EHC-9
All Windows have a Sound Transmission Class (STC) of 33 or more = 1 point		Specification /site check	EHC-9
Options: Accessibility			
Dwelling complies with Accessibility Design Checklist Level 1 (refer to Technical Manual) = 1 point OR Dwelling complies with Accessibility Design Checklist Level 2 (Refer to Technical Manual) = 2 points OR Dwelling achieves Lifemark Certification = 3 points		Drawing/site check by Assessor	EHC-10
Options: Lighting			
All fixed external lights have motion sensors with daylight cut off, integrated photovoltaic cells or a Lighting Power Density of no more than 1.5W/m ² = 0.5 points		Specification /site check	EHC-6
Options: Transport			
Electric vehicle charging point in the garage/car parking space with at least 16 Amp capacity = 1 point		Specification /site check	EHC-8
Dwelling is located within 800m of at least 1 public transport terminal offering daily services = 1 point		site check	STE-3
Options: Water efficiency			
Kitchen tap flow rates are ≤ 7.5L/min (5 Star WELS) = 0.5 points		Site check	WAT-1
Options: Waste			
A minimum of 60% of total waste is reused and/or recycled and/or recovered for the whole construction/refurbishment project = 1 point OR A maximum of 20kg is sent to landfill/cleanfill per m ² of gross floor area for the whole construction/refurbishment project = 1 point OR A minimum of 70% of total waste is reused and/or recycled and/or recovered for the whole construction/refurbishment project = 2 points OR A maximum of 14.99kg is sent to landfill/cleanfill per m ² of gross floor area for the whole construction/refurbishment project = 2 points OR A minimum of 80% of total waste is reused and/or recycled and/or recovered for the whole construction/refurbishment project = 3 points OR A maximum of 10kg is sent to landfill/cleanfill per m ² of gross floor area for the whole construction/refurbishment project = 3 points		Waste reports to be checked by Assessor	WST-1
On-site construction waste sorting with a minimum of 3 sorting stations = 1 point		Site check during construction	WST-1
Options: Site			
At least 25% of the land area (not including area under roof) is vegetated with site-appropriate native species = 1 point		Site check	STE-2
Up to 2 points in total through any combination of the following (see guidance for amenity list): Up to four fruit producing trees or vine per dwelling at 0.25 points per tree or vine AND/OR Where the development contains recognised communal amenities at 0.25 points per amenity AND/OR Where the dwelling is located within 800m of up to eight public amenities at 0.25 points per amenity AND/OR 2m ² of vegetable gardens per dwelling for 1 point		Site check	STE-3
Where the dwelling is located on a site that has previously experienced development = 1 point		Site check	STE-3

Provide cycle parking facilities such that there is 1 resident parking space per 1,2, and 3 bed dwelling AND 2 resident parking spaces per 4 bed dwelling, AND at least 1 visitor park for every 10 dwellings up to 20 parks per development = 1 point		Site check	STE-4
If you have other Homestar credits / features that you would like to target, Please contact NZGBC at homestar@nzgbc.org.nz			

Density and Resource Efficiency

Up to 5 points are available for resource efficiency based on the tables below.

Resource Efficiency

Calculate the dwelling's conditioned space using floor plan drawings. Round this figure up to 1 decimal point. Determine the number of bedrooms, then use the following table to determine points awarded.

Conditioned Space (m ²) Thresholds Based on Number of Bedrooms						
1 bedroom (m ²)	2 bedroom (m ²)	3 bedroom (m ²)	4 bedroom (m ²)	5 bedroom (m ²)	6 bedroom (m ²)	Points
44	72	100	119	135	148	5.0
46	76	104	123	143	150	4.5
48	79	110	132	149	156	4.0
51	83	115	139	155	162	3.5
54	88	119	146	162	169	3.0
57	91	126	152	169	176	2.5
59	96	131	160	178	185	2.0
62	101	137	166	185	192	1.5
65	105	144	174	193	200	1.0

Density

Calculate the Building Footprint (BF) and Gross Floor Area (GFA) using floor plan drawings. Divide the GFA by the BF to obtain the Density Ratio. The benchmarks shown are the minimum Density Ratio required for each point - round this down to the nearest whole number.

Density Ratio	Points
5+	3
3-4	2
2	1

Approved Contractor Accreditations

Using contractors with the following accreditations onsite achieves points in Homestar, given their ability to ensure good environmental practices on site.

- Enviro-Mark NZ Gold standard or above
- Resene Eco Decorator
- EcoSmart Electrician

- IAONZ Accreditation
Homestar or Green Star professional

NZGBC/GBCA Approved Level A Eco-labels and Certifications

The following table lists the Level A Eco- Labels (including type 1 eco-labels and forestry certifications) currently approved by the New Zealand Green Building Council (NZGBC) and/or the Green Building Council of Australia (GBCA). GBCA approved eco-labels are accepted by default for NZGBC rating tools such as Homestar. Sustainable forestry certifications such as FSC and PEFC are not strictly eco-labels but perform a similar function for forestry products.

Eco Label/ Certification	Applicable Material Categories
Environmental Choice New Zealand	All
Green Tag Green Rate A	All
Carpet Institute of Australia ACCS ECS Level 4	All
Good Environment Choice Australia	All
Institute for Market Transformation to Sustainability (MTS)	Flooring and Engineered Wood Products
Sustainable Materials Rating Technology (SMaRT)	Flooring and Engineered Wood Products
Forest Stewardship Council Chain of Custody certification (FSC)	Applicable only for timber (excluding engineered wood products) only
Programme for the Endorsement of Forest Certification (PEFC)	Applicable only for timber (excluding engineered wood products) only

Note that the Homestar tool has other point options that are not included in the above checklist, such as recognition for FSC/PEFC certified timber products, which may be swapped in for options on the materials section of the checklist. Contact NZGBC (homestar@nzgbc.org.nz) for further information.

Public and Communal Amenities

The following table lists key public and communal amenities that are recognised for 0.25 points each when located within 800m of the development. Only one in each set of amenities can be counted (i.e. if a dairy and service station is present, only count one), but educational facilities serving different student segments may be counted separately (i.e. kindergarten, boys high school, girls high school and university are separate amenities). Communal amenities are those provided within the development, and hence capacity requirements must be met for them to achieve any points. Please refer to STE-3 credit in Homestar technical manual for further guidance.

Key Public Amenities		Key Communal Amenities
Café/restaurant/takeaways	Marae	Playground area
Chemist/medical centre	Place of worship	Open landscaped area
Community centre	Post office	Food growing area
Dairy/service station	Public library	Resident gym
Designated cycleway	Public park/sports field	Outdoor dining
Educational facility	Supermarket/superette	
Fitness centre/gym		

Signed Assessor Proforma

(Assessor to sign and verify)

I (first and last name), _____ confirm that I carried out the Homestar™ Built Rating Assessment of the property at the street address listed in page 1. As an Accredited Homestar™ Assessor I confirm that the assessment recorded in the above checklist on pages 2 and 3 accurately reflects the condition of the assessed property including but not limited to:

- Constructed building features including thermal envelope, room layout, size, building materials and all construction detail
- Constructed landscape and site features
- Provided equipment and fittings including HVAC, Lighting and Hot water heating
- Onsite waste management practices
- Expected performance of dwelling and site in relation to Homestar credits
- Certifications, accreditations and all other information on the dwelling obtained pertaining to points claimed in Homestar credits, whether provided to earn points or as supporting evidence

I confirm that I have specifically checked the following details on site either through a timed test or supplier documentation

- All bathroom fans that are not operating continuously have run on timers (with a sufficient run on time)
- All showers have no more than a 9 L/min flow rate at full flow
- All bathroom and kitchen taps have a flow rate correlating with the points claimed

Furthermore, I confirm that all site checks and inspection of information was carried out thoroughly and that the information contained in this document is true to the best of my knowledge.

I confirm that I have professional indemnity insurance, that I am solely responsible for the accuracy of this document and absolve New Zealand Green Building Council of all and any responsibility if the rating awarded in this document is disputed by any party.

Notes:

The assessor's signature on the Assessor Pro-forma confirms that all ticked items where evidence is not required to be submitted in the first instance (unless requested) comply with relevant Homestar requirements based on the assessor's observations. In addition, NZGBC may request evidence for all items for several projects done by the assessor in order to establish sufficient confidence in the assessor's thoroughness.

By signing the proforma, the assessor, having received training by NZGBC on the whole Homestar tool prior to accreditation, acknowledges that any item they confirm to comply with Homestar requirements, comply with all requirements of the Homestar Technical manual, in addition to what is summarised in this checklist.

Signature: _____

Name: _____

Role: _____

Company: _____

Date: __ / __ / 20__

Submission

Submit the completed and signed checklist with

- A full drawing set AND where possible, a specification (these do not need to be marked up, however marked up drawings/ specification maybe required to be submitted upon request)
- Required evidence in the applicable folder (using the Checklist Submission Template)
- Any other evidence requested by NZGBC
- Dwelling registry (for multi-unit developments) showing the lot number (Design Rating), or official street address (Built Rating) of each dwelling