Public Utilities Office – NatHERS Technical Requirements

For the current version of this document refer to the Department of Finance, Public Utilities Office website via www.finance.wa.gov.au.

1. Assessor Accrediting Organisations and NatHERS Accredited Assessors

The Public Utilities Office, in facilitating the NatHERS scheme in Western Australia, recommends and supports the use of NatHERS Assessors, accredited with a nationally recognised Assessor Accrediting Organisation (AAO), undertaking all NatHERS ratings for regulatory purposes in Western Australia. This is to ensure quality and consistency in ratings done for regulatory purposes. This is aligned with the professional practice of individuals who operate in a specialised building profession within the residential building industry.

Please refer to the NatHERS Protocol for Assessor Accrediting Organisations, June 2008 for further details on the national framework for the approval and operation of organisations that accredit users of NatHERS software for regulatory purposes.

The Public Utilities Office currently supports the following Assessor Accrediting Organisations (AAO) to accredit NatHERS Assessors in Western Australia:

- Association of Building Sustainability Assessors (ABSA) at www.absa.net.au
- Building Designers Association Victoria (BDAV) at www.bdav.org.au

2. Softwares Approved for Regulatory Use

The software allowed to be used to rate new buildings for regulatory purposes varies across jurisdictions. The software products are reviewed by the Public Utilities Office for local suitability. From 1 May 2013, the Public Utilities Office recommends that only the following versions of NatHERS software tools be accepted for ratings undertaken for regulatory purposes.

<table>
<thead>
<tr>
<th>Software</th>
<th>Version</th>
<th>Date Accreditation Attained</th>
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<tbody>
<tr>
<td>AccuRate</td>
<td>V.1.1.4.1</td>
<td>Accredited May 2006</td>
</tr>
<tr>
<td>AccuRate Sustainability</td>
<td>V.2.0.2.13 (currently service pack 1)</td>
<td>Accredited March 2011</td>
</tr>
<tr>
<td>BERS Pro</td>
<td>V4.2 110811/A</td>
<td>Accredited August 2011</td>
</tr>
<tr>
<td>FirstRate 5</td>
<td>V 5.1x (currently V5.1.9)</td>
<td>Accredited April 2013</td>
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3. Communication Process for Requesting Clarification of Data Entry Issues for NatHERS Ratings

NatHERS Accredited Assessor - Communication Channels

In order to ensure prompt resolution of issues surrounding consistency in data entry and NatHERS ratings undertaken for regulatory purposes, there is a requirement for a clear and widely understood communication process for WA Assessors seeking clarification on these issues.

The Public Utilities Office, in consultation with the WA NatHERS Technical Advisory Committee (TAC), the Association of Building Sustainability Assessors (ABSA) and the Building Designers Association Victoria (BDAV), has decided upon the following process to ensure issues are addressed in a timely manner and that clear and consistent messages and decisions are disseminated to industry in a timely manner.

1. NatHERS Assessors are to raise any technical matters or issues with regard to entry of data into the NatHERS Software to the Assessor Accrediting Organisations (AAO) technical support line directly in the first instance (e.g. ABSA, BDAV). The AAO - as the first point of contact - should be able to address the majority of technical issues either through referral to existing NatHERS Guidelines for Data Entry, NatHERS Software Provider Guides, or referral to the WA NatHERS Technical Requirement containing additional guidance for WA-specific issues. Responses should be expected within 24 to 48 hours at the most for all queries.

2. In the event the AAO is not immediately able to respond to the NatHERS Assessor query, the issue can be referred to the Public Utilities Office and the WA TAC. Assessors will be notified of this process. It would be expected that WA TAC members would follow up with request for full information on the issue so that a solution may be found.

3. Depending on issues raised, additional WA-specific guidelines may be developed by the Public Utilities Office and WA TAC and added to the WA NatHERS Technical Requirements for distribution.

4. Should the issue be related to NatHERS Software, the NatHERS National Administrator and relevant NatHERS Software Provider will be advised of the issue as soon as practicable.

5. Process and other non-technical issues viewed as affecting the consistency of NatHERS ratings outcomes in WA can be addressed directly to the Public Utilities Office and WA TAC members.

Upon resolution and formulation of a response to any new issue, the updated WA NatHERS Technical Requirements will be forwarded to the AAOs and the Building Commission’s 6 Star Committee for distribution to Western Australian Accredited Assessors and the building industry respectively.

The WA NatHERS Technical Requirements will be updated as required and located on the Public Utilities Office website.
4. NatHERS Climate Zone Selection

In the first instance, NatHERS Assessors should take guidance for the correct selection of climate zones from Assessor Accrediting Organisations (AAO) current protocols and NatHERS Assessor Procedures.

In practice, this means taking the direction provided within the NatHERS software as detailed below. In addition, there are a number of Western Australian specific addendums to the climate zone selection within the NatHERS softwares, and where these exist, they supersede and override the direction provided by the NatHERS software.

The **FIRST** climate zone listed for the applicable postcode **MUST** be used except when:

1. there are justifiable climate, topographical and/or geographical reasons to use another postcode and this is documented with the rating and provided to the AAO; or

2. the Public Utilities Office has given permission or direction to use alternative climate zones in a specific location or postcode – these instances are detailed in the **WA NatHERS Alternative Climate Zone Spreadsheet**. Note that in such an instance, care must be taken to ensure that all relevant record/reporting documentation is filled out with the climate zone used and the actual address postcode – so a correct record of rating is lodged with the Certificate Office. **Refer to figure 4.1 for process overview of identifying appropriate postcode/climate zone for use in NatHERS models.**

Note: Currently in AccuRate, when entering an alternative postcode to assign the correct climate zone, an incorrect address will appear on the project details and certificate. Appropriate notation/clarification of this change should be provided by the assessor i.e. marked up on the drawings.

**The New NatHERS National Climate Zone Map and WA NatHERS Alternative Climate Zone Spreadsheet**

A new national online climate zone map (primary resource) has been developed to detail NatHERS climate zones throughout Australia. In the Perth metropolitan and South-West regions of Western Australia, the **WA NatHERS Alternative Climate Zone Spreadsheet**, which complements the new national climate zone map, assists NatHERS assessors by detailing the correct postcode to enter into the NatHERS software. This ensures the model is run with the correct climate file. It is the responsibility of the assessor to ensure the NatHERS assessment is performed using the correct climate zone.

The region-specific addendums contained in the **WA NatHERS Alternative Climate Zone Spreadsheet** are provided to the national NatHERS administration for review and incorporation into upcoming versions of the NatHERS software as part of the national process for updating climate zone selection. From this point, the relevant addendums will become redundant.

Any proposed change request in addition to those above should be emailed to the Public Utilities Office with supporting evidence as to why the use of another climate zone would be more suitable for that postcode or location. If supported, the Public Utilities Office will then provide an update to all WA energy assessors and major industry groups to ensure consistency in assessment results.
Identify address for premises

NatHERS Climate Zone Map

**Aim**: Identify correct climate zone for premises location
**Action**: Enter address for premises to determine correct climate zone

NatHERS Approved Software - model

**Aim**: Ensure the correct climate zone is assigned to the model
**Action**: Enter premises address and postcode data, then select correct climate zone identified above

Is the correct climate zone for the premises (as identified in the NatHERS map above) listed as an option in the software?

Yes

You **must** select that climate zone

No

WA NatHERS Alternative Climate Zone Spreadsheet

**Aim**: Identify work-around postcode to give the correct climate zone for the premises location

NatHERS Approved Software - model

You **must** enter the work-around postcode into the NatHERS software model

Continue with NatHERS model

**Note**: Reports published by software may not provide appropriate site data where the work-around process has been followed. Assessors should provide correct site address details as necessary. A note describing methodology may be appropriate.

**Figure 4.1**: Process for identifying correct postcode and climate zone for NatHERS model
5. Where NatHERS Can or Cannot Be Used

NatHERS software can only be used to calculate the heating and cooling loads for Classes 1, 2, 4 and also Class 10a buildings ONLY if attached to a Class 1 structure.

New Dwellings

Class 1: one or more buildings which in association constitute -

(a) Class 1a – a single dwelling being:

(i) a detached house
(ii) one of a group of two or more attached dwellings, each being a building, separated by a fire-resistant wall, including a row house, terrace house, town house or villa unit.

(b) Class 1b

(i) a boarding house, guest house, hostel or the like –
   (A) with a total floor area of all floors not exceeding 300m² measured over the enclosing walls of the Class 1b building
   (B) in which not more than 12 persons would ordinarily be resident
(ii) 4 or more single dwellings located on one allotment and used for short term holiday accommodation

which are not located above or below another dwelling or another Class of building other than a private dwelling.

Class 2: a building containing two or more sole-occupancy units each being a separate dwelling.

Class 4: a dwelling in a building that is Class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.

Class 10a: a non-habitable building being a private garage, shed or the like which must be attached to a Class 1 building.

Additions & Alterations to Dwellings

NatHERS software can be used to assess residential dwellings which have had additions or alternations, as long as the entire dwelling is modelled. The dwelling will then have to meet the energy efficiency Performance Requirements for an alteration or addition as set out in the building regulations and Volume 2 of the National Construction Code (NCC). The Building Commission has been working to facilitate an industry-lead protocol for developing appropriate verification methods that provide practical and cost effective building solutions that meet the Performance Requirements of the NCC. It is anticipated that the protocol will be finalised by May 2014. Until then Alterations and Additions are subject to the requirements in the Building Regulations 2012 with guidance provided in the Advisory Note 2013/024 (AN024) which can be found at http://www.buildingcommission.wa.gov.au/docs/advisory-notes/an024_v2.pdf
6. Zoning and Openings

Zoning
Section 7 of NatHERS Technical Note 1 provides detailed principles for house zoning. The purpose of this technical requirement is to highlight correct zoning by example.

Openings – BERS Pro V4.2
Note: when using BERS Pro version V4.2 110811 with the default NatHERS settings, the software provider (Solar Logic) has advised assessors “Must change permanent openings to doors when using CHENATH 2.13 otherwise you will get problems such as different simulation results between the first and second simulation.”
Figure 6.1: NatHERS zoning example (house plan, zoning plan and key to zoning)