

# NatHERS Principles for Ratings in Regulation Mode (Version 1.1 - 2013)

# 1. Introduction

- 1.1 This Technical note replaces *Discussion document, NatHERS Software Modelling Principles version 4.1 (2012)* and *Technical Note Version 1.0.* The Note is designed to be a living document to ensure consistent thermal performance assessments of drawing sets for new residential buildings and major additions to existing residential buildings when using NatHERS software for regulatory purposes. This document will be updated from time to time, and it is the responsibility of assessors to ensure they are using the current version.
- 1.2 The principles are to be used by all assessors accredited under the Nationwide House Energy Rating Scheme, unless other state or territory regulatory obligations apply. Where there is an inconsistency between a regulatory requirement for carrying out a thermal performance assessment or preparing a house energy rating, the regulatory requirement prevails to the extent of the inconsistency.
- 1.3 It is planned that jurisdictional modelling differences will disappear or decease over time, but currently in New South Wales for variations refer to the BASIX thermal comfort protocol. In Western Australia, assessments must also be conducted in accordance with the Government's NatHERS technical requirements. In the Australian Capital Territory these principles provide a guide to assessors but do not apply to assessments.
- 1.4 There may be some complex modelling situations that do not seem to be covered by this document. Assessors should use this guidance and their own professional judgement where a situation is NOT covered by this document and all supporting information that informs their decision must be retained for seven years and produced if audited.
- 1.5 Each dwelling must have its own individual rating even if it is a design that is regularly repeated on the same or different projects. The individual orientation and conditions must be rated for all permutations of a repeated dwelling design and all provisions of this document apply.
- 1.6 The terms 'design documentation' and 'drawing sets' are used interchangeably in this document and include plans, specifications, schedules and addendums that may relate to the rating.

# 2. Software tools

- 2.1 Only software tools accredited by the NatHERS National Administrator and authorised for use for the type of dwelling in the jurisdiction the dwelling is located, may be used to rate residential buildings.
- 2.2 Software support is provided by the software providers.
- 2.3 Software support is NOT provided by the Assessor Accrediting Organisations (AAO's), however; they may issue additional modelling guidance and practice notes that support this document. Where there is a perceived contradiction in AAO NatHERS guidelines, this document prevails.
- 1 <u>www.nathers.gov.au</u> An initiative of the Commonwealth, state and territory governments April 2013

# 3. Orientation of buildings

3.1 Design documentation needs to include a clear north point. Building orientation is based on rotation of the dwelling with respect to True North, **not** Magnetic North (where this can be identified).

# 4. Modelling of buildings

- 4.1 The building must be modelled using information on the drawing sets and specifications. Only details that appear on the drawing sets and specifications should be included except where defaults will apply after seeking clarification (Section 10). Where there is inconsistency between the specifications and the drawing sets the inconsistency needs to be highlighted to the designer and the designer needs to make the revisions.
- 4.2 Information should not be assumed if it is not present on the design documentation. Written information from the client should be requested if the design documentation set is considered incomplete (See also Section 10 Default settings). The Assessor should also state that where information is not provided, the worst case default values will be applied. This request for information and the reply from the client, should be kept with the Assessor's records for the individual project for seven years.
- 4.3 The minimum design documentation required when modelling a dwelling include:
  - Site plan. This should include an accurate north point and adjacent buildings. If adjacent buildings are not shown on any plan, assume defaults see Section 10
  - Floor plan including floor coverings
  - Elevations
  - Sections
  - Lighting plan including details on the use of recessed luminaires
  - Location and type (operable or not) of exhaust fans
  - Construction material details
  - Window schedule including window types (e.g. sliding, awning or specialist glass).

Note: Ratings can still be completed if information such as a lighting plan has been requested but not received. In this case, the defaults in Section 10 will apply.

4.4 Assessors must use the exposure category best suited to the terrain surrounding the house or unit (see Table 1). Allowance should be made for the increased exposure of high-rise units, provided the elevation is associated with a reduction in obstructions.

Terrain	Description	Examples
Category 1	<b>Exposed</b> open terrain; few or no obstructions.	Flat grazing land, lake-side, ocean- frontage, desert. Exposed high-rise unit above 10 floors.
Category 2	<b>Open</b> terrain; grasslands with few well scattered obstructions below 10 m.	Farmland with scattered sheds, lightly vegetated bush blocks. Medium-rise unit above 3 floors.
Category 3	Suburban terrain; numerous closely spaced obstructions below 10 m.	Suburban housing, heavily vegetated bushland areas.
Category 4	<b>Protected</b> terrain; numerous closely spaced obstructions over 10 m.	City and industrial areas.

#### **Table 1: Terrain Exposure Categories**

# 5. Modelling neighbouring buildings

- 5.1 Only model neighbouring buildings and other surrounding features if they will have an impact on the rating. Do not model neighbouring fences, single storey buildings greater than 10m away, double storey greater than 20m away, or high rise/topographical features that are located to the south and are outside the shadow range of the dwelling. Note: this requirement can be ignored in the Tropics where southern neighbours/fences/topographical features may impact on shading.
- 5.2 Neighbouring buildings and features detailed on the design documentation must be modelled according to the information on the respective drawing, including the impact of level changes and retaining walls. If no information is provided, apply Default Clause 10.12 and include any impact of level changes.
- 5.3 If modelling on a **new** development site and no neighbouring houses are present or indicated on the drawing set (but will be developed in the future), presume that the neighbouring buildings will be the same as the one being modelled, as per the following:
  - 5.3.1 Presume a straight building line for the neighbour, the same set back from the street and boundary as the dwelling being rated.
  - 5.3.2 If a two storey house is being modelled, presume two storey neighbours are present on all sides. For a single storey presume single storey neighbours.
  - 5.3.3 Presume the neighbouring dwelling is the same distance from the boundary fence as the dwelling being rated (ignore dwellings to the south except in the tropics).
  - 5.3.4 Presume a 1.8 m high side and rear fence if local planning requirements are unknown.
  - 5.3.5 Include all level changes between lots that will impact on the rating.

# 6. Modelling of additions to existing dwellings

- 6.1 NatHERS software tools must not be used to rate only a part of a dwelling. An addition of any kind cannot be rated as only the addition and not the whole of dwelling.
- 6.2 Any rating of an existing house/apartment or an addition to an existing house/apartment must treat the project as a complete dwelling and rate both the existing and proposed as one dwelling. All component zones of a dwelling must be included in the rating (Refer Section 7: Zoning).
- 6.3 Each jurisdiction may have alternate modelling methods to meet the requirement for the National Construction Code (NCC) energy efficiency requirements of additions. Refer to the NCC for jurisdictional variations and/or local council for requirements in your area.

# 7. Zoning

# 7.1 Zoning - Whole of Dwelling

- 7.1.1 All dwellings must contain multiple zones. For example, a kitchen or kitchen/living, living, bedroom and unconditioned zone(s).
- 7.1.2 All dwellings to be modelled must contain at least one unconditioned zone excluding the garage. For example, this must be at least one internal room NOT including the garage. This would normally be a bathroom, laundry or WC. If the laundry, WC and bathroom do NOT have an external window or door then **one of them** must still be selected to be the unconditioned area, for example the WC could be selected.
  - 7.1.2.1 If all these zones/rooms are clearly marked on the plans and specifications as having a fixed heating and/or cooling appliance (or branch outlet from a central system), then the smallest can be selected to be the one unconditioned zone.
  - 7.1.2.2 Note that an electrical resistance heater such as a heat globe or fan heater unit does not qualify as a fixed heating feature/appliance for this clause.
- 7.1.3 All dwellings to be modelled must contain one and only one main kitchen area.
- 7.1.4 All other smaller kitchens/kitchenettes within the building must be zoned 'Other day-time conditioned'.
- 7.1.5 There must be a maximum of 2 living areas these are to be the two largest logical living areas. Others are to be zoned 'Other day-time' (see Table 2).
- 7.1.6 All spaces to be modelled must be capable of being fully enclosed by the building envelope i.e. there must be walls, floors and roofs of some description enclosing the space. Open outdoor living areas not fully enclosed are not 'zoned' but included in the modelling as shade features.
- 7.1.7 Ensure that roof volumes are modelled correctly, particularly in cases where the outdoor shade area is formed by part of the main roof line. Consult your software support or software training material if in doubt.
- 7.1.8 All parts of a building capable of being fully enclosed must be included within a zone. This includes storage spaces and spaces with openings required for the safe operation of a gas appliance. Ignore separated garages that are not attached.
- 7.1.9 Each zone must have a ceiling or a roof.

#### 7.2 Zoning - Conditioning of spaces

- 7.2.1 Most spaces within the building envelope are considered to be conditioned, with the exception of the main bathroom, laundry and garages. Refer to Table 2 for more details.
- 7.2.2 An area normally considered unconditioned is to be treated as a conditioned zone only where design documentation specifically

indicate central heating/cooling outlets or in-floor hydronic heating in these spaces (refer to Clause 7.1).

Table 2. Soliware 2016 types conditioning status	Table 2: Software zone t	ypes conditioning status
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Zone type	Room	Conditio	ned?
		Heated	Cooled
Kitchen/Living	A kitchen zone with one or more living areas. Must include the main kitchen area and may include a combined kitchen/lounge/meals or dining area.	Yes	Yes
Kitchen	Kitchen.	Yes	Yes
Living	Living. Family, rumpus, media (if it is one of the two largest allowable living zones), home theatre etc.	Yes	Yes
	If more than 2 living areas, the 2 largest living areas are classified as "living".		
	Other areas are classified as "Other day-time".		
Other day-time	Study (without built-in wardrobe), home theatre, media (if third or other largest sized living area), internal storage areas with operable windows.	Yes	Yes
	Laundry, WC, bathroom, powder-room = when <b>not</b> ventilated externally by a door or window on an external wall (also see note below).		
Other day-time	Hallways, corridors (either fully closable by doors or open to other zones).	Yes	Yes
Other day-time*	Laundry, WC, bathroom, powder-room = when they include an external wall with one or more ventilation openings i.e. windows or doors.	No	No
	Internal domestic lift. Air Locks (see 7.2.3)		
	NOTE: 7.1.2 applies but if the laundry, WC and bathroom do NOT have an external window or door then <b>one of them</b> must still be selected to be the unconditioned area.		
Bedroom	Bedroom.	Yes	Yes
Study with a built- in wardrobe, walk- in wardrobe or attached ensuite.	Bedroom.	Yes	Yes
Other night-time	Areas directly accessed from a bedroom: ensuites, WIR, parents retreats etc.	Yes	Yes
Garage*	Garage.	No	No

\*An area normally considered unconditioned (e.g. garage or garage workshop) is to be treated as a conditioned zone **only** where drawing sets specifically indicate central heating/cooling outlets in these spaces. Note Clause 7.1.2 still applies.

#### 7.2.3 Class 2 and 4 buildings

#### Table 3: Floors

Floor type	How to treat
Floors above a car park*, common basement, highly ventilated common public areas.	Treat as above outdoor air.
Floors above commercial premises, minimum or ventilated common public areas.	Treat as above a neighbour.
Any Class 2 or 4 car park that is different from a fully enclosed space with just one entrance point (i.e. an open car park with minimum or no external walls).	Treat as above outdoor air.

\*car parks and basements cannot be treated as sub-floor zones.

# Table 4. Apartment walls shared with common public areas

Wall type	How to treat
Apartment walls shared with minimum ventilated corridors (i.e. corridors publicly accessed by lifts, stairwells or with an airlock between the corridor and external air, or with apartments on the opposite side of the internal corridor).	Treat as adjacent to a neighbour.
Apartment walls shared with ventilated corridors (i.e. corridors accessed by lifts, stairwells and having operable doors or windows which open to external air).	Treat as external wall with no solar absorbance (i.e. FR5 and BersPro = treat as 'light').
	Alternative: Treat as external wall with eaves the same length as the corridor width, and an external shading scheme the same length as the apartment wall.
Apartment walls shared with highly ventilated corridors (i.e. corridors open to external air).	Treat as external wall with eaves the same length as the corridor width.
Apartment walls shared with corridors with fully glazed external walls (i.e. corridors with the major wall being fully glazed).	Model the corridor as a non- conditioned day-time zone. This zone is to have the same length as the apartment wall.
Apartment walls shared with lifts and enclosed stairwells.	Treat as external wall with no solar absorbance (i.e. FR5 and BersPro = treat as 'light').
	Alternative: Treat as external wall with wing walls and eaves the same length as the stair well or lift width and an external shading scheme the same length as the lift or stairwell wall.

# 7.3 Zoning – Small air spaces (with and without external operable windows and doors)

- 7.3.1 Small air spaces include: store rooms, pantries, linen closet and other small non-habitable rooms which have **external operable windows/doors,** are treated as separate 'Other day-time' conditioned zones.
- 7.3.2 If one of the above small air spaces is only accessed from a bedroom, then 'Other night-time' conditioning applies.
- 7.3.3 Small air spaces include: store rooms, walk-in-robes (WIR), pantries, linen closet and other small non-habitable rooms, that **do not have** external operable windows/doors and are ONLY accessed from one parent zone – **these are to be combined into the applicable parent zone** (refer to Clause 7.4).

#### 7.4 Zoning – Combining Zones

- 7.4.1 Small air spaces with **no operable external windows and doors** and the only access point being to one other zone, are combined into the zone from which they are accessed.
- 7.4.2 Multiple adjacent zones, **may** only be combined if they have external windows/doors to the same orientation, are the same zone type and conditioning and open to the same internal zone (i.e. an internal hallway).
- 7.4.3 If the resulting zone has external ventilation to more than one orientation they are **not to be combined**, as this would cause the software to model cross-flow ventilation effects that would not exist in reality.
- 7.4.4 Garage workshops with no internal door to the dwelling but with a window or external door that are only accessed directly from the garage are to be combined with the garage.

#### 7.5 Zoning – Bedsits and open plan studios

- 7.5.1 Bedsits and open-plan studios must be modelled with separate zones for the separate usage patterns, even if there is no physical separation. They must contain a minimum of: a kitchen/living zone, a bedroom zone and an unconditioned zone.
- 7.5.2 Where no physical separation is present between spaces with different usage patterns, any obvious features can be used to determine the different zones provided the minimum areas are achieved (refer Clause 7.5.3).
- 7.5.3 When there are no obvious features by which to zone the open plan studio or bedsit, the following **minimum** zone areas must apply:
  - kitchen/living zone area(s) = minimum of 30%
  - bedroom zone area = minimum of 20%
  - bathroom/toilet/laundry zone area = minimum of 10%

#### 7.6 Zoning – Spaces with physical separation

- 7.6.1 Physical separation of a space is considered to occur when a wall separates one air space from another and contains either: no openings, a controlled opening such as a door, or a permanent opening.
- 7.6.2 Spaces with physical separation are zoned as separate zones unless one of the spaces is considered a small air space, in which case it is combined with the zone from which it is entered.

#### 7.7 Airlocks

- 7.7.1 An airlock is defined as having:
  - one or more external walls with or without windows
  - one or more internal walls
  - an external door
  - one only internal door opening to a conditioned or non-conditioned zone
  - a floor
  - a ceiling or a combined ceiling/roof.
- 7.7.2 Air locks are treated as 'Day-time unconditioned' zones.

#### 8. Windows, Glazing and Insect Screens

- 8.1 Windows and glazed doors must be modelled in accordance with the sizes noted on the Window Schedule and include accurate modelling of:
  - glass and frame type
  - openable percentage
  - default or custom values
  - size, location and offset.
- 8.2 If a builder has a preferred window supplier and that window supplier's codes and sizes are shown on the drawing sets then the assessor may use that manufacture's ventilation charts to determine the openability of the window and/or door. If that information is not available then the default values apply (refer Clause 10.10).
- 8.3 Where the window manufacture is not nominated, as in Clause 8.2, the default openable percentage figures should always apply (refer Clause 10.10). Where a window has both fixed and openable components, assessors are to calculate the total opening based on the entire unit. See window training module for more details (available in mid 2013 on www.nathers.gov.au).
- 8.4 If the type of window is not clearly indicated (for example, sliding or awning) then the drawing sets need to be referred back to the client and the drawing set is NOT to be rated.
- 8.5 Windows include fully or partially-glazed hinged doors and sliding doors.
- 8.6 All windows must be modelled as having 'Holland blinds' fitted as the default. These are not required to be installed. No other internal window coverings are permitted for regulatory rating of new dwellings.
- 8.7 Fixed external window shading devices shown on the design documentation must be included in the rating.

8.8 Insect screens must be modelled to all external operable windows and doors regardless of whether insect screens are shown or omitted on the design documentation or specifications. This does not apply to garage windows or doors.

# 9. Shading and Eaves

- 9.1 Protected trees with an existing preservation order or heritage protection are the ONLY type of vegetation that may be modelled. Protected or 'regulated' trees (including canopy) must be indicated on drawings to scale and supporting information showing the existing preservation order or heritage listing, and a species shading schedule, MUST be provided to the assessor otherwise they must not be modelled.
- 9.2 Outdoor living areas (as defined in the NCC) attached to the dwelling must always be rated as shade features.
- 9.3 Exterior shading devices must not be modelled unless they are shown on the design documentation.
- 9.4 The width of a shading device is measured from the face of the external wall to the outer-most protrusion, including gutters. If the gutter width is not specified, then assume 120 mm width.
- 9.5 If the gutter is on a deep fascia board where the board will cast a greater shadow than the gutter, then the measurements (projection and offset) are to be taken from the bottom of the fascia.
- 9.6 The thickness of the construction elements are to be taken into account when modelling shading (for example, the thickness of timber slats in a solar pergola).
- 9.7 Shading from the width of eaves is the distance from the wall to the edge of the gutters if gutters are shown on the drawing set (refer Clause 9.4).

# 10. Default Settings (for new dwellings)

- 10.1 Where there is insufficient information on the design documentation and a request for further information has been made but not received, an assessment can still be undertaken but default values (shown below) are to be used. The client must be advised accordingly and told that **some** defaults are worst case and the rating may be adversely affected.
- 10.2 The correct identification of the worst case defaults may require multiple simulations. This is to ensure that the rating provided from the drawing set is the minimum that should be achieved. Selection of differing materials after the rating process will therefore not compromise the rating.
- 10.3 **Roof Colour**: If the roof colour or roof solar absorptance is not nominated on the design documentation, then the worst case default is used. For example, in tropical areas a 'dark' roof would be selected; conversely in a temperate or cool climate a 'light' roof would be selected.
- 10.4 **Wall Colour**: For walls, the default colour is 'medium', if not shown otherwise on the drawing set.

- 10.5 **Floor Covering**: If no floor coverings are specified, then the default settings are:
  - garages have concrete floors
  - wet areas and kitchens have ceramic tiles
  - all other areas have carpets and rubber underlay
- 10.6 **Internal colours**: Internal ceiling and internal wall colour must be modelled as 'not specified' or 'medium' where the software has this option.
- 10.7 **Ground Reflectance**: The ground reflectance default setting of 0.2 must be modelled at all times.
- 10.8 **Vents and penetrations**: All vents and penetrations (including exhaust fans) are to be treated as unsealed/worst performance if not shown otherwise.
- 10.9 **Lighting**: If no lighting plan is received (even after being requested) then ventilated recessed downlights are to be modelled throughout the dwelling at a rate of 4 ventilated recessed downlights per 10 square metres of ceiling area in each zone. For zones between 5 and 10 sq m allow 2 recessed downlights and 1 recessed downlight for zones less than 5 sq m. For example a combined living/kitchen area of 15 sq m would have 6 ventilated recessed downlights, and a living/dining of 30 sq m would have 12.
- 10.10 **Window Openability**: If opening percentages for window types are not specified by the window manufacturer, then the defaults shown below or the nearest in-built software figures are to be used. **Note**: Window units containing a combination of types must be calculated accurately according to the proportion of each. Sample opening areas for a two pane window or sliding door i.e. 1 fixed and 1 operable pane, (excluding louvre) are given below. Refer to the window training module when available for more details (www.nathers.gov.au):
  - casement 45%
  - sliding 45%
  - awning 30%
  - double hung 40%
  - two panel sliding door 45%
  - louvre 80%
- 10.11 Windows with **restricted openings and no complying security screen:** windows complying with the safety rules in the NCC, need to have a restricted opening percentage. The default setting of 10% is to be used, regardless of window type selected.
- 10.12 **Window and Door Air Infiltration**: Gaps around windows and doors are to be set to medium (if the software allows). This is the default if the drawing sets do **not** note that the windows and doors are weather-stripped or comply with AS2047.
- 10.13 **Neighbour and topographic defaults**: If neighbouring buildings are not identified on the drawing sets and cannot be gathered from internet sources, then presume all distances and heights given in Section 5 as default values.
  - 10.1.1 Do not rate buildings/fences or any feature that will not impact on the solar access of the subject dwelling. There is no requirement to model neighbours fences or topographical features to the south of the dwelling. Note: this does not apply in tropical regions where the impact of features to

the south should be assessed if the assessor believes it will impact the dwelling being rated.

10.1.2 Generally do not enter single storey buildings greater than 10m away, twostorey greater than 20m away, or high rise/topographical features that are located outside the shadow range of the dwelling. These features may sometimes impact on a dwelling depending on the topography, building site levels and the siting of the dwelling. In these instances assessor judgement is required.

# **11. Ceiling Penetrations**

- 11.1 The impact of ceiling penetrations for example exhaust fans, recessed luminaries (downlights) and flues, and the subsequent loss of ceiling insulation **must** be considered when undertaking a NatHERS assessment.
- 11.2 For further details, refer to NatHERS Technical Note No. 2 on the treatment of ceiling penetrations.

#### 12. Minimum drawing set certification requirements

- 12.1 Before certifying drawing sets, the assessor is to confirm:
  - 12.1.1 The full details of the construction materials are detailed on the drawing sets, and are in accordance with the assessment.
  - 12.1.2 The window specification details including;
    - 12.1.2.1 Uw and SHGCw of the individual windows, doors and fixed glazing.
    - 12.1.2.2 Either an individual window and door size schedule or clearly noted floor plans or elevations showing window height, width and frame type.
    - 12.1.2.3 Skylight and roof window details.
  - 12.1.3 Ceiling penetrations are noted.
- 12.2 If the above details are not present on the drawing sets, or differ from the rating assessment, the drawing sets are to be returned to the architect or building designer for completion (except where defaults apply). Details on the drawing sets and relevant schedules/addendums/ specifications, must align with the assessment and vice versa.

# **13. Certification of Design Documentation**

- 13.1 Drawing sets are not to be certified if the information on the drawing sets and specifications does not align with the information on the NatHERS energy rating report. Drawing sets are to be returned to the designer or client to be amended before certification by a NatHERS assessor.
- 13.2 For Class 1 dwellings the assessor is to manually or electronically stamp every page of the plans/drawing set that relate to the assessment (i.e. the cover sheet, floor plans, elevations and specifications) with the following details:
  - the star rating achieved and the corresponding area adjusted heating and cooling loads in MJ/m2 annum units
  - the assessor's signature
  - the assessor's name clearly printed

- their AAO and their assessor accreditation number or License Number and Licensing Authority (as required by the relevant jurisdiction)
- the certification date
- confirmation on whether the dwelling was rated with or without downlights.
- if the assessor is a member of an AAO then the project's unique Assessor Certificate Number, issued only by the AAO (also known as the project certification/rating number) must also be included (for BDAV members this currently only applies to BASIX assessments).
- 13.3 The bulk of these details is currently presented either on existing AAO, or will be available on future AAO, assessor stamps. Information not currently on the available assessor stamps needs to be added manually or electronically.
- 13.4 Any 'project stamp' or rating identifier, needs to be on every page of the drawing set that relates to the energy rating. If the assessor attaches their own (with the written approval of the client) list of requirements that apply to the rating, then these can be on just one page of the drawing set, typically this would be on the specifications page if space allows.
- 13.5 For Class 2 dwellings all the above requirements apply EXCEPT the star rating for the project which must be displayed differently: The heating and cooling load to be displayed for the project are the averaged figure (sum of all heating and cooling loads divided by the total number of dwellings) and the resultant average star rating based on these figures, as per the NCC requirements. Individual unit scores DO need to be shown as part of the certified working drawings detailing each individual dwellings star rating and each units total combined heating and cooling load. If space permits these results should be displayed on the specifications page or alternatively on a separate page.

# 14. Final Documentation – Building Thermal Performance Outputs

- 14.1 For Class 1 dwellings: The assessor will supply the client with a hard copy or electronic format (PDF) of the certified documentation and the accredited software's 'Building Thermal Performance' software summary report. The software summary report is to clearly show the assessment results (star rating), plan version rated, construction types, glazing and insulation details (this would usually be 3 to 5 pages in length).
- 14.2 For Class 2 dwellings: Clause 14.1 applies to each unique individual unit in a medium or high density development. If in a high rise development, a number of units on lower, mid or upper floors of buildings higher than 3 floors are identical in all respects including sub-floors, wing walls, shading structures and height above ground level then these identical units can be included on the one 'Building Thermal Performance' software summary report, as long as they are identical in all respects and can be identified individually by unit number. Units on the ground and top floors can only be grouped with identical units in all respects on that same floor.
- 14.3 The Software Output (i.e. the 'Building Thermal Performance' software summary report) needs to be stamped with the details in Clause 13.2 to clearly link the printout with the drawing set for all dwellings.

#### Feedback on these principles

All enquiries and comments about the principles should be referred to an accredited assessor organisation (ABSA or BDAV), or your state and territory building regulator if accreditation or licencing is not required in your jurisdiction. Where necessary, these organisations will then refer the matter to the NatHERS National Administrator for advice, who may then issue an amended document.

#### Disclaimer

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NatHERS supports improvements to the thermal performance (energy efficiency) of Australia's residential buildings by providing a standardised approach and guidelines for energy rating software tools used to assess dwellings across Australia.

NatHERS is administered by the Department of Resources, Energy and Tourism (formally DCCEE) on behalf of the Commonwealth, state and territory governments.

For more information visit www.nathers.gov.au