



BRANZ Appraised

Appraisal No. 774 [2019]

WARMUP WETROOM SYSTEM

Appraisal No. 774 (2019)

This Appraisal replaces BRANZ Appraisal 774 (2012).



BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

- 1.1 The Warmup Wetroom System is for internal wet areas of buildings that are to be finished with ceramic or stone tiles. The system consists of Warmup Insulation Backer Board, ARDEX Undertile Sheet Membrane, preformed shower trays and Warmup Undertile Heating.

Scope

- 2.1 The Warmup Wetroom System has been appraised for use in internal wet areas of buildings within the following scope:
 - on floor substrates of concrete, plywood, compressed fibre cement sheet and fibre cement sheet tile underlay, and on wall substrates of concrete, concrete masonry, wet area fibre cement sheet lining systems and wet area plasterboard lining systems; and,
 - on structural floors and walls complying with the NZBC; and,
 - where floors are designed and constructed such that deflections do not exceed 1/360th of the span; and,
 - where floors are designed not to exceed a continuous operating temperature of 35°C; and,
 - when protected from physical damage by a screed and ceramic or stone tiles.
- 2.2 The use of the waterproofing membrane on concrete slabs where hydrostatic or vapour pressure is present from below is outside the scope of this Appraisal.
- 2.3 Movement and control joints in the substrate must be carried through the membrane to the screed, tile or stone finish. The design and construction of the substrate and the movement and control joints is specific to the building and is therefore the responsibility of the building designer and building contractor and is therefore outside the scope of this Appraisal.
- 2.4 The ceramic or stone tile finishes are outside the scope of this Appraisal.
- 2.5 The system must be installed by trained installers, approved by Warmup New Zealand Ltd.

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, the Warmup Wetroom System if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1 (b), 15 years and B2.3.2. The Warmup Wetroom System meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E3 INTERNAL MOISTURE: Performance E3.3.4, E3.3.5 and E3.3.6. The Warmup Wetroom System meets these requirements. See Paragraphs 10.1 – 10.6.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The Warmup Wetroom System meets this requirement and will not present a health hazard to people.

Technical Specification

4.1 System components and accessories for the Warmup Wetroom System, which are supplied by Warmup New Zealand Ltd are:

- **ARDEX Undertile Sheet Membrane [WPM750]:** A single ply synthetic rubber membrane with polypropylene filaments welded to both sides, which enables better wetting out by water based adhesives. It is supplied as a 0.75 mm thick, 1.4 m wide x 20 m long roll.
- **Warmup Insulation Backer Board:** Substrate board made from extruded polystyrene and coated both sides with a close woven fiberglass mesh embedded on a cement polymer mortar. It is available in a range of thickness from 6 mm to 60 mm, with widths 600 mm or 1200 mm and lengths of 1250 mm or 2500 mm. It is also available as preformed shower trays and hobs.
- **Warmup Undertile Heating Cables:** Multi stranded single conductor, teflon insulated, full earth screen with outer PVC insulation. All heating elements are factory terminated and available in 13 different sizes. Each different element length is colour coded to ensure the correct element is used.
- **Warmup Thermostats:** A range of 6 models of non-programmable and programmable temperature controllers for the Warmup Undertile System.
- **Clamp Waste:** An outlet designed to securely clamp the membrane that can be tiled over. The plumbing aspects of the floor clamp waste have not been assessed by BRANZ and are outside the scope of this Appraisal.

Handling and Storage

5.1 Handling and storage of all materials supplied by Warmup New Zealand Ltd, whether on site or off site, is under the control of the trained installers, approved by Warmup New Zealand Ltd. Warmup Insulation Backer Board must be stacked flat, off the ground and supported on a level platform. It must be kept dry at all times either by storing under cover or by providing waterproof covers to the stack. Care must be taken to avoid damage to edges, ends and surfaces. The sheets must always be carried on edge.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Warmup Wetroom System. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

- 7.1 The Warmup Wetroom System integrates components to create a heated and waterproof wet room solution ready for tiling in new or existing buildings.
- 7.2 The Warmup Wetroom System may be used in the following areas:
 - Wet areas – all floor areas in a wet area.
 - Semi-wet or dry areas or floor areas adjacent to sanitary fixtures such as baths, tubs and basins.
- 7.3 Timber framing must comply with NZS 3604, or where specific engineering design is used, the framing shall be of at least equivalent stiffness to the framing provisions of NZS 3604, or comply with the serviceability criteria of AS/NZS 1170. Timber floor framing must be constructed such that deflections do not exceed 1/360th of the span. Where NZS 3604 is used, the allowable joist spans given in Table 7.1 shall be reduced by 20%. In all cases framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and all sheet edges are fully supported.
- 7.4 Concrete and concrete masonry substrates must be to a specific engineering design meeting the requirements of the NZBC, such as concrete construction to NZS 3101, concrete slab-on-ground to NZS 3604, and concrete masonry to NZS 4229 and NZS 4230.
- 7.5 Fibre cement sheet and tile underlay must be manufactured to comply with the requirements of AS/NZS 2908.2 and must be specified by the manufacturer as being suitable for use as a wet area membrane substrate.
- 7.6 Space heating design, including the layout of the electric element cables, must be carried out by Warmup New Zealand Ltd.

Durability

- 8.1 The Warmup Wetroom System meets the performance requirements of NZBC Clause B2.3.1 [b], 15 years when used in accordance with this Appraisal as a wetroom system in wet areas.

Serviceable Life

- 8.2 Warmup Wetroom System installations are expected to have a serviceable life of at least 20 years provided the tile or stone finish system is maintained in accordance with this Appraisal.

Maintenance

- 9.1 Regular maintenance is essential for Warmup Wetroom System installations to continue to meet the NZBC durability performance provision and to maximise their serviceable life.
- 9.2 In wet areas, annual inspections must be made to ensure that all aspects of the tiling system remain in a waterproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress, must be repaired immediately as for new work.
- 9.3 No servicing of the electrical elements should be required unless damage has occurred. Should the tiling surface require repairs, Warmup New Zealand Ltd must be referred to regarding the heating element. Any electrical repairs must be carried out by a registered electrician.
- 9.4 Drainage outlets must be maintained to operate effectively, and tile finishes must be kept clean.

Internal Moisture

- 10.1 Warmup Wetroom System can be installed and finished to provide a surface that is impervious and easily cleaned, and will prevent water from penetrating behind linings or to concealed spaces.
- 10.2 Surfaces must be finished with ceramic or stone tiles. A means of compliance with NZBC Clause E3.3.3 and E3.3.4 is given in NZBC Acceptable Solution E3/AS1 Paragraph 3.1.1 [b], 3.1.2 [b] and 3.3.1 [b].
- 10.3 In unenclosed showers, falls must be a minimum of 1 in 50 and extend a minimum of 1500 mm out from the shower rose. Floor wastes and drainage flanges must be provided and the floor must fall to the outlet.

- 10.4 The Warmup Wetroom System is suitable for use to contain accidental overflow to meet NZBC Clause E3.3.2. A means of compliance for overflow is given in NZBC Acceptable Solution E3/AS1, Section 2.
- 10.5 The waterproofing membrane must completely cover shower bases, and for unenclosed showers it must extend a minimum of 1500 mm out from the shower rose. Further design guidance on waterproofing wet areas, including waterproofing walls and junctions can be obtained from AS 3740, BRANZ Good Practice Guide: Tiling, and the flooring and wall lining manufacturers.
- 10.6 Where water resistant wall finishes such as prefinished sheet materials are used, they must overlap the waterproofing membrane a minimum of 30 mm.

Installation Information

Installation Skill Level Requirements

- 11.1 Installation of the Warmup Wetroom System must be completed by trained installers, approved by Warmup New Zealand Ltd.
- 11.2 Installation of substrates must be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class, in accordance with the instructions given within the Warmup New Zealand Ltd Technical Literature and this Appraisal.

System Installation

Warmup Insulation Backer Board

- 12.1 Installation of the Warmup Insulation Backer Board must be in accordance with BRANZ Appraisal No. 895 [2018] and the Warmup Wetroom System Technical Literature.

ARDEX Undertile Sheet Membrane (WPM 750)

- 12.2 Refer to BRANZ Appraisal No. 727 [2017] ARDEX Undertile Sheet Membrane (WPM 750) and the Warmup Wetroom System Technical Literature for full installation details and methods.

Warmup Undertile Heating

- 12.3 Installation of the Warmup Undertile Heating must be in accordance with BRANZ Appraisal No. 644 [2017] and the Warmup Wetroom System Technical Literature.

Tiling

- 12.4 The waterproofing membrane must be protected at all times to prevent mechanical damage.
- 12.5 Tiling must be carried out in accordance with AS 3958.1, or BRANZ Good Practice Guide: Tiling. A flexible adhesive complying with AS 2358 must be used. All tiles must be fixed in accordance with the instructions of the tile adhesive manufacturer.

Inspections

- 12.6 The relevant Technical Literature must be referred to during the inspection of Warmup Wetroom System installations.

Health and Safety

- 13.1 Safe use and handling procedures for the components that make up the Warmup Wetroom System are available from Warmup New Zealand Ltd.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

- 14.1 An assessment of testing information provided for Warmup Insulation Backer Board and ARDEX Undertile Sheet Membrane [WPM750] was made by BRANZ technical experts.
- 14.2 Assessment of electrical safety in compliance with AS/NZS 60335:2002 has been carried out by UL International Ltd.

Other Investigations

- 15.1 An assessment was made of the durability of the Warmup Insulation Backer Board and the ARDEX Undertile Sheet Membrane [WPM750] by BRANZ technical experts.
- 15.2 Site inspections were carried out by BRANZ to examine the practicability of installation.
- 15.3 The Technical Literature for the Warmup Wetroom System has been examined by BRANZ and found to be satisfactory.

Quality

- 16.1 The manufacture of the ARDEX Undertile Sheet Membrane [WPM750] has been examined by BRANZ and found to be satisfactory.
- 16.2 The manufacture of the other components of the Warmup Wetroom System have not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 16.3 The quality of the supply to market of the Warmup Wetroom System is the responsibility of Warmup New Zealand Ltd.
- 16.4 Quality of installation on site of components and accessories supplied by Warmup New Zealand Ltd is the responsibility of the trained installers, approved by Warmup New Zealand Ltd.
- 16.5 Designers are responsible for the building design and building contractors are responsible for the quality of installation of the framing and substrates.
- 16.6 Building owners are responsible for the maintenance of the ceramic or stone tile finish in accordance with the instructions of Warmup New Zealand Ltd.
- 16.7 Electrical components that connect to mains power must be installed by a registered electrician.

Sources of Information

- AS 3740: 2010 Waterproofing of wet areas within residential buildings
- AS 3958.1: 2007 Ceramic tiles – Guide to the installation of ceramic tiles.
- AS/NZS 1170: 2002 Structural design action - General principles.
- AS/NZS 4858: 2004 Wet area membranes.
- AS/NZS 60335:2002 Household and similar electrical appliances – Safety – Part 2.96: Particular requirements for flexible sheet heating elements for room heating.
- BRANZ Appraisal No. 644 [2017] Warmup Undertile Heating
- BRANZ Appraisal No. 727 [2017] ARDEX Undertile Sheet Membrane [WPM 750 and WPM 1000].
- BRANZ Appraisal No. 895 [2018] Marmox Tilebacker Boards.
- Good Practice Guide: Tiling, BRANZ, April 2015.
- NZS 3101:2006 Concrete Structures Standard.
- NZS 3603: 1993 Timber Structures Standard.
- NZS 3604: 2011 Timber-framed buildings.
- NZS 4229:2013 Concrete masonry buildings not requiring specific engineering design.
- NZS 4230:2004 Code of Practice for the design of masonry structures.
- Ministry of Business, Innovation and Employment Record of amendments – Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.



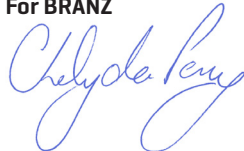
In the opinion of BRANZ, the **Warmup Wetroom System** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Warmup New Zealand Ltd**, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the Technical Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Warmup New Zealand Ltd:**
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions;
 - d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Warmup New Zealand Ltd**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Warmup New Zealand Ltd** or any third party.

For BRANZ



Chelydra Percy

Chief Executive

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6 September 2019