



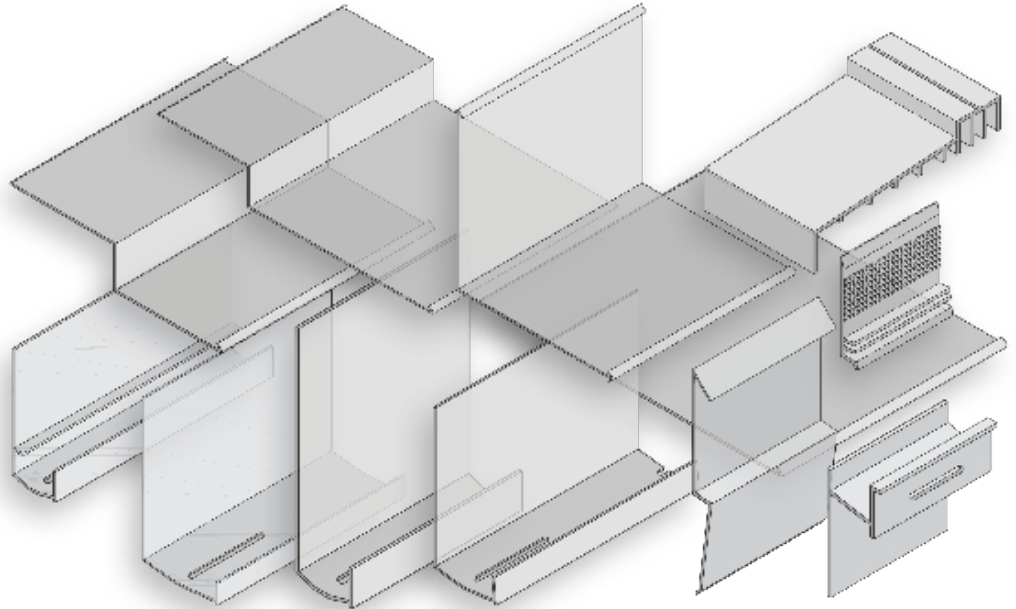
BRANZ Appraised

Appraisal No. 977 [2017]

E2 REDWAY FLASHINGS

Appraisal No. 977 [2017]

Amended 26 February 2020



BRANZ Appraisals

Technical Assessments of products for building and construction.



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Product

- 1.1 E2 Redway Flashings are a range of uPVC back flashings designed for use in a variety of wall construction details to meet the flashing requirements for both direct-fixed and cavity cladding systems. The range also includes the E2 Redway Flashings Sill Tray System for window and door joinery.

Scope

- 2.1 E2 Redway Flashings have been appraised for use as back flashings on timber and steel framed buildings within the following scope:
 - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
 - with direct fixed or cavity-based wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or with proprietary direct fixed or cavity-based cladding systems covered by a valid BRANZ Appraisal; and,
 - situated in NZS 3604 Wind Zones, up to and including Extra High.

[Note: E2 Redway Flashings can also be used on buildings subject to specific weathertightness design. Weathertightness design and detailing of these installations is the responsibility of the designer and is outside the scope of the Appraisal].
- 2.2 The E2 Redway Flashings Sill Tray System has been appraised for use as a sill tray in joinery openings of buildings within the following scope:
 - timber framed buildings constructed in accordance with the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1, with direct fixed timber or fibre cement horizontal weatherboard wall claddings in accordance with NZBC Acceptable Solution E2/AS1; or
 - constructed with concrete masonry, in-situ concrete, pre-cast concrete or EPS block systems up to 3 storeys in height with a maximum height from ground to eaves of 10 m, and with a floor plan area only limited by seismic and structural joints, all designed and constructed in accordance with the NZBC; and
 - situated in NZS 3604 Wind Zones up to, and including, Very High.
- 2.3 The E2 Redway Flashings Sill Tray System is appraised for use with aluminum window and door joinery that is installed with vertical jambs and horizontal heads and sills. *[Note: The Appraisal of the Sill Tray System relies on the joinery meeting the requirements of NZS 4211 for the relevant Wind Zone.]*

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, E2 Redway Flashings, if designed, used, installed, and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC.

Clause B2 DURABILITY: Performance B2.3.1 (a) not less than 50 years, B2.3.1 (b), 15 years and B2.3.2. E2 Redway Flashings meet these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. E2 Redway Flashings contributes towards meeting this requirement. See Paragraphs 10.1 and 10.2

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. E2 Redway Flashings meet this requirement and will not present a health hazard to people.

Technical Specification

4.1 E2 Redway Flashings are extruded from uPVC plastic by Redway Developments Limited. All E2 Redway Flashing profiles are supplied in 2.7 m lengths.

4.2 The E2 Redway Flashings covered by the Appraisal are:

Product Code	Description
RDCC15	15 mm Flat Panel Cavity Closer
RDCC19	19 mm Flat Panel Cavity Closer
RDCC21	21 mm Flat Panel Cavity Closer
RDCC40	40 mm Flat Panel Cavity Closer
RDCC45	45 mm Flat Panel Cavity Closer
RDCC50	50 mm Flat Panel Cavity Closer
RDTV20	20 mm Top Vent Cavity Closer
RDWBC25	25 mm Weatherboard Cavity Closer
RDWBC30	30 mm Weatherboard Cavity Closer
RDWBC33	33 mm Weatherboard Cavity Closer
RDWBC35	35 mm Weatherboard Cavity Closer
RDCSE30	Cavity Stop End for Weatherboard Closer
RDRABCC10/19	10 - 19 mm Vented Cavity Closer for RAB
RDRABCC10/30	10 - 30 mm Vented Cavity Closer for RAB
RDCS47	Weatherboard Cant Strip [Starter]
RDWBJ40	40 mm Weatherboard Jamb
RDCS55	55 mm x 55 mm Internal / External Corner Flashing
RDCS85	85 mm x 85 mm Internal / External Corner Flashing
RDCS105	105 mm x 105 mm Internal / External Corner Flashing
RDZF7	Ecoply Barrier Horizontal Jointer
RDZF17	Ecoply Barrier Steel Horizontal Jointer
RDFB40	40 mm Flat Back Flashing
RDFB135	135 mm Flat Back Flashing
RDFB160	160 mm Flat Back Flashing
RDBKF45	Brick Kickout Flashing
RDCNS100/42	50 mm x 42 mm x 50 mm Cavity to Non-Cavity Flashing
RDCNS150	50 mm x 19 mm x 100 mm Cavity to Non-Cavity Flashing
RDCNS100	50 mm x 19 mm x 50 mm Cavity to Non-Cavity Flashing
RDSE	Sill Tray Stop End [supplied in pairs - left and right]
RDST87	Sill Tray 87 mm
RDTJ	Sill Tray Jointer
RDSW50	Sill Tray Window Support Wedges 50 mm

Handling and Storage

- 5.1 Handling and storage of all materials supplied by Redway Developments Ltd, whether on site or off site, is under the control of the installer. E2 Redway Flashings must be protected from physical damage and must be stored in clean, dry conditions. The E2 Redway Flashings Sill Tray system components shall be stored in a manner that avoids contamination of the glue joint surfaces.

Technical Literature

- 6.1 Refer to Redway Developments Ltd for details of the current Technical Literature for E2 Redway Flashings. 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 E2 Redway Flashings are a range of back flashings for use on walls of buildings. They are designed for use as a secondary line of defence to assist in the weathertightness of wall cladding and window systems by providing a direct path for any water infiltration to be directed back out to the external face of the cladding. When paired with suitable cladding types, E2 Redway Flashings will contribute to the prevention of the ingress of moisture and vermin into buildings.
- 7.2 E2 Redway Flashings can be used as alternatives to back flashings specified within NZBC Acceptable Solution E2/AS1. Where used otherwise than in accordance with E2/AS1 detailing, the use of E2 Redway Flashings shall be by way of specific weathertightness design and is outside the scope of this Appraisal.
- 7.3 E2 Redway Flashings must not be exposed to the weather or ultra violet light for a total of more than 90 days before being covered by the wall cladding.
- 7.4 Where a proprietary cladding proprietor specifies a specific flashing as part of their system, permission must be obtained from the cladding proprietor before the flashing system is substituted with E2 Redway Flashings.
- 7.5 Where E2 Redway Flashings are used with other cladding systems not covered by this Appraisal [refer to Appraisal Paragraph 2.1], designers must detail the junction between the E2 Redway Flashings and the cladding to meet their own requirements and the performance requirements of the NZBC. Details not included within the Technical Literature have not been assessed and are outside the scope of this Appraisal.
- 7.6 The E2 Redway Flashings Sill Tray System is designed to fit directly under aluminium joinery, sloping forward to divert water to the building exterior. Water sources include leaking joinery, failed jamb seals or flashings, condensation or wind driven rain. The E2 Redway Flashings Sill Tray system must only be used where the sloping portion of the sill tray starts beyond the joint between the timber reveal liner and the aluminium joinery extrusion to pick up any leakage through the mitre joints in the window joinery.
- 7.7 Jamb flashings, where used, must extend and lap over the end sections of the sill tray.
- 7.8 Building designers incorporating the E2 Redway Flashings Sill Tray System into their design must ensure that adequate support for the aluminium joinery is provided in addition to that provided by the support wedges.
- 7.9 The E2 Redway Flashings Sill Tray system is not designed to overcome poor detailing and workmanship of aluminium joinery installation. The system must not be considered in isolation, but be considered as part of the wall cladding system. The E2 Redway Flashings Sill Tray system is designed to be used in conjunction with airseals and joinery flashing systems, not as a substitute.

Durability

- 8.1 Assessment of durability to meet the NZBC is based on difficulty of access and replacement, and the ability to detect failure of E2 Redway Flashings both during normal use and maintenance of the building.

Serviceable life

- 8.2 Provided they are not exposed to the weather or ultra-violet light for a total of more than 90 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, E2 Redway Flashings are expected to have a serviceable life equal to that of the cladding.

Maintenance

- 8.3 No maintenance is required for E2 Redway Flashings. Annual inspections must be made to ensure that all aspects of the cladding system, aluminium joinery and any sealed joints remain in a weathertight condition and water cannot penetrate the cladding. Any damaged areas or areas showing signs of deterioration which would allow water ingress must be repaired immediately.

Prevention of Fire Occurring

- 9.1 Separation or protection must be provided to E2 Redway Flashings from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 10.1 E2 Redway Flashings when installed in accordance with this Appraisal and the Technical Literature assist in preventing the penetration of moisture that could cause undue dampness or damage to building elements.
- 10.2 Where a cladding proprietor specifies the use of a sill tray around window openings as part of their system, or specify the use of a sill tray that complies with NZBC E2/AS1, Paragraph 9.1.10.5, the E2 Redway Flashings Sill Tray system may be used.
- 10.3 The details given in the Technical Literature for weather sealing are based on the design principle of having a first and second line of defence against moisture entry for all joints, penetrations and junctions. The ingress of moisture must be excluded by detailing flashings and wall interfaces as shown in NZBC Acceptable Solution E2/AS1 and the Technical Literature. Weathertightness details that are developed by the designer are outside the scope of this Appraisal and are the responsibility of the designer for compliance with the NZBC.

Installation Information

Installation Skill Level Requirements

- 11.1 Installation of E2 Redway Flashings must be completed by, or under the supervision of Licensed Building Practitioners with the relevant License Class, in accordance with instructions given within the E2 Redway Flashings Technical Literature and this Appraisal.

System Installation

E2 Redway Flashings Installation

- 12.1 E2 Redway Flashings can be cut to length on site. Back flashings must be installed in a continuous length where possible, but to avoid wastage, the back flashings can be lapped 100 mm. The direction of the lap must ensure that water is shed to the outer face of the flashing.
- 12.2 E2 Redway Flashings must be used and installed in conjunction with the selected cladding system in accordance with the installation methods and requirements of NZBC Acceptable Solution E2/AS1, or the proprietary cladding system manufacturer.

E2 Redway Flashings Sill Tray System Installation

- 12.3 The Technical Literature provides full details for the installation of the sill tray, including aluminium joinery opening details. The following is a summary of the main points of installation:
- The sill trimmer must be level.
 - The sill tray is cut to length to suit the opening width.
 - Stop ends are fitted to the ends of the sill tray with a PVC solvent cement.
 - Flexible wall underlay and flexible flashing tapes must be installed in accordance with NZBC Acceptable Solution E2/AS1, prior to the installation of the sill tray system.
 - The sill tray system is fixed to the studs through the fixing holes provided in the stop ends, with either galvanised plasterboard clouts or screws. Screws are recommended to allow for adjustments.
 - The Sill Tray System is fixed to the sill trimmer through the upstand support section at the rear of the tray [a scribed line is provided]. The fixings must not penetrate through the sloping part of the tray, as this will compromise the water shedding capability of the sill tray.
 - When the aluminium joinery is installed, care must be taken to ensure the sloping portion of the sill tray is not penetrated by the sill reveal fixings.
 - The gap formed between the Sill Tray System and the aluminium joinery flange must not be sealed, so moisture can drain to the exterior.

Basis of Appraisal

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

- 13.1 BRANZ expert opinion on NZBC E2 code compliance for E2 Redway Flashings was based on evaluation of all details within the scope and as stated within this Appraisal. The details contained within the Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the back flashings will meet the performance levels of NZBC Acceptable Solution E2/AS1.
- 13.2 The practicability of installation of E2 Redway Flashings has been assessed by BRANZ.
- 13.3 The Technical Literature for E2 Redway Flashings has been examined by BRANZ and found to be satisfactory.

Investigations

- 14.1 An assessment was made of the durability of E2 Redway Flashings by BRANZ experts.
- 14.2 Site visits have been carried out by BRANZ to assess fit for purpose and the practicability of installation, and to assess in service performance.
- 14.3 Weathertightness detailing of the E2 Redway Flashings has been assessed by BRANZ and found to be satisfactory.

Quality

- 15.1 The manufacture of E2 Redway Flashings has 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. BRANZ undertakes an ongoing review of product quality on an inwards goods basis.
- 15.2 The quality of materials, components and accessories supplied to the market is the responsibility of Redway Developments Ltd.
- 15.3 Quality on site is the responsibility of the installer.
- 15.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of the framing systems, wall underlays, cavity battens and cladding system in accordance with the instructions of the designer.
- 15.5 Building owners are responsible for the maintenance of the cladding system in accordance with the instructions of cladding manufacturer and designer.



Sources of Information

- NZS 3604: 2011 Timber Framed Buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, 26 February 2020

This Appraisal has been amended to update Technical Specification to include Vented Cavity Closers for RAB board.



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20 December 2017

E2 REDWAY FLASHINGS



In the opinion of BRANZ, **E2 Redway Flashings** are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Redway Developments Limited**, 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. **Redway Developments Limited:**
 - 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 **Redway Developments Limited**.
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 **Redway Developments Limited** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

20 December 2017