



BRANZ Appraised

Appraisal No. 941 [2016]

SUBBASE SPEEDY SUBFLOOR SYSTEM

Appraisal No. 941 [2016]

BRANZ Appraisals

Technical Assessments of
products for building and
construction.



SubBase

Subbase Building Technologies Ltd

PO Box 250

Kaeo 0448

Tel: 09 407 9816

Email: info@subbase.co.nz

Web: www.subbase.co.nz



BRANZ

BRANZ

1222 Moonshine Rd,

RD1, Porirua 5381

Private Bag 50 908

Porirua 5240,

New Zealand

Tel: 04 237 1170

branz.co.nz



Product

- 1.1 The SubBase Speedy Subfloor System consists of polypropylene SubBase devices for the location and support of square timber piles or posts prior to concreting the footings.

Scope

- 2.1 The SubBase Speedy Subfloor System has been appraised for use as a square timber pile or post locator and supporter in the following situations:
 - 125 x 125 mm square sawn timber piles prior to concrete being poured for foundation piles designed in accordance with NZS 3604.
 - 90 x 90 mm square timber posts prior to concrete being poured for foundations subject to specific engineering design.

Building Regulations

New Zealand Building Code

- 3.1 In the opinion of BRANZ, the SubBase Speedy Subfloor System, if designed, used, installed and maintained in accordance the statements of this Appraisal, will meet the following provisions of the NZBC:

Clause B1 STRUCTURE: Performance B1.3.1. The SubBase Speedy Subfloor System meets this requirement. See Paragraphs 8.1 to 8.3.

Clause B2 DURABILITY: Performance B2.3.1 [a], not less than 50 years. The SubBase Speedy Subfloor System meets this requirement. See Paragraph 10.1.

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

Technical Specification

- 4.1 SubBase Speedy Subfloor System is manufactured from recycled polypropylene and are available in two models. The square base is attached to a perimeter ring 100 mm below.
- SubBase 125 have a square base on top for locating 125 mm x 125 mm timber piles.
 - SubBase 100 have a square base on top for locating 90 x 90 mm timber posts.

Handling and Storage

- 5.1 SubBase Speedy Subfloor System devices are packaged in cartons for delivery. They are reasonably robust, and are not affected by moisture. They should be stored in a dry area out of direct sunlight prior to use.

Technical Literature

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

Design Information

General

- 7.1 The SubBase 125 locates the base of 125 x 125 mm square timber piles 100 mm above the bottom of the pile footing, as required by NZS 3604 Clause 6.4.5.6. It allows concrete to be poured under and around piles in a single placement.
- 7.2 The SubBase 100 also locates the base of 90 x 90 mm posts 100 mm above the bottom of the post footing and is subject to specific engineering design. It allows concrete to be poured under and around posts in a single placement.

Structure

- 8.1 SubBase Speedy Subfloor System is for use with footings on good ground as defined in NZS 3604. Pile and post loads will be transferred to the ground through the concrete footing once it has cured, as required by NZS 3604.
- 8.2 The SubBase Speedy Subfloor System is not designed to support additional loads over 150 kg until the pile or post is embedded with concrete in accordance with NZS 3604 Clause 6.4.5.7.
- 8.3 The 90 x 90 mm post footings must be subject to specific engineering design.

Materials

- 9.1 Concrete shall be in accordance with NZS 3604 Clause 6.4.5.2.
- 9.2 Timber piles and posts shall be in accordance with NZS 3602 Section 106 (Hazardous Class H5).

Durability

- 10.1 Once the SubBase Speedy Subfloor System is encased in concrete, no degradation will occur, and the footing system will have an expected durable life of at least 50 years.

Maintenance

- 11.1 SubBase Speedy Subfloor System will not require any maintenance once the concrete has been placed around them.

Installation Information

Installation Skill Level Requirement

- 12.1 Installation must always be carried out in accordance with the SubBase Speedy Subfloor System Technical Literature and this Appraisal, by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant License Class.

Installation

- 13.1 The depth, thickness and plan size of the pile footing must be in accordance with NZS 3604 Clauses 6.4.5.3, 6.4.5.4 and 6.4.5.5. Post footings must be to a specific engineering design.
- 13.2 Footings shall bear upon a level solid bottom in accordance with NZS 3604 Clause 3.4. SubBase Speedy Subfloor System must be placed on the solid bottom before concrete placement.
- 13.3 The SubBase Speedy Subfloor System is attached to the base of the piles or posts through the use of nails or screws.
- 13.4 It is important that access is maintained for concrete placement, and that no foreign material enters the footing prior to the concrete being poured.
- 13.5 Connect temporary braces to two sides of the pile/post and attach to pegs driven into the ground if necessary.
- 13.6 When the concrete is placed it is important to ensure that it is properly compacted around the SubBase Speedy Subfloor System. Rod the concrete under the pile/post to ensure footing is completely filled. Concrete must be in accordance with NZS 3604 requirements.
- 13.7 The SubBase Speedy Subfloor System is not designed to support additional loads, i.e. installation of bearers, braces etc. until the footing hole has been filled with concrete and the concrete has set. SubBase Speedy Subfloor System when fitted with temporary braces can have further subfloor components added, i.e. permanent braces and bears with care 4 hours after concrete has been added to the footing.
- 13.8 Activity that places additional side loads, i.e. leaning ladders against pile/post, hammer nailing, boring holes etc. that are likely to move the pile/post are not to be undertaken until concrete is set. Refer to NZS 3604 Clause 6.4.5.7.

Health and Safety

- 14.1 Suitable protective clothing should be worn when handling and placing wet concrete as it is highly alkali.

Basis of Appraisal

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

Other Investigations

- 15.1 An assessment of the durability of SubBase Speedy Subfloor System has been made by BRANZ technical experts.
- 15.2 The ability to embed the pile or post as required by NZS 3604 Clause 6.4.5.6 has been assessed by BRANZ technical experts.
- 15.3 The ability of the SubBase Speedy Subfloor System to support loads prior to concreting has also been assessed by Subbase Building Technologies Ltd.
- 15.4 The suitability of the material the SubBase Speedy Subfloor System is manufactured of, is assessed by Subbase Building Technologies Ltd.

Sources of Information

- NZS 3604: 2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.



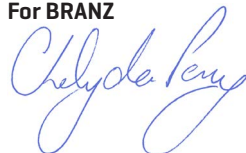
In the opinion of BRANZ, the **SubBase Speedy Subfloor System** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Subbase Building Technologies 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. **Subbase Building Technologies 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 **Subbase Building Technologies 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 **Subbase Building Technologies Ltd** or any third party.

For BRANZ



Chelydra Percy

Chief Executive

Date of Issue:

11 November 2016