CodeMark>>>

Certificate no: CMNZ70132

Version: 1

Original issue date: 21 October 2022 Version date: 09 August 2023

1. Certificate Holder Details



STOPDIGGING NZ Ltd

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2. Product Certification Body

Bureau Veritas Australia Pty Ltd

11/500 Collins Street

Melbourne VIC 3000 Australia
product.certification@bureauveritas.com
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www.bureauveritas.com.au

Complaints: The complaints process for this certificate can be found here: www.bureauveritas.com.au/your-feedback

Sam Guindi – Bureau Veritas Product Certification Manager



Product Certificate

STOPDIGGING! Ground Screw Foundation System

3. Description of Building Method or Product

Name of the product or method in Aotearoa New Zealand, including any brand names used. Description of what it is and the components that make up any system and its physical attributes including the materials and make-up of the product, where applicable. Matters that should be taken into account in the use or application of the building method or product can be found in item 6. Conditions and Limitations of Use. Continuation of description can be found in item 10 – Supporting Information about Description. [Delete if not applicable]. The building method's or building product's catalogue or model identification number or numbers or other unique identifiers that might be used to identify the building product or building method.

The STOPDIGGING! Ground Screw Foundation System comprises ground screws matched to site conditions by static pile testing to determine the screw type, size and depth for installation to achieve the capacity required to meet the design loads.

The STOPDIGGING! Ground Screws are circular hollow sections with a continuously welded helix manufactured from steel that complies with ISO 630 FE360A (High Tensile Steel for Structural Purposes). The ground screws are coated with a hot-dipped galvanised coating that achieve an average of 125 µm zinc cover.

The STOPDIGGING! Ground Screw Foundation System uses the following STOPDIGGING! Products:

- Ground screws: SGU 95 (580 mm to 1600 mm long), SGC 76Ø (865 mm to 3000 mm long), SGC 89Ø (1200mm to 3000mm long)
- Brackets: SGL 145, SGE 125 and SGE 95

4. Intended use of Building Method or Product

Intended use of the building method or product as described in the product manual and other instructional materials. A statement of the function or purpose of the building method or product. Continuation of intended use can be found in item 11 – Supporting Information about Intended use. [Delete if not applicable]

The STOPDIGGING! Ground Screw Foundation System is an alternative to piles and foundation walls as defined in NZS 3604:2011, or for use in other foundations by specific engineering design.

5. New Zealand Building Code Provisions

The performance clauses of the New Zealand Building Code that are relevant to the intended use and with which the building method or product complies or contributes to (where used as part of a system).

How the building method or product complies or contributes can be found in item 8. Basis for Certification. Any qualifications on the extent of that compliance can be found in item 6. Conditions and limitations of use

B1 Structure: B1.3.1, B1.3.2, B1.3.3 (b, f, g, h), B1.3.4

B2 Durability: B2.3.1 (a), B2.3.2 (a) **F2** Hazardous building materials: F2.3.1



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6. Conditions and Limitations of Use

The building method or product's use is to be in accordance with the installation instructions and requirements against which the building method or product was assessed. Conditions or limitations of conformity for the performance requirements the building method or product is used in a conformity for the performance requirements the building method or product as whether there are any matters that should be taken into account in the use or application of the building product or building method and, if so, what those matters are.

- 1. The STOPDIGGING! Ground Screw Foundation System is certified for:
 - a) foundations of buildings within the scope of NZS3604:2011 section 1.1.2 (b to o) or NASH standard Part 2: May 2019 section 1.1.3 with suspended floors:
 - i) situated on
 - 1) good ground as defined in Acceptable Solution B1/AS1 (that is, as defined in NZS3604:2011 but excluding ground that has the potential for liquefaction or lateral spread), or
 - ground with adequate bearing capacity established by static pile testing (but excluding ground that has the potential for liquefaction or lateral spread), and
 - ii) maximum above ground height of the ground screw does not exceed 900 mm, and
 - iii) diagonal bracing is not required, and
 - b) foundations specifically engineered for buildings other than in 1(a), and
 - c) buildings located in Exposure zones A, B, C and D (as defined in NZS3604:2011 section 4.2), except microclimates. Where located within 500m of the sea including harbours, or 100m from tidal estuaries and sheltered inlets, the above ground portion of the ground screws shall have a protective coating, or the space containing them shall be enclosed.
- 2. The STOPDIGGING! Ground Screw Foundation System shall be designed in accordance with the STOPDIGGING Design Guide NZ v4.0 October 2022 and installed in accordance with the STOPDIGGING Installation Manual NZ v3.0 October 2022.
- 3. The designer shall provide a signed declaration for inclusion with any application for building consent that all design conditions of this CodeMark certificate have been met when specifying the STOPDIGGING! Ground Screw Foundation System. The declaration shall include the following details:
 - a) confirmation that the STOPDIGGING! Ground Screw Foundation System has been designed in accordance with the STOPDIGGING Design Guide NZ v4. October 2022, and
 - b) confirmation that the soil type is suitable as listed in Table 2 in the Design Guide, and
 - c) confirmation of:
 - i) good ground as defined in Acceptable Solution B1/AS1 (that is, as defined in NZS3604:2011 but excluding ground that has the potential for liquefaction or lateral spread), or
 - ii) adequate bearing capacity established by static pile testing (but excluding ground that has the potential for liquefaction or lateral spread), or
 - iii) bearing capacity for the site by a CPEng (Geotechnical)



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- d) for foundations that have been specifically engineered, a design statement from a CPEng (Structural).
- 4. The installer shall provide a signed declaration/record of installation for submission with an application for a Code Compliance Certificate that all installation conditions of this CodeMark certificate have been met when installing the STOPDIGGING! Ground Screw Foundation System. The record of installation shall include:
 - a) confirmation that the STOPDIGGING! Ground Screw Foundation System has been installed in accordance with the STOPDIGGING Installation Manual NZ v3.0 October 2022
 - b) results of static pile testing
 - c) the screw type(s), size(s) and depth(s) of installation.

7. Health and Safety Information

Health, safety, and well-being declarations associated with installation, maintenance, and use of the building method or product, and their specific editions and dates necessary to ensure the performance requirements of clauses F1 to F9 of the Building Code can be met.

The compliance with any manufacturer's installation instructions, maintenance, OH & S statements, MSDS's and other Health and Safety declarations will provide the necessary Health and Safety Information pertaining to the product.

8. Basis for Certification

How the performance requirements in the Building Code were met for each of the provisions. Where used as part of a system, the specific contribution to compliance.

B1 Structure - By testing and comparison with Verification Method B1/AS1 and Acceptable Solution B1/AS1

B2 Durability - By analysis and comparison with Verification Method B2/VM1

F2 Hazardous building materials - By comparison with the performance requirements of Building Code clause F2.3.1



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9. Supporting Documentation for Certification

Reference to any acceptable solutions, verification methods, New Zealand Standards, or other compliance pathways referenced against each individual performance requirement the building method or product is compliant with, and their specific version and date. Reference to documents describing tests and evaluations and any other documents relied on for certification or used to prove compliance, including their full title, specific version and date.

- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability Second edition (Amendment 12),
 November 2019
- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B1 Structure First edition (Amendment 20), 29
 November 2021
- Cook Costello "Stopdigging! Ground Screw Specification" Revision 3, 24 February 2022
- AMX Structures Report "Design and Test Loads for Ground Screws", 14 September 2022
- WSP Opus "Ground Screw Load Testing", Report AL2883, 22 July 2018
- STOPDIGGING! Ground Screw Design Guide V4.0, October 2022
- STOPDIGGING! Ground Screw Installation Guide V3.0, October 2022
- STOPDIGGING! Adapter Screw SGC89 Product Sheet
- STOPDIGGING! Beam Screw SGU Product Sheet

10. Supporting Information About Description (Optional)

Any supporting information for section 3.

N/A

11. Supporting Information About Intended Use (Optional)

Any supporting information for section 4.

N/A

12. Supporting Information About Conditions and Limitations of Use (Optional)

Any supporting information for section 6.

N/A

All CodeMark certificates that are current must be registered with MBIE. MBIE maintains a register of valid product certificates. <u>Please find the register here.</u>

If the certificate is not listed on this register or it appears as (SUSPENDED), it is not a valid CodeMark certificate and does not have to be accepted by a building consent authority as establishing compliance with the New Zealand Building Code.



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