

Certificate no: CMNZ70132 Version: 3 Original issue date: 21 October 2022 Version date: 06 September 2024

1. Certificate Holder Details

STOPDICGING!

STOPDIGGING NZ Ltd 5c Beatrice Tinsley Crescent Rosedale Auckland 0632 New Zealand info@stopdigging.co.nz Ph: +64 9 393 5528 www.stopdigging.co.nz

2. Product Certification Body

Bureau Veritas Australia Pty Ltd

11/500 Collins Street Melbourne VIC 3000 Australia product.certification@bureauveritas.com Ph: 1800 855 190 www.bureauveritas.com.au

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

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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 them 10 – Supporting Information nabout Description. Deleteit into tapplicable). The building method's catalogue or model identification number or numbers or attributes unique identifies that might be used to identify the building method 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 comprises the following STOPDIGGING! components:

- Ground screws: SGU Diameter 67mm and SGC Diameter 76mm, 89mm, 114 mm (lengths to suit design load requirements)
- Brackets: SGL and SGE

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) using a preengineered solution for buildings within the scope of NZS3604:2011 or NASH Standard Part 2: May 2019 and meeting certain ground conditions or for use in buildings outside that scope or with other ground conditions 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 **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 compliant with, including any requirements for people with the qualifications and site installation instructions and requirements the building method or product as assessed. Conditions or limitations of conformity for the performance requirements the building method or product is assessed. Conditions or limitations of conformity for the performance requirements the building method or product, any known or demonstrated situations where the building method or product should not be used. A statement as to whether there are any matters that should be taken into account in the use or applications of the building method and, if so, what those matters are:

- 1. The STOPDIGGING! Ground Screw Foundation System is certified for use as foundations of buildings, located in Exposure zones B, C and D (as defined in NZS3604:2011 section 4.2, except microclimates), as described in either 1(a) or 1(b).
 - a. foundations of buildings, new and existing, with suspended floors that come within the scope of NZS3604:2011 section 1.1.2 (b to o) or NASH Standard Part 2: May 2019 section 1.1.3 where;
 - i. the foundations are situated on ground with adequate bearing capacity as established by static pile testing (but excluding ground that has the potential for liquefaction or lateral spread); and
 - ii. diagonal bracing is not required; and
 - iii. the maximum floor live load does not exceed 3kPa; and
 - iv. the maximum above ground height of the ground screw does not exceed 900 mm; and
 - v. the spacing between joists and bearers is within the scope of Table 3 or Table 4, Appendix 2 of the STOPDIGGING! Design Guide Version 7.0, August 2024 ("the Design Guide");
 - b. foundations for buildings not within the scope of 1 (a), where:
 - i. the foundations are situated on ground with adequate bearing capacity as established by static pile testing, but the ground has the potential for liquefaction or lateral spread; or
 - ii. diagonal bracing is required; or
 - iii. the maximum floor live load exceeds 3kPa; or
 - iv. the maximum above ground height of the ground screw exceeds 900 mm; or
 - v. the spacing between joists and bearers is not within the scope of Table 3 or Table 4, Appendix 2 of the Design Guide.
- 2. The STOPDIGGING! Ground Screw Foundation System shall be designed in accordance with the relevant section of the STOPDIGGING! Design Guide and installed in accordance with the STOPDIGGING Installation Guide Version 4.0, March 2024.
- 3. For foundations under 1(a) the LBP Designer shall complete Part 1 of the STOPDIGGING! Ground Screw Foundation System Design Declaration Version 2.2, June 2024 to certify that the foundation system has been designed in accordance with the pre-engineered solution described in the Design Guide, Part 1.
- 4. For foundations under 1(b) a CPEng (Structural or Geotechnical) shall complete Part 2 of the STOPDIGGING! Ground Screw Foundation System Design Declaration Version 2.2, June 2024 to certify that the foundation system as a specifically engineered solution in accordance with the Design Guide, Part 2.



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- 5. The installer shall provide a complete STOPDIGGING! Installation Record Version 1.0, September 2022 and STOPDIGGING! Static Pile Test Report Version 1.0, February 2023 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.

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

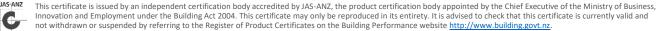
How the performance requirements in the Building Code were met for each of the provisions. Where used as part of a system, the specific contribution to compliance.

B1 Structure - By testing and comparison with Verification Method B1/VM1 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

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.

- 1. Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability Second edition (Amendment 12), 28 November 2019
- 2. Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B1 Structure First edition (Amendment 20), 29 November 2021
- 3. Cook Costello "StopDigging! Ground Screw Specification" Revision 3, 24 February 2022
- 4. AMX Structures Report "Design and Test Loads for Ground Screws", 22 August 2024
- 5. WSP Opus "Ground Screw Load Testing", Report AL2883, 22 July 2018
- 6. STOPDIGGING! Adapter Screw SGC89 Product Sheet
- 7. STOPDIGGING! Beam Screw SGU Product Sheet
- 8. STOPDIGGING! Design Guide Version 7.0, August 2024
- 9. STOPDIGGING! Installation Guide Version 4.0, March 2024
- 10. STOPDIGGING! Design Declaration Version 2.2, June 2024
- 11. STOPDIGGING! Installation Record Version 1.0, September 2022
- 12. STOPDIGGING! Static Pile Test Report Version 1.0, February 2023



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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</u> the register here.

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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