

4<sup>th</sup> August 2025

Duracrete Products Ltd  
37 Saleyards Road  
**Kauri 0185**

Attention: Craig Little ([craig@duracrete.co.nz](mailto:craig@duracrete.co.nz))

**DURACRETE PRODUCTS LTD**  
**4500L SINGLE AND DUAL CHAMBER TANKS**  
**SCHEDULE TO PS1.**

The purpose of this schedule is to outline the scope of the attached producer statement design PS1. It reflects the extent of the analysis carried out by Hawthorn Geddes engineers and architects ltd.

This producer statement supersedes the previous statement dated 25/03/2025.

This producer statement covers the following specific features for structure B1 and durability B2 based on Design Life 50yrs, side loading of 1200kg/m<sup>2</sup> from adjacent boundary, and "good ground" in accordance with the Building Code Clause B1:

1. Duracrete proprietary 4500Ltr single chamber and dual chamber septic tanks conforming to the installation loading limitations illustrated in Figure 1 & 2 attached.
2. Duracrete proprietary 4500Ltr single chamber and dual chamber septic tanks with a 150mm thick lid conforming to the installation loading limitations illustrated in Figure 3 & 4 attached.
3. 4500Ltr septic tank anti-floatation sill for water table to the full buried depth of tanks with 900mm maximum soil cover. Figure 5 attached.

Overall tank's durability is as certified by Duracrete.

The critical elements are constructed in factory conditions under strict QA/QC processes. The products are also subject to consumer warranties.

Tank installation is to be in accordance with the stamped and signed Duracrete's site preparation and installation guidelines attached in this PS1.

HG considers inspection by the local Territorial Authority is appropriate. If the consenting authority requires a PS4 for the tanks, a CM1 level of inspection would be appropriate. Also, if the site conditions are deemed to need PS4 inspections, the PS4 can be carried out by appropriately qualified engineer familiar with the contents of this PS1.

## Limitation

This schedule has been prepared solely for the benefit of our client Duracrete Products Ltd and the Building Consent Authority in relation to the building consent application for which this schedule has been prepared. The comments in it are limited to the purpose stated in this schedule. No liability is accepted by Hawthorn Geddes engineers & architects ltd in respect of its use by any other person, and any other person who relies upon any matter contained in this schedule does so entirely at their own risk.



**Anthony Barber**  
Hawthorn Geddes  
engineers & architects ltd

Schedule prepared by: Anthony Barber

Encl:        Endorsed Duracrete drawings (5 sheets x A4)  
              Duracrete site preparation guideline (3 sheets x A4)

## PRODUCER STATEMENT – PS1 – DESIGN

**ISSUED BY:** Hawthorn Geddes engineers and architects ltd  
(Design Firm)

**TO:** Duracrete  
(Owner/Developer)

**TO BE SUPPLIED TO:** Any Consenting Authority  
(Building Consent Authority)

**IN RESPECT OF:** 4500L Single Chamber & Dual Chamber Septic Tanks (HG ref 13214-R1)  
(Description of Building Work)

**AT:** Any site within New Zealand  
(Address)

Town/City: (Address) **LOT** **DP** **SO**

We have been engaged by the owner/developer referred to above to provide:

Structural engineering analysis services for the 4500L dual and single chamber septic tanks. Refer to the attached schedule.  
This statement supersedes the previous statement dated 25/03/2025.

(Extent of Engagement)

services in respect of the requirements of Clause(s) **B1** of the Building Code for:

☐ All or ☒ Part only (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment **B1/VM1 & VM4** or  
(verification method/acceptable solution)

☐ Alternative solution as per the attached schedule.

The proposed building work covered by this producer statement is described on the drawings titled:

Duracrete 4500L Septic Tank and numbered **Figures 01 & 02**;  
together with the specification, and other documents set out in the schedule attached to this statement.

**On behalf of the Design Firm**, and subject to:

- (i) Site verification of the following design assumptions **Good Ground as described in NZBC B1**  
(ii) All proprietary products meeting their performance specification requirements;

**I believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:


☒ CM1 ☐ CM2 ☐ CM3 ☐ CM4 ☐ CM5 (Engineering Categories)

I, **Anthony Barber** am: ☒ CPEng # **224371**  
(Name of Design Professional)

I am a member of: ☒ Engineering New Zealand and hold the following qualifications: **BE, CMEngNZ, PSA122901**

The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000\*.

The Design Firm is a member of ACE New Zealand: ☐

**SIGNED BY:** **Anthony Barber** (Signature)   
(Name of Design Professional)

**ON BEHALF OF** Hawthorn Geddes engineers and architects ltd Date: **04/08/2025**  
(Design Firm)

*Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000\*.*

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.  
**THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACE NEW ZEALAND AND ENGINEERING NEW ZEALAND**

# GUIDANCE ON USE OF PRODUCER STATEMENTS

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional engineers New Zealand (now Engineering New Zealand), ACE New Zealand in consultation with the Building Officials Institute of New Zealand. The original suit of producer statements has been revised at the date of this form as a result of enactment of the Building Act (2004) by these organisations to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with reasonable grounds for the issue of a Building Consent or a Code Compliance Certificate, without having to duplicate design or construction checking undertaken by others.

**PS1 Design** Intended for use by a suitably qualified independent design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

**PS2 Design Review** Intended for use by a suitably qualified independent design professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

**PS3 Construction** Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 2011<sup>2</sup>

**PS4 Construction Review** Intended for use by a suitably qualified independent design professional who undertakes construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACE New Zealand and Engineering New Zealand to interpret the Producer Statement.

## Competence of Design Professional

This statement is made by a Design Firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its designers.

A competent design professional will have a professional qualification and proven current competence through registration on a national competence based register as a Chartered Professional Engineer (CPEng).

Membership of a professional body, such as Engineering New Zealand (formerly IPENZ) provides additional assurance of the designer's standing within the profession. If the design firm is a member of ACE New Zealand, this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent design professional".

## \*Professional Indemnity Insurance

As part of membership requirements, ACE New Zealand requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard, small projects. If the parties deem this inappropriate for large projects the minimum may be up to \$500,000.

## Professional Services during Construction Phase

There are several levels of service which a Design Firm may provide during the construction phase of a project (CM1-CM5 for Engineers<sup>3</sup>). The Building Consent Authority is encouraged to require that the service to be provided by the Design Firm is appropriate for the project concerned.

## Requirement to provide Producer Statement PS4

Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design firm's engagement.

## Attached Particulars

Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.

## Refer Also:

<sup>1</sup> Conditions of Contract for Building & Civil Engineering Construction  
NZS 3910: 2013

<sup>2</sup> NZIA Standard Conditions of Contract SCC 2011

Guideline on the Briefing & Engagement for Consulting Engineering Services  
(ACE New Zealand/Engineering New Zealand 2004)

<sup>4</sup> PN Guidelines on Producer Statements

[www.acenz.org.nz](http://www.acenz.org.nz)  
[www.engineeringnz.org](http://www.engineeringnz.org)



association of  
consulting and  
engineering



DO NOT SCALE  
CONTRACTOR MUST VERIFY  
ALL DIMENSIONS ON SITE  
BEFORE COMMENCING WORK



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M: 021 951 054  
E: [geral@duracrete.co.nz](mailto:geral@duracrete.co.nz)  
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PROJECT:  
**Duracrete  
4,500L  
Tank**

SHEET:  
**4,500L  
Dual  
Chamber**

NOTES:  
USE THIS CONFIGURATION FOR  
A DUAL CHAMBER SEPTIC TANK  
WITH EFFLUENT FILTER ON THE  
OUTLET.

NO	DATE	REVISION	BY

PAGE SIZE: A3  
SCALE: As Shown  
REF: D4500LDCOPT1  
DATE: 22-03-2022  
DRAWN: G. Lilley

DRAWING #:  
**1 of 1**

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THIS DESIGN AND DRAWING IS  
COPYRIGHT OF DURACRETE  
PRODUCTS LTD. IT MAY NOT BE  
COPIED OR REPRODUCED IN  
ANY FORMAT OR IN ANY MEDIUM  
WITHOUT THE WRITTEN  
AUTHORISATION FROM  
DURACRETE PRODUCTS LTD.

This drawing has been checked for Compliance only with the extent of our work described on the accompanying Producer Statement Ref: **13214-21**

Signed: *AG Bawder* Date: **4/8/2025**

**Hawthorn Geddes**  
engineers & architects ltd

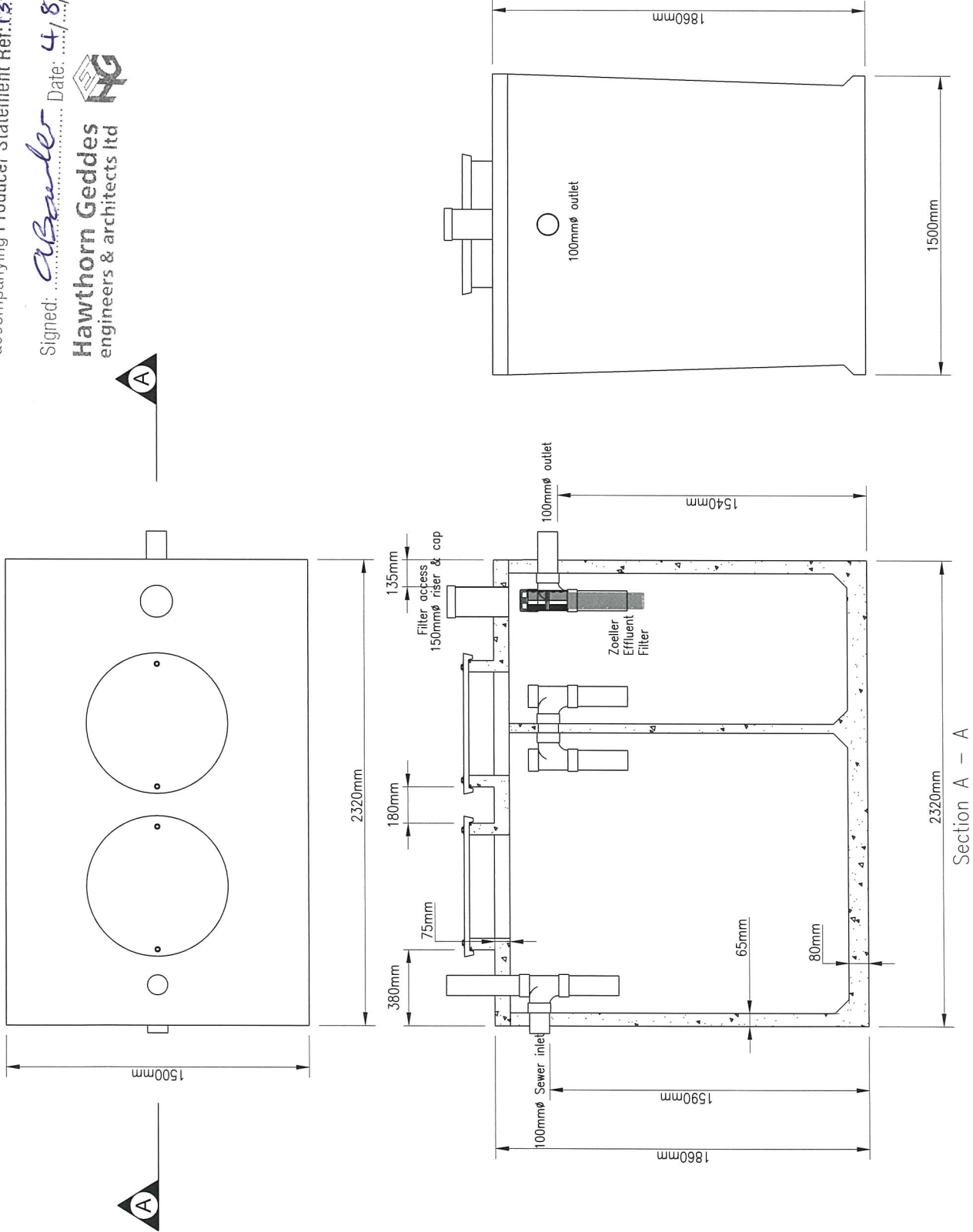


Figure 2





4,500L Single Chamber  
Septic Tank  
150mm thick roof

This drawing has been checked for Compliance  
only with the extent of our work described on the  
accompanying Producer Statement Ref: **13214-21**

Signed: *C. Barber* Date: **4/8/2025**



**Hawthorn Geddes**  
engineers & architects Ltd

150mm thick roof with D12  
reinforcing steel in 100mm grid

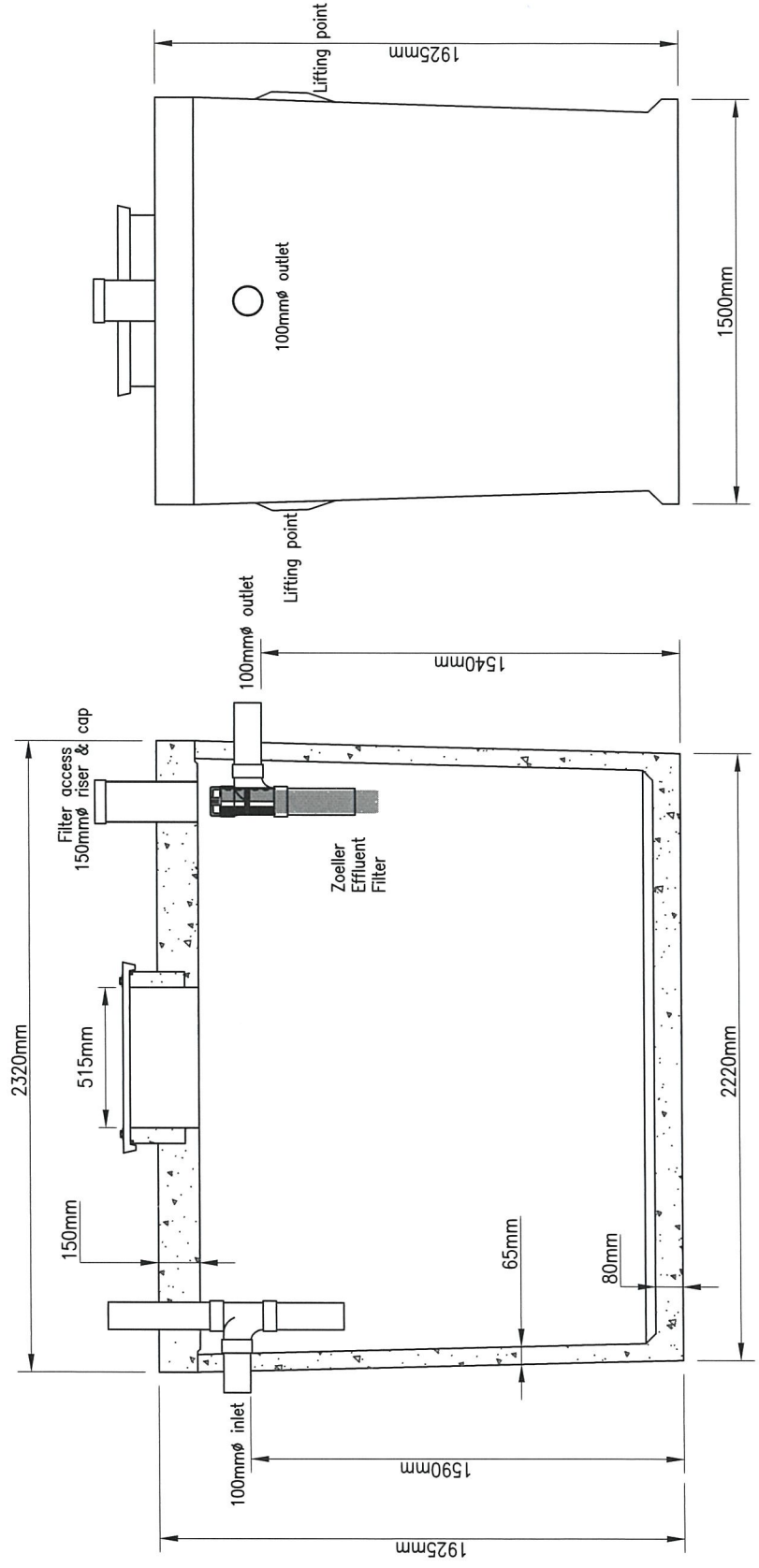
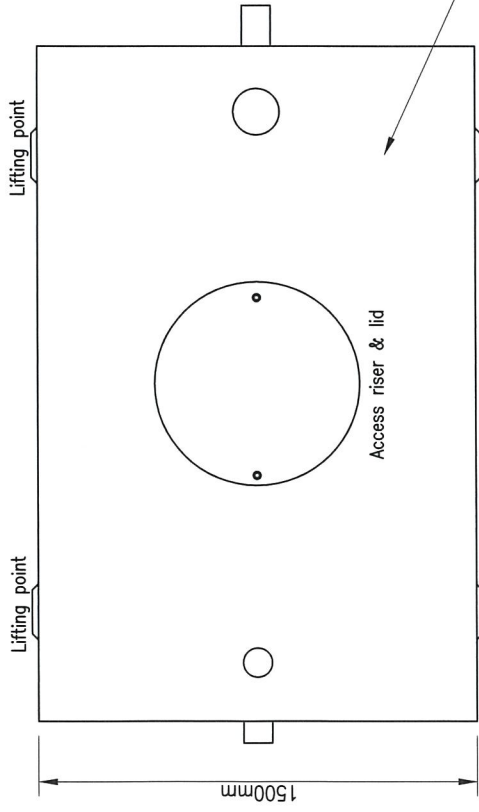


FIGURE 3



4,500L Dual Chamber  
Septic Tank  
150mm thick roof

This drawing has been checked for Compliance  
only with the extent of our work described on the  
accompanying Producer Statement Ref: 132(4-2)

Signed: *A. Bowler* Date: *4/8/2025*



**Hawthorn Geddes**  
engineers & architects Ltd

150mm thick roof with D12  
reinforcing steel in 100mm grid

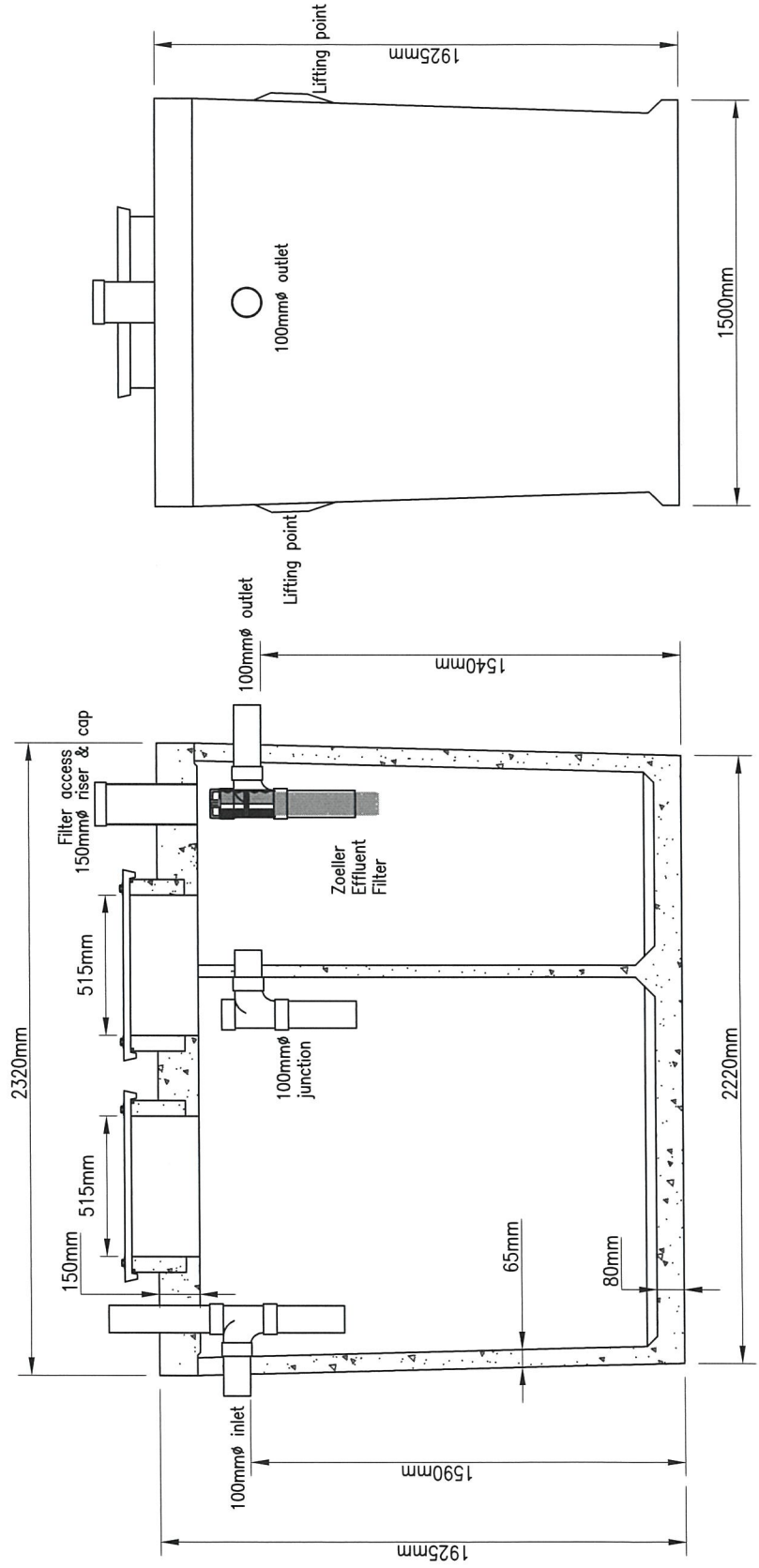
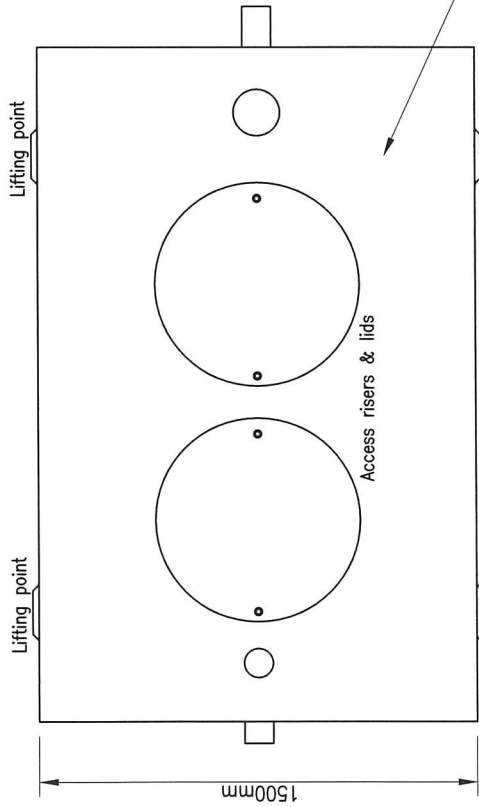
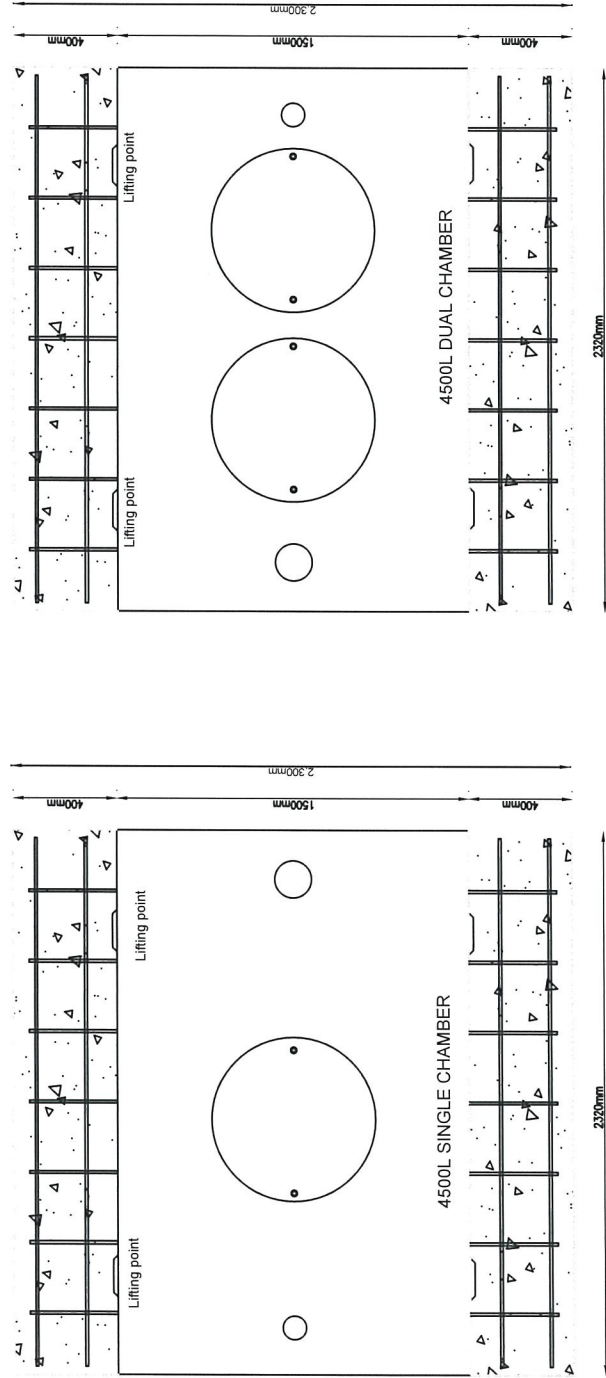
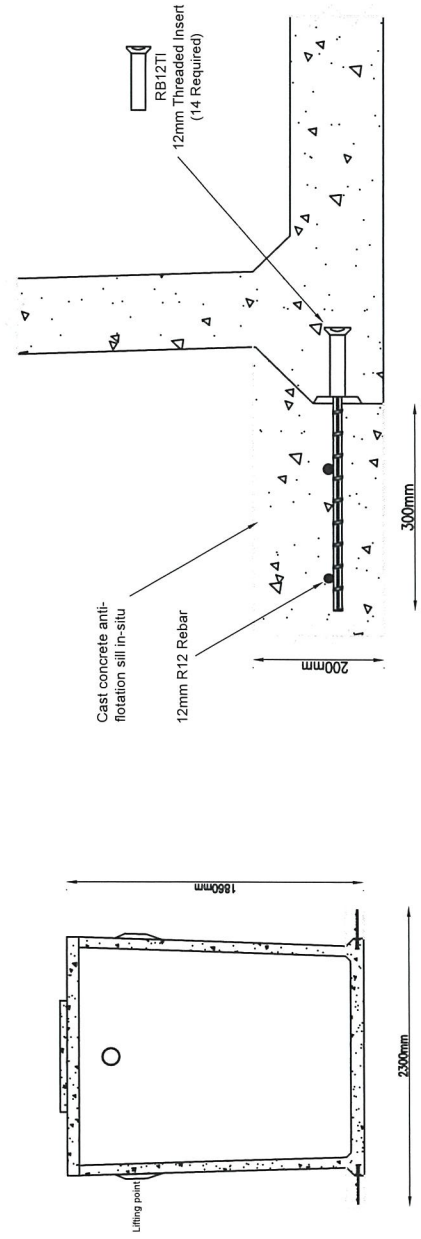


Figure 4



# 4500L SINGLE & DUAL SEPTIC CHAMBER - ANTI-FLOAT DETAILS





37 Saleyards Road, Kauri, Whangarei, PO Box 4194 Kamo 0141, 0800 387 227

### Importance of correct site preparation

The site loading of a full 4 500 litre septic tank is 7.8 tonnes across the site dimensions of 2.4m x 1.5m. This extreme loading requires our base preparation steps to be carefully followed by the purchaser/chosen contractor for the tank to be covered by the manufacturer's warranty.

The excavated site must be free from all solid objects such as rocks, tree stumps, tree roots etc and be flat and level. Do not reintroduce the excavated material as a way of forming a level platform.

Correct site preparation (steps 1&2 below) is critical to distribute the downward loading evenly across the site. It will also allow some ground movement or settlement to be taken up in the prepared foundation and not allow it to be transferred directly to the base of the tank.

Uneven weight transfer will result in the failure of the tank.

Tanks should be backfilled as soon as possible after they are sited to seal in the ground. The backfilling material should be clean, rock free soil or similar.

### Site preparation steps

A tolerance of 15mm is permitted across the entire site at the conclusion of following steps 1&2.

1. Excavate & level the ground which will form the base for the tank. Ground shall be "good ground" in accordance with NZBC Clause B1. Do not reintroduce excavated material to achieve a level platform. The final excavated hole size should be 2.8m x 2m and to a maximum depth of 2.26m.
2. Add bedding material GAP20/7 (General All Purpose 7-20mm) and level in all directions to a depth of 100mm. A tolerance of 15mm across the site is permitted across the entire site.



100mm layer of bedding material GAP20/7 (General All Purpose 7-20mm) to a tolerance of 15mm.



2.8m x 2m excavated foundation. Levelled in all directions to a tolerance of 40mm. NZBC Clause B1.





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### Important notes & purchaser responsibilities

- It is the purchaser's responsibility to ensure access is clear, site preparations are complete and to the required standard when the tanks arrive. This will avoid any delays and extra time on site and potential cost overruns. Duracrete and the chosen Transport Contractor takes no responsibility for site readiness or unforeseen delays on site
- Site suitable access is the responsibility of the purchaser. Check that there are no overhead power lines, tree branches, buildings, gate posts or other obstacles blocking access to the loaded delivery truck
- It is the purchaser's responsibility to ensure that the path required from the road to the tank site does not have drains, septic tanks, bridges or irrigation lines that the truck could either fall into or damage
- Duracrete and the chosen Transport Contractors are not responsible or liable for the site preparation standards
- On the day of installation, it is critical that the primary chamber of the septic tank is filled completely with water not exceeding the outlet point.
- To prevent floatation (hydraulic uplift) issues, the tanks should remain full until connected to the household plumbing pipes
- Determining the location of your tanks on your site may require an engineer's assessment and specific foundation design
- It is the installers responsibility to ensure that the pipework entering the tank from the household and exiting the tank is supported and bedded accordingly to prevent dislodgement or displacement
- It is the purchaser's responsibility to ensure that their site access and tanks sites are ready to take delivery on the agreed date with our Production/Dispatch Manager. If there is a delay, you may move to the back of the queue depending on product and transport contractor availability. Product may then need to be allocated to the next customer who is ready to take delivery as we cannot store tanks due to storage space limitations
- It is the installers responsibility to ensure that backfilling takes place after all connections are complete and done using material that is uniform in size and free from large rocks. Do not use sand
- It is the purchaser's responsibility to pass this document on to any relevant contractors or end users



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### Warranty terms and conditions

All Duracrete Products are warranted to be free of defects caused by poor workmanship or non-compliance with industry standards for a period of 10 years from the date of dispatch.

### Conditions of Warranty

- Duracrete Products accepts no liability for damage caused due to improper site preparation and incorrect site situations that are outside our requirements (refer to site preparation steps 1&2 on previous page)
- Liability of Duracrete Products is limited to the repair, or if necessary, replacement of the concrete tank concerned. The decision to repair or replace the tank lies exclusively with Duracrete Products

### This warranty does not cover

- Damage caused after delivery resulting from poor, inadequate or incorrect site foundations
- Tanks that are not placed directly on to a prepared tank site at the time of delivery
- Damage caused during transportation
- Negligent or accidental damage that occurs after delivery and during installation
- Moving the tank from its original location
- Filling of the primary chamber with water past the outlet point before the outlet pipe is fitted
- Installation of the tanks exceeding the maximum ground level of 300mm soil cover as per the specifications
- Damaged caused to the roof of the tank due to the exceeding of the load limitations
- Exceeding of the specified load capacity on the manhole lid
- Hydraulic Uplift (Floatation)
- Normal aging, wear and tear
- Failure resulting from natural causes (earthquakes, flooding, ground settlement/subsidence, land slips)
- Undermining of the ground supporting the tank
- Failure of any plumbing or drainage connections installed by others after delivery
- Repairs carried out by unauthorised persons

