

Ultra Drain | Level-Entry Threshold Application

Thank you for your enquiry regarding the use of Ultra Drain in a level-entry threshold application.

I hope the following information is helpful should you wish to pursue the Alternative Solution pathway available under the New Zealand Building Code.

The New Zealand Building Code specifies that a level-entry threshold drain should be **150mm deep and 200mm wide**. Where a proposed drain does not meet these dimensions, an application may be submitted as an **Alternative Solution** under the E2 External Moisture requirements for level-entry threshold drains.

In these situations, the Council must assess whether the proposed alternative is capable of adequately managing the anticipated water flow. An Alternative Solution cannot simply be rejected without consideration of the supporting evidence provided.

This is where the homeowner, engineer, or architect can assist by demonstrating compliance with the Building Code. The submission should include:

- Appropriate fall rates for the surrounding concrete surfaces that discharge to the channel drain.
- Hydraulic calculations confirming the drain's flow capacity and performance.
- Any additional supporting documentation that demonstrates the system's ability to manage surface water effectively.

For reference, NIWA has recorded rainfall events of up to **123mm in a single hour** in New Zealand. This equates to approximately **123 litres of water per square metre per hour**, or **2.05 litres per minute per square metre**.

The actual drainage capacity required will depend on the total catchment area and the effectiveness of the surface falls in directing water away from the dwelling and towards the drainage system.

Based on the information provided, I would recommend the **Ultra Drain Plus (UDP100 HZ)**. This drain is **2 metres long** and features a **marine-grade aluminium grate** with an integrated **5-degree pitch**, designed to enhance water flow performance.

The **UDP100 HZ** is capable of handling:

- **29,304 litres per hour**
- **488.4 litres per minute**

When assessing suitability, drainage systems should be evaluated on their hydraulic capacity and flow performance rather than dimensions alone. In this application, the drain's primary role is to capture and remove residual surface water and direct it to the stormwater system.

I have attached documentation relating to a recent Auckland project where the originally specified channel drain was successfully substituted with an **Ultra Drain UDP100**. The homeowner submitted a **Minor Variation Application** to Council and provided supporting information similar to that outlined above.

As discussed during our conversation, the New Zealand Building Code is performance-based, allowing for innovation and alternative design solutions where it can be demonstrated that the proposed system will perform adequately. Provided sufficient supporting documentation is supplied, Alternative Solutions can be approved where they satisfy the intent and performance requirements of the Code.

For further information on Alternative Solutions, please refer to the **Auckland Council Alternative Solutions Guidance Document**.

I hope this information is helpful. Please let me know how your application progresses. If there is anything further we can assist with, please don't hesitate to contact us.

Kind regards,

SSL Distributors Ltd

Application for on-site minor variations of approved plans



It is the Owner/ Authorised agent's responsibility to notify Council of any changes to the approved plans; this variation must be provided to and be approved by the Building Inspector. All changes must be approved before work proceeds. Any applications submitted via email or at service centres must use this form.

Alternatively, this application can be completed by the inspector in their inspection app. This is subject to all information being provided at the time of the inspection. Soft copy of plans should be emailed to the inspector for digital stamping.

If providing hardcopies of plans- 2 copies must be provided. If approved, one copy will be stamped, signed and left on site and the other scanned into Council file.

Please refer to the government's website for guidance information about what constitutes a minor variation <https://www.building.govt.nz/projects-and-consents/build-to-the-consent/making-changes-to-your-plans/minor-variations-guidance/>.

Consent details:

Building Consent N°:

Site address:

Owner/ agents name:

Postal address:

Email address:

Applicant's role in project:

Contact phone number:

Record of variation: (please identify location and provide a detailed description of the variation including plan references)

Omission of water storage tank shown on A03 rev -; as per revised drawing A03 rev B. This tank is surplus to requirements of the EPA & RC conditions. Refer Civil Hub Consultants email dated 28 Feb 2023 attached.

Code clauses:

☒ Reduced scope of work (if ticked, please describe items that will not be constructed)

Water storage tank will not be installed on site as it is surplus to requirements. As per engineers advisement (Attached below)

his table for describing changes to bracing elements, window sizes, etc.

Was	Reason for Change: Altered, removed, replaced,	Now
ground water tank	Additional to requirements	Underground watertank only
2da flo	Client's Request Cost too high	UDF 100 - Ultra drain

This minor variation approval does not constitute approval under the Resource Management Act, we recommend that you seek advice from Auckland Council's Resource Consents department on this aspect of proposal. If the work requires resource consent, work cannot lawfully commence until this approval has been obtained.

Owner signature:

Date: 2/3/23

Agent's signature:

Agent has written authority to act for owner: ☒ YES ☐ NO

Agents signing this form must have approved authority to act for owner before signing this form.

Council use only:

The variation is minor and does not materially affect Building code compliance

☒ Yes ☐ No

Work may proceed

☒ Yes ☐ No

Variation

☒ Approved ☐ Declined

Record of variation:

Method of recording the minor variation (tick box):

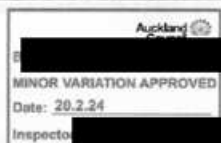
- ☒ New amended plans- soft copy (preferred)
☐ New amended plans- hard copy
☐ Inspection checklist comment by inspector
☐ Approved plans notated and photographed by inspector
☐ Other (describe) _____

Inspector's signature:

Date:

Inspector's name:

Reasons
for Decisions:



Note: If the scope of work has changed, please check to see whether an update is required to the description of work in the system.

Use this table for describing changes to bracing elements, window sizes, etc.

Was	Reason for Change: Altered, removed, replaced,	Now
Thanda Ho	Check Request price	alter drain cap 100 pre change drain
Water Storage Tank	detention with advice from engineer	only detention Tank

Note: This minor variation approval does not constitute approval under the Resource Management Act; we recommend that you seek advice from Auckland Council's Resource Consents department on this aspect of your proposal. If the work requires resource consent, work cannot lawfully commence until this approval has been obtained.

Owner signature:  Date: 26/1/24

Agents signature: 

Agent has written authority to act for owner: ☒ YES ☐ NO

*Agents signing this form must have approved authority to act for owner before signing this form.

Council use only:

The variation is minor and does not materially affect Building code compliance ☒ Yes ☐ No

Work may proceed ☒ Yes ☐ No

Variation ☒ Approved ☐ Declined

Record of variation:

Method of recording the minor variation (tick box):

☒ New amended plans- soft copy (preferred)

☐ New amended plans- hard copy

☐ Inspection checklist comment by inspector

☐ Approved plans notated and photographed by inspector

☐ Other (describe) _____

Inspector's signature:  Date: 

Inspector's name: 

Reasons for Decisions: 

Note: If the scope of work has changed, please check to see whether an update is required to the description of work in the system.

