Customer Information

Stormwater & Percolation Testing

Make sure your proposal will work before you start building

With new subdivisions popping up across the district, at increasing densities, and a number of significant rain fall events occurring in recent months; it's a timely reminder to ensure you know that the storm water system you have designed for your customer is going to work.

You need to ensure that all surface water which falls within your allotment is controlled within your allotment boundaries to protect other property.

Storm water (surface water) that requires the most control is the amount that falls on hard surfaces such as your roof and sealed driveway areas. Generally storm water from these hard surfaces is collected via spouting and downpipes, or sumps and then conveyed via pipework to an appropriate outfall.

Naturally occurring surface water will always flow downhill, however; you cannot allow storm water that has been collected or concentrated by buildings or site works to freely flow onto other property as it can cause a nuisance for neighbours.

What is other property?

Other property means any land or buildings or part thereof which is:

a. Not held under the same allotment; or

b. Not held under the same ownership – and includes any road.

Acceptable Solutions and Verification Methods for demonstrating compliance with E1 are available from the Ministry of Building, Innovation, and Employment.

Acceptable Solution – E1/AS1 provides minimum requirements for sizing of gutters, downpipes, and drains, etc for conveying storm water to an outfall.

Verification Method – Selwyn District Council currently does not have accurate hydrological data for the district, therefore site specific investigations are required.

E1/VM1 is a test method which requires a suitably qualified person to verify adequate percolation rates can be achieved by on-site testing to verify the proposed outfall is suitable.

Comprehensive checks

The majority of the Selwyn District relies on storm water being disposed of, to ground via soak holes. Many areas within Selwyn District however contain substrata that does not provide good drainage. We are even seeing evidence of this in some of the subdivisions within the Rolleston township area.

Hence why we ask for percolation testing to be carried prior to building consent approval to demonstrate that adequate drainage can be achieved and so you can design the storm water outfall appropriately.

Points to consider for your Building Consent application

- Minimum finished floor level above crown of the road is achieved
- Stormwater from all roofs and hard standing areas, including driveways, are collected and conveyed to an appropriate outfall
- On site testing has been completed and provided in your application to verify adequate soakage is available, and verifies the soak pit design
- Levels have been checked to verify whether a bubble up sump will need to be included in the design, if the site has a storm water lateral provided by the Network Utility Operator
- Regional Council rules or requirements that will affect the storm water design have been considered (e.g. iZone Industrial park, some new subdivisions have specific requirements under the Land Use Resource Consent issued by Environment Canterbury) – if you're unsure whether Regional Council approval is required check with Environment Canterbury.

Common Issues during construction

Some of the non-compliances/issues our team come across daily include:

- Storm water outfalls not constructed in accordance with the approved building consent documents – we regularly see soak holes being filled with tailings instead of 100mm+ boulders which means the soak hole will not have the holding capacity intended due to reduced void size
- Filter cloth being installed over the top of the soak hole, but not extending around the sides as required to keep fines from surrounding soil blocking up the voids
- Driveway sumps shown on approved consent documents not being installed and surface water being directed to the street without consultation or consideration that the street stormwater systems are designed to receive the surface water capacity from the street only!

  Remember, the street is 'other property', and therefore should not be subjected to surface water runoff from your driveway.

Vehicle crossings

It is an SDC requirement to form and seal all vehicle crossings. This will be inspected as part of Practical Completion/Final Inspection prior to issue of CCC.

For details on vehicle crossing prerequisites please refer to the Vehicle Crossing Information Pack on our website.

Future maintenance considerations

- Are soak holes located in positions where the homeowner will be able to maintain them in the future?

- Are the soak holes suitably located for access and to avoid undermining the foundations of surrounding buildings or affecting other structures and services, if maintenance is required?

Further information for designers

Our Surface Water, Stormwater, Soak Pit & Driveway Runoff document has additional information for Designers.