

SITE/SOIL ASSESSMENT & EVALUATION

For On-site Wastewater Disposal and Management

Form C-Fm 37

Note

This document is intended as guidance in the presentation of information necessary for the design and assessment of on-site effluent disposal systems. It is structured around the requirements in AS/NZS 1547:2012 On-site Domestic-Wastewater Management and the requirements of Environment Southland's Regional Effluent Land Application Plan, Rule 5.1, for the treatment and discharge to land of domestic foul water. The document needs to be used in conjunction with AS/NZS 1547:2012 and Rule 5.1 and does not outweigh the requirements of those standards and rules.

Landowner Name in Full (Private/Company/Trust)**Owners Address**

Property/rapid number:

Street/road name:

Suburb or Rural Delivery (RD) No:

Town/City:

Post Code:

Contact Details

Home phone:

Work phone:

Cellphone:

Fax:

Email:

Consultant/Site Evaluator Details

Name:

Work phone:

Cellphone:

Fax:

Email:

Property Location (this is the location the proposed work is to be carried out)

Date of on site Evaluation

Property/rapid number:

Street/road name:

Town/City

Legal Description

Valuation number:

Property size:

Some of the above information can be located on the owner's rates statement/Certificate of Title or a Sales and Purchase Agreement.

Site Clearances (also need to be shown on site plan)

Separation Distances from	Disposal Field Separation (m)	Reserve Field Separation (m)
Property Boundaries:		
Buildings and housing		
Surface water		
Wells/Bores		
Recreational areas		
Water tanks		
Embankments/retaining walls/cuttings		
Existing treatment systems:		
Stormwater disposal areas:		
Reticulated foul water discharge:		
Stands of trees/shrubs/hedges		
Groundwater		
Perched water		
Hardpan or bedrock		
Paved/ trafficable areas/drive ways		

Ground Topography (ground contours to be shown on site plan)

Flat ground:	
Rolling ground:	
Slopes towards disposal system:	
Slopes away from disposal system:	

Flooding Potential

Yes		No	
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Is the property in a flood zone or is the location in an area that could be potentially flooded?
If yes attach information and details on how the flooding potential has been mitigated.

Are Surface Water Interception/Diversion Drains Required?

Yes		No	
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Location to be shown on site plan and cross-section to be provided.

Is Sub-Surface Drainage Required?

Yes		No	
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Method Used to Assess Soil Profile (test sites to be shown on site plan)

	Depth (m)	Number of Test Sites:
Hand dug test pit:		
Machine dug test pit:		
Hand dug bore hole:		
Machine dug bore hole:		

Supporting information and photos to be attached showing all horizons, including all limiting aspects like hard pans.

Was a Percolation Test Done?

Yes		No	
Talsma-Hallam method (Ksat):			
Other:			

Test report and description to be attached.

Soil Assessment

	Depth	Colour	Clay Content %	Description
Horizon 1				
Horizon 2				
Horizon 3				
Horizon 4				

Horizon examples; layers of different soil textures and types, Top soil, sandy gravel, Heavy clays, Hard pans, etc.

Gravel and Sand

Make up of fragments in soil

Type of Rock	Size mm	% of Fragments
Fine sand:	<1	
Coarse sand:	1 -2	
Fine gravel:	2-6	
Medium gravel:	6 - 20	
Coarse gravel:	20 - 60	
Cobbles:	60 - 200	
Stones:	200 - 600	
Boulders:	> 600	

% of fragments	Class
<2	Very few
2 - 10	Few
10 - 20	Common
20 - 50	Many
50 - 90	Abundant
>90	Profuse

Soil Structure

Massive	
Single Grained	
Weak	
Moderate	
Strong	

Determination Of Soil Category

Use the information gathered to determine soil category below

Soil category	Soil Texture	Structure	Indicative Drainage Class	Indicate Category
1.	Gravels and sands	Structureless (massive)	Rapidly drained	
2.	Sandy loams	Weakly structured or massive	Well drained	
3.	Loams	High/moderate Structured	Moderately well Drained	
		Weakly structured or massive		
4.	Clay loams	High/moderate structured	Imperfectly Drained	
		Weakly structured Massive		
5.	Light clays	Strongly structured	Poorly drained	
		Moderately structured		
		Weakly structured or massive:		
6.	Medium to heavy clays	Strongly structured	Very poorly Drained	
		Moderately structured		
		Weakly structured or massive		

Water Supply Sources for the Building

Rainwater (roof collection):	
Bore/well:	
Reticulated supply:	

Water Reduction Fixtures Fitted

Yes		No	
If yes please indicate:			
Standard reduction:			
Full reduction:			

Where water reduction fixtures are being used, supporting information on fixtures need to be attached.

Does the Building have a Garbage Grinder?

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
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If yes, provide specific design details for septic tank capacity.

Potential Loadings

Number of bedrooms:	<input type="text"/>
Occupancy:	<input type="text"/>
Litres/person:	<input type="text"/>
Total daily loading:	<input type="text"/>

Septic Tank

Please indicate below the number, type and volume of all chambers.

Chamber No.	Type of Chamber	Capacity (litres)
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

For treatment systems other than single stage treatment systems, manufacturers' information and test results need to be supplied.

Septic Tank Outlet Filter

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
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If yes, please specify type:

Delivery System

Gravity	<input type="checkbox"/>
Dosing Siphon	<input type="checkbox"/>
Pump	<input type="checkbox"/>

Is a Pump being Used?

High water alarm:	Yes		No	
Pump chamber volume:				litres
Emergency storage volume:				litres

Land Application Method

Trench:	
Disposal bed:	
LPED irrigation	
ETS system:	
Sub-surface dripper irrigation:	
Surface dripper irrigation:	
Mound:	
Other (please specify):	

Cross-section details and site plan to be attached.

Size of Trench/Bed System

Total daily loading (Q)	
Design Loading Rate (DLR)	
Trench/Bed Width in (w)	
Length of System (L)	

$$L = \frac{Q}{DLR \times W}$$

For other systems calculations may vary refer to AS/NZS 1547:2012 for further information.

Size of Reserve Disposal area (m ²)	
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Supporting Document Checklist

	Site plan with all relevant information as required by Site/Soil Assessment.
	Risk Assessment. If maximum separations from Table R1 not used risk assessment justifying reductions in separations required
	Floor Plan of building identifying sleeping areas and potential loadings
	Soil supporting information and colour photos
	Percolation Test Reports
	Water Reduction Fixtures supporting information
	Manufacturers' treatment system information and test results
	Disposal field construction information and cross sections
	Construction and cross section of cut off drains
	Management and maintenance information and schedule