

Malcolm Linton.

Wastewater / Drainage Engineer.
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:PRODUCER STATEMENT – DESIGN - PS1:

Sewage Land Application System

Our Ref: CD 114/17 - Ashburton

To: Ashburton District Council.
&
Environment Canterbury

Applicant: Kasey Morris

Date: 1st August 2017

Location: Lot 2 out of Lot 1 DP 60937 - @ 65 Johnstone St.

I, Malcolm Linton hereby confirm that the sewage Land Application system for the above site, has been designed with sound and widely accepted principles to adequately dispose of the sewage effluent on-site.

The standard of effluent treatment will satisfy Environment Canterbury's investigation under a "Resource Consent Application" for sewage Treatment in the Unsewered Areas of the Canterbury Region, the design complies with standards within AS/NZS 1547:2012.

The design is detailed in the Specification, Working Drawing Detail and Site Plan that is attached. As an independent design professional, covered by a current policy of professional indemnity insurance. I believe on reasonable grounds that this system will adequately dispose of effluent on-site and comply with N.Z. Building Code, G13.2, G13.3.4, G13/VM4 of the Building Regulation 1992 First Schedule and shall continue to satisfy the performance requirements of the First Schedule, Clause B2.3.1 (b) of the Building Amendment Reg. 1997. Provided the system is installed as per specifications, designed plans – and Owner maintains the system as detailed in the Owners Manual so that the Septic Tank functions in an alive state.

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:Specifications:

Septic Tank and Land Application.

Applicant: Kasey Morris

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Location: Lot 2 out of Lot 1 DP 60937 - @ 65 Johnstone St.

**Discharge On-Site and Assessment
of Effects on the Environment:**

The existing dwelling within proposed Lot 2 is a 3-bedroom home, that has the discharge from existing septic tank discharging over proposed new boundary. Therefore requiring new system.

- Therefore if dwelling is used to its full potential a maximum wastewater flow of up to 1000L/day could be reached. (Accommodating occupancy of 2 – 5 people in residence).
- Length of effluent drip lines in soakage field to be a minimum of 300 lineal metres.

Compliance: Due to the rate and even loading of effluent waste within topsoil over flat land and required separation from open drains, no adverse effects envisaged with discharge to environment or to Neighbors. Ground water under site has potential to be less than 1m below drip irrigation. The proposed disposal field is within Land Parcel under 4ha. The disposal field is within domestic Well protection zone on-site. Therefore a Resource Consent is required from Environment Canterbury.

Open Drains: There are no open drains within 20m of soakage field.

Soil Type: Soil sample revealed 300mm topsoil → 700mm clay loam → 1100mm tight mottled silt bound shingle → then into ground water.

Wells: Domestic water supplied from Well on-site.

:Type of System:

1. Septic Tank:

Install an Austin Bluewater ABS 2000 Advanced Aerated Wastewater Treatment System Ph 03-5952812, **or** Oasis Clearwater Series 2000 Aerated Wastewater Treatment System Ph 03-3440262, **or** Eloy Oxyfix NZ 8PE Basic Aeration Wastewater Treatment Ph 021 774 897, Ph 03 318 6577. **or** Hansen 75 Aeration Treatment System Ph 03-3138418, **or** Hynds Environmental Lifestyle Aeration Treatment System Ph 03 - 03-3441370.

Existing Drains: Divert existing drains from existing septic tank and connect drain to new treatment septic tank. Empty old septic tank and fill.

2. Land Application Irrigation System:

Soakage area to be a minimum 300 lineal metres, being 4 lines 75m long x 1m apart using drip irrigation. This creates a conservative long term loading rate of 3.3mm/sq/m/day over the disposal area.

- A Sub-surface Raam or similar Trickle Irrigation System will be laid, total minimum length of 300m, in the designated irrigation disposal area as per Working Drawings, Site Plan, Resource Consent Plan & confirmation of Owner. The drip irrigation lines to be installed 100mm below ground level or clipped to ground and covered with mulch.
- Disposal to be through 1.6L/hr compensating emitters at 0.6m centers.
- The installation of the drip irrigation with correct placement within the area of disposal, of the Air/Vacuum Relief at the highest point of the field and Line flushing Valves at the end of each drip irrigation pipe line as per working drawings & site plan.

3. Water Entry:

No other surface or stormwater to enter system either before or after the septic tank stage.

Assessment of Effects of the Wastewater Treatment:

The domestic effluent treated through an Austin Bluewater Aeration or Oasis Clearwater Aeration or Eloy Oxyfix Aeration or Hynds Environmental Lifestyle Aeration or Hansen Aeration *Aerated Wastewater Treatment* System will produce an effluent quality of:

BOD less than 20mg/l

Non filterable residue of not more than 30mg/l

Faecal coliforms; less than 1000 per 100ml (as per Env. Cant.) Through final soil treatment.

Less than 200 per 100ml (after treatment)

No adverse effects envisaged to the environment or neighbours due to the above standard of the trickle irrigation and required separation from ground water.

:Service Contract:

A Service Contract will need to be arranged, at the times required with Austin Bluewater Aeration or Oasis Clearwater Aeration or Eloy Oxyfix Aeration or Hynds Environmental Lifestyle Aeration or Hansen Aeration, to ensure the Aeration System is functioning properly. This contract must be kept signed and active at all times.

:Installation:

Austin Bluewater Aeration or Oasis Clearwater Aeration or Eloy Oxyfix Aeration or Hynds Environmental Lifestyle Aeration or Hansen Aeration Unit, to be installed by a registered drainlayer and all associated drains connecting to tank and disposal field. Installation of the treatment unit to be in conjunction with manufacturers requirement. Rises and access lids to tank chambers are to be watertight. Access lids to be at ground level or above. Disposal field to be installed as per cross section and plan view drawings.

Producer Statement

Upon completion of installation as per Specification, working drawings and site plan, Contractor must complete the '*Producer Statement – Construction PS3*' (That is a part of this design file) and send the document to **Drainage Consultancy & Design Ltd**, within 7 days of completion. (Via **Post** or **Fax** or **Scan & Email**).

≈ **Drainage Consultancy and Design Ltd** ≈

210 Kainga Road – Christchurch 8083.

Mobile 021-221 0043; Ph 03-323 9394; Fax 03-323 9390

Email: malcolm@drainageconsultancydesign.co.nz

Building Consent No: B.C. (Territorial Authority)

Resource Consent No: CRC (Environment Canterbury)

PRODUCER STATEMENT – CONSTRUCTION = PS3

(Job Reference Number = CD 114/17 - Ashburton)

Issued By: _____
(Contractor)

To: = Drainage Consultancy & Design Ltd Re: Kasey Morris
(Designer) (Owner / Applicant)

In Respect Of: On-Site Sewage Disposal System

At: 65 Johnstone St - Being - Lot 2 Out of Lot 1 DP 60937

(Address)

(Legal Description)

I: _____, being contracted to: _____
(Contractor) (Owner / Developer)

To construct the on-site sewage disposal system described by the *Working Drawings and Specifications* prepared by;

Drainage Consultancy & Design Ltd - Titled - Septic Tank & Land Application
(Design Firm) (Project)

Dated: 01/08/17. Plus authorized **Variations dated:** _____, (copies attached) issued by;
Drainage Consultancy & Design Ltd and other documents to which the on-site sewage disposal system is proposed to be constructed.

I: _____, a duly authorized agent of _____
(Duly authorized agent) (Contractor)

have sighted Building Consent No. _____ and the attached conditions of building consent with Working Drawings and Specifications prepared for construction by **D.C. & D. Ltd** and **Believe on reasonable grounds that** ____ **All**, ____ **Part only**, as specified in the attached particulars of the building work under the building consent has been completed to the extent required by that building consent. **(Complying with requirements within G13 & G13/VM4)**

Signed: _____ Date: _____
(Signature of duly authorized agent)

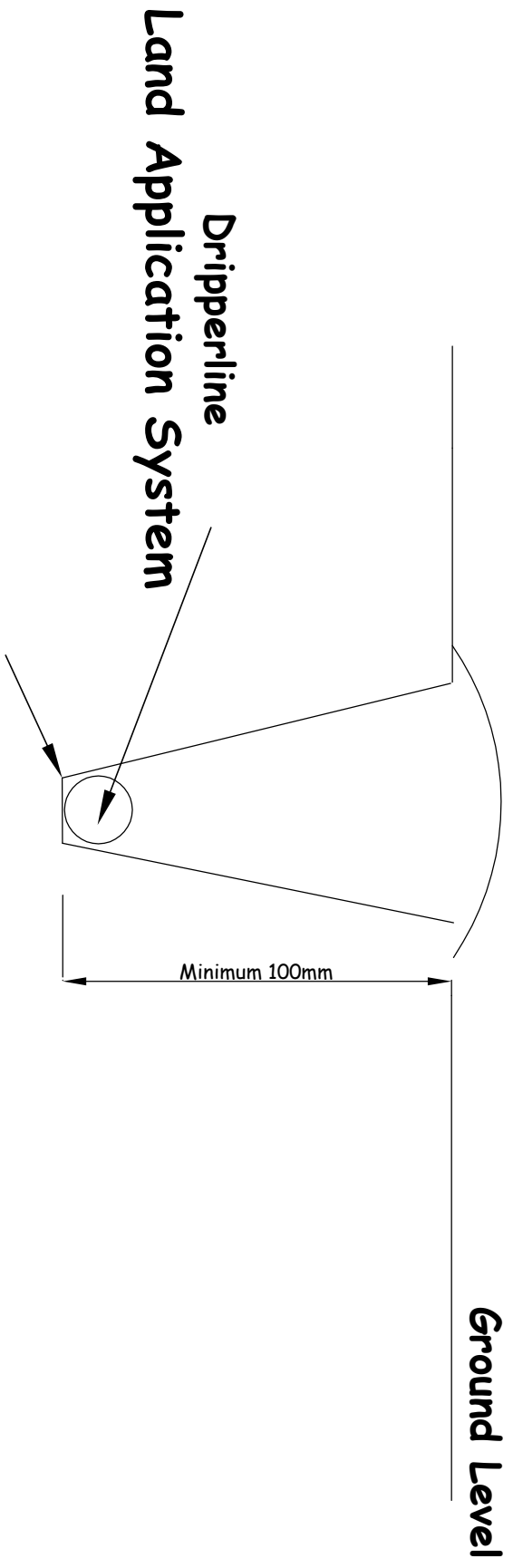
On behalf of:

(Contractor)

(Address)

Date Installed: _____ **Also Attach to this form when returning:**
Photo of Disposal Pipe in Ground, Demarcation Signage of Field or Fencing off of Field, & As Laid Plan as per Condition Requirements of Resource Consent.

Total Length of drip lines to be As per Specification & Plan View Drawing.
All lines to be 1m apart. (See specification and Plan View Drawing
for example of length and number of lines required).



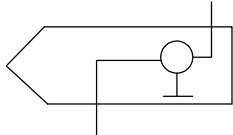
Deep Rip First, The dripperlines to be installed into the ground at a depth of 100mm.
If roots prevent in-ground installation, then clip to ground & cover with 100mm of soil/mulch

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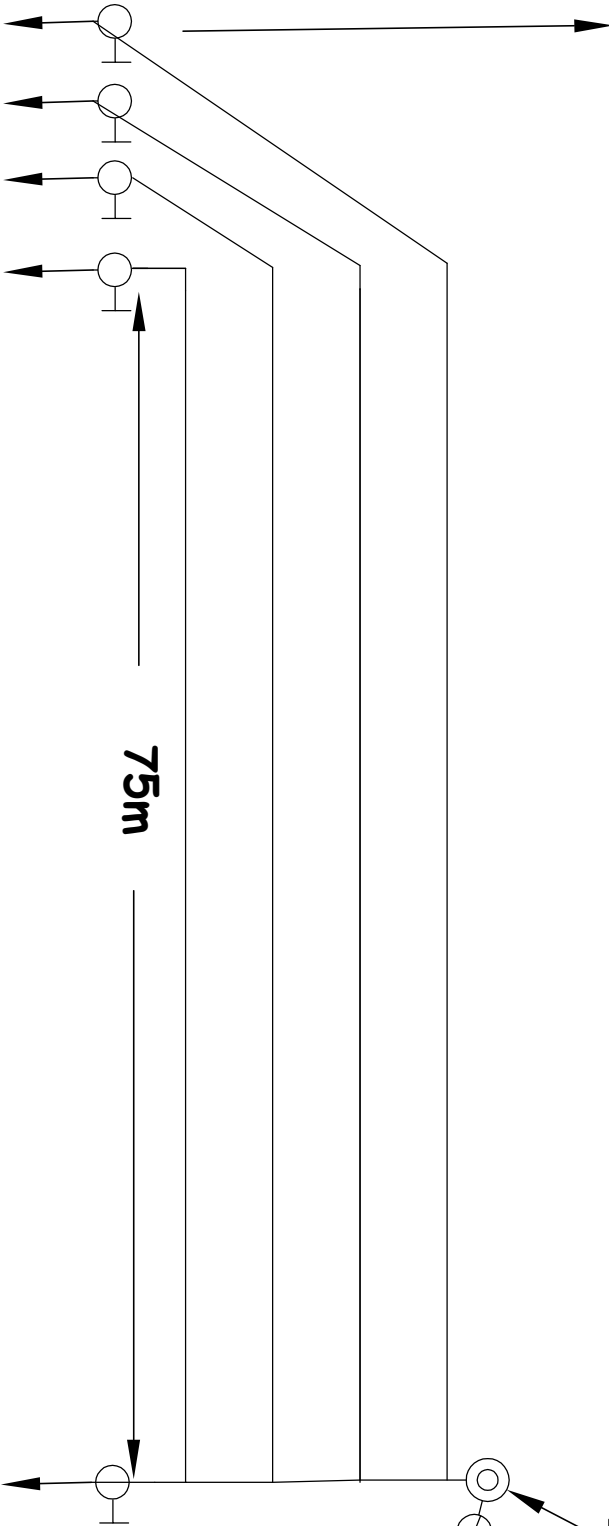
≈ DRAINAGE CONSULTANCY & DESIGN LTD ≈		SYSTEM	
MALCOLM LINTON WASTE WATER/DRAINAGE ENGINEER 210 Kainga Rd. - Kainga Christchurch 8083 Email: malcolm@drainageconsultancydesign.co.nz		DRIP IRRIGATION CROSS SECTION	
PH: 03 323 9394 FAX: 03 323 9390 MOBILE: 021 221 0043		Applicant Kasey Morris Lot 2 Out of Lot 1 DP 60937 65 Johnstone St	Job No CD 114/17 - Ashburton
B.C. NO:			Date 01/08/17
		Designed By: M.L	Scale As Indicated. n/s
		Drawn By: M.L	Drawing No Drip Irrigation.

Total Length of drip lines to be Minimum 300 lineal metres.
Lines to be 1m apart.

FOR A
3 -BEDROOM HOME



Manual
Flushing Valves On Pegs By The Fence.



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≈ **DRAINAGE CONSULTANCY & DESIGN LTD** ≈

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SYSTEM

DRIP IRRIGATION
PLAN VIEW

Applicant

Kasey Morris

Location

Lot 2 Out of Lot 1 DP 60937
65 Johnstone St.

B.C. NO

Job No
CD 114/17 - Ashburton

Date
01/08/17

Designed By:

M.L

Scale

As Indicated. n/s

Drawn By:

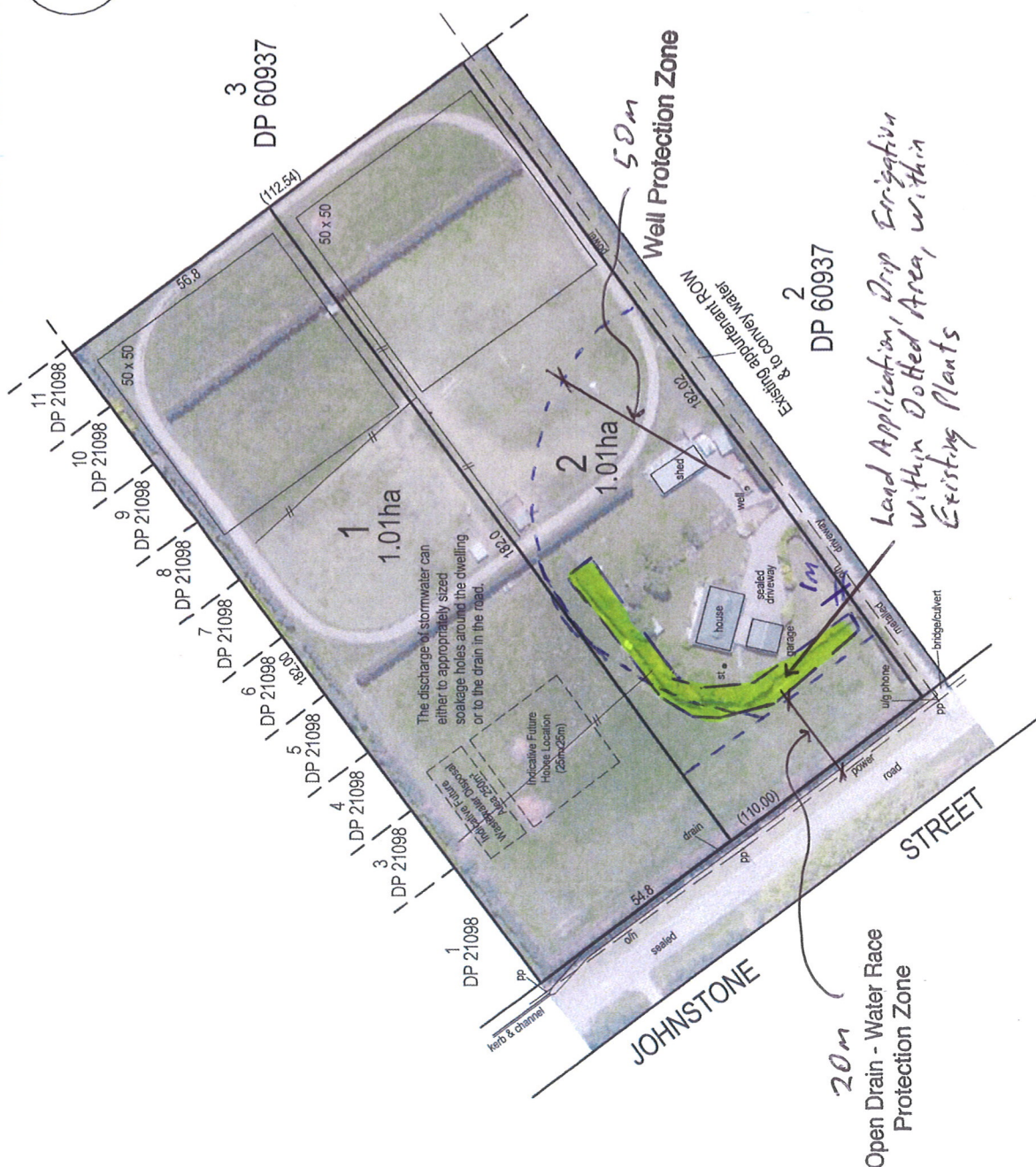
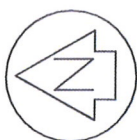
M.L

Drawing No

Drip Irrigation.

NOTES:

1. THIS SURVEY HAS NOT INCLUDED SITE MARKING OF THE BOUNDARY POSITIONS UNLESS OTHERWISE INDICATED.
2. NO UNDERGROUND SERVICE INFORMATION IS SHOWN ON THIS PLAN. THE LOCATION OF ANY SUCH SERVICES SHOULD BE CONFIRMED WITH THE RELEVANT LOCAL AUTHORITY OR UTILITY SERVICE PROVIDER.
3. SCHEME PLAN ONLY. AREAS & DIMENSIONS ARE APPROXIMATE AND SUBJECT TO FINAL SURVEY.
4. THE DISCHARGE OF STORMWATER CAN EITHER TO APPROPRIATELY SIZED SOAKAGE HOLES AROUND THE DWELLING OR TO THE DRAIN IN THE ROAD.



SURVUS
CONSULTANTS
surveying engineering property development

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REV	DATE	REVISION DETAILS
B	10/11/16	FOR SUBMISSION CONSENT
A	07/09/16	FOR SUBMISSION CONSENT

DRAFTED	VERIFIED
SMS	APPROVED
	DATE

KASEY MORRIS - 65 JOHNSTONE STREET, ASHBURTON	PROJECT
PROPOSED SUBDIVISION OF LOT 1 DP 60937	TITLE
CT 354M149	

INFORMATION ONLY	PROJECT NO
	13209
	SCALE
	1:1000
	DRAWING NO
	SC-01

SHEET 1 OF 1

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:OWNERS MANUAL:

Applicant: Kasey Morris

Date: 1st August 2017

Location: Lot 2 out of Lot 1 DP 60937 - @ 65 Johnstone St.

**AS THE OWNER OF THIS SEPTIC TANK AND
EFFLUENT SYSTEM, YOU ARE RESPONSIBLE
FOR THE OPERATION AND MAINTENANCE;**

:LIFE OF SYSTEM:

A. Drains,

If drains are PVC, (normal product) which are of durable material and excepting accidents should last at least 80 years.

B. Septic Tank / Pump Chamber,

Concrete septic tanks are of durable material and should last at least 50 years.

C. Effluent Soakage Bed,

The life of soakage bed is dependent on a large number of factors, some of which are listed below;

1. The types of detergents used.
2. The types of other products flushed into the system. (What kills bugs in the house will kill bacterial bugs in your septic tank)
3. Volume of effluent discharged per day.
4. Volume of solid particles discharged per day. (Performance of septic tank - is tank alive or dead)?
5. The Maintenance of the system.
6. Variation of algae and bacterial growth in the bed.
7. Variation in rain fall.
8. Variation in the ground water height.
9. Normal long term clogging of the pores in the ground.

Do;

1. Use biodegradable household cleaners and synthetic laundry powders or liquids. (i.e. Petroleum based).
2. Recommend you use body washes, shower gels etc, as these produces are synthetic based, instead of soap.
3. Ensure you use water saver, sud saver cycles on your dishwasher and washing machine if fitted.
4. Do fix any leaking taps or toilet cisterns when noticed.
5. Recommend water saver devices to be fitted on all showers.
6. Clean Septic Tank and Filter when required.
7. Make sure you always have in place a 'Maintenance Service Contract', where servicing, checking and cleaning of septic tank, filter and disposal can be regularly monitored as per conditions in your Resource Consent from Environment Canterbury for your property.

Don't;

1. Recommend you avoid using soap based washing powders.
2. Don't install a waste master disposal, (Garbage grinder).
3. Don't dispose egg shells, coffee grounds, tea bags etc as they are not biodegradable and should be disposed of in the rubbish. Generally compost food scrapes or dispose of them in the rubbish.
4. Don't dispose Napisan product or similar into drains.
5. Don't dispose of disposable nappies , sanitary napkins / panty shields or condoms into drains, nor cleaning wipes / cosmetic wipes / personal hygiene wipes / baby wipes etc.
6. Don't dispose of strong bleaches, chlorine compounds, antiseptics or disinfectants into drains.
7. Don't dispose of medicine pills etc into drains.
8. Don't allow fat to be poured down the sink.
9. Don't put petrol, oil, flammable / explosive substances or chemicals from garage e.g. pesticide, paint, cleaners, photographic chemicals or trade waste down drains.
10. Don't empty a spa or swimming pool into system.

:Helpful Hints:

To help reduce sludge building up in the septic tank;

1. Scrape all dishes to remove food material etc. before washing.
2. Keep all possible solids out of the system.

To help reduce the volume of effluent liquid required to soak away in the land application area;

1. As previous stated, install water saving devices.
2. Take showers (moderate length of time) instead of baths.
3. Only wash cloths when there is a full load / use dishwasher when there is a full load.
4. Try and avoid using the washing machine and dishwasher at the same time.
5. Endeavor to space out water use evenly as possible, so that the system is not over loaded with a large volume of water at the one time.

:Maintenance Requirements:

-And-

:Maintenance Service Contract:

:Maintenance:

- **Clean Septic Tank** as required. This however is dependant on the number of people your system caters for and the build up of sludge and crust layers. Tanks need to be pumped out when the **scum** layer, (*Layer of crust on top*) comes down to within 100mm of the bottom of the tee junction or filter at outlet, **or** when the **sludge**, (*Build up of material on bottom of tank*) and **scum** have accumulated to the extent that the **scum and sludge** has taken up 2/3rds of the volume of the tanks first chamber. (Check build up yearly).
The filter will need to be checked for blockage. Note the bio-mass build up on cartridge will aid filtration performance and is not required to be totally removed. Generally clean filter when tank gets emptied. (Hose down with water back into the 1st chamber of septic tank).

The above items will be checked and completed by person you contract to fulfill the maintenance service contract as required by Canterbury Regional Council, which is outlined below.

:Maintenance Service Contract:

You will find as part of your “*Resource Consent – Discharge Permit*” from Canterbury Regional Council, you are required to have in place a “*Maintenance Service Contract*” which provides for servicing of septic tank and monitoring of the outfall effluent quality ‘*Two Times a Year*’. In contract a requirement to take action, to ensure that the effluent treatment and disposal system is maintained and operated to insure compliance with the conditions of the discharge permit of C.R.C.

Service Agents: Austin Bluewater Ph 03-5952812 or Oasis Clearwater Ph 03-3440262, **or** Eloy Oxyfix via GK'S Contracting Ph 021 774 897 or 03 318 6577 **or** Hynds Environmental Lifestyle Treatment System Ph 03-3441370, **or** Hansen Aeration Ph 03-3138418.
To obtain a Maintenance Service Contract.

:Owner Change:

This Manual, Specification and site plan must be kept in a handy and safe place. These are to be given to New Owner if and when property changes ownership. (New occupiers of dwelling)