Glen Parker-7022

From: Ron Findlater [ron@findlaterconstruction.co.nz]
Sent: Wednesday, 4 July 2012 3:28 p.m.
To: Glen Parker-7022
Subject: RE: Wharite Enterprises Ltd Discharge Permit Application U120355

Hi Glen,
I should have noted that my calculations are based on the house having 'Standard Water Reduction Fixtures' as set shown on page 123 of AS/NZS 1547:2012. This will properly require the owner up-grading some fixtures in the house to meet this standard.

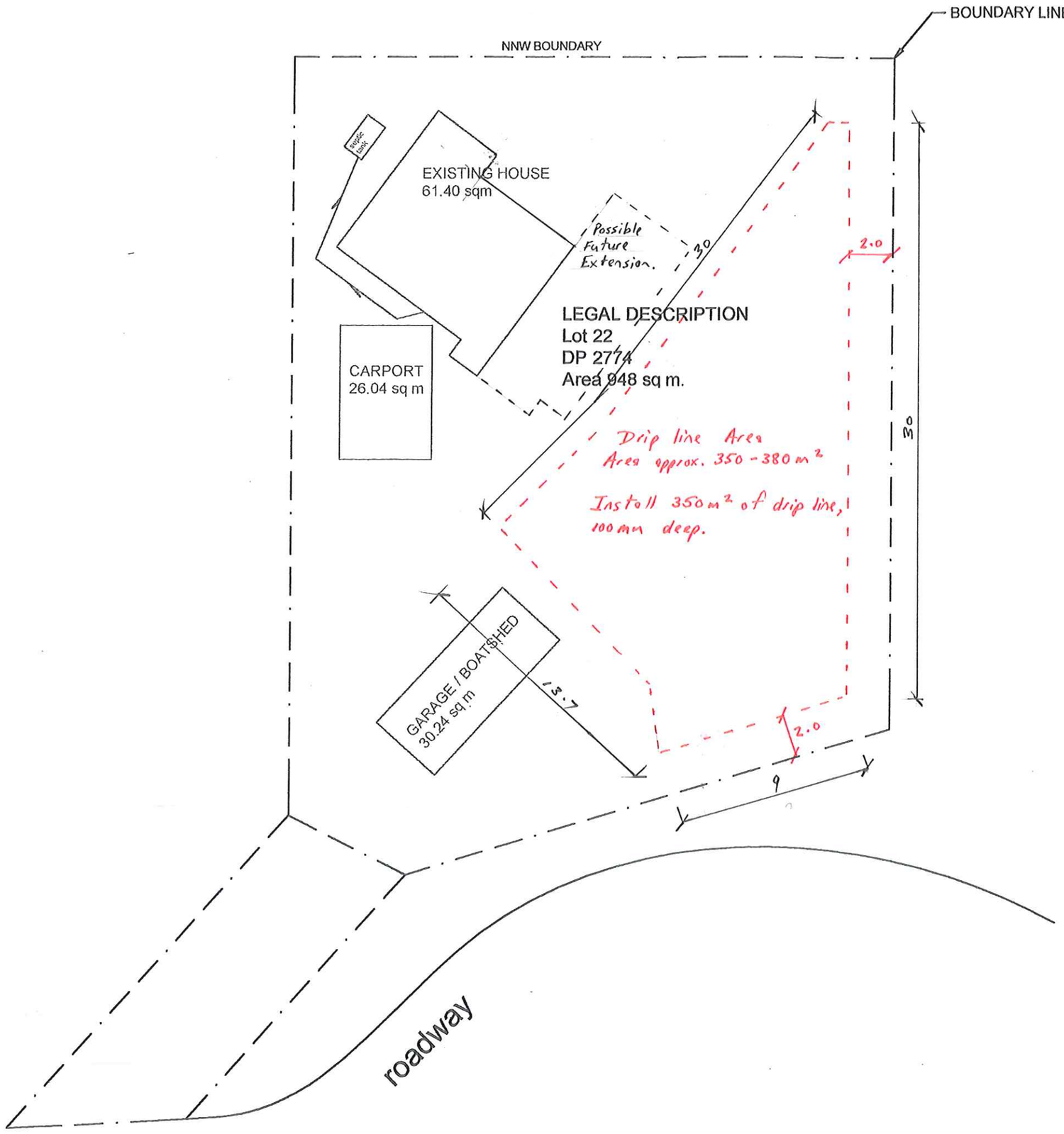
Cheers,
Ron.

Ron Findlater
Findlater Construction Ltd
Phone +64 3 579 2284 **Fax** +64 3 579 2285 **Mobile** 021 464 232
www.findlaterconstruction.co.nz

From: Glen Parker-7022 [mailto:Glen.Parker@marlborough.govt.nz]
Sent: 3 July 2012 14:43
To: Ron Findlater
Subject: Wharite Enterprises Ltd Discharge Permit Application U120355

Ron
I was just looking through the calculations for this one and you say the existing house has standard fixtures and you've given the daily flow rate at 165 litres per person. Do you mean the house has no water reduction fixtures, if so the flow rate should be 200 litres per person (according to the new AS/NZS 1547:2012 standard). Or do you mean the existing house has standard water reduction fixtures?

Glen



FIRMS NAME
Triple D Services

NOTES
Check and confirm all dimensions on site.

REVISION

DESIGN
DRAWN JHB
CHECKED
APPROVED
DATE October 2004

JOB TITLE
Proposed extension for :
Wharite Enterprises
201 Duncan Bay Rd
Tennyson Inlet
Marlborough Sounds

DRAWING TITLE
Site Location Plan

Drawn scale		Rev
1:200		
Job No	Code	Dwg No

ON-SITE WASTEWATER MANAGEMENT REPORT

DATE COMPILED	12th December 2011
PREPARED FOR	Wharite Enterprises Ltd
SITE ADDRESS	201 Duncan Bay Road Tennyson Inlet Marlborough
DESIGNER	Ron Findlater
COMPANY	Findlater Construction Ltd
ADDRESS	32 Timandra Place, Blenheim
PHONE	03 579 2284
FAX	03 579 2285
EMAIL	ron@findlaterconstruction.co.nz
NOTES	

REFERENCES	***BC NUMBER***	
	FC JOB NUMBER	
	REPORT NUMBER	140

TABLE OF CONTENTS

APPENDIX

2.0 APPLICANT DETAILS

2.1 Name
Wharite Enterprises

2.2 Postal Address
C/- Findlater Construction

2.3 Phone & Email
Home
Work 579 2284 Findlater Construction - Ask for Ron
Mobile
Email ron@findlaterconstruction.co.nz

2.4 Nature of Applicant
Owner

2.5 Names - on Certificate of Title
Wharite Enterprises Ltd

3.0 SITE ADDRESS & INFORMATION (Desk top study)

3.1 Address
201 Duncan Bay Road, Tennyson Inlet, Keneperu Sounds, Marlborough

3.2 Legal Description
Lot 22 DP 2774

3.3 Property Number & zone
104977

3.4 Total Property Area
948 m2

3.5 Map References
NA

3.6 Annual Rainfall
Approx 700 - 1500mm

3.7 Status Of Dwelling Waste Water System Is To Service
Presently 2 bedrooms

4.0 ON-SITE ASSESSMENT

4.1 Date Of Site Visit
April '12

4.2 Weather Conditions
Fine and warm.

4.3 Site Clearances

Separation Distance From:	Treatment Plant M	Drip line pipe work M
Boundaries	>2	>2
Surface Water	>30	>30
Water Courses	>30	>30
Trees	>2	>0.5
Bores	Nil	Nil
Embankments / Retaining Walls	Nil	Nil
Habitable Buildings	>3	>3

4.4 Flooding Potential
Nil

4.5 Possible Run-on Seepage
Some very minor run-on possible in heavy rain, not a concern.

4.6 Are Cut Off Drains Required
No

4.7 Site Stability: Is Expert Assessment Necessary
No

4.8 Predominant Wind Direction
North west

4.9 Evapo - Transpiration Potential
Not to bad, but drip line will be sitauted in native bush area.

4.10 Ground Cover Above Proposed Wastewater Land Application Area
Native bush.

4.11 General Site Landform Element
Foothills.

4.12 Slope Aspect
North west facing

4.13 Are Surface Rocks Visible
No

4.14 Availability of Reserve Land
Yes, the area we propose to install the drip line in is larger than required.

4.15 Land Disposal Area Ground Water Depth
Summer > 1.0 m
Winter > 1.0 m

4.16 Site Constraints
The poor draining underlying clay soils.

4.17 Visual Assessment of Land Application Area
The proposed land application area is to the north east corner of the section. It slopes towards the west and generally covered in native bush and some shrubs.
The underlying soils are poor draining clay soils, typical Sounds soils.

5.0 SOIL LOGS

5.1 Summary
Three test pits were hand augered with difficulty, as the ground is predominently hard, with underlying clay soils.

5.2 Test Pit 1

Lower Depth MM	Moisture Condition	Colour (Moist)	Field Texture	Coarse Fragments %	Predominant Gravel Size	Structure	Soil Category
10	Dry	Brown/Yellow	Soil	-	-	-	3
900	Dry	Yellow	Clay	-	-	-	5

5.3 Test Pit 2

Lower Depth MM	Moisture Condition	Colour (Moist)	Field Texture	Coarse Fragments %	Predominant Gravel Size	Structure	Soil Category
10	Dry	Brown/Yellow	Soil	-	-	-	3
900	Dry	Yellow	Clay	-	-	-	5

5.4 Test Pit 3

Lower Depth MM	Moisture Condition	Colour (Moist)	Field Texture	Coarse Fragments %	Predominant Gravel Size	Structure	Soil Category
10	Dry	Brown/Yellow	Soil	-	-	-	3
900	Dry	Yellow	Clay	-	-	-	5

6.0 WASTEWATER DESIGN & CALCULATIONS

6.1 Number Of People System Is To Be Designed For

Bedrooms	3	Bedrooms	x	2	People / Bedroom	= 6
Study	0	Study	x	1	People / Study	= 0
Other	0	Other	x	2	People / Room	= 0
					Design Occupancy	= **6** People

6.2 Intended Potable Water Supply

Local Duncan Bay Road reticulated water scheme.

6.3 Portable Water Usage (litres per person per day)

Existing house with standard fixtures. Use a daily design flow rate of **165** litres per person per day.

6.4 Soil Category For Calculations (From Soil Logs)

Using worst case scenario, use soil category **5**

6.5 Design Irrigation Rate

For category soils **5**

DIR = 20 mm per week
= 2.86 mm per day

6.6 Secondary System Calculations

$$\text{Length of drip line} = \frac{Q}{DIR}$$

Q = Daily design flow in litres/day
DIR = Daily irrigation rate in mm/day

$$= \frac{6 \times 165}{2.86}$$

$$= \frac{990}{2.86}$$

= 346.5 Lm of Effluent Drip Line

7.0 RECOMMENDATIONS

7.1 Designers Experience in Area

I have designed and installed various systems in the surrounding area.

7.2 Best Practicable Option

The best practicable option for this site is as follows:

If the existing Septic tank is in good condition it could be left in use, then connect the new Innoflow AX15 tank to its outlet. Or de-commission the existing septic tank, if its found to be unserviceable and connect the new Innoflow AX15 tank to the sewer drain from the house.

Also install 350 Lineal metres of effluent drip line in the bush covered area in the north eastern corner of the property, with a 32mm delivery pipe from the tank to the top of the drip line area.

All as per our attached plans.

7.6 System Maintenance Requirements

The Marlborough District Council requires that the owner of any advanced waste-water treatment system enters into and retains a service contract with the system supplier, or with a suitably qualified maintenance contractor. Maintenance records need to be forwarded to the Marlborough District Council after each service. We can provide this service at 6 monthly intervals.

7.7 Care Of Effluent Disposal Ground Area

The area immediately above the drip line should be kept free of :

a. Vehicle movements and parking
b. Planting of anything other than grasses and shallow rooted plants
c. Grazing of heavy animals, e.g. Cattle etc

8.0 ASSESSMENT OF EFFECTS ON THE SURROUNDING ENVIRONMENT

8.1 This system has been designed specifically for this site, taking note of all site constraints and in accordance with the MDC's guidelines and AS/NZS 1547:2000, and some parts of AS/NZS 1547:2012 so there should be no detrimental effects to the surrounding environment.

9.0 INSTALLATION NOTES FOR ELECTRICIAN , OWNER AND DRAINLAYER

9.1 Electrical

A single phase cable is required to be run to the tank from the nearest power supply - which is normally the house. This supply should have its own circuit breaker. A cable is also required from the alarm panel to the tank. The alarm is 12 volt and fits a normal electrical flush/wall box. This alarm is both audible and visual. It is usually located in the house laundry, garage or near the interior electrical switchboard. The alarm and full electrical instructions come with the Innoflow AX15 tank.

Normal electrical cable requirements are :

12 volt alarm	1.5 TPS Cable
240 volt tank supply	2.5 TPS Cable

The tank comes as standard with a 240 volt exterior isolating switch. A 12 volt transformer for the alarms is part of the tank electrical wiring.

9.2 House Designer and Drainlayer

It is important to keep the sewer drains as shallow as practical so that the invert level at the tank inlet is no greater than 650mm. If the invert level is deeper than 650mm at the tank, the access points will need extending to stop surface from entering the tank. This means that some thought and care needs to be given to final finished ground levels when setting out the sewer drains.

10.0 REFERENCES

10.1 Marlborough District Council: Guidelines for new on-site wastewater management systems (2005).

10.2 AS/NZS 1547:2000, On-Site domestic wastewater management.
AS/NZS 1547:2012, On-Site domestic wastewater management.

10.3 Centre for Environmental Training - Course July 2005: 'Site and Soil Assessment for On-Site Wastewater Management Systems'.

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**MB1A/563**
Land Registration District	**Marlborough**
Date Issued	06 June 1962

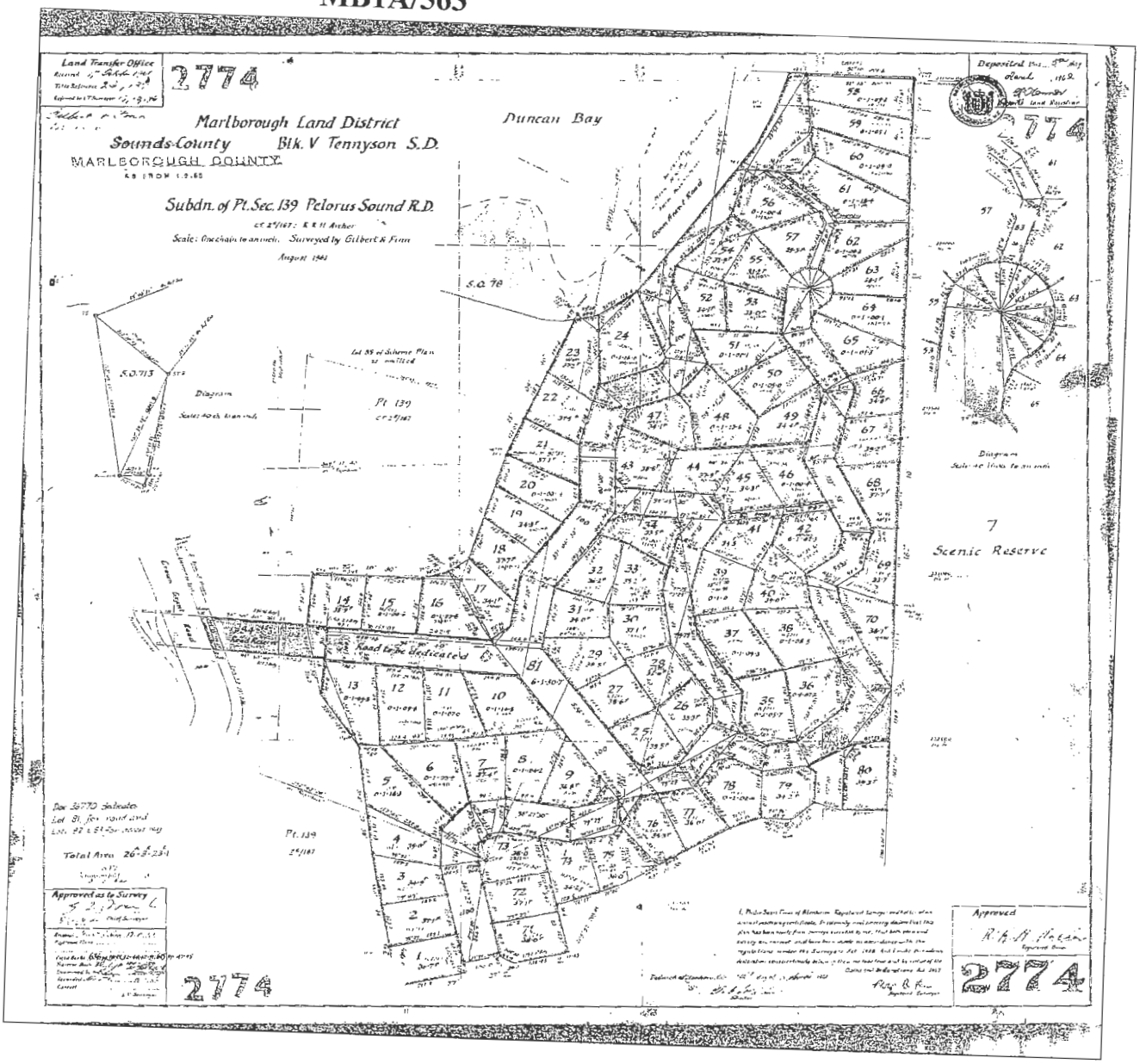
Prior References
MB1A/385

Estate	Fee Simple
Area	948 square metres more or less
Legal Description	Lot 22 Deposited Plan 2774

Proprietors
Wharite Enterprises Limited

Interests
Land Covenant in Transfer 36771
5389696.2 Mortgage to ASB Bank Limited - 4.11.2002 at 9:00 am
7168465.1 Variation of Mortgage 5389696.2 - 19.12.2006 at 9:00 am

Identifier **MB1A/563**



FINDLATER CONTRUCTION LTD

32 Timndra Place, Blenheim Ph 03 579 2284 Fax 03 579 2285 Email office@findlaterconstruction.co.nz

Waste Water System Report

Client		**Resource Consent No.**			
Site Name		**Job No.**			
Site Address		**Serviceman**			
Type of System	*PBR (Packed Bed Reactor)*	**Date Serviced**		**Next Service**	
Land Application Method		**Make**			

Maintenance Tasks	Check	Comments
Remove lids, check chamber levels are and have been normal.		
Check system for storm water infiltration.		
Check / clean Zabel filter/s, clean and replace.		
Check sludge level in primary / septic tank.		
Does system need pumping out - Yes or No answer.		
Turn system off		
Lift recirculation spray pump, clean impellor & screen, then replace.		
Clean out recirculation pump chamber throughly.		
Check irrigation pump pipe work for leaks and damage.		
Pump out and clean irrigation pump chamber.		
Lift out irrigation pump, clean impellor & screen, then replace.		
Hose out irrigation chamber walls and floor, then pump out.		
Fill irrigation chamber with clean water if available.		
Check / clean Arkal or other drip line filter.		
Remove any scum floating round in clarification chamber.		
Turn system back on		
PBR sprayer i.e. Nozzle clean, spray pattern, adjust as required.		
Adjust sludge return valve.		
Check re-circulation pump high level alarm is working Ok.		
Check irrigation chamber high level alarm is working OK.		
Check if electrical wiring, switches, controller's etc look OK.		
Check entire system is back to normal, and running Ok.		

Effluent Disposal Field		
Visually check field for leaks and damage.		
If fitted, check sequencing valve/s operation.		
Flush out drip line.		
Check air and vacuum valves.		
UV Unit If Installed		
Check lamps are working		
Clean lamp quartz sleeves		

Replace all lids, pick up tools and leave area tidy.

Residential Solutions

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wastewater specialists

The AdvanTex® AX15

The natural choice for advanced wastewater systems

environmental choice

cost savings

Quality Treatment, at a Competitive Price

Orenco's AdvanTex® AX15 is a completely pre-packaged "plug & play" AdvanTex® treatment system that installs as easily as a septic tank. Its simplified design reduces costs for excavation, installation, and O&M, giving you quality wastewater treatment at a competitive price

The system benefits

- No smell
- No noise
- Aesthetically pleasing
- Proven technology
- Low power consumption
- Three Year System Warranty
- Five Year Pump Warranty
- Environmentally Sound
- Low visual impact
- Alarm monitoring option available
- Consistently high treatment quality
- Minimal routine maintenance
- Ease of transporting
- Compact footprint
- Easy installation

All-in-1, Pre-plumbed System
The AX15 combines all tanks into a single, shallowly-buried unit. All interior components are installed and adjusted at the factory, saving install time and costs on site.

Clear, Odorless, Re-Usable Effluent
The AX15 produces the same, great "re-use" quality effluent produced by all AdvanTex® systems; so the treated effluent can be re-used for subsurface irrigation. A responsible, green solution to house hold water and wastewater needs!

Compact Footprint, Shallow-Bury
The AX15 recirculates, treats, and discharges high quality effluent out of a unit that is only 2m high and a total of 1.9m2. It can be shallowly buried, so it's perfect for small sites and sites with clay or rocky soils.

Ideal for Repair/Replacement of Failing Systems
Many existing septic systems are at the end of their useful life. The AX15 can replace a failing system in a fraction of the space and cost.

Low Power Costs, Low Maintenance Costs
Average power costs for the AdvanTex® system are $6 to $8 per month, that's less than $100 per year. Maintaining the system is also easy, with a 6-monthly inspection and annual service, programmed automatically by the service company. You don't even have to be home when the service is done

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0800 4666 35, info@innoflow.co.nz

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wastewater specialists

Residential Solutions

The AdvanTex® AX15

The natural choice for advanced wastewater systems

The AdvanTex Difference

Compare the AdvanTex® with other systems and see why it is the natural choice for advanced wastewater treatment systems

	AdvanTex AX15	Typical Aerated System	Other system – For you to complete
Visual Impact	Green access lids all at ground level	Some systems protrude above the ground	
Noise	'Whisper quiet' pumps, no noisy blower	Noise associated with blower running, sometimes constantly	
Odour/Effluent Quality	Neutral, earthy smell, clear to the naked eye	Some odour, level varies with use	
Power Usage (per month, based on $0.15/kWhr	$6 - $8 – standard system $12 - $14 with UV	Reported as high as $40 - $60	
Servicing, Maintenance	6-monthly inspection, 12-monthly service	Minimum quarterly	
Sludge Removal	8 – 10 years, dependent on system use	Reported as often as annually in some cases	
Component Quality	3 year system warranty, 5 years on pumps Textile media designed to last indefinitely	Aerators typically last 3 – 4 years, depending on quality	
Process Stability	Stable, consistent	Varies with use, does not perform well when under- or over-loaded	
Holiday Homes, variable use	Suitable for variable use, proven for at least 4 months 'downtime'	Not suitable, systems need constant source of 'food'	
Back to base monitoring	VeriComm telemetry available as an option	Generally not available	
Materials of Construction	Durable lightweight fibreglass ideal for difficult access sites	Usually concrete, difficult to maneuver, or plastic, fragile when buried	

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wastewater specialists

Orenco Systems® Inc.
Changing the Way the World Does Wastewater®

AdvanTex® Treatment Systems

An Overview

Orenco's AdvanTex® Treatment Systems, supplied in Australasia by Innoflow Technologies through a network of authorised installers and distributors, are an innovative technology for onsite treatment of wastewater.

The heart of the system is the AdvanTex filter, a sturdy, watertight fiberglass basin filled with an engineered textile material. This lightweight, highly absorbent textile material treats a tremendous amount of wastewater in a small space. That's because textile has a very large surface area for biological breakdown of wastewater components – about five times greater than that of an equivalent volume of sand. Yet the AdvanTex filter has a very small footprint.

System Performance

Orenco Systems® has been researching, designing, testing, and selling a variety of textile filters for nearly a decade. More than 20,000 textile filters have been installed throughout the world, on sites ranging from demonstration projects to university testing facilities, single-family homes, commercial properties, and community systems.

Unlike other wastewater treatment technologies, the AdvanTex Treatment System provides consistent, reliable wastewater treatment, even during "peak flow" conditions. The AdvanTex Treatment System includes a processing tank and a control panel with a programmable dosing timer. The timer settings mean the pump discharges small amounts of treated wastewater, regularly, throughout the day. AdvanTex treats residential-strength waste to better than "secondary" standards. Effluent can be used for drip or subsurface irrigation, or discharged to shallow, inconspicuous trenches. With the addition of UV disinfection, effluent can even be reused above ground.

Third-Party Performance Verification

AdvanTex Treatment Systems have undergone lengthy performance testing under a number of different bench-tests and field trials, including NSF testing in the USA, the Rotorua trials in New Zealand and AS1546.3 in Australia.

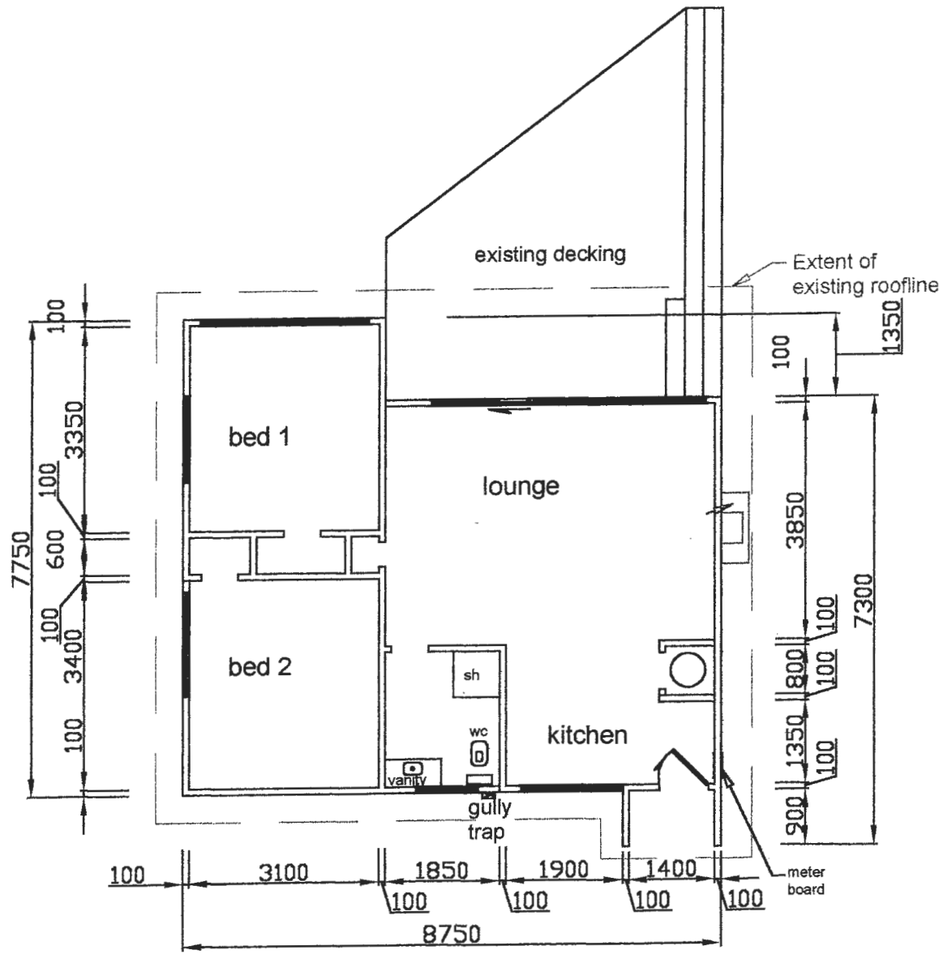
System Benefits

Significantly smaller land area is required for the AdvanTex Treatment System than is required for sand and gravel filters. That's because textile has demonstrated the capacity to support microbial populations that can treat filtered processing tank effluent at greater hydraulic loading rates. In fact, loading rates for AdvanTex Treatment Systems are typically 5-20 times higher than for sand filters. In addition, reductions in drainfield size are often permitted with AdvanTex Treatment Systems. Moreover, textile is lightweight, making it ideal for prepackaging and shipping, which simplifies installation and reduces costs.

Applications

The AdvanTex Treatment System is ideal for...

- New construction
- System upgrades and repairs
- Pretreatment of moderately high-strength waste
- Wherever typical secondary treatment standards suffice



FIRMS NAME
Triple D Services

NOTES
Check and confirm all dimensions on site.

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DESIGN
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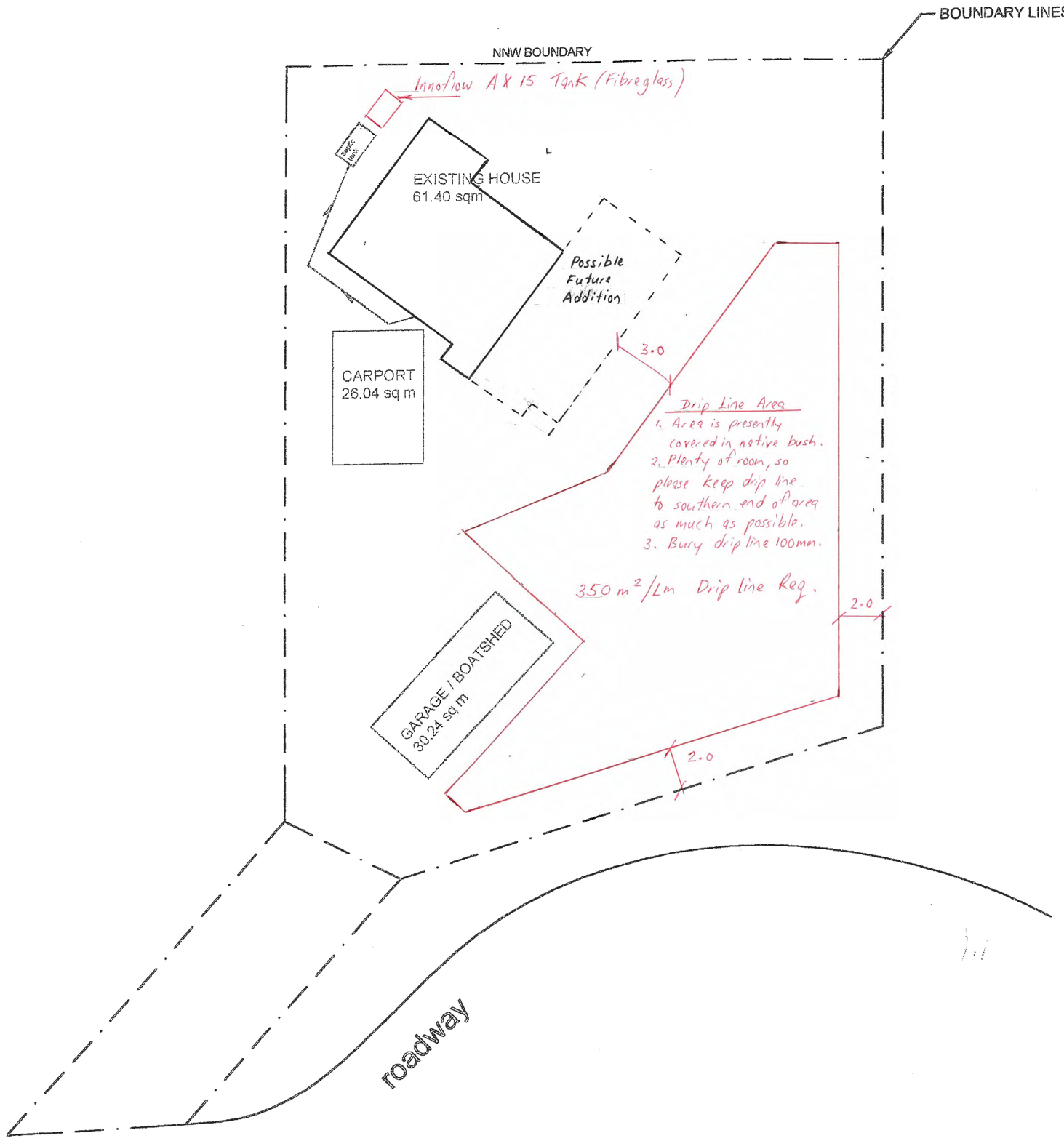
CHECKED
APPROVED
DATE October 2004

JOB TITLE
Wharite Enterprises
201 Duncan Bay Rd
Tennyson Inlet
Marlborough
Sounds

DRAWING TITLE
Existing Floor Plan

Drawn scale 1:100 | Rev
Job No | Code | Dwg No



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DESIGN	
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JOB TITLE
Proposed extension for :
Wharite Enterprises
201 Duncan Bay Rd
Tennyson Inlet
Marlborough Sounds

DRAWING TITLE
Site Location Plan

Drawn scale	Rev
1:200	

Job No	Code	Dwg No

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The accompanying material has been released by Council from its information repositories.
Council does not accept any responsibility for the initial and ongoing accuracy to the material.
It is the responsibility of the recipient to make such checks as the recipient considers appropriate to ensure accuracy.
Services layers are schematic only and actual positions and level should be confirmed from Councils's hard copy records.

1:2,500