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Locality Map Print

N
W E
S

MARLBOROUGH DISTRICT COUNCIL

Approximate Scale only.
A4 Portrait template.
Date: 27-5-2008 14:25:2

ON - SITE WASTE WATER REPORT

DATE COMPILED	31 - 01 - 08
PREPARED FOR	Geoff and Judy Robinson
SITE ADDRESS	1701 Queen Charlotte Drive, Picton

PREPARED BY	Ron Findlater
COMPANY	Findlater Construction Ltd
ADDRESS	32 Timandra Place, Blenheim
PHONE	03 579 2284
FAX	03 579 2285
EMAIL	ron@findlaterconstruction.co.nz

REFERENCES	***BC NUMBER***
	FC JOB NUMBER
	REPORT NUMBER 44

AMMENDMENTS	RF	14-08-08	Change from drip line to effluent beds

TABLE OF CONTENTS

1 APPLICANT DETAILS

2 SITE ADDRESS AND INFORMATION

3 ON-SITE ASSESSMENT

4 WASTE WATER SYSTEM DESIGN

5 SOIL LOGS

6 WASTE WATER DESIGN CALCULATIONS

7 RECOMMENDATIONS

8 AFFECTS ON SURROUNDING ENVIRONMENT

9 INSTALLATION NOTES FOR ELECTRICIAN, ARCHITECT, DRAINLAYER AND OWNER

ATTACHMENTS CHECK LIST

A CERTIFICATE OF TITLE

B OASIS CLEARWATER TANK SPECIFICATIONS

C SITE PLANS

D SERVICING CHECK LIST (6 Monthly)

1.0 APPLICANT DETAILS

1.1 Name
Geoff and Judy Robinson

1.2 Postal Address
PO Box 588, Picton

1.3 Phone & Email
Home 573 8987
Work N/A
Mobile N/A
Email marinerig@xtra.co.nz
or

1.4 Nature of Applicant* (* i.e. Owner, Lessee, Purchaser, Developer)
Owner

1.5 Property Owners Name(s)
Geoff and Judy Robinson

2.0 SITE ADDRESS & INFORMATION (Desk top study)

2.0 Address
1701 Queen Charlotte Drive, Picton

2.1 Lot Number
2

2.2 DP Number
529542

2.3 Property Number
529542

2.4 Total Property Area 957 ***M2*** 0.0957 ***Hectares***

2.5 Map References
N/A

2.6 Annual Rainfall 900 ***mm***

3.0 ON-SITE ASSESSMENT

3.1 Date Of Site Visit
31-01-08

3.2 Weather Conditions
Fine and clear

3.3 Site Clearances

Separation Distance From	Treatment Plant M	Disposal Field M
Boundaries	>30	>30
Surface Water	>10	>2
Water Courses	>10	>2
Trees	>10	>5
Well, bores	Nil	Nil
Embankments/Ret. Walls	Nil	Nil
Buildings	>5	>4

3.4 Flooding Potential
No

3.5 Possible Run-on Seepage
Yes, surface water from Queen Charlotte Drive may run onto the property. Will depend on how the boundary area between the section and Queen Charlotte Drive is landscaped.

3.6 Are Surface Water Interception Drains Required* (* If yes show on site plan)
No, because we are using raised beds. But the owner needs to take care of where the any surface water from Queen Charlotte Drive is directed when landscaping.

3.7 Site Stability, Is Expert Assessment Necessary* (* If yes attach report)
No

3.8 Predominant Wind Direction
North west

3.9 Evapo - Transpiration Potential
Good

4.0 Ground Cover Above Proposed Waste Water Land Application Area
Grass

4.1 General Site Landform Element
Lower slope

4.2 Slope Aspect
North facing

4.3 Are Surface Rocks Visible
No

4.4 Availability of Reserve Land
Some, but the hole disposal system would need revising if more area was required.

4.5 Land Disposal Area Ground Water Depth

Summer	>1.2 m
Winter	>1.2 m

4.6 Does Constant Head Permeability Testing(k_{sat}) Been Undertaken*
No *(* If yes attach report)*

4.7 Site Constraints
The main site constraints are the poor drainage characteristics of the underlying clay soils and the small section size.

4.9 Visual Assessment of Land Application Area
The section drops about 3 metres from Queen Charlotte Drive to where the house is to be located. Presently the section is covered in grass.

5.0 SOIL LOGS

5.1 Test Pit 1 (TP1)

Lower Depth MM	Moisture Condition	Colour (Moist)	Field Texture	Coarse Fragments %	Consistency	Structure	Soil Category
25	Dry	Brown	Loam	2-10	-	Moderate	3
800	Dry	Yellow	Clay	2-10	-	Weak	5

5.2 Test Pit 1 (TP2)

Lower Depth MM	Moisture Condition	Colour (Moist)	Field Texture	Coarse Fragments %	Consistency	Structure	Soil Category
20	Dry	Brown	Loam	2-10	-	Moderate	3
800	Dry	Yellow	Clay	2-10	-	Weak	5

5.3 Test Pit 1 (TP3)

Lower Depth MM	Moisture Condition	Colour (Moist)	Field Texture	Coarse Fragments %	Consistency	Structure	Soil Category
25	Dry	Brown	Loam	2-10	-	Moderate	3
900	Dry	Yellow	Clay	2-10	-	Weak	5

SG = Single Grained

6.0 WASTE WATER DESIGN CALCULATIONS

6.1 Number Of People System Is To Be Designed For

Number of :

Bedrooms	3 x	2 (Persons Per Room)	=	6
Offices	0 x	2 (Persons Per Room)	=	0
Other	0 x	2 (Persons Per Room)	=	0
		Design Occupancy		6 People

Comments -

6.2 Intended Potable Water Supply

Roof rain water

6.3 Portable Water Usage (litres per person per day)

Full water reduction fixtures 80 Litres per person per day

Note

The plumber and owner need to ensure that full water reduction fixtures are installed.

These are :

Combined use of reduced flush 6/3 litre water closets, shower-flow restrictors, aerated faucets, front loading washing machines and flow/pressure control valves on all water-use outlets.

6.4 Soil Category For Calculations (From Soil Logs)

5 Category

6.5 Secondary System Calculations

Chosen DLR (Design Loading Rate) = 12 mm / Day

$$\frac{Q}{\text{mm/day}} \qquad L = Q / (DLR \times W)$$

$$= \frac{6 \times 80}{12.0} \qquad L = 480 / \left(\frac{DLR}{12} \times 1.5m\right) = \frac{18}{} \text{ 26 m length required}$$

= **40 m2** **Therefore a minium of 40m2 of effluent disposal bed is required.**

Q = Design daily flow in L/day

070462

7.0 RECOMMENDATIONS

7.1 Designers Experience in Area

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

7.2 Description Of Proposed System

I recommend firstly installing a Oasis Clearwater Texass tank. Then constructing three raised effluent disposal beds, 14 m long x 1.5m wide, which will give us a total bed size of **63m2**. All as per our attached drawings.
These beds are to be feed via a 3 port sequencing vlave.

Note : The surface of the bed can only be planted in shallow rooted plants.

7.3 System Maintenance Requirements

The Marlborough District Council requires that the owner of any advanced wastewater treatment system enters into and retains a service contract with the system supplier, or with a suitably qualified maintenance contractor. Records of this maintenance needs to be forwarded to the Marlborough District Council after each service.

As Oasis Clearwater's Agent we can provide this service at six monthly intervals.

8.0 AFFECTS ON SURROUNDING ENVIRONMENT

8.1 As this system has been designed in accordance with the Marlborough District Councils guide lines and AS / NZS 1547:2000 there should be no detrimental affects on the surrounding environment.

9.0 INSTALLATION NOTES FOR ELECTRICIAN , ARCHITECT, DRAINLAYER AND OWNER

9.1 Electrical

A single phase cable is required to be run from the nearest power supply, which is is normally the house to the tank. This supply should have its own circuit breaker. Also another cable is required to be run 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 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. Also a 12 volt transformer, for the alarms, is part of the tank electrical wiring.

9.2 *House Designer and Drainlayer*

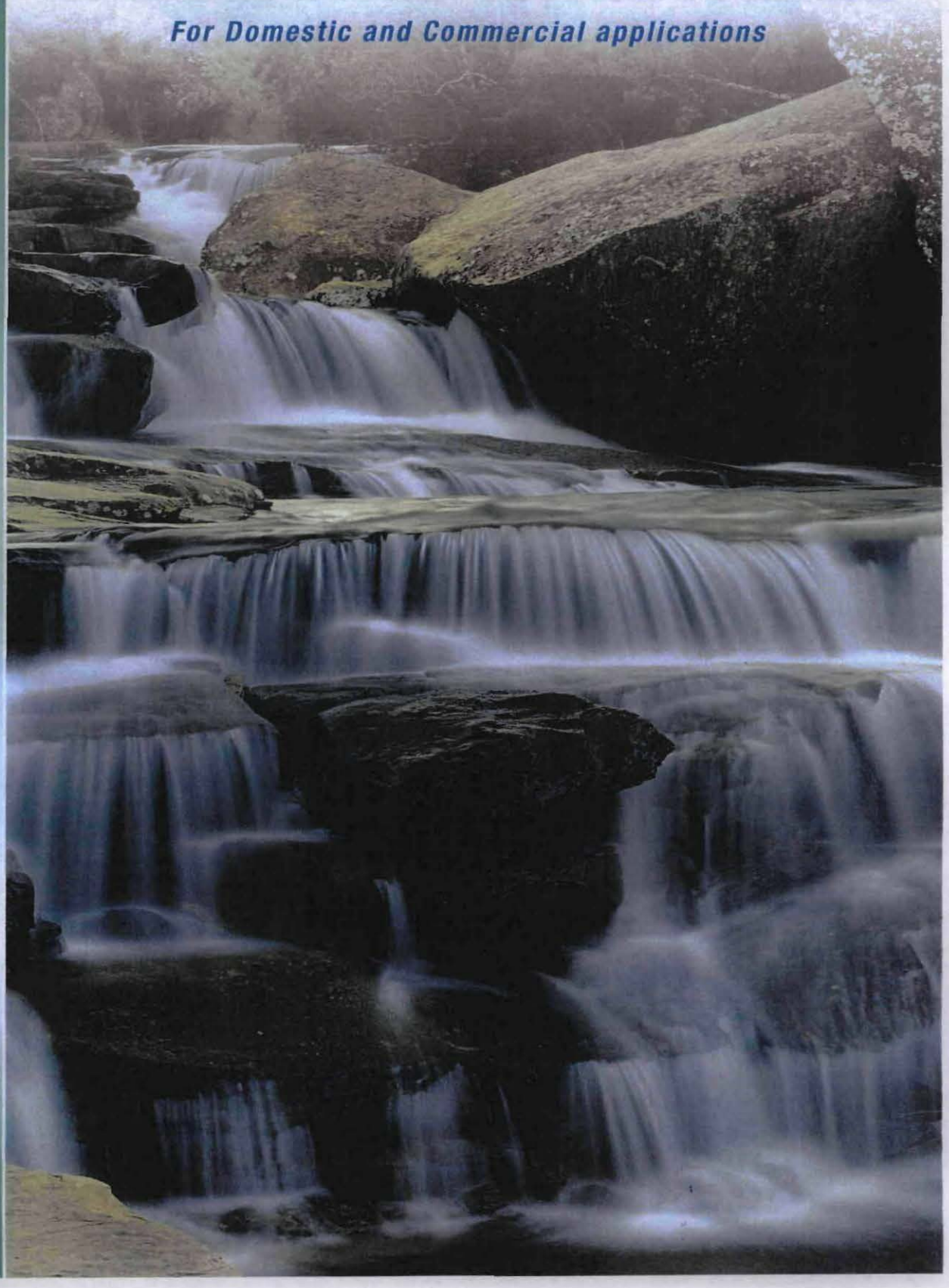
It is important to keep the drains as shallow as practical so that the invert level at the tank inlet is no greater than 650mm. If the invert level is deeper, the tank access points will require extending to stop surface water entering the tank.
This means some thought needs to be given to the drainage layout when the drainage layout is being designed, with reference to site ground levels.

'The Evolution Continues...'

TEXASS

TEXTILE ADVANCED SEWAGE SOLUTION

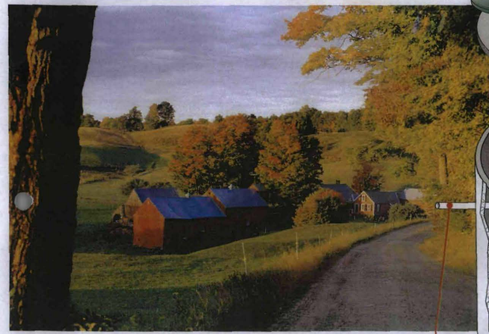
For Domestic and Commercial applications

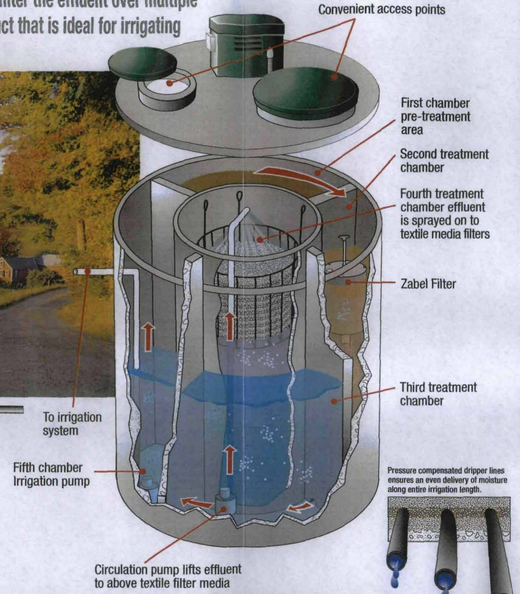


Developed in the USA

Perfected and manufactured in NEW ZEALAND

Developed in the USA and perfected in New Zealand, the Texass (Textile Advanced Sewage Solution) utilises a textile media to efficiently filter the effluent over multiple passes, finally producing a very high quality end product that is ideal for irrigating lawns, gardens and tree lots.





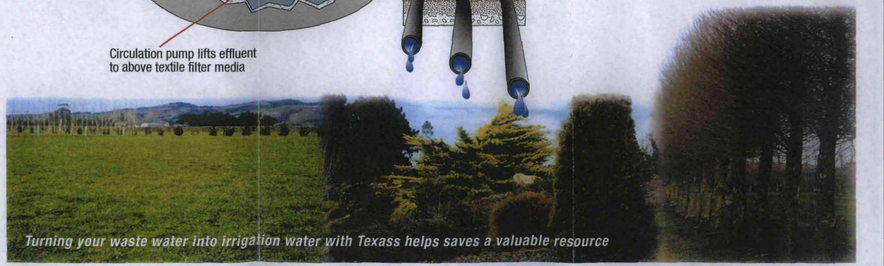
Texass
Textile Advanced Sewage Solution

There have been various approaches to treating and filtering effluent over the years, the basic septic tank relying on simple settling out of solids with anaerobic action to clean the liquid before finally emptying back into the soil via ground seepage, filtering through sand or gravel.
This old process results in only 20% of the treatment happening in the tank with the result that the released liquid is still unclean, and accordingly unhealthy for both the environment and ourselves.

Today Government and local bodies are charged with keeping our environment and its ecology as pristine as possible. Regulations require any installation that handles the treatment of sewage will perform to approved standards, efficiently and effectively, day in - day out... and the final product must achieve certain measurable standards before it re-enters our environment.

Working with proven American designed technology, Oasis Clearwater has perfected Texass, a textile filtering system that efficiently cleans the effluent through recirculation. After passing through solids settling and small particle filtering compartments, the effluent is pumped and sprayed several times through the unique textile filter.

Each pass cleans the liquid further until it is at the appropriate quality for dispersing through the irrigation system. The resulting irrigation water easily exceeds both New Zealand's and Australia's stringent standards for the disposal of wastewater.



Turning your waste water into irrigation water with Texass helps saves a valuable resource

The Texass unit is manufactured as a complete unit in our plant. Apart from installation, there is no onsite construction needed and the small footprint, below-ground-tank ensures there is a minimal impact on the landscape.

Six key reasons why people prefer the Texass process

Rugged durability and performance...

All the system components are of the highest standard for years of worry free operation.

The textile filtering media is manufactured to a consistent quality - essential for a high performance sewerage treatment plant.

Texass units are contained in specially designed, concrete tanks, however, where the installation access is difficult, we can supply purpose designed polypropylene tanks.

Easy installation...

Relative to some other systems, the Texass system is straight forward to install with no expensive back fill materials needed and no labour intensive techniques required.

Installation is carried out by our trained installers, including commissioning.

Each Texass installation has a 2 year warranty on all aspects of the system when installed by our qualified installers.

Size does matter...

In our case it's small!

Because the Texass system is so efficient, the overall size is more compact. This reduces excavation and disruption at the time of installation.

Economical operation...

The Texass system is cost effective to run.

The textile filtering media is manufactured to a consistent quality and unlike sand (used in some systems to filter effluent) its superior efficiency means performance can be assured from day one.

The recirculation system does not have to run constantly as the pump are activated intermittently. The first pump sprays the effluent over the textile filter several times before the second pump sends the treated effluent into the irrigation system.

Maintenance minimal...

The Texass system incorporates leading edge technology to make routine maintenance procedures straightforward and substantially easier than other systems. The Texass system has been designed and engineered to avoid any need to enter the unit, with all critical components accessible from the access lid on top of the tank.

We're here to help...

Texass Systems and our Distributors are dedicated to helping you solve your on-site waste water problems. We are firmly committed to manufacture the highest quality products ensuring the protection of our environment. Our systems are designed to Internationally recognised performance standards.

Advantages of the Texass System

Home owners

- *Protects water quality and enhances owners' quality of life.*
- *Saves water, money and protects our environment.*
- *Low operating and maintenance costs.*

Councils and Developers

- *Highly reliability, low maintenance systems.*
- *Reduced operating costs.*
- *Increased public health protection.*

Engineers

- *Proven design and Engineering.*
- *Reliable performance, reduced costs.*
- *Systems for domestic and commercial applications.*
- *Ideal for failed system renovation.*

Contractors and Installers

- *One chamber - one hole - one connection.*
- *Low maintenance, full range of spares available.*
- *On going manufacturer backup.*

Technical specifications

• *Primary Pre-treatment chamber*	*3500 litres*
• *Secondary Pre-treatment chamber*	*750 litres*
• *Packed Bed Reactor and Recirculation well*	*2150 litres*
• *Pumpwell*	*1050 litres*
• *Total operating capacity*	*7450 litres*
• *Total holding capacity*	*9400 litres*
• *Control panel - Audio and visual alarm - sequential timers*	
• *Tank construction - All concrete*	

***Tank Dimensions** - for a 10 Person, 1800 litres per day capacity*

• *Height*	*2500 mm*
• *Diameter*	*2500 mm*
• *Weight*	*6.5 Tonnes*

Consistent with our policy of product improvement, we reserve the right to alter specifications without notice.

Texass design criteria

Design criteria and specifications for any Texass system is based on daily hydraulic flow rates. Contact your local Texass Distributor with your needs, they are trained specialists who will evaluate your requirements and specify the system to fit your situation.

System size	*Peak daily flow rates*	*Type of unit*
up to 10 persons	*1800 litres per day*	*Texass Series 2000*
11 t0 17 persons	*3000 litres per day*	*Texass Series 3000*
over 17 persons	*refer to your Texass distributor*	

Commercial systems available to 75m3 per day in modular installations. Refer to Texass Systems' Head Office for further information.

Parameter	*Units*	*Average test figures*
BOD_5	*mg/L*	*< 15*
Suspended solids	*mg/L*	*< 15*
Total N	*mg/L*	*< 15*

Certifications

N.Z TP 58 APPROVAL - 3rd Edition
AUS/NZS 1547.2000 - On Site Domestic Waste Water
AUS/NZS 1546 s 1: 1998 - Septic Tank Manufacture

Our company and our capabilities

Texass Environmental Systems has been pioneering onsite wastewater treatment since 1990. Our team of qualified professionals have many years of combined experience designing and developing innovative technology and systems to meet demanding standards for waste water treatment.

We have also established close working relationships with several leading international authorities and manufacturers of similar equipment to complement our knowledge.

We offer a full range of services including

Design and construction.

Liaison with local and regional councils.

Upgrading of existing systems.

Maintenance programmes.

Domestic and commercial applications.

Committed to quality

To ensure constant quality, our products are manufactured, assembled and fitted out at our own concrete product manufacturing plant.

Texass

TEXTILE ADVANCED SEWAGE SOLUTION

Manufactured under licence to Oasis Clearwater Environmental Systems

P.O.Box 16-276, Hornby, Christchurch, New Zealand
Phones: 03-344 0262, 0800 48 48 49 • Fax: 03-344 0267
Email: office@oasisclearwater.co.nz
Website: www.oasisclearwater.co.nz

Phone 0800 48 48 49

Your authorised local distributor

September 2007

FINDLATER CONSTRUCTION LTD
OFFICE/YARD: 32 TIMANDRA PLACE
BLENHEIM

PHONE (03) 579 2284
FAX (03) 579 2285
E-MAIL: office@findlaterconstruction.co.nz

Findlater CONSTRUCTION

OASIS TEXASS SYSTEM SITE CHECK LIST

CLIENT _____ DATE _____

SITE ADDRESS _____

SERVICED FC

BY _____ ARRIVE _____ DEPART _____ JOB # _____

OFFICE USE

REPORTS / INVOICE POSTED

INVOICE # _____ CLIENT ☐ COUNCIL ☐ CHECKED BY _____

CHECKS

1.	Remove all lids, check all chamber levels are and have been normal.	☐	
2.	Take a sample from irrigation pump chamber, test pH level, record result.	☐	_____ pH
3.	Check Zabel filter, clean (some Biomass can remain on filter) and replace.	☐	
4.	Check septic tank sludge depth, note below if it needs emptying.	☐	_____ metre
5.	Turn power off, remove Arkal filter, clean and replace.	☐	
6.	Check foam spray nozzle is not blocked.	☐	
7.	Check effluent spray pattern over foam is correct i.e. not spraying sides etc	☐	
8.	Check foam is at correct level and evenly distributed in foam basket.	☐	
9.	Lift out irrigation pump, check impellor & grill, wash and replace.	☐	
10.	Lift out re-circulation pump, check impellor & grill, wash and replace.	☐	
11.	Turn power back on.	☐	
12.	Check irrigation pump chamber high level alarm.	☐	
13.	Check re-circulation pump alarm.	☐	
14.	Check re-circulation pump run cycle is correct i.e. 6 minutes/30 minutes	☐	
15.	Open drip line flush valve and flush for 20 seconds.	☐	
16.	Close drip line flush valve.	☐	
17.	Note that vacuum breaker valve works OK.	☐	
18.	Note drip line is working OK.	☐	
19.	Check all power plugs are back in correct sockets in electrical box.	☐	
20.	Check system is back to normal and able to run on auto OK	☐	
21.	Replenish chlorine tablets in chlorinator (if fitted). Add no more than 3.	☐	_____ number
22.	Replace all tank lids, pick up tools and leave area tidy.	☐	

NOTES

_____

_____

_____

_____

_____

Application for Resource Consent to Construct a Dwelling at 1701 Queen Charlotte Drive.

G. L & J. M Robinson

Proposal

The proposal is to construct a two storey residential dwelling at 1701 Queen Charlotte Drive, Grove Arm. The lower storey will comprise two garages and a workshop. The top storey will comprise three bedrooms, one bathroom, one living room and one kitchen. There will also be an outdoor deck off the living room. The proposal also includes the installation of a septic tank sewerage system. The legal description of the site is "Lot 2 DP 334930". The plans attached in Appendix A show the layout of the site and the septic tank system. The dwelling has been designed by Max Architectural Design, the drainage and sewerage system has been designed by Findlater Construction.

A building consent application for this work was submitted to the Marlborough District Council. The council's reference number for the building consent is "BC080526", this is currently being processed.

Resource Consents Required

Upon receipt of the building consent application, Marlborough District Council Information Officer Ron Wass wrote to us advising of the resource consent requirements for this proposal.

The majority of this proposal falls under the permitted baseline. However; council advised that in accordance with section 9 of the Resource Management Act 1991 and the Marlborough District Council District Plan the proposal will require a land use consent because:

- The dwelling will encroach the recession plane from the south boundary
- The dwelling will encroach the recession plane from the north boundary to a minor extent
- The permitted site coverage will be exceeded by three percent
- The permitted height restrictions will be exceeded by approximately 10.6%

The Marlborough District Council advised that in accordance with section 15 of the Resource Management Act 1991 and the Marlborough District Council District Plan the proposal will require a discharge permit because:

- Of the discharge from the septic tank sewerage system in the drip line area.

Assessment of Environmental Effects

The receiving environments potentially effected include the natural or bio-physical environment (water, vegetation etc) and the social environment (neighbours, other dwellings etc.)

19.5.08

Social Environment:
The recession plane that will be encroached on the south boundary will not have any adverse effects on the neighbouring property on the south boundary. This property is owned by Mr D.B Collins and he has provided his written approval which is attached in Appendix B. There is a dense row of trees between our site and Mr Collins property. This row of trees will screen our property from the view of Mr Collins (see attached photo in Appendix C)

The recession plane that will be encroached on the north boundary will not result in any adverse effects on neighbouring properties. The north boundary is the front boundary of the section and there are no neighbours to be effected. As can be seen from the photo in Appendix D the north boundary is the waterfront.

Exceeding the permitted site coverage by three percent will not result in any adverse effects on the social environment. We have been informed that the permitted site coverage rule may have been recently amended; the architect was unaware of this at the time of design. However, it is believed that three percent exceedence is unlikely to be noticeable.

Exceeding the permitted height by 10.6% will not have any adverse effects on neighbouring properties. The permitted height will only be marginally exceeded. It is believed that this will not result in any views from other dwellings in the area to be obstructed. The photograph in Appendix E shows the only dwelling that is behind our property. This dwelling is elevated well above our property and views will not be obstructed by our proposed dwelling.

The septic tank to be installed will not have adverse effects on neighbouring properties. The septic tank system has been designed by Findlater Construction. Findlater Construction specialise in the design of septic tank and sewerage systems which is an assurance that the system will be installed and designed to a high standard. All other dwellings in the area rely on septic tank sewerage systems also.

Bio-Physical Environment
It is believed the construction of the dwelling and the installation of the Findlater septic tank sewerage system will not have any adverse effects on the natural environment. The appearance of the dwelling and the landscaping will in keeping with the surrounding environment. The discharge from the septic tank system will be sufficiently treated so as contaminants are removed before it is discharged to the dripline area.

Conclusion

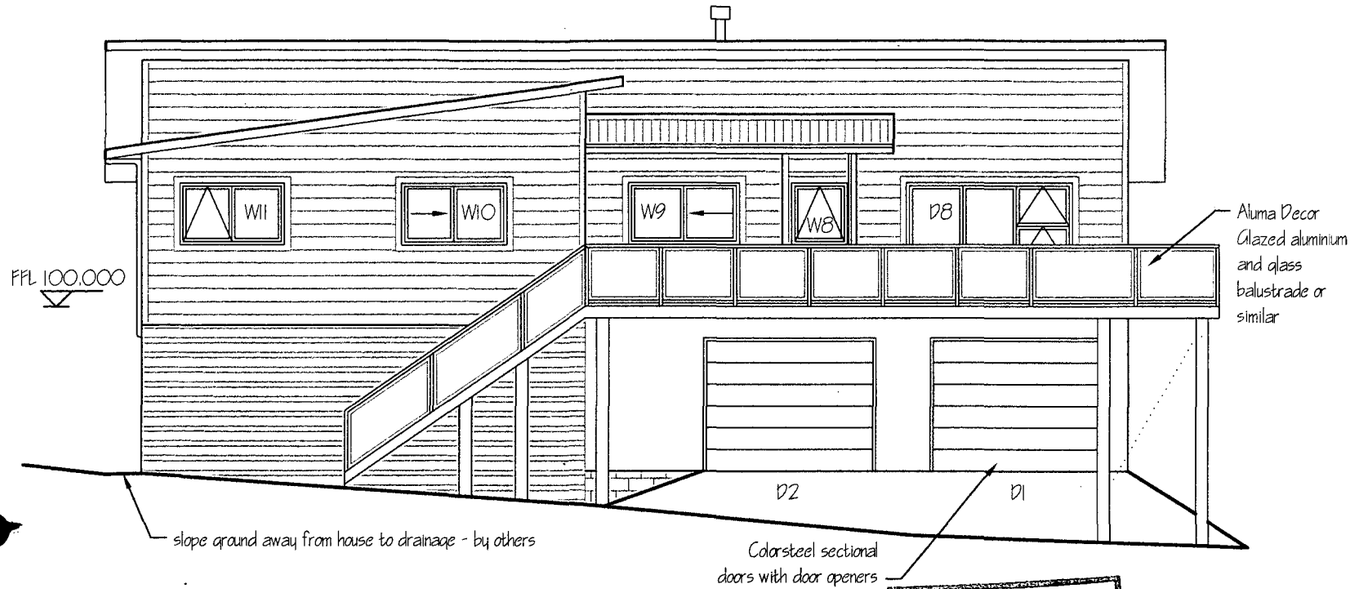
- A land use consent in accordance with s.9 of the RMA is required
- A discharge permit in accordance with s.15 of the RMA is required
- It is requested that the proposal in non-notified
- It is requested that both the land use consent is granted for an unlimited period
- It is requested that the discharge permit is granted for the maximum term possible (35 years)

D.L.C.
19-5-08

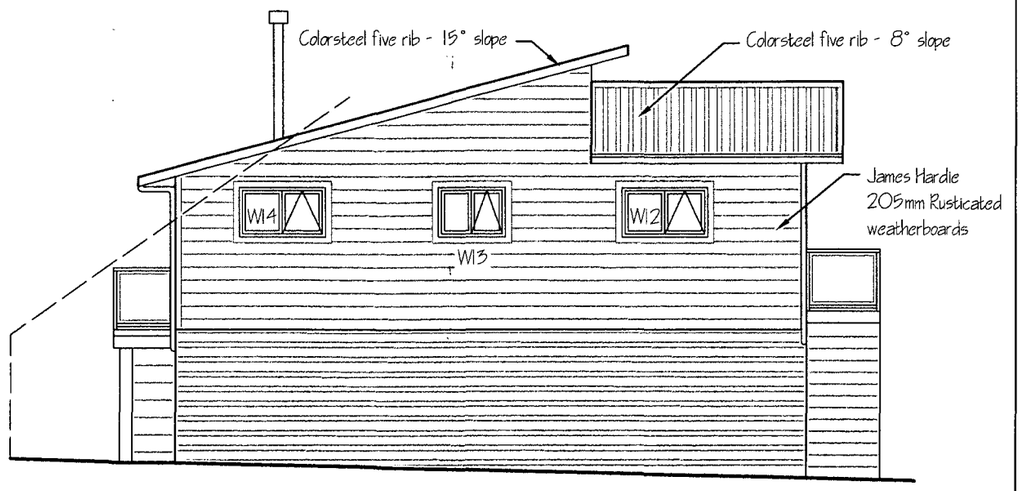
Appendix A

Drawings and Plans

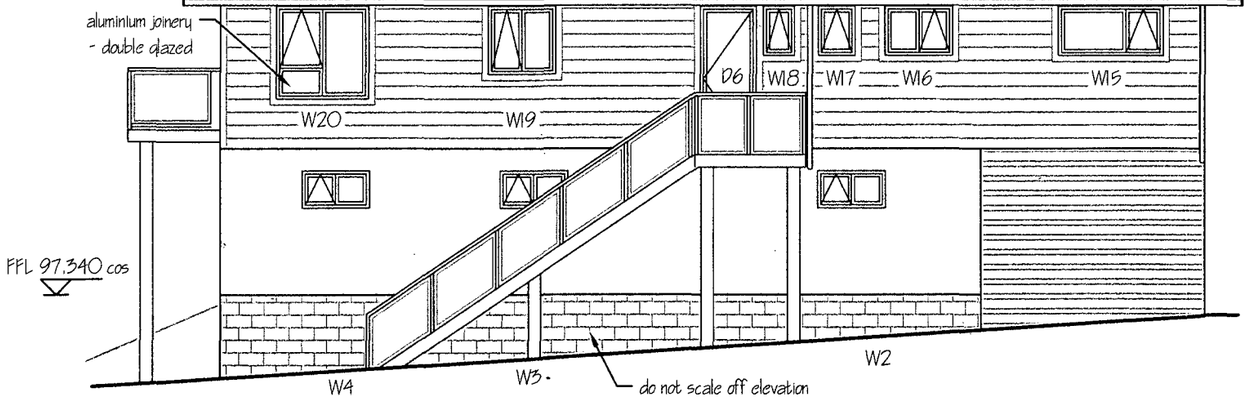
Copy



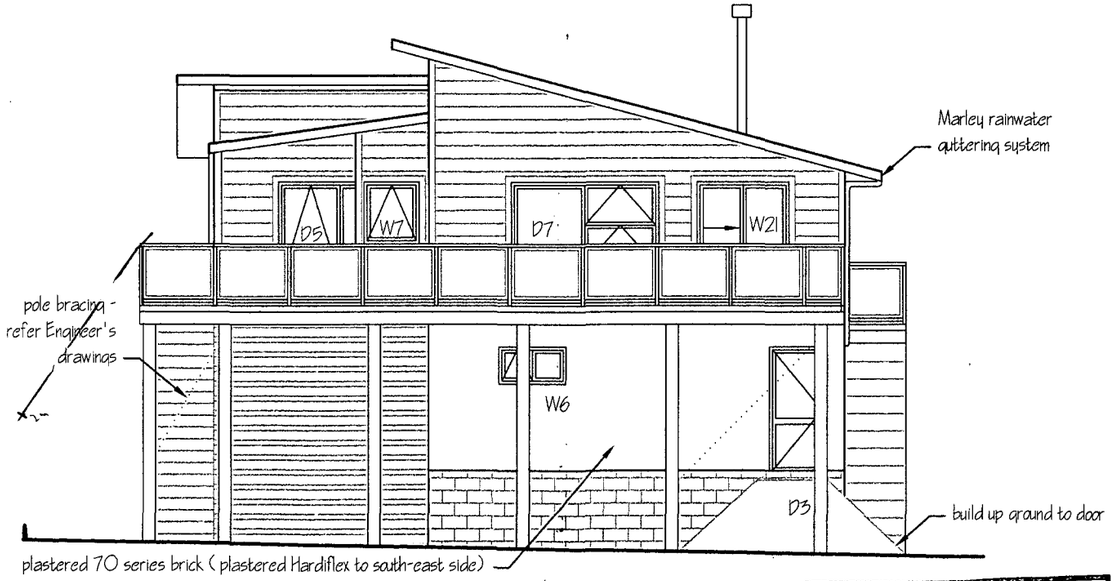
ELEVATION A (NORTH-EAST)
SCALE 1:100



ELEVATION B(SOUTH-EAST)
SCALE 1:100



ELEVATION C (SOUTH-WEST)
SCALE 1:100



ELEVATION D (NORTH-WEST)
SCALE 1:100

RevNo	Revision note	Date

MAX ARCHITECTURAL DESIGN
House Design and Drafting Service
Office - 43 Beach Rd, Waikawa Marina Post - 364a Waikawa Rd Picton
maxarchitecture@hotmail.com Ph / Fax 03 573 6505

D.J.G 19-5-08

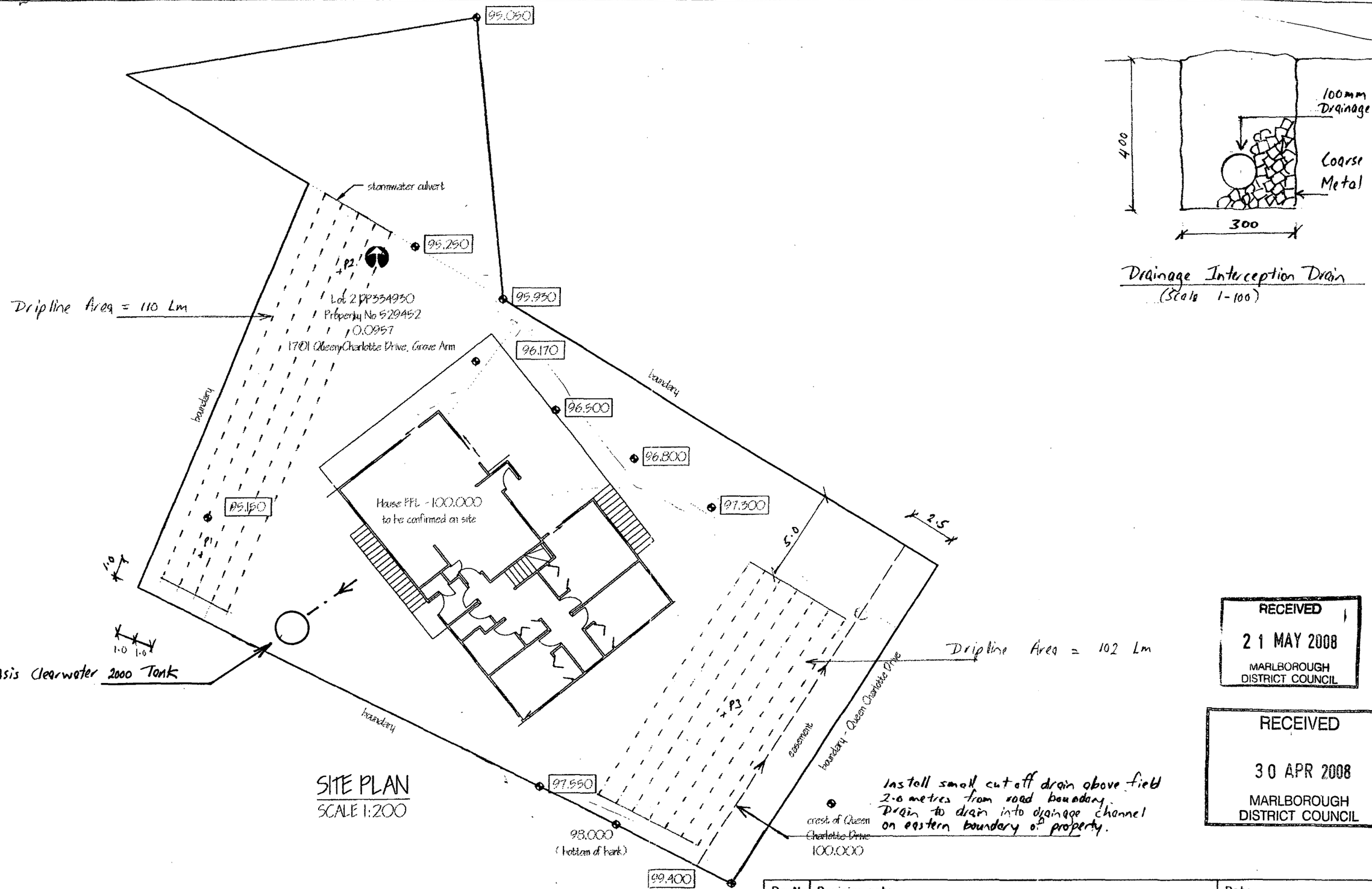
Designed by	File name	Date	Scale
	ROBJ-XPLAN	03/03/08	1:100 (A3)

J AND G ROBINSON

ELEVATIONS

ROBJ-03 | Edition | Sheet 3 of 16

1 copy



SITE PLAN
SCALE 1:200

Drainage Interception Drain
(Scale 1-100)

Install small cut off drain above field 2.0 metres from road boundary. Drain to drain into drainage channel on eastern boundary of property.

RECEIVED
21 MAY 2008
MARLBOROUGH DISTRICT COUNCIL

RECEIVED
30 APR 2008
MARLBOROUGH DISTRICT COUNCIL

RevNo	Revision note	Date

MAX ARCHITECTURAL DESIGN
House Design and Drafting Service
Office - 43 Beach Rd, Waikawa Marina Post - 364a Waikawa Rd Picton
maxarchitecture@hotmail.com Ph / Fax 03 573 6505

W.L.C. 19.5.08

Designed by	File name	Date	Scale
	ROBJ-XPLAN	14/12/07	1:200 (A3)

J AND G ROBINSON

SITE PLAN

ROBJ-04	Edition	Sheet