ABACUS DESIGN

ARCHITECTS PROJECT MANAGERS ENGINEERS

RESOURCE CONSENT APPLICATION

for

EFFLUENT DISPOSAL SYSTEM

at

CONDERS BEND ROAD RENWICK

for

MR. STAPELTON LE

JULY 2005

EFFLUENT DISPOSAL REPORT

PART 2: ASSESSMENT OF ENVIRONMENTAL EFFECTS

2.1 PROPOSAL

Outline:

Mr Stapleton intends to carry out alterations to the existing dwelling located on his property described as Lot 2 DP 12127. Abacus Design has been engaged by Mr Stapleton to investigate and assess the environmental effects of the proposal.

The Stapleton property is situated in a 'Rural 3 Zone' in the Wairau/Awatere Resource Management Planning Maps. The proposed alterations involve the addition of two bedrooms. The effluent disposal system is required to be upgraded accordingly to meet the standard NZS1547.

The proposal involves on-site discharge of domestic wastewater within 30 meters of an open waterbody. This is considered a Discretionary Activity as the proposed system does not meet the standards and terms for the discharge of domestic waste water as a permitted activity,

The Site:

The site is located off Conders Bend Road and is currently developed with a dwelling. The site is generally flat and features a stream, which run approximately 12m inside the eastern boundary of the property. The majority of the site is vegetated with grass and areas of garden. The surrounding area features viticultural plantings.

Effluent Disposal System:

The property features an existing two bedroom dwelling, which is believed to be serviced by a 3500L septic tank and unknown disposal field. If upon uncovering, the tank is found to have a capacity of less than 3500L an additional tank shall be added to the system to provide a minimum total capacity of 3500L. The property owners intend to carry out alterations to the existing dwelling, which involves the construction of two additional bedrooms. Therefore the effluent disposal system is required to be upgraded to NZS1547 Standards for a four bedroom dwelling.

Seepage test holes were not conducted on the site however inspection of the soil profile showed 100mm topsoil on 300mm of silty loam on silty loam with abundant gravel's. The soil was classified as a category 3 soil due to the presence of gravel's. It is proposed to continue using the existing septic tank and disconnect the existing disposal area. A new shallow bed effluent disposal field shall be installed. Due to the size constraints of the site and the presence of a stream the disposal area will be situated a distance of 16m from a water body, which will require resource consent. The water table is situated in excess of 600mm from the proposed disposal level.

Using Table 4.2A1 from NZS1547 for a primary treated effluent, the design loading rate of 15mm/day and a load of 1400 L per day indicate that 93 square of disposal area is required. There is sufficient area available for two 16mx3m shallow beds. The beds shall be constructed to the attached detail with a 2m separation distance between beds and boundaries. A weir box shall be installed to ensure effluent is distributed evenly between the beds. Shallow beds shall be planted with vegetation suited to absorbing and transpiring moisture.

Land Use – Effluent Disposal within 30m of a water body

The proposed effluent disposal system has been described in detail in the above section.

The proposed shallow beds are situated a distance of 15m from the stream. Due to the physical constraints of the site it is not possible to situate the effluent disposal field in a compiling location and we believe that the proposed location is the best practical option and the risk of contamination of the creek is low.

2.2 GENERAL ASSESSMENT CRITERIA

The Marlborough Sounds Resource Management Plan, Volume II, Rules defines the proposed activity as a Discretionary Activity.

The Rules define the general assessment criteria required to be addressed and make reference to the Matters Subject to assessment, which are addressed as follows:

- Requirements of Sections 104,105 and the Fourth Schedule; matters effecting the councils' decision on the proposal are detailed in Section 2.1 above of this application with further references to objectives, policies and rules listed in 2.2.1 below. Items listed in the fourth schedule are also discussed in the listed sections.

- *The likely effect of the proposal on locality and wider community:* The proposal will not affect the amenity values of the Rural three Zone.

- *The likely effects of the proposal on areas of landscape importance:* The area is not located in an area of landscape importance.

- *The likely effects of the proposal on significant nature conservation values, indigenous vegetation and habitats of indigenous fauna.* The site is not known to posses any significant nature conservation values.

- *The likely effects of the proposal on the beds of and within rivers, lakes and wetlands-and drainage channels:* Due to the physical constraints of the site it is not possible to situate the effluent disposal field in a compiling location. We believe that the proposed location is the best practical option and the risk of contamination of the creek is low.

2.3.2 MATTERS FOR CONSIDERATION IN THE EXERCISE OF COUNCILS DISCRETION

The proposal's effects on amenity values, fresh water and rural environment have been detailed above. There are unlikely to be any detrimental effects as a result of the proposal.

2.3.3 LIKELY EFFECTS ON SURROUNDING COMMUNITY

As detailed above, we have attempted to mitigate any negative effect perceived through design, location of the effluent system upgrade. There are unlikely to be any detrimental effects on the surrounding community as a result of the proposal.

APPENDIX

Effluent Disposal Report

ABACUS DESIGN
ARCHITECTS PROJECT MANAGERS ENGINEERS

ABACUS DESIGN LIMITED
TEL 03 577 8857
FAX 03 577 9966
PO BOX 309
56 SCOTT STREET
BLENHEIM
NEW ZEALAND

4 July, 2005

Marlborough District Council
PO Box 442
BLENHEIM

Attention: Building Control

Dear Sirs,

Stapelton Effluent Disposal – Conders Bend Road, Renwick

We have conducted a site visit to the above property described as Lot 2 DP12127 and make the following comments and recommendations regarding effluent disposal.

The property is situated on flat land and is surrounded by viticultural plantings. The property features an existing two bedroom dwelling bedroom dwelling, which is believed to be serviced by a 3500L septic tank and unknown disposal field. If upon uncovering the tank is found to have a capacity of less than 3500L an additional tank shall be added to the system to provide a minimum total capacity of 3500L. The property owners intend to carry out alterations to the existing dwelling, which involves the construction of two additional bedrooms. Therefore the effluent disposal system is required to be upgraded to NZS1547 Standards for a four bedroom dwelling.
Seepage test holes were not conducted on the site however inspection of the soil profile showed 100mm topsoil on 300mm of silty loam on silty clay loam with abundant gravel's. The soil was classified as a category 3 soil due to the presence of gravel's. It is proposed to continue using the existing septic tank and disconnect the existing disposal area. A new shallow bed effluent disposal field shall be installed. Due to the size constraints of the site and the presence of a stream the disposal area will be situated a distance of 16m from a water body, which will require resource consent. The water table is situated in excess of 600mm from the proposed disposal level.
Using Table 4.2A1 from NZS1547 for a primary treated effluent, the design loading rate of 15mm/day and a load of 1400 litres per day indicate that 93m^2 of disposal area is required. There is sufficient area available for two 16mx3m shallow beds. The beds shall be constructed to the attached detail with a 2m separation distance between beds and boundaries. A weir box shall be installed to ensure effluent is distributed evenly between the beds. Shallow beds shall be planted with vegetation suited to absorbing and transpiring moisture. Suggested pipe layout and bed details are attached.

Please contact me if you have any further question.

Yours Faithfully,

Bronwen Frazer

sj524-lt-06

ABACUS DESIGN

ARCHITECTS PROJECT MANAGERS ENGINEERS

Site and Soil Evaluation Report

1.1 Location details

Owner: BRUCE STAPELTON

Location: CONDERS BEND

Address: RENWICK

1.2 Climate

Annual rainfall (mm): —

Annual Evaporation (mm): —

1.3 Intended water supply

- [ ] Public Supply
- [ ] Rain Water (roof collection)
- [x] Bore/Well/Dam

1.5 Existing on-site systems

- [x] Satisfactory
- [ ] Problems evident
- [ ] Failed

Reasons / descriptions etc:

EXISTING SYSTEM OPERATES SATISFACTORY AND NO ODOURS OR LEACHATES NOTED DURING VISIT.

SYSTEM REQUIRES UPGRADING DUE TO ADDITION OF 2 BEDROOMS

1.6 Site Evaluator

Name: BRONWEN FRAZER

Company/agency: Abacus Design

Address: PO Box 309
Blenheim

Phone: 5778857

Fax: 5779966

2.0 ON-SITE EVALUATION

2.1 Work Undertaken

Details: SITE VISIT & EFFLUENT DESIGN

Date: MAY 05

Weather (on day and preceding week): FINE / FINE

Photo Attached: YES / (NO)

2.2 Topography

Slope: FLAT SITE

Drainage Patterns: STREAM

Ground Cover: GARDEN & LAWN

Boundaries: 2 m SET BACK

Waterways: STREAM

Well/Bores: —

Buildings: DWELLING

Other: —

Site History (land Use): SURROUNED BY VINEYARD

Site Plan Attached: (YES) / NO

2.3 Site Exposure

Site Aspect: GOOD

2.4 Environmental concerns (eg. High water table, wetlands, water ways etc.):

STREAM.

2.5 Site Stability

Is expert assessment necessary: YES / (NO)

2.6 Drainage Controls

Depth to seasonal water table: +600mm FROM DISPOSAL LEVEL

Need for cut off drains/diversion banks: NIL

Need for surface water collector/cut off drains: NIL

2.7 Set back Distances

Set back distance: 2m From Boundary 15m from Stream

Reserve area: Reserve area available

3.0 SOIL INVESTIGATION

3.1 Soil profile determination

Method: Test pit / ~~Auger Hole~~

Other

3.2 Reporting

Layer	Lower Depth	Moisture content	Colour (moist)	Field Texture	Coarse Fragments %	Structure	Other
1	100mm	MOIST	BROWN	FINE	NIL	TOPSOIL	
2	300mm	MOIST	BROWN	FINE	NIL	SILTY LOAM	
3	GRAVELS			GRAVELS			
4							
5							

3.3 Estimated Soil Category

Soil Test	1	2	3	4	5
Soil Category	3	3			

3.4 Recommended DLR / DIR

Reason: DLR = 15 mm / day

Presence of Gravels

3.5 General Comments

N/C

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Septic Tank and Disposal Field Design

1.1 **Name of person completing this form** BRONWEN FRAZER

1.2 **Name of person who did the site investigation** BRONWEN FRAZER

1.3 **Date of site investigation** MAY 05

1.4 **Soil Category found on site** 1 2 (3) 4 5

1.4 **Number of Bedrooms** 4

1.5 **Average Daily Flow Rate (Q) (Litres)** 1400

1.6 **Septic Tank Capacity (Litres)** 3500L

1.7 **Soil Category** 3

1.8 **Design Loading Rate (DLR)** 15 mm/day

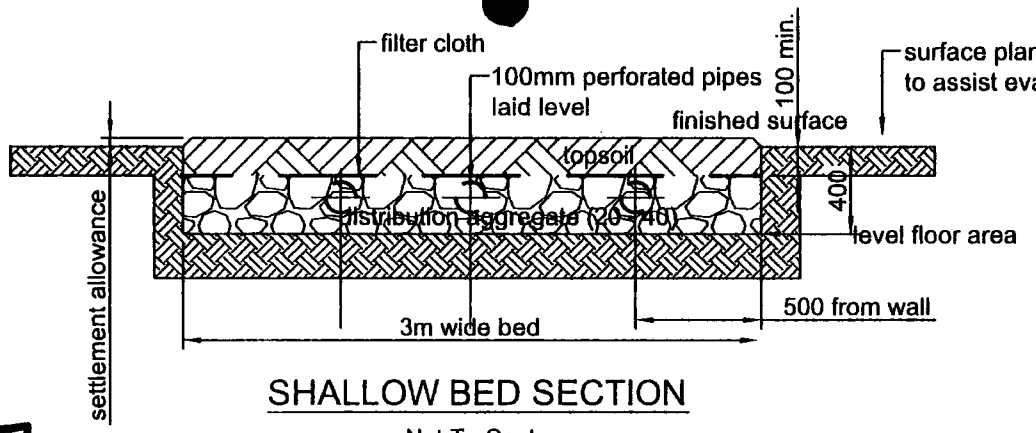
1.9 **Bed Width (m)** 3

2.0 CALCULATIONS

$$L = \frac{(Q\ 1400)}{(DRL\ 15) \times (W\ 3)}$$

Length of bed = 31 m.

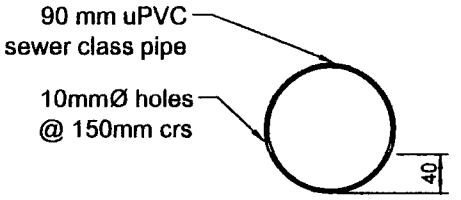
TWO 16m x 3m SHALLOW BEDS



SHALLOW BED SECTION

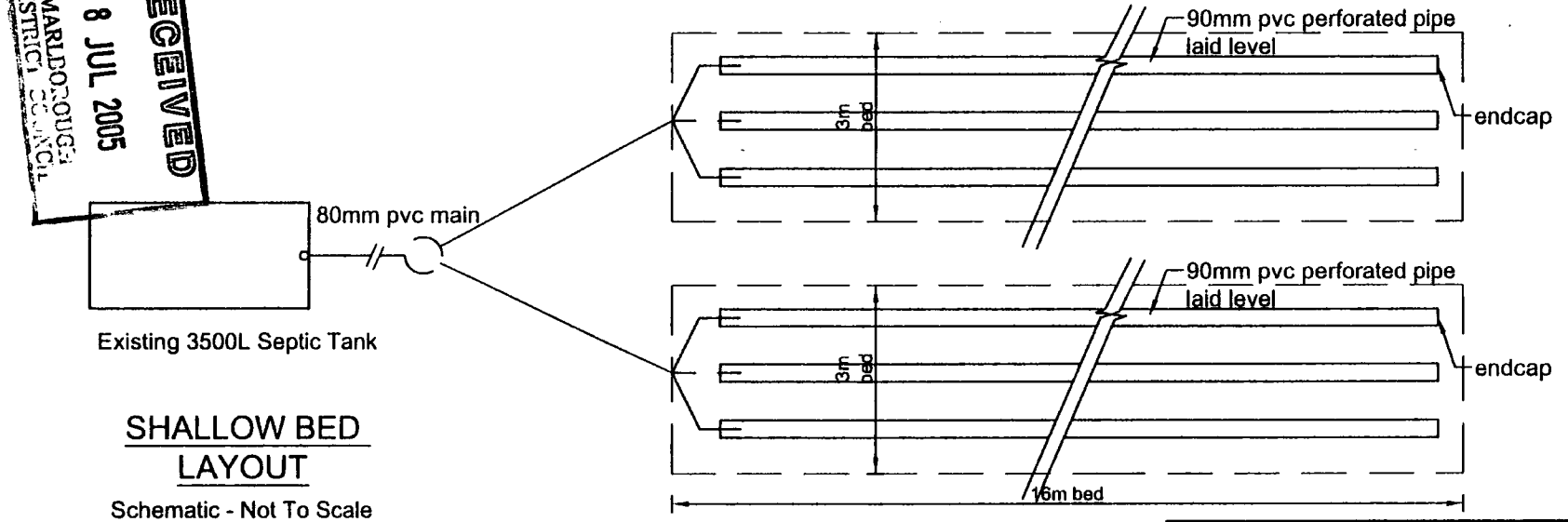
Not To Scale

(level site - slope less than 5%)



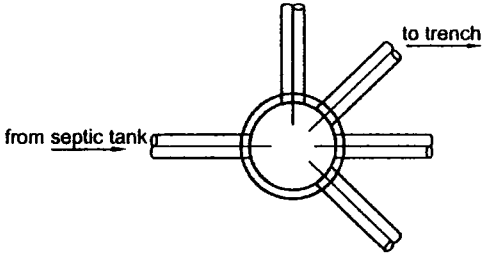
PERFORATED PIPE DETAIL

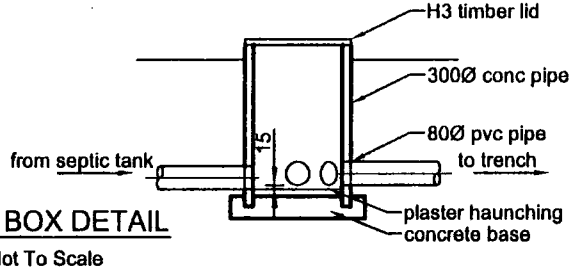
Not To Scale



SHALLOW BED LAYOUT

Schematic - Not To Scale





WEIR BOX DETAIL

Not To Scale

AMENDMENT	DATE	DETAILS
01	08/07/05	FOR INFO

ABACUS DESIGN

PROJECT
STAPELTON EFFLUENT

DRAWING
SHALLOW BED DETAIL

DATE 08/06/05

SCALE NTS

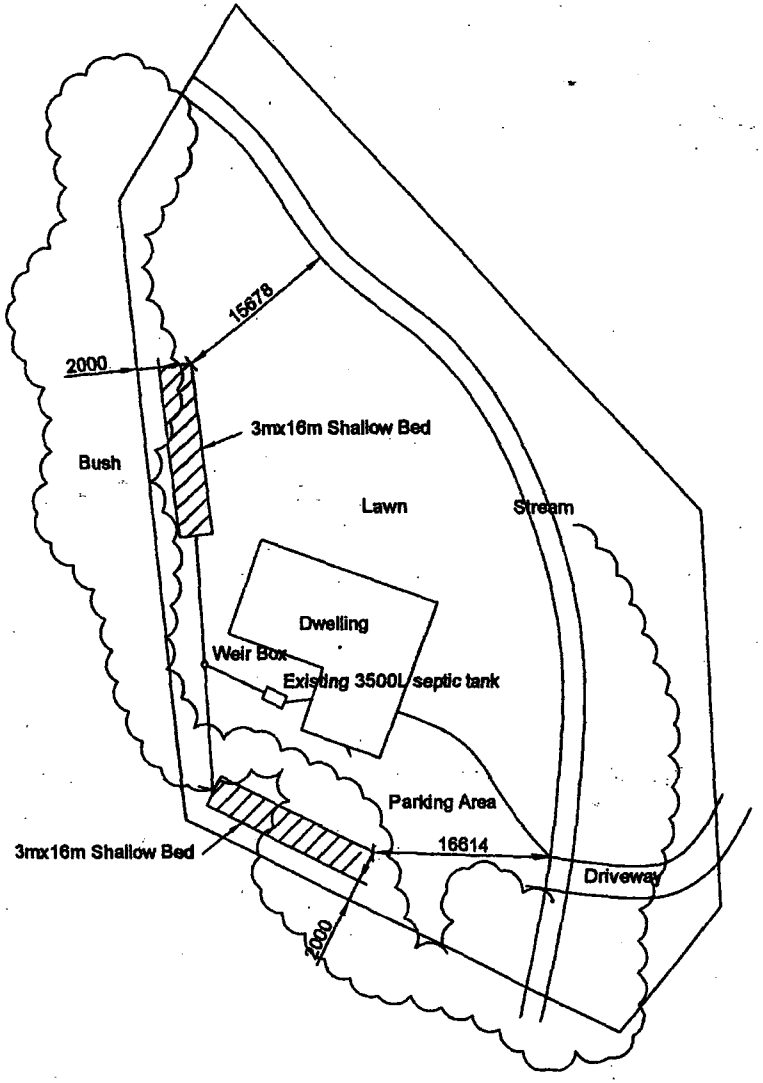
DWG NO. SJ524-FIG2

AMENDMENT 01

CAD FILE REF: SJ524-F1

TEL 03 577 8657
FAX 03 577 8656
PO BOX 308
141 HIGH STREET
BLENHEIM
NEW ZEALAND

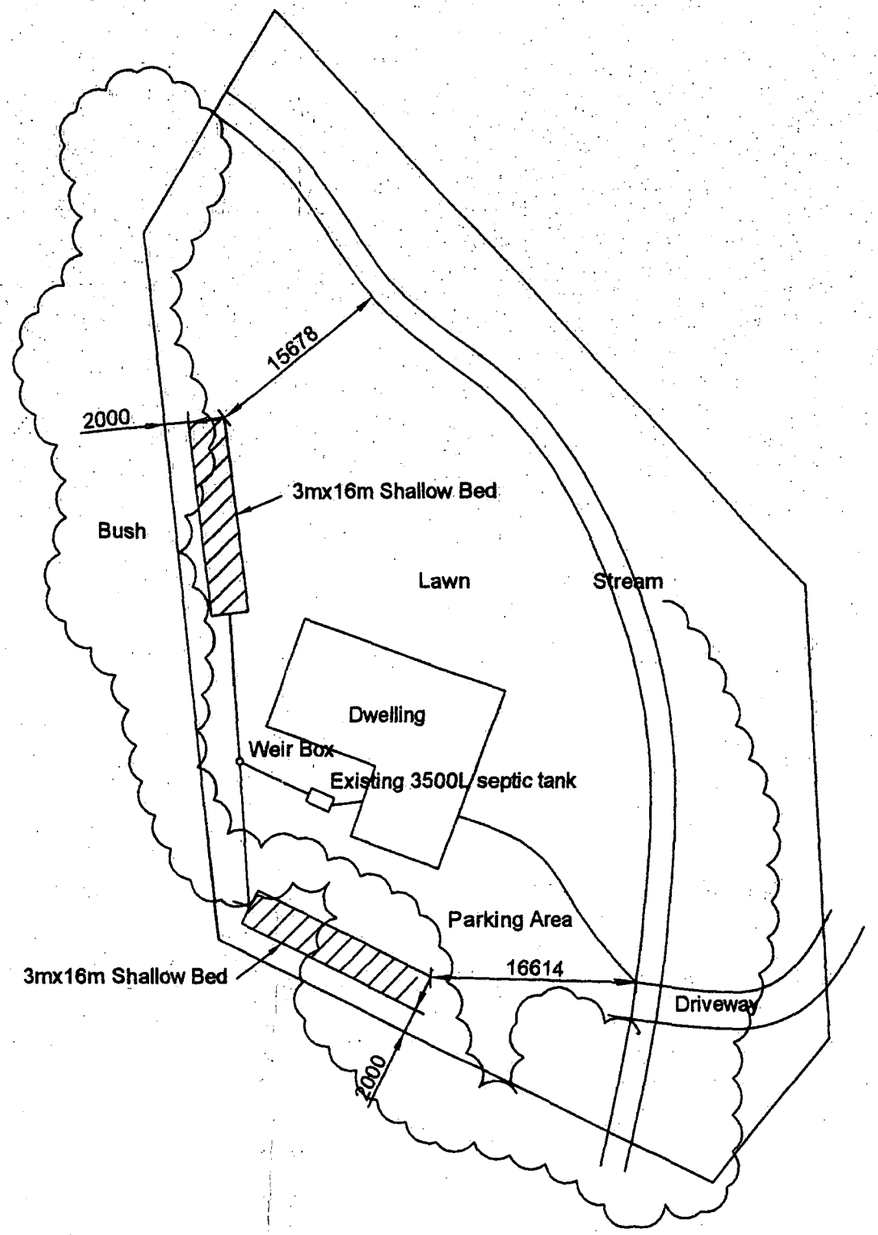
050672



For Info

01 01/07/05 For Info AMENDMENT DATE DETAILS	AMENDMENT DATE DETAILS	CONSULTANTS ABACUS DESIGN abacusdesign@xtra.co.nz - TEL 03 577 8857 - FAX 03 577 9966 - PO BOX 309 - 141 HIGH STREET - BLENHEIM - NEW ZEALAND	CLIENT STAPELTON	PROJECT STAPELTON EFFLUENT DRAWING SITE PLAN	DATE 01/07/05 AMENDMENT 01 DWG NO. SJ524-FIG1 SCALE 1:500 CAD FILE REF: SJ524-F1	A

050672



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