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TECHNICAL SPECIFICATIONS

Hynds Lifestyle Wastewater System

HYNDS ENVIRONMENTAL

CONTENTS

APPENDICES

1. INTRODUCTION

Hynds Lifestyle Systems are an elite range of aerated wastewater treatment systems that offer environmentally sensitive alternatives to the septic tank.

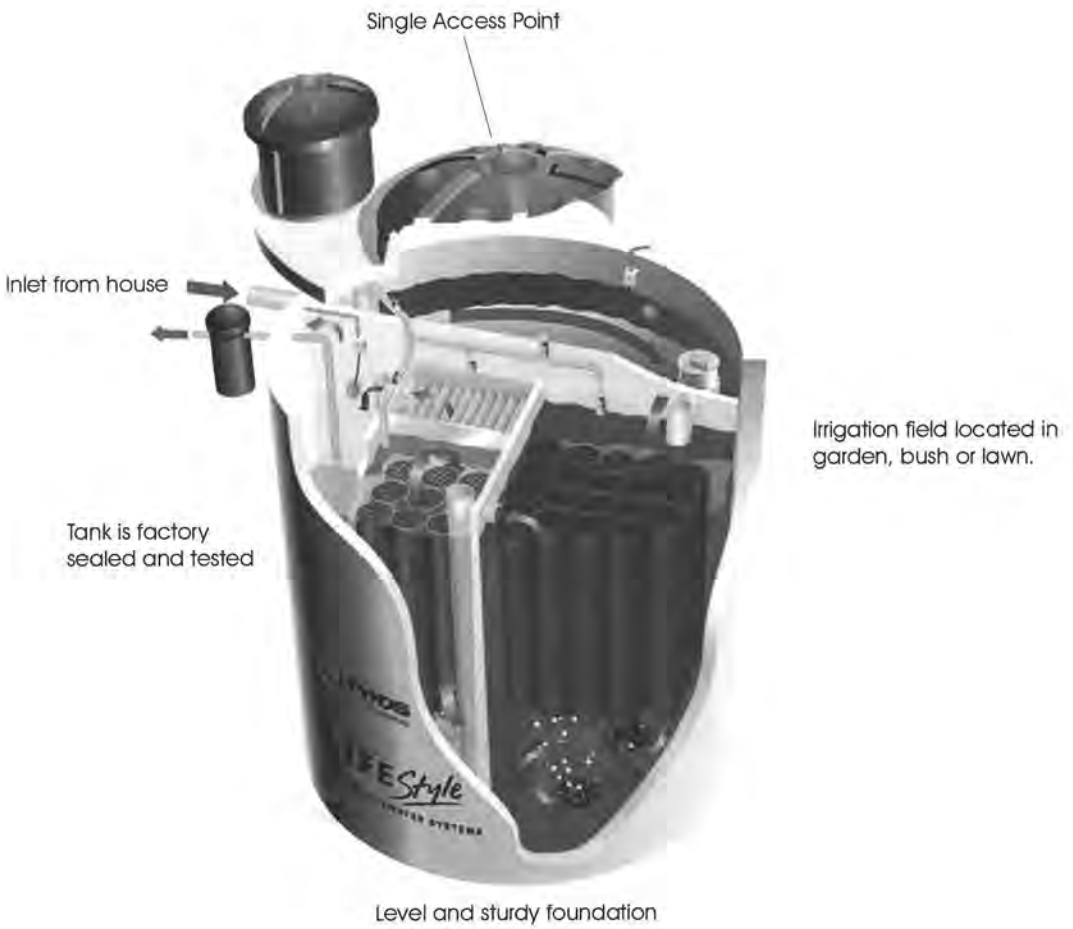
The Lifestyle - Advanced system is supplied as a complete wastewater treatment unit. It only requires a sewage and electrical connection from the house or dwelling to its single tank design.

Systems are installed to offer simple and cost effective wastewater treatment, as well as offering solutions for environmentally sensitive areas or poor ground conditions.

All Lifestyle systems produce a clear, odourless liquid suitable for sustainable irrigation of landscaped gardens, bushes or trees.

Once installed, Lifestyle systems can be easily landscaped to blend in to the surrounding environment.

Hynds Environmental is a privately owned New Zealand company specialising in the manufacture, supply, and installation of environmental protection systems including wastewater systems, stormwater treatment systems, oil water separators and flood walls. A design service and full servicing programme is available to suit the wastewater treatment and disposal needs of both domestic and commercial applications.



2. APPLICATIONS

Lifestyle wastewater systems are commonly used in rural or residential areas not connected to the sewer mains. Typical applications include properties requiring:

- a level of treatment higher than conventional septic tanks;
- effluent disposal on sites with poor soil &/or poor percolation conditions;
- effluent disposal on sites with difficult contours;
- effluent disposal on sites positioned close to beaches, waterways or water sources;
- effluent disposal on sites with high water tables;
- treatment of large volumes;
- limited space available for septic tank disposal trenches.

Figure 1: Lifestyle Advanced System

3. FEATURES AND BENEFITS

Some of the features and benefits of the Lifestyle wastewater systems include:

- Guaranteed strength integrity (ISO 9001 manufactured)
- Highest quality concrete construction means no joints and no leaks
- Large capacity (8500 litres)
- Genuine 24 hour emergency capacity
- Single tank installation
- Full height primary chamber wall to prevent surging and cross contamination of raw sewage
- Zabel filter on Primary to prevent carry through of solids and no biodegradable items
- Sludge return function dramatically reduces primary chamber pump out frequency
- Simple and protected Electronic control and Alarm system (IP rated)
- Quiet operation
- Economic to operate – $150-$200 pa
- Simple Retrofit for upgrading of an existing system
- Designed for ground water prevention
- Visually unobtrusive with environmentally blending colours
- Fully compensated drip irrigation system for even distribution
- Simple to maintain irrigation filter which offers 6 years warrantee on blockage of irrigation field
- Hynds is a reliable and established company, providing drainage solutions to New Zealand since 1973

Figure 2: Hynds Branches nationwide

- Hynds stand by their quality and warrantees
- Hynds operates a 24 hour call service
- Low maintenance cost compared to existing septic tanks

4. THE TREATMENT PROCESS

The treatment process occurs through a series of treatment chambers before disposal via a self-compensating drip irrigation field.

The system has the ability to process and treat 1,600 litres per day within a 24-hour period (although larger flows are possible).

The treatment process occurs as follows:

- anaerobic breakdown of the wastewater effluent within a 3000 litre pretreatment chamber, complete with outlet Zabel bio filter;
- two stage aerobic digestion;
- effluent clarification;
- recycling of activated sludge;
- irrigation pump chamber;
- fine filtering of suspended solids through a disc/mesh filter;
- final disposal of the treated effluent through pressurised and compensated drip irrigation network system.

TREATMENT STAGES OF A HYNDS LIFESTYLE WASTEWATER SYSTEM

1. **Wastewater enters from dwelling.**
2. **Primary treatment tank.**
3. **Biological filter.**
4. **First stage aeration chamber.**
5. **Second stage aeration chamber.**
6. **Laminer plate clarification.**
7. **Pump out / irrigation.**

5. CHAMBER FUNCTIONS

For specific chamber capacities refer to Table 1.

5.1 Pretreatment Chamber (Anaerobic)

The pretreatment or anaerobic chamber is situated at the beginning of the treatment process. The chamber is designed to retain the wastewater so the larger settleable solids are retained and form a sludge at the bottom of the chamber. Solids that float combine to form a thick scum on the top of the effluent. Anaerobic organisims break down the sludge resulting in the formation of Hydrogen Sulphide gas. In a well functioning system, this gas should be contained effectively by the solid scum. Further removal of the solids takes place in a biological filter situated at the outlet of the pretreatment chamber.

5.2 Biological Disc Filter

A biological filter is installed at the outlet of the pretreatment tank as a standard feature in the Lifestyle Advanced system.
The Hynds filter performs three main functions in the pretreatment tank as follows:

- reduces surge action and offers flow control;
- retains the solids in the tank;
- lowers the BOD_5

Figure 3: Biological Disc Filter

Table 1

System Type	Pre-treatment Volumes	Aeration Volumes (Stage 1)	Aeration Volumes (Stage 2)	Irrigation Volume	Total System Working Volume	Emergency Capacity	Total System Capacity	Standard System Surge Capacity	Standard System Treatment Capacity
Advanced	3,000 litres	1530 litres	1530 litres	1000 litres	7,200 litres	1,770 litres	8,450 litres	600 litres per hour	1,800 litres per day
Compact	3,000 litres	1500 litres	1250 litres	1500 litres	6,500 litres	2,300 litres	7,500 litres	600 litres per hour	1,800 litres per day
Elite	Stage 1 4,500 litres Stage 2 3000 litres	1530 litres	1530 litres	1000 litres	11,200 litres	3,020 litres	12,950 litres	800 litres per hour	3,000 litres per day

Table 1 : Lifestyle Wastewater Treatment Systems chamber capacities

5.3 Submerged Aerated Filtration Chambers (Aerobic Digestion) – Stage 1

The submerged aerated filtration chamber is a two-stage process. The wastewater is initially infused with oxygen by an electric blower (stored above ground) and a fine bubble diffuser system at the base of the tank. Biomass filter media is situated above the diffusers and aerobic bacteria rapidly multiply on the surface of these biomass filters to create a large biological filter. The effluent is cleansed as it passes through the filter. The bacteria will eventually die and fall off the biomass. This is called slough and is passed into the next chamber.

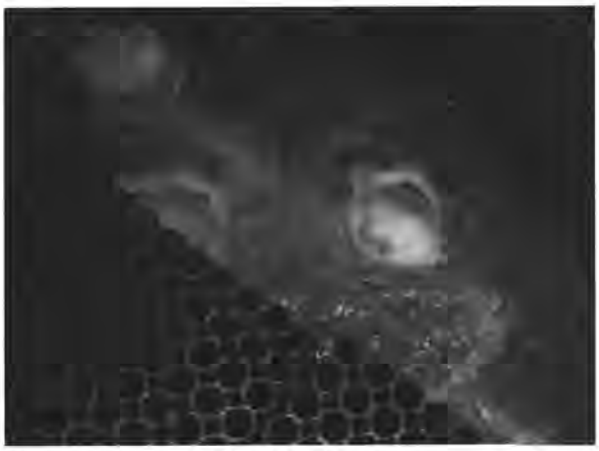


Figure 4: Submerged Aerated Filtration

5.4 Submerged Aerated Filtration Chambers (Aerobic Digestion) – Stage 2

The submerged aerated filtration process is repeated in a second chamber, which improves the quality of effluent produced. This effluent then passes into the laminar plate separator.

5.5 Laminar Plate Separator and Sludge Return System

Final clarification of the effluent occurs in a laminar plate separator, which is located at the end of the stage 2 aeration chamber. The effluent enters the separator chamber near the base of the tank before passing up through a series of diagonal honeycombed plates to the outlet pipe. The laminar plates remove any fine suspended particles remaining in the effluent and this material drops to a hopper at the base of the separator tank. The velocity of the flow up through the plates is controlled by specifically sized outlet holes, which ensures a high level of suspended solid removal.

Figure 5: Laminar plate separator

A venturi system, driven by the electric blower used for aeration, constantly takes effluent from the bottom of the hopper back to the inlet of the pretreatment chamber. The slough produced in the aeration stages is also passed back to the pretreatment tank at this stage. This high energy activated sludge helps break down the anaerobic sludge in the pretreatment chamber, thereby reducing the frequency that this chamber will require to be pumped out.

5.6 Disinfection Option

Disinfection can be specified with the Lifestyle wastewater system with the use of chlorination (or other alternative methods) if necessary. The disinfection reduces the number of pathogenic coliform organisms present in the treated wastewater and is normally only used in areas where disposal fields are close to aquifers, high pedestrian traffic areas or where spray irrigation is allowed.

The chlorination of the system is achieved with the use of a contact cartridge which is located above the irrigation storage chamber.

Systems installed with the chlorination option usually require an extra service visit annually to ensure the chlorination is maintained.

(Note: The use of chlorination as a method of disinfection will be dependant upon the local regulatory authority - please check their requirement before specifying this option).

5.7 Irrigation Pump Chamber

The irrigation chamber offers a storage buffer to cope with the daily and surge loads placed on the system. The chamber houses a submersible pump (D42) which feeds the disposal field, operated by a float switch.

The Lifestyle wastewater system has been designed to allow a specified 'balance' between the irrigation chamber volume and the pump to handle the design input. Please refer to the Hynds Irrigation Headloss Calculator and the pump curve to assess if a custom pump should be supplied.

Figure 6:Pump out chamber

6. DESIGN PARAMETERS

The correct design of a Lifestyle Treatment System is essential for it's optimum performance. Design must be performed by a civil engineer or other competent professional person (approved by the local regulatory authority) after performing a site investigation/evaluation and following the steps below:

- determination of daily hydraulic input, surge loading, and treatment capacity
- ascertainment of effluent BOD_5 concentration
- positioning of tanks on site in relation to fall, depth, and distance
- positioning of disposal field onsite noting elevations for irrigation pump sizing
- design of disposal field (refer to "The Disposal Field – page 9")
- confirmation of Hynds Environmental - Service Contract

6.1 Hydraulics

Daily hydraulic design may be calculated either by using the Auckland Regional Council Technical Publication No. 058 (TP58) or the New Zealand/Australian Standards NZS 1546-1547.

The surge loads detailed in Table 1 relate to the maximum flow rate possible for our standard systems, without the need to enlarge the irrigation tank/pump combination. It does not relate to treatment quality as systems running continually at this maximum flow rate will not function at their optimum level and may require additional irrigation filter maintenance. Surge conditions should be kept below a maximum period of 10 minutes per hour.

6.2 Effluent Concentration

The standard raw wastewater and grey-water effluent concentrations to be treated should be within the values stated in either ARC TP 58 or the New Zealand/Australian Standards.

Consultation with a Hynds Environmental Technical Representative will be needed for systems required to treat effluent with levels above that stated in these documents, as well as for systems with high grey-water proportions.

6.3 Selection of Tank Site Position

The positioning of the tanks on site must allow a minimum gravity fall (vertical drop) into the pretreatment tank of 1 in 100mm. Additional tank installation depth can be obtained with the specification of riser sections in either 150mm, 300mm, or 450mm heights.

Figure 7:A landscaped Lifestyle System

Tanks are not designed for vehicle loads, point loads, or earth-fill above 450mm deep, unless purpose designed.

Consideration may be made for landscaping aesthetics to cover the concrete tank lid. Refer to www.hynds.co.nz for examples of landscaped systems.

6.4 Selection of Disposal Field Position

Positioning of the disposal field should seek to maximise evapo-transpiration potential. Once the location of the field is designated the ***Hynds head loss spreadsheet should be used to see if a custom pump should be specified for the system. Hynds will email this spreadsheet upon request.***
The field must be designated in a position separate from recreational or animal grazing areas, or gardens used for planting vegetables for consumption. It must also be positioned away from neighbouring boundaries, watercourses and water sources by distances specified by the local regulatory authority for the region concerned.

Figure 8:A typical irrigation field

6.5 Maintenance Contract

Ensure that a Hynds Environmental Service Contract is specified within your design summary to ensure regular inspection and programmed servicing of the system occurs.

7. THE DISPOSAL FIELD

The Lifestyle wastewater system utilises a pressure compensated dripline emitter system to irrigate the disposal field.
The disposal field should be designed to maximise the evapo-transpiration potential which is a combination of plant transpiration and surface evaporation. Minimal soakage and percolation rates can be accommodated.
The disposal field allows a residual amount of stimulated aerobic bacteria to be transported into the anaerobic disposal fields, hence lengthening the bed's life further by producing an enhanced zone of bacterial activity.
This system incorporates an irrigation filter (described below) as well as combinations of flushing valves, air release valves, and check valves to ensure that the disposal beds perform at an optimum level.
The system owner may use this disposal method to irrigate new or existing shrubs or grasses although this is dependent on their water needs together with the systems daily output volume.
The application rate of the treated effluent for each site must be determined by performing a site investigation and referencing TP58 or the New Zealand/Australian Standard for relevant design values.
The disposal field area (in m^2) may then be determined by dividing the daily flow by the application rate.

The length of the drip-line and the layout of the disposal field is then configured by following the basic principals detailed below. (Refer to Appendix A for Typical Irrigation Layouts or consult your Hynds Environmental Technical Representative for further information):

- appropriate choice of drip-line diameter and emitter output rates;
- appropriate choice of emitter spacing and drip-line trench spacing;
- determine drip-line length;
- design layout of irrigation field including (feeder pipe) manifold;
- placement of field either in - bush block with natural vegetation cover - or in bark/mulch garden - or trenching in shallow trench (of typical trench cross-section 50 - 100mm depth and width);
- optional bedding material of topsoil or scoria where conditions require;
- placing drip-lines laterally across contours to ensure treated effluent does not run down the lines laid on a slope;
- ensure that system is continually pressurised above 5m head to allow the emitters to work output correctly;
- use of air valves at the top of the system;
- use of flushing valves at the bottom of the system;
- use of check valves when vertical falls greater than 4m occur. These valves are used to minimise working systems from emptying in small zones which may result in local flooding;
- disposal fields with total irrigation line length greater than 350m may need a higher pressure irrigation pump.

7.1 Irrigation Filter

An irrigation filter is included when using pressure compensated dripline emitters within the disposal field. This filter is a disk-mesh configuration which retains any non-digestable particles still remaining in suspension after treatment.

The filter acts to lengthen the life of the disposal field by significantly reducing any potential blockages within the disposal field emitters.

A range of disk-mesh filters are available for varying design flows.

Figure 9 and 10: Cleaning an irrigation filter

8. TREATMENT LEVELS

A very high level of treatment quality is provided by a Lifestyle wastewater system.

8.1 Controls

The levels obtained depend on a number of controlling factors as follows:

- *concentration of effluent to be treated (as a level of BOD_5 initially in wastewater);*
- *daily input flows;*
- *the volume of surge loads entering the system;*
- *adequate disposal field size;*
- *avoidance of "foreign" non-biological substances;*
- *continual system maintenance.*

8.2 Treatment

A correctly designed and operated Lifestyle system required to treat normal domestic effluent at 20°C will produce a treated effluent with the following characteristics:

- *average BOD_5 of 20 mg/l with no samples greater than 30 mg/l;*
- *non-filterable residue of 20 mg/l average value with no samples greater than 45 mg/l;*
- *reduction in E-coliforms.*

For domestic systems with disinfection option, this can be reduced to an E-coli count not greater than 200 E-coli per 100ml. The free residue chlorine value generally does not exceed 0.5mg/l after 30 minutes of detention at peak flows of 650 litres per 2 hours.

The Lifestyle system could still operate effectively outside of these parameters for short periods of time provided the system has the ability to recover to standard levels.

For systems continuously operating outside standard capacities, treated effluent quality is expected to decrease during the aeration and clarification processes. A lower quality treated effluent will then be pumped to the disposal field, usually requiring more frequent cleaning of the irrigation filter.

Figure 11: Testing is carried out by independent laboratories

9. MONITORING SYSTEMS

The Lifestyle wastewater system is monitored by an electronic control system. A small remote alarm plate is located inside the dwelling and contains an audible and visible alarm, activating whenever a fault or high water level occurs.

The audible alarm may be deactivated at the alarm plate and must be reactivated once the fault has been corrected or the high water status light has switched off. (Refer to Appendix B – User Guide EV13 and Electrical Requirements EV38) for schematic electrical wiring diagrams for the Lifestyle Advanced system.

10. TANK CONSTRUCTION

The Lifestyle tank is constructed of concrete during a unique homogeneous casting process to ensure that internal tank partitions are accurately located and sealed. Tensile reinforcement is formed with a combination of internal steel and fibre. The lid is constructed of steel reinforced concrete. The concrete compressive strength is 40MPa at 28 days. No fibreglass components are used.
Systems incorporate sealed stainless steel submersible pumps.

11. INSTALLATION OF A SYSTEM

Lifestyle systems are installed either by Hynds Environmental Technical Representatives or trained installers who have undertaken specified Lifestyle installer training. Refer to Appendix B (Installation Information EV14) for details on installation of the Lifestyle systems.
A free site visit and quotation are provided for each Lifestyle system. The quotation will detail the extent of the works covered for each project.

Figure 12:Delivery of a Lifestyle system

Figure 13: Installation of a Lifestyle system

Tanks must be filled with water to the normal operating level immediately after installation to prevent the tanks from floating if the water table rises.
Tanks are installed in a hole excavated with a level horizontal foundation. If the foundation is found to be soft, rocky, or uneven, then a suitable granular material (minimum of 50mm thickness) is placed as a bedding support for the tanks.
Wiring of the alarm board within the dwelling is to be performed by a registered electrician and is not performed by Hynds Environmental staff or installers. Refer to Appendix B (Electrical Requirements EV38) for the Lifestyle schematic electrical wiring diagram.

12. COMMISSIONING

Commissioning of a Lifestyle system may only be performed by a Hynds Environmental Technical Representative or a trained Lifestyle system installer. The commissioning is completed after the tank has been installed and once electrical power is available. A commissioning report is completed for all systems.

13. SYSTEM REQUIREMENTS

The following requirements must be observed to ensure problem-free operation:

•Do not switch off the system once commissioned;

•Check detergents to see if they are biodegradable or suitable for use in a septic tank

•Do not allow non-biodegradable chemicals to enter the system

•Try to spread wash loads over the week;

•Fix all leaking faucets

•Ensure that rain or surface water cannot enter the sewer drainage system. eg. via low gully traps at the house

•Never make adjustments to the system or controller

A comprehensive list of cleaning chemicals which are not recommended can be provided.

14. SYSTEM SERVICING

Lifestyle systems come with a Maintenance Servicing Contract which ensures that the system continues to function efficiently. Servicing is performed by trained Technical Representatives.

Servicing includes:

- all filters cleaned
- irrigation lines flushed
- electrical equipment tested
- testing of alarm system
- system performance reviewed

All services are recorded on Service Report Sheets which are supplied to the system owner and kept by Hynds Environmental for future system reference. An additional copy is sent to the Local Regional Authority officer if required.

If a system is not running at optimum efficiency, the Technical Representative will detail this for the system owner's attention.

Figure 14:Servicing of a Lifestyle system is completed every 6 months

15. PRODUCT WARRANTEES

Hynds Environmental offers a 15 -year warrantee for concrete components. System pumps and electronic controllers each have a 24-months replacement warrantee. Warrantees have specific limitations and are not valid in situations of abuse or misuse.

Appendix A

Typical Irrigation Layouts

The Lifestyle Wastewater Treatment System utilises a pressure compensated dripline emitter irrigation system to irrigate the disposal field.

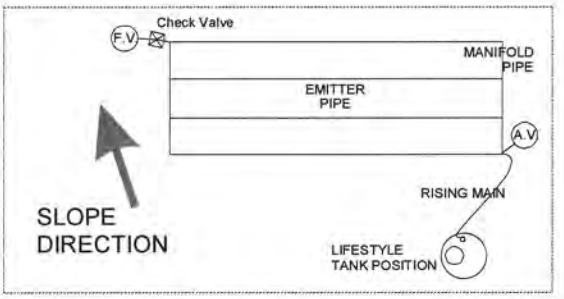
The following typical layouts are presented to assist the designer and installer to correctly use this effective disposal system.

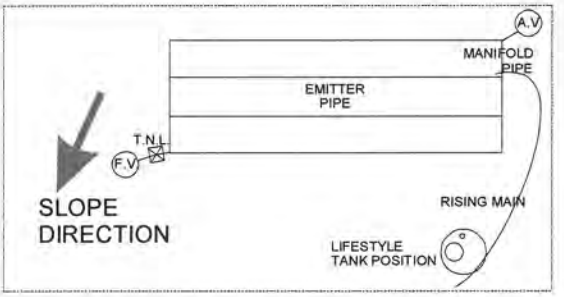
These layouts are schematic only and represent plan views of the disposal field.

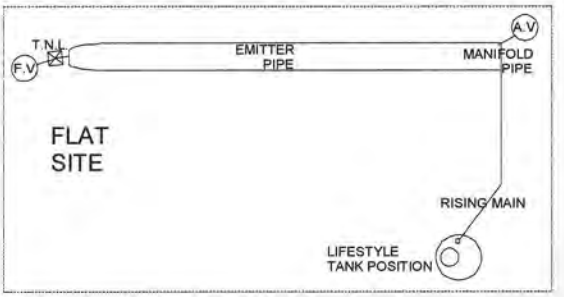
Many other effective layouts are possible.

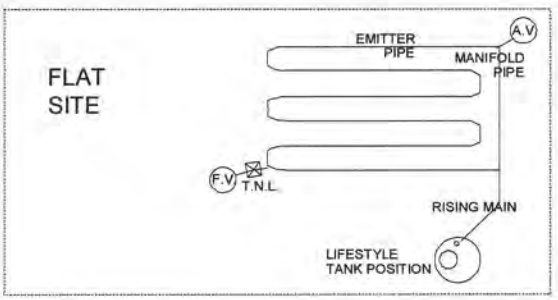
Notes:

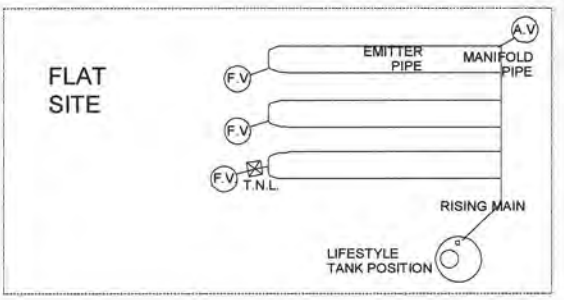
- *slope direction shown by arrow;*
- *manifold pipe is usually solid walled alkathene but may be emitter pipe on flat ground;*
- *A.V. = Air Release Valve (position to prevent blockage);*
- *Check Valve = Allows flow in one direction after 4m head has been exceeded within the system. Prevents draining of the system after shutdown. Ensures immediate startup when irrigation line exceeds 4m head pressure;*
- *irrigation pipe, bend and tee fittings are used to form right angles and connections within the layouts. Curves in the emitter pipe signify radius turns in the field without the use of bend fittings;*
- *F.V. = Flush Valve (position to prevent blockage).*











Appendix B Lifestyle Installation Instructions

Installation Information (EV14)

Electrical Requirements (EV38)

User Guide (EV13)

HYNDS ENVIRONMENTAL

ENVIRONMENTAL PROTECTION SYSTEMS

LIFEStyle Aerated Wastewater Treatment System

INSTALLATION INFORMATION

A Hynds Lifestyle Wastewater Treatment System should only be installed by an authorised installer.

Installers should take note of the following information:

1. Tank Access

There must be sufficient access on the site for the delivery truck to reverse up to the edge of the excavation. The overall height of the truck is 4.3m and the weight is approximately 22 Tonne. Overhead power lines, steep slopes and other obstructions must be noted. If insufficient access is not available, other installation methods must be considered.

2. Excavation Requirements

(see diagram on page 2)

If the homeowner is making arrangements for the excavation, a 5 Tonne excavator is generally the minimum requirement. The excavator must be reliably maintained and should remain available until completion of the installation for backfilling and compacting. To avoid the excavation filling with rainwater and / or collapsing, the hole should only be dug on the day of installation. Excavation should be completed under the supervision of an authorised Hynds Environmental installer to ensure that the excavation is in the correct position and to the correct dimensions.

Note: if risers are required (see point 3 below), the hole will need to be deeper and a larger excavator may be required. Scoria, sand or GAP7 (about ½ m^3) must be available as bedding for the tank.

3. Connection into the System

The sewage network is connected into the tank with a normal 100mm PVC stub fitting as shown in the diagram.

A minimum fall of 1:60 is required from the house to the Lifestyle tank. If this cannot be achieved using a standard excavation depth – either due to the site's geography or due to existing sewer lines – the tank must be lowered and risers fitted (normally at extra cost). The risers are necessary to ensure protection of electrical components and access to the tank for servicing purposes. It must be ensured that new sewer lines are not installed unnecessarily steep and / or deep, as this may cause extra expense. Hynds Environmental installers can provide full drainage services and carry out the final sewage connection.

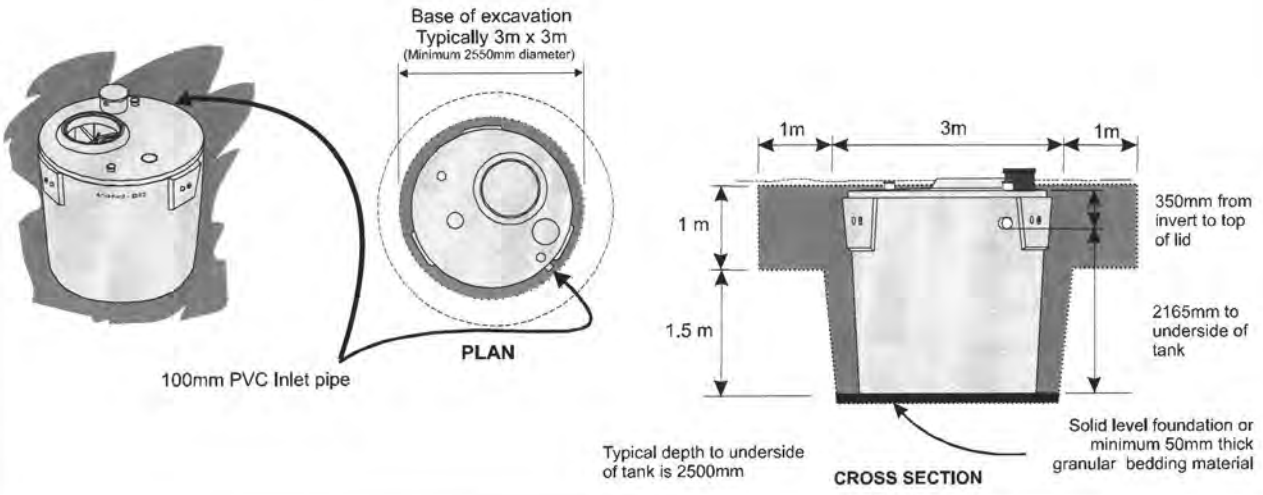
4. Electrical

Please refer to the Electrical Requirements brochure (EV.38).

A certified electrician must complete the electrical connections to the system. To save additional trenching cost, the electrical cables conduit can be laid in the drainage trench (to the tank) while it is still open. The system's alarm plate will be found inside the electrical control unit by removing the face cover. The alarm needs to be installed inside a building, in a position where it can be easily heard and accessed.

AERATED WASTEWATER TREATMENT SYSTEM

Excavation Requirements



5. Disposal Area

The area designated for disposal of the treated wastewater will need to be prepared. Before irrigation can be laid, the grass must be cut short or ideally the area should be rotary hoed. Once the irrigation has been laid, the area must be planted and mulched or barked. This must be completed before the Producer Statement can be supplied. Once prepared, livestock and vehicles must be kept off the area.

For surface irrigation systems, suitable trees and shrubs must be planted over the land application area to ensure adequate evapo-transpiration. Hynds Environmental can provide further information on suitable plants. In addition, unless sufficient leaf litter is present to naturally cover the irrigation lines (e.g. in native bush), a 75-100mm thick layer of bark or mulch must be laid over the lines. This acts as a barrier to suppress weeds and to protect the lines from UV rays and disturbance.

Planting and barking must be completed before the Designer can sign off the installation and before a Code of Compliance certificate can be issued by the local authority. For bark gardens, we recommend the use of aeratable bark (grade 4 or larger). This will not be blown around and allows good airflow to the ground.

Weed matting is not recommended as it 'suffocates' the soil (even in non-irrigated situations).

Buried irrigation lawn areas will need final preparation before sowing the grass seed. These areas should not be driven on by anything heavier than a ride-on mower.

6. Other Site Works

Arrangements must be made for the construction of any cut-off/ swale drains if specified in the Engineer's wastewater design report. These drains prevent any surface run-off water flowing on or over the area and ensure compliance with consent conditions. This construction can be contracted to Hynds Environmental.

7. Planning

To assist in planning of the installation, the Building Consent Number and proposed date of installation must be advised as soon as possible. Any changes to the installation date must be advised immediately as the earliest possible notification will help ensure that the tank is installed when the homeowner is ready for it.

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protecting our environment

HYNDS ENVIRONMENTAL

www.hynds.co.nz

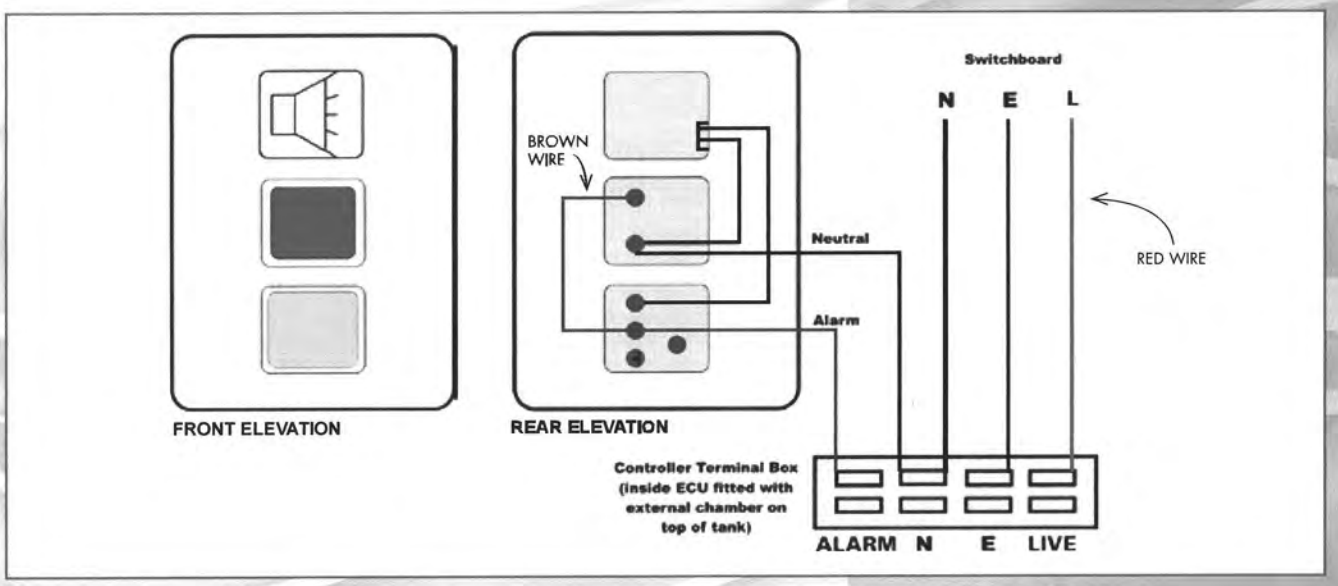
Reference EV14 September 2006

HYNDS ENVIRONMENTAL

ENVIRONMENTAL PROTECTION SYSTEMS

LIFE Style Aerated Wastewater Treatment System

ELECTRICAL REQUIREMENTS



Introduction

A registered electrician should perform the electrical connection of a Hynds Lifestyle Wastewater Treatment System on-site.

All electrical work must be carried out in accordance with NZS 3000: 1997 and NZECP2: 1993.

A 2.5mm (twin and earth) cable from the switchboard to the tank, protected by its own dedicated 16 Amp 30mA RCD. For the homeowner / occupier's benefit, the cable should be labeled appropriately. In addition, a twin P&N cable is required from the controller (on the tank) to the alarm plate (inside the building).

External Power and Alarm Cables

These cables can be laid in the drainage line trench going out to the tank, to save additional trenching cost. The wiring conduit needs to be fully sealed (including a the ends) to ensure storm / ground water cannot enter the system's electrical housing via water ingress into and tracking down inside the conduit.

Alarm Plate (see diagram above)

The audio-visual alarm is similar to a light switch (using the same type of flush box) and will be with the electrical controller, which is in the chamber on top of the tank.

The alarm should be installed inside the building and positioned where it can be heard and accessed in order to view the warning light and, if necessary, the alarm muted once Hynds Environmental has been contacted).

On livening of the circuit, the alarm may activate. This is caused by a high water level from the initial inactive period and may last up to 30 minutes depending on the water level. During this period, the alarm can be switched to the 'MUTE' (up) position.

Once the water level has been pumped down to the tank's normal operating level, the light will automatically extinguish and the switch must be reset to its 'NORMAL' (down) position in order to provide the audible warning.

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protecting our environment

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Reference EV38 October 2007

SUBMERSIBLE DRAINAGE PUMPS
Model Numbers: D42A, D42M

DEPEND ON DAVEY

SUMP PUMPS

PRODUCT DESCRIPTION

Submersible sump pump with twin impeller design for higher pressure, up to 26m head

APPLICATIONS

- Lawn & garden irrigation
- Sump emptying to higher heads
- Treated effluent disposal
- Water transfer from wells

"A" suffix models equipped with present length automatic float switch fitted for automatic operation.

FEATURES & BENEFITS

Double mechanical seal, one in oil bath on motor and extra mechanical seal on pump
- Superior reliability
- Long service life

Corrosion resistant 304 stainless steel shaft, motor shell and fasteners
- Long service life

Centrifugal multistage twin impeller design
- Higher pressures & increased efficiency

Closed vane impellers with long engagement "D" drives
- Positive operation
- Long service life

Labyrinth impeller neck rings
- Maintain pump performance
- Less susceptible to wear

FEATURES & BENEFITS

Corrosion resistant hard wearing polycarbonate impellers
- Long service life

Corrosion resistant stainless steel fine mesh suction strainer with large surface area
- Prevents blockages of the pump by solids

In-built automatic thermal overload
- Protects the motor in the event of blockage or voltage supply problems

OPERATING LIMITS

Capacities to	110lpm
Max. total head	26m
Max. submergence	12m
Max. operating temperature	50°C
Max. soft solids	1.9mm O.D.
Outlet size (BSP)	1"F

Suitable Fluids
Clean water of neutral pH containing up to 1% small solids. Some wear should be expected while pumping hard solids in suspension.

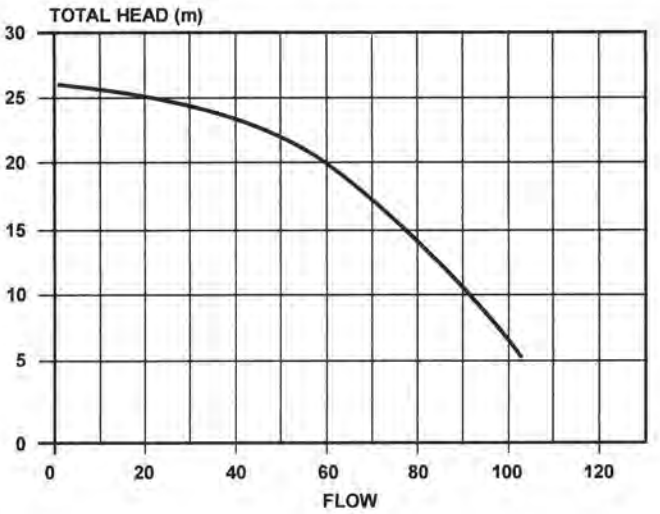
H/O & MFG SCORESBY Quality System
Quality Endorsed Company
ISO 9001 Lic 10636 Standards Australia

TECHNICAL SPECIFICATIONS

MATERIALS OF CONSTRUCTION

PART	MATERIAL
Impeller	Glass filled polycarbonate
Lock nut	304 stainless steel
Pump casing	Cast iron - FC200
Diffuser and blanking ring	Glass filled noryl
Mechanical seal - pump	Carbon/ceramic
Mechanical seal - motor	Silicon carbide/ceramic in oil bath
Shaft seal elastomer	Nitrile rubber
Pump shaft	304 stainless steel
Orings	Nitrile rubber
Motor shell	304 stainless steel
Bottom bearing housing	Cast iron - FC200
Upper motor cover	Cast iron - FC200
Handle	304 stainless steel
Fasteners	304 stainless steel
Float & power supply leads	HO7RN-F oil resistant

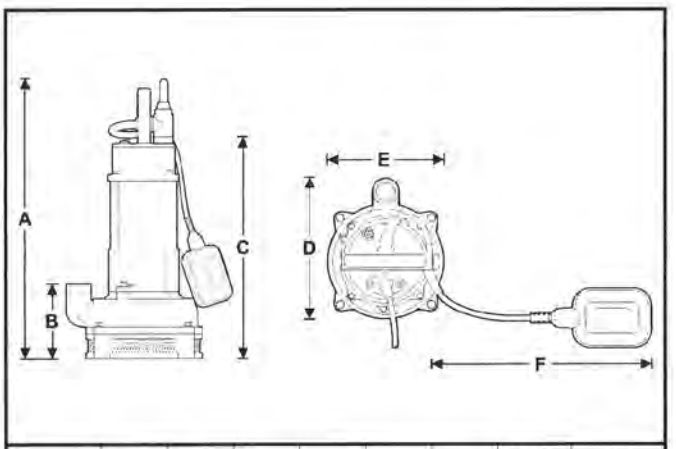
HYDRAULIC PERFORMANCE



ELECTRICAL DATA

Supply voltage	220-240V
Supply frequency	50Hz single phase
Speed	2 pole, 2850rpm
Full load current	4.0A
Locked rotor current	14A
Input power (P_1)	0.94kW
Output power (P_2)	0.60kW
IP rating	X8
Insulation class	Class F
Starting	P.S.C.
Lead	6m long

DIMENSIONS



Model	A	B	C	D	E	F	Outlet B.S.P.	Net Weight (kg)
D42	475	130	370	235	195	330	1"F	20

All dimensions in mm unless otherwise stated.

INSTALLATION & PRIMING

Use a rope to position and retrieve the pump. Do not lower or retrieve the pump using the power lead as this may damage the cable entry seals, causing water leaks and unsafe operation.
Don't use this product for recirculating or filtering swimming pools, spas, etc.
While these pumps are built to high safety standards, they are not approved for installations where people will be in the water while they are operating.
Don't pump abrasive materials. Sand and grit in the water being pumped will accelerate wear, causing shortened pump life.
Keep your pump clean, particularly in situations where lint, hair or fibrous materials may get bound around the pump shaft. Regular inspection and cleaning will extend pump life.
Make room for the float switch to operate. Automatic models have a float switch to turn them on when the water level rises and turn them off again when it has been pumped down to the safe operating level of the pump. If the float switch is not free to rise and fall, correct pump operation may not be possible.
Don't run your pump dry. Non-automatic models must be switched off manually or by way of an external float/level switch when the water level is reduced to the top of the pump housing.

This literature is not a complete guide to product usage. Further information is available from your Davey dealer, Davey Customer Service Centre and from the relevant product Installation and Operating Instructions. This data sheet must be read in conjunction with the relevant product Installation and Operating Instructions and all applicable statutory requirements. Product specifications may change without notice.

DEPEND ON
DAVEY

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Member of the GUD Holdings Ltd Group
ABN 18 066 327 517
Head Office and Manufacturing
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Scoresby, Australia 3179
Ph: +61 3 9730 9222
Fax: +61 3 9753 4100
Website: www.davey.com.au
Customer Service Centre
Ph: 1300 367 866
Fax: 1300 369 119
E-mail: sales@davey.com.au
Interstate Offices
Sydney - Brisbane - Adelaide
Perth - Townsville

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Ph: +1 630 898 6976
Fax: +1 630 851 7744
Website: www.daveyusa.com
E-mail: sales@daveyusa.com

DPM128-1/3K/0602/GPW supersedes DPM128/3K/0101/GPW

WASTEWATER TREATMENT & DISPOSAL DESIGN REPORT

FOR PROPERTY AT:

VINTEN RESIDENCE

LOT 117, 6 ANGUS WAY, NIKAU VIEWS

PARAPARAUMU

September 2013

DOCUMENT CONTROL

Design report completed by:	Lisa Burns, Aqua Mondo Ltd	Date:	2 September 2013
Peer review by:	Rod Murray, *ME,MIPENZ,CEnvP*, Business Unit Manager, Hynds Environmental Systems Ltd. Auckland Council Approved Producer Statement Author No. 2528	Date:	September 2nd, 2013

1.0 INTRODUCTION

A site visit to the property at Angus Way in Paraparaumu was undertaken on September 1st, 2013 to determine the suitability for installing a Hynds Environmental Advanced Aerobic Sewage Treatment System - Lifestyle (Hynds Environmental *Lifestyle*) to treat household effluent from the proposed property dwelling, and to dispose this to land within the confines of the site.

2.0 SITE DESCRIPTION

The legal description of the property is Lot 117, DP442630.

The owner is proposing to build a new 3-bedroom plus study dwelling on this elevated semi rural property, located in the upper region of Nikau Views.

The property is situated on a plateau, with the building site and effluent management areas being relatively flat with slight undulating slopes across the site. The property falls steeply towards the northern and eastern boundaries – the northern boundary being a bush clad gully - and moderately towards the southern boundary.

Due to the sloping aspect on this site, the irrigation field will be laid along the north western boundary within a raised land area and suitably planted. (Reference is made to the site plan at rear of this document).

Access to the property is from a sealed driveway off Angus Way. The site comprises a parcel of land of irregular shape totalling 4,271m^2 in plan area.

From inspection, the soil structure within the proposed land application area revealed topsoil in depth of approximately 75-100mm overlying a moist firm clay to an immeasurable depth. No ground water was encountered. These results indicate that the area has poorly drained soils – considered equivalent to a Category 5 soil.

3.0 PROPOSED SYSTEM DESCRIPTION

AEE

The following system description illustrates the environmental effects of operating a Hynds Environmental *Lifestyle*, and thus satisfies the Auckland Regional Council guideline document Technical Publication 58 (TP58) in terms of its requirement for an ***Assessment of Environmental Effects (AEE)*** as it may be applied to this jurisdiction.

The Hynds Lifestyle Advanced Treatment System is also designed to comply with the relevant clauses of the Australia/New Zealand standard for on-site systems AS/NZS1547:2012. However, many councils have chosen to use either Auckland Regional Council's On-site Wastewater Systems: Design and Management Manual (TP58) or AS/NZS 1547, or a combination of the both. As these requirements have in many cases been written into regional and district plans, it would be inappropriate to comply solely with AS/NZS 1547:2012.

The Hynds Lifestyle Advanced Treatment System has participated in performance/testing trials at the National Testing Facility in Rotorua to ensure that system performance generally complies with the provisions of TP58 and AS/NZS 1547:2012 as they may be revised from time to time.

Capacity

a) The recommended system to treat waste from the proposed dwelling is a Hynds Environmental *Lifestyle* which has a total operating volume of 8500-litre, and a capacity to treat 1800 litres per day from a residential dwelling with standard appliances, and no garbage grinder:

BOD & SS

a.1 this system is designed to perform to an effluent quality of 20mg/L BOD_5 and 20mg/L suspended solids

Organic Loading

b) The design for this application is a conservative approach using the industry standard TP58:

b.1 the assumed organic loading is <70mg/L BOD_5

Failure alert & emergency storage

c) The Hynds Environmental *Lifestyle* has an audible and visible alarm system indicating high water level, air interruption, and pump failure

d) The Hynds Environmental *Lifestyle* tank has a minimum one-day emergency storage of 1818 litres

e) Land application of the wastewater is through a subsurface-laid pressure-compensating drip irrigation system designed to evenly distribute treated effluent over the designed dispersal area:

e.1 a pressure compensating irrigation main feeds irrigation blocks that are laid to ensure ponding does not occur at lower sections of dispersal areas;

Subsurface-laid dispersal fields

e.2 an uninterrupted flow is maintained in the unlikely event of breakages to the irrigation tubing;

e.3 the distribution main (primary) has a discrete clean out;

e.4 the end of each dripper line is normally connected to a secondary main with its own clean out

f) On-site reserve areas have been allocated and have been sized to allow for an area exchange, or further additions to the land dispersal area as required

Reserve

g) Consideration to site gradients, aspect, and the planting of suitable water and nutrient tolerant plants or vegetation to suit the application to maximise the evapotranspiration potential is recommended:

Biological treatment

g.1 surface laid dripper irrigation lines shall follow natural contours, and minimise further down-gradient effects

h) The disposal of treated effluent by subsurface laid irrigation shall be laid in areas where there is no proposed foot, animal or vehicle traffic:

h.1 such locations within fenced areas are preferable

Potential impacts mitigation

i) All separation distances from dwellings/structures, natural watercourses, and property boundaries have been considered.

i.1 these are reflected in the indicative placement of the proposed Hynds Environmental *Lifestyle* and associated treated effluent dispersal field, plus reserve area.

j) The flood risk potential from the 20-year flood plan has been considered. Though the site and site gradients largely precludes flooding potential, any risk is believed to be minimal with an installed Hynds Environmental *Lifestyle* as all electrical components can be easily removed should an unexpected flood event occur:

Floor risk considerations

j.1 the replacement of any components is simple, which

ensures the system can continue constant operation

k) Any adverse odour is not expected, as the Hynds Environmental *Lifestyle* tank is a completely sealed system with all venting being directed through the house terminal vent

No odour

l) The Hynds Environmental *Lifestyle* includes an aeration system that is contained within a sealed container and has been designed to emit only very low noise that can be detected from a dwelling at the required minimum set-back (3m) distance:

Low noise

l.1 the pump is submerged which does not produce an objectionable noise effect

m) The accompanying Hynds Environmental System Management Plan includes a 6-monthly service on every system:

System Management

m.1 the first year's service is included in the purchase price of the system to ensure the client receives full system instruction and corrections of use during this time

n) Any default of payment is advised to the local territorial authority or council, who may in turn advise the client of their breach of conditions under the Code of Compliance rule:

n.1 if a client continues to default, Hynds Environmental maintains a 24-hour phone service for remedial response

o) Each homeowner receives a user guide (Operation and Maintenance Manual) on the system at commissioning date:

System management & maintenance

o.1 the commissioning date is also an opportunity to educate the client on how to manage and maintain the system with recommendations made regarding to:

o.1.1 site-specific maintenance of the irrigation field

o.1.2 cleaning product usage

o.1.3 general filter maintenance

Visual impacts

p) The visual effect on the surrounding environment is minimal with only a small dome shaped lid and box visual above ground that can simply be disguised with planting

3.1 Wastewater System: Basis of Design

Occupancy Allowances:	Major Dwelling Number of bedrooms	3 + 1
Refer Table 6.1	Occupancy:	6 persons
Flow Allowances: Refer table 6.2	Tank Water	180L/cap/d
Max Daily Wastewater Flow:	6 x 180L/cap/d	1080L/d

Areal Application Area Calculation

Design Land Disposal Area: $\frac{1080L/d}{2.8L/m^2/d}$ = $385m^2$

The Area to Volume Ratio is: $\frac{4,271m^2 \text{ (Gross Lot Area)}}{1080L/d \text{ (Max Daily Flow)}}$ **= 3.95**

Permitted activity

As this ratio is a greater than 1.5, and the maximum daily flow rate is less than 2000L/day, this design falls within the criteria for permitted activities.

The above design output parameters confirm HESL's recommendation for installation of a Hynds Environmental *Lifestyle* system at Angus Way, Paraparaumu. The system consists of the following:

System elements

1) 1x advanced 2-stage primary chamber
2) 1x Zabel filter on outlet of primary chamber
3) 1x 2-stage aeration chamber
4) 1x laminar plate separator
5) 1x pump-out chamber
6) 1x treated effluent dispersal field

NB: The tank includes 24-hour retention period.

3.2 Wastewater System: Siting

The most appropriate to location for the Hynds Lifestyle tank is some 7-10m on the north western corner of the dwelling. There is no future building site within close proximity of this location.

3.3 Land Disposal System

Disposal of the effluent is to be through subsurface laid 17mm pressure compensating drip irrigation (PCDI) pipe.

- The lines will need to be covered with mulch, with recommendation to plant the area with plant species suited to water and high nutrient tolerance.
- The dispersal field shall be fenced off from stock.

The loading application rate used in this situation is 2.8L/m^2/d (2.8mm/d). This was chosen based on the soil assessment at the disposal site.

4.0 General Comments

Operating Instructions

Instructions will be given in writing to the homeowners on use and care of the system, and emergency operation instructions. The owners will be informed that the land used for treated effluent dispersal should not be used for recreation, grazing, or for planting of vegetables for consumption.

4.1 Construction Warranty

Standards

Hynds Environmental Systems Ltd (HESL) offer components that are designed to all relevant New Zealand standards. Products are manufactured in accordance with an ISO 9001 quality system and are certified as complying with "S" Mark requirements.

4.2 Design Warranty

AQM Environmental has designed the wastewater treatment system and land application for treated effluent dispersal for this property based on information provided by the client (and/or representative).

Supply & installation of

The wastewater treatment system design is based solely on the assumption that AQM Environmental shall supply all components and

components

installation.

The installation of the specified system is critical to its effective functioning and as such AQM Environmental will not guarantee, or take responsibility for, any system that is manufactured or installed by other parties under this design.

AQM Environmental does not take responsibility for future changes in occupancy that may change the design requirements of the wastewater treatment system for this dwelling.

Registered plumber

Plumbing of the proposed dwelling must be certified by a registered plumber to ensure that any poor tap-ware, leaking appliances or illegal pipe-work does not interfere or compromise the predicted design flows.

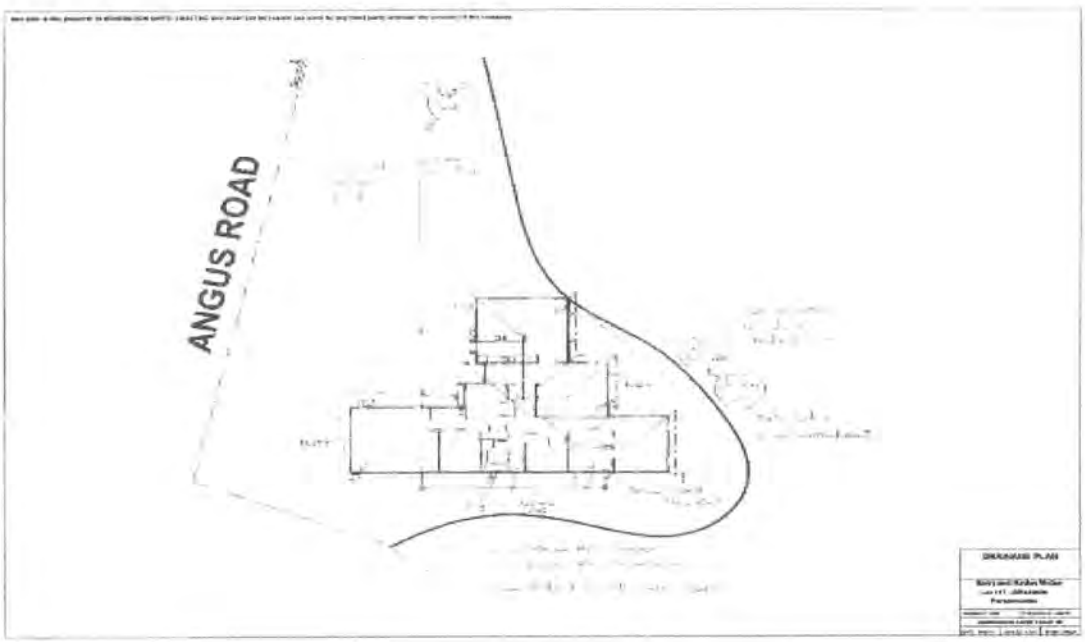
4.3 Servicing

Evidence

Copies of all service reports will be forwarded to the relevant territorial authority/council.

APPENDIX A

Sketch of Hynds Environmental *Lifestyle* and treated effluent dispersal field locations (provisional)



APPENDIX B

Technical Specifications of Hynds Lifestyle Wastewater System including suggested vegetation species for planting with drip irrigation systems

(see separately enclosed document)

BUILDING CONSENT DOCUMENTATION FILED

Kāpiti Coast DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

dwelling

Building Consent Number:	BC 130599
Street Address:	9 Angus Way Paraparaumu

Tick indicates documents (s) included in this Building Consent	✓
Building Consent Application	✓
Application checksheet	✓
Costing schedule	✓
Plans and specifications	✓
Invoice and receipt	✓
Processing records/checksheets	✓
Inspection page printouts	✓
1-27 | 62 | 71-86 | 94-102	✓
Building consent and memorandum	✓
Inspection reports	✓
Application for CCC	
Code of Compliance Certificate	✓
Producer statements and supporting documentation	✓
Peer review documents	N/A
Fire design documents	N/A
Requests for further information and other correspondence	N/A
Amendments	N/A
Supplementary information	N/A
Energy work certificates	✓
Notices to Fix	N/A

This form comprises part of the Building Consent documentation and indicates the contents of the Building Consent File.

CODE COMPLIANCE CERTIFICATE REVIEW CHECKSHEET

Criteria: All building work except for minor works or major projects.
Refer QAS: B14, B15, B16

Kāpiti Coast DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

Address of Project: 9 Angus Way	
Date:	**BC No:** 130594

	N/A	Yes	No
Application for Code Compliance Certificate (Form 278) completed?		✓	
Confirm all required inspections and been completed and passed			
If Inspections have been missed, what supporting info and method of verification has been provided to compensate for missed inspections?			

	N/A	Yes	No
Work in accordance with approved consent and approved amendments		✓	
If no, has NTF been issued?			
Have items of non-compliance been resolved and NTF uplifted?			

Note: If work is not in accordance with consent, (and approved amendments) or NTF matters have not been resolved, suspend application for Code compliance Certificate.

Supporting documentation required in building consent addenda. Form completed during BC Approval process			
Tick indicates yes, N/Z indicates considered – but not applicable	**Req'd**	**Supplied**	**Accept**
copy of electrical certificate	✓	✓	✓
copy of gas certificate	N/A		
an "as-built" drainage plan	✓	✓	✓
plumbing (Form 125) for pressure test and installation piped services	✓	✓	✓
drainage (Form 126) for stormwater installation	✓	✓	✓
drainage (Form 127) for private sewer installation	✓	✓	✓
a Construction Review (PS4) statement for Structural engineering	✓	✓	✓
a Construction Review (PS4) statement for Fire engineering	N/A		
a Construction Review (PS4) statement for Geo-technical engineering	N/A		
Roof cladding warranty	✓	✓	✓
Solar water heating technical specifications	N/A		
wall cladding/texture coating installation applicator warranty			
~~a copy of the lift certificate~~ Sewage treatment designer supervision cert	✓	✓	✓
a certificate from the fire alarm installer	N/A		
a certificate from the sprinkler certifier			
a copy of wet-area membrane installers warranty	✓	✓	✓
A copy of deck membrane manufacturer's installers warranty/guarantee	N/A		
FPIS (verifier) Fire Systems Certification			
A copy of windows	✓	✓	✓
A copy of water tank warranty	N/A		
A copy of septic tank warranty			
Record of work Builder	✓	✓	✓
Roofing Brick	✓	✓	✓
Window	✓	✓	✓

If specified supporting documentation has not been provided, what alternative information or verification method has been provided to compensate. (describe):

Compliance Schedule	Yes	No
Is a new or amended compliance schedule required?		
If "Y" Has it been issued? (Refer note below)		

If the new/ revised compliance schedule has not been issued, what action has been taken to ensure it will be issued? Outline:

Note: If the draft/ revised compliance schedule has not been issued, the Code Compliance Certificate cannot be issued. Suspend issuing CCC until this matter is addressed.

Building Consent Requirements	Yes	No
Are there any item specified in the building consent or PIM that have not been completed. Outline:		
Are there any development impact fees to be paid outstanding? (if Yes, CCC cannot be issued)		✓
Approve to issue Code Compliance Certificate if all other outstanding fees are paid	✓	

Building officer:	*Co- reviewer:*
Signature: Craig Watson	Signature:
Date: 21-1-13	Date: 10/2/14
Name: C. WATSON	Name: Russell Brook

Kāpiti Coast
DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

VEHICLE CROSSING INSPECTION FORM

Building Consent: _____

Date: _____

To: Building Inspectors

Owner: _____

Address: _____

_____

_____

Can you please inspect the above Vehicle Crossing, footpath and berm and return the completed form to me signed.

Thank you

Inspected by:	
Date Inspected:	
Approved:	☐ YES ☐ NO

COMMENTS:

BUILDING CONSENT PROCESSING CHECKLIST

dwelling

6 Argus Way Paraparaumu

Kāpiti Coast DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

BC:	130599
Category:	

Key	
N/A ☐	Not Applicable to this application. (The deletion of whole sections as N/A is permitted. For alternatives comment below each section).
No ☐	Plans, specifications & documentation not complying with the Building Code &/or Bld Act (The reason specified alongside each prompt)
Yes ☐	Plans, specifications & documentation complying with Category Bld Code &/or Bld Act (The reason specified alongside each prompt)
Note	The further information requests are identified by hand written numbers and corresponding on FIR letters / e-mails sent

Site Plan *(NZS 3604 Sec 3.4, 4,5 Code clB1, B2,E1, E2 F1&F2 Sect. 72, 75 BA04)*		
N/A ☐ No ☐ Yes ☐		Comments
☐ ☐ ☑	Wind zone (High) VI High Specific *(GIS)*	
☑ ☐ ☐	Flooding / ponding hazards *(GIS)*	
☑ ☐ ☐	Slippage / fault line hazards *(GIS)*	
☑ ☐ ☐	Erosion, river & coastal hazards *(GIS)*	
☐ ☐ ☑	Subsidence / soft soil hazards *(Site inspection notes)*	
☐ ☐ ☑	Corrosion zone *(Sea spray or* Zone H*)*	
☑ ☐ ☐	Soil contamination *(F1 GIS)*	
☐ ☐ ☑	Distances to boundaries / sitting *(District plan)*	
☐ ☒ ☐	Floor levels / contours *(E2/AS1 & NZS 3604 E1)*	1 Provide Contours of Site Works
☑ ☐ ☐	Two or More Allotments *(Sec 75 – 83 Bld Act)*	
☑ ☐ ☐	Noise / sound insulation *(airport & highway)*	
☐ ☐ ☑	CT/221 notice reviewed	1 - SED foundations required, 2 Site waste water, 3 Water supply 4-11 N/A for Lot 17
Additional Comments		

Specific Design *(Verified Online PS2, B1, B2, VM1)*		
N/A ☐ No ☐ Yes ☐		Comments
☐ ☐ ☑	PS1 Design Certificate *(B1 B2 VM1)*	DEKE Consulting - Malcolm Thomson Covering tib raft on piles
☑ ☐ ☐	PS2 Peer Review *(B1 B2 VM1)*	
☐ ☐ ☑	Calculations *(VM1)*	
☐ ☐ ☑	CPeng *(Verified Online)*	
Additional Comments		

Concrete / Foundation Plan *(NZS 3604, NZS 4210 & 4229 E2/AS1)*		
N/A ☐ No ☐ Yes ☐		Comments
Layout		
☐ ☐ ☑	Layout dimensions *(NZS 3604)*	
☐ ☐ ☑	Control joints *(NZS 3604)*	
☑ ☐ ☐	Slab thickening *(NZS 3604,* cl 7.5)	
☐ ☐ ☐	Alternative *(specify reason)*	
Section		
☐ ☐ ☑	Depth & width *(NZS 3604)*	
☐ ☐ ☑	Reinforcement *(NZS 3604;B2)*	
☐ ☐ ☑	Plate fixings *(NZS 3604:B2 cl 7.5)*	M12 tru bolts at 900crs
☐ ☐ ☑	DPM *(NZS 3604;B2)*	

☐ ☐ ☑	Engineer design and Calcs *(B1;B2)*	
☐ ☐ ☑	Concrete strength *(B1;B2 cl 4.8.2)*	20MPa
☑ ☐ ☐	Foundation wall tanking *(B2, E2)*	
☐ ☐ ☐	Alternative *(specify reason)*	
Additional Comments		

Timber/Subfloor *(NZS3604 NZS 3602 & 3640, B1, B2)*		
N/A ☐ No ☐ Yes ☐	Comments	
Layout		
☐ ☐ ☐	Layout dimensions	
☐ ☐ ☐	Bearers details *(B1,B2)*	
☐ ☐ ☐	Joist details *(B1:B2)*	
☐ ☐ ☐	Alternative *(specify reason)*	
Section		
☐ ☐ ☐	Foundation type/size *(NZS 3604;B2)*	
☐ ☐ ☐	Piles post sizes & treatment *(NZS 36043602;3640;B2)*	
☐ ☐ ☐	Pile c/c *(NZS 3604)*	
☐ ☐ ☐	Fixing *(NZS 3604:B2)*	
☐ ☐ ☐	Coatings(durability) *(NZS3604 ;B2)*	
☐ ☐ ☐	Ventilation& Access to sub floor spaces *(NZS 3604)*	
☐ ☐ ☐	Alternative *(specify reason)*	
** If the addition is an upper storey show details on upgrading existing foundations, joints, piles, etc (may require Engineer design)*		
Additional Comments		

Floor plans / layout *(B1, B2, C1-4, D1, E3, F7, G1, G2, G12 G3, G9, G11, G13)*		
N/A ☐ No ☐ Yes ☐	Comments	
☐ ☐ ☑	Room dimensions	
☐ ☐ ☑	Sectional lines	
☐ ☐ ☑	Location of partitions	
☐ ☐ ☑	All designated spaces	
☐ ☑ ☐	Lintels *(NZS 3604:B2)*	* Provide engineers lintel to ~~support~~ ~~make~~ the garage opening
☑ ☐ ☐	Beams *(NZS 3604, B2 by engineer)*	
☐ ☐ ☑	Point loads by engineer or prenailer *(B1 B2)*	
☐ ☐ ☑	Smoke detectors *(F7)*	
☐ ☐ ☑	Wet areas / WCs *(D1, Table 2;* B2)	dwg 15
☐ ☐ ☑	Kitchen (G3)	
☑ ☐ ☐	Alternative *(specify reason)*	
** Changes to existing work requires both an existing floor plan & a proposed floor plans. * Facility provided for washing utensils / food G3, Section 1.1 & Figure 1: * Preparation Area and Access to Facility Paragraphs 1.1.2 and 1.5*		
Additional Comments		

Wall Framing *(B1, B2, B3)*		
N/A ☐ No ☐ Yes ☐	Comments	
☑ ☐ ☐	Identify engineering / Structural items/ portals *(B1 B2)*	
☐ ☐ ☑	By prenailer or to NZS 3604 *(B1 B2)*	
☐ ☐ ☑	Fixing types *(NZS 3604 B1 B2)*	dwg 10.
☐ ☐ ☑	Stud c/c as per wind zone *(NZS 3604 B1 B2)*	
☐ ☐ ☑	Building wrap *(NZS 3604)*	Tuton
☐ ☐ ☑	Stud heights of rooms *(NZS 3604 B1 B2)*	
☑ ☐ ☐	Alternative (specify reason)	
Additional Comments		

Roof (NZS 3604,3602 &3640 B1B2E2 E2/AS1).

N/A ☐ No ☐ Yes ☐	Comments
Trussed / by prenailer or Framed roof (NZS 3604)	
☐ ☐ ☑	Fixing layout & details *(BI B2)*
☐ ☐ ☑	Correct layout *(B1)*
☐ ☐ ☑	Max span (12m or Engineer) *(B1)*
☐ ☐ ☑	Purlin or batten c/c *(B1 B2)* 45x45
☑ ☐ ☐	Rafters / Beams *(BI B2)*
☐ ☐ ☑	Ceiling ~~joists~~ battens
☑ ☐ ☐	Alternative (specify reason)
Roof cladding - Metal ; Profiled Metal; Masonry, Membranes (Code E2, E2/AS1 B2)	
☐ ☐ ☑	Pitch / profile / grade *(E2)* 25° pressed metal tiles.
☐ ☐ ☑	Underlay *(E2)* Thermakraft 215.
☐ ☐ ☑	Flashings *(E3;E2, B1 B2)* Ridge/hip, valley, gutter
☑ ☐ ☐	Parapets *(B1 E2 B2)*
☑ ☐ ☐	Membrane Roofs and substrate *(Code E2/AS1 B2)*
☐ ☐ ☑	Gutters, Barges & Fascias detail *(Refer E2, section 8.3, cl 8.3.9)*
☑ ☐ ☐	Alternative (specify reason)
Installation of profiled metal roof cladding shall be by trained installers, approved by the tile manufacturer or NZ agent. In some cases experienced builders undertake installation, refer E2, section 8.4, cl 8.4.2 'General'	
Additional Comments	

Claddings (CodeB1 & B2 E2/AS1,Branz good practice Guides &,Weather tightness Vol 12&3)

N/A ☐ No ☐ Yes ☐	Comments
☐ ☐ ☑	Risk matrix Cavity or direct *(E)*
☐ ☐ ☑	Building wrap *(NZS 3604)* Tekton - ok as an air barrier
☐ ☐ ☑	Brick Veneer *(E2/AS1; B2)* (HS) top of wall / bot of wall (meter) (garage) / ~~vert abutment~~
☐ ☐ ☑	~~Timber~~ Weatherboard *(E2 Branz Timber Guide Vol 1&2; B2)* Lined to garage gable.
☑ ☐ ☐	Stucco *(B1 NZS 3604 Branz good practice guide; B2)*
☑ ☐ ☐	Profiled Metal *(E2 Metal Roofing Practice; B2)*
☑ ☐ ☐	Plywood *(E2 ; B2)*
☑ ☐ ☐	Fiber Cement W/b *(E2; B2)*
☑ ☐ ☐	Board & Batten *(Branz good practice guide; B2)*
☑ ☐ ☐	Fiber Cement Sheet *(E2; B2)*
☐ ☒ ☐	Weathertightness details *(E2 ; B2)*
☑ ☐ ☐	Alternative *(specify reason)*
Additional Comments	* ( ) = provide

Bracing (NZS 3604 B1, B2, E3)

N/A ☐ No ☐ Yes ☐	Comments
☑ ☐ ☐	Subfloor bracing *(B1 & NZS 3604)*
☐ ☐ ☑	Wall bracing *(B1 & NZS 3604)*
☐ ☐ ☑	Roof bracing *(B1& NZS 3604)*
☐ ☒ ☐	Bracing calculations *(B1 & NZS 3604)*
☐ ☐ ☑	Provide bracing plan layout *(B1 & NZS 3604)*
☐ ☐ ☑	Double top plate (if > 5m) *(B1 & NZS 3604. Required where ceiling lining density is ,600kg per m3 e.g. pinex)*
☑ ☐ ☐	Indicate dragon tie (if > 6.m) *(B1.& NZS 3604)*
☑ ☐ ☐	Diaphragm ceilings (if > 7.5m) *(B1 & NZS 3604)*
☐ ☐ ☑	Check for distribution *(B1 & NZS 3604)*
☑ ☐ ☐	Alternative *(specify reason)*
Additional Comments	* EP1's - rated higher for wind on the calculations than manufacturer specs * Bracing factors do not appear to align with NZS 3604 for wind.

Light & Ventilation *B1 G4, Clause 1.2 ; G4, clause 1.3* G7,G9 F2	
N/A ☐ No ☐ Yes ☐	Comments
General	
☐ ☐ ☑	Vent 5% *(G4)*
☐ ☐ ☑	Light 10%. *(G7)*
☐ ☐ ☐	Electrical *(G9)*
☑ ☐ ☐	Mechanical ventilation *(G4)*
☐ ☐ ☑	Exterior space for awareness *(G7)*
Glazing	
☐ ☐ ☑	Safety glass *(F2)*
☐ ☐ ☑	Wind zone *(B1. NZS 3604 NZS4223)*
☑ ☐ ☐	Visual manifestation *(NZS 4223)*
☑ ☐ ☐	Alternative *(specify reason)*
Additional Comments	

Insulation *(BRANZ Home Insulation Guide, NZS 4218, AS/NZS 2918)*	
N/A ☐ No ☐ Yes ☐	Comments
☐ ☐ ☑	Floor *(H1)*
☐ ☐ ☑	Wall *(H1)*
☐ ☐ ☑	Roof *(H1)*
☐ ☐ ☑	Windows / glazing *(H1)*
☑ ☐ ☐	Alternative *(specify reason)*
Additional Comments	

Stairs / Landings / Handrails *(D1,sec 4)*	
N/A ☐ No ☐ Yes ☐	Comments
☐ ☐ ☐	Stair tread & risers *(D1)*
☐ ☐ ☐	Landing size *(D1)*
☐ ☐ ☐	Handrail *(D1)*
☐ ☐ ☐	Riser opening (min) where children *(D1)*
☐ ☐ ☐	Head Height *(D1)*
☐ ☐ ☐	Alternative *(specify reason)*
Stair type: Minor Private: Max rise 220mm/Min tread 220mm,. Secondary Private: Max rise 200mm/Min tread 250mm, Main Private: Max rise 190mm/Min tread 280mm. (Main private includes exterior stairs)	
Additional Comments	

Decks / Balconies / Barriers *(D1, F4 & NZS 3604, Section 6 & 7)*	
N/A ☐ No ☐ Yes ☐	Comments
☐ ☐ ☐	Barrier & deck fixing durability *(D1 B1 B2 F4)*
☐ ☐ ☐	Top rails, balusters, bottom rails, palings *(D1 B1)*
☐ ☐ ☐	If Engineer then calculations required *(B1 B2)*
☐ ☐ ☐	Max 3m height or Engineer *(B1 B2)*
☐ ☐ ☐	Deck joist sizes, grade, treatment, span & spacing *(D1 B1 B2)*
☐ ☐ ☐	Piles & bearers the correct grade, treatment, size, spacing & span *(D1 B1 B2)*
☐ ☐ ☐	Slip resistance *(D1)*
☐ ☐ ☐	Appropriate waterproofing membrane *(B1 B2)*
☐ ☐ ☐	Stringer size & connections *(D1 B1 B2)*
☐ ☑ ☐	Thresholds *(D1 E2)*
☐ ☐ ☐	Alternative *(specify reason)*
Additional Comments	

Fire *(Residential) (NZBC F7;Cdoc)*

N/A ☐ No ☐ Yes ☐	Comments
☐ ☐ ☑	Travel distances max 24m *(C3.15)*
☐ ☐ ☑	Smoke detectors *(F7)*
☑ ☐ ☐	Wood burners **(***F7)*
☑ ☐ ☐	Garage fire wall details *(C7 (C7.10 C7.8)*
☑ ☐ ☐	Alternative *(specify reason)*
Additional Comments	

Swimming Pool & Fencing *Fencing of Swimming Pools Act 1987'*

N/A ☐ No ☐ Yes ☐	Comments
☐ ☐ ☐	Refer to Compliance for sign off
☐ ☐ ☐	Specific Engineering Design
☐ ☐ ☐	Proprietary system/design
☐ ☐ ☐	Section/construction
☐ ☐ ☐	Pool backwash discharging the sewer
☐ ☐ ☑	Fence height ~
☐ ☐ ☐	Gate(s) / door(s) open outward

Ambiguity / Contradictions

N/A ☐ No ☐ Yes ☐	Comments
☐ ☐ ☑	Manufacturers Specs
☐ ☐ ☑	Engineer compared with Designer/Arch
☑ ☐ ☐	Any Other contradictions
Additional Comments	

Alternative Solutions

Record assessment, decision and reasons for decisions below. Has the designer substantiated why they believe the proposal complies with the building code? Is there a determination on a similar proposal? Has corroborative evidence been provided (peer review, appraisal or determination)? Include reference to comparison with acceptable solutions, other documents / standards / best practice guides / publications, expert opinion, determinations, in-service history, product certification, professional judgment, building code objectives. Refer BRANZ Bulletin # 456 (Dec 2004). List any conditions / communications / actions:

No major alternatives outside of specific design foundations by Chartered professional engineer.

This sheet relevant to plumbing & drainage only		
N/A ☐ No ☐ Yes ☐		Comments
General		
☐ ☐ ☑	Kitchen area *(G3/AS1)*	
☐ ☐ ☑	Laundry...	
☐ ☐ ☑	Bathrooms	
☐ ☐ ☑	Location of sanitary fixtures	
☐ ☐ ☐	Plumbing layout	
	Plumber's Reg no. Mark Scaife	Drainlayers Reg no... Mark Scaife CR724
Additional Comments		
Effluent Disposal Systems		
☐ ☐ ☐	Engineering Site Investigation	
☐ ☐ ☐	Design Specification & Producer Statement	
The design criteria should include; Capacity based on bedroom numbers, Loading calculation, site evaluation, soil profile, site characteristics.		
Additional Comments		
Water Supplies		
☐ ☐ ☑	G 12	
☐ ☑ ☐	Town supply	
☐ ☐ ☑	Private scheme	
☐ ☐ ☑	Type & location Roof catchment	
☐ ☐ ☐	Alternative *(specify reason)*	
Additional Comments	2x25,000 H water storage tank overflow to site ensure no erosion occurs.	
Sanitary Drainage		
☐ ☐ ☑	G13	
☐ ☐ ☑	Layout	
☐ ☑ ☐	Council availability or	
☐ ☐ ☑	Septic tank design & calcs	
☑ ☐ ☐	Alternative *(specify reason)*	
Additional Comments	80mm T.V.V 20RGSV	
Stormwater Drainage		
☐ ☐ ☑	E1	
☐ ☐ ☑	Layout	
☐ ☑ ☐	Council availability	
☑ ☐ ☐	Alternative *(specify reason)*	
Additional Comments	stormwater to tank	
Sanitary Plumbing		
☐ ☐ ☑	G13 + NZ/AS3500:3	
☐ ☐ ☑	Layout	
☑ ☐ ☐	Alternative *(specify reason)*	
Additional Comments		

D.P checked.
221 notice scanned to B.C
no council services available. => GIS checked ✓
P+D Pack ✓

Accessibility *(D1, G5, F8, NZS 4121)*		
N/A ☐ No ☐ Yes ☐		Comments
☐ ☐ ☐	Car parks	
☐ ☐ ☐	Projections	
☐ ☐ ☐	Kerb ramps	
☐ ☐ ☐	Footpaths / Ramps / Landings	
☐ ☐ ☐	Entrances	
☐ ☐ ☐	Public Facilities	
☐ ☐ ☐	Lifts	
☐ ☐ ☐	Stairs	
☐ ☐ ☐	Stair / handrails	
☐ ☐ ☐	Doorways / Doors / Corridors / Lobbies	
☐ ☐ ☐	Controls	
☐ ☐ ☐	Places of assembly / entertainment / Recreation	
☐ ☐ ☐	Warning Systems	
☐ ☐ ☐	Toilet Facilities / Laundering	
☐ ☐ ☐	Food preparation / accommodation	
☐ ☐ ☐	Signs	
☐ ☐ ☐	Residential Accessibility *(D1)*	
Additional Comments		

Commercial Fire report *(C1,C2, C3, C4)*		
N/A ☐ No ☐ Yes ☐		Comments
☐ ☐ ☐	Purpose group FHC	
☐ ☐ ☐	Fire cell separation /use of building	
☐ ☐ ☐	f- rating	
☐ ☐ ☐	s- rating	
☐ ☐ ☐	Occupancy numbers	
☐ ☐ ☐	Means of escape	
☐ ☐ ☐	Travel distances	
☐ ☐ ☐	External walls/unprotected areas	
☐ ☐ ☐	Fire resistance to supporting elements/floors/ walls	
☐ ☐ ☐	Risks to/below escape routes	
☐ ☐ ☐	Fire safety precautions	
☐ ☐ ☐	SFI's / SDI's	
☐ ☐ ☐	Signs	
☐ ☐ ☐	Hazardous agents / materials / substances on site	
☐ ☐ ☐	Referal to DRU	
☐ ☐ ☐	Alternative (specify reason)	
Additional Comments		

Solid Waste *(G15)*		
N/A ☐ No ☐ Yes ☐		Comments
☐ ☐ ☐	Waste bin area	
☐ ☐ ☐	Environmental health referral	
☐ ☐ ☐	Alternative (specify reason)	
Additional Comments		

Hazardous Agents, Materials and substances *(F1-F3)*		
N/A ☐ No ☐ Yes ☐		Comments
☐ ☐ ☐	Waste bin	
☐ ☐ ☐	Environmental health referral	
Additional Comments		

Work Sheet

General stamp prompts:

Wind Zone
Corrosion
Cladding
Electrical
Bracing Highlighted
Boundary setting out
Engineers design and addendum

Set Status
Complete checklist
Addendum and note re fire report
Section 72 / ponding
Set inspections

Dialogue Record

List further information requested, info received, records / reference of communication etc.
via Phone / Email / letter / counter / fax

Date / time	State content of discussion!!!	Initials
10/9/13 12:24pm	Posted, emailed & left landline answer phone message stating RFI has been issued for Alan. Emailed Marty & Rod @ Emerge the RFI	
11/9/13	Discussed site plan & bracing W/ Rod @ Emerge. updated site plan to come. bracing T5-5 incorrect - T5-6 the right one. reviewed over the phone & ok. Rod emailed through the info later in the afternoon.	
12/9/13	Reviewed info all acceptable excluding item 1. I called Alan P and told him I need verification from the design engineer of the foundation that it is suitable given its location to the bank. I request a written reply.	

Change of Use – Sec 114: (*Record decisions and basis for decisions – confirm whether sec 115 applies*)		
Date:		
Alteration to Existing Building - Sec 112 *(Record decisions and basis for decisions – confirm whether sec 118 applies and if so, has it been complied with?). List conditions / communications / actions:*		
Date:		
Hazards – Sec 71-74 : *(Record decisions and basis for decisions – see under "site plan above already done")*		
Date:		
Compliance Schedule – Sec 100 - 107: *(Record if new / amended compliance schedule required, and attach copy of replica compliance schedule. Ensure that note is recorded on building consent that new / amended compliance schedule will be issued).*		
Date:		

Note :- Refer to the associate code clause along side each prompt above for compliance or reason of decision

Plan checked yet Unsatisfactory

Refer to the official request for further information correspondence (letter, email or phone call) for final list of required information. For acceptance of returned information refer to addendum to form 436

Signature, name & date

Bldg: Jaime Sherlock 10/9/13

Plumbing: —

Fire: —

I am satisfied on reasonable grounds that the provisions of the Building Code are met and the

Building consent may be granted (refer Bld Act Sec 49(1))

No Further Information Requests have been made.

Signature, name & date

Bldg: 12/9/13
(for all pages except those listed below)

Plumbing: Simon Copp 7/9/2013
(For pages 6 of 11 unless otherwise listed)

Fire:
(As listed on page 7 of 11)

This page is to be read in conjunction with the Request for Further Information (RFI) letter, email or phone correspondence (refer to pages 9&10 for phone correspondence) associated with BC .....

RFI#	Reason for acceptance of returned / revised information or reference to location within revised information of item accepted as complying with the provisions of the Building Code 130599	Date reviewed and Satisfied on reasonable ground as complying with the Building Code
2	Revised layout provided from prehaler	12/9/13
3	All details provided, reviewed & acceptable.	
4a	- removed	
4b	Revised to 2012 spec.	12/9/13
1	Paul Rohlmeds called to discuss the location	
	of the dwelling in relation to the bank - see	
	attached email 12/09/13 11:48am. (CPENG) I	
	called Alan to discuss the landscaping element required.	
	He explained that was going to happen and	
	that he would email me confirmation of this.	12/9/13

I am satisfied on reasonable grounds that the provisions of the Building Code are met and **the Building consent may be granted (refer Bld Act Sec 49(1).** All previous Further Information Requests now satisfactory

Bldg: Signature, name & date 12/9/13

Plumbing: –

Fire: –

NOTE:
ONLY PAGE 1 OF ADDENDUM WILL BE SIGNED BY THE AUTHORISED BUILDING CONTROLS OFFICER

Addenda to Form 436
Allocation of work to approvals officer outside current competency

Building Category	Circle Appropriate Category 0 1 2 3

1) Authorized by Team Leader of delegate	Level of supervision required	Reason for decision
Name, Signature & date:	Coaching Mentoring Peer review on completion	In training Vetting one level above competency Other
2) Approval Officer undertaking training	**Record of Learning**	**Decision**
Name, Signature & date: Current competency level Category 0, 1 or 2		**I am satisfied on reasonable grounds that the provisions of the Building Code are met and the building consent may be granted (Refer Bld Act 49(1))**
3) Coach / Mentor /' Peer reviewer	**Training needs identified**	**Comments**
Name, Signature & date: Current competency level Category 1, 2 or 3		**I am satisfied on reasonable grounds that the provisions of the Building Code are met and the building consent may be granted (Refer Bld Act 49(1))**

Allocation Notes

- Categories of building are determined on receipt of application
- All applications are re assessed for the category and allocated to each appropriate Officer at the earliest opportunity and then placed in processing shelves accordingly
- Approvals staff are aware of their own competency level and check the allocation of work.
- Approvals staff may select, for training purpose, a consent 1 (one) category higher than their current competency for the purpose of increasing their skill level provided they gain approval from the Team Leader Building Consent Approvals. Once approval is given the Team Leader Building Consent Approvals will arrange for the appropriate supervision and final peer review.

00058

RBW

RECEIVED
- 4 SEP 2013
BY:

Building Consent Application — use this Checksheet for:

Single Residential Dwelling and Accessory Buildings

— including single stand-alone dwellings, dwelling additions and/or alterations, re-piling, garages, decks, gazebos, sheds, retaining walls etc.

— An Application Form is attached to this checksheet —

(Please include this checksheet with your application)

Address of project: 9 Angus Way, Paraparaumu

This checksheet shows you the information that has to be supplied with your building consent application. Please attach **2 copies** of the following information (unless otherwise specified) with your completed Building Consent Application form.

Please tick relevant box in the Customer Use column as you attach the information. If the box is not relevant to your application, write NA across the box. Please check each section carefully and complete those sections that are relevant to your project.

Once you have attached all the required information, please check for completeness as an incomplete application or lack of any supporting information will mean that your application cannot be accepted for processing.

CUSTOMER USE *COUNCIL USE*

1. GENERAL

Complete this section for all applications

☑ **a. Building Consent Application Form** (1 copy) ☑

Completed and signed by the owner or by an agent on behalf of the owner.

☑ **b. Proof of ownership** (1 copy) ☑

One recent copy of current certificates/s of title (i.e. not older than 3 months) or where applicable one copy of purchase agreement (if recently purchased) or one copy of relevant portions of current lease

☑ **c. Locality Plan (1:500) showing:** ☑

Physical location of the subject building in relation to streets or landmarks, north point, name of building and lot and DP number.

☑ **d. Site Plan (1:100) showing:** ☑

Dimensions of all boundaries, north point, finished floor levels, ground contours (extended to boundaries) and/or levels, site area, street name and number, lot and DP number, outline of building, distance to boundaries and the position of swimming or spa pools. Include on the site plan the designated wind zone of the site (e.g. specific design, very high, high, medium or low).

☑ **e. Application Fee** ☑

Applications will not be accepted without payment of the appropriate fees. Fees payable are set out in the published fee schedule of the council that has jurisdiction over the project site.

For office use only Receiving Officer:

(GLS Down) Relevant information present to warrant taking in A.C Application.

CUSTOMER USE

COUNCIL USE

- 4 SEP 2013

BY:

2. CHANGE OF USE

Complete for all existing buildings where the proposal involves forming a household unit where one did not exist before

Example: the conversion of a garage or shed into a residential unit

N/A

a. Assessment of the building for compliance with the building code

Section 115(a) of the Building Act 2004 requires that the building, in its new use, complies fully with all clauses of the building code.

b. Reasonably practicable

The above assessment must relate to all building code clauses. If the proposal is for the project to meet anything less than full compliance with any clauses, your application must clearly state your reasoning, with supporting documentation, and show how you will meet the highest level of compliance that can be considered reasonably practicable

3. FOUNDATIONS / FLOOR

Complete for all new buildings, for existing buildings where the footprint of the building will change or where an additional storey is being added.

a. Foundation Plan (1:100 / 1:50) showing:

- Dimensions of all new foundations
- Sub-floor, including bracing
- Footing details
- If a concrete slab, show basic details including reinforcing and contractions joints
- Piles and footing
- If the addition is an upper storey show details on upgrading existing foundations, joints, piles etc
- Indicate ventilation to sub floor spaces

N/A

b. Subfloor bracing

Provide subfloor bracing plan and calculations for all piled structures. Where the structure is specifically engineered, this should be included with the structural calculations.

Subfloor bracing plan and calculations are required where an additional storey is to be added.

4. CONSTRUCTION

Complete for all new structures or alterations to existing structures.

N/A

a. Existing floor plan (1:100 / 1:50) showing:

(For additions and alterations only)

- All levels
- All designated spaces
- All removals
- Sanitary fixtures
- Smoke detectors

CUSTOMER USE

-4 SEP 2013

BY:

COUNCIL USE

☑ **b. Proposed floor plans (1:100 / 1:50) showing:** ☑

- Room dimensions
- Location of partitions
- All designated spaces
- All floors (new or altered)
- Location of sanitary fixtures
- Stairs, barriers, handrails, floor joists and beams
- Floor joist layout for each level with timber floors
- Smoke detectors
- Note where wall will form part of the swimming pool fence

☑ **c. Pre-nail Truss and Frames:** ☑

- Specific design wall framing requires clarification
- Truss layout must be supported by design certification and design of fixing details, including consideration of load paths to ground
- Lintels carrying point loads, such as from girder trusses, require specific engineering design

☑ **d. Wall bracing plan (1:100 / 1:50) showing:** ☑

- Bracing details and calculations for wall bracing (also required for existing lower storeys where an additional storey is being added)
- Sub-floor bracing for decks projecting more than 2m from the house
- Location, type and number of bracing elements to indicate compliance with NZS 3604:1999 (include calculations)
- If the bracing was specifically designed by a structural engineer, provide calculations (required for specific design wind zones and lateral distribution of upper floor loads where lower storey bracing is provided in walls beyond the upper storey footprint)

☑ **e. Sections and details (1:50 / 1:20 / 1:10) showing:** ☐

- Foundation details involving reinforcing and connections
- Stairs, handrails, decks and decking
- Insulation systems and materials to floors, walls and roof
- Barriers providing safety from falling. Specific engineering design required where detail does not comply with NZBC B1/AS2
- Framing sizes, beams, lintels
- Roof cladding, eaves, fascias, gutters
- Flashings to openings
- Fire rated systems on all walls – closer than 1 metre to boundary
- Stud heights of rooms and total height from lowest ground floor level to top of ridge
- Window and door installation details
- Retaining wall details e.g. type, height of retained ground, relationship to boundary, waterproof membrane and proposed drainage

N/A **f. Fire Report:** ☐

For domestic dwellings of 4 storeys or more, or buildings providing more than one household unit

CUSTOMER USE

COUNCIL USE

5. EXTERNAL

Complete for new buildings or existing buildings with alternations to the external shell

a. Elevations (1:100 / 1:50) showing:

Accurate lines form boundary to boundary on each elevation, relevant District Plan daylight control lines, the maximum height on each elevation, location of door and window openings, fixed and opening sashes, sill heights, floor levels in relation to ground levels, exterior cladding nominated to all elevations, down pipes and spouting, ventilators to sub-floor area (suspended floors only)

b. Risk assessment

(Risk matrix in E2/AS1 may be used for buildings within scope)

Consider exposure, design and detailing to support appropriate selection of cladding

c. Cladding details (1:50 / 1:20 / 1:10)

Provide details around all penetrations, joinery and other junctions at a level appropriate to the level of risk e.g. roof/wall, balcony/wall, junction of different types of cladding, back flashing details for cavity systems

d. Production certification

Supply copies of product certificates relied on as compliance documents

e. Alternative solutions

If the proposal uses products or systems that are not covered in the Acceptable Solutions of clause E2 of the building code provide supporting current information including test results (fully signed reports), case studies, expert opinion (including evidence of experience/qualification, basis for forming opinion and statement of independence) etc to demonstrate compliance.

6. SERVICES

Complete for all projects with new installations or alteration of plumbing or drainage services

a. Plumbing and Drainage plan 1:100 / 1:50) showing:

Note: if you have supplied drainage details for surface water disposal on the site plan, no drainage plan is required.

- Sizes of pipe work and drains
- Fixtures and fittings, hot water system(s)
- If the building is more than one storey with sanitary fittings on upper floors, provide an isometric layout showing wastes, pipes and falls
- Drainage layout with inspection bends and junctions indicated for both sewer and storm water
- Any other drainage on site including council mains and retaining wall field drains
- Ventilation of sanitary rooms
- Calculations for sizing of down pipes
- Gully traps including overflow relief gullies

CUSTOMER USE

- 4 SEP 2013

BY:

COUNCIL USE

7. STRUCTRAL

Complete for all projects incorporating specific structural design

a. Structural calculations

If any design work required the services of a structural engineer, attach 2 copies of the calculations with this. The calculations must be prefaced with information explaining the design philosophy and justification of assumptions and methodologies used in analysis

b. Expert Opinion (Producer Statements):

If this application for consent relies on any expert opinion including producer statements certifying compliance with the New Zealand Building Code, a copy must be attached with this application. (Note all structural producer statements are required to have accompanying calculations)

8. SPECIFICATIONS

Complete for all applications

Note: the specification must be specific to the project and cover all aspects of the proposed work.

a. Specification: General

- Elements of structure (size, spacing, timber treatment)
- Finish or fixings to meet durability requirements
- Plumbing and drainage materials and design that installation is to comply with
- Wet area surfaces
- Ventilation systems
- Flooring slip resistance for access routes
- Glazing
- Type of smoke detectors (including existing smoke detectors where they will remain)

b. External claddings

For each of the following claddings provide details of the product name, manufacturer, maintenance requirements and warranties offered

- Building wraps
- Wall claddings
- Roof claddings
- Membranes (roof and decks)
- Tanking
- Joinery

9. DEMOLITION / REMOVAL

Complete for all projects involving demolition of significant parts of buildings or the demolition or removal of whole buildings.

N/A

a. Means of barricading the site

Provide details of temporary barriers, gates which swing inwards or other means of restricting public access to the area

CUSTOMER USE

- 4 SEP 2013

COUNCIL USE

BY:

b. Proposed tipping location for demolition materials (address/landfill) ☐

c. Hazardous building material ☐

Provide safety plan detailing the safe handling and disposal of hazardous materials

d. Site management plan covering ☐

Management to control silt runoff, noise and dust

e. Proposed destination for relocate building ☐

f. Access to and from the site including (use of kerb crossings) ☐

g. Specify termination of existing services ☐

- Water
- Sewer
- Storm water

h. Details about the building such as: ☐

Number of storeys, type of materials the building is constructed (Photographs of the building would be useful)

Note

You will need to contact the relevant service authorities specified below to advise them of the extent of your work:

Electricity, gas, drainage, water, transport, telecommunications, cable television or any other services that may be affected.

Transportation of relocated building

You will be required to contact and provide details to Councils Transportation and Traffic Department.

10. OTHER APPROVALS

Please check territorial authority regarding the requirement for other approvals required and fees payable. These may include:

- Consents under the Resource Management Act
- Approvals under bylaws including earthworks, vehicle crossings, road openings and water connections.

Show the location of swimming or spa pools on the property and describe how compliance with the fencing of Swimming Pools Act will be achieved.

The issuing of a building consent does not relieve the owner of any duty or responsibility under any other act.

The following Councils developed this checksheet in partnership: Kāpiti Coast District, Porirua City, Wellington City, Hutt City, and Upper Hutt City.

RECEIVED
dwelling
4 SEP 2013
BY:

PLANNING PROCESSING CHECKSHEET

Kāpiti Coast DISTRICT COUNCIL
Mo Huri Whakamuri, Ka Titiro Whakamua

Building Consent Number : BC 130599

Property Information	
Property Address	9 E Angus Way Paraparaumu
Legal Description	Lot 117 DP 442830.
Planning Zone	RURAL.
Building Project	dwelling

	Yes	No	Action reqd	Actio n
Certificate of Title	✓			
Easements		✓		
Section 221	✓		Include copy attached.	

District Plan Items to Check	Yes	No	Action Reqd	Actioned
Designations	✓		Airport Horizontal Surface.	
Heritage Register		✓		
Flood Hazards		✓		
Min Floor Level		✓		
Coastal Hazards		✓		
Other Hazards		✓		
EQ Faults		✓		
Eco-site/Native Veg		✓		
	Complies?		**Action Reqd**	**Actioned**
Yards (+water bodies)	✓		Neighbours Approval??	
HIRB	✓			
Max Height	✓			
Site Coverage	✓			
Permeable Surface	✓			
Earthworks	✓			
Water Tank / Siting	✓✓			
Parking	✓			

Building Consent Number: BC

	Complies?		Action Reqd	Actioned
Fences/Retaining Wall	N/A			
Airport Noise 45dbl				

Other Provisions				
	Yes	No	Action reqd	Actioned
Does the building straddle Title/crosslease boundary		✓		
Existing Resource Consent?		✓		
Resource Consent Required?		✓	Apply Section 37 and advise Plan Vetting Team.	
Section 72 or 77 Required?		✓	Advise Plan Vetting Team and send letters out.	$ 367
Section 221 Consent Notice	✓		Advise Plan Vetting Team	
DIF Required?		✓	Advise Plan Vetting Team and send letter out.	Paid on Subdivision
Calculate DIF Fees				Amount
			2nd Comm / Ind Floor area X $13.31	
			Non-residential 0.002 X area	
Invoice codes	RM		Water Supply	
	RM		Sewage	
	RM	79	Community Facilities	
	RM		Roads	
	RM		Flood Mitigation	
	RM		Reserves	
Send DIF letter out			**TOTAL**	

Additional Comments

* ALL WORK TO BE IN ACCORDANCE WITH RM 060103 & SEC 221 CONSENT NOTICE *

Decision: (*delete item that does not apply*)

- Application complies with District Plan requirements
- ~~Application does not comply with District Plan – BC to be issued subject to s37~~

Officer's Name & Signature: J. Burke **Date:** 5.9.13

KAPITI COAST DISTRICT COUNCIL

CONSENT NOTICE PURSUANT TO SECTION 221 OF THE RESOURCE MANAGEMENT ACT 1991

IN THE MATTER OF A PLAN LODGED FOR DEPOSIT UNDER NUMBER 335661

AND RESOURCE CONSENT NO. RM 010212
(BEING THE SUBDIVISION OF LOT 2 DP 324819),

AT MAUI POMARE ROAD, PARAPARAUMU
FOR MAHAKI HOLDINGS LIMITED

The Regional Regulatory Titles Officer at Wellington

PURSUANT to Section 221 of the Resource Management Act 1991 the Kapiti Coast District Council hereby gives notice that it has consented to the subdivision and that the following conditions are to be complied with on a continuing basis:

1. **With respect to Lots 69, 70 and 73: The native trees remaining within the lots as shown on Pritchard Group Ltd plan SP.3 NV.5 are to be protected from all harm. Owners and developers shall not cut down, damage or harm or permit to be cut down, damaged or harmed, any of these protected native trees.**

2. **With respect to Lots 69 to 74 inclusive: On-site wastewater treatment and disposal system shall be designed, constructed and operated to take into account the findings within the report prepared by Hamish Wells, dated March 20, 2001 and headed *"Nikau Valley Stage 5 – proposed Lots 72, 73, 75, 76 & 77 evaluation for on site effluent disposal in accordance with ARC TP No 58 second edition 1994"* Any system installed on site must meet the following performance criteria:**
   - **The system shall be designed with sufficient wastewater retention time to enable adequate treatment in relation to any constraints identified in the site investigation;**
   - **The wastewater shall be evenly distributed to the entire filtration surface of the disposal field;**
   - **The bottom of the wastewater disposal system shall be sufficiently above the groundwater at its highest level, in relation to any constraints identified in the site investigation, to prevent any contamination of groundwater;**
   - **The area available for on-site treatment shall be appropriate for the volume of the discharge and any constraints identified in the site investigation**

3. **With respect to Lots 69, 70 and 73 to 79 inclusive:** No dwelling or on site effluent system may be located within the following areas identified on DP335661:
   - "U" (Lot 69);
   - "V" (Lot 70);
   - "Y" (Lot 73);
   - "X" or "G" (Lot 74);
   - "Z" or "H" (Lot 75);
   - "W" or "I" (Lot 76);
   - "T" (Lot 77);
   - "S" (Lot 78); and
   - "R" (Lot 79)

   as these areas define the buffer zone associated with the location of the Ohariu Fault.

4. **With respect to ALL Lots:** Foundation design and construction for any new building or additions and alterations to a building shall take into account the findings within the report prepared by Hamish Wells, dated 16-04-04 and headed *"Nikau Valley Stage 5B – lots 69 – 84 – site soil conditions and suitability for the construction of light timber framed buildings in accordance with NZS 3604:1999"* submitted to Council in relation to application No. RM010212. A copy of the report is available in Council's Resource Consents Office at any time the office is open to the public.

5. **With respect to ALL Lots:** Further subdivision of the Lots (other than boundary adjustments as defined within the District Plan) shall be prohibited.

Issued in respect of application No. RM 010212 on this 30th day of August, 2004.

Wayne Gair
AUTHORISED OFFICER

Matthew Muspratt
AUTHORISED OFFICER

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Historical Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**552375**
Land Registration District	**Wellington**
Date Issued	21 September 2011

Prior References
426937

Estate	Fee Simple
Area	4271 square metres more or less
Legal Description	Lot 117 Deposited Plan 442630

Original Proprietors
Mahaki Holdings Limited

Interests

B349886.5 Mortgage to Bank of New Zealand - 24.3.1994 at 2.57 pm

Appurtenant hereto is a water supply right specified in Easement Certificate B400853.7 - 25.10.1994 at 9.46 am

B531004.4 Consent Notice pursuant to Section 221(1) Resource Management Act 1991 - 26.7.1996 at 12.34 pm

Land Covenant in Transfer B531004.12 - 26.7.1996 at 12.34 pm

Land Covenant in Transfer B686032.7 - 24.9.1998 at 10.05 am

Appurtenant hereto is a right of way and rights to electricity supply, water supply, gas supply, telephone and sewage drainage specified in Easement Certificate B812888.7 - 29.11.2000 at 3.00 pm

The easements specified in Easement Certificate B812888.7 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Transfer B812888.12 - 29.11.2000 at 3.00 pm

6144832.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 10.9.2004 at 9:00 am

Land Covenant in Transfer 6766028.1 - 24.2.2006 at 9:00 am

8870232.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 21.9.2011 at 3:28 pm

516880 Subject to reservations as to coal, gold and silver - 15.8.1962 at 2:25 pm (affects part formerly CT WN8B/846)

Land Covenant in Easement Instrument 8870232.7 - 21.9.2011 at 3:28 pm

Title Plan - DP 442630

Survey Number	DP 442630
Surveyor Reference	Nikau Heights 3A
Surveyor	Robert Graham Longley
Survey Firm	Pritchard Group Limited (Otaki)
Surveyor Declaration	I Robert Graham Longley, being a licensed cadastral surveyor, certify that: (a) this dataset provided by me and its related survey are accurate, correct and in accordance with the Cadastral Survey Act 2002 and the Rules for Cadastral Survey 2010, and (b)the survey was undertaken by me or under my personal direction. Declared on 11 Aug 2011 11:30 AM

Survey Details

Dataset Description	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685		
Status	Deposited		
Land District	Wellington	**Survey Class**	Class B
Submitted Date	11/08/2011	**Survey Approval Date**	23/08/2011
		Deposit Date	21/09/2011

Territorial Authorities

Kapiti Coast District

Comprised In

CT 426937

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Lot 116 Deposited Plan 442630	Fee Simple Title	0.4308 Ha	552374
Lot 117 Deposited Plan 442630	Fee Simple Title	0.4271 Ha	552375
Lot 118 Deposited Plan 442630	Fee Simple Title	0.9489 Ha	552376
Lot 119 Deposited Plan 442630	Fee Simple Title	1.6604 Ha	552377
Lot 120 Deposited Plan 442630	Fee Simple Title	0.4130 Ha	552378
Lot 121 Deposited Plan 442630	Fee Simple Title	0.4053 Ha	552379
Lot 122 Deposited Plan 442630	Fee Simple Title	1.0674 Ha	552380
Lot 123 Deposited Plan 442630	Fee Simple Title	1.0303 Ha	552381
Lot 128 Deposited Plan 442630	Fee Simple Title	15.3651 Ha	552382
Lot 129 Deposited Plan 442630	Fee Simple Title	0.5154 Ha	
Area A Deposited Plan 442630	Easement		
Area B Deposited Plan 442630	Easement		
Area C Deposited Plan 442630	Easement		
Area D Deposited Plan 442630	Easement		
Area E Deposited Plan 442630	Easement		
Area F Deposited Plan 442630	Easement		
Area G Deposited Plan 442630	Easement		

Title Plan - DP 442630

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Area H Deposited Plan 442630	Easement		
Area I Deposited Plan 442630	Easement		
Area J Deposited Plan 442630	Easement		
Area K Deposited Plan 442630	Easement		
Area L Deposited Plan 442630	Easement		
Area M Deposited Plan 442630	Easement		
Area N Deposited Plan 442630	Easement		
Area O Deposited Plan 442630	Easement		
Area P Deposited Plan 442630	Easement		
Area Q Deposited Plan 442630	Easement		
Area R Deposited Plan 442630	Easement		
Area S Deposited Plan 442630	Easement		
Area T Deposited Plan 442630	Easement		
Area U Deposited Plan 442630	Easement		
Area V Deposited Plan 442630	Easement		
Area W Deposited Plan 442630	Easement		
Area X Deposited Plan 442630	Easement		
Area Y Deposited Plan 442630	Easement		
Area Z Deposited Plan 442630	Easement		
Area BA Deposited Plan 442630	Easement		
Area BB Deposited Plan 442630	Easement		
Area BC Deposited Plan 442630	Easement		
Area BD Deposited Plan 442630	Easement		
Area BE Deposited Plan 442630	Easement		
Area BF Deposited Plan 442630	Easement		
Area BG Deposited Plan 442630	Easement		
Area BH Deposited Plan 442630	Easement		
Area BI Deposited Plan 442630	Easement		
Area BJ Deposited Plan 442630	Easement		
Total Area		22.2637 Ha	

Plan Number

DP 442630

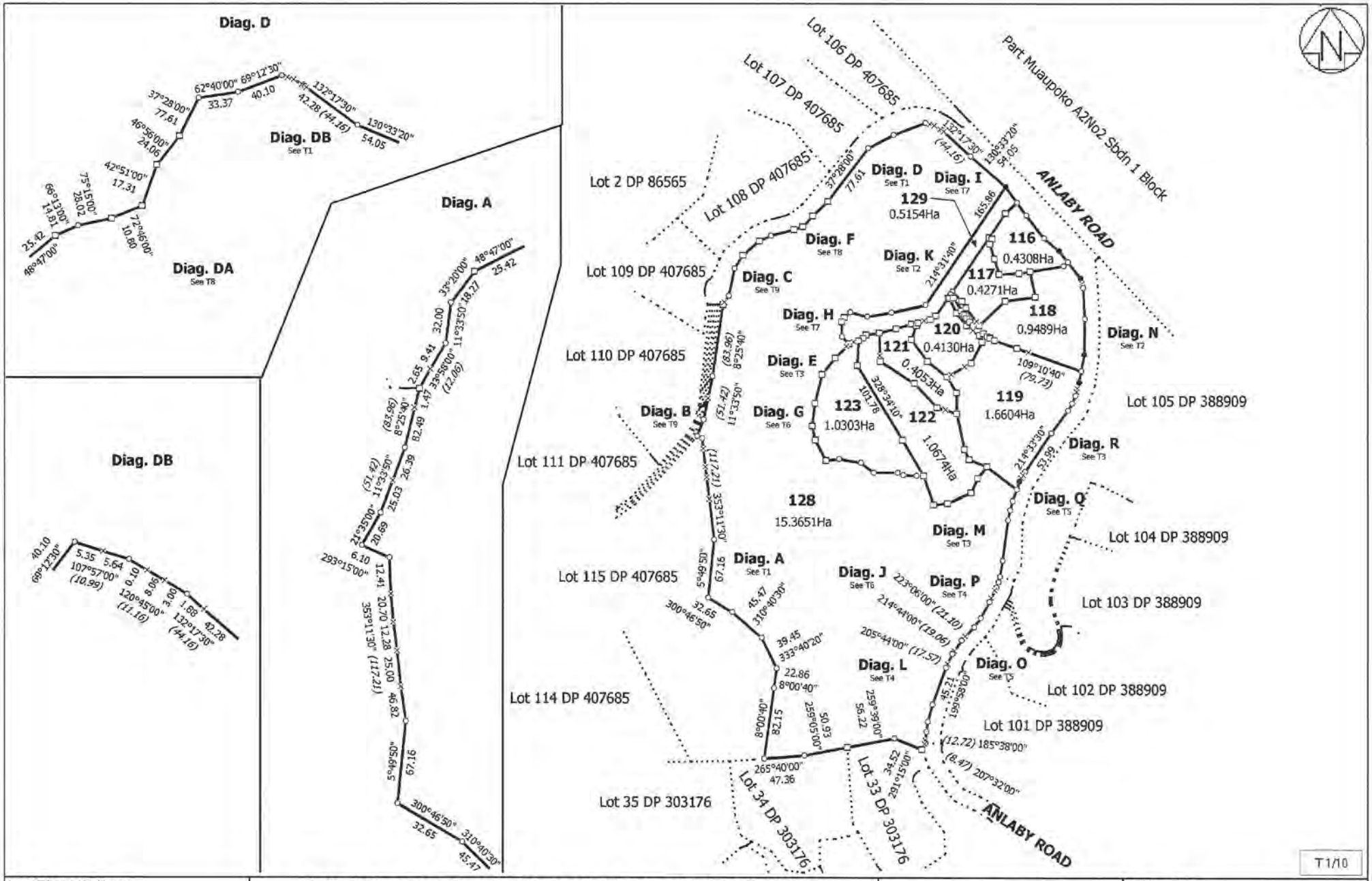
Schedule of Existing Easements			
Purpose	**Shown**	**Servient Tenement**	**Creating Document or Easement Certificate**
Gas Pipeline (in gross)	S, T, K, J, V, W, P, Z, Y, BA	Lot 128 DP 442630	Transfer 871349.1
	R, S, J, I, U, V, N, X, Y	Lot 128 DP 442630	Doc 900461 Varied by B 065547.1
Right to Drain Water (Stormwater Drainage) (in gross)	D, E, F	Lot 128 DP 442630	E.I. 7532913.8
	A	Lot 118 DP 442630	E.I. 7943259.9
	B, C	Lot 119 DP 442630	
Right to Drain Sewage (in gross)	G, H, I, J, K, L	Lot 128 DP 442630	E.I. 7943259.7
	BB	LOT 123 DP 442630	
Right to Convey Electricity (in gross)	G, M, N, O, P, Q	Lot 128 DP 442630	E.I 7943259.10
	BB	Lot 123 DP 442630	
Right to Convey Telecommunications and Computer Media (in gross)	G, M, N, O, P, Q	Lot 128 DP 442630	E.I 7943259.11
	BB	Lot 123 DP 442630	

Memorandum of Easements (Pursuant to s243 Resource Management Act 1991)			
Purpose	**Shown**	**Servient Tenement**	**Dominant Tenement**
Right to Drain Water (Stormwater Drainage)	BJ	Lot 119 DP 442630	Lot 118 DP 442630

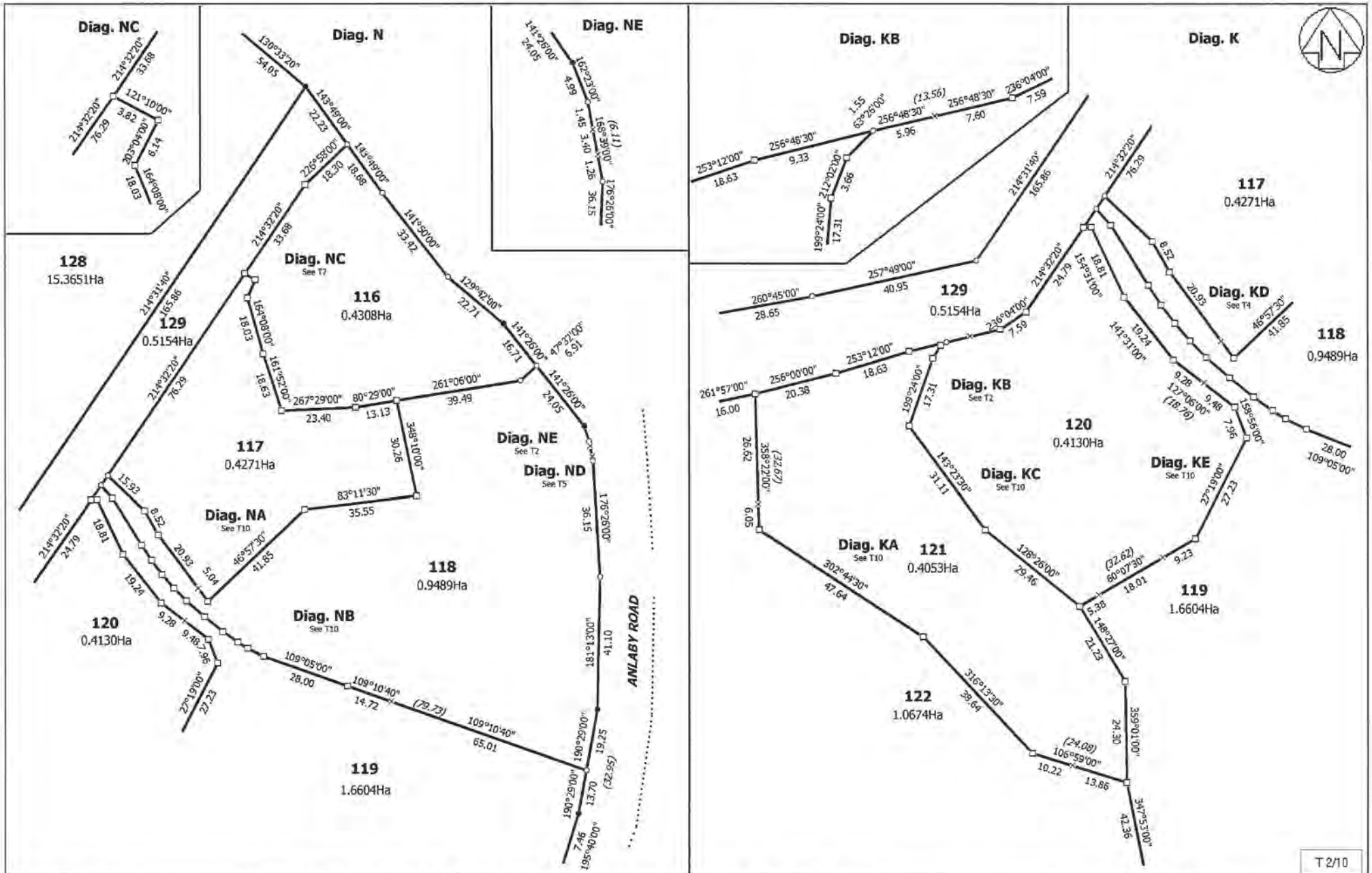
Memorandum of Easements in Gross (Pursuant to s243 Resource Management Act 1991)			
Purpose	**Shown**	**Servient Tenement**	**Grantee**
Right to Drain Water (Stormwater Drainage)	BH	Lot 120 DP 442630	Kapiti Coast District Council
	BI	Lot 123 DP 442630	

Areas to be subject to Land Covenants: BC, BD, BE, BF, and BG.

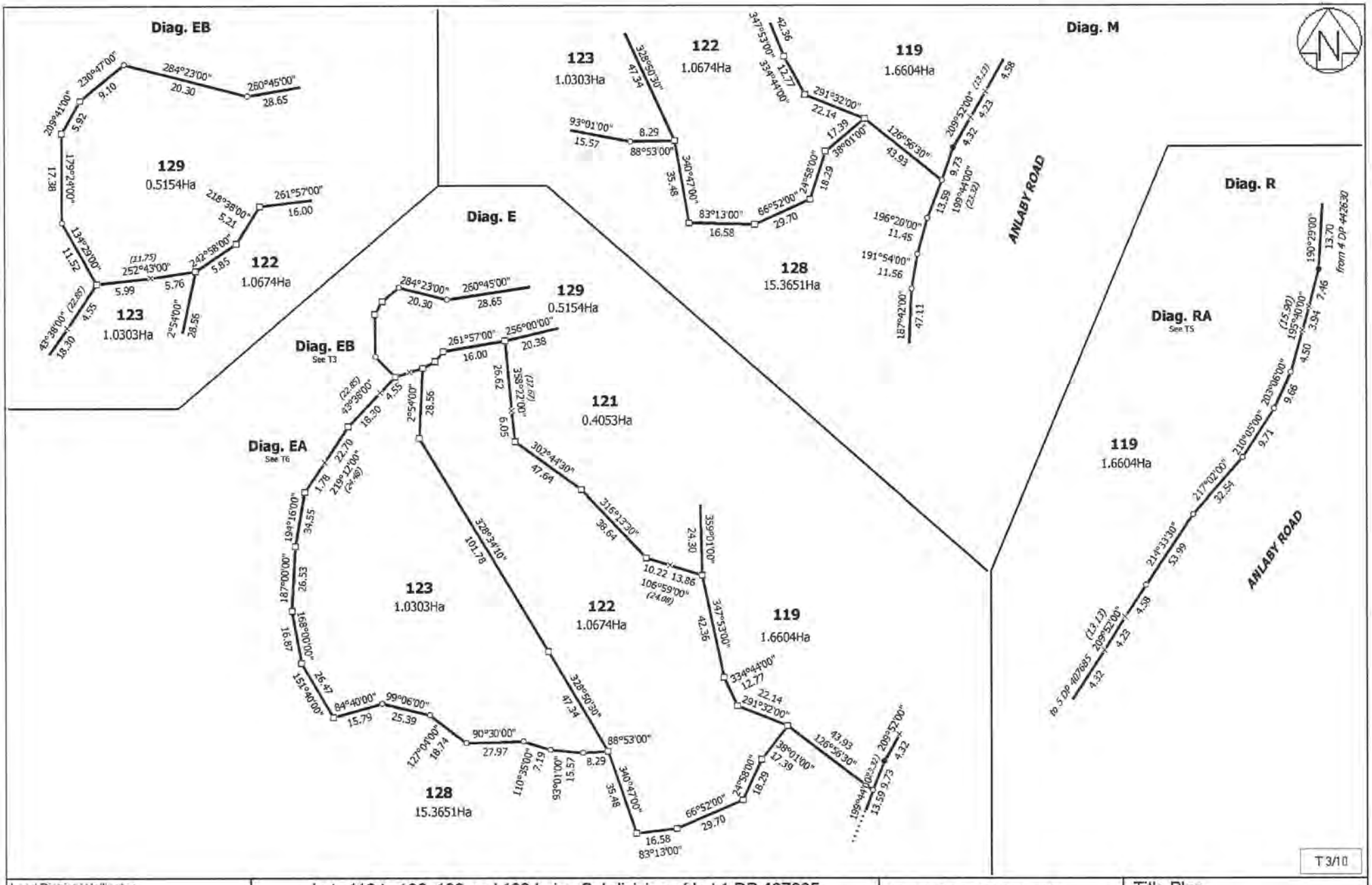
Easement Tables 1 of 1



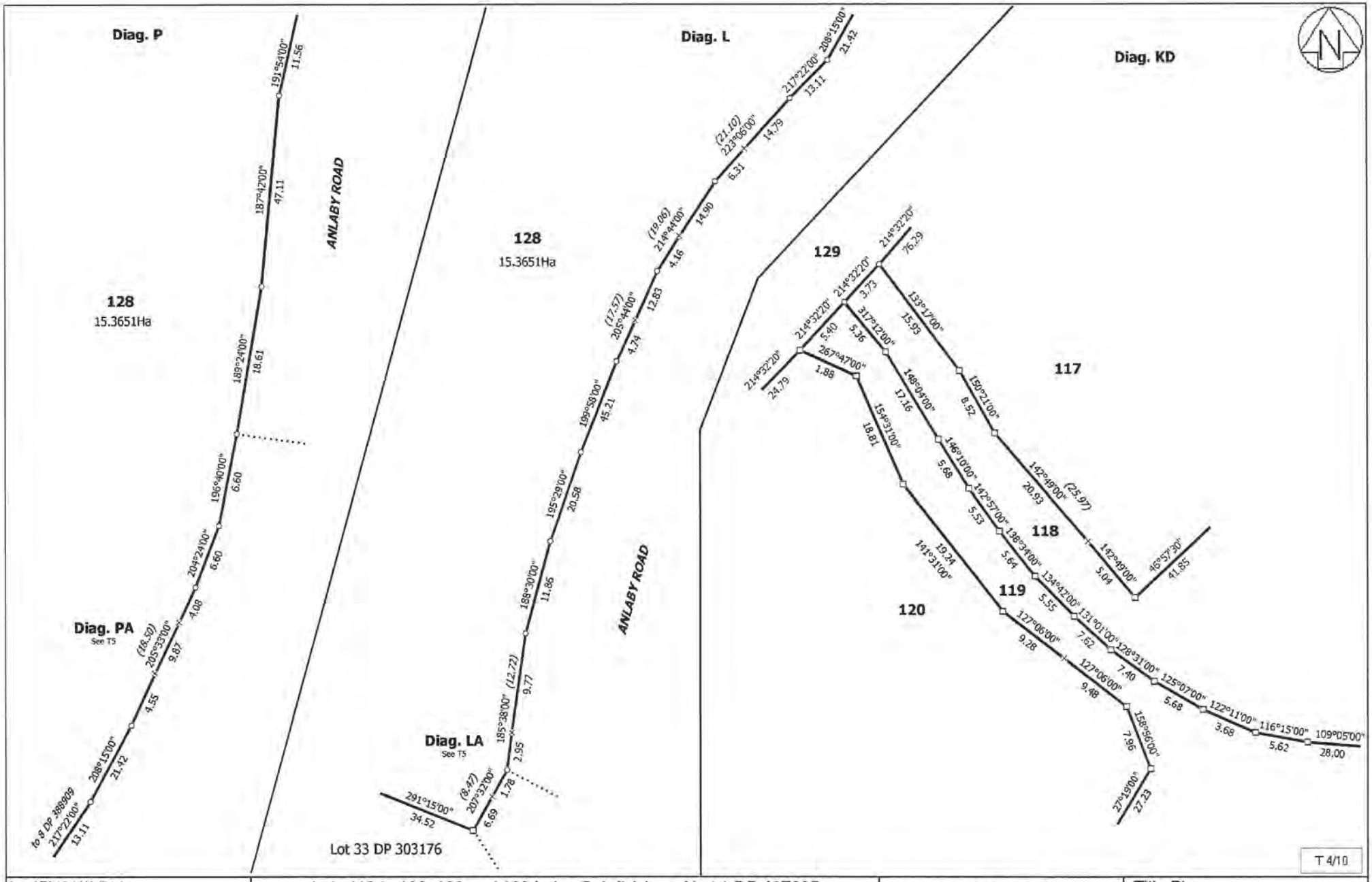
Land District: Wellington Digitally Generated Plan Generated on: 29/09/2011 09:37am Page 4 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan DP 442630 Deposited on: 21/09/2011



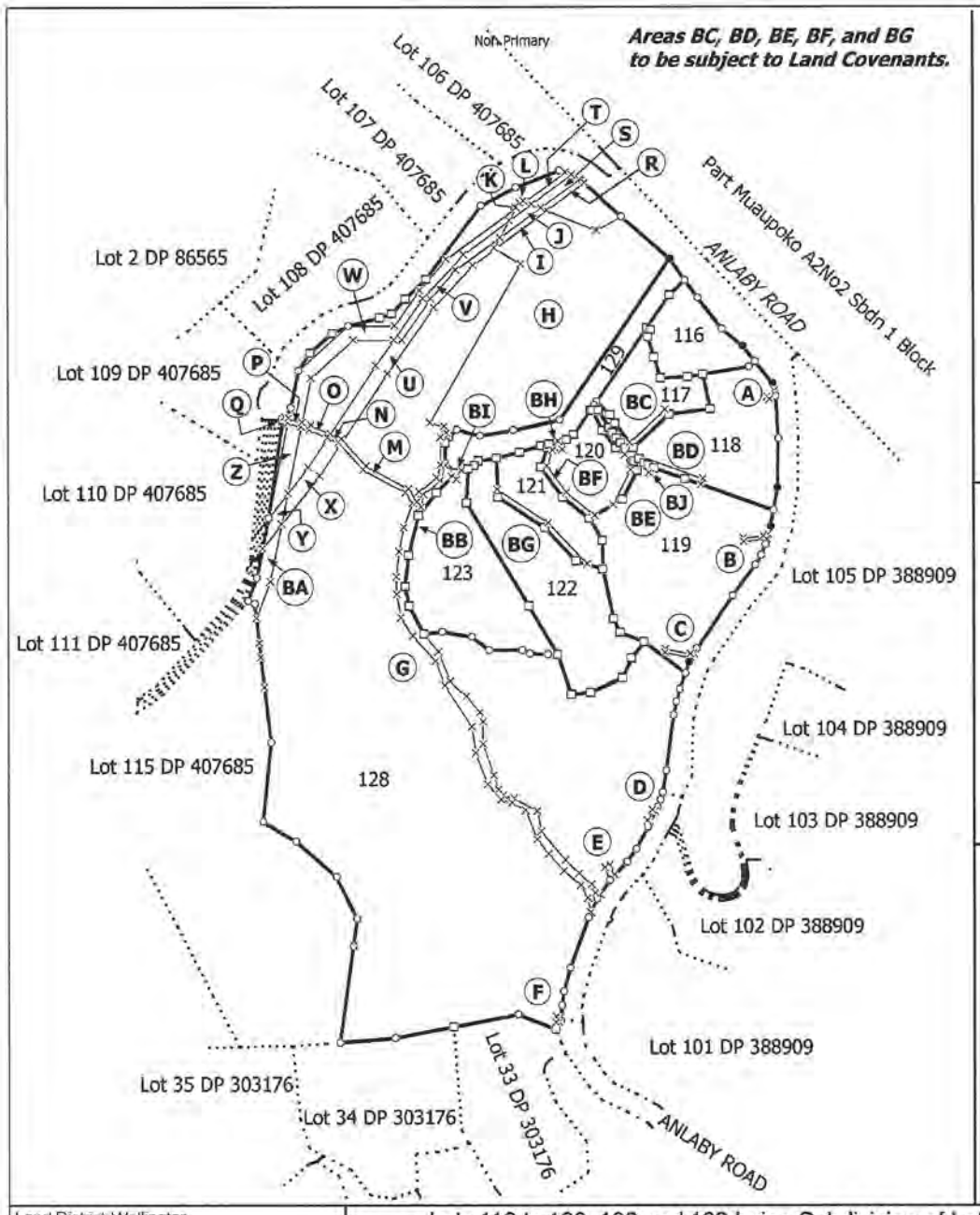
Land District Wellington Digitally Generated Plan Generated on: 29/09/2011 09:37am Page 5 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan DP 442630 Deposited on: 21/09/2011

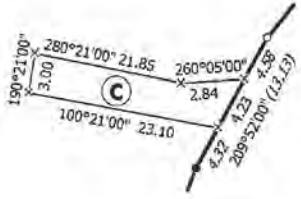


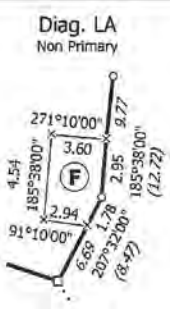
Land District Wellington Digitally Generated Plan Generated on: 29/09/2011 09:37am Page 6 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan DP 442630 Deposited on: 21/09/2011

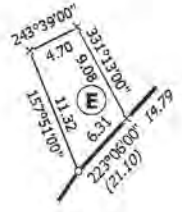


Land District: Wellington Digitally Generated Plan Generated on: 29/09/2011 09:37am Page 7 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan DP 442630 Deposited on: 21/09/2011









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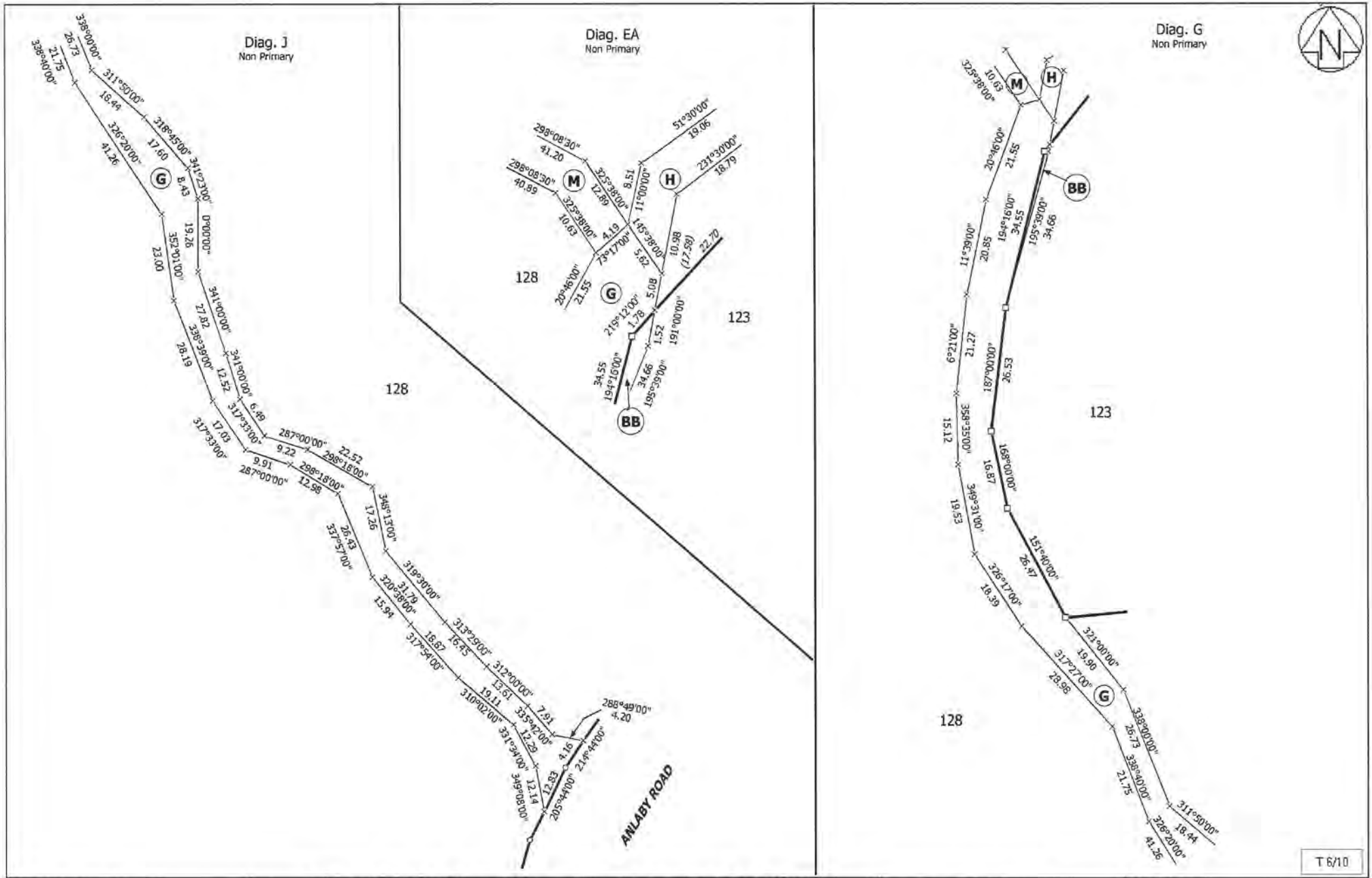
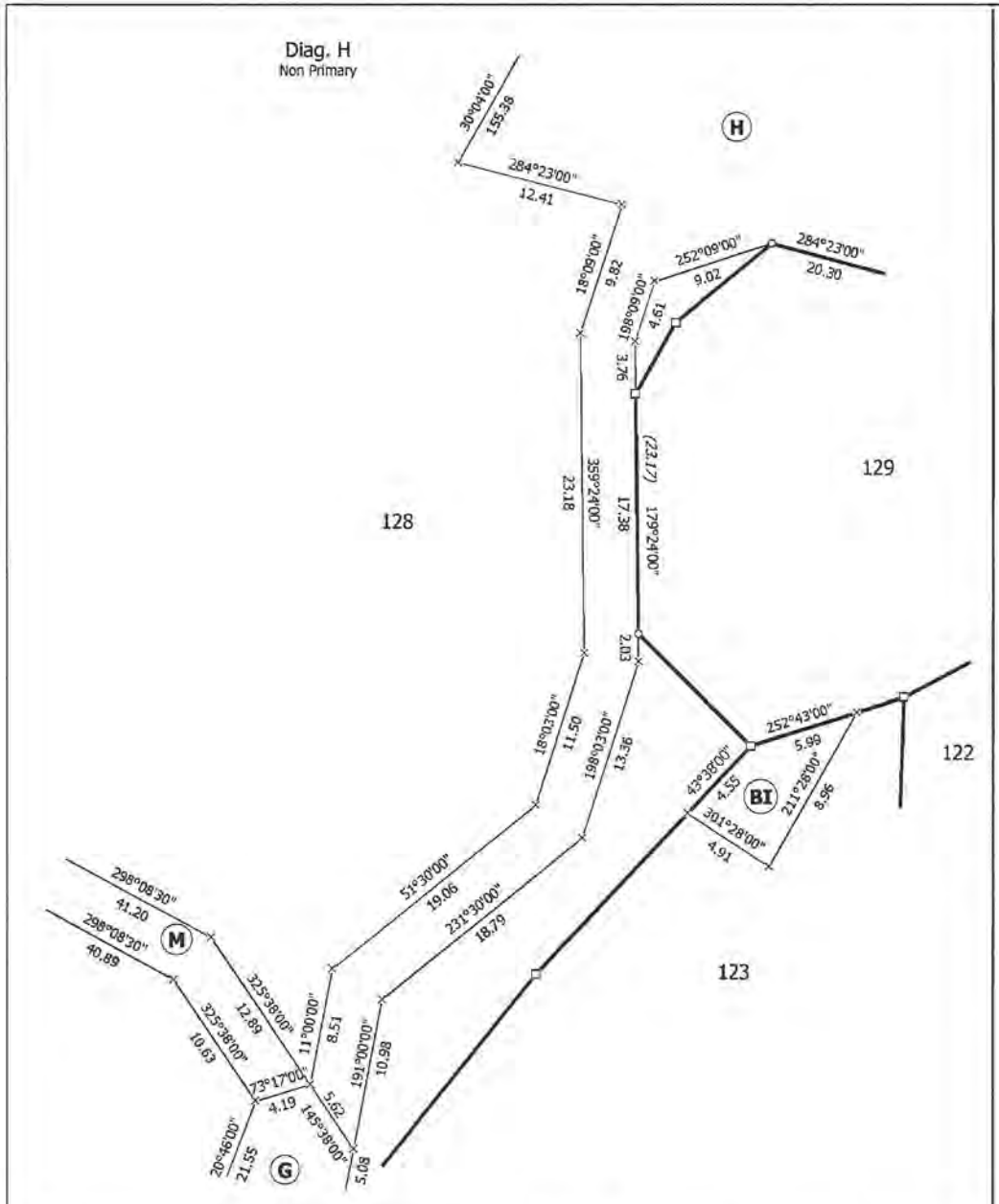
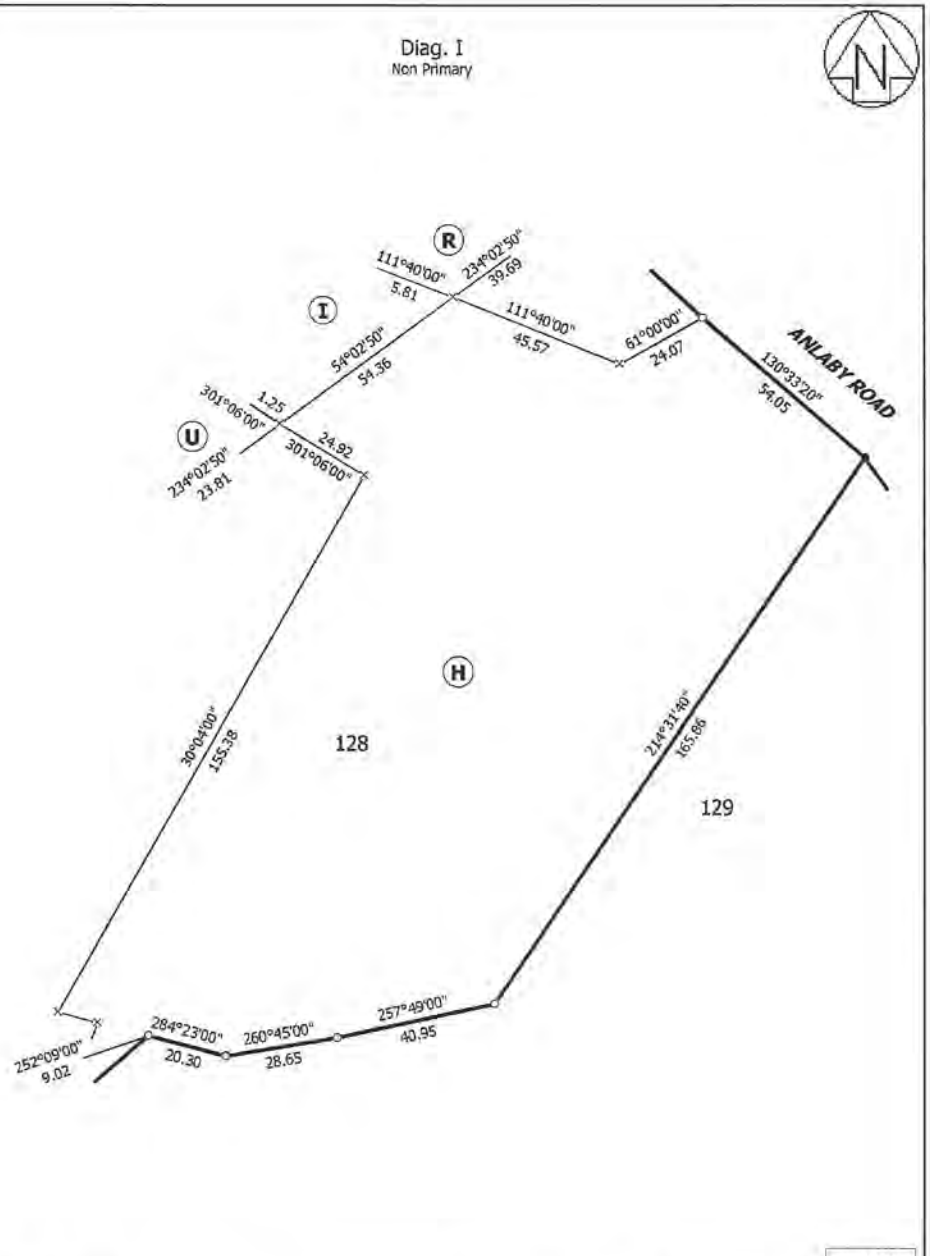
Land District: Wellington Digitally Generated Plan Generated on: 29/09/2011 09:37am Page 8 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan DP 442630 Deposited on: 21/09/2011



Land District: Wellington Digitally Generated Plan Generated on: 29/09/2011 09:37am Page 9 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan DP 442630 Deposited on: 21/09/2011





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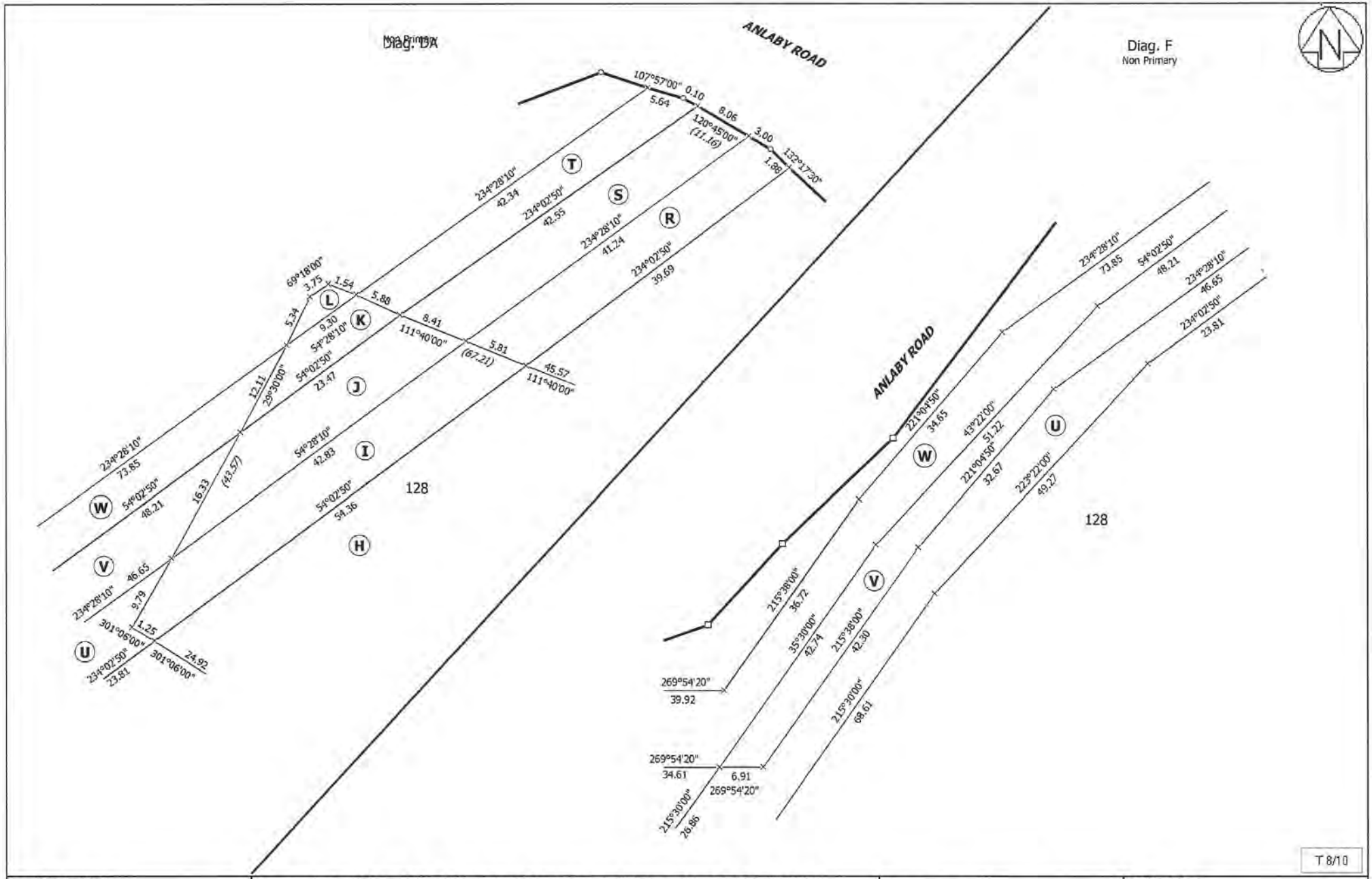
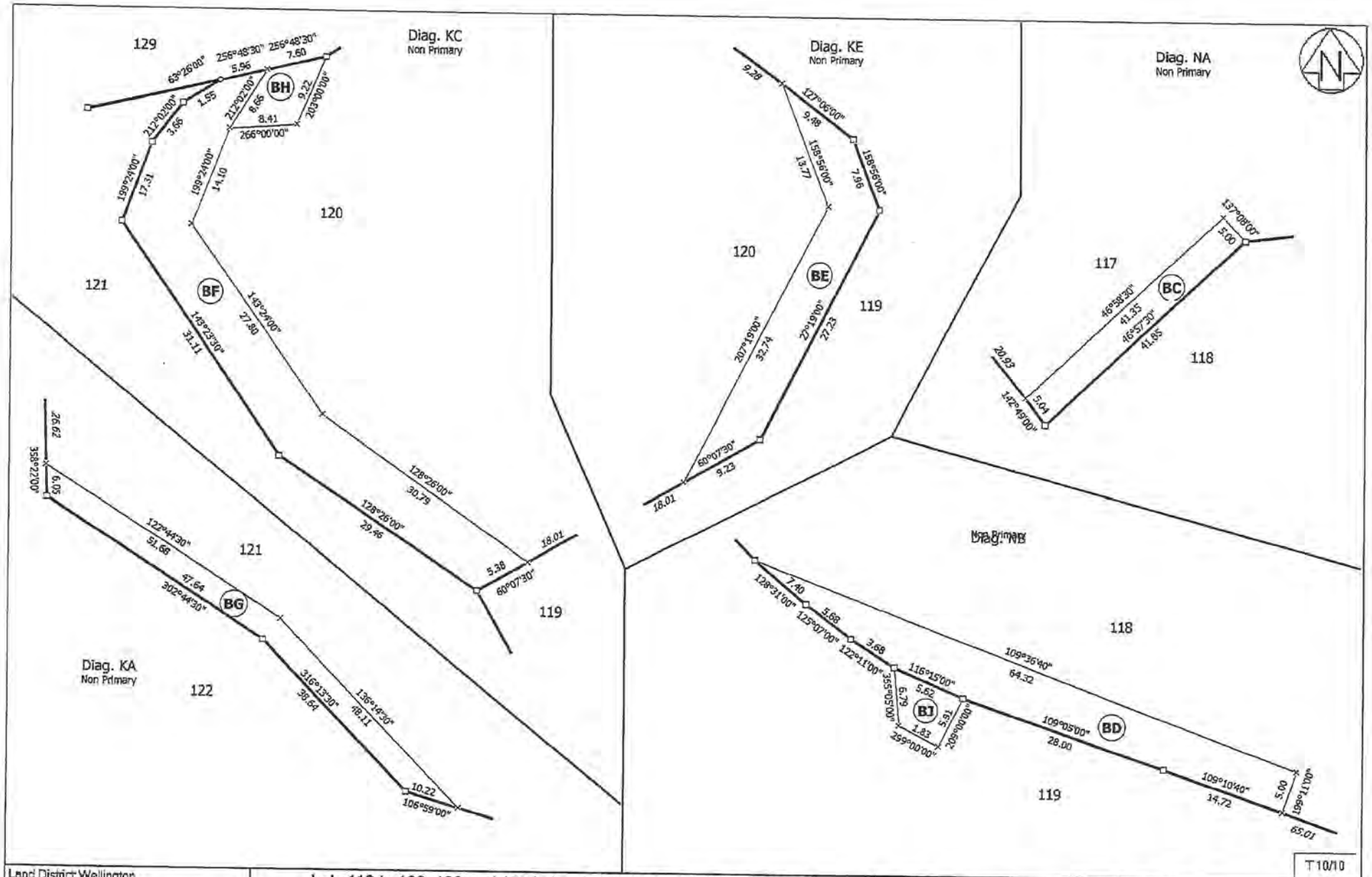
Land District: Wellington Digitally Generated Plan Generated on: 29/09/2011 09:37am Page 10 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan DP 442630 Deposited on: 21/09/2011



Land District: Wellington Digitally Generated Plan Generated on: 29/09/2011 09:37am Page 11 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan DP 442630 Deposited on: 21/09/2011



Land District Wellington Digitally Generated Plan Generated on: 13/07/2011 5:01pm Page 13 of 13	Lots 116 to 123, 128 and 129 being Subdivision of Lot 1 DP 407685	Surveyor: Robert Graham Longley Firm: Pritchard Group Limited (Otaki)	Title Plan LT 442630

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and section 30C, Building Act 2004

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING		
Street address:	Lot 117 Niakau Views	
Suburb:	Nikau Views	
Town/City:	Paraparaumu	Postcode:

THE OWNER(S)		
Name(s):		
Mailing address:		
Suburb:	PO Box/Private Bag:	
Town/City:		Postcode:
Phone number:	Email address:	

BASIS FOR PROVIDING THIS MEMORANDUM

I am providing this memorandum in my role as the: Please tick the option that applies ✓

○	**sole** designer of all of the RBW design outlined in this memorandum – I carried out all of the RBW design work myself – no other person will be providing any additional memoranda for the project
○	**lead** designer who carried out some of the RBW design myself but also supervised other designers – this memorandum covers their RBW design work as well as mine, and **no other** person will be providing any additional memoranda for the project
✓	**lead** designer for all but specific elements of RBW – this memorandum only covers the RBW design work that I carried out or supervised and the **other** designers will provide their own memorandum relating to their specific RBW design
○	**specialist** designer who carried out specific elements of RBW design work as outlined in this memorandum – other designers will be providing a memorandum covering the remaining RBW design work

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK (RBW)

I Martin Horn carried out / supervised the following design work that is restricted building work

PRIMARY STRUCTURE: B1

Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ✓ if included. Cross ⊗ if excluded	If appropriate, provide details of the RBW	Tick ✓ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
All RBW design work relating to B1 ✓		○ Carried out ✓ Supervised	
Foundations and subfloor framing ✓		○ Carried out ✓ Supervised	

Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ✓ if included. Cross ✗ if excluded	If appropriate, provide details of the RBW	Tick ✓ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Walls ✓		○ Carried out ✓ Supervised	
Roof ✓		○ Carried out ✓ Supervised	
Columns and beams ✓		○ Carried out ✓ Supervised	
Other ○	N/A	○ Carried out ○ Supervised	
EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2			
All RBW design work relating to E2 ✓		○ Carried out ✓ Supervised	
Damp proofing ✓		○ Carried out ✓ Supervised	
Roof cladding or roof cladding system ✓		○ Carried out ✓ Supervised	

Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ✓ if included. Cross ⊗ if excluded	If appropriate, provide details of the RBW	Tick ✓ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Ventilation system (for example, subfloor or cavity) ✓		○ Carried out ✓ Supervised	
Wall cladding or wall cladding system ✓		○ Carried out ✓ Supervised	
Waterproofing ✓		○ Carried out ✓ Supervised	
Other ○	N/A	○ Carried out ○ Supervised	
FIRE SAFETY SYSTEMS: C1 - C6			
Emergency warning systems Evacuation and fire service operation systems ○ Suppression or control systems Other	N/A	○ Carried out ○ Supervised	
Note: The design of fire safety systems is only restricted building work when it involves small-to-medium apartment buildings as defined by the Building (Definition of Restricted Building Work) Order 2011.			

WAIVERS AND MODIFICATIONS

Waivers or modifications of the Building Code are required. ○ Yes ✓ No

If Yes, provide details of the waivers or modifications below:

Clause	**Waiver/modification required**
List relevant clause numbers of building code	Specify nature of waiver or modification of building code required

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise design work that is restricted building work.

Name: Martin Horn	LBP or Registration number: BP113024
The practitioner is a: ☒ Design LBP ○ Registered architect ○ Chartered professional engineer	
Design Entity or Company (optional): Emerge Architectural Design Limited	
Mailing address (if different from below):	
Street address/Registered office: 85 Lombard Street	
Suburb: Central	Town/City: Palmerston North
PO Box/Private Bag: PO Box 652	Postcode: 4440
Phone number: 06 353 0217	Mobile: 021 2845 674
After hours: -	Fax: 06 353 0218
Email address: marty@emerge-arch.co.nz	Website: www.emerge-arch.co.nz

DECLARATION

I Martin Horn LBP, state that I have applied the skill and care reasonably required of a competent design professional in carrying out or supervising the Restricted Building Work (RBW) described in this form, and that based on this, I also state that the RBW:

- Complies with the building code, or
- Complies with the building code subject to any waiver or modification of the building code recorded on this form

Signature: _____

Date: _____

Kāpiti Coast District Council

Private Bag 60 601
Paraparaumu 5254
New Zealand

Tel (04) 296 4700
or 0800 486 486
Fax (04) 296 4830
kapiticouncil@kapiticoast.govt.nz
www.kapiticoast.govt.nz

CONSENT NOTICE
PURSUANT TO SECTION 221 OF THE RESOURCE MANAGEMENT ACT 1991

COPY
for Brown Envelope

IN THE MATTER OF A PLAN LODGED FOR DEPOSIT UNDER NUMBER 442630
AND RESOURCE CONSENT NO. RM 100103

(BEING THE SUBDIVISION OF LOT 1 DP 407685),
AT ANLABY ROAD, NIKAU VALLEY
FOR MAHAKI HOLDINGS LIMITED

The Regional Regulatory Titles Officer at Wellington

PURSUANT to Section 221 of the Resource Management Act 1991 the Kapiti Coast District Council hereby gives notice that it has consented to the subdivision and that the following conditions are to be complied with on a continuing basis:

1. With respect to Lots 116 to 123 inclusive: Foundation design and construction for any new building or additions and alterations to a building shall take into account the findings and recommendations within the site investigation report for Nikau Heights Stage 3a prepared by Hamish Wells, Engineer and submitted to Council in relation to application No. RM100103. A copy of the report is available in Council's Office at any time the office is open to the public.

2. With respect to Lots 116 to 123 inclusive: Any on site wastewater system design and construction shall take into account the findings and recommendations within the site investigation report related to On Site Effluent Disposal for Nikau Heights Stage 3a prepared by Hamish Wells, Engineer, and submitted to Council in relation to application No. RM100103. A copy of the report is available in Council's Office at any time the office is open to the public.

3. With respect to Lots 116 to 123 inclusive: It shall be the responsibility of the land owner to construct, maintain and monitor the installation and operation of any individual household water supply in accordance with the Ministry of Health's publication 'Household water supplies, the selection, operation and maintenance of individual household water supplies' (revised April, 2006) that provides a minimum storage capacity of 30,000 litres and ensures that any adverse effects on the environment are minor.

4. With respect to Lots 121, 122, 123 and 128: All newly planted trees and vegetation capable of growth to a height in excess of 1 metre and/or new buildings/structures shall be set back a horizontal distance of at least 12 metres (a total of 24 metres) from the centrelines of the Bunnythorpe-Haywards A and B high voltage transmission lines. (Transpower Corridor Management Policy).

5. With respect to Lots 121, 122, 123 and 128: Prior to the construction of any building or structure, the land owner shall submit to the Kapiti Coast District Council (and a copy to Transpower) a report from a suitably qualified electrical engineer confirming that the proposed building or structure complies with the minimum safe distances from the Bunnythorpe-Haywards A and B transmission lines as specified in table 3 of NZECP 34:2001. (NZECP 34:2001 safe distance from conductors where engineering advice is necessary).

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6. With respect to Lot 128: Buildings or any part of a building shall not be located within 12 metres of the closest visible edge of any high voltage transmission line support structure foundation. (NZECP 34:2001 safe distances from support structures).

7. With respect to Lot 128: Buildings, structures and vegetation located on the land shall not be located to preclude existing vehicle access to the existing support structures on site. (NZECP 34:2001 access to support structures).

8. With respect to Lots 121, 122, 123 and 128: In the case of any tower supporting any conductor, no person shall excavate or otherwise interfere with any land:
   - At a depth greater than 300mm within 6 metres of the outer edge of the visible foundations of he tower; or
   - At a depth greater 3 metres, between 6 metres and 12 metres of the outer edge of the visible foundations of the tower; or
   - In such a way as to create an unstable batter.

9. With respect to Lots 121, 122, 123 and 128: All machinery and mobile plant operated on the land shall maintain a minimum clearance distance of 4 metres from the Bunnythorpe-Haywards A and B transmission line conductors at all times.

10. With respect to Lots 121, 122, 123 and 128: Excavated or other material shall not be deposited under or near the Bunnythorpe-Haywards A and B transmission lines so as to reduce the vertical distance from the ground to the conductors to a distance less than (refer Table 4 in NZECP 34:2001):
    - 7.5 metres vertically across or along driveways, or on any other land traversable by vehicles;
    - 6.0 metres vertically, on any land not traversable by vehicles due to inaccessibility; and
    - 4.5 metres in any distance other than vertical on all land (radial distance).

    Note that the distances specified include an allowance for mechanical creep (i.e. permanent elongation). (NZECP 34:2001 safe distances of conductors from ground).

11. With respect to Lots 121, 122, 123 and 128: With reference to NZECP 34:2001 Figure 2, no fences of conductive material shall be constructed within 5 metres of any high voltage transmission line tower. (NZECP 34:2001 safe distances from support structures – fences).

Issued in respect of application No. RM 100103 on this 5th day of September, 2011.

David Wayne Gair
AUTHORISED OFFICER

Monique Sarah Robertson
AUTHORISED OFFICER

Memorandum from licensed building practitioner:

Record of building work – Window Installation

Section 88, Building Act 2004

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING	
Street address: 9 Angus Way	
Suburb: Nikau Valley	
Town/City: PARAPARAUMU	Postcode: 5032

THE PROJECT
Building consent number: BC- 130599

THE OWNER(S)	
Name(s): **Generation Homes Kapiti Coast**	Validity authenticated
Mailing address: **P O Box 197**	Signature: 21 JAN 2014
Suburb: **Waikanae**	PO Box/Private Bag:
Town/City: **Kapiti Coast**	Postcode: **5250**
Phone number: **0275 181 909**	Email address: **Alanp@generation.co.nz**

EXTERNAL MOISTURE MANAGEMENT SYSTEMS

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Description of RBW carried out	If necessary, describe the restricted building work.	Tick ☑ whether you carried out the restricted building work or supervised someone else carrying out the restricted building work.
Window Installation		
Flashing Tape to Soffit fitted items	Flexible flashing tape (Aliband) fitted to the head of all soffit fitted items prior to the ribbonboard and soffits being fitted	☑ Carried out ☐ Supervised
Butyl flashings for BV cavity construction	For BV cavity construction the Butyl flashings (Supercoarse) fitted to the sills of all items that do not go to the floor (WANZ Guide to E2/AS1 Amd 5, Figure 73C, (f) Sill detail, page 28)	☐ Carried out ☐ Supervised
Wrapping of openings	Openings wrapped by cutting back of building overlay and fitting the flexible flashing tape (Aliband) as per WANZ Guide to E2/AS1 Amd 5, detail drawing 3, page 10)	☑ Carried out ☐ Supervised
Sill supports fitted	Sill supports fitted to all items wider than 600mm. Sill support fitted across the full opening and fixed with 10 gauge x 50mm stainless steel screws at maximum 300mm centres. WANZ Guide to E2/AS1 Amd 5, Figure 73C, (f) Sill detail, page 28)	☑ Carried out ☐ Supervised
Window Installation	Windows installed square and true. Packed and fixed within 150mm of all corners and with max 450mm centres as per E2/AS1 Ammd 5, Clause 9.1.10.8 Attachment for windows and doors	☑ Carried out ☐ Supervised
Air sealing of Joinery	Windows air sealed with PF Rod and low expansion foam. Narrow areas wet sealed where it is impracticable to use PF rod and foam. E2/AS1 Ammd 5, Clause 9.1.6 Airseals	☑ Carried out ☐ Supervised
Butyl flashings for BV cavity construction	Fitting of butyl flashings to all jambs as per WANZ Guide to E2/AS1 Amd 5, Diagram 73C , g Jamb flashing, page 28)	☑ Carried out ☐ Supervised
Head flashings	Head flashings fitted to all non-soffit fitted items. Flashing tape applied to top of 65mm head flashing WANZ Guide to E2/AS1 Amd 5, Figure 71 (a) Metal head flashing with flashing tape option, page 25)	☑ Carried out ☐ Supervised

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.

Name: GRANT CAMPBELL	LBP number: BP102556
Class(es) licensed in: CARPENTRY	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below): 187 HARAKEKE RD, RD1 OTAKI	
Street address / Registered office: 5 GRANDVIEW TCE RD 20 LEVIN	

Suburb:	Town / City:
PO Box / Private Bag:	Postcode:
Phone Number:	Mobile: 021 436 019
After hours:	Fax: 06 3680357
Email address: g.a.campbell@xtra.co.nz	Website:

DECLARATION

I G Campbell carried out or supervised the restricted building work recorded on this form.

Signature _____

Date: _____

Memorandum from Licensed Building Practitioner:
Record of building work
Section 88, Building Act 2004

LICENSED BUILDING PRACTITIONER · www.dbh.govt.nz · BUILDING CONFIDENCE

PlaceMakers
Know how. Can do.

THE BUILDING

Street address: 9 Angus Road
Suburb: Nikau Views.
Town/City: Paraparaumu | Postcode:

THE PROJECT

Building consent number: 130599

THE OWNER(S)

Name(s): Barry + Hayley Vinten
Mailing address: 9 Angus Road
Suburb: Nikau Views. | PO Box/Private Bag:
Town/City: Paraparaumu | Postcode:
Phone number: | Email address:

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

PRIMARY STRUCTURE

Work that is restricted building work (Tick ✓)	Description of restricted building work (If necessary, describe the restricted building work)	Carried out or supervised (Tick ✓ whether you carried out the RBW or supervised someone else.)
○ Foundations and subfloor framing	Validity authenticated 21 JAN 2014 Signature:	○ Carried out ○ Supervised
✓ Walls	Stand premade Frames Connect to slab as per plan (Thru bolts + Handibracs)	✓ Carried out ○ Supervised
✓ Roof	Erect premade Trusses Strap brace, dragen ties Truss connections as per plan.	✓ Carried out ○ Supervised
○ Columns and beams		○ Carried out ○ Supervised
✓ Bracing	Ply bracing to external walls with Handibrac connections. Strap bracing to trusses.	✓ Carried out ○ Supervised
✓ Other	Gib bracing elements	○ Carried out ✓ Supervised

White – Council Copy Yellow – Home Owner's copy Blue – Builder's Copy

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

EXTERNAL MOISTURE MANAGEMENT SYSTEMS

Damp proofing ✓	Mulseal brick cavity	✓ Carried out ○ Supervised
Roof cladding or roof cladding system ○		○ Carried out ○ Supervised
Ventilation system (for example, subfloor or cavity) ○		○ Carried out ○ Supervised
Wall cladding or wall cladding system ✓	Linea to Garage Cable. on cavity system as per plan.	✓ Carried out ○ Supervised
Waterproofing ✓	Generation Homes building wrap.	✓ Carried out ○ Supervised
Other ○		○ Carried out ○ Supervised

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.

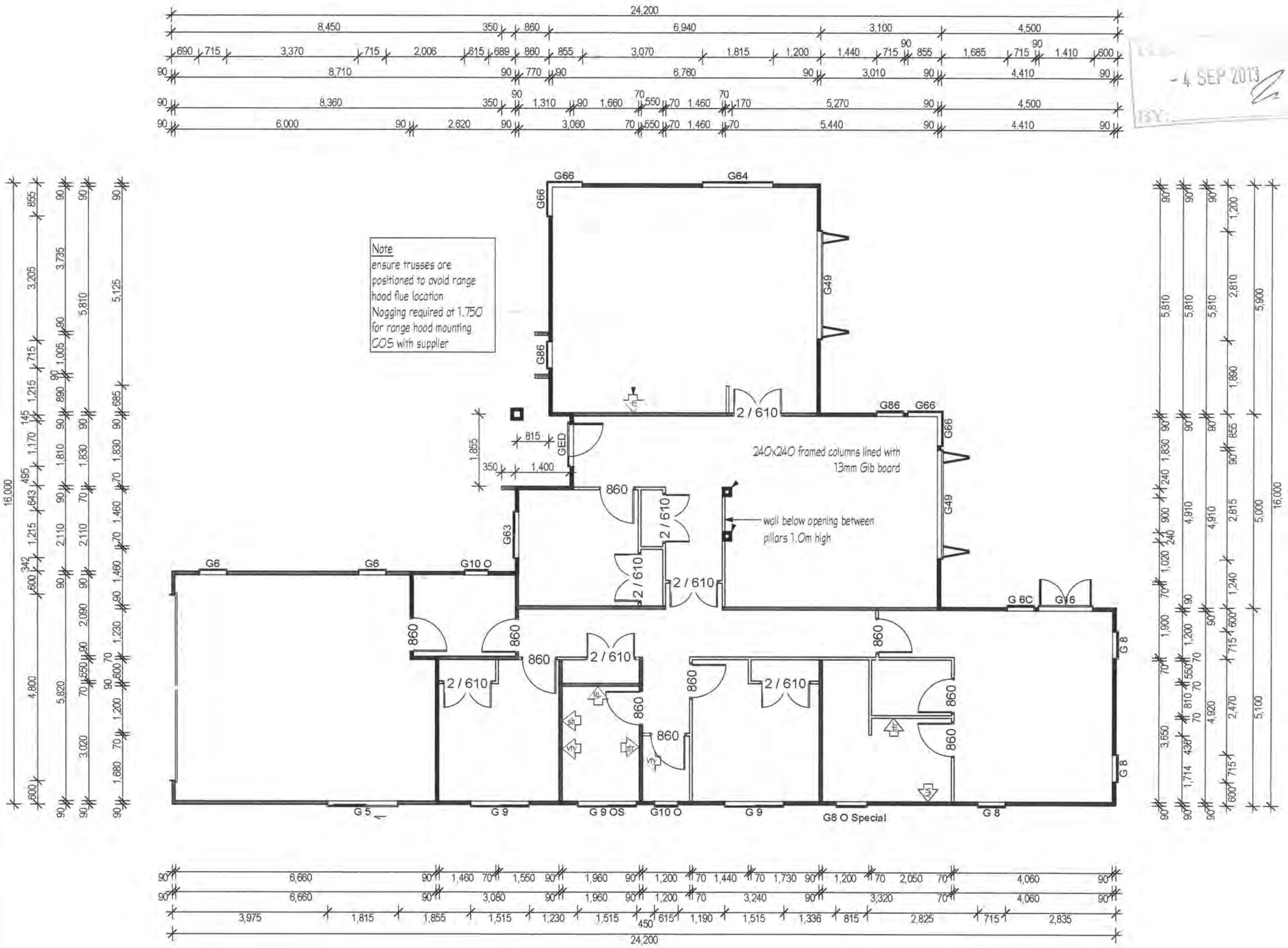
Name: Brett Flanagan.	LBP number: 106355
Class(es) licensed in: Carpentry	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below):	
Street address/Registered office: 26 Woven stone way	
Suburb: RD 20 Ohau	Town/City: LEVIN
PO Box/Private Bag:	Postcode: 5570
Phone number: 06 3672300.	Mobile: 0276180835
After hours:	Fax:
Email address:	Website:

DECLARATION

I Brett Flanagan carried out or supervised the restricted building work recorded on this form.

Signature: _____ Date: 17/12/13

White – Council Copy Yellow – Home Owner's copy Blue – Builder's Copy



Wall Setout Notes:

90 x 45 SG8 R2.6 Pink Batts Insulated Wall

90 x 45 SG8 Un-Insulated Wall

70 x 45 SG8 Un-Insulated Wall

FIXTURES BLOCKING

allow to place extra nogs 800mm above floor for vanity fixing at all vanity / handbasin locations. allow also to provide nogging as required for **Shower Enclosure (SH)** fixing, **heated towel rails (HTR), Range Hoods (RH), Vanity & Basins (Vty), Dryers and disabled handrails** where indicated

All framing and lintels to be SG8 grade unless specified otherwise

Double Top plate = 90 x 45 top plate with 140 x 35 ribbon board

Refer to Truss Designers plans for Lintel and Beam Schedules

Ensure trusses are positioned to avoid range hood flue location Nogging required at 1.750 for range hood mounting C.O.S with supplier

All ceramic tiles to wet areas to have glazed finish to an average friction co-efficient of 0.1 - 0.2

CHECK ALL DIMENSIONS ON SITE PRIOR TO MANUFACTURE.
ANY DISCREPANCIES TO BE VERIFIED BY DESIGNER

WALL SETOUT PLAN		
Barry and Hayley Vinten Lot 117 - DP442630 Paraparaumu		
DRAWN BY ROD	CHECKED BY MARTY	
GENERATION KAPITI COAST NZ		
DATE AUG 13	SCALES: 1:100	EC183 - dwg 08

SPECIFIC PROJECT NOTES

LEGAL DESCRIPTION:

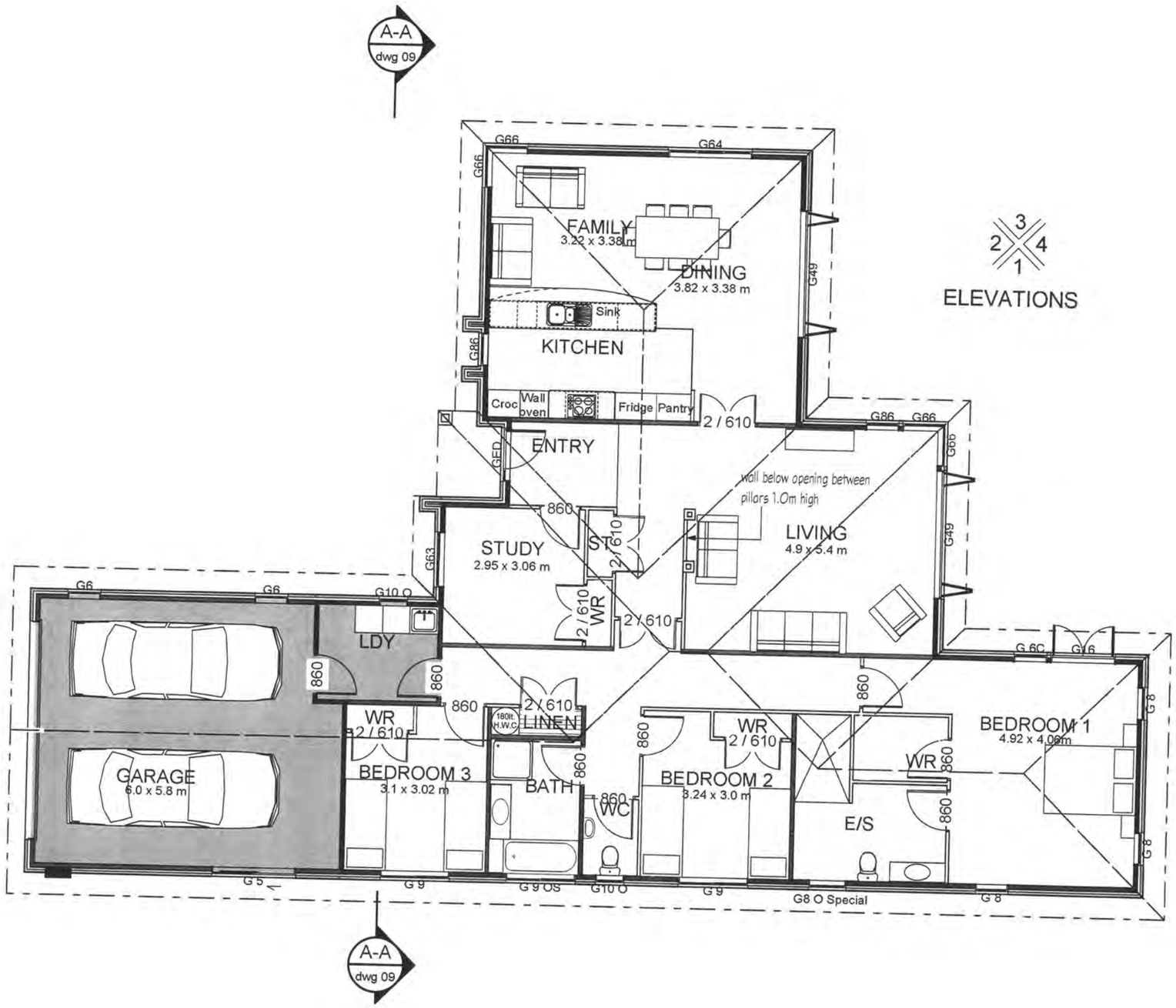
LOT	117
DP	442630
SITE AREA	4271sq m
STREET #	Paraparaumu

AREAS:

SITE AREA	4271sq m
AREA OVER BRICK	234.56 sq m
AREA OVER FRAMING	224.269 sq m
SITE COVERAGE	5.5%

ZONES:

WIND	Very High
EARTHQUAKE	3
CORROSION	C
SNOW LOADING	N/A
RESIDENTIAL	Rural



2 3 4 1

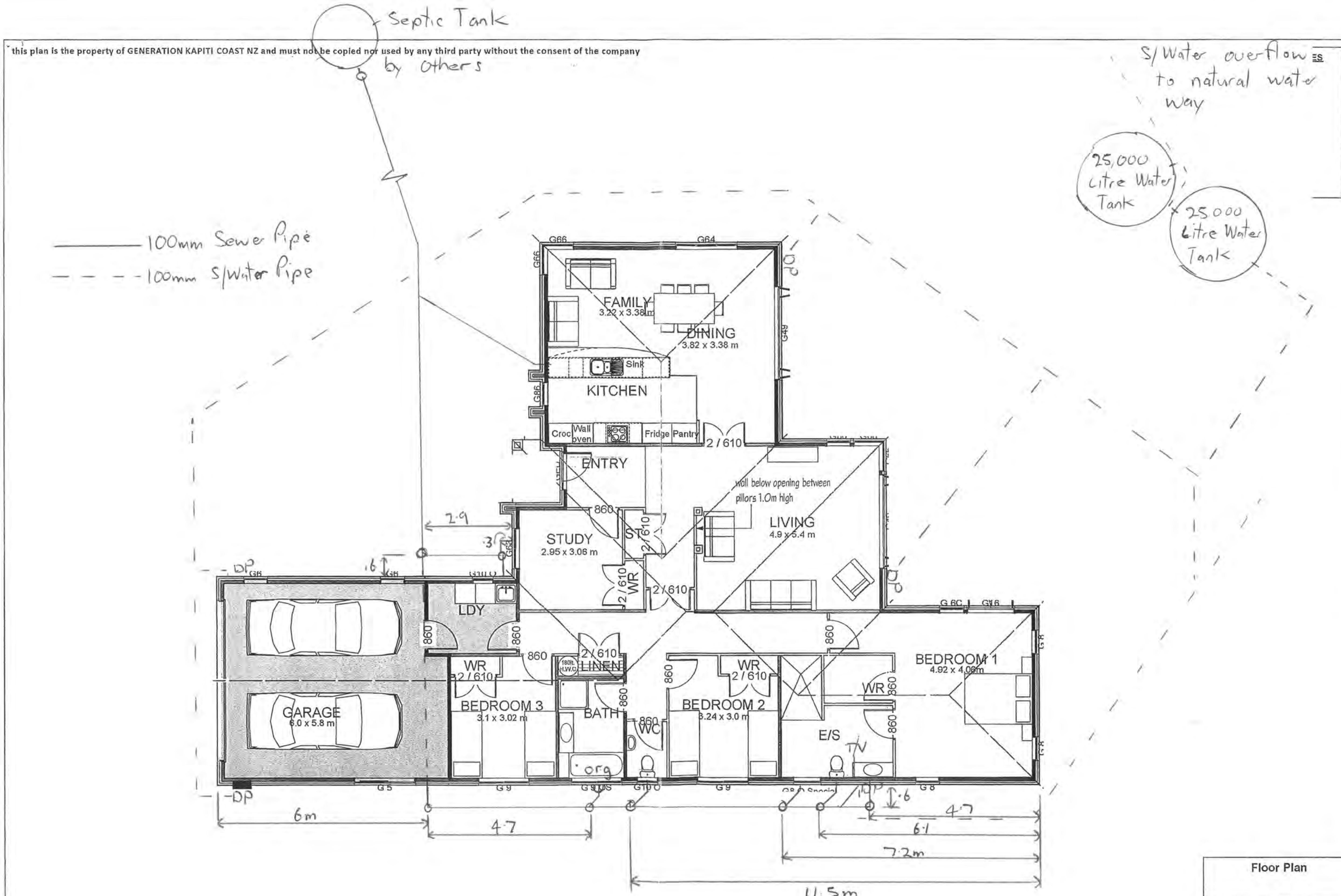
ELEVATIONS

00003

Floor Plan

Barry and Hayley Vinten
Lot 117 - DP442630
Paraparaumu

DRAWN BY ROD	CHECKED BY MARTY
GENERATION KAPITI COAST NZ	
DATE AUG 13	SCALES: 1:100 / EC183 - dwg 04



Floor Plan

Barry and Hayley Vinten
Lot 117 - DP442630
Paraparaumu

DRAWN BY ROD	CHECKED BY MARTY
GENERATION KAPITI COAST NZ	
DATE AUG 13	SCALES: 1:100 — EC183 - dwg 04

BC 130599

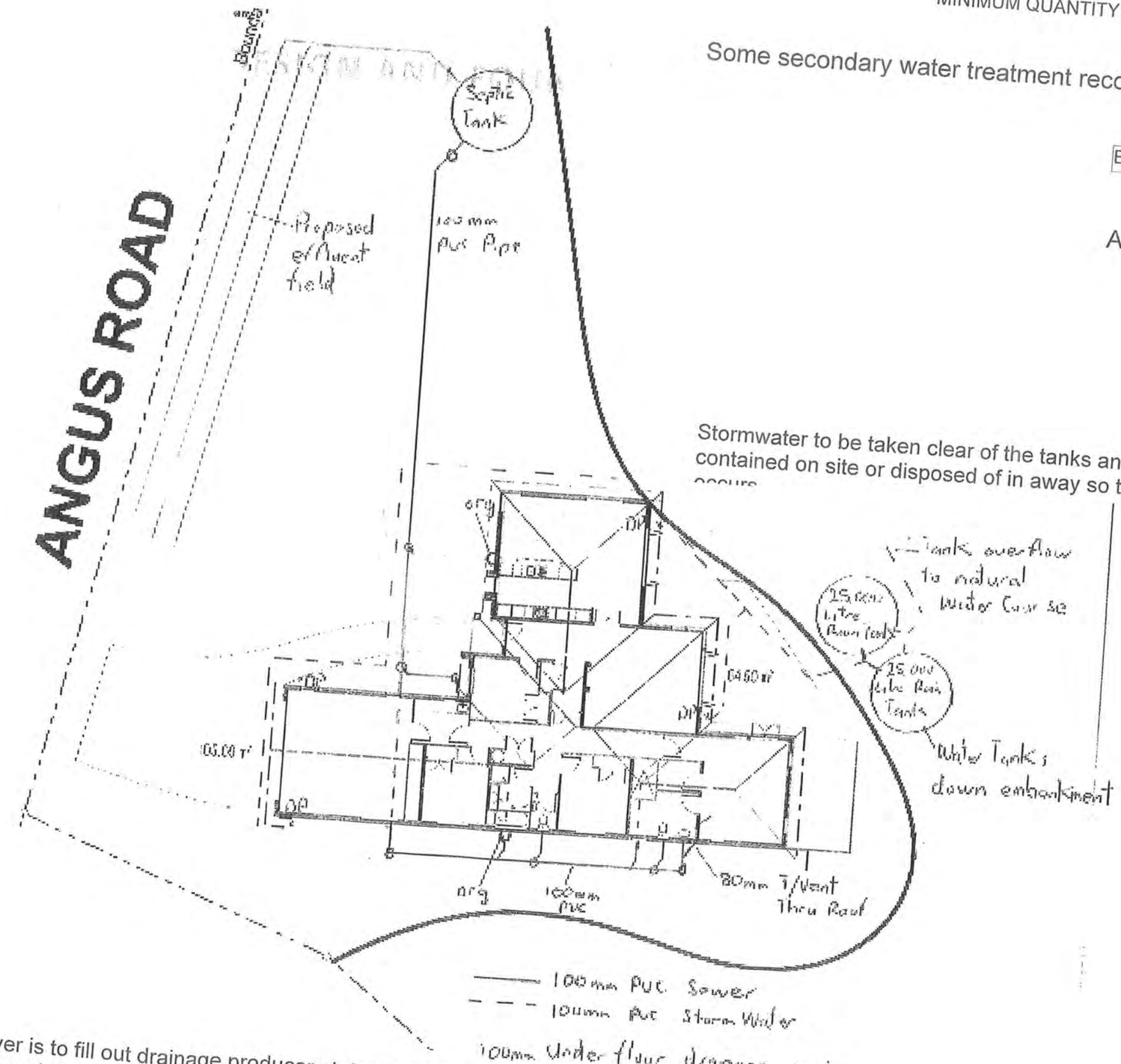
MAKE PROVISION FOR THE STORAGE OF POTABALE WATER
MINIMUM QUANTITY 30,000 LITRES

Some secondary water treatment recomended after first flush device

BED DRAINS IN PEA METAL

A drainage inspection is required

APPROVED
BY
PLUMBING
AND
DRAINAGE
Simon C
7/9/2013
00010



Stormwater to be taken clear of the tanks and the overflow be contained on site or disposed of in away so that no erosion occurs

RECEIVED
- 4 SEP 2013
BY:

BUILDER TO ENSURE THAT PROPOSED FOUNDATION HEIGHT WILL ALLOW A SATISFACTORY DRAINAGE CONNECTION TO THE SEWAGE TREATMENT SYSTEM

ring plumber/drain layer is to fill out drainage producer statement form as near as laid drawing and return to Council.Please show all cluding under slab drainage

A 20MM copper TPR drain from the HWC is to run from the tundish to the discharge point at low level outside of the building at low level Plastic pipe not to be used!

DRAINAGE PLAN		
Barry and Hayley Vinten Lot 117 - DP442630 Paraparaumu		
DRAWN BY ROD	CHECKED BY MARTY	
GENERATION KAPITI COAST NZ		
DATE AUG 13	SCALES: 1:100	EC183 - dwg 11