

20 December 2012
Project No. 42071508

Auckland Council
Level 2,
35 Graham Street
Auckland City

Attention: Patricia Burford
Wastewater Consents and Compliance Advisor

Dear Pat

Subject: Discharge to Land Consent Renewal

URS New Zealand Limited (URS) has been retained by the Brain Morrison Family Trust & Vanessa Morrison Family Trust (operating as the Sandspit Motor Camp) to design and consent a new subsurface drip irrigation effluent disposal system.

To this end we attach:

- Completed Form A (Application for Resource Consent);
- Completed Form B19 (Application for a Discharge Permit of contaminants to land);
- Completed TP58 Appendix E (Assessment of Environmental Effects);
- A3 Site Plan.

In addition to the above required documentation, we also provide for completeness the following additional information:

- URS Letter dated 21 November 2012 outlining the proposed "New Subsurface Drip Disposal Concept";
- New Septic Tank Building Consent Application, 8 June 2012; and,
- Auckland Council (via Tony Bullard) e-mail approval 8 June 2012.

In summary, on behalf of the Applicant we seek to renew the current discharge to land Permit No. 22315 early (which expires on 30 June 2014) in favour of a new and significantly technically superior subsurface drip disposal system, with a couple of minor new condition modifications based around "that for any 20 days of any calendar year the maximum discharge volume may be 36m³/day".

In preparing this Application, URS had a Pre-application Meeting with Auckland Council Wednesday 28 November 2012, in order to discuss if the proposed new system could be installed and operated under the existing consent conditions. By way of e-mail later that day, Council advised that either a variation or new consent would be required. Accordingly the Applicant has elected to make a renewal Application early.

Furthermore, during this Pre-application meeting it was intimated to URS that the file "may not be complete" for the original application. Hence for ease of reference and in order to make this Application as complete as practical, URS also provide the following:

URS New Zealand Limited
URS Centre, 13-15 College Hill
Auckland 1011
PO Box 821, Auckland 1140
New Zealand
T: 64 9 355 1300
F: 64 9 355 1333

- The original November 1998 Colin Ashby Consulting Discharge Consent Application (included as an Appendix to his May 1999 Management Plan); and,
- 12 May 1999 Auckland Regional Council's (ARC) officers Report (Julian Roberts) resulting from the Ashby Consulting led discharge Consent application.

1 The Essence of the Renewal Application

The original system as described by Ashby Consulting November 1998 was consented in June 1999 (Permit No 22315 which we currently seek to renew) and has operated in accordance with this consent subsequently. However issues have arisen over time and the Applicant now seeks to modify their ablution and cooking facilities, which all combine to require modifications to the current wastewater system with URS being retained to assist early 2012.

1.1 New Septic Tank

One key issue was the quality and location of the original septic tank. This had fallen into dis-repair and ideally needed to be moved to make way for new building modifications. URS working with Laser Plumbing of Warkworth designed and installed a brand new sealed septic tank and external pump station (refer attached 8 June 2012 Building Consent Application and Auckland Council approval). In summary this new septic tank and pump station offered several improvements over and above the original including:

- New fully sealed concrete septic tank and external pump station;
- Dual chamber septic tank to give improved quality output;
- Purpose built bank of 8 Ecofilters located between first and second septic tank chambers to greatly improve outlet quality by retaining built-up solids in the first chamber; and,
- 2 hours emergency storage provided as specified by previous consenting officer's report.

1.2 New Subsurface Drip System

The second matter was issues arising from the original disposal field which included:

- The drip system was laid out on the surface which gave rise to issues with maintaining the existing olive grove, plus donkeys grassed the area also causing further system damage;
- The system involved pumping from the treatment plant to a second tank on the hill by the disposal area and gravity feeding the irrigation / disposal (meaning a potentially significant portion of the irrigation system had less than the ideal operating pressure);
- The drip system had the irrigation lines running down the contour (not across the contour) and had no provision for flushing or chemically cleaning the drip lines;
- The driplines were widely spaced (about 5m apart) so not making best use of the full disposal capacity of the site;
- As a consequence of the above, many drip lines were cut and damaged, many drippers appeared blocked or had insufficient pressure to effectively operate, the system on start-up and draining at the end of each disposal cycle delivered much more effluent to the ends of the driplines than that distributed across the total disposal area.

Resulting from these identified issues URS has conceived and seeks approval (on behalf of the Applicant) for a new and technically much more advanced subsurface drip disposal system, based upon the successful large and recognised high performing Omaha and Pauanui community schemes.

The proposed system is described in the attached URS letter dated 21st November 2012, but in summary key features proposed to address the identified issues are:

- Subsurface drip (instead of surface drip) incorporating impregnated root intrusion inhibition, anti-microbial tube lining (to mitigate rampant bacterial slime build-up) and vacuum relief (to avoid particulate suck-back on system shut down);
 - The olive trees will be removed to allow a much closer drip line spacing (i.e. 1.5m of the new proposal vs 5m with the currently consented system);
 - The system will be direct online with a new higher pressure delivery pump located at the treatment plant (i.e. the gravity feed tank on the hill will be made redundant). This will ensure each individual drip emitter will be operating within the manufacturer's required pressure specifications. The drip emitters will also be pressure compensating so to give an even flow from each, resulting in an even distribution of effluent across the disposal area. The drip emitters will also incorporate silicon diaphragms rather than inferior EDPM, so to avoid any issues should occasional chemical clearing be required;
 - The irrigation driplines will run across the contour of the disposal field and the field will be divided into five (5) distinct and separately irrigated zones (by a manual automatic sequencing valve) in order to provide effective pulse irrigation of the disposal system. This will result in short bursts of effluent delivery to each of the 5 zones with a long rest period between irrigation cycles, so enabling effective bioremediation by the soil and associated biota. A future sixth irrigation zone has been allowed for, to act as a reserve area – should this ever prove necessary;
 - The system has a fully integrated flush return system back to the treatment plant for high velocity scouring and chemical cleaning, so to ensure the system can be easily maintained and kept up to specification over the long-term. The flush return system will also incorporate an innovative automatic drain system for the end of each irrigation cycle, so to prevent the system draining on shut-down through the driplines along the lower contour;
- The above technical solution should not only address all the identified issues with the current disposal system, but also provide a much more uniform distribution over the entire disposal area as it will incorporate 3,051m of dripline (as opposed to 714m of the original system) and 5,084 individual drip emitters (as opposed to just 1,190 of the original system). This will result in far lower actual point source application rates surrounding each individual drip emitter with the proposed new system, as compared to the consented system.

1.3 Daily Volumes

We refer to Section 5.3 of the attached 12 May 1999 ARC's Report, and quote "water meter readings taken from the site indicate that the volume of wastewater discharged is highly variable throughout the year. Peak flows occur during peak occupancy periods over Christmas and New Year and Public Holiday weekends. The average maximum discharge volume was measured at 18m³ over the January period. The daily average flows over the period June-August were

measured at only 2.7m³. Overall the annual average daily wastewater flow volume is calculated as 6.2m³.

The Applicant considers this still an accurate assessment – but for very short periods the daily volume can increase to 30m³/day – with a maximum recorded at 36m³/day.

As described later, we believe that the proposed technical improvements to the disposal field should allow for short periods of an increase daily volume without any increased risk of environmental effects, as provided by the current discharge consent permit.

1.4 Site Soil

Geology of the Sandspit area comprises alternating sandstone-siltstone of the Waitemata Group sedimentary deposits (refer Institute of Geological and Nuclear Sciences Limited, 2001. 1:250,000 Geological Map 3). Accordingly the soils are expected to reflect the weathering products of the underlying geology and comprise silts and clays. These soils therefore would be considered as Soil Category 5-6 type soils as defined in On-Site Waste Water Systems: Design and Management Manual (Auckland Regional Council, 2004, TP 58 3rd Edition).

1.5 Disposal Application Rates

Section 6.2.1 of the 12 May 1999 ARC's Report states "the system has been operating normally for 2 years with no signs of breakout or excessive moisture in the disposal field". The Applicant confirms that this has remained the case throughout the period of the current consent, since June 1999.

However overall application rates (or loading rates) are not an entirely accurate assessment of what is actually happening in the field. In reality, there is a "wet" area around each individual drip emitter, and the effluent dissipates from these point sources by way of capillary action laterally (and drainage downwards) through the soil profile. The greater the number of emitters the lesser the actual application rate to the soil surrounding each individual drip emitter.

Subsurface drip irrigation is also demonstrated by the US Department of Agriculture to be a much more effective irrigation technology than surface drip irrigation, by wetting up a soil volume 40% larger for the same applied volume as surface drip (i.e. lower soil moisture content for the same applied water volume).

As described in the URS letter of 21 November 2012, the proposed irrigation area for zones 1-5 inclusive is 4,576m². With reference to the 12 May 1999 ARC Report (with respect to average daily volumes) Table 1 below describes the loading rates (or application rates) for the disposal area with key relevant daily wastewater volumes.

Table 1 – Average Application Rates of Key Daily Volume Options

m ³ /day	Description	mm/day
2.7	Average daily winter flows (June – August)	0.59
6.2	Annual average daily volume	1.35
18	Average January daily average	3.95
25	Consented maximum daily volume	4.92
36	Proposed 20 day short-term maximum daily volume	7.87

However, as described above the number of individual drip emitters acting as discrete point sources of emission, has a direct bearing on the localised application rate surrounding each drip emitter. We have assumed a wetted area with a diameter of 600mm around each emitter for the estimation described in Table 2 below. Table 2 extrapolates the application rate for each key relevant daily volume, for both the current consented system with 1,190 drip emitters and the proposed new system with 5,084 emitters.

Table 2 – Point Source Application Rate Comparison of the Proposed System Versus the Current

m ³ /day	L/emitter per day		mm/day per emitter	
	1,190 emitters	5,084 emitters	1,190 emitters	5,084 emitters
2.7	2.27	0.53	8.02	1.88
6.2	5.21	1.22	18.42	4.31
18	15.13	3.54	53.48	12.52
25	21.01	4.92	74.27	17.38
36	30.25	7.08	106.95	25.03

Therefore the loading rate surrounding each individual drip emitter in the proposed new subsurface disposal field at 36m³/day (i.e. 25mm/day) is less than a third that of the application rate surrounding each individual drip emitter at the current consented maximum daily volume of 25m³/day (i.e. 74mm/day) with the existing disposal system.

2 Conclusion

As environmental effects of land based effluent disposal largely result from the application rate, we conclude that with the far greater number of individual drip emitters (and the other technical advantages as described above in this report and the URS letter of 21 November 2012) associated

with the proposed new Sandspit Motor Camp drip disposal field, there will be less risk of than any effects resulting from the proposed system, as compared to the currently consented system.

We also conclude that short duration disposal at $36\text{m}^3/\text{day}$ with the proposed new subsurface drip disposal system, should result in less risk of environmental effects, as compared to the current surface disposal system operating at the current consented volume of $25\text{m}^3/\text{day}$.

Any concern regarding the increasing of the daily discharge volume over and above the current consent volume of $25\text{m}^3/\text{day}$, could in our opinion, simply be addressed by a consent condition which stated that "if any breakout or excessive moisture were to be observed in the disposal field during a period of disposal greater than $25\text{m}^3/\text{day}$, that the Applicant must store or truck offsite the excess daily effluent volume greater than $25\text{m}^3/\text{day}$ ".

Accordingly, we conclude the risk of environmental effects resulting from both the proposed new subsurface drip disposal system, and short duration of increased daily volume, to be less than minor.

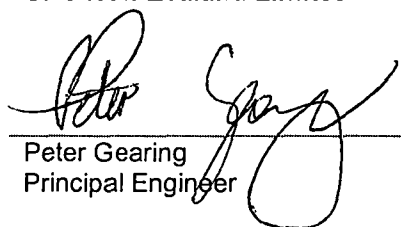
3 Recommendation

Based on the lack of environmental effects observed since 1999 with the current system, and the considerable improvements proposed by the new subsurface drip irrigation disposal field described in this renewal Application, we recommend the following:

- That Discharge to Land Permit No 22315 be renewed for a further 15 years;
- That the new permit include a consent condition stating that "for any 20 days of any calendar year, the maximum discharge volume may be $36\text{m}^3/\text{day}$ "; plus,
- the new permit also include a further consent condition stating that "if any breakout or excessive moisture were to be observed in the disposal field during a period of disposal greater than $25\text{m}^3/\text{day}$, that the Applicant must store or truck offsite the excess daily effluent volume greater than $25\text{m}^3/\text{day}$ ".

We trust this meets with your approval and if any further information should be required please do not hesitate to contact the undersigned.

Yours sincerely
URS New Zealand Limited


Peter Gearing
Principal Engineer
Evan Peters
Associate Engineer

Attachments



21 November 2012
Project No. 42071508

Sandspit Holiday Park
1334 Sandspit Road
RD2 Warkworth

Attention: Brian Morrison

Dear Brian

Subject: New Subsurface Drip Disposal Concept

Please find below our suggested new subsurface drip irrigation disposal concept for your consideration.

1 Introduction

URS has been retained by the Sandspit Holiday Park to provide a new subsurface drip irrigation disposal concept to replace the existing surface drip system. The current disposal system also runs the driplines down the contour, which is seen as inferior to across the contour in this situation – plus the current layout is between olive trees. Pet donkeys also currently graze the disposal area occasionally, whereby both grazing and olive maintenance is considered incompatible with surface drip irrigation disposal.

2 New Disposal Concept

1. It is proposed to convert the disposal area to subsurface drip irrigation – with the driplines running across the contour;
2. The new concept is to allow for 6 blocks – with only 5 installed initially (each as shown around 915m²) – with the 6th held as a potential reserve area – see attached Figure 1;
3. The combined area of the 5 initial blocks is 4,576m²;
4. It is proposed the system incorporate 2 L/hr pressure compensating drip emitters spaced at 0.6m along each row – with rows 1.5m apart;
5. 2L/hr emitters have hydraulic advantages and a lower point application rate compared to 4L/hr, hence are considered the more appropriate for this situation;
6. 1.5m row spacing is considered an appropriate spacing, with no real significant environmental advantage seen as resulting from a closer spacing (say 1m) – but hydraulic complexity and cost could increase significantly with a closer spacing (i.e. 1m or less). The installation contractor also advises that 1.5m is more compatible with his installation equipment;
7. Buried drip emitters are to be impregnated against root intrusion, and dripline piping to be protected against slime build-up;
8. Previous flow data is reported to indicated that the average annual daily volume is 6.2m³/day (equating to 1.35mm/day over the proposed area) while the average winter discharge is less

URS New Zealand Limited
URS Centre, 13-15 College Hill
Auckland 1011
PO Box 821, Auckland 1140
New Zealand
T: 64 9 355 1300
F: 64 9 355 1333

\\AKI-fs\jobs\Jobs\42071508\5 Works\Phase 2 - Irrigation layout\28. New Subsurface Drip Disposal Concept (Letter).docx

than 2.5m³/day (which equates to an application rate of 0.5mm/day). For the few days around January / February at the consented volume of 25m³/day, this will equate to an application rate of 5.5mm/day (noting that the current consent does not specify a maximum application rate). For the couple of days annually that might exceed the current consent - at say 36m³/day - this could increase to 7.8mm/day, if considered consentable. Accordingly we may seek to obtain a new consent which allowed for ten (10) days per year with a maximum application rate of 8mm/day.

9. If one compares this new proposal to the current consented system – the current has system has 714m of irrigation tube (versus 3,051 meters proposed); has 1,190 emitters (versus 5,084 emitters proposed) and if the average wetted area around an individual drip emitter was assumed at 0.6m – then at 25m³/day a current localised application rate of 74mm/day (versus 17mm/day proposed);
10. Consequently this proposal represents a vastly improved situation which hopefully would be appreciated by the Regulator (i.e. Auckland Council);
11. This all being accepted, then the flow rate of such a system would be 2,034L/hr (to each of the 5 blocks) i.e. 12.3 hours of pumping for the current maximum consent volume of 25m³/day; this flow rate is very similar to the current – so should not upset any other aspects of the existing wastewater treatment system (a key reason for selecting this proposed drip irrigation configuration in the first instance).

3 Pumping / System Hydraulics

We confirm that 7 November 2012 URS was also contacted by Sandspit Holiday Park that the existing irrigation pump has failed and the intent was to install a new pump compatible with the new subsurface drip irrigation proposal. While considered more detailed design than concept, we provide the following detail to assist.

1. The existing delivery line is considered too small hydraulically to handle direct on line pumping / irrigation;
2. It is proposed that the new irrigation system be pumped direct on line, rather than fed from a storage tank just above the disposal area (as this existing configuration of pumping to a storage tank does not provide sufficient pressure for the drip emitters on the high side of the disposal field to work effectively);
3. Figure 1 also incorporates a potential new delivery line route (for pumping head and flow estimation purposes) which is 254m long;
4. The static lift to run the proposed new system direct on-line is around 48m;
5. Allowing for a 42mm ID (say 50mm OD PE100 12.5 bar rated / or 10 bar rated PE80) this would give a velocity of 0.42m/sec, being a velocity not too low so as to build up slime, but not too high as to waste pumping head (there is some flexibility in the associated headloss – but this is not considered pump critical);
6. We suggest a 20m operating pressure for the top emitters – which will equate to around 35m at the lower emitters;
7. With other associated dynamic headlosses this all equates to approximately an 88m pump head (i.e. well below the 12.5 bar rated PE100);

8. Hence pumping duty is estimated in the order of $2.1\text{m}^3/\text{hr}$ (based on only pumping to one block at a time) and 90m head.

4 Additional Comments to Assist with Consenting this New Disposal Proposal

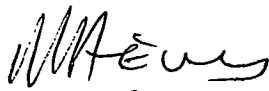
1. In our opinion the concept of running the submains down the slope (and driplines across the slope) gives advantages, which include:
 - short drip runs so higher flush velocity, meaning the operator will not need to “fiddle” with manual valves to split fields for flushing,
 - ability to keep driplines at similar contours round each field (so preventing each line draining to low points along the dripline on shutdown),
 - ability to connect the flush submains to an automatic flush system – this will help keep the system clean, while also preventing the system draining to the lowest drip lines each cycle (preventing the lower areas being wetter - if automated to each pump cycle – which is proposed, refer below),
 - would give increased control if the valley area around zone 2 gets wetter (i.e. this area could be taken out of service temporarily if need be);
2. Note – an alternative submain layout is possible and this should not alter any of the pump duty nor proposed mainline. For example one could get longer drip line runs by dividing zones 4 & 5 across the contour (instead of down contour) and similarly with zones 2 & 3, - but we consider this inferior for the reasons described previously;
3. Similarly, there is an option or alternative to the conventional Figure 2 layout – whereby the drip line and flush return line for each zone are in the same trench – and the drip lines run across the contour (from the pressure submain) and then back to the flush line – this reduces the number of dripline to submain connections – and reduces the number of drip lines by half requiring flushing. The run lengths under this scenario would still be of a length to provide effective flushing (i.e. not too long) given the topography and Figure 1 layout. In some respects this option may be preferable to the conventional Figure 2 layout, and we have discussed with Laser Plumbing who are inclined to agree.
4. Figure 2 describes hydraulically the new concept and how the pressure delivery and flush return systems may be configured;
5. We would also propose a simple 4 station controller be connected to the automatic flush valve whereby – cycle 1 receives a pump start signal from the irrigation tank – cycle 2 runs the irrigation for 20minutes – then cycle 3 provides (say) a 2 minute delay to let the irrigation settle after irrigation – then cycle 4 opens the flush valve for (say) 3 minutes to drain the drip lines, but not all the flush mainline – then the main irrigation 6-way sequencing index valve clicks round, and the system sits ready for next pump start. Figure 3 also describes the pump arrangement and flush return control (both located by the treatment plant);
6. We suggest two manual screen filters at the irrigation index valve each manually isolated. This will make cleaning simple and easily accessible, where each filter can be isolated independently while being cleaned (so if the irrigation comes on inadvertently there is no operator issue) – refer Figure 3;

7. We suggest two pressure gauges at the filters (inlet /outlet) so the operator can easily see when the filter(s) might need to be cleaned;
8. One may also consider including a tee and extra manual valve at the bottom of the delivery line (on the pressure side of the non-return valve) – so if the operator ever wanted to, the pressure delivery mainline could be drained back to the septic tank (this could potentially be useful);
9. During detailed design (once Council has indicated support) consideration should be given also to the ability to inject chemical for occasional scouring / cleaning. This is not considered to be onerous and URS is trialling a new reagent currently with WaterCare at the Omaha scheme which may be most appropriate for this system, with excellent H&S, efficacy and other advantages.

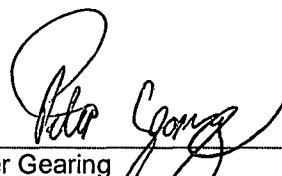
In summary we are of the opinion that this new subsurface drip disposal concept / proposal is technically and environmentally significantly superior to what is currently consented, and should be pragmatic to operate and maintain. We suggest this concept now be discussed with Auckland Council in order to invite their comment, before applying for a formal consent renewal. URS has briefly talked to Council about the ability to discuss the proposal prior to the formal consent application process, and Council were supportive suggesting this be done via a "pre-application meeting", which they may be able to attend as early as next week (i.e. week of 26th November).

We trust the above meets your expectations.

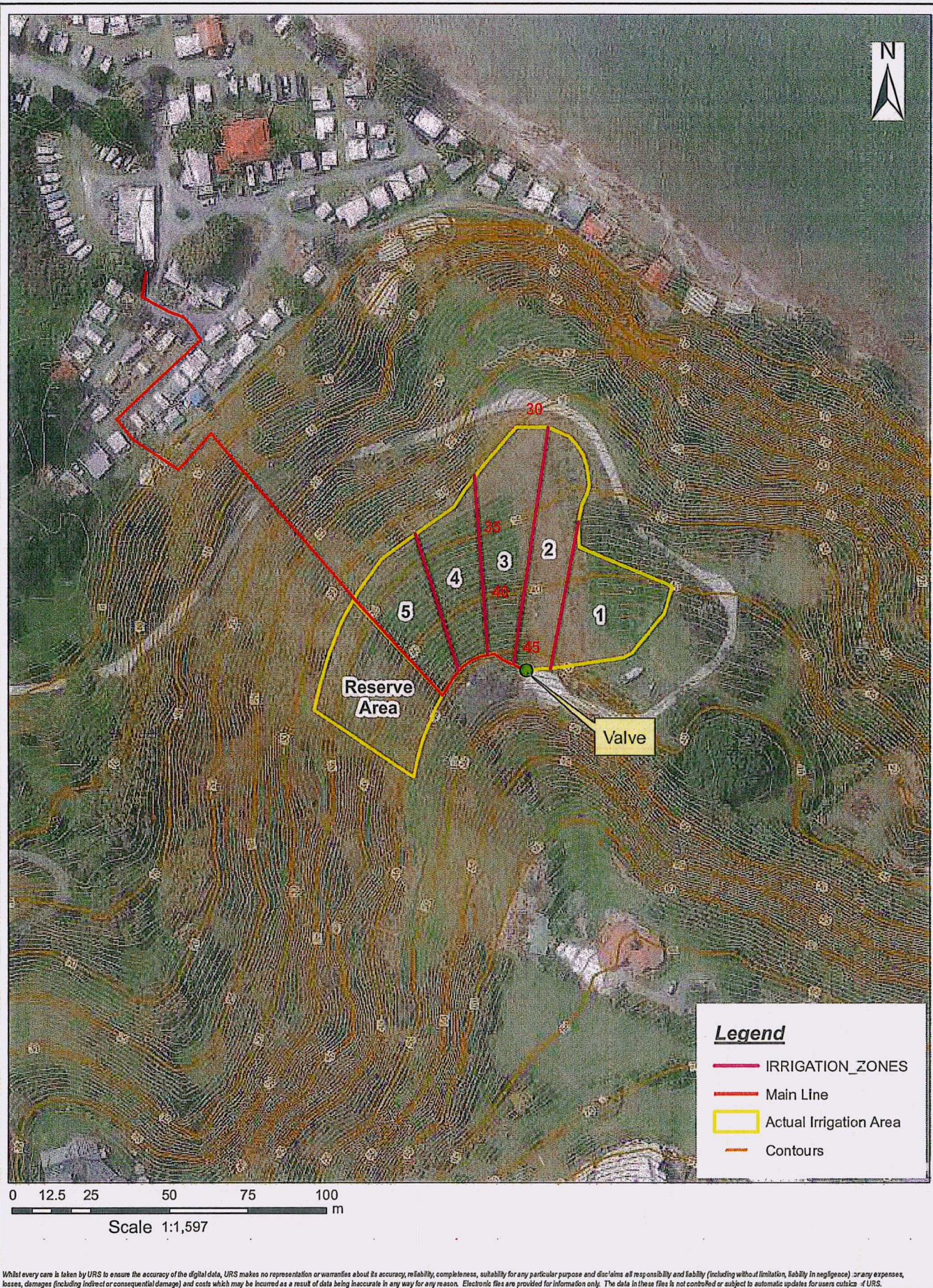
Yours sincerely
URS New Zealand Limited



Matthew Reed
Associate Engineer



Peter Gearing
Principal Engineer



This drawing is subject to COPYRIGHT.

Whilst every care is taken by URS to ensure the accuracy of the digital data, URS makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence) for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in any way for any reason. Electronic files are provided for information only. The data in these files is not controlled or subject to automatic updates for users' cuttings of URS.

SANDSPIT
HOLIDAY
PARK

WASTEWATER SYSTEM INVESTIGATION

PROPOSED IRRIGATION AREA
CONCEPT ONLY

URS

File: 42071508\Irrigation_Area.mxd

Drawn: SS

Approved: TS

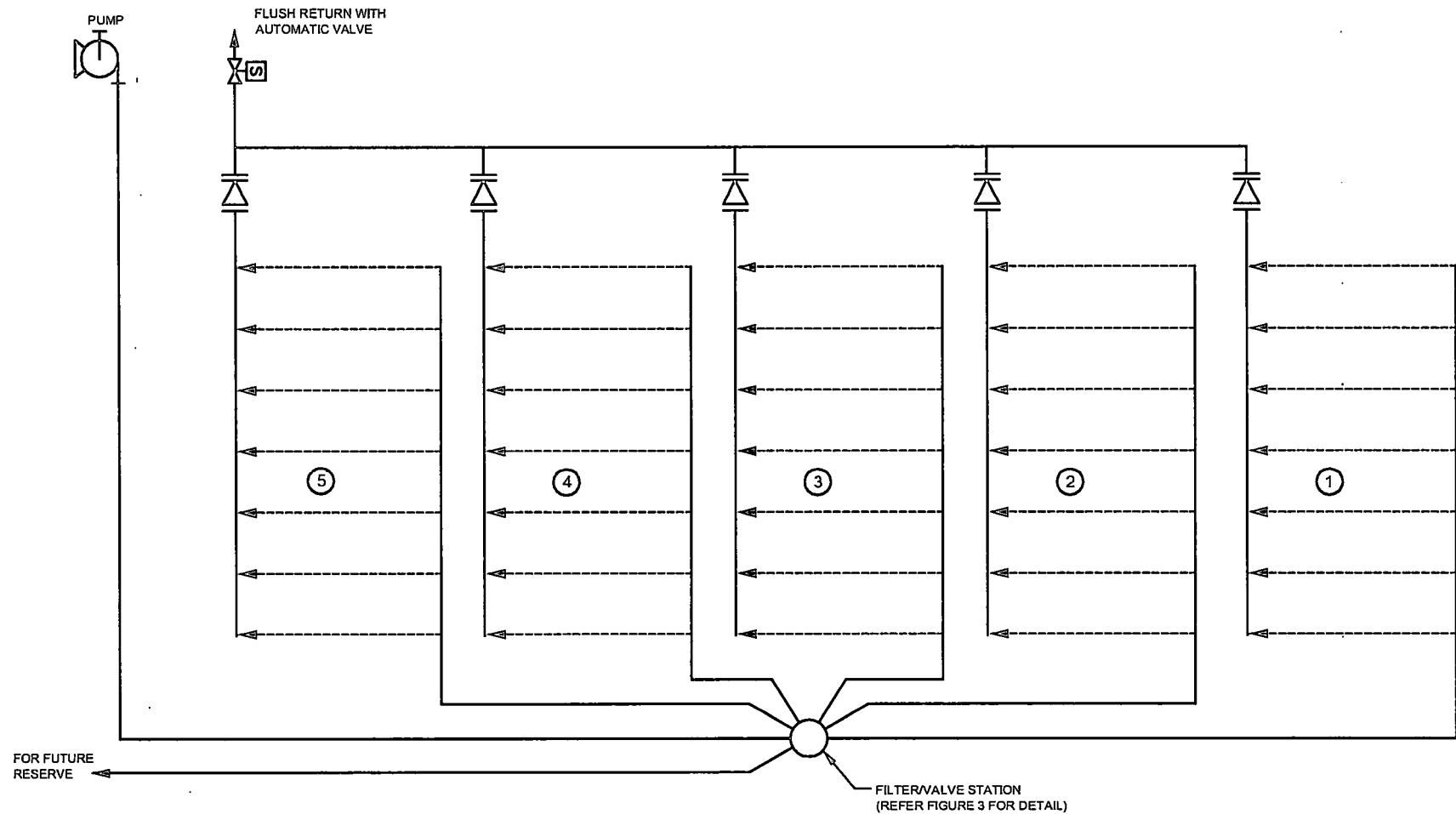
Date: 21/11/2012

Figure: 1

Rev. A

A4





Source: XXXXXXXXXXXXXXX

Whilst every care is taken by URS to ensure the accuracy of the digital data, URS makes no representation or warranty about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence) for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in any way for any reason. Electronic files are provided for information only. The data in these files is not controlled or subject to automatic updates for users outside of URS.

CONCEPT ONLY

SANDSPIT
HOLIDAY
PARK

WASTEWATER SCHEME INVESTIGATION

GENERAL DISPOSAL
FIELD LAYOUT
(PRESSURE & FLUSH CONCEPTS)

URS

File No: 42071508-W002.dwg

Drawn: SCG

Approved: PG

Date: 15.11.2012

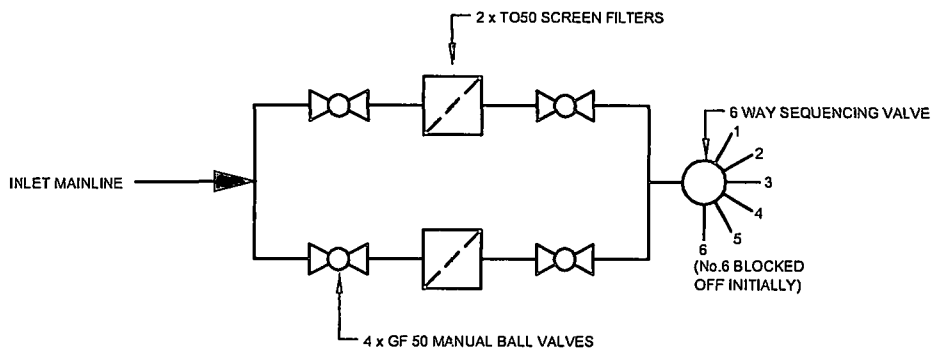
Figure:

2

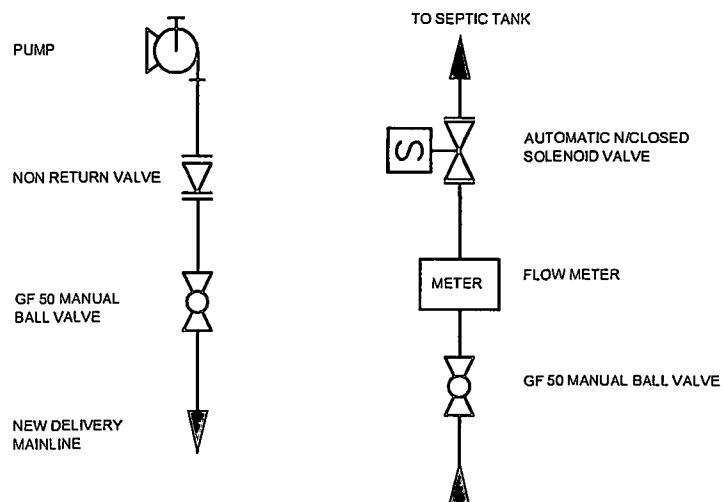
Rev. A

A4





MAIN FILTER & SEQUENCING VALVE



PUMP / FLUSH RETURN CONCEPT

CONCEPT ONLY

Source: XXXXXXXXXXXXXXXX

Whilst every care is taken by URS to ensure the accuracy of the digital data, URS makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence) for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in any way for any reason. Electronic files are provided for information only. The data in these files is not controlled or subject to automatic updates for users outside of URS.

SANDSPIT
HOLIDAY
PARK

WASTEWATER SYSTEM INVESTIGATION

FILTER & VALVE STATION
PUMP / FLUSH RETURN
SCHEMATIC LAYOUTS

URS

File No: 42071508-W003.dwg

Drawn: SCG

Approved: PG

Date: 15.11.2012

Figure: 3



Rev. A

A4

Gearing, Peter

From: Tony Bullard <Tony.Bullard@aucklandcouncil.govt.nz>
Sent: Friday, 8 June 2012 3:16 PM
To: Patricia Burford
Cc: David Norton; Gearing, Peter
Subject: RE: Building Consent - Sandspit Motor Park

Thanks heaps Pat. Much appreciated.

David – the changes look fine to us. They don't need any specific approvals or changes to consent. This email is sufficient for our purposes. Let me know if you need any more information from our team.

Cheers

Tony

From: Patricia Burford
Sent: Friday, 8 June 2012 1:40 p.m.
To: Tony Bullard
Subject: RE: Building Consent - Sandspit Motor Park

Hi Tony: I think that we can allow this under Condition 29, which states: "That the Consent Holder shall advise the Manager in writing immediately in the event problems are detected within the system and shall outline a schedule of action proposed to remedy such problems prior to commencement of work."

I believe that Peter's email has identified the problem and has outlined the schedule of work proposed. Since there is not a change to the system other than replacement, we don't need to revise the consent. Hopefully the replacement will fit with any needed upgrades when they apply for renewal of their consent. We will need to check the system design on renewal, which could mean what they are installing now will need further upgrades. We can do a compliance visit then to see how everything is working.

Kind Regards,

Pat

Pat Burford, Wastewater Consents and Compliance Advisor

Natural Resources and Specialist Input Unit

Ph 09 352 2637 | Extn (40) 5637 | Mobile 021 832 012 |
Auckland Council, Level 2, 35 Graham Street, Auckland City
Private Bag 92300, Victoria Street, Auckland 1142

Visit our website: www.aucklandcouncil.govt.nz

From: Tony Bullard
Sent: Thursday, 7 June 2012 6:32 p.m.
To: Patricia Burford
Subject: FW: Building Consent - Sandspit Motor Park
Importance: High

Hi Pat

Can you please check this info from Peter Gearing below and get back to me if we can simply approve the modifications with a simple letter or email (as opposed to a variation to consent). I suspect we can but haven't investigated the matter. Note it's a little urgent I believe.

Gearing, Peter

From: Gearing, Peter
Sent: Friday, 8 June 2012 10:53 AM
To: 'David Norton'
Cc: g.jones@laserplumbing.co.nz; Sunich, Trent
Subject: Building Consent - Sandspit Motor Park
Attachments: 27. A3 Site Plan.pdf; 24. Ecotube spec.pdf; 25. Notes to Accompany Building Consent Application.doc; 26. Appendix E.pdf; 10. Septic tank.pdf

David

We write further to our both conversation of yesterday and our e-mail to yourself and Mr Tony Bullard.

Please add this e-mail (and its attachments) plus the e-mail of yesterday (with its attachments) to the file.

A hard copy of the building consent application has been sent to you via your Warkworth office by the contractor Greg Jones of Laser Plumbing.

Please find attached as per your request:

- A short report explain the proposed works
- An assessment of environmental effects (included in the report)
- Septic tank specifications
- Filter specifications
- Appendix E TP58
- A3 site plan with scale bar.

With the arrival of the hard copy application form, hopefully we have provided all the information required. Could you please confirm.

Thank you for your assistance.

Kind regards

Peter Gearing
Principal Environmental Scientist
URS New Zealand Limited
13-15 College Hill, Auckland 1011,
New Zealand

Tel: 64 9 355 1300
DDI: 64 9 355 1332
Mob: 64 29 355 1332
Mailto: peter.gearing@urs.com

Notes to Accompany Building Consent Application

Applicant

Brian and Vanessa Morrison Family Trusts

Location

Sandspit Motor Camp
6 Brick Bay Drive
Sandspit RD2

Background to Building Consent Application

- URS NZ Limited (URS) has been retained to assist the Sandspit Motor Camp with their effluent treatment and disposal system;
- Sandspit Motor Camp has a current discharge consent which expires 30 June 2014 (permit No 22315 attached);
- In URS' opinion (which is supported by the Sandspit Motor Camp) a new and improved disposal field will be proposed with a separate and new discharge to land application to Council - to follow later;
- However, the current and immediate issue is that of the current existing septic tank and pump station (to the treatment plant) which are in very poor condition and represent H&S plus environmental risk (leaks etc);
- URS has been retained to assist with a pragmatic alternative;
- The owners (the "Applicants") are about to go overseas – and have asked for urgency to install the new system prior;
- URS propose a "like for like" new sealed solution – incorporating a new 22m³ concrete tank fitted out with both two chambers and 8 filters (an increase from the current single filter - in order to as best as practical retain solids and improve treatment plant quality). A 22m³ tank is proposed as it is the largest readily available locally for this purpose and avoids the potentially high risks of building anything in-situ. The proposal also includes a new sealed separate pump station (and to move the existing pump into this). Please refer attached sketches (Scope of Works) – which have been kept simple in a quest for pragmatism by the client;
- The tank will be supplied by Absolute Concrete – specification attached;
- The bank of septic tank outlet filters will be of the Ecofilter type – specification attached;
- Please note ARC consenting officer's report clause 5.3 "average daily flow 6.2m³/day" & consent condition 13(i) "to provide 2 hours emergency storage in the septic tanks";
- $6.2\text{m}^3/24\text{hrs} = 0.24\text{m}^3 \times 2\text{hrs} = 0.5\text{m}^3$. However for the purposes of this proposal we have estimated storage at $25\text{m}^3/\text{day}$ (i.e. the consented maximum flow)/24hrs = $1\text{m}^3 \times 2\text{hrs} = 2\text{m}^3$;
- Please find attached Appendix E of TP 58 – which in agreement with Mr David Norton of Auckland Council – has assumed all matters pertaining to treatment and disposal are covered by the existing discharge to land consent and as such are not relevant to this specific building act application;
- Please find attached A3 plan;

- Please find below an assessment of environmental effects (AEE);

Assessment of Environmental Effects

- Appendix E TP58 refers to Section 5 with respect to an assessment of environmental effects (AEE);
- Section 5 describes the affects and matters pertaining to the overall system including effluent volume, treatment and land disposal etc. These issues are considered irrelevant to this building consent application as all that the works covered by this application relate to the installation of an improved "like for like" septic tank and pump station (supplying the existing treatment plant and disposal field;
- Design – as described above a sealed 22m³ tank with partition and 8 Ecofilters is proposed to provide best quality primary treatment prior to the existing septic tank – this is considered preferable to building a tank in-situ or attempting to repair the current septic tank (which is considered unsuitable for the intended purpose in its current condition);
- Noise – the system will be buried, the only source of potential noise will be the existing pump, it will be moved to the new pump station, it will be under water and will be no more noisy than the existing location where it was immediately adjacent the kitchen and laundry, with no complaints being reported;
- Odour – no odour is expected as the new system will be able to from a stable crust, unlike the existing system which was unstable;
- Visual – the system will be buried with only four risers being visible on the septic tank and 1 on the pump station, this is considered a significant improvement over the existing system;
- Neighbouring properties – there are no nearby properties and it is considered that there are unlikely to be discernible impacts or effects on any neighbours or guests at the motor park;
- Groundwater – the site has high groundwater – the effects of these will be mitigated by a comprehensive H&S installation plan by the contractor Laser Plumbing – which will involve suring the sides of the excavation, pumping the groundwater, lifting the new tank(s) in by a crane situated well away from the excavation edges, and filling the new tank with water immediately upon installation;
- Surface water – the new tank(s) will be fully sealed with the top of the risers sitting well above the soil surface to mitigate inundation or stormwater ingress into the tank(s).

On-site Wastewater Disposal Site Evaluation Investigation Checklist

PART A: Contact Details

1. Applicant Details:

Applicant Name	Peter Gearing (on behalf of Brian Morrison)		
Company Name	URS NZ Ltd (on behalf of Brian & Vanessa Morrison family * trusts)		
	First Name(s)	Surname	
Property Owner Name(s)	Brian & Vanessa	Morrison.	
Nature of Applicant*	* Owner.		

(* i.e. Owner, Lessee, Prospective Purchaser, Developer)

2. Consultant/Site Evaluator Details:

Consultant/Agent Name			
Site Evaluator Name			
Postal Address			
Phone Number	Business	Private	
	Mobile	Fax	
Name of Contact Person			
E-mail Address			

NOT APPLICABLE
LOOSE CONSENT

3. Are there any previous existing discharge consents relating to this proposal or other waste discharge/disposal on the site?

Yes ☒ No ☐ (Please tick)

If yes, give Reference Number(s) and Description

ARC Discharge Consent Permit No 22315
current to June 2014.

4. List any other consents in relation to this proposal site and indicate whether or not they have been applied for or granted.

If so, specify Application Details and Consent No.):

(e.g. Land Use, Water Take, Subdivision, Earthworks Stormwater Consents)

ARC Water Take Consent permit No 282416.
current to June 2015.

PART B: Property Details

1. Property for which this application relates:

Physical Address of Property			
Territorial Local Authority			
Regional Council			
Legal Status of Activity	Permitted:	Controlled:	Discretionary:
Relevant Regional Rule(s) [Note 1]			
Total Property Area (m ²)			
Map Grid Reference of Property [Note 2]			
Notes: 1. In the Auckland Region, the relevant Permitted Activity criteria is as specified in the ARC Air Land and Water Plan (ARC: ALWP) Rule 5.5.XX (refer Appendix C TP58), and until this Plan comes into force the PA criteria is specified in the ARC Transitional Regional Plan for "On-site Disposal of Domestic Wastewater". 2. NZMS 260 series, scale 1:50,000			

Refer Building Consent Application

2. Legal description of land (as shown on Certificate of Title):

Lot No.		DP No.		CT No.	
Other (specify)					

Please ensure copy of Certificate of Title is attached.

PART C: Site Assessment – Surface Evaluation

(Refer TP58 – Sn 5.1 General Purpose of site Evaluation and Sn 5.2.2(a) Site Surface Evaluation)
Note: Underlined terms defined in Table 1, attached

1. Has a Desk Study been undertaken for this property

Yes	☐	No	☐	(Please tick one)
-----	--------------------------	----	--------------------------	-------------------

If yes, please specify the findings of the Desk Study, and if not please specify why this was not considered necessary.

NOT APPLICABLE

2. Has a Slope Stability Assessment been carried out on the property?

Yes	☐	No	☐	(Please tick one)
-----	--------------------------	----	--------------------------	-------------------

If No, why not?

**On-site Wastewater Systems:
Design and Management Manual (TP 58)**

If Yes, please give details of report (and if possible, please attach report):

Author:	
Company/Agency	
Date of Report	
Brief Description of Report Findings	

3. Site Characteristics (See Table 1 attached):

Provide descriptive details below:

Performance of Adjacent Systems:
Estimated Rainfall and Seasonal Variation:
Vegetation Cover:
Slope Shape:
Slope Angle:
Surface Water Drainage Characteristics:
Flooding Potential: YES/NO
If yes, specify relevant flood levels on appended site plan, i.e. one in 5 year and/or 20 year and/or 100 year return period flood level, relative to disposal area.
Surface Water Separation:
Site Clearances (Provide general description here and specific dimensions in Part 6 below an in Site Plan):
Site Characteristics:

4. Site Geology of the subject property

Geological Map Reference Number	
---------------------------------	--

5. What Aspect(s) does the proposed disposal system face (please tick)?

North	☐
North-West	☐
North-East	☐
East	☐

West	☐
South-West	☐
South-East	☐
South	☐

6. Site clearances, which should also be shown on the site plan:

Separation Distance from	Treatment Separation Distance (m)	Disposal Field Separation Distance (m)
Boundaries		
Surface water		
Groundwater		
Stands of Trees/Shrubs		
Wells, water bores		
Embankments/retaining walls		
Buildings		
Other (specify):		

PART D: Site Assessment – Subsoil Investigation

(Refer TP58 – Sn 5.1 General Purpose of Site Evaluation, Sn 5.2.2(b) Site Surface Evaluation and Sn 5.3 Subsurface Investigations)

Note: Underlined terms defined in Table 2, attached

1. Please identify the soil profile determination method:

Test Pit	☐	(Depth _____ m)	No. of Test Pits	☐
Bore Hole	☐	(Depth _____ m)	No. of Bore Holes	☐
Other (specify)				
Soil Report Attached?	Yes ☐	No ☐	(Please Tick)	

2. Was fill material intercepted during the subsoil investigation?

Yes ☐	No ☐	(Please tick)
------------------------------	-----------------------------	---------------

If yes, please specify the effect of the fill on wastewater disposal

On-site Wastewater Systems:
Design and Management Manual (TP 58)

3. Has percolation testing been carried out?

Yes ☐ No ☐ (Please tick)

If yes, please specify the method

Test Report Attached? (Please tick)	☐	Yes ☐	No ☐

4. Are surface water interception/diversion drains required?

Yes ☐ No ☐ (Please tick)

If Yes, please show on site plan

5. Please state the depth of the seasonal water table:

Winter		(m)
Summer		(m)
Please indicate whether measured	☐	or estimated ☐ (please tick)

6. Are there any potential short circuit paths?

Yes ☐ No ☐ (Please tick)

If the answer is yes, please explain how these have been addressed

**7. Based on results of subsoil investigation above please indicate the disposal field soil category
(Refer TP58 Table 5.1):**

Is Topsoil Present?	☐	If so, Topsoil Depth?		(m)
---------------------	--------------------------	-----------------------	----------------------	-----

Soil Category	Description	Drainage	Tick One
1	Gravel, coarse sand	Rapid draining	☐
2	Coarse to medium sand	Free draining	☐
3	Medium-fine & loamy sand	Good drainage	☐
4	Sandy loam, loam & silt loam	Moderate drainage	☐
5	Sandy clay-loam, clay loam & silty clay-loam	Moderate to slow drainage	☐
6	Sandy clay, non-swelling clay & silty clay	Slow draining	☐
7	Swelling clay, grey clay, hardpan	Poorly or non-draining	☐

Reasons for placing in stated category

PART E: Discharge Details

1. Water supply source for the property (please tick):

Rainwater (roof collection)	☐
Bore/well	☐
Public supply	☐

2. Calculate the maximum daily volume of wastewater to be discharged, unless accurate water meter readings are available (Refer TP58 Table 6.1 and 6.2):

Number of Bedrooms		
Design Occupancy		(Number of people)
Per capita Wastewater Production		(Litres per person per day)
Other - Specify		
Total Daily Wastewater Production		(Litres per day)

*NOT APPLICABLE
Refer consent*

3. Do you propose to install:

a) Full Water Conservation Devices?	Yes	☐	No	☐	(Please tick)
b) Water Recycling - what %?	%	☐	No	☐	(Please tick)

If you have answered Yes, please provide additional information including the estimated reduction in water usage:

4. Is Daily Wastewater Discharge Volume more than 2000 litres:

Yes	☒	(Please tick)	<i>consent for 25m³/day</i>
No	☐	(Please tick)	

Note if the answer to the above is yes an ARC wastewater discharge permit will be required

5. Gross Lot Area to Discharge Ratio:

Gross Lot Area		m ²
Total Daily Wastewater Production		(Litres per day) (from above)
Lot Area to Discharge Ratio		

NOT APPLICABLE

6. Does this proposal comply with the Auckland Regional Council Gross Lot Area to Discharge Ratio of greater than 1.5)

Yes	☐	No	☐	(Please tick)
-----	--------------------------	----	--------------------------	---------------

7. Does this proposal comply with the Auckland Regional Council Gross Lot Area to Discharge Ratio of greater than 3

Yes ☐ No ☐ (Please tick)

8. Is an Auckland Regional Council Discharge Consent Required?

Yes ☐ No ☐ (Please tick)

PART F: Primary Treatment (Refer TP58 Section 7.2)

1. Please indicate below the no. and capacity (litres) of all septic tanks including type (single/dual chamber grease traps) to be installed or currently existing:

Number of Tanks	Type of Tank	Capacity of Tank (Litres)
1 x 22m ³ tank	concrete tank modified to 2 chambers.	22,000 L
	Total Capacity	

2. Is a Septic Tank Outlet Filter to be installed?

Yes ☒ No ☐ (Please tick)

If Yes, please state the type

8 x Ecofilters will be installed in one bank to hold back sand
--

PART G: Secondary and Tertiary Treatment

(Refer TP58 Section 7.3, 7.4, 7.5 and 7.6)

1. Please indicate the type of additional treatment, if any, proposed to be installed in the system (please tick):

Secondary Treatment	
Home aeration plant	
Commercial aeration plant	
Intermediate sand filter	
Recirculating sand filter	
Recirculating textile filter	
Clarification tank	
Tertiary Treatment	
Ultraviolet disinfection	
Chlorination	
Other	
	Specify

PART H: Land Disposal Method *(Refer TP58 Section 8)*

1. Please indicate the proposed loading method (please tick):

Gravity	☐
Dosing Siphon	☐
Pump	☐

2. Is a high water level alarm being installed in pump chambers?

Yes ☐ No ☐ (Please tick)

3. If a pump is being used, please provide the following information:

Total Design Head		(m)
Pump Chamber Volume		(Litres)
Emergency storage volume		(Litres)

4. Please identify the type(s) of land disposal method proposed for this site (please tick) *(Refer TP58 Sections 9 and 10):*

Surface Dripper Irrigation	☐
Sub-surface Dripper Irrigation	☐
Standard Trench	☐
Deep Trench	☐
Mound	☐
Evapo-transpiration Beds	☐
Other (Please Specify)	

5. Please identify the loading rate you propose for the option selected in Part H, Section 4 above stating the reasons for selecting this loading rate:

Loading rate		(Litres/m ² /day)
Disposal Area	Basal	(m ²)
	Areal	(m ²)

Explanation *(Refer TP58 Sections 9 and 10)*

6. What is the available reserve wastewater disposal area *(Refer TP58 Table 5.3)*

Reserve Disposal Area (m ²)	
Percentage of Primary Disposal Area (%)	

7. Please provide a detailed description of the design and dimensions of the disposal field and attach a detailed plan of the field relative to the property site:

Description and Dimensions of Disposal Field:

directly under the on-site

Plan Attached? Yes ☒ No ☐ (Please tick)

If not explain why not

PART I: Maintenance & Management (Refer TP58 Section 12.2)

1. Has a maintenance agreement been made with the treatment and disposal system suppliers?

Yes ☐ No ☒ (Please tick)

But a new disposal system is planned and the new consent is required and an agreement expected at that time (June 2014 or before).

PART J: Assessment of Environmental Effects

1. Is an assessment of environmental effects (AEE) included with application?

(Refer TP58 section 5. Ensure all issues concerning potential effects addressed)

Yes ☒ No ☐ (Please tick)

2. Are there any specific environmental constraints?

Yes ☐ No ☒ (Please tick)

If Yes, please explain

PART K: Is Your Application Complete?

1. In order to provide a complete application you have remembered to:

Fully Complete this Assessment Form	☒
Include a Location Plan and Site Plan (with Scale Bars)	☒
Include a Property Title (Certificate of Title)	☒
Attach an Assessment of Environmental Effects (AEE)	☒

2. Declaration

I hereby certify that, to the best of my knowledge and belief, the information given in this application is true and complete.

Name	<i>Ite Gearing</i>	Signature	<i>[Signature]</i>
Position	<i>Principal Environmental Scientist</i>	Date	<i>7/06/2012</i>

HCL Job No: 14568Building Code Clause(s): B1**PRODUCER STATEMENT – PS1 – DESIGN**ISSUED BY: IAN HUTCHINSON CONSULTANTS LTD

(Design Firm)

TO: ABSOLUTE CONCRETE

(Owner / Developer)

TO BE SUPPLIED TO: AUCKLAND COUNCIL

(Building Consent Authority)

IN RESPECT OF: PROPOSED BURIED WATER TANK

(Description of Building Work)

AT: VARIOUS SITES

(Address)

LOT - DP - SO -

We have been engaged by the owner/developer referred to above to provide:

SPECIFIC STRUCTURAL DESIGN COMPUTATION

(Extent of Engagement)

services in respect of the requirements of

Clause(s) B1 (VM1) (VM4) (AS1)

of the Building Code for

☐ All ☒ Part only (as included in the Design Calculations, ref 14568 dated MAR 2011),

of the proposed building work. The design carried out by us has been prepared in accordance with:

☒ Compliance Documents issued by Department of Building & Housing B1 (VM1) B1 (AS1) B1 (VM4)

or

(verification method / acceptable solution)

☐ Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled

HUTCHINSON CONSULTING ENGINEERS - 22,000 LITRE WATER TANK and numbered A3 -14568 S/01

together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

(i) Site verification of the following design assumptions GOOD GROUND CONDITIONS IN ACCORDANCE WITH B1 (VM4)

(ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code.

I, IAN THOMAS HUTCHINSON am: ☒ CPEng # 63973 ☐ Reg ArchI am a Member of: ☒ IPENZ ☐ NZIAand hold the following qualifications: BE ME MIPENZ (Civil Structural) CPEng IntPE(NZ)

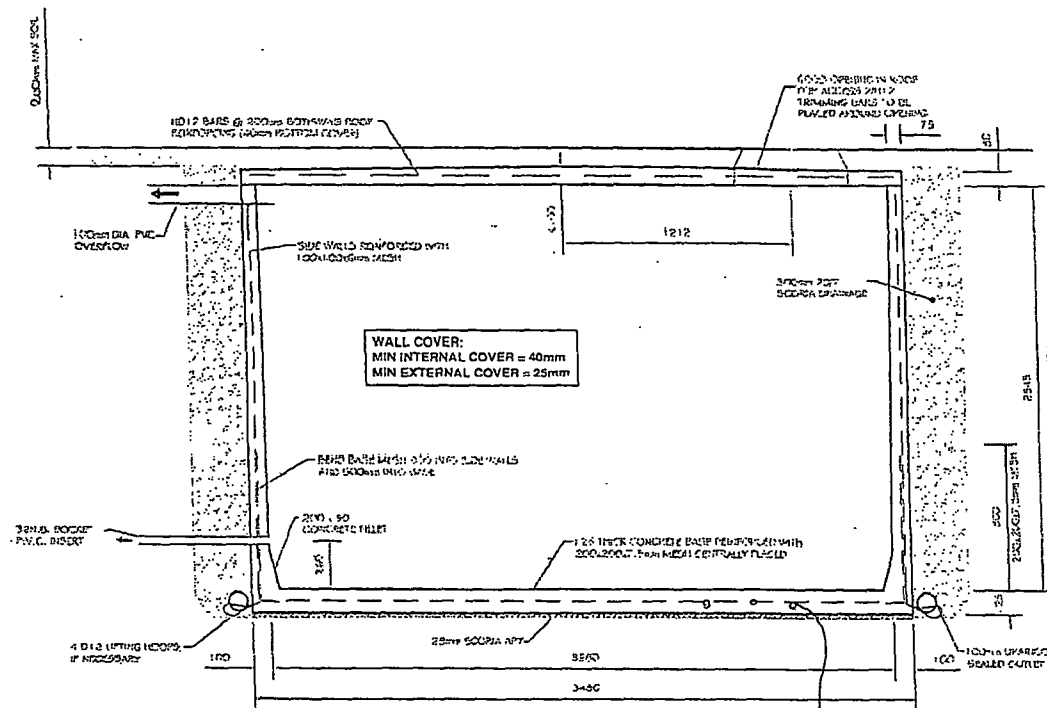
The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000.*

The Design Firm is a member of ACENZ ☒ Yes ☐ NoSIGNED BY Ian T Hutchinson ON BEHALF OF IAN HUTCHINSON CONSULTANTS LTDDate 14 March 2011Signed [Signature]

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$ 200,000.*

This form is to accompany Form 2 of the Building (Forms) Regulations 2004 for the application of a Building Consent.

22700 LITRE
5000 GALLON



WALL DESIGN AND COVER
REQUIREMENTS BASED ON
40MPa CONCRETE STRENGTH

BASE DRILLED 12mm STARTERS @ 300C
150mm FLANGE POURED EITHER ON SITE
OR POST PRODUCTION PRIOR TO DELIVERY

CONSTRUCTION NOTES & SPECIFICATION

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NZS 3105

ALL CONCRETE & CEMENT MORTAR SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF NOT LESS THAN 35 AND 25 MPa RESPECTIVELY.

THE UPPER PERIMETER SURFACE OF THE CONCRETE WALL SHALL BE ROUGHENED AFTER THE INITIAL CURE TO PROMOTE CONCRETE BOND BETWEEN THE UD AND THE WALL.

THE INTERNAL SURFACE OF THE TANK SHALL RECEIVE TWO CEMENT WASH COATS ONCE THE TANK HAS BEEN CONSTRUCTED.

ALL TANK WALLS SHALL BE REINFORCED WITH 100x100x6mm MESH AND 200x200x7.5mm MESH AS DETAILED

200x200x7.5mm MESH SHALL EXTEND FROM THE TANK BASE 800mm INTO THE SIDE WALLS

THE MINIMUM CONCRETE INTERNAL COVER SHALL BE 40mm, THE MINIMUM CONCRETE EXTERNAL COVER SHALL BE 25mm.

MATERIALS:

REINFORCING MESH SHALL CONFORM TO NZS 3422: 1975

CONCRETE FOR FLOOR SLABS SHALL COMPLY WITH NZS 3105:1990 AND HAVE MINIMUM 28 DAY CRUSHING STRENGTH OF 35MPa

CEMENT MORTAR FOR WALLS AND ROOF SHALL COMPLY WITH NZS 3105:1990 AND HAVE MINIMUM 28 DAY CRUSHING STRENGTH OF 25MPa

MINIMUM INSIDE COVER TO WALL REINFORCEMENT TO BE IN ACCORDANCE WITH CLAUSE 7.8 OF NZS 3105:1990

LOADINGS:

CONTENTS LOAD SHALL BE WATER OF MAXIMUM DEPTH 2445mm

DESIGN ASSUMES ROOF SOIL LOAD OF 100mm DEPTH. NO SURCHARGE SHALL BE APPLIED TO THE GROUND WITHOUT FURTHER SPECIFIC DESIGN

WIND LOAD NOT APPLICABLE

SEISMIC LOADINGS IN ANY AREA OF NEW ZEALAND IS ACCEPTABLE

ALL UNIFORMLY BURIED WATER TANKS SHALL HAVE AN ADEQUATE 200mm METAL DRAINAGE BLANKET AND DRAIN COIL OUTLET

THE DRAIN COIL OUTLET SHALL DISCHARGE INTO A FREE DRAINING SEALED STORMWATER CONNECTION LOCATED BELOW THE BASE OF THE WATER TANK TO PREVENT FLOTATION DURING HIGH NATURAL GROUNDWATER LEVELS

IF A SUITABLE STORMWATER CONNECTION IS NOT AVAILABLE SPECIFIC ANCHORING DESIGN AGAINST FLOTATION WILL BE REQUIRED. PLEASE CONTACT ABSOLUTE CONCRETE FOR FURTHER ADVICE

CONSTRUCTION:

THE WORKMANSHIP SHALL CONFORM WITH NZS 3105:1990 AND NZS 3105:1990

THE INSTALLER SHALL ENSURE THAT THE STABILITY, STRENGTH AND LONG TERM BEARING CAPACITY OF FUNDING SOILS IS ADEQUATE FOR THE IMPOSED LOAD.

REV	DATE	REV
The Design and Drawings shown on this sheet remain the Copyright of Hutchinson Consultants Limited, and are not to be reproduced without their written Authority. DO NOT SCALE IF IN DOUBT - ASK HUTCHINSON CONSULTANTS Civil & Structural Consulting Engineers Ground Floor Glen House 15 Tamariki Ave P.O. Box 120 Orawa Auckland Telephone - (07) 426-6792 - Fax - (07) 426-5668		
PROJECT ABSOLUTE CONCRETE LTD P O BOX 17 KAIWAKA		
5000 gal 200mm WATER TANK Buried		
SCALE 1:25 @ A3	DATE OCTOBER 2007	
DRAWN J. A. Brooks (021) 940 032 juli@hcn.co.nz	SHEET A3 - 123835/01	



e-cogent

ENVIRONMENTAL ENGINEERING SOLUTIONS

ecotube™

Septic Tank Effluent Filter NZ Patent No. 334385

As approved by Ian Gunn, Honorary Research Fellow, The University of Auckland and co-author of ARC Technical Publication 58.

INTRODUCTION

The ecotube™ effluent filter improves the efficiency of your septic tank or wastewater treatment plant in two ways. It prevents the occurrence of septic tank outlet blockages and extends the life of the disposal area by filtering out solids.

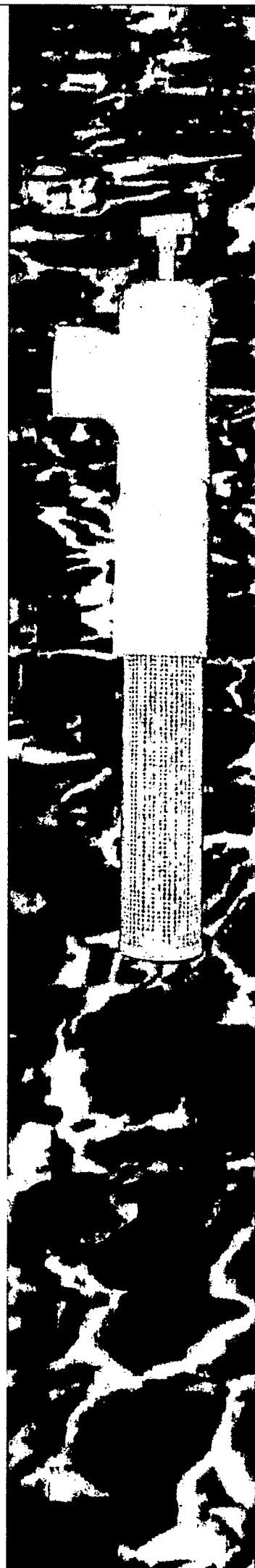
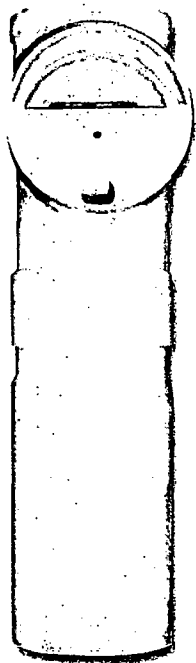
Septic tank effluent typically separates into three layers. The ecotube™ extracts and filters the effluent from the relatively clean middle layer for discharge to the disposal area further minimising blockages.

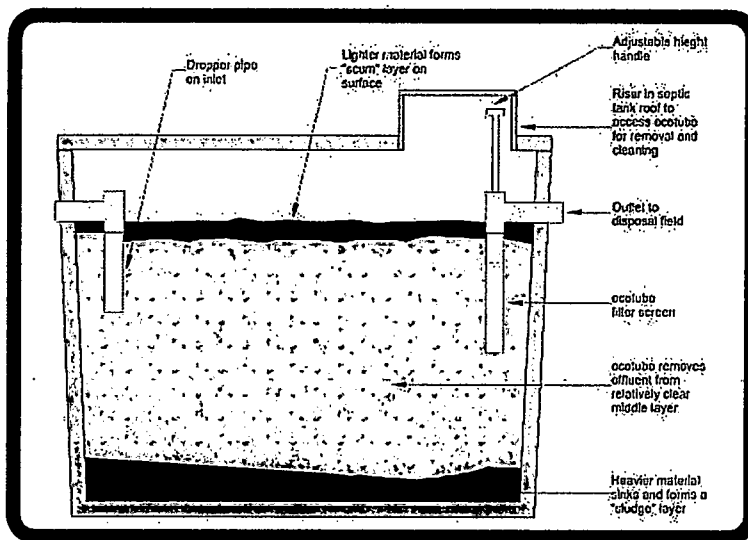
The ecotube™ utilises highly durable polypropylene filter tube from NSW Environmental. It is designed and built in New Zealand and provides a large filter area through the use of patented concentric filter tubes.

For cleaning the ecotube™ comes with an adjustable handle to allow for easy and complete removal however frequent cleaning is not required as solids captured on the filter fall back into the underlying sludge layers.

The ecotube™ comes complete with an outlet junction and insert filter. Alternatively the insert filter can be purchased separately to use in an existing outlet junction with no acaption fitting required.

The outlet junction has a flow modulation plate with a low flow orifice and a peak flow weir to buffer surges through the ecotube™. The junction also has an expanded dropper pipe to ensure the full filter surface area is exposed to the effluent.





ADVANTAGES

Key advantages of the ecotube™ effluent filter

- Flow area, filter area and aperture size make the ecotube™ one of the best effluent filters available
- Easily installed or retrofitted – no adaption fittings required
- Cost efficient
- Available as a complete unit or as an insert filter
- Larger ecotube™ available to handle larger commercial or industrial septic tanks.
- Filtered solids fall back into the septic tank for further treatment - No sump or vault to block with captured solids!
- 2.5mm filter opening size with low velocity through screens
- Flow modulation on outlet to reduce surges but still allowing emergency overflow when required
- Expanded dropper pipe ensures the full surface area of the filter has unimpeded contact with the effluent
- Adjustable handle and removable filter allows easy cleaning
- New Zealand designed, patented and manufactured for use with standard New Zealand fittings

YOUR LOCAL AGENT

DISCLAIMER: Buyers and users must make their own assessment of our products under their own conditions for their own use. All queries regarding product suitability of purpose or installation should be directed to ecogent for advice and assistance. Availability of product may differ slightly from that available in your area.

AUCKLAND REGIONAL COUNCIL

SUBJECT: Resource consent application to discharge up to 25m³ of treated waste water to ground soakage.

FROM: Julian Roberts

FILE: 7835

PERMIT: Discharge 22315
to ground

TO: The Manager
Land & Water Quality Section

DATE: 12 May 1999

(This report is confidential until it has been considered and is not to be construed as Council policy until adopted).

1. APPLICATION

1.1 Applicant

B & V Morrison.

1.2 Proposal

To discharge up to 25m³/day of contaminants to land for the purpose of disposing of treated wastewater to ground soakage in accordance with Section 15(1) of the Resource Management Act 1991.

1.3 Location

NZMS 260 R09 655327 – Sandspit Motor Camp, Sandspit.



2. STATUTORY MATTERS

The proposed discharge of contaminants is an exception to the Transitional Regional Plan. Section 369(1)(b) RMA deems an exception under a Transitional Regional Plan to be a discretionary activity in terms of the RMA.

Accordingly a discharge permit is required pursuant to Section 15(1) of the Resource Management Act 1991.

3. NOTIFICATION

In accordance with Section 94(3) of the Resource Management Act 1991 this application was not notified as:

- a. There is no relevant plan or proposed plan;
- b. The adverse effects on the environment of the activity were considered to be minor; and
- c. Written approval has been obtained from every party who may be adversely affected by the granting of the application.

4. CONSULTATION

The applicant has consulted with, and obtained written approval from, owners of six neighbouring properties to the camp ground.

5. PROPOSAL

5.1 Background

The Sandspit Motor Camp has operated at the site for approximately 34 years. The existing domestic wastewater treatment system has operated for most of that time. Previously the treated effluent was discharged, via gravel filters, to the Matakana Estuary. However, due to changes in public attitudes, and the recognition of the cultural issues associated with this disposal method, discharge to water is now viewed unfavourably unless no other disposal options are available. Furthermore, the treatment and disposal system has failed to achieve performance standards for effluent quality, due mainly to problems with the UV sterilisation plant.

The Motor Camp changed hands in 1995 and the new operators were made aware of the previous discharge permit and the associated conditions. The expiry date for the current consent is 31 December 1999. The Consent Holder was made aware that the consent was unlikely to be renewed unless an alternative disposal option was sought.

Accordingly the Consent Holder has installed a RAAM dripper irrigation system on private land above the motor camp. This required a variation to be made to the consent. Therefore the

Consent Holder is applying for new consent to authorise the discharge of contaminants to ground.

5.2 Description of the site

The Sandspit Motor Camp is located off Sandspit Road within Sandspit township at a point where the road turns sharply towards the parking, boat launching and wharf facilities on the Spit known as Kawau Landing. The camp occupies an area of relatively low lying land sheltered by mature trees and bordered on the western, northern and eastern sides by the Matakana River estuary. At low tide a sandy beach is exposed to the northeast

5.3 Wastewater Flow Rates

According to the applicant's consultant maximum occupancy at the campsite is reached during the Christmas period and may reach 400 people. During the winter occupancy rates may drop below 10.

Based on design flows of TP58, this would equate to a maximum design volume of 20m³.

Water meter readings taken from the site indicate that the volume of wastewater discharged is highly variable throughout the year. Peak flows occur during peak occupancy periods over Christmas and New Year, and Public Holiday weekends. The average maximum discharge volume was measured at 18m³ over the January period. The daily average flows over the period June-August were measured at only 2.7m³. Overall, the annual average daily wastewater flow volume is calculated as 6.2m³.

These figures are based on meter reading taken from the water bore, and it is accepted that they are conservative estimates of the wastewater volumes, as a proportion of water taken is used for such activities as watering gardens, washing boats etc. The demand for water for these purposes is also likely to significantly increased during peak occupancy periods.

The applicant proposes to install a water meter on the discharge line in order to obtain an accurate measurement of actual daily discharge volumes. Initially this will require daily meter readings during peak use periods. However, once the actual discharge volumes have been established it is anticipated that this will be relaxed to a weekly meter reading requirement.

5.4 Existing System

5.4.1 Treatment Plant

The existing system comprises a septic tank of approximately 26m³ fitted with an 'Orenco' solids filter, and an aeration plant of 41m³ capacity. The aeration plant comprises a 5.1m³ "Contact Tank", two 5.1m³ "Re-aeration Tanks" and a 6.8m³ "Settling Tank". Following treatment by the aeration plant, wastewater passes through a UV treatment plant to reduce the pathogen load. This was initially installed due to concerns over the quality of effluent discharged to the estuary. However, it has been retained even though the effluent is now discharged to ground some distance from any watercourse. A "Biotube" solids filter has also recently been installed in line after the treatment system. However, no monitoring results have yet been obtained to verify its effectiveness within the system.

The applicant also proposes to install an "Arkal Disc Filter" if there is a requirement to further improve the quality of the discharged effluent. However, this will not be determined until the next monitoring period.

5.4.2 Disposal Field

The applicant ceased discharging to the estuary approximately 2 years ago, and has been discharging to a dripper irrigation field laid around an olive tree plantation on land above the campsite.

Waste water from the treatment plant is pumped to an 1800 litre storage tank, and then to a 2700 litre storage tank above the campsite.

Wastewater from the 2700 litre storage tank is then distributed via RAAM dripper irrigators to the surface of the field. Dripper lines will be laid downslope running between the rows of olive trees. Approximately 714 linear metres of dripper have been established at 5 metre centres. Notwithstanding this spacing, the length of dripper line equates to a disposal area of 714 m².

6. EVALUATION

6.1 Wastewater Treatment

Monitoring results of samples taken throughout the operation of the system indicate that the effluent quality is highly variable in respect of BOD and suspended solids. A number of problems have also been encountered with consistently high faecal coliform counts. Following a number of improvements of the system, a Consultant Engineer was finally contracted to investigate the problem. It was found that the plumbing arrangement of the treatment tanks was inadequate, allowing untreated effluent to pass through to the UV plant. Obviously this situation gave rise to high readings. This matter has now been addressed and monitoring results from samples taken over Easter 1999 demonstrate an improvement in this regard. Notwithstanding this improvement, the quality of effluent is still relatively poor. The applicant has therefore installed a "Biosolids" filter to further improve the effluent quality. Subsequent discussions with Ian Gunn have also indicated that the addition of a disc filter after the treatment systems is likely to address this matter. Accordingly the applicant proposes to install this equipment at a later stage should the effluent quality not improve as a result of the upgrades discussed above.

The suspended solids levels have been cause for concern in view of the chosen disposal option of RAAM line. Typically this equipment performs well with suspended solids levels less than 10mg/l. Comprehensive monitoring of the disposal system will therefore be required to avoid problems with this equipment. Conditions will also be imposed on the consent requiring the consent holder to undertake remedial work to the system in the event that high suspended solids levels affect the performance of the irrigation lines.

6.2 Wastewater Disposal

The proposed disposal method is appropriate for this application as it utilises a northerly facing slope with good topsoil coverage, and is used to irrigate an olive orchard. Monitoring of the performance of the system over the past 2 years has identified no operational problems with the system.

However, the system has not been constructed in accordance with established design criteria for such systems. The following issues have been raised as being of concern to the ARC:

6.2.1 Loading Rate

The maximum proposed loading rate for the disposal bed is approximately 5 times higher than that recommended in TP58. Based on the maximum daily discharge volume of 25m^3 , the area of disposal field provided requires a loading rate of 25mm/day (compared with 5mm/day TP58). The applicant's consultant has been repeatedly requested to justify such a high loading rate.

The applicant's consultant provides support for the proposal on the following basis:

1. The system has been operating normally for 2 years with no signs of breakout or excessive moisture in the disposal field.

While this argument may provide some justification for allowing the system to continue, it does not take into account the long term effects of loading the soil at such a high rate with relatively poor quality effluent. Accordingly it is not an acceptable reason for operating the system as it is. One option would be to grant the consent for a short duration (say 3-4 years) on the basis that the consent holder would have to demonstrate no adverse effects before its renewal.

2. The site lies on a gently sloping northerly facing slope with high evapotranspiration potential. The greatest ET potential exists during the greatest use of the camp. To some extent this does mitigate higher loading rates for short durations, but again it is not an acceptable practice over time. Again, the application could be granted for a short duration in order to review the system prior to its renewal.
3. The peak volumes applied for are only generated during the summer peak season (3-4 weeks) and during public holiday weekends (3-4 days). Occupancy levels and water meter readings clearly show that water usage outside of these times is significantly lower than the peak applied for (in some cases by as much as 10 times).

The average daily discharge rate based on annual discharge volume is approximately $6\text{m}^3/\text{day}$ while the average winter discharge volume is less than $2.5\text{m}^3/\text{day}$. The disposal field is adequately sized to accommodate the average daily discharge rate, and is only likely to fail during peak occupancy periods.

4. The existing dripper lines have been regularly monitored for decrease in performance due to higher than recommended suspended solids levels. No effects have been noticeable and

no significant build-up of solids has been observed within the dripper lines. The addition of a biosolids filter will improve the quality of the effluent further and this is considered appropriate.

6.2.2 Effluent Quality

The quality of the effluent has been consistently poor for some time with high suspended solids levels and extremely high faecal coliform levels. Although improvements to the treatment system have improved the effluent quality, it has remained above the usual minimum standards for dripper irrigation. In particular, the elevated suspended solid levels have the potential to affect the efficiency of the dripper lines through blockage. In order to address this the applicant has recently installed a biosolids filter. The results of this improvement are yet to be seen in monitoring results. However, the applicant has further agreed that if the suspended solid levels remain high an additional "Arkal" disc filter will be installed in-line.

The ARC is satisfied that the applicant has taken all reasonable steps to treat the effluent to an appropriate level.

The high levels of pathogens within the effluent have also been a cause for concern. The applicant has recently installed a new UV sterilisation plant to address this matter. Unfortunately the results have not been as significant as had been hoped. The most likely cause for this is that the high suspended solid levels present in the effluent have affected the performance of the unit. By installing the additional filters and installing the UV unit after the filters is anticipated that the faecal coliform levels will be significantly reduced from the present.

6.3 Assessment of Actual and Potential Environmental Effects

Following discussions with Ian Gunn and the applicant's consultant, the ARC retains a number of reservations about the proposed disposal method and its long term suitability. However, a number of mitigating factors need to be taken into account when considering this application.

1. The previous discharge was to the estuary and was of worse quality than the current effluent. The positive environmental benefits of redirecting the discharge are considerable and must be weighed against the possible adverse effects of the disposal bed failing.
2. The disposal bed is situated a significant distance from any adjoining properties, or any public areas of the holiday park. The irrigation field lies below the owners dwelling on a large area of orchard. No public access is available to the property.
3. The disposal bed is situated over 500 metres from the foreshore or other surface water. Groundwater levels in the area are not close to the surface. Accordingly it is considered that the risk of contamination of ground or surface waters is minor.
4. The applicant has a large amount of land available as a reserve area, adjacent to the disposal field.

2. The conditions of this consent (including any specified quantity) may be reviewed pursuant to section 128 of the Resource Management Act 1991, by the giving of notice pursuant to section 129 of the Act, in the year of 2001 and subsequently at two yearly intervals thereafter commencing in the month of July of that year, for any of the following purposes:
 - i. To deal with any significant adverse effect on the environment which may arise from the exercise of the consent and which was not apparent at the time of the granting of the consent; or
 - ii. To vary the maximum daily discharge volume in light of changed circumstances or the results of monitoring; or
 - iii. To vary the design requirements of the system in light of changed circumstances or the results of monitoring; or
 - iv. To require a Consent Holder to adopt the best practicable option to remove or reduce any adverse effect on the environment; or
 - v. To deal with any adverse effect on the environment arising or potentially arising from the exercise of this consent through altering or providing specific performance standards; or
 - vi. To alter monitoring requirements in light of previous monitoring results obtained from previous monitoring and/or changed environmental and/or hydrological knowledge.
3. The maximum daily discharge volume permitted by this consent will be reviewed 12 months from the granting of this consent and may be varied, with the agreement of the Council and the Consent Holder, according to the results of water meter readings taken from the water meter specified in condition 18.
4. The wastewater treatment and disposal system shall be constructed and installed in accordance with the conditions of this permit and in accordance with the Engineer's plans and specifications submitted as the applicant's proposal, "Engineering Report for Sandspit Motor Camp Onsite Waste Disposal - Colin Ashby Consulting November 1998" which will form part of this permit.
5. Prior to the exercising of this permit, a Registered Engineer, experienced in wastewater treatment shall verify in writing to the Manager that all components of the waste water treatment and disposal system have been inspected and installed in accordance with standard engineering practice, with the plans submitted with this application and with the specifications and conditions of this permit.
6. The Consent Holder shall provide 'as-built' plans for the layout of the treatment and disposal system clearly showing the precise location of the treatment system and any modifications from that initially proposed and showing the location of the reserve area required by Special Condition 7 below. These plans shall be submitted to and approved by the Manager prior to exercising this permit.

Maintenance

7. Sufficient area shall be reserved on the same site as the disposal system to enable the disposal fields to be increased in size by at least 200%.
8. The septic tank, aeration tanks, treated wastewater holding tank buffer tanks and the biosolids filters shall be inspected and maintained on a six monthly basis, and the tanks cleaned out when the combined depth of sludge and scum occupies more than half the tanks depth, but in any event the tanks shall be desludged two yearly.
9. The UV disinfection unit shall be inspected at least once every 2 days and cleaned at least once every month, when inspection indicates appropriate. A spare UV lamp shall be kept available at all times.
10. The Consent Holder shall ensure that good vehicular access to the treatment and disposal systems is maintained at all times so that maintenance can be carried out.

Signage

11. The Consent Holder shall install appropriate signage adjacent to the disposal area to discourage access by unauthorised personnel.
12. The Consent Holder shall erect signs in the toilet block and kitchen advising that no chemicals or other toxic substances, or food waste, shall be disposed of to the wastewater treatment system.

Emergency Procedures

13.
 - i. The Consent Holder shall ensure there is 2 hours emergency storage in the septic tanks and treated wastewater holding tank above the high water level alarm specified in Special Conditions 14 below.
 - ii. Within the management plan, procedures shall be outlined to be put in place, to limit water usage and effluent generation during an emergency situation.
 - iii. Either a contract shall be entered into with a septic tank cleaning firm to respond to an emergency within 2 hours Or A standby (not electric) pump and a standby storage tank capable hour storage of effluent, shall be available.
14. The Consent Holder shall install an audible alarm system designed to sound in the event of any pump failure.
15. The Consent Holder shall ensure that appropriate persons shall be available and shall respond as soon as practicable to any alarm sounding in an emergency arising from the from the wastewater treatment and disposal system on a 24 hours a day, seven days a week basis. A copy of the names of the people including a contact number shall be submitted to the Manager and shall be appended to the management plan required by Special Condition 26 below.

5. The applicant has accepted specific review conditions that would require the system to be upgraded immediately any signs of disposal bed failure become apparent. Furthermore, extensive monitoring conditions have been imposed on this consent to address the concerns of the ARC.

7. CONCLUSION

This application is to discharge 25m³/day of contaminants to land for the purpose of disposing of treated domestic wastewater to ground soakage in accordance with Section 15(1)(b) of the Resource Management Act 1991.

On the basis of the information submitted to Council by the applicant, and having assessed the proposal against the relevant criteria, Council has a number of concerns with the proposed disposal area, as it is not consistent with the guidelines set out in TP58.

However, the applicant has made significant improvements to the previous system, and it is acknowledged that the change from discharging to the estuary to land disposal is a significant improvement. Furthermore, the applicant has accepted the conditions proposed by the Council to address its concerns.

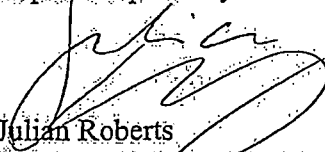
Accordingly it is recommended that the consent be granted with a 2 year review clause to allow the system to be reviewed and modified accordingly should it be found to be operating unsatisfactorily.

8. RECOMMENDATION

Based on the information available, it is recommended that:

- a) The consent be granted subject to the special conditions appended to this report.
- b) The consent expires on which corresponds to a term of 15 years.

Report Prepared by:


Julian Roberts
Land and Water Quality

**SANDSPIT MOTOR CAMP
ON-SITE WASTE DISPOSAL
MANAGEMENT PLAN**



Colin Ashby Consulting
Structural, Civil & Geotechnical Engineering
3 Elizabeth Street, P O Box 124, Warkworth
Ph 09 425 9422 Fax 09 425 9431 E-mail: cashbyc@wk.planet.gen.nz

The Report contained here-in remains the exclusive property and copyright of **Colin Ashby Consulting** and shall not be reproduced, (excepting the express needs of the project in question) by any means either in whole or in part, without their written approval.

CONTENTS

- **ON-SITE WASTE DISPOSAL MANAGEMENT PLAN**
- **APPENDIX A –SIGNAGE**
- **APPENDIX B -LETTER OF AGREEMENT WITH SEPTIC TANK CLEANER**
- **APPENDIX C -A.R.C. RESOURCE CONCENT PERMIT No. 22315**
- **APPENDIX D -ENGINEERING REPORT FOR SANDSPIT MOTOR CAMP ONSITE WASTE DISPOSAL**
- **APPENDIX E –PLAN OF EXISTING EFFLUENT FIELD, AND THE RESERVED AREA FOR FUTURE EFFLUENT EXPANSION**

FILE No:	
DIQUE No:	9858
RECEIVED	
- 9 JUL 1999	
Auckland Regional Council	
ATTENTION:	JULIAN ROBERTS
INFORMATION:	
NOTIONED:	

Introduction

In accordance with the Resource Consent granted by the Auckland Regional Council (Permit No 22315), a Management Plan is required for the Wastewater Treatment and Disposal Systems.

Resource Consent

The Resource Consent is a vital part of the overall Management Plan and the conditions outlined therein are to be complied with. A copy of the Resource Consent is Appendix to and forms part of this management plan.

The Resource Consent shall be carefully worked through and all matters contained therein implemented prior to exercising of the permit.

Letter of Verification

A letter of verification in accordance with clause 4 of the permit is herewith attached, verifying that all components of the wastewater treatment and disposal system have been inspected and installed in accordance with standard engineering practice, with plans submitted with this Application and with the specifications and conditions of the permit.

As Built Plans

'As built' plans are appendix to this management plan setting out the layout of the treatment disposal system.

Inspection & Operation Programme

(Refer clause 24 of Resource Consent Permit)

Plant

To include requirements (a), (b), (f), (h)

Daily

Read and record in log book meter reading (1 December to 28), (To be reviewed after first 12 months).

Inspect aeration tanks and clarifier tower and remove leaves and other debris if necessary.

Inspect U.V. lamp at least once ever second day and clean or replace if necessary. A spare lamp must always be kept available.

Ensure correct functioning of plant.

Weekly

Clean scum build-up from walls of Aeration tanks if necessary.

Monthly

First day of every month read and record in log book meter reading (1 March to 30 November).

Dismantle and clean U.V. sterilization unit.

Test audible pump alarm.

Quarterly

Sample effluent from 2,700 litre storage tank (prior to discharge to the dosing syphon) on the last Monday morning of the months of January, April, July and October 2001 (Ref: Appendix C Item 20 – 25).

Six Monthly

Inspect and maintain septic tank, aeration tanks, treated wastewater holding tank, buffer tanks and the biosolid filters for sludge build up (if combined depth of sludge occupies more than half the tank depth, tank must be cleaned).

Sample effluent (after October 2001) last Monday morning of January and July (Ref: Appendix C Items 20-25)

Two Yearly

Early December. Desludge septic tank and clean biotube filter 1999, 2001 etc.

Disposal System

(To include requirements (d) (g)).

Shift dripper lines systematically across field at approximately one meter spacings.

24 Dec to 31 Jan at least every second day

1 Feb to Easter at least once a week

Easter to 24 Dec when mowing field

Maintenance Schedule**Disposal Field (To include requirements (c) and (d)).**

Mow grass cover on disposal field on a regular basis so that grass cover does not exceed 100mm in length.

Six Monthly

Purge dripper lines of any accumulated solids.

Annually

Aeration pump dismantled and checked by a qualified pump technician in early December and veins replaced if deemed necessary.

All other pumps serviced or replaced if problems occur. A replacement pump is to be utilised during servicing.

Tank lines, meters etc visually inspected for defects.

General Maintenance

Good vehicular access to the treatment and disposal systems must be maintained at all times.

Signage to be erected (Appendix A)

(1) Adjacent the disposal area

(2) Kitchen

(4) To be erected in a visible location close to the pump.

A log book recording complaints, emergencies, failures, problems and remedial action taken shall be kept onsite and be made available to ARC officers during normal working hours by appointment (Ref: Appendix C Item 17).

Ensure wastewater and recycled water meters are in good working order.

Contingency Plan

Actions to be taken in the event of failure of part of the system.

If audible alarm sounds:

1. Ascertain the cause of the problem.
2. If problem is deemed to take more than 1 hour to remedy, contact sewerage disposal contractor to remove waste.
3. Place notices in ablution block restricting water usage e.g. (no showering) (Ref: Appendix C (3)) until the problem is remedied. (Showers are metered so won't work anyway in the case of power failure).
4. Remedy problem as soon as possible.

Sufficient area has been set aside to enable the disposal fields to be increased in size by at least 200% if necessary.

The effectiveness of the disposal field area shall be kept under review particularly during periods of high patronage and if necessary the size of the fields shall be increased.

Emergency Procedures

Two hours emergency storage in the septic tanks and treated wastewater holding tank above the high water audible alarm system float, designed to sound in the event of any pump failure, shall be provided.

Note to achieve this it may be necessary to lower the level of the float switches and or raise the level of the emergency overflow outlet.

An agreement has been entered into (See Appendix B) with McJIMRAY Septic Tank Cleaners (Ph 09 423 7014 or 025 909 289) for 24 hour emergency attendance, with a response time of less than 2 hours so as to with draw surplus effluent and or sludge promptly so as to avert or minimise the potential for an unauthorised discharge to occur.

Camp management shall also take the following steps to limit water usage and effluent generation during an emergency situation:

1. Turn off urinals.
2. Restrict or band use of the showers.
3. Erect temporary signs advising of the emergencies situation and requesting co-operation of campers to limit water usage while repairs to the sewage treatment system are underway.

Emergency Response Personnel

In accordance with clause 14 of the Resource Consent, a list is appendix of emergency personnel for call out on a 24 hours per day basis 7 days a week, giving the names of the people including contact phone number. The list is arranged in pecking order of priority.

Brian Morrison	(Owner)	425 8610	
Vanessa Morrison	(Owner)	425 8610	
Helen Lewis	(Assistance Manager)	425 9710	Private
		425 8610	Business
Graham Adolf	(Electrician)	425 9194	
McJIMRAY	(Septic Tank Cleaners)	423 7014	
		025 909 289	Mobile
Colin Ashby	(Consultant Engineer)	425 9422	
		025 949 694	Mobile

APPENDIX A

SIGNAGE

(1)

**NO UNAUTHORISED ENTRY
BEYOND THIS POINT.
EFFLUENT DISPOSAL DRIP
IRRIGATION
SYSTEM OPERATING**

Sandspit Motor Camp Management

(2)

**NO CHEMICALS OR TOXIC
SUBSTANCES OR FOOD WASTE
SHALL BE DISPOSED OF TO
WASTEWATER TREATMENT SYSTEM.
PLEASE USE BIO DEGRADABLE SOAP
POWDERS AND DISHWASHING LIQUIDS
ETC**

Sandspit Motor Camp Management

EMERGENCY

**YOUR CO-OPERATION IS
SOUGHT TO LIMIT WATER
USAGE**

AS

WE ARE CURRENTLY WORKING

ON

**REPAIRING THE SEWAGE
TREATMENT SYSTEM.**

Sandspit Motor Camp Management

(4)

EMERGENCY RESPONSE PERSONAL IF ALARM SOUNDS

(Please contact first on list and work downwards if no response)

Brian Morrison	(Owner)	425 8610	
Vanessa Morrison	(Owner)	425 8610	
Helen Lewis	(Assistance Manager)	425 9710	Private
		425 8610	Business
Graham Adolf	(Electrician)	425 9194	
McJIMRAY	(Septic Tank Cleaners)	423 7014	
		025 909 289	Mobile
Colin Ashby	(Consultant Engineer)	425 9422	
		025 949 694	Mobile

Sandspit Motor Camp Management

APPENDIX B

Letter of Agreement With Septic Tank Cleaner



McJIMRAY

Mac McLaren
Septic Tank Cleaning
R.D. 3
Warkworth

Phone/Fax 09-4237014
Mobile 025 909 280

27 May 1999

Brian Morrison
Sandspit Motor Camp
R.D.
Warkworth

Sandspit Motor Camp

Dear Sir,

In response to your request re: call-out time in event of power failure at the Sandspit Motor Camp at Warkworth, please find the enclosed commitment.

The call out time would be no longer than 2 hours, and the response vehicle would be a 9x9 cubic meter vacuum truck.

Yours faithfully,

Mac McLaren.

APPENDIX C

AUCKLAND REGIONAL COUNCIL RESOURCE CONSENT

PERMIT No. 22315

AUCKLAND REGIONAL COUNCIL

RESOURCE CONSENT

PERMIT NO. 22315

CONSENT HOLDER: Brian Morrison Family Trust & Vanessa Morrison
Family Trust (operating as Sandspit Motor Camp)

FILE REFERENCE: 7835

CONDITIONS OF CONSENT

Date of Commencement of Consent: 30 June 1999

First Date of Review: 30 June 2000

Date of Expiry of Consent: 30 June 2014

Purpose of Consent: To discharge up to 25m³/day of contaminants to land for the purpose of disposing of treated wastewater to ground soakage in accordance with Section 15(1)(b) of the Resource Management Act 1991.

Quantity: That the maximum daily discharge shall not exceed 25m³.

Site Location: Sandspit Motor Camp, 1334 Sandspit Road, Sandspit.

Map Reference: NZMS 260 R09 655327

Definition: 'Council' means the Auckland Regional Council.

'Manager' means the Manager, Land and Water Quality Section, Auckland Regional Council, or nominated Council staff acting on the Manager's behalf.

General

1. This resource consent is granted by the Council subject to its servants or agents being permitted access to the relevant parts of the property at all reasonable times for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.
2. The conditions of this consent (including any specified quantity) may be reviewed pursuant to section 128 of the Resource Management Act 1991, by the giving of notice pursuant to section 129 of the Act, in the year of 2001 and subsequently at two yearly intervals thereafter commencing in the month of July of that year, for any of the following purposes:
 - i. To deal with any significant adverse effect on the environment which may arise from the exercise of the consent and which was not apparent at the time of the granting of the consent; or
 - ii. To vary the maximum daily discharge volume in light of changed circumstances or the results of monitoring; or
 - iii. To vary the design requirements of the system in light of changed circumstances or the results of monitoring; or
 - iv. To require a Consent Holder to adopt the best practicable option to remove or reduce any adverse effect on the environment; or
 - v. To deal with any adverse effect on the environment arising or potentially arising from the exercise of this consent through altering or providing specific performance standards; or
 - vi. To alter monitoring requirements in light of previous monitoring results obtained from previous monitoring and/or changed environmental and/or hydrological knowledge.
3. The maximum daily discharge volume permitted by this consent will be reviewed 12 months from the granting of this consent and may be varied, with the agreement of the Council and the Consent Holder, according to the results of water meter readings taken from the water meter specified in condition 18.
4. The wastewater treatment and disposal system shall be constructed and installed in accordance with the conditions of this permit and in accordance with the Engineer's plans and, specifications submitted as the applicant's proposal, "Engineering Report for Sandspit Motor Camp Onsite Waste Disposal - Colin Ashby Consulting November 1998" which will form part of this permit.

5. Prior to the exercising of this permit, a Registered Engineer, experienced in wastewater treatment shall verify in writing to the Manager that all components of the waste water treatment and disposal system have been inspected and installed in accordance with standard engineering practice, with the plans submitted with this application and with the specifications and conditions of this permit.
6. The Consent Holder shall provide 'as-built' plans for the layout of the treatment and disposal system clearly showing the precise location of the treatment system and any modifications from that initially proposed and showing the location of the reserve area required by Special Condition 7 below. These plans shall be submitted to and approved by the Manager prior to exercising this permit.

Maintenance

7. Sufficient area shall be reserved on the same site as the disposal system to enable the disposal fields to be increased in size by at least 200%.
8. The septic tank, aeration tanks, treated wastewater holding tank buffer tanks and the biosolids filters shall be inspected and maintained on a six monthly basis, and the tanks cleaned out when the combined depth of sludge and scum occupies more than half the tanks depth, but in any event the tanks shall be desludged two yearly.
9. The UV disinfection unit shall be inspected at least once every 2 days and cleaned at least once every month, when inspection indicates appropriate. A spare UV lamp shall be kept available at all times.
10. The Consent Holder shall ensure that good vehicular access to the treatment and disposal systems is maintained at all times so that maintenance can be carried out.

Signage

11. The Consent Holder shall install appropriate signage adjacent to the disposal area to discourage access by unauthorised personnel.
12. The Consent Holder shall erect signs in the toilet block and kitchen advising that no chemicals or other toxic substances, or food waste, shall be disposed of to the wastewater treatment system.

Emergency Procedures

13.

- i. The Consent Holder shall ensure there is 2 hours emergency storage in the septic tanks and treated wastewater holding tank above the high water level alarm specified in Special Conditions 14 below.
- ii. Within the management plan, procedures shall be outlined to be put in place, to limit water usage and effluent generation during an emergency situation.
- iii. Either a contract shall be entered into with a septic tank cleaning firm to respond to an emergency within 2 hours Or A standby (not electric) pump and a standby storage tank capable hour storage of effluent, shall be available.

14. The Consent Holder shall install an audible alarm system designed to sound in the event of any pump failure.

15. The Consent Holder shall ensure that appropriate persons shall be available and shall respond as soon as practicable to any alarm sounding in an emergency arising from the from the wastewater treatment and disposal system on a 24 hours a day, seven days a week basis. A copy of the names of the people including a contact number shall be submitted to the Manager and shall be appended to the management plan required by Special Condition 26 below.

16. That the Consent Holder shall install public notices providing 24 hour emergency numbers to be called in the event of any alarm sounding or an emergency arising from the treatment plant and disposal system. The signs should be placed in a prominent position next to the treatment plant.

17. That the Consent Holder shall maintain a log book recording complaints and emergencies from the treatment and disposal systems. The details which shall be recorded in this log book include the following;

- The name of complainant, the time and date the complaint was made.
- The nature of the complaint.
- The time and date at which the complaint was responded to and remedial action taken.

The log book shall be made available to ARC officers during normal working hours by appointment. These results shall be forwarded to the Manager along with water meter readings.

Monitoring

18. The Consent Holder shall continuously measure the flows to wastewater disposal systems and to the recycled water volume with water meters capable of measuring to an accuracy of plus or minus 5 %. The meter shall be installed in accordance with the manufactures specifications and shall be maintained in good working order at all times.

19. The Consent Holder shall ensure that meters required by Special Condition 18 above, are read on the following basis:
- i. During the period 1 December to 28 February of each year, the meters shall be read on a daily basis at the same time of each consecutive day; and
 - ii. During the period 1 March to 30 November of each year the meters shall be read on a monthly basis at the same time of the first day of each month.

These readings shall be recorded in a log book and the flow records shall be forwarded to the Manager quarterly by 1 March, 1 June, 1 September and 1 December of each year.

20. An effluent sample shall be taken from the 2,700 storage tank prior to discharge to the dosing syphon on the last Monday morning of the months of January, April, July, & October until October 2001 and then twice annually on the last Monday morning of the months of January & July in accordance with the schedule and procedure specified in the Management Plan required by Special Condition 26 below.
21. The samples required by Special Condition 20 above shall be analysed within 12 hours of sample collection for biochemical oxygen demand, suspended solids and faecal coliforms and shall be collected and analysed in accordance with latest edition of the "Standard Methods for the Examination of Water and Wastewater", published by the American Public Health Association, the American Water Works Association and the Water Environment Federation, or equivalent as approved in writing by the Manager.
22. The results obtained in accordance with Special Condition 21 above shall be recorded in a log book and a copy forwarded to Manager within one month of the date the sample was taken.
23. The samples required by condition 20 shall; be analysed for the following parameters:
- Suspended Solids
 - Faecal Coliforms
 - Enterococi
24. The quality of the wastewater discharged to the irrigation system shall conform with the following standards:
- Suspended Solids better than 20 mg /l.

25. In the event of any sample having a contaminant quality that exceeds the maximum limits specified in Special Condition 24 above, the following action shall be taken:
- The Manager shall be advised of the analysis results identified within 7 days of receipt of the result; and
 - The Consent Holder shall ensure action is taken immediately to address and remedy the problem and advise the Manager immediately of actions taken; and
 - A further sample shall be taken within 7 days of receipt of the analysis results for the previous sample and analysed in accordance with Special Condition 21 above and these results forwarded to the Manager within 7 days of receipt of the result.

Management of the System

26. A Registered Engineer or suitably qualified consultant experienced in wastewater engineering shall prepare a management plan for the wastewater treatment and disposal systems. This plan shall be prepared in accordance with the conditions of this permit and shall contain the following;
- a. An inspection programme to verify the correct functioning of the wastewater treatment and disposal systems.
 - b. A schedule for the daily, weekly, monthly and annual operational requirements including reading of the water meter.
 - c. A schedule of maintenance requirements for the pumps, septic tanks, biotubes, recirculation tanks, treated effluent holding tank, UV disinfection unit, water meters, and disposal field.
 - d. A schedule of maintenance requirements for management of vegetation on the wastewater ground disposal area.
 - e. A contingency plan specifying the actions to be taken in the event of failure of any component of the system and any other non-compliance with the conditions of this permit.
 - f. Details of a schedule for the desludging of the septic tanks and cleaning of the biotubes.
 - g. Details of how the ground disposal system will be managed.
 - h. A sampling and monitoring program in accordance with Special Conditions 20-22 of this consent including sample site locations, sample method and sample timing.

A copy of this management plan shall be forwarded to and approved in writing by the Manager prior to the exercising of this permit.

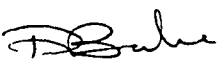
27. The Consent Holder shall maintain the system in an efficient and professional manner in accordance with the management plan and the conditions of this permit, to ensure that any works that are necessary to this shall be done by the Consent Holder within one month of written notice from the Manager.
28. That the Consent Holder shall record in the log book, required in Condition 17 above, any problems which are detected within the system and shall outline the action taken to remedy such problems.

Advice Notes

1. The consent holder is advised that should he/she/it wish to transfer this permit to any other person he/she/it must do so by advising the Council in writing in accordance with Section 135(1)(a) of the Resource Management Act 1991. A fee is payable at the time of transfer to cover the cost of administration.
2. The consent holder is advised that he/she/it is required to comply with all relevant provisions of the Building Act 1991, prior to commencing work.
3. The consent holder is referred to Section 125 of the Resource Management Act 1991, which provides for the lapsing of a consent two years after the commencement date, if it is not given effect to within that period.
4. The consent holder is referred to Section 124 of the Resource Management Act 1991, which provides for the exercising of a consent while applying for a new consent.
5. The consent holder shall pay to the Council any administrative charge fixed in accordance with s.36(1) of the Resource Management Act 1991, or any additional charge required pursuant to s.36(3) of the Resource Management Act 1991, payable in respect of this resource consent.

This Consent has been granted by the Auckland Regional Council pursuant to the Resource Management Act 1991. The date of commencement of this consent is determined by Section 116 of the Resource Management Act 1991, unless a later date is stated as a condition of this consent. The provisions of Section 116 of the Resource Management Act 1991 are summarised in the covering letter issued with this consent.

Ian Mayhew
Manager
Land and Water Quality Section
Auckland Regional Council

Per: 

Date: 11/6/99

APPENDIX D

ENGINEERING REPORT

FOR

SANDSPIT MOTOR CAMP
ONSITE WASTE DISPOSAL

ENGINEERING REPORT
FOR
SANDSPIT MOTOR CAMP
ONSITE WASTE DISPOSAL

CONTENTS :

Item	Description	Page
1	Report	1-4
2	Appendix A	5-7
3	Appendix B	8-10
4	Appendix C	11
5	Appendix D	12-15
6	Drawings	16-17
7	Photographs	18-20



Colin Ashby Consulting

The Report contained here-in remains the exclusive property and copyright of Colin Ashby & Associates and shall not be reproduced, (excepting the express needs of the project in question) by any means either in whole or in part without their written approval.



Colin Ashby Consulting.

Structural, Civil, & Geotechnical Engineering.

**PO Box 124 Warkworth
Rodney District. N.Z.**

**Ph. 09 425 94 22, Fax 09 425 94 31
Mobile 025 94 96 94**

Job No 1939
ca/lc/dp

12 November 1998

Mr Brian Morrison
Sandspit Motor Camp
Sandspit Road
RD 2
WARKWORTH

Dear Mr Morrison

Re: SANDSPIT MOTOR CAMP ONSITE WASTE DISPOSAL

As requested, I have carried out a review of the onsite waste disposal at the Motor Camp. I record that I visited the site on Wednesday 21 October 1998 and reviewed the setup with yourself.

Auckland Regional Council Concerns

A copy of a letter dated 15 October 1998 addressed to you from the Auckland Regional Council is appendix hereto. In summary test results show that all the limits with respect to effluent quality are been exceeded consistently.

From the records, it would appear that there have been occasions when the standards for individual constituents have been met. However, I understand that this was more than likely a result of incorrect sampling. For example taking a sample on the down stream side of the ultraviolet light sterilizing unit shortly after the plant had been shut down and the effluent sampled may have been sitting in the ultraviolet unit for some time.

The Consent is due to expire on 31 December 1999 and in its current state, it is extremely unlikely that the permit would be renewed. ARC have requested that a Registered Engineer be engaged and a copy of his report forwarded by Friday 13 November 1998.

Observation

From my observations it would appear that the carry over of suspended solids, from the septic tank and into the rest of the system is the principle cause of the problem. Also the Aeration tanks appear to be incorrectly connected.

Because of the carry over of solids and the incorrect connection of the aeration units, although apparently working hard. The system is not functioning properly and the ultraviolet sterilization unit, because of the turbidity of the effluent, is all but useless.

Septic Tank

The septic tank measures approximately 6.6m long x approximately 2.2m wide x approximately 1.8m deep containing approximately 1.5m depth of effluent.

I understand that the tank has a central dividing wall lengthwise along the tank, effectively providing two chambers. The tank capacity is therefore of the order of 21,000lts. This size does meet the minimum requirements of TP58, however, a larger tank would have been advantageous. It is noted that there is from time to time a need to "muck rake" the silage within the tank to get things moving.

To reduce carry over of solids, it is recommended that an Innoflow standard commercial biotube screen filter, type FT1254, be fitted to the outlet of the septic tank before entering the wet well. It is further recommended that a riser kit be installed above the biotube screen filter to facilitate ease of cleaning.

It is anticipated that such a filter will significantly reduce the carry over of solids into the wet well and improve the quality of effluent quite measurably even though the septic tank is of minimal size.

The use of such a filter may not be a "cure all", but its installation will definitely assist in improving matters.

Wet Well

It is noted that the wet well use is approximately 2m in diameter and the depth between float switches is approximately 1m. It is noted that sometime in the past, one of the float switches failed to operate because of accumulation of fat around the float preventing it from rotating. This would indicate that the desirability of installing a grease trap on the waste pipes leading from the kitchen. It may also prove helpful to educate campers by requiring them to dispose of fat waste in the refuse rather than flushing it down the kitchen sink.

The wet well pump and float switches etc. appear to be reasonably sized and working acceptably.

Aeration

It is acknowledge that you have recently upgraded the aeration units using a larger pump. The aeration units consist of 3 concrete cylindrical towers 1.8mØ, 2.8m high, containing 2.4m depth of effluent and having central blower pipes. When the site was visited, the effluent in the 3 towers was bubbling well and aerating system was functioning, although the effluent was turbid and dark brown.

In carefully studying this system, I believe that it has been set up wrong from the outset and that the least treated effluent is short circuiting the system and finding its way into the clarifier.

Referring to the attached plan it would appear that raw effluent is directed into aeration tank No.3 instead of tank No.1. From aeration tank No.3 there is a direct connection to the clarifier. Thus aeration tanks No.1 & 2 become isolated satellite tanks serving very little useful purpose.

I would recommend that the raw effluent line be redirected to aeration tank No.1 and the valve from tank No.1 to No.3 are closed.

The flow path should be:

Wet well → Aeration tank No.1 → Aeration tank No.2 → Aeration tank No.3 → Clarifier → via top outlet to UV Sterilizer / or via bottom outlet to Aeration tank No.1 → etc.

Clarifier Unit

Following the aeration tower is a clarifier unit stilling tower, where small suspended solid particles gravitate out of suspension and then are syphoned off from the bottom of the tank back to the No.1 aeration tank by air venturi action within the clarifier outlet pipe. Clarified effluent from the top of the clarifier unit, is drawn off via a centrally located "V" notched weir dish via an outlet pipe to then pass through an ultraviolet light sterilizing unit.

With respect to the clarifier unit, it is noted that there is concern with respect to mosquito breeding during the summer. It is suggested that a summer house/turret type structure be constructed over the clarifier tower. The roof to be waterproof and mosquito proof with netted covered walls and door. It would be a challenge to construct and make mosquito proof, particularly around the walkway and door, but not impossible.

UV Sterilization

The UV sterilizer used is a "Steriflo" model 1000S unit with a treatment capacity of clear water of 6000 to 10,000 litres per hour.

This equates to 100 to 167ℓ/min, which should be more than sufficient, providing the turbidity of the effluent can be reduced. The peak discharge 18m³ per day over a 12 hour period equates to 25ℓ/min.

Effluent Discharge

After UV Sterilization, effluent can either be discharged directly to the estuary as per the discharge consent or to a PVC storage tank of approximately 1800lt capacity. From this, it is pumped within the site up a hill to a 2700lt tank with a dosing syphon. From the syphon tank, the syphoned discharge loads a network of RAMM drip irrigation lines feeding an olive tree orchard.

It is anticipated that with a biotube filter and grease trap installed, the quality of effluent will improve markedly, however, it may possibly still not reach the standards required to meet the discharge consent. There may be a need for further plant upgrading, possibly including a sand contact filter at the outlet of the clarifier unit stilling chamber and prior to the ultraviolet light treatment.

In my view it would be prudent to utilize the irrigation system which has been set up rather than discharge to the estuary. Because of the quantity of effluent involved, a discharge consent for this alternative irrigation system will be required, however, it is much more likely to be granted than for a discharge direct to the estuary, particularly since the Resource Management Act came into force.

Whichever method is used, there is a need to scrub up the quality of the effluent, as in time the drip irrigation system will fail to function if there are too many suspended solids carried over.

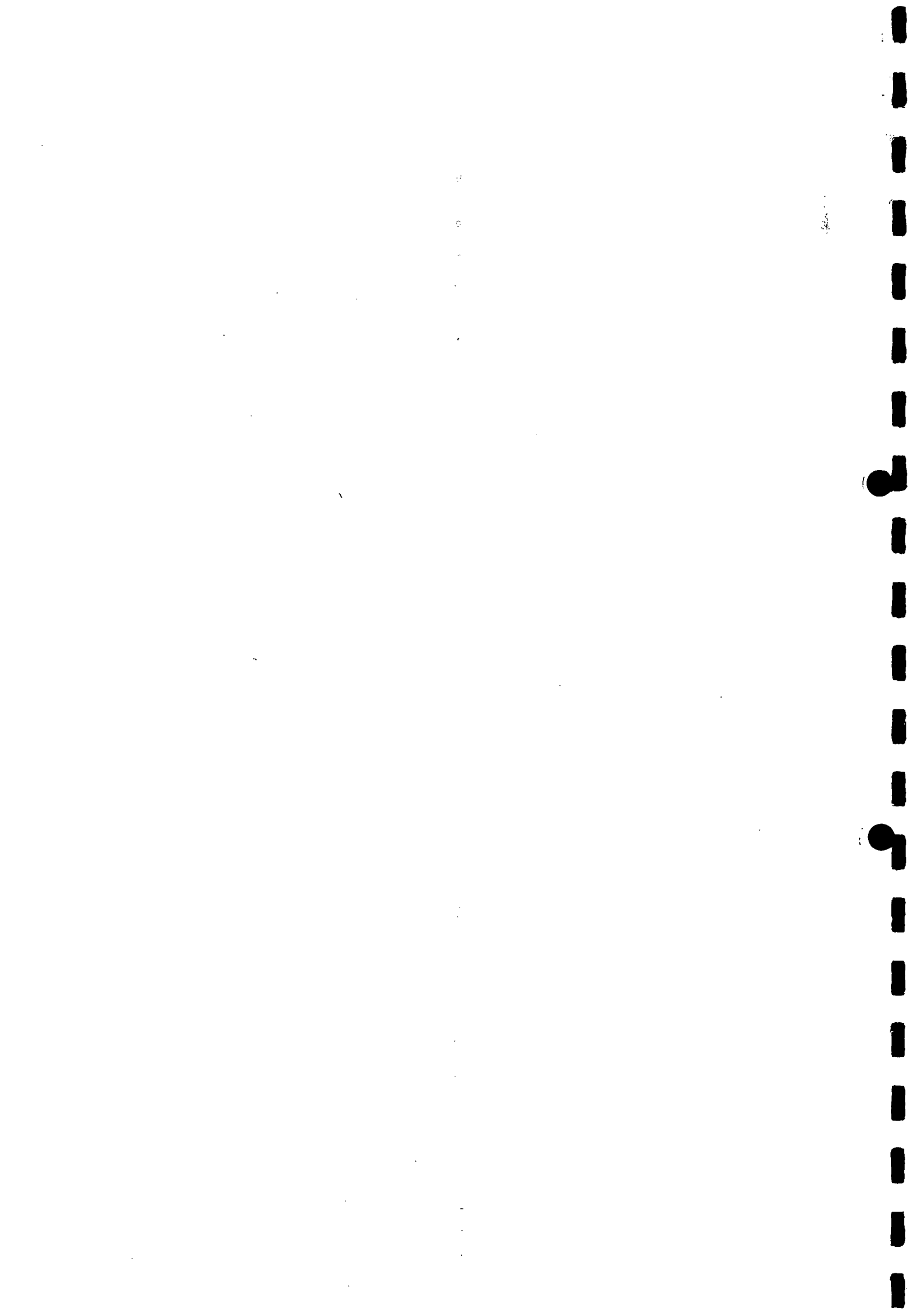
Conclusion and Recommendations

1. Erect signs in the kitchen advising campers not to dispose of fats or chemicals down the waste water system.
2. Fit a grease trap between the kitchen waste and the septic tank.
3. Although the existing septic tank is of minimum size for the peak volume at the height of the season, it may prove satisfactory providing a standard commercial biotube screen filter type FT1254 is fitted to the tank outlet.
4. The raw effluent outlet to be redirected to Aeration tank No.1 and that the valve between tanks 1 & 3 to be closed.
5. It is suggested that the top of the clarifier unit stilling chamber should be roofed and walled in such a way as to prevent ingress of mosquito.
6. A consent to discharge to land will be required with respect to the very good irrigation setup which you have established. This is considered as a superior discharge system, rather than discharge to the estuary as per the existing discharge consent.
7. The quality of effluent following the recommended upgrade should be monitored and if necessary the septic tank size increased and/or a sand contact filter place between the clarifier unit stilling chamber and the ultraviolet light unit, so as to enhance effluent quality. However, it is anticipated that if the upgrades as specified are carried out, that the effluent quality targets set will be achieved.

Yours faithfully



Colin W. Ashby
MIPENZ. BE. NZCE. Reg. Eng.





SANDSPIT MOTOR CAMP RAAM
IRRIGATION EFFLUENT FIELD LAYOUT



1800 LITRE
LOWER HOLDING
TANK PRIOR TO
PUMPING TO UPPER
SYPHON DOSING
TANK

2700 LITRE
UPPER SYPHON
DOSING TANK



Check all information on site.



Colin Ashby Consulting.
Structural, Civil, & Geotechnical Engineering
P.O. Box 124 Warkworth,
Ph / Fax 09 425 94 22, Mobile 025 94 96 94

**SANDSPIT MOTOR CAMP
ON SITE WASTE WATER
TREATMENT PLANT**

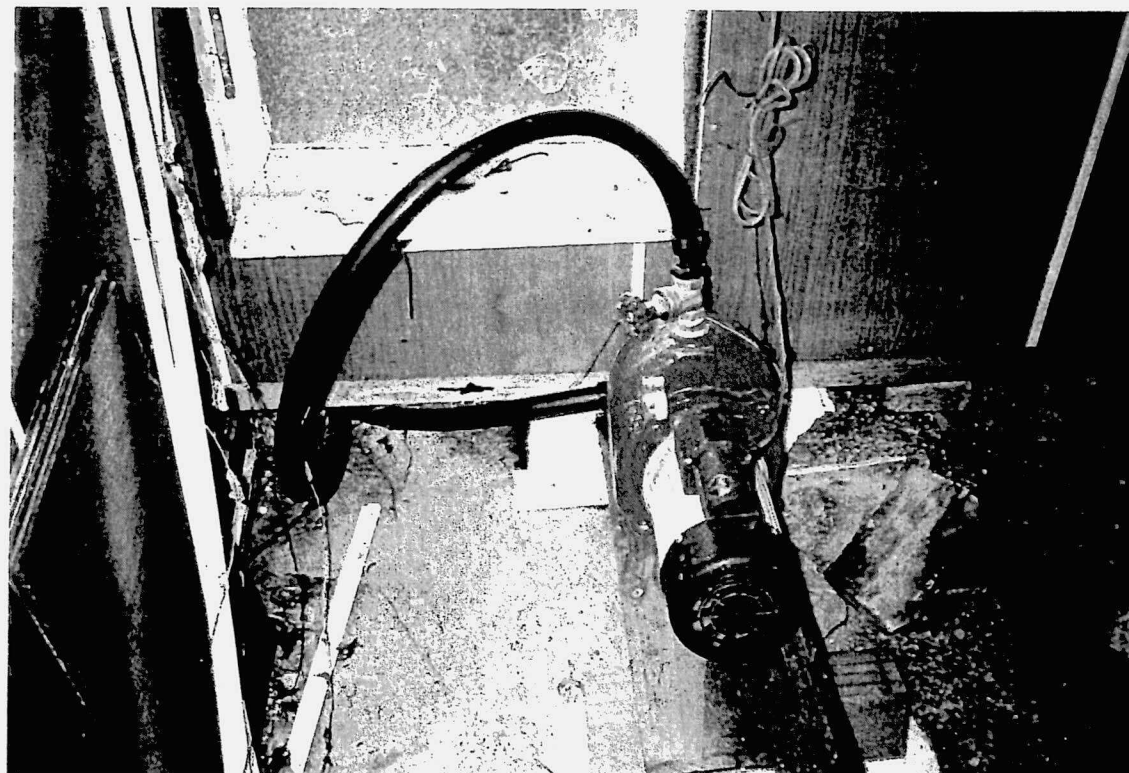
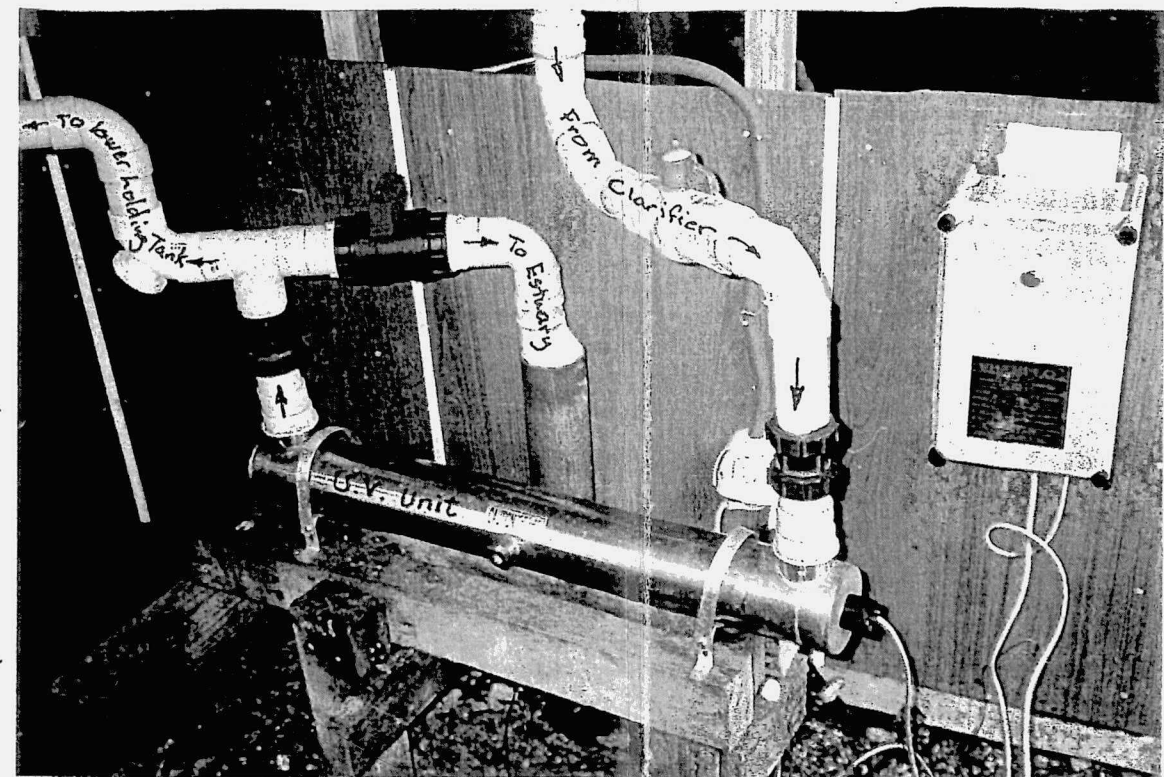
Plan No. 1939		Sheet. 5
Scale :		
Drawn :	Date : 11/ 98	Series of



10,850 LITRE
CLARIFIER
STILLING TOWER

STERIFLOW
MODEL 1000S
(100-160 l/MIN
CAPACITY WITH
CLEAR WATER

ULTRA VIOLET
LIGHT
STERILISATION
UNIT



ONGA OJ 5700 1500 W
PUMP FROM LOWER
HOLDING TANK TO
UPPER SYPHON DOSING
TANK

Check all information on site.



Colin Ashby Consulting.

Structural, Civil, & Geotechnical Engineering
P.O. Box 124 Warkworth,
Ph / Fax 09 425 94 22, Mobile 025 94 96 94

SANDSPIT MOTOR CAMP ON SITE WASTE WATER TREATMENT PLANT

Plan No. 1939

Scale :

Drawn :

Date : 11/98

Sheet.

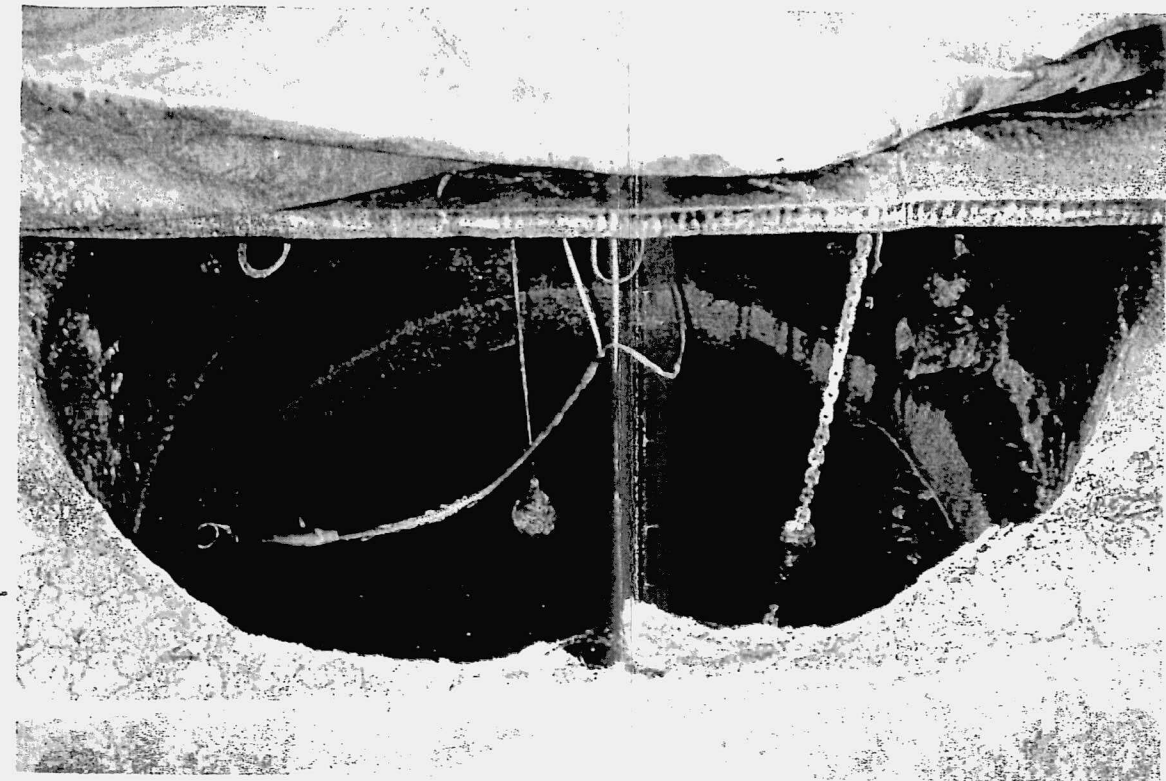
4

Series of



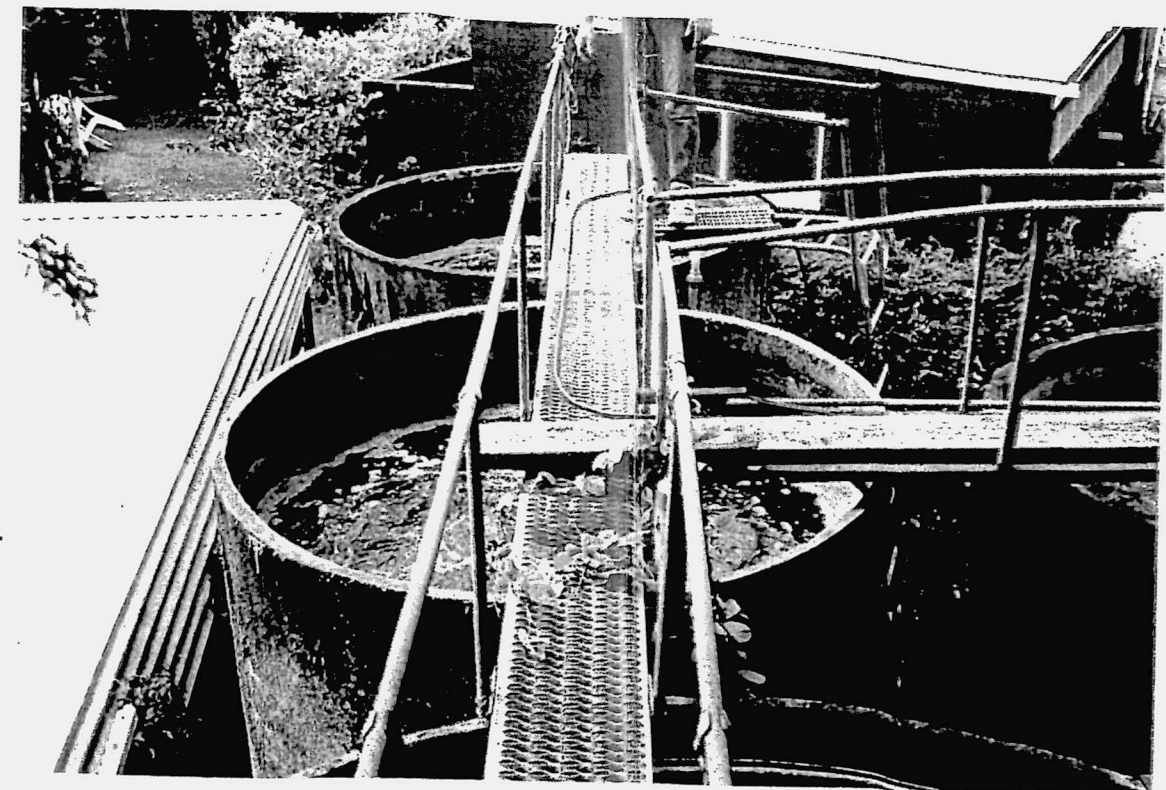
OUTLET FROM
SEPTIC TANK
INTO WET WELL
PUMPING CHAMBER

WET WELL
PUMPING
CHAMBER



AERATOR PUMP
AND AERATION
TOWER

5000 LITRE
AERATION
TOWERS



Check all information on site.



Colin Ashby Consulting.

Structural, Civil, & Geotechnical Engineering

P.O. Box 124 Warkworth,

Ph / Fax 09 425 94 22, Mobile 025 94 96 94

**SANDSPIT MOTOR CAMP
ON SITE WASTE WATER
TREATMENT PLANT**

Plan No. 1939

Scale :

Drawn :

Date : 11 / 98

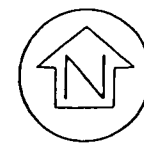
Sheet.

3

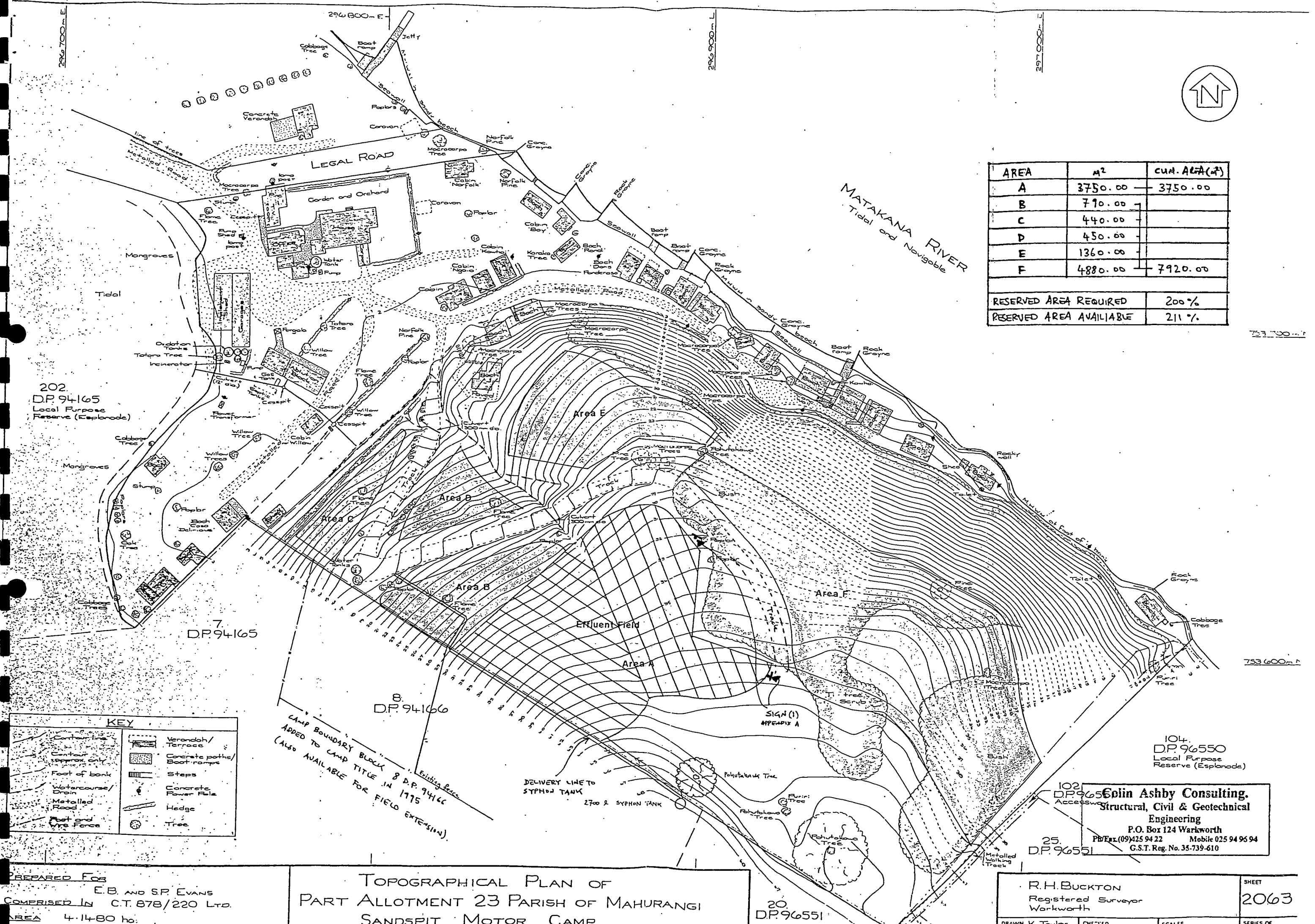
Series of

APPENDIX E

**Plan of existing effluent field, and
the reserved area for future
effluent field expansion.**



AREA	m ²	CUM. AREA (m ²)
A	3750.00	3750.00
B	710.00	
C	440.00	
D	450.00	
E	1360.00	
F	4880.00	7920.00
RESERVED AREA REQUIRED		200%
RESERVED AREA AVAILABLE		211%



KEY	
	Contour line
	Foot of bank
	Watercourse/Drain
	Metalled Road
	Foot and Fire Force
	Verandah/Terrace
	Concrete paths/Boat ramps
	Steps
	Concrete Power Pole
	Hedge
	Tree

PREPARED FOR
E.B. AND S.P. EVANS
COMPRISED IN CT 878/220 LTD.
AREA 4.1480 ha.

TOPOGRAPHICAL PLAN OF
PART ALLOTMENT 23 PARISH OF MAHURANGI
SANDSPIT MOTOR CAMP

R.H. BUCKTON
Registered Surveyor
Warkworth

104 DP 96550
Local Purpose Reserve (Esplanade)

102 DP 96551
Accessway

25 DP 96551

20 DP 96551

2063

SHEET

SERIES OF

File 7835

Tony Bullard

From: Tony Bullard
Sent: Friday, 8 June 2012 3:16 p.m.
To: Patricia Burford
Cc: David Norton; 'peter.gearing@urs.com'
Subject: RE: Building Consent - Sandspit Motor Park

Thanks heaps Pat. Much appreciated.

David – the changes look fine to us. They don't need any specific approvals or changes to consent. This email is sufficient for our purposes. Let me know if you need any more information from our team.

Cheers

Tony

From: Patricia Burford
Sent: Friday, 8 June 2012 1:40 p.m.
To: Tony Bullard
Subject: RE: Building Consent - Sandspit Motor Park

Hi Tony: I think that we can allow this under Condition 29, which states: "That the Consent Holder shall advise the Manager in writing immediately in the event problems are detected within the system and shall outline a schedule of action proposed to remedy such problems prior to commencement of work."

I believe that Peter's email has identified the problem and has outlined the schedule of work proposed. Since there is not a change to the system other than replacement, we don't need to revise the consent. Hopefully the replacement will fit with any needed upgrades when they apply for renewal of their consent. We will need to check the system design on renewal, which could mean what they are installing now will need further upgrades. We can do a compliance visit then to see how everything is working.

Kind Regards,

Pat

Pat Burford, Wastewater Consents and Compliance Advisor

Natural Resources and Specialist Input Unit

Ph 09 352 2637 | Extn (40) 5637 | Mobile 021 832 012 |
Auckland Council, Level 2, 35 Graham Street, Auckland City
Private Bag 92300, Victoria Street, Auckland 1142

Visit our website: www.aucklandcouncil.govt.nz

From: Tony Bullard
Sent: Thursday, 7 June 2012 6:32 p.m.
To: Patricia Burford
Subject: FW: Building Consent - Sandspit Motor Park
Importance: High

Hi Pat

Can you please check this info from Peter Gearing below and get back to me if we can simply approve the modifications with a simple letter or email (as opposed to a variation to consent). I suspect we can but haven't investigated the matter. Note it's a little urgent I believe.

Cheers

From: Gearing, Peter [mailto:peter.gearing@urs.com]
Sent: Thursday, 7 June 2012 1:40 p.m.
To: Tony Bullard
Cc: David Norton; g.jones@laserplumbing.co.nz; Sunich, Trent
Subject: Building Consent - Sandspit Motor Park

Tony

Thank you for your call this morning and offer of assistance to fast track support / approval to the Building Consents Team for them to consider the attached building consent application. To summarise the situation:

- Our client (Sandspit Motor Camp) has a discharge consent until 30 June 2014 (permit no 22315 attached);
- We have been retained to assist with the new consent (which in our opinion - & supported by the client - will incorporate a new and improved disposal field) – with a separate application to Council for new consent to follow later;
- However, the current and immediate issue is that of the current septic tank and pump station (to the treatment plant) which are in very poor condition and represent H&S plus environmental risk (leaks etc);
- We have been retained to assist with a pragmatic alternative;
- Our client is about to go overseas – and has asked for urgency to install the new system prior;
- We propose a “like for like” new sealed solution – incorporating a new 22m³ concrete tank fitted out with both two chambers and 8 filters (an increase from 1 filter - in order to as best as practical retain solids and improve treatment plant quality). A 22m³ tank is proposed as it is the largest readily available locally for this purpose and avoids the potentially high risks of building anything in-situ. We also propose a new sealed separate pump station (and to move the existing pump into this). Please refer attached sketches (Scope of Works) – sorry about quality – kept very simple for pragmatic reasons to assist our client’s finances;
- Please note ARC officers report clause 5.3 “average daily flow 6.2m³/day” & consent condition 13(i) “to provide 2 hours emergency storage in the septic tanks” – $6.2\text{m}^3/24\text{hrs} = 0.24\text{m}^3 - 2\text{hrs} = 0.5\text{m}^3$. We have estimate storage at $25\text{m}^3/\text{day}$ (consented flow)/ $24\text{hrs} = 1\text{m}^3 - 2\text{hrs} = 2\text{m}^3$.

We trust these improvements within the confines of a ‘like for like’ solution meets with the Regional Wastewater Teams approval – and if so if you could please send (at your earliest convenience) an e-mail to Mr Dave Morton to that effect, in order for him to consider the building consent application. This would be most appreciated, and if any further information is required please do not hesitate to contact the undersigned.

Thank you and regards.

Peter Gearing
Principal Environmental Scientist
URS New Zealand Limited
13-15 College Hill, Auckland 1011,
New Zealand

Tel: 64 9 355 1300
DDI: 64 9 355 1332
Mob: 64 29 355 1332
Mailto: peter.gearing@urs.com

This e-mail and any attachments contain URS Corporation confidential information that may be proprietary or privileged. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

Tony Bullard

From: Gearing, Peter [peter.gearing@urs.com]
Sent: Thursday, 7 June 2012 1:40 p.m.
To: Tony Bullard
Cc: David Norton; g.jones@laserplumbing.co.nz; Sunich, Trent
Subject: Building Consent - Sandspit Motor Park
Attachments: 12. Conset no 22315.pdf; 10. New septic scope of works.pdf; 11. Building consent applic.pdf

Tony

Thank you for your call this morning and offer of assistance to fast track support / approval to the Building Consents Team for them to consider the attached building consent application. To summarise the situation:

- Our client (Sandspit Motor Camp) has a discharge consent until 30 June 2014 (permit no 22315 attached);
- We have been retained to assist with the new consent (which in our opinion - & supported by the client - will incorporate a new and improved disposal field) – with a separate application to Council for new consent to follow later;
- However, the current and immediate issue is that of the current septic tank and pump station (to the treatment plant) which are in very poor condition and represent H&S plus environmental risk (leaks etc);
- We have been retained to assist with a pragmatic alternative;
- Our client is about to go overseas – and has asked for urgency to install the new system prior;
- We propose a “like for like” new sealed solution – incorporating a new 22m³ concrete tank fitted out with both two chambers and 8 filters (an increase from 1 filter - in order to as best as practical retain solids and improve treatment plant quality). A 22m³ tank is proposed as it is the largest readily available locally for this purpose and avoids the potentially high risks of building anything in-situ. We also propose a new sealed separate pump station (and to move the existing pump into this). Please refer attached sketches (Scope of Works) – sorry about quality – kept very simple for pragmatic reasons to assist our client’s finances;
- Please note ARC officers report clause 5.3 “average daily flow 6.2m³/day” & consent condition 13(i) “to provide 2 hours emergency storage in the septic tanks” – $6.2\text{m}^3/24\text{hrs} = 0.24\text{m}^3 - 2\text{hrs} = 0.5\text{m}^3$. We have estimate storage at $25\text{m}^3/\text{day}$ (consented flow)/ $24\text{hrs} = 1\text{m}^3 - 2\text{hrs} = 2\text{m}^3$.

We trust these improvements within the confines of a ‘like for like’ solution meets with the Regional Wastewater Teams approval – and if so if you could please send (at your earliest convenience) an e-mail to Mr Dave Morton to that effect, in order for him to consider the building consent application. This would be most appreciated, and if any further information is required please do not hesitate to contact the undersigned.

Thank you and regards.

Peter Gearing
Principal Environmental Scientist
URS New Zealand Limited
13-15 College Hill, Auckland 1011,
New Zealand

Tel: 64 9 355 1300
DDI: 64 9 355 1332
Mob: 64 29 355 1332
Mailto: peter.gearing@urs.com

This e-mail and any attachments contain URS Corporation confidential information that may be proprietary or privileged. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

Subject: SANOSUIT HOLIDAY PARK

Project/Task No: _____

By: PG

Date: 24/5/2012

File Structure/Doc No: _____

Date: _____

Verified By: _____

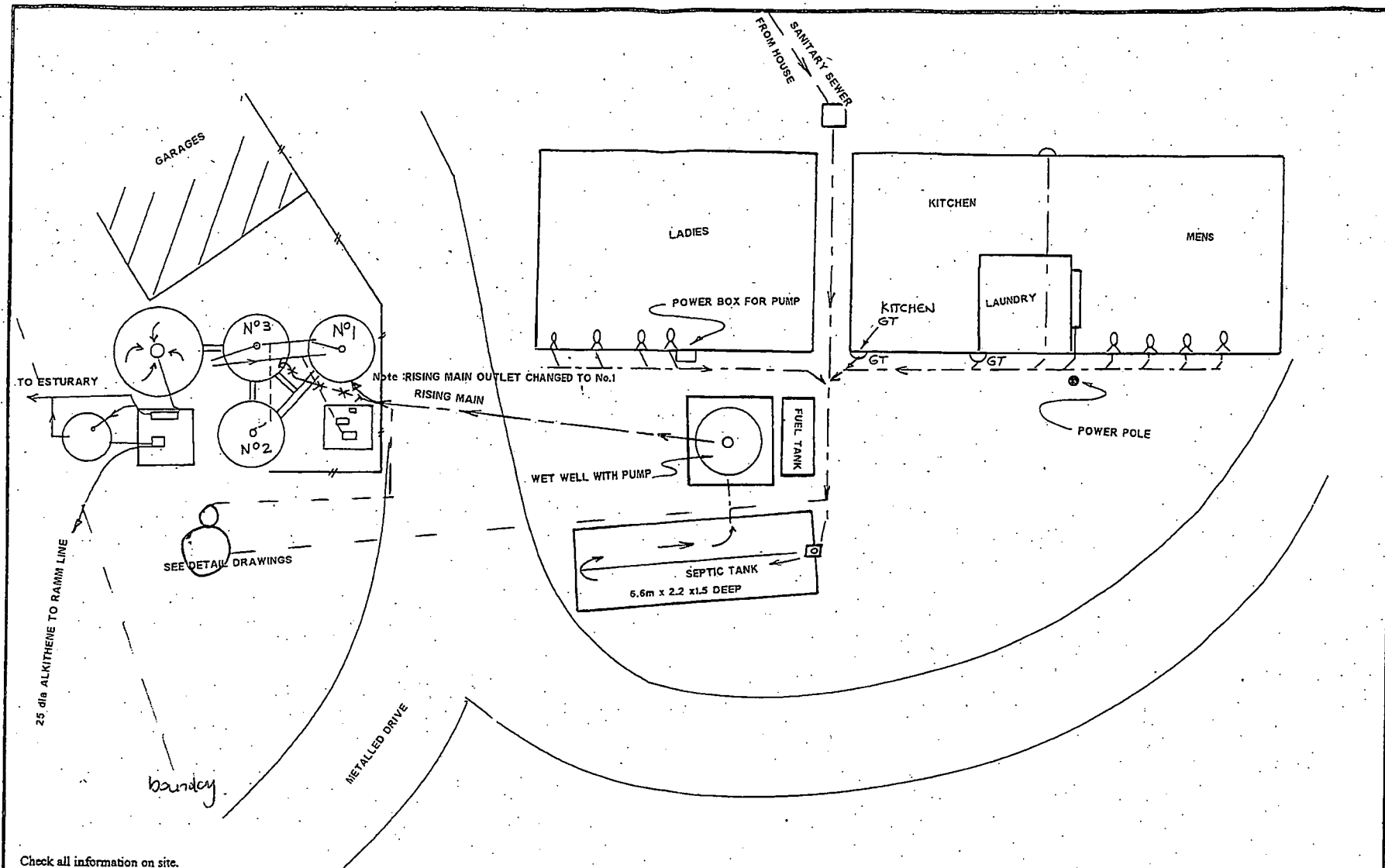
Date: _____

Sheet: 1

of 4

Scope of Work

- 1) install new septic tank.
- 2) fit at septic tank
 - 25% 75% split - 75% primary chamber & 2 chambers.
 - 25% second chamber.
 - 2x 150mm holes between primary/secondary chamber.
 - 2x 600mm risers.
 - 8x Ecotube filter unit on outlet from secondary chamber.
- 3) inverts to allow for fall of 20mm/m from existing septic.
- 4) install 1200 flanged base and 1200 riser 2.4m deep with heavy duty lid for pump station.
 - install so top of pump station above top of septic tank.
 - this to allow the 150mm to invert from top of septic & storage.
 - consent requires 2 hrs storage = $25m^3/day$.
 - $25 \div 24hrs/day = 1m^3/hr$ 2hrs = $2m^3$.
 - 150mm in storage tank = $1.25m^3$.
 - total vol of 1200mm x 2.4m pump station = $2.7m^3$.
- 5) remove pump from existing pump station & new pump station.
 - fit pump in order to maximize volume above normal pump cut out for storage of pump fails.
- 6) - connect pump outlet to existing & rising main to pump station.
- connect gravity to new septic tank.
- 7) suck out existing septic tank and pump station.
 - crush & fill with hard fill.
- 8) fit new septic and pump station so tops above ground to avoid inundation in wet weather.
- 9) divert stormwater as appropriate.
- 10) fill new septic and pump station with water.



Colin Ashby Consulting.
Structural, Civil, & Geotechnical Engineering
P.O. Box 124 Warkworth,

**SANDSPIT MOTOR CAMP
ON SITE WASTE WATER
TREATMENT PLANT**

Plan No. 1939

Scale: AS SHOWN 1:100

Drawn: CA

Date: 11.98

Sheet. 1 R1

Series of

2

Subject:

Project/Task No:

By:

Date:

File Structure/Doc No:

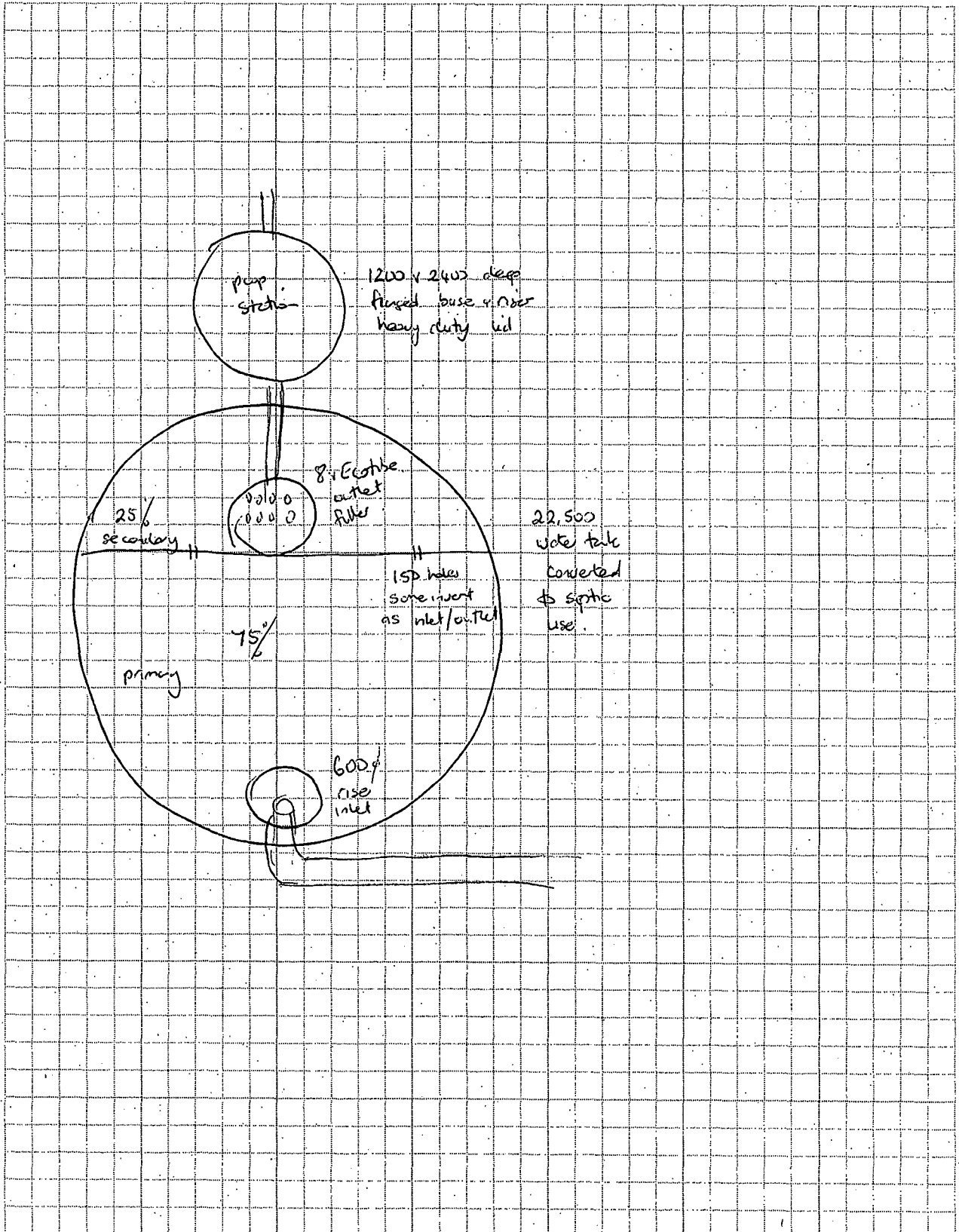
Date:

Verified By:

Date:

Sheet:

3 of 4



Subject: _____

Project/Task No: _____

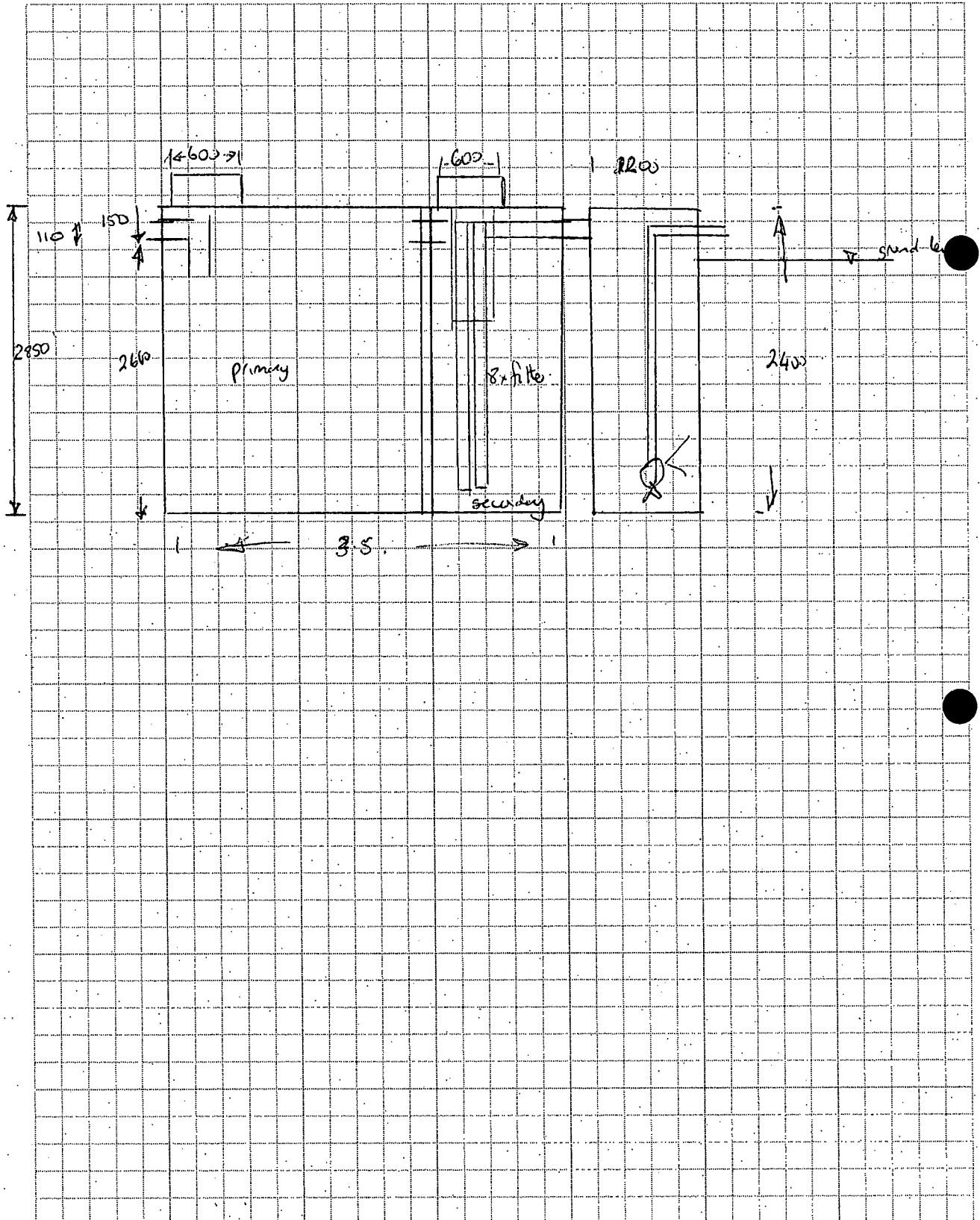
By: _____ Date: _____

File Structure/Doc No: _____

Verified By: _____ Date: _____

Date: _____

Sheet: 4 of 4



Commercial application for a project information memorandum and/or building consent

Section 33 or section 45, Building Act 2004



Date received:

Application No:

APPLICATION TYPE (tick appropriately)

If you have an existing application number relating to this building work, please note the number beside the application type.

- ☐ Project information memorandum
- ☐ Building consent
- ☐ Staged consent
- ☐ Amendment
- ☐ National multi-use approval No:

Restricted building work (RBW) applies from 1 March 2012. Financial assistance package (FAP).

Does application involve RBW?

☐ Yes ☒ No

Is this a re-clad application?

☐ Yes ☒ No

Is application subject to a claim under the FAP scheme?

☐ Yes ☒ No

If yes, FAP claim number:

THE BUILDING

Street address of building (for structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection).

1334 Sandspit Rd

Legal description of land where building is located (state legal description as at the date of application and, if the land is proposed to be subdivided, include details of relevant lot numbers and subdivision consent).

PT Allot 23 Mahurangi Parish of Mahurangi N/A/878/220

Building name

N/A

Location of building within site/block number (include nearest street access)

N/A

Number of levels (include ground level and any levels below ground)

N/A

Level or unit number

N/A

Current lawfully established use (include number of occupants per level and per use if more than 1)

Campground

Area (total floor area, indicate area affected by the building work if less than the total floor area)

N/A m²

Year first constructed

N/A

THE OWNER

Name of owner (include preferred form of address e.g. Mr, Miss, Dr, an individual)

Brian and Vanessa Morrison Family Trusts

Contact person (insert n/a if the applicant is an individual)

Brian

Mailing address

6 Brick Bay Drive
Sandspit

Postcode:

R02

Street address/registered office

As above

Phone number (landline)

09 425 0011

Daytime

425 0011

Facsimile number

09 425 0011

Mobile

081 209 2676

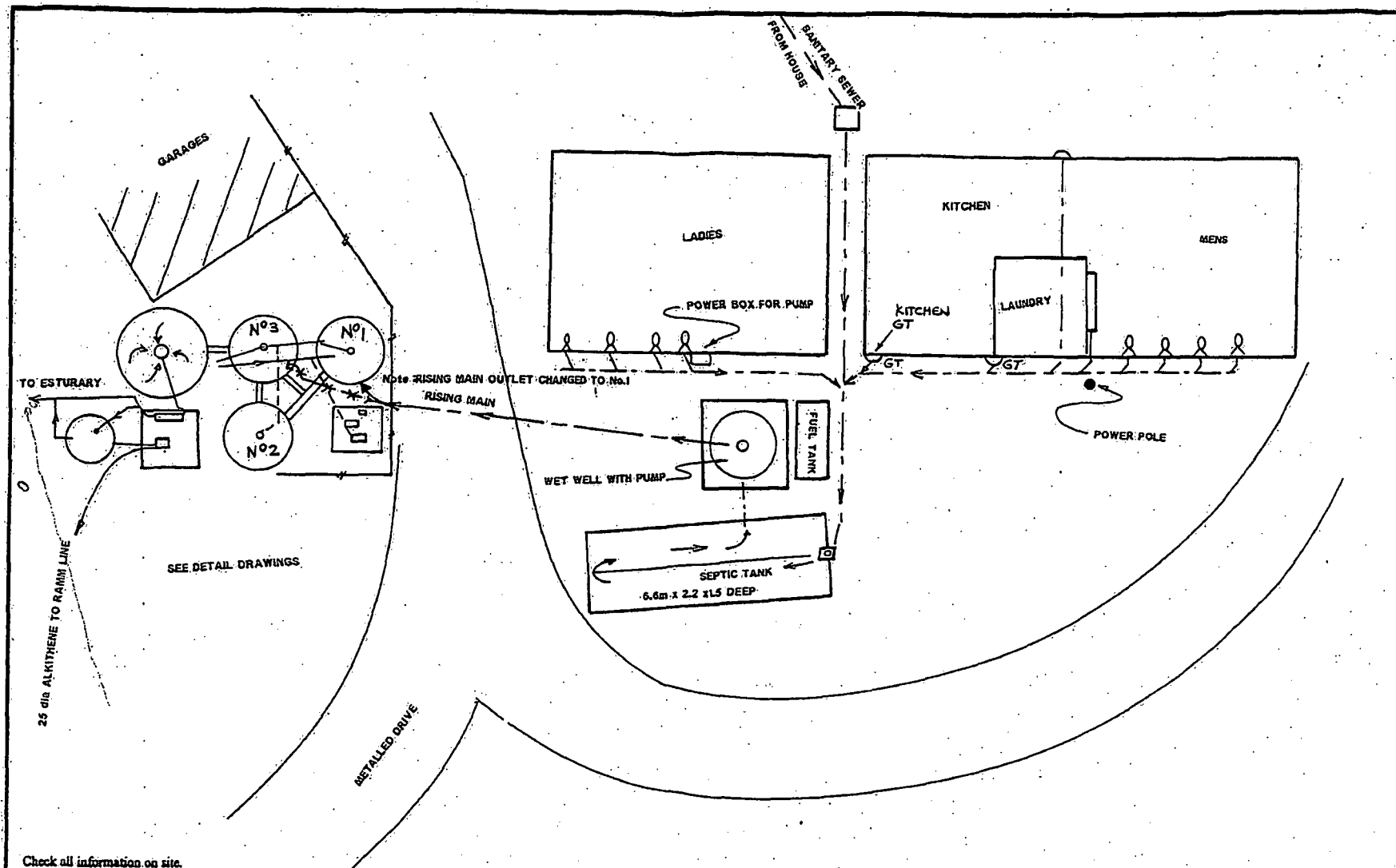
Email address

A brianandvanessa@xtra.co.nz

Website

N/A

The following evidence of ownership is attached to this application (copy of certificate of title, lease agreement or agreement for sale and purchase showing full name of legal owner(s) of the building)



Check all information on site.



Colin Ashby Consulting.
Structural, Civil, & Geotechnical Engineering
P.O. Box 124 Warkworth.

**SANDSPIT MOTOR CAMP
ON SITE WASTE WATER
TREATMENT PLANT**

Plan No. 1939

Scale: AS SHOWN 1:100

Drawn: CA

Date: 11.98

Sheet. 1 R1

Series of

Cpk



This map/plan is illustrative only and all information should be independently verified on site before taking any action. Copyright Auckland Council. Boundary information from LINZ (Crown Copyright Reserved). Whilst due care has been taken, Auckland Council gives no warranty as to the accuracy and completeness of any information on this map/plan and accepts no liability for any error, omission or use of the information. Height datum: Auckland 1948.

Map Title



Auckland Council
Te Kaitiaki o Tāmaki Makaurau

Created: Wednesday, 6 June 2012, 11:05:17 a.m.

Scale @ A4 1:500

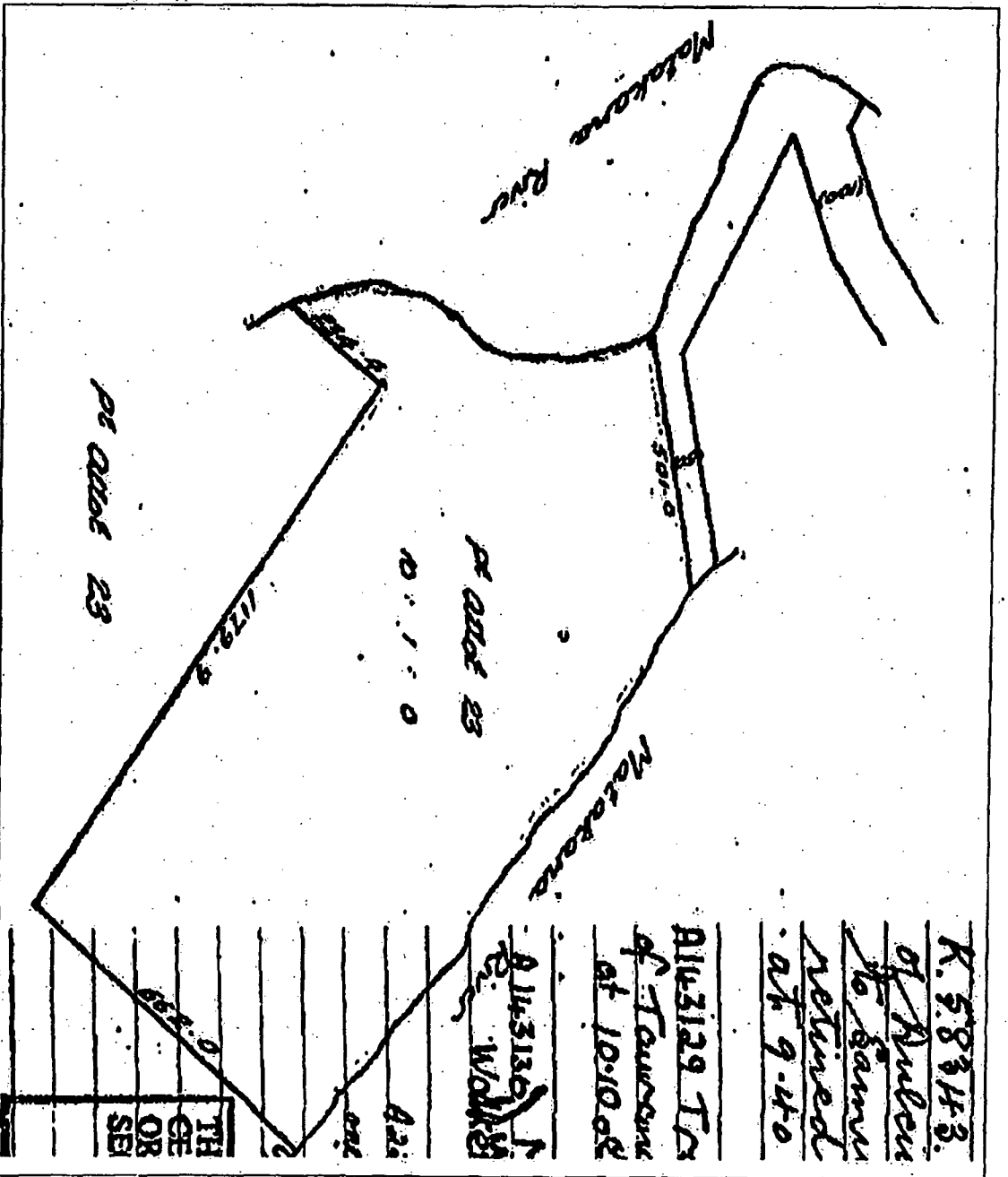
Identifier

NA878/220

K. 58343.
of Rules
to be given
returned
at 9.40

Alu3129 Tm
of Tawson
at 1010.08

Alu3130 Tm
of Walker





**COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952**
Limited as to Parcels

Search Copy



R. W. Muir
Registrar-General
of Land

Identifier **NA878/220**
Land Registration District **North Auckland**
Date Issued **17 June 1947**

Prior References
NA771/267

Estate Fee Simple
Area 4.1480 hectares more or less
Legal Description Part Allotment 23 Parish of Mahurangi

Proprietors

Brian Phillip Morrison, Vanessa Anne Morrison and Brian & Vanessa Morrison Trustees Limited as to a 1/2 share
Brian Phillip Morrison, Vanessa Anne Morrison and Brian & Vanessa Morrison Trustees Limited as to a 1/2 share

Interests

12058 Order in Council imposing Building Line Restriction - 30.4.1947 at 10.00 am
Subject to rights of way over parts marked F & N, rights to convey electricity over parts marked I, M & N, rights to convey telecommunications & computer media over parts marked M & N and drainage over parts marked F, G & H on DP 390452 created by Easement Instrument 7658082.4 - 14.12.2007 at 9:00 am
Appurtenant hereto are rights of way, rights to convey electricity and drainage created by Easement Instrument 7658082.4 - 14.12.2007 at 9:00 am
Some of the easements created by Easement Instrument 7658082.4 are subject to Section 243 (a) Resource Management Act 1991
7666051.1 Mortgage to ANZ National Bank Limited - 15.1.2008 at 2:06 pm

Notice of Valuation

(Please note this is not a rates notice)



Brian Morrison And Vanessa Morrison And Brian &
Vanessa Morrison Trustee Ltd
6 Brick Bay Drive
RD 2
Warkworth 0982

Private Bag 92300, Victoria Street
Auckland 1142, New Zealand

Civic Administration Building
1 Greys Avenue, Auckland

Phone 09 301 0101
www.aucklandcouncil.govt.nz

26 October 2011

This notice is to let you know of your property's valuation details as at 1 July 2011. This is an important notice. You should read it and file it for future reference.

Your rates will be based, in part, on the capital value shown below from 1 July 2012.

Valuation details (as at 1 July 2011 - the effective date of the Auckland Council general revaluation)

Land value	\$ 2,800,000
Value of improvements	\$ 900,000
Capital value (rateable value)	\$ 3,700,000
Reason for notice	General Revaluation

Property information

Valuation reference	905/45200
Ratepayer	Brian Morrison And Vanessa Morrison And Brian & Vanessa Morrison Trustee Ltd
Owner	Brian Morrison And Vanessa Morrison And Brian & Vanessa Morrison Trustee Ltd
Property location	1334 Sandspit Rd
Property description	DWG OBS OI
Legal description	PT ALLOT 23 MAHURANGI PARISH OF MAHURANGI NA/878/220
Land area	4.1480ha

Local authorities use information contained in the District Valuation Roll to set rates. This notice details information on your property that is contained in the District Valuation Roll of Auckland Council. The Rating Valuations Act 1998 obliges councils to maintain the valuation rolls but allows them to choose their valuation service provider.

The Valuer-General regulates the maintenance of District Valuation Rolls to ensure that they meet the minimum standards set out in the Rating Valuations Act 1998, the Rating Valuations Regulations 1998 and the Rating Valuations Rules.

An owner or ratepayer (if different) may object to any information contained in a notice of valuation within the time and in the manner specified in regulations made under the Rating Valuations Act 1998. If you object to a value that is a component of your valuation, Auckland Council will review that value, and may also review any other value components of the rating unit, i.e. land value, value of improvements, capital value or annual value.

What you need to know:

- If any of the details on this notice are incorrect, please contact us at the address overleaf
- To object to any of the values on this notice, see the objection information overleaf
- You can only object to your valuation details. The effect of the valuation on rates is not a relevant reason
- If you wish to object, your objection must be received no later than 5pm on 16 December 2011.

For more information, please see overleaf, call our revaluation team on 0800 874 060 or visit www.aucklandcouncil.govt.nz/revaluation

15c	Fire separation (SS1:6.9 and 13) (as so defined) and (NZ Building Code C/AS1)	☐ AS/NZS 1905.1:1997 ☐ NZS 4232:1998 ☐ Other	☒	☐	☐
15d	Signs for communicating information intended to facilitate evacuation (SS1:6.9 and 13) and such signs as required by (the NZBC (all systems) and Section 120 Building Act 2004)	☐ NZS 4121:2001 ☐ Other	☐	☐	☐
15e	Smoke separation (SS1:6.9 and 13) (as so defined) (NZ Building Code C/AS1)	☐ AS/NZS 1668.1:1998 ☐ Other	☐	☐	☐
15	The compliance schedule for this building relates to section 103(d) of the Building Act 2004:				
15.1	Means of escape from fire, and (NZ Building Code C/AS1)	☐ NZ Building Code C/AS1 ☐ Other	☐	☐	☐
15.2	Safety barriers, and (NZ Building Code F/AS1)	☐ NZ Building Code F/AS1 ☐ Other	☐	☐	☐
15.3	Access and facilities for people with disabilities to and within the building. Means of access and facilities for use by persons with disabilities that meet the requirements of (section 118) and (NZ Building Code: D1/AS1 & D2/AS1, Building Act Section 117/120).	☐ NZS 4121:2001 ☐ Other	☐	☐	☐
15.4	Hand held hose reels for fire fighting, and	☐ NZS 4503:2005	☐	☐	☐
15.5	Any signs that are required by the Building Code section 119 & 120 (NZ Building Code: F8/AS1)	☐ NZS 4121:2001 ☐ AS/NZS 2293:1995 ☐ Other	☐	☐	☐

KEY CONTACTS / LICENSED BUILDING PRACTITIONERS (LBP) - please provide if applicable

Designer or Architect

Business/Name:	
Address:	
Daytime:	After hours:
Mobile:	Fax:
Registration or LBP Registration No:	

Structural Engineer

Business/Name:	
Address:	
Daytime:	After hours:
Mobile:	Fax:
Registration or LBP Registration No:	

Head Contractor / Site Manager

Business/Name:	
Address:	
Daytime:	After hours:
Mobile:	Fax:
LBP registration No:	

Builder / Carpentry work

Business/Name:	
Address:	
Daytime:	After hours:
Mobile:	Fax:
LBP registration No:	

Drain layer

Business/Name: <i>Greg Jones</i>	
Address: <i>850 Matakana</i>	
Daytime: <i>09 422 909</i>	After hours: <i>0712 426 846</i>
Mobile: <i>0712 426 846</i>	Fax:
Registration No: <i>13 851</i>	

Plumber

Same

Electrician

Business/Name:	
Address:	
Daytime:	After hours:
Mobile:	Fax:
Registration No:	

Gas Fitter

Same

Foundation work

Business/Name:	
Address:	
Daytime:	After hours:
Mobile:	Fax:
LBP Registration No:	

Bricklaying

Business/Name:	
Address:	
Daytime:	After hours:
Mobile:	Fax:
LBP Registration No:	

10	Building maintenance units providing access to the exterior and interior walls of buildings	☐ BS 6037.1:2003 ☐ Other	☐	☐	☐
11	Laboratory fume cupboards (NZ Building Code F 3.3)	☐ AS 2243.8:2006 ☐ NZS 7203.1992 ☐ Other	☐	☐	☐
12	Audio loops or other assistive listening systems				
12.1	Audio loop (NZ Building Code F7, F8, G5)	☐ AS 1088.4:1997 ☐ NZS 4121:2001 ☐ Other	☐	☐	☐
12.2	FM radio frequency systems and infrared beam transmission systems (NZ Building Code F7, F8, G5)	☐ AS 1088.4:1997 ☐ NZS 4121:2001 ☐ Other	☐	☐	☐
13	Smoke control systems				
13.1	Mechanical smoke control (NZ Building Code C/AS1)	☐ AS/NZS 1668:1998 Part 1 ☐ AS/NZS 1668:1998 Part 4 ☐ AS 1851:2005 Sect 17 ☐ AS 1851:2005 Sec 18 ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
13.2	Natural smoke control (NZ Building Code C/AS1)	☐ AS/NZS 1668:2005 Part 1 ☐ AS 1851:2005	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
13.3	Smoke curtains (NZ Building Code C/AS1)	☐ AS/NZS 1668:1998 Part 1 ☐ AS/NZS 1668:1998 Part 4 ☐ AS 1851:2005 Sect 17 ☐ AS 1851:2005 Sec 18 ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
14	Emergency power systems for, or signs relating to, a system or feature specified in any of clauses 1 to 13				
14.1	Emergency power systems is installed for the purpose of supplying emergency power to any of the specified systems 1 - 13	☐ NZS 6104:1981 Part 8 ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
14.2	Signs for all systems (NZ Building Code D1, F8/AS1)	☐ NZS 4121:2001 ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
15	Any or all of the following systems and features, so long as they form part of a building's means of escape from fire, and so long as those means also contain any or all of the systems or features specified in clauses 1 to 6, 9 and 13				
15a	System for communicating spoken information intended to facilitate evacuation (SS1:6.9 & 13) and	☐ AS 1851:2005 Sect.10 ☐ NZS 4512:2010 ☐ Other	☐	☐	☐
15b	Final exits (SS1:6.9 and 13) and (NZ Building Code C/AS1)	☐ NZ Building Code C/AS1 ☐ Other	☐	☐	☐

3	(Electromagnetic or automatic doors or windows (for example, ones that close on fire alarm activation))				
3.1	Automatic doors (sliding; revolving; panic) (NZ Building Code C/AS1, C2.3.3, (b) 3.3.2-3.3.3)	☐ NZS 4239:1996 ☐ AS 4085:1992 ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
3.2	Access-controlled doors (swipe card; key pad; sensor; delayed egress) (NZ Building Code C/AS1, C2.3.3, (b) 3.3.2-3.3.3)	☐ NZS 4232:1998 ☐ NZS 4239:1993 Appendix A ☐ Other	☐	☐	☐
3.3	Interfaced fire or smoke doors or windows (electromagnetic door holders) (NZ Building Code C/AS1, C2.3.3, (b) 3.3.2-3.3.3)	☐ NZS 4232:1998 ☐ NZS 4239:1993 Appendix A ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
4	Emergency Lighting Systems (NZ Building Code F6/AS1)	☐ NZS 6742:1971 ☐ Other	☐	☐	☐
5	Escape route pressurisation systems (NZ Building Code C/AS1, C3.3.7, C3.3.8, C3.3.9)	☐ AS 1851.6:2005 Sect. 18 ☐ AS 1668.1:1998 Appendix F ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
6	Riser mains for use by fire services (NZ Building Code C/AS1, C3.2, C3.3.9)	☐ NZS 4510:2008 Part 9 ☐ Other	☐	☐	☐
7	Automatic back-flow preventers connected to a potable water supply (NZ Building Code G12/AS1)	☐ AS 2845:1998 Part 1 ☐ AS 2845:1998 Part 3 ☐ Other	☐	☐	☐
8	Lifts, escalators, travelators, or other systems for moving people or goods within buildings				
8.1	Passenger-carrying lift (NZ Building Code D2.3.1 – D2.3.5, G/AS1)	☐ NZS 4332:1997 Part 2.5 ☐ EN 81:2003 ☐ EN 115:2008 ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
8.2	Goods/Service lift (NZ Building Code D2/AS1)	☐ EN 81:2003 ☐ EN 115:2008 ☐ Other	☐	☐	☐
8.3	Escalators and moving walks (NZ Building Code D2.3.1-D2.3.2)	☐ EN 81:2003 ☐ EN 115:2008	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
9	Mechanical ventilation or air conditioning systems (NZ Building Code C/AS1 and G4/AS1) Note: Owners' operation manual may have maintenance provisions included	☐ AS/NZS 3666.2:2002 ☐ Other	☐	☐	☐
	Interfaced with Emergency Warning System	☐ Yes ☐ No			
	Cooling tower installed?	☐ Yes ☐ No			

COMPLIANCE SCHEDULE

Are any specified systems affected by this application?

☐ Yes ☒ No

If yes, continue completing this section. If no, go to next section.

If existing building, please state Compliance Schedule

Nº:

Will the new work require an amendment to an existing Compliance Schedule?

☐ Yes

☒ No

Fire hazard category (please circle):

1 2 3 4

Total occupancy numbers:

Purpose group (please circle):

CS CL CO CM SC SD SA SR SH WL WM WH WF IA ID

SPECIFIED SYSTEMS – For notification of proposed procedures of inspection, maintenance and performance standards or specified systems included in a building consent application. (Section 46 (G), Building Act 2004)

Important note: Inspection, Maintenance and Reporting (IMR) you must specify the proposed procedures for the inspection, maintenance and reporting of each specified system, for the purposes of the compliance schedule. (Photocopies of the relevant section of the performance standard are acceptable)

DEFINITIONS

New means that a new system or feature is being installed into either a new or existing building

Altered means that an existing system or feature is being modified or altered resulting in changes to the performance requirements, and / or inspection and maintenance procedures

Removed means that a system or feature is being removed from the building

COMPLIANCE SCHEDULE INSPECTION, MAINTENANCE AND REPORTING PROCEDURES

Specified system:		Performance/Maintenance Standards: (most common standards are provided, if another standard is used, specify next to other)	System notification: (tick as applicable)		
			New	Altered	Removed
1	Automatic systems for fire suppression (for example, sprinkler systems)				
1.1	Automatic systems for fire suppression (NZ Building Code: C/AS1, F7)	☐ NZS 4541:2007 ☐ Other	☐	☐	☐
1.2	Automatic systems for fire suppression (Gas/foam) Gas and foam flood or deluge system, dry and wet chemical extinguishing systems (NZ Building Code: C3.3.6, C3.3.9; F7 3.1-3.3)	☐ NZS 4541:2007 ☐ Other	☐	☐	☐
2	Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit and serves only that unit)				
2.1	Emergency warning systems including manual and automatic fire alarms; heat detectors; gas; radiation systems: Alarm type ☐ Audible ☐ Visual (NZ Building Code: F7 3.1-3.3)	☐ NZS 4561 Appendix A ☐ Other	☐	☐	☐
2.2	Automatic gas leak detection systems for the detection and measurement of combustible gases	☐ NZS 4512:2003 with the amendment as per F7/AS1 1.1.1.2 ☐ Other	☐	☐	☐

ATTACHMENTS (the following documents are attached to this application)

☒ Plans and specifications	☐ Development contribution notice
☐ Project information memorandum	☐ Completed relevant checklist(s)
☐ Certificate attached to project information memorandum	☐ Memoranda from licensed building practitioner(s) who carried out or supervised any design work that is restricted building work

BUILDING CONSENT (the building work will comply with the building code as follows)

Clause (Involved in the proposed building work)	Means of compliance (refer to compliance documents) or detail of alternative solution in the plans or specifications	Clause (Involved in the proposed building work)	Means of compliance (refer to compliance documents) or detail of alternative solution in the plans or specifications
B1 Structure	☐ B1/AS2 ☐ NZS 3604 ☐ NZS 4229 ☐ AS/NZS 1170 ☐ Other _____	G1 Personal hygiene	☐ G1/AS1 ☐ Other _____
B2 Durability	☐ B2/AS1 ☐ NZS 3101 ☐ NZS 3604 ☐ NZS 3602 ☐ Other _____	G2 Laundering	☐ G2/AS1 ☐ Other _____
C1-C4 Fire	☐ C/AS1 ☐ Other _____	G3 Food preparation and prevention of contamination	☐ G3/AS1 ☐ Other _____
D1 Access/Routes	☐ D1/AS1 ☐ NZS 4121 ☐ Other _____	G4 Ventilation	☐ G4/AS1 v AS 1668.2 ☐ Other _____
D2 Mechanical installations for access	☐ D2/AS1 ☐ NZS 4121 ☐ Other _____	G5 Interior environment	☐ G5/AS1 ☐ Other _____
E1 Surface water	☐ E1/AS1 ☐ E1/VM1 ☐ Other _____	G6 Airborne and impact sound	☐ G6/AS1 ☐ Other _____
E2 External moisture	☐ E2/AS1 ☐ E2/AS2 ☐ Other _____	G7 Natural light	☐ G7/AS1 ☐ Other _____
E3 Internal moisture	☐ E3/AS1 ☐ Other _____	G8 Artificial light	☐ G8/AS1 ☐ NZS 6703 ☐ Other _____
F1 Hazardous agents on site	☐ F1/AS1 ☐ Other _____	G9 Electricity	☐ G9/AS1 ☐ Other _____
F2 Hazardous building materials	☐ F2/AS1 ☐ NZS 4223 ☐ Other _____	G10 Piped services	☐ G10 ☐ NZS 5261 ☐ Other _____
F3 Hazardous substances	☐ F3 ☐ Hazardous substances and new organism ☐ Other _____	G11 Gas as an energy source	☐ G11/AS1 ☐ Other _____
F4 Safety from falling	☐ F4 ☐ Fencing of Swimming Pool Act 1987 ☐ Other _____	G12 Water supplies	☐ G12/AS1 ☐ AS/NZS 3500.1 ☐ Other _____
F5 Construction and demolition hazards	☐ F5/AS1 ☐ Other _____	G13 Foul water	☒ G13/AS1 ☐ G13/AS2 ☐ BS 5572 ☐ G13/AS3 ☐ Other _____
F6 Visibility in Escape Routes	☐ F6/AS1 ☐ Other _____	G14 Industrial/liquid waste	☐ G14/AS1 ☐ Other _____
F7 Warning systems	☐ F7/AS1 ☐ NZS 1668 ☐ NZS 4512 ☐ NZS 4515 ☐ AS/NZS 1668.1 ☐ Other _____	G15 Solid waste	☐ G15/AS1 ☐ Other _____
F8 Signs	☐ F8/AS1 ☐ Other _____	H1 Energy efficiency	☐ H1/AS1 ☐ NZS 4218 ☐ NZS 4243 ☐ NZS 4214 ☐ ALF Design Manual ☐ Other _____

Waivers and modifications: State nature of waiver or modification of building code required:

THE PROJECT

Description of the building work:

Installation of new septic tank and pump station
Replacing like for like.

What is the existing lawful use of the building?

N/A

Will the building work result in a change of use?

☐ Yes

☒ No

If yes, provide details of new use:

Estimated total value of building work on which the building levy will be calculated (including goods and services tax) (state estimated value as defined in section 7 of the Building Act 2004)

\$ 20,000

Stage

1

of an intended

1

stages

Intended life of new building (if less than 50 years)

number of years

List building consents previously issued for this project (if any)

N/A

RESTRICTED BUILDING WORK (comes into effect 1 March 2012)

Will the building work include any restricted building work?

Yes

☐

No

☒

If yes, provide the following details of all licensed building practitioners (LBP) who will be involved in carrying out or supervising restricted building work. (If these details are unknown at the time of application, they must be supplied before the building work begins)

Licensed building practitioners name	Licensing class	LBP Number (or) registration number, if treated as being licensed under s 291 of the Building Act 2004
N/A		

PROJECT INFORMATION MEMORANDUM (The following matters are involved in the project)

- ☐ Subdivision
- ☐ Alterations to land contours
- ☐ New or altered connections to public utilities
- ☐ New or altered locations and/or external dimensions of buildings
- ☒ Other matters known to the applicant that may require authorisations from the Building Consent Authority: please specify
- ☐ New or altered access for vehicles
- ☐ Building work over or adjacent to any road or public place
- ☐ Disposal of stormwater or wastewater
- ☐ Building work over any existing drains or sewers or in close proximity to wells or water mains

Replace old septic tank

AGENT (only required if application is being made on behalf of the owner)

Name of agent:

Greg Sones Plumbing Gas Fitting + Drain Laying

Contact person:

Greg

Mailing address:

850 Matakana Rd
Matakana

Postcode:

0985

Street address
/registered office:

As above

Phone number: Landline:

472 9051

Daytime:

472 9051

Facsimile number:

472 9058

Mobile:

021 242 6846

Email address:

Workworth@laseplumbing.co.nz

Website:

Relationship to owner: (supply details of authorisation from the owner to make the application on the owner's behalf)

FIRST POINT OF CONTACT FOR COMMUNICATIONS WITH COUNCIL/BUILDING CONSENT AUTHORITY

Full name:

Greg Sones

Mailing address:

As above

Postcode:

Phone number:

As above

Mobile:

As above

Facsimile number:

As above

Email address:

BILLING

All consent related invoices/refunds to be billed and posted to:

Owner:

☒

Agent:

☐

SIGNATURE

Signature:

Greg Sones

Owner:

☐

Agent:

☒

Date:

6/6/12

Name:

Greg

Brian Philip Morrison

BRIAN PHILIP MORRISON
(owner)

Commercial application for a project information memorandum and/or building consent

Section 33 or section 45, Building Act 2004



Date received:

Application No:

APPLICATION TYPE (tick appropriately)

If you have an existing application number relating to this building work please note the number beside the application type

- ☐ Project Information memorandum
- ☐ Building consent
- ☐ Staged consent
- ☐ Amendment
- ☐ National multi-use approval No:

Restricted building work (RBW) applies from 1 March 2012. Financial assistance package (FAP)

Does application involve RBW?

☐ Yes ☒ No

Is this a re-clad application?

☐ Yes ☒ No

Is application subject to a claim under the FAP scheme?

☐ Yes ☒ No

If yes, FAP claim number:

THE BUILDING

Street address of building (for structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection)

1334 Sandspit Rd.

Legal description of land where building is located (state legal description as at the date of application and if the land is proposed to be subdivided include details of relevant lot numbers and subdivision consent)

PT Allot 23 Mahurangi Parish of Mahurangi N/A/878/220

Building name

N/A

Location of building within site/block number (include nearest street access)

N/A

Number of levels (include ground level and any levels below ground)

N/A

Level or unit number

N/A

Current lawfully established use (include number of occupants per level and per use if more than 1)

Camp ground

Area (total floor area, indicate area affected by the building work if less than the total floor area)

N/A m²

Year first constructed

N/A

THE OWNER

Name of owner (include preferred form of address, e.g. Mr/Miss/Dr if an individual)

Brian and Vanessa Morrison Family Trusts

Contact person (insert name if the applicant is an individual)

Brian

Mailing address

6 Brick Bay Drive Sandspit

R.D.2

Postcode

Street address/registered office

As above

Phone number (landline)

09 425 0011

Daytime

425 0011

Facsimile number

09 425 0011

Mobile

021 209 2676

Email address

A

brianandvanessa@stra

Website

The following evidence of ownership is attached to this application (copy of certificate of title, lease agreement or agreement for sale and purchase showing full name of legal owner(s) of the building)