



*Tauranga City*

# LIM

## Land Information Memorandum



# Land Information Memorandum

This LIM has been prepared for:

Applicant	<b>Robert Shaw</b>
Property Address	<b>6/674L Ranginui Road Tauranga</b>
Legal Description	<b>Unit 6 DPS 62811 Interest in Lot 1 DPS 62448</b>
Application Date	<b>9 July 2025</b>

This Land Information Memorandum has been prepared for the purposes of Section 44A of the Local Government Official Information and Meetings Act 1987 and, in addition to the information provided for under section 44, may contain such other information concerning the land that Council considers, at its discretion, to be relevant. It is based on a search of Council records only. There may be other information relating to the land which is unknown to Council. The Council has not undertaken any inspection of the land or any building on it for the purpose of preparing this Land Information Memorandum. The applicant is solely responsible for ensuring that the land is suitable for a particular purpose.

It is recommended that the Certificate/Record of Title, which is not held by Council, be searched by the purchaser.

## Contents

Services Information

Rating/Valuation Details and Levies

Building Information	▪ Consents and Permits
City Planning	▪ City Plan ▪ Resource Consents
Land Development	▪ Land Features ▪ Hazardous Contaminants
Other Information	▪ Licences



## Services Information

Land information which is likely to be relevant includes information on private and public stormwater, water and sewer details. Please refer to the appropriate authorities for further information about network utility services.

### Service Record

Copy of Deposited Plan Attached	<b>Yes</b>
Service Print Attached	<b>Yes</b>
Method of Sewer Disposal	<b>To Public Sewer</b>
Existing Method of Stormwater Disposal	<b>To Services</b>
Drinking Water Supplied to the Land	<b>Yes</b>
Drinking Water Supplier Is:	
(i) Owner of the Land; or	<b>No Information Available</b>
(ii) Tauranga City Council [Water Supply Authority Unit (WSA)]; or	<b>Yes</b>
(iii) Another Networked Supplier	<b>No Information Available</b>
Any Information Notified under Section 206(1) Water Services Act 2021	<b>No Information Available</b>

#### Note:

1. Please note that the existence of a watermain along a property frontage does not necessarily mean that a connection is available. This may need to be provided at the applicant's expense.
2. If the land is supplied with drinking water by Tauranga City Council as a Water Supply Authority, any conditions (generally set out in Tauranga City Council's [Supply of Water Bylaw 2019](#)) applicable to that supply are included in this Land Information Memorandum.
3. If the land is supplied with drinking water by a networked supplier other than the WSA, any conditions that are applicable to that supply are included in this Land Information Memorandum.
4. If the land is supplied with drinking water by the owner of the land, any information Council has about the supply is included in this Land Information Memorandum.
5. Any information notified to the territorial authority by a drinking-water supplier under Section 206(1) Water Services Act 2021 is included in this Land Information Memorandum.

## Rating and Valuation Details

Tauranga City Council rates are billed twice a year on the last business day of August and February. Unpaid rates for each instalment will incur a 10% penalty.

The valuation details below are based on a revision date of 1 May 2023. This has been used to assess the rates for Council's financial year beginning 1 July 2025.

Further information on property valuations can be found on Council's website at the following link: [Property valuations - Tauranga City Council](#).

### Valuation Details

Valuation Reference	<b>06679 528 00 J</b>
Capital Value	<b>\$1,210,000</b>
Land Value	<b>\$390,000</b>
Improvement Value	<b>\$820,000</b>

### Rating Details

Current Annual Rates	<b>\$4,586.34</b>
Balance Owing	<b>\$Nil</b>

### Water Meter Details

Water Meter On Property	<b>Yes</b>
Meter Type	<b>Individual Meter</b>
Water Rates Owing	<b>\$Nil</b>

A separate account is issued for water metered properties. Residential meters are read every three months. Commercial / Industrial meters vary depending on use.

#### **Note:**

Council's Water Supply Bylaw requires a final water meter reading to be undertaken when a property is sold.

# Infrastructure Funding and Financing (IFF) Levy Details

The IFF levy (under the Infrastructure Funding and Financing (Western Bay of Plenty Transport System Plan Levy) Order 2022) is payable for a period of 30 years from 1 July 2024 to 30 June 2054. The method for assessing the liability for an IFF levy on the property is set out in the 2022 Order. The annual levy (as calculated under the 2022 Order) is allocated across the levy area with 50% of the overall levy coming from commercial and industrial properties and 50% coming from residential properties and with the IFF levy on the property being based on the capital value of the property. Further information on the levy is available at the following link: [Infrastructure Levy - Tauranga City Council](#).

## IFF Levy Details

Current Annual IFF Levy	<b>\$110.22</b>
Balance Owing	<b>\$Nil</b>

## Building Information

This information is sourced from Council records and may not reflect the situation on site if work has been undertaken without consent. It is recommended that the property file is viewed together with this LIM to satisfy any due diligence requirements. The property file may be ordered at the following link: [Order a LIM or Property File](#)

**Building Permits:** For Building Permits issued prior to 1993 a copy of the inspection records, if these are held by Council, are available in the property file.

**Building Consents:** For Building Consents issued after 1 January 1993 a Code Compliance Certificate (CCC) will be issued where the building work for which the building consent relates has been completed in accordance with the NZ Building Code.

**Solid Fuel Heaters:** It is important that any solid fuel heater has been legally installed, either as part of the original dwelling or by way of a separate permit/consent.

## Permits and Consents

### Building Permits

Date Issued	Description of Work
07/08/85	Erect Swimming Pool (Body Corporate)
02/04/86	Erect Changing Room, Pavilion, Barbeque & Retaining Walls (Body Corporate)

### Building Consents

Date Issued	Description of Work	BC Number	CCC Issued
23/01/97	Erect Dwelling – Unit 6	96/3632	Yes
15/08/23	Install Freestanding Yunca Monte Multifuel Solid Fuel Heater with Wetback	331093	Yes

#### Additional Comments:

It is noted that the property at 674L Ranginui Road has a swimming pool. An inspection of the pool safety barrier was undertaken on 19 January 2023 and it was found to be compliant. All pool safety barriers in New Zealand must meet the requirements of Section 162C of the Building Act 2004. Further information on swimming pool safety barriers including fees and charges can be found on Council's website, [here](#).

**Compliance Schedule**

**N/A**

**Requisitions**

**None**

# City Planning

## The Operative Tauranga City Plan

The Tauranga City Plan provides the rules for how people can build or develop the land they own in our city. This can be land that is residential, commercial or industrial. The City Plan covers all subdivision, land use and development, how and where the city grows, how infrastructure is located and how natural and physical resources are managed. It is the blueprint by which any development in Tauranga is managed. It also includes rules on other things that are covered by the Resource Management Act - including hazards, signage, reserves, noise, heritage, etc.

There are specific rules within the City Plan that cover, amongst other matters, building height, earthworks, tree protection, bulk and scale of buildings, setbacks from coastal and harbour margins, and specific residential, commercial and industrial uses depending on location within the City.

Specific rules for each suburb and property can vary depending on the underlying zone of the area and the location of a specific property within that zone.

The majority of the City Plan became 'operative in part' on 9 August 2013. The remaining parts of the City Plan subsequently became operative on 5 July 2014.

A table showing a complete list of variations and plan changes to the operative City Plan can be found in the [Table of Plan Change Dates](#).

It is advised that prospective purchasers of property review and consider all relevant planning rules for the specific property this Land Information Memorandum applies to prior to purchase.

To view the Operative Tauranga City Plan please [click here](#).

If you have any specific queries on any rules or any existing or proposed use of a property, please contact the Tauranga City Council's Duty Planner (07 577 7000) for further information.

## Development Contributions

Council operates a development contributions policy under the Local Government Act 2002, and also has financial contributions provisions in its City Plan. The broad purpose of these policies is to fund infrastructure costs that relate to the city's growth from those parties that undertake subdivision, building or development. These contributions are required on building consents, resource consents, service connection authorisations and certificates of acceptance. Contributions may remain payable on any property in circumstances where subdivision, building and development projects have not been completed, and in rare occasions where the Council has agreed to defer payment. In addition, further subdivision, building or development of a property may trigger the requirement to pay further development and/or financial contributions.

Council's development contributions team can advise further on these matters in relation to the application of development and financial contributions to the property in question.

## Transportation Strategy & Planning and Reserve Management Plans

As part of Tauranga City Council's Transport strategy and planning activities and Reserves Management Plans, properties neighbouring Council-owned or administered land may be subject to transport network development such as walkways and cycleways or other development, activities or use of the land. The Tauranga Reserves Management Plan is available online at the following link: [Reserve Management Plans](#).



## Relevant Planning Information

Relevant Planning information for this property is available online through the [City ePlan](#).

Zone: Operative Tauranga City Plan	<b>Medium Density Residential</b>
Identified Plan Areas	<b>None Known</b>
Utilities / Designations	<b>None</b>
Protected Heritage/Notable or Groups of Trees, or Protected Buildings	<b>None Known</b>
Archaeological or Heritage Sites	<b>None Known</b>
<b>Council Consents, Certificates, Notices, Orders or Bonds Affecting the Land:</b>	<b>Yes</b>
<b>Description</b>	<b>Date Issued</b>
Section 5(1)(g) Unit Titles Act 1973	<b>27/08/97</b>

## Flooding from Intense Rainfall

This property is identified as being within a floodable area in a 1-in-100 year rainfall event, which takes into consideration the effects of sea level rise and climate change based on RCP 8.5 median scenario, as of the year 2130 and is subject to specific rules in the City Plan. Refer also Land Features section of this LIM for further information.



## Land Features

This information relates to city-wide studies and may not reflect the on-site situation or natural hazard investigations and mitigation done on a property level.

The Tauranga City Council does not act as agent for network utility operators.

The landform and geology within Tauranga City have some features which demand particular attention. These features, which may or may not be relevant to the property in question, are outlined in “General Description of Land Form within Tauranga District” as attached.

## Microzoning for Earthquake Hazards

The Council has received reports and results that have assessed Tauranga City’s vulnerability to liquefaction when considering a range of earthquake events. These reports and results, and a summary of them, are available by accessing the following link: [Earthquakes and Liquefaction](#).

The reports and **results** reflect the most up-to-date vulnerability to liquefaction from an earthquake event.

It is important to note that different properties are exposed to different levels of probability that land damage from liquefaction and lateral spread will in fact occur. The reports and results are undertaken at a City-wide scale and may be superseded by detailed, site specific assessments undertaken by qualified and experienced practitioners using improved or higher resolution data than presented in these reports.

The **vulnerability and land damage** maps are prepared based on an assessment of natural ground conditions and therefore do not consider the influence of recent human activities that may influence liquefaction response (i.e., earthworks, ground improvement, foundation design), unless specifically stated within the technical reports. As such, the degree of land damage may be less than predicted for a given property where liquefaction risk was addressed during landform or building foundation design.

**The presence of liquefaction and lateral spread information on a property may have implications for the use and development of that property including, but not limited to, the requirements for and assessments of building consent applications under the Building Act 2004 and Building Code (refer to the NZ Standard AS/NZ 1170 and design standard outlined in Chapter 10.10.6 Liquefaction of Tauranga City Council’s Infrastructure Development Code), subdivision consent applications under the Resource Management Act, and infrastructure design.**

The assessed hazard applicable to the area this property has been assessed within, is available by accessing the web-viewer available through the following link: [Earthquakes and Liquefaction](#).

## Landslide Susceptibility

Council has received an assessment of Tauranga City’s susceptibility to landslides. Two maps have been prepared, one showing areas susceptible to land sliding triggered by rainfall, and the other by earthquakes. A report detailing the assessment and maps are available by accessing the following link: [Landslide Susceptibility](#).

## Land Features (cont.)

### Natural Hazard Information from Bay of Plenty Regional Council

Our region is exposed to a range of natural hazards including tsunamis, flooding, coastal erosion, coastal inundation, landslide, liquefaction, active faults and volcanic hazards.

These natural hazards can have major consequences on people, property and infrastructure. Regional Council is working to improve our understanding and management of these risks to support safe and resilient communities.

Further information regarding natural hazards held by the Bay of Plenty Regional Council that may be relevant to this property can be found at the below links:

[Bay of Plenty Regional Council – Natural Hazards](#)

[BayHazards - Bay of Plenty Natural Hazards Viewer](#)

Additionally, if your property is in a low-lying area, coastal area or near a river, stream or floodplain you may request a flood level report at the following link: [Flood Level Report](#).

## Special Land Features Relevant to the Subject Property

Information about Land Features and Natural Hazards may be identified on Council's mapping website, [Mapi](#).

### Comments:

1. Refer copies of following reports as attached:
  - a. Geotechnical Investigation Report by Worley Consultants Limited dated October 1984, reference 5-932-75.
  - b. Subsurface Investigation Report by Worley Consultants Limited dated 19 July 1985, reference 5-233-12.
  - c. Foundation Inspection Report by Peter W.M. Ewart Consulting Structural Engineer dated 22 January 1997, reference 4278.
2. **Flooding from Intense Rainfall**  
 Please see flood risk assessment information related to Flooding from rainfall, 1% AEP, year 2130 climate, RCP 8.5 median scenario under Planning Section (Flooding from Intense Rainfall). Refer also attached map which illustrates the effect on this property.  
  
 Further information on flood modelling can be found at the following link: [Flood Hazard Modelling and Mapping](#).
3. **Depth and Velocity**  
 Tauranga City Council model for Depth & Velocity of flood water. This gives us important information about where flood waters flow during a 1 in 100-year rainfall event. Please see attached map which illustrates the effect on this property.
4. **Slopes**  
 This site is subject to a slope hazard. Any further development may need to be supported by a report from a Category 1 Accredited Geo-professional and subject to Stormwater Specific Design. Please see the slope hazard zones plan attached and refer to our [website](#) for more information.

## Additional Information

### Licences

Licences Affecting the Land or Buildings

**No**

**Signed for and on behalf of the Council:**



**Position held:** LIM & Property Files Officer

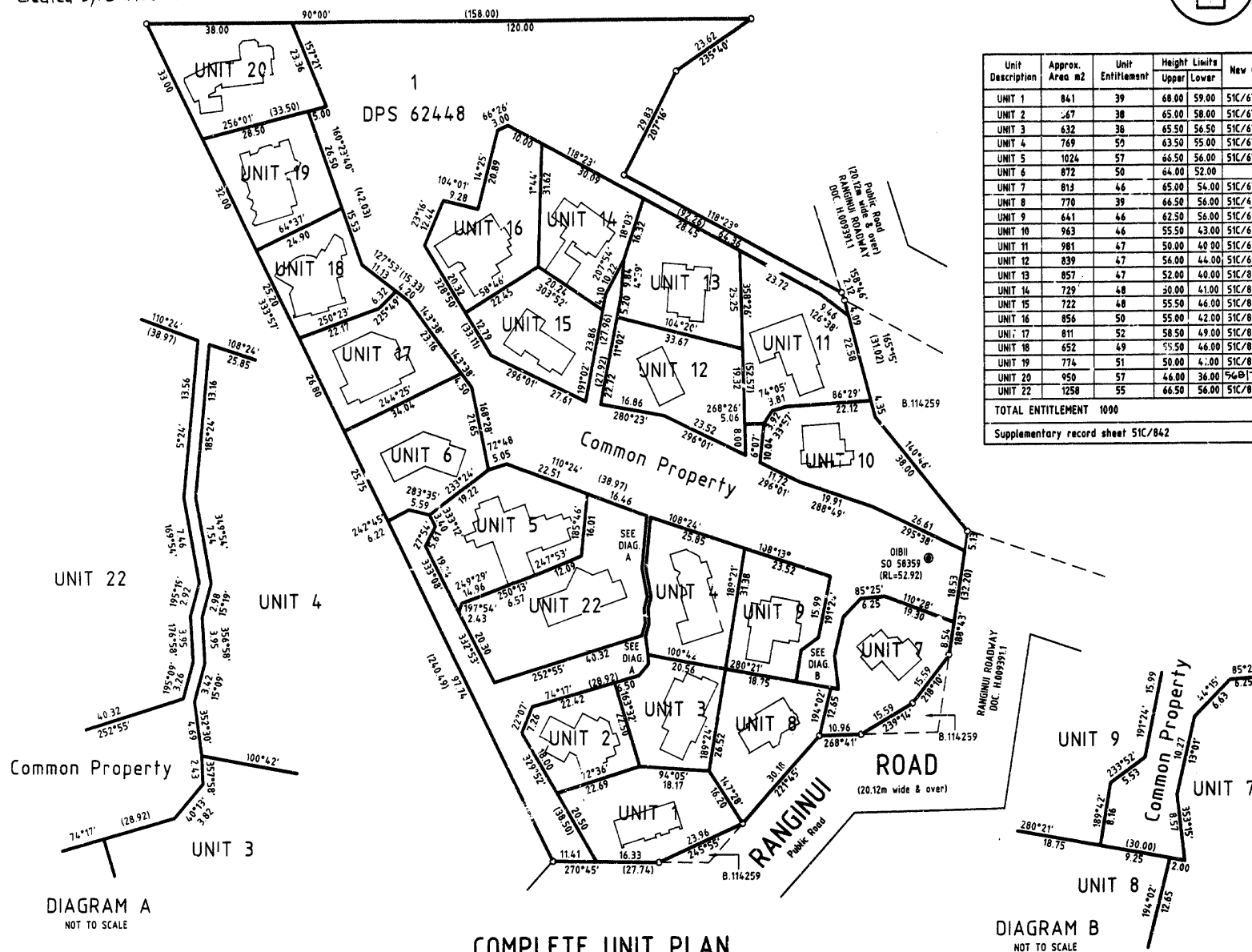
**Date:** 21 July 2025



*Tauranga City*

# Deposited Plan

Subject to Easements as on DPS 62448  
Eas. Cert. B.114260.3  
Created by: B.114260.4



Unit Description	Approx. Area m2	Unit Entitlement	Height Limits Upper Lower	New C.T.
UNIT 1	841	39	68.00 59.00	51C/670
UNIT 2	47	30	65.00 58.00	51C/671
UNIT 3	632	36	65.50 56.50	51C/672
UNIT 4	769	50	63.50 55.00	51C/673
UNIT 5	1024	57	66.50 56.00	51C/674
UNIT 6	872	50	64.00 52.00	
UNIT 7	813	46	65.00 54.00	51C/675
UNIT 8	770	39	66.50 56.00	51C/676
UNIT 9	641	46	62.50 56.00	51C/677
UNIT 10	963	46	55.50 43.00	51C/678
UNIT 11	981	47	50.00 40.00	51C/679
UNIT 12	839	47	56.00 44.00	51C/680
UNIT 13	857	47	52.00 40.00	51C/832
UNIT 14	729	48	30.00 41.00	51C/833
UNIT 15	722	48	55.50 46.00	51C/834
UNIT 16	856	50	55.00 42.00	51C/835
UNIT 17	811	52	58.50 49.00	51C/836
UNIT 18	652	49	55.50 46.00	51C/837
UNIT 19	774	51	50.00 41.00	51C/838
UNIT 20	950	57	46.00 36.00	56B/772
UNIT 22	1258	55	66.50 56.00	51C/839
TOTAL ENTITLEMENT 1000				
Supplementary record sheet 51C/842				

Approvals  
*D.A. O'Shea*  
Registered Owners

Pursuant to Section 5(1)(g) of the Unit Titles Act 1972, I *Craig Barry Batchelor* the Authorised Officer of the District Council hereby certify that every building shown hereon has been erected, and all other development work has been carried out, to the extent necessary to enable all the boundaries of every unit and the common property shown on the plan to be physically measured.

I further certify that the said plan is consistent with the Proposed Development Plan No DPS 63038

Dated this *27* day of *August* 19 *97*  
*[Signature]*  
authorised Officer

Sub *370*  
NOTES:  
1. Site Bench Mark is OIBH SO 58359 situated in common property area, flush in seal.  
2. Levels are in terms of Maturiki Datum Origin BM 316 RL36.555

Address of Body Corporate:  
SUNRIDGE ESTATE  
Ranginui Road Tauranga

Total Area 2.6553ha

Comprised in Cst 51C/670-680  
51C/842, 51C/832-840, 56B/772

I, JOSEPH HENRY ANDERSON  
Registered Surveyor and holder of an annual practising certificate (or who may act as a registered surveyor pursuant to section 25 of the Survey Act 1986) hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof.

Dated at TAURANGA this *29* day of *August* 1997 Signature *[Signature]*

Field Book *p.* Traverse Book *p.*  
Reference Plans *p.* DPS 62448, DPS 62811, DPS 63038  
DPS 70158  
Examined *correct* Correct

Approved as to Survey *[Signature]*

7/10/97  
Deposited this *4th* day of *November* 1997

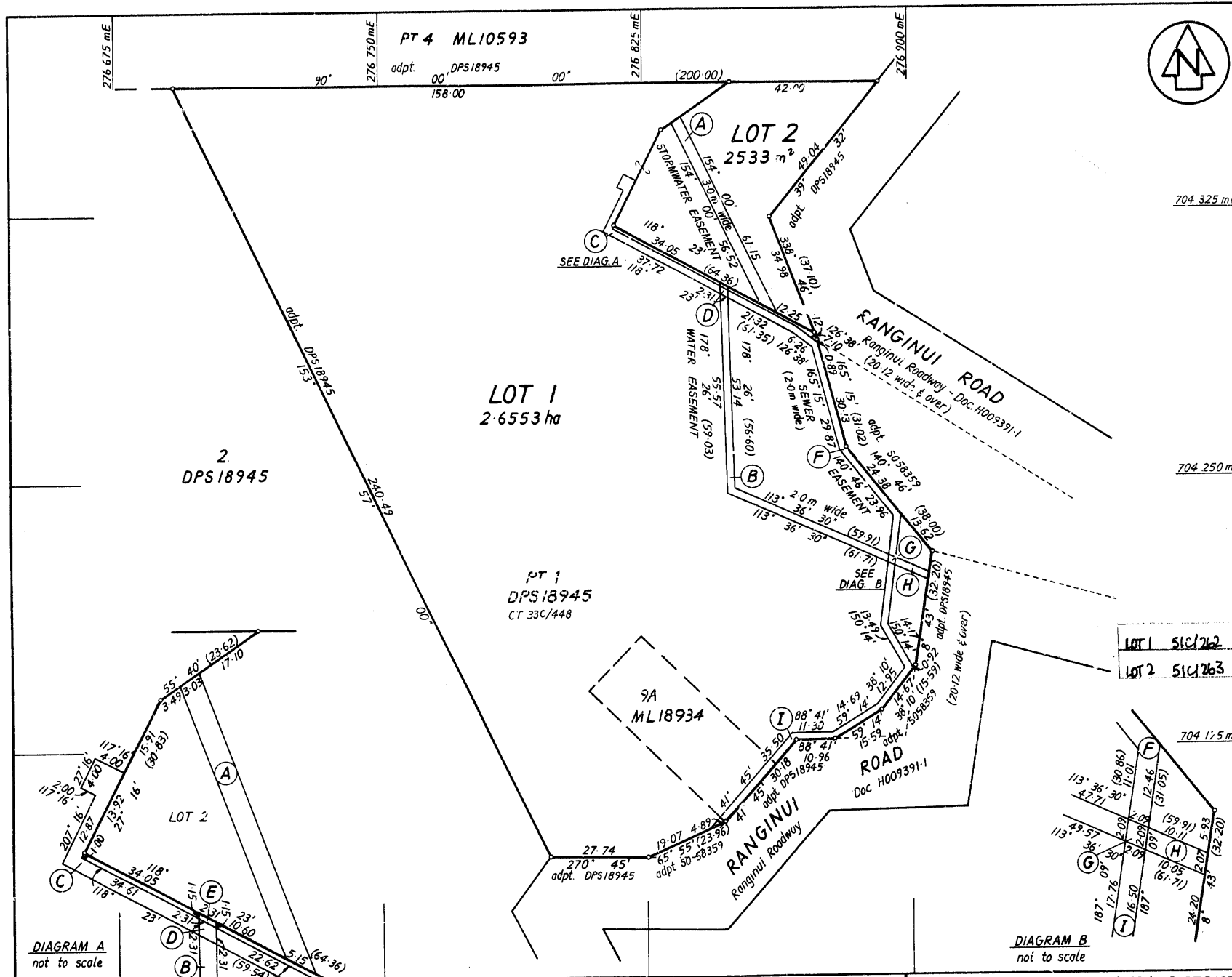
*[Stamp: District Land Registrar]*  
District Land Registrar

File Received *05-09-97*  
Instructions *DPS 62811*

LAND DISTRICT SOUTH AUCKLAND  
SURVEY BLK. & DIST. XV TAURANGA  
NZMS 261 SHT U14 RECORD MAP No Tga 44

# PLAN OF UNITS ON LOT 1 DPS 62448

TERRITORIAL AUTHORITY TAURANGA DISTRICT  
Surveyed by Connell Wagner 6552-01A  
Scale 1:750 Date JULY 1997



Approvals

*[Signature]*

*[Signature]*

Registered Owners

Approved pursuant to Section 223 of the Resource Management Act 1991 on the 28 day of November 1991. Subject to the granting or reserving of the easements set out in the Memorandum hereon.

The Common Seal of the Tauranga District Council is affixed hereto in the presence of:

*[Signature]*

Authorised Officer

Pursuant to Section 224(c) of the Resource Management Act 1991 I hereby certify that all the conditions of the subdivision consent have been complied with to the satisfaction of the Tauranga District Council

Dated this 28 day of November 1991

*[Signature]*

Authorised Officer

MEMORANDUM OF EASEMENTS			
Purpose	Serv. Ten.	Shown	Dom. Ten.
Right to drain water	Lot 2	A	Lot 1
Right to convey water	Lot 1	B, D, E G & H	Lot 2
Right to drain sewage	Lot 1	C, D, F G & I	Lot 2

Total Area 2.9086 ha

Comprised in CT 33C/448 (Bal.)

I, BRIAN HAROLD ASKIN, Registered Surveyor and holder of an annual practising certificate for who may act as a registered surveyor pursuant to section 25 of the Survey Act 1980 hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof. Dated at Tauranga this 20 day of November 1991. Signature *[Signature]*

Field Book ..... p. 656, p. 36-39  
Reference Plans .....  
Examined A.M. W. Correct S.T. H. H.

Approved as to Survey

27.11.92 *[Signature]* Chief Surveyor

Dated this 27 day of November 1992

*[Signature]* Land Registrar

DPS 62448

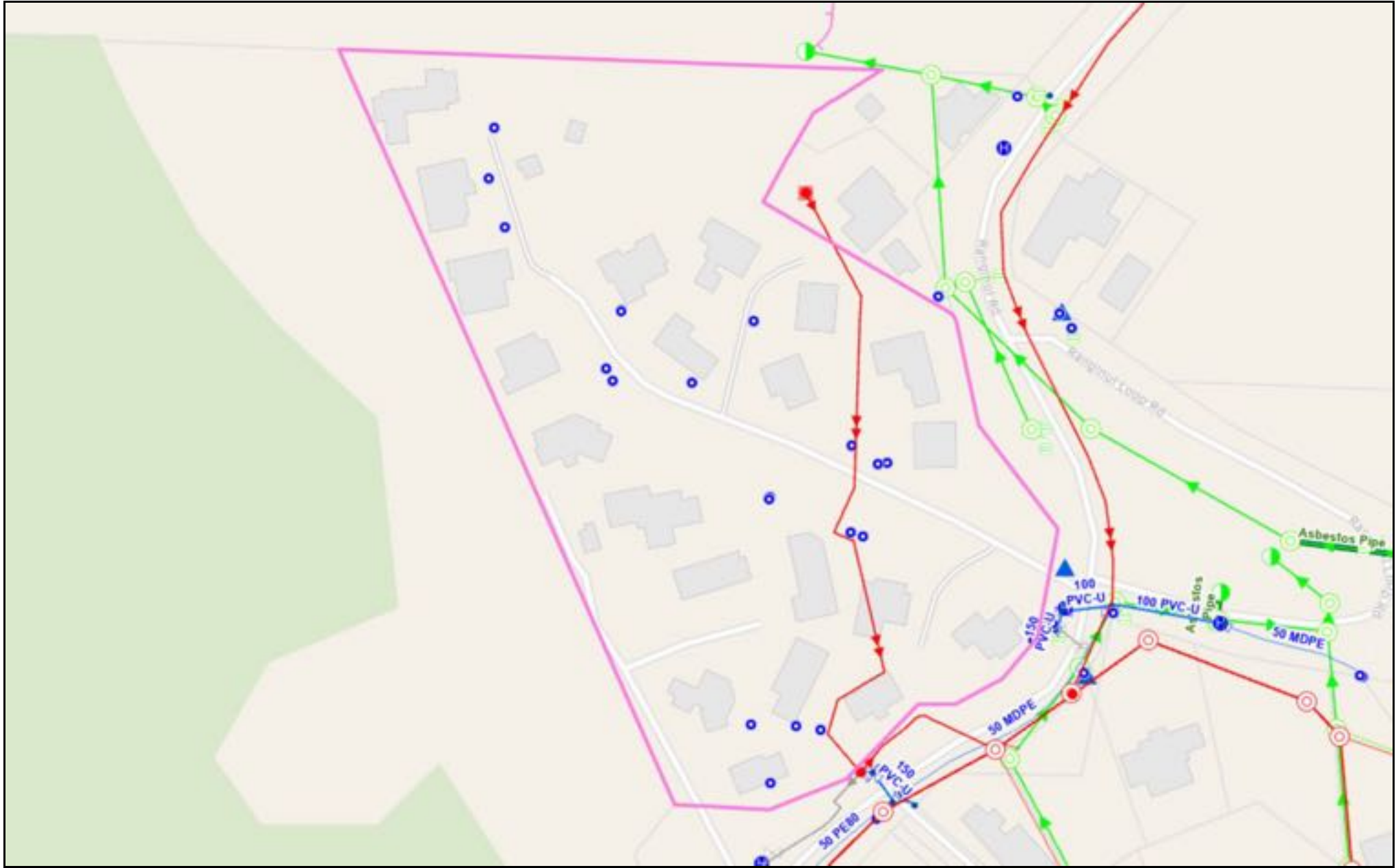
LAND DISTRICT SOUTH AUCKLAND  
SURVEY BLK. & DIST. XV TAURANGA  
NZMS 261 SHT U/4 RECORD MAP No 5:3

LOTS 1 & 2 BEING A SUBDIVISION OF  
PT LOT 1 DPS18945 & RANGINUI 9A BLOCK.

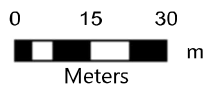
TERRITORIAL AUTHORITY TAURANGA DISTRICT  
Surveyed by BRIAN H. ASKIN  
Scale 1:750 Date NOV. 1991



# Services Plan



## Services Plan



Scale 1: 1500 @A4

















Information shown on this plan is indicative only. The Council accepts no liability for its accuracy and it is your responsibility to ensure that the data contained herein is appropriate and applicable to the end use intended.

















# Services Key












## Water

	Water Service Line
	Water Meter
	Rider Main
	Reticulation Main
	Trunk Water Main
	Asbestos Pipe (Abandoned)
	Asbestos Pipe (Operational)
	Hydrant
	Valve
	Water Reservoir
	Backflow - Double Check
	RPZ
	Valve
	Private Water Bore




## Stormwater

	Service Line
	Rising Main
	Gravity Main
	Stormwater Drain
	Subsoil Drain
	Stormwater Overland Flow Path
	Culvert
	Inlet
	Outlet
	Stormwater Manhole
	Stormwater Sump
	Stormwater Rodding Eye
	Large Sump
	Storage Pond

## Wastewater

	Service Line
	Rising Main
	Gravity Main
	Asbestos Pipe (Abandoned)
	Asbestos Pipe (Operational)
	Node
	Rodding Eye (Inspection Point)
	Manhole
	Valve
	Chamber
	Pump Station

## Other

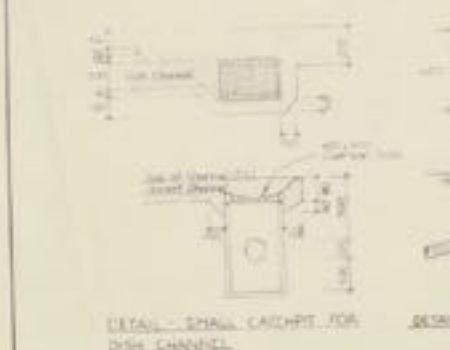
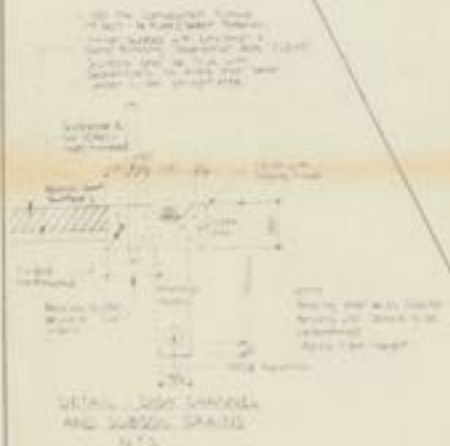
	Abandoned assets and lines
	Private assets and lines
	Geotech Utility Buffer

More symbols may appear on the Services Plan than are shown here. For a full key please contact the [Tauranga City Council LIM Office](#).

# Building Information



PLAN  
WIND-DRIVEN ALERT SYSTEM  
**APPROVED**  
DESIGNED BY W.F. TAYLOR  
CONSULTANT TO THE  
HARRISON GRIERSON CONSULTANTS LTD  
DATE 15.12.75



SECTION A-A  
N.T.S.

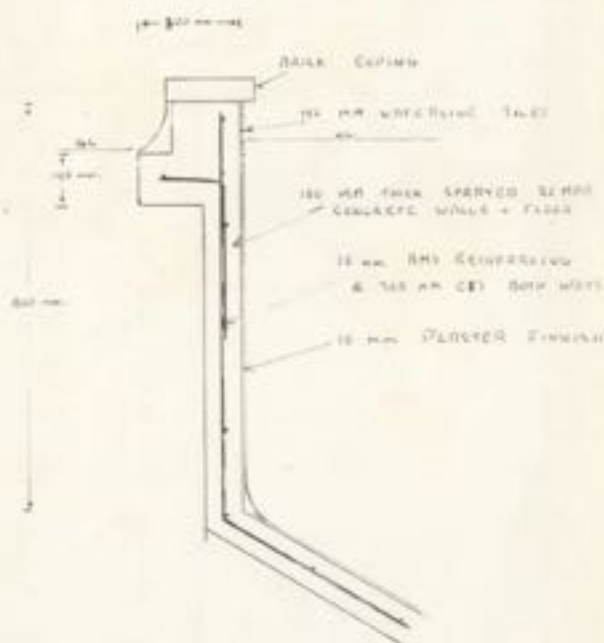
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HARRISON GRIERSON CONSULTANTS LTD  
Consulting Engineers, Surveyors, Planners  
**HG**

BRIDGEVALE  
WELCOME BAY  
(W.F. TAYLOR)

Common Area  
Detail Sheet

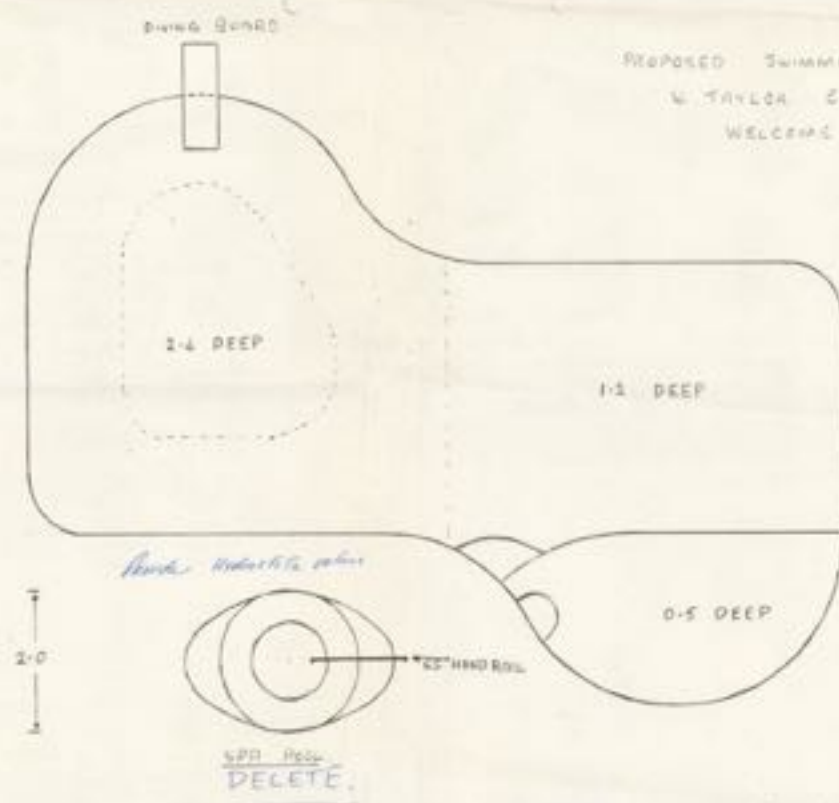
423241  
1:150



SECTION THRU WALL 1718

Pool CAPACITY 24,000 LITRES  
 FILLING BY FILTERMETER QPSP/1961  
 BACKWASH WATER TO GULLY TEND ✓  
 FILLING FROM HOT WATER HEAT  
 GROUND SUPPLETS - CHECK FLOW TO RECHARGE BR42 ✓

**IMPORTANT**  
 At least 24hrs. Notice **MUST BE GIVEN** to the Inspector **BEFORE POURING**.  
 CONCRETE FOUNDATIONS - BOND BEAMS  
 SPREADS TERRACE SLABS - CONCRETE FLOORS  
 INSULATION COMPLETENESS IN ROOF, WALLS & FLOOR.  
 REPAIR - INSULATION INSPECTIONS REQ'D. All timber to comply with NZS1321 for classification and grading.  
 The position of the Terrace City System materials against this is necessary in the Specification and must be complied with.  
**THIS PLAN AND SPECIFICATION MUST BE KEPT ON SITE AT ALL TIMES.**



PROPOSED SWIMMING POOL  
 W. TAYLOR SCHOOL  
 WELLSVILLE GRV

Layout PLAN 1:50





Ranginui No 12 Block



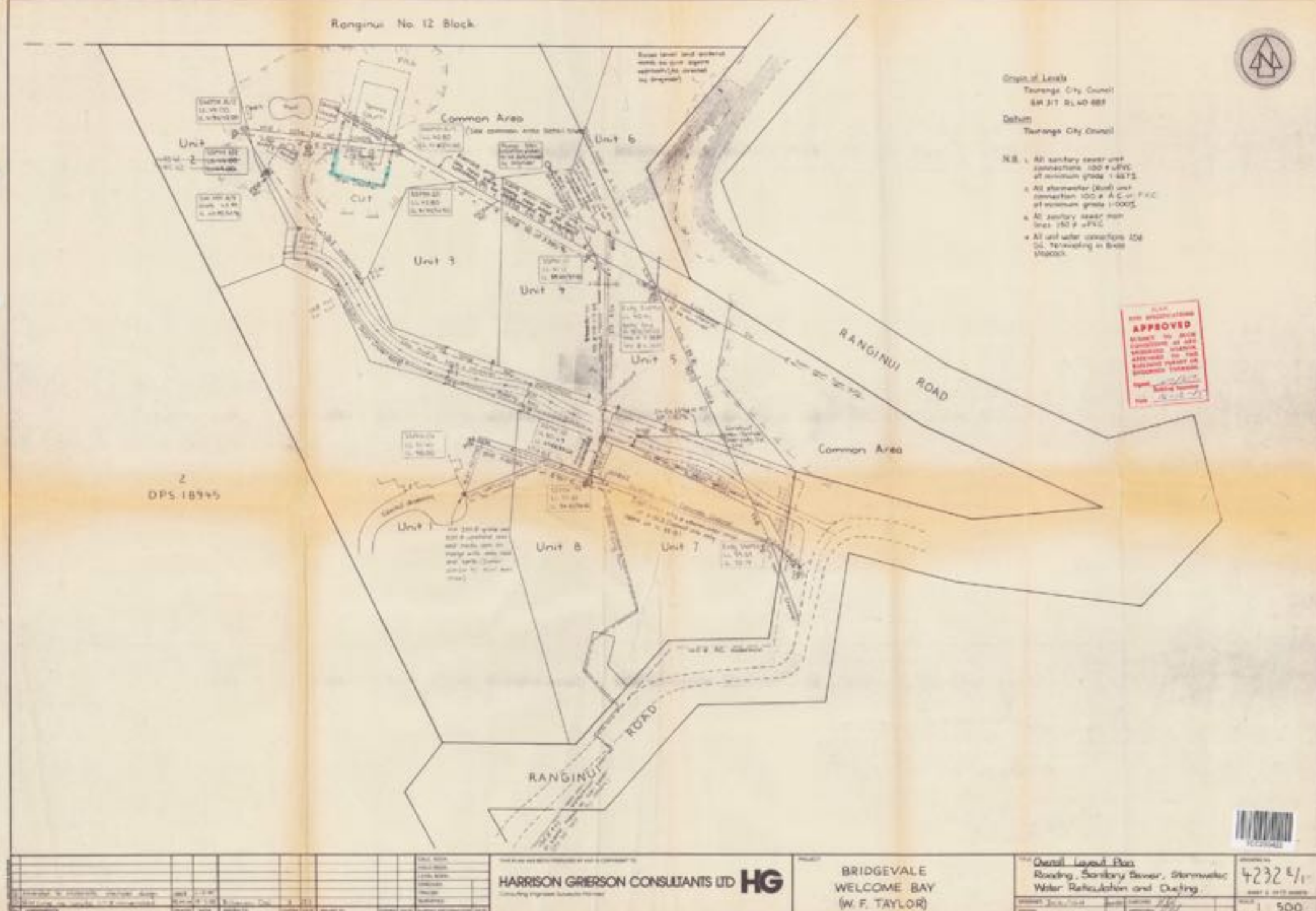
Origin of Lines  
Tauranga City Council  
S/N 317 SL 40 889

Date  
Tauranga City Council

- N.B. 1. All sanitary sewer unit connections 100 # uPVC at minimum grade 1-6875.  
2. All stormwater (Roof) unit connections 100 # A.C. or P.V.C. at minimum grade 1-0005.  
3. All sanitary sewer main lines 150 # uPVC.  
4. All unit water connections 100 # uPVC, branching in 90° stacks.



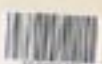
2  
DPS 18945



HARRISON GRIERSON CONSULTANTS LTD HG

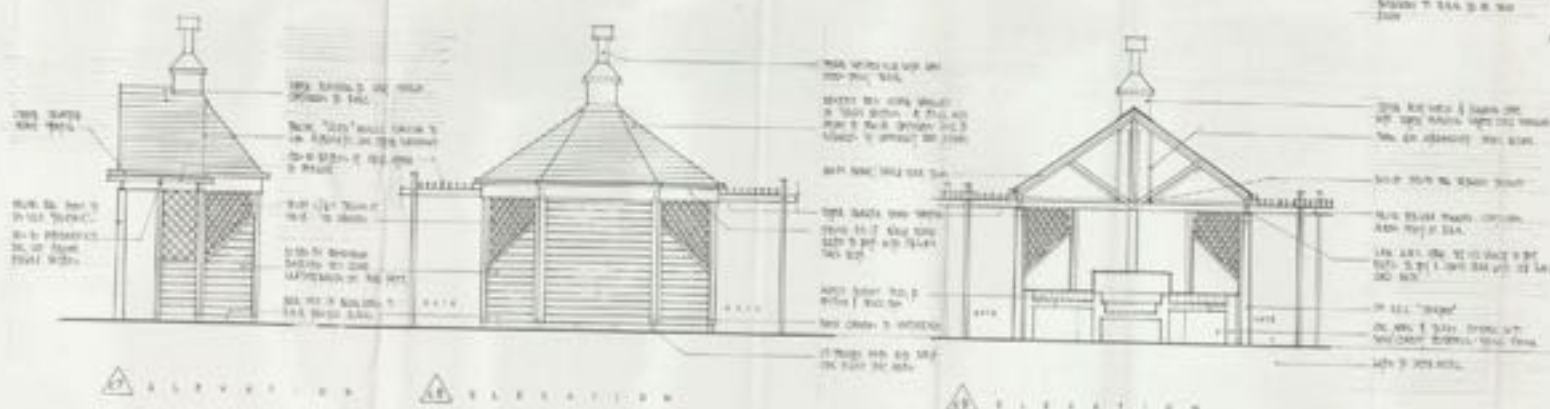
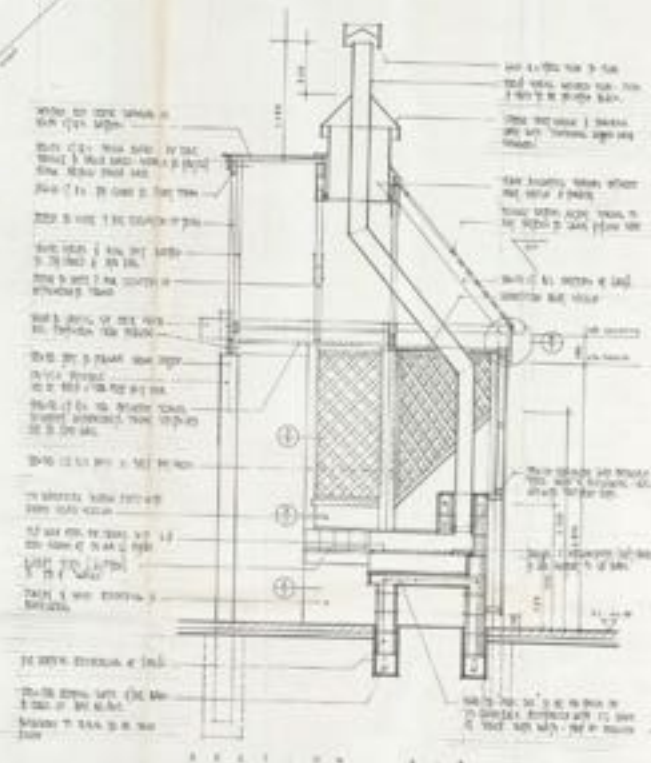
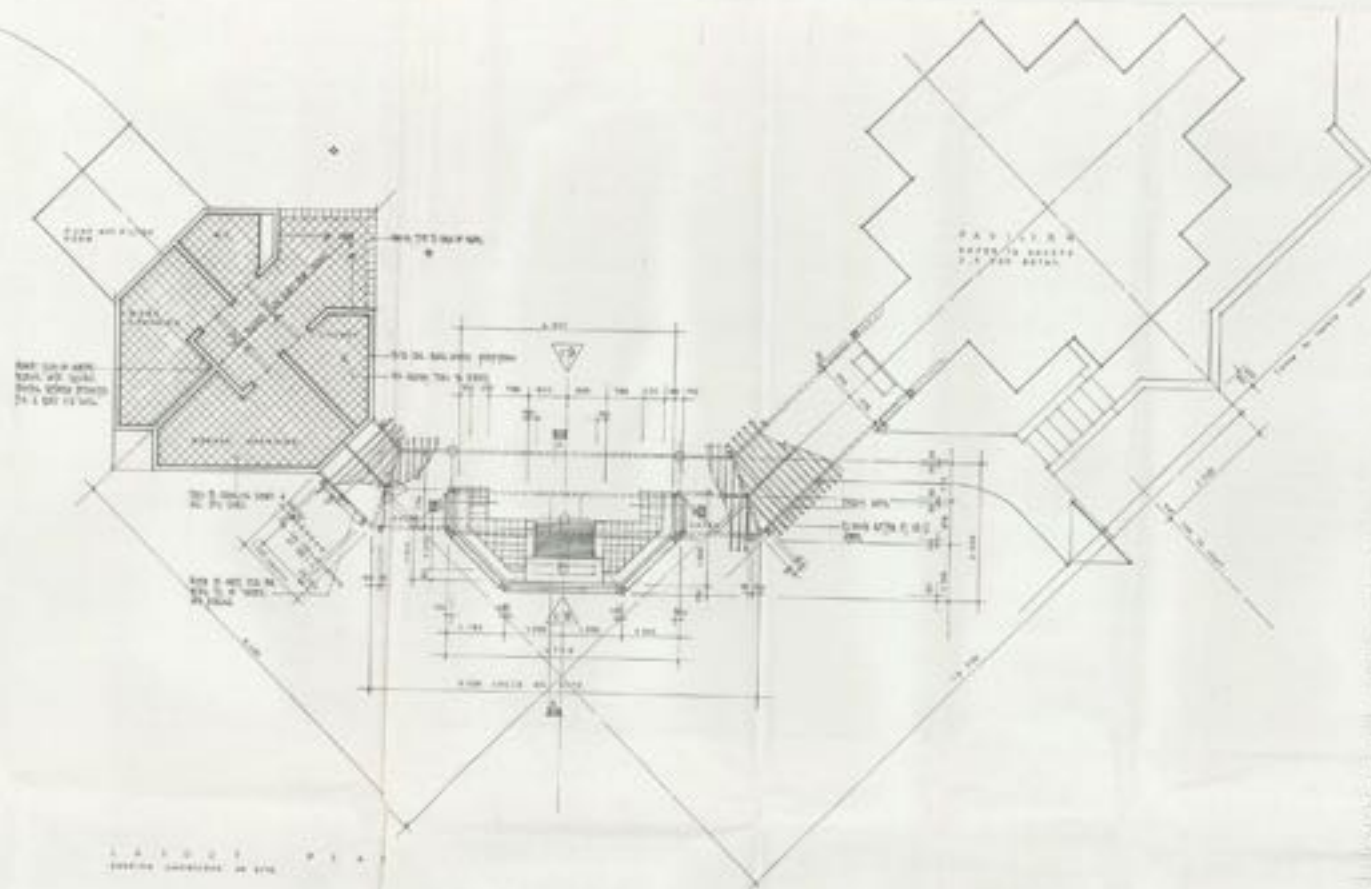
BRIDGEVALE  
WELCOME BAY  
(W. F. TAYLOR)

Detail Layout Plan  
Roadway, Sanitary Sewer, Stormwater  
Water Retention and Discharge



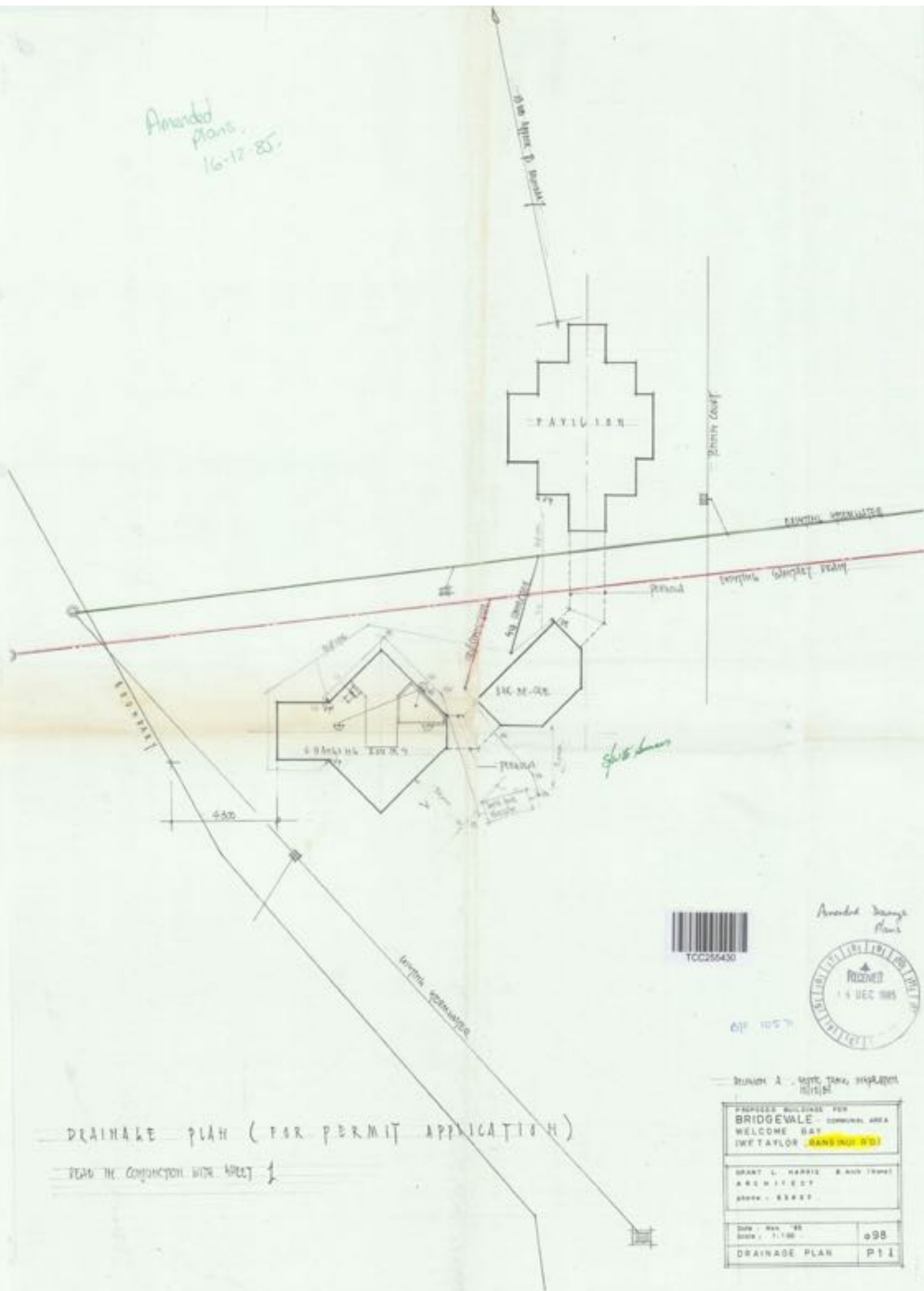
4232 E/1  
1 500



[illegible]



Amended  
Plans.  
16-12-85.



Amended Drainage  
Plans



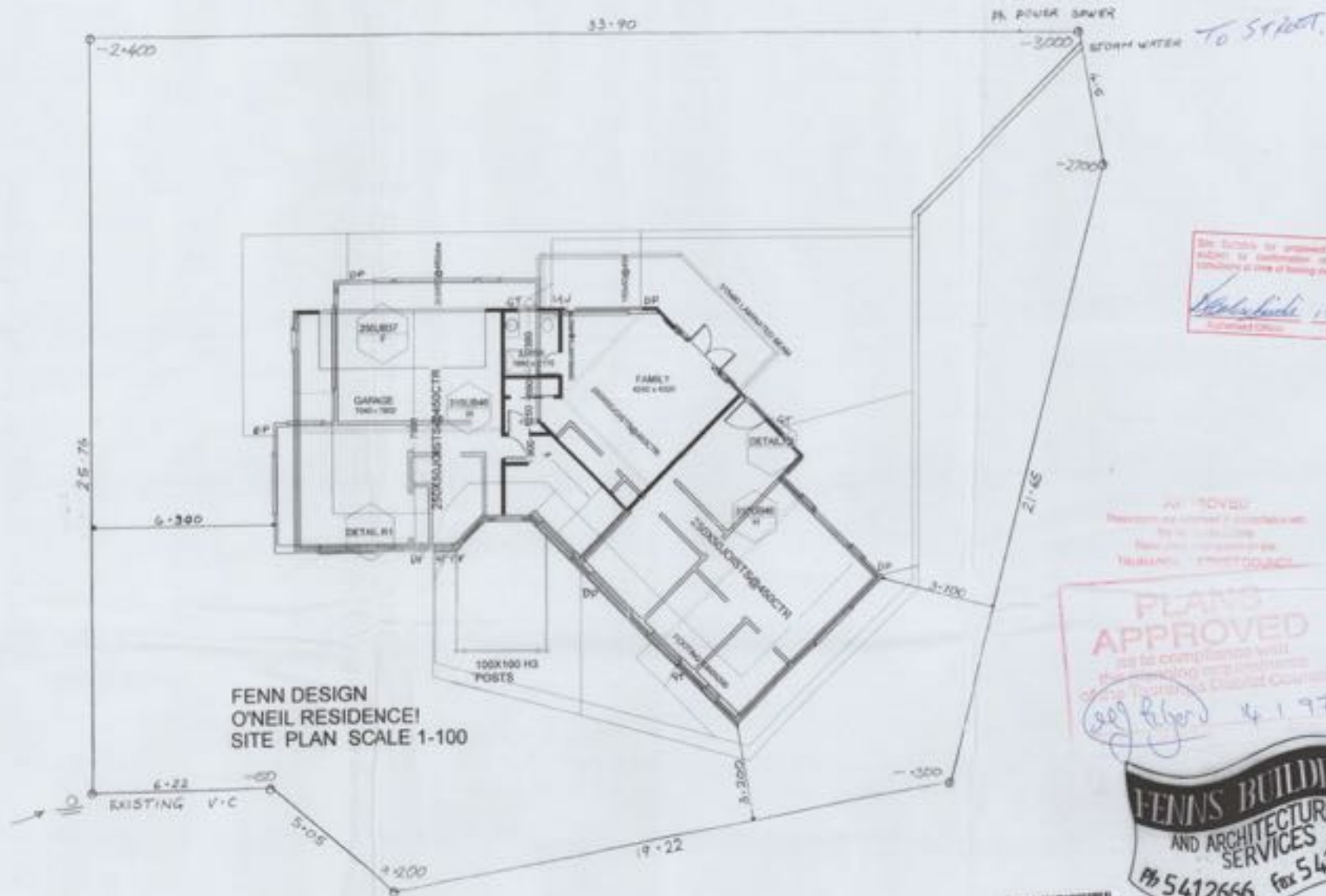
01/10/85

Section A - 1/4" Scale, 1/4" = 1' - 0"

PROPOSED BUILDINGS FOR <b>BRIDGEVALE - COMMUNAL AREA</b> WELCOME BAY JWE TAYLOR <b>RANGING RD</b>	
GRANT L. HARRIS & ASSOCIATES ARCHITECTS PHONE - 83333	
Date: Nov '85 Scale: 1/4" = 1' - 0"	098
DRAINAGE PLAN	P11

DRAINAGE PLAN (FOR PERMIT APPLICATION)

READ IN CONJUNCTION WITH SHEET 1



See Exhibit for proposed building  
subject to determination of ground  
conditions at time of building inspection

*Wanda Smith* 1/1/97  
Architect/Owner

ALL TOWNSHIP  
Requirements are followed in accordance with  
the N.J. Uniform Building Code  
New Jersey Department of Community  
Development, Planning and Construction

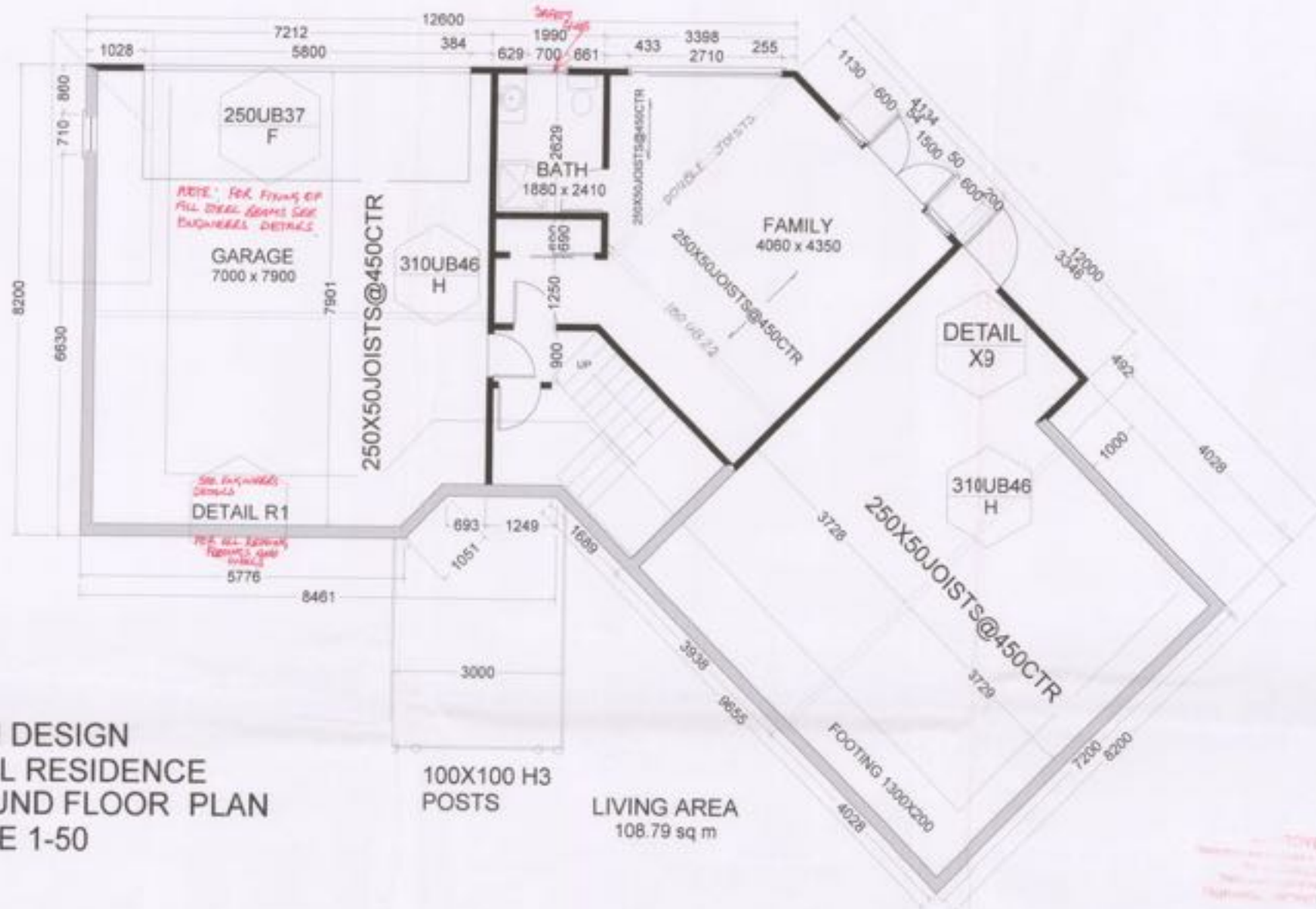
**PLANS  
APPROVED**  
as to compliance with  
the existing zoning ordinance  
of the Township of District Council

*Jeff Roper* 4.1.97

**FENNS BUILDERS LTD**  
AND ARCHITECTURAL  
SERVICES  
Ph 5412666 Fax 5410375

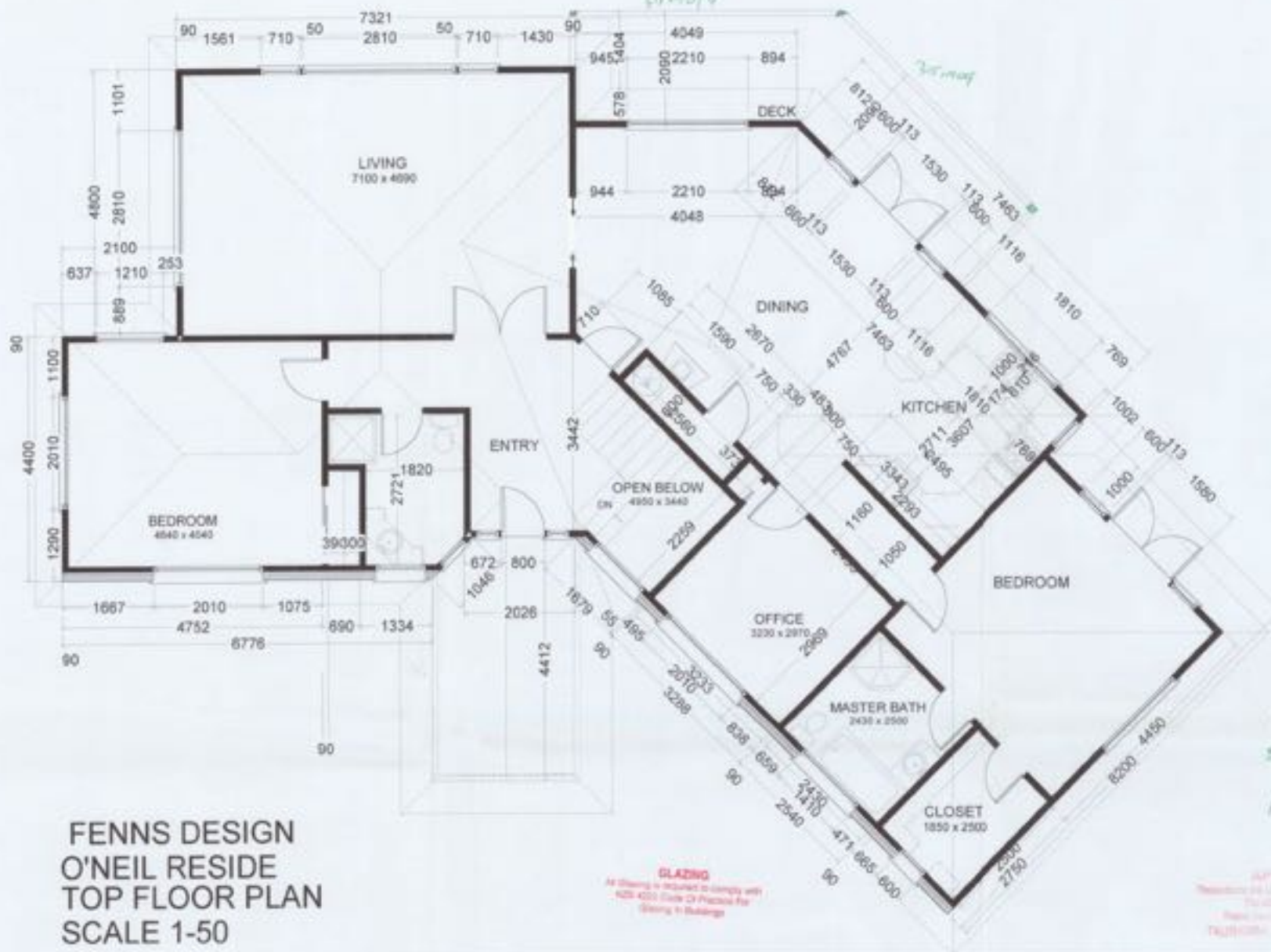




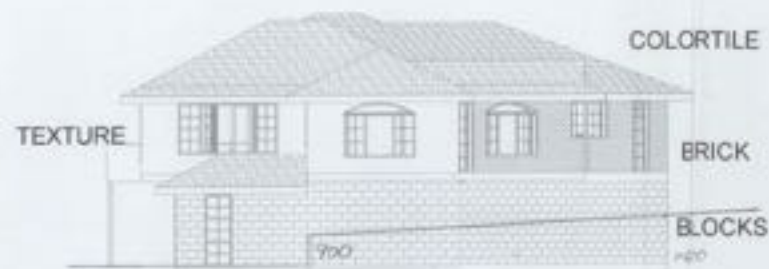


FENN DESIGN  
O'NEIL RESIDENCE  
GROUND FLOOR PLAN  
SCALE 1-50





TCC249111



ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D

FENNS DESIGN



O'NEIL RESIDENCE  
SUNRIDGE  
ELEVATIONS  
SCALE 1-100



MOVED  
Residential and Commercial Building Division  
City of Toronto  
100 Queen Street West  
Toronto, Ontario M5H 2N2  
Tel: (416) 392-3100



# As Built Drainage Plan

Drainage plan for:

Street No: h674

Street Ranginui Rd  
Sunridge Estate

Lot 1.2 F046 D.P. S 62448

Suburb Welcome Bay

Owner Oriel

Type of Building Dwelling

Drainlayer Greg Mays

Date of Inspection 18-4-97

Inspector B. Fisher

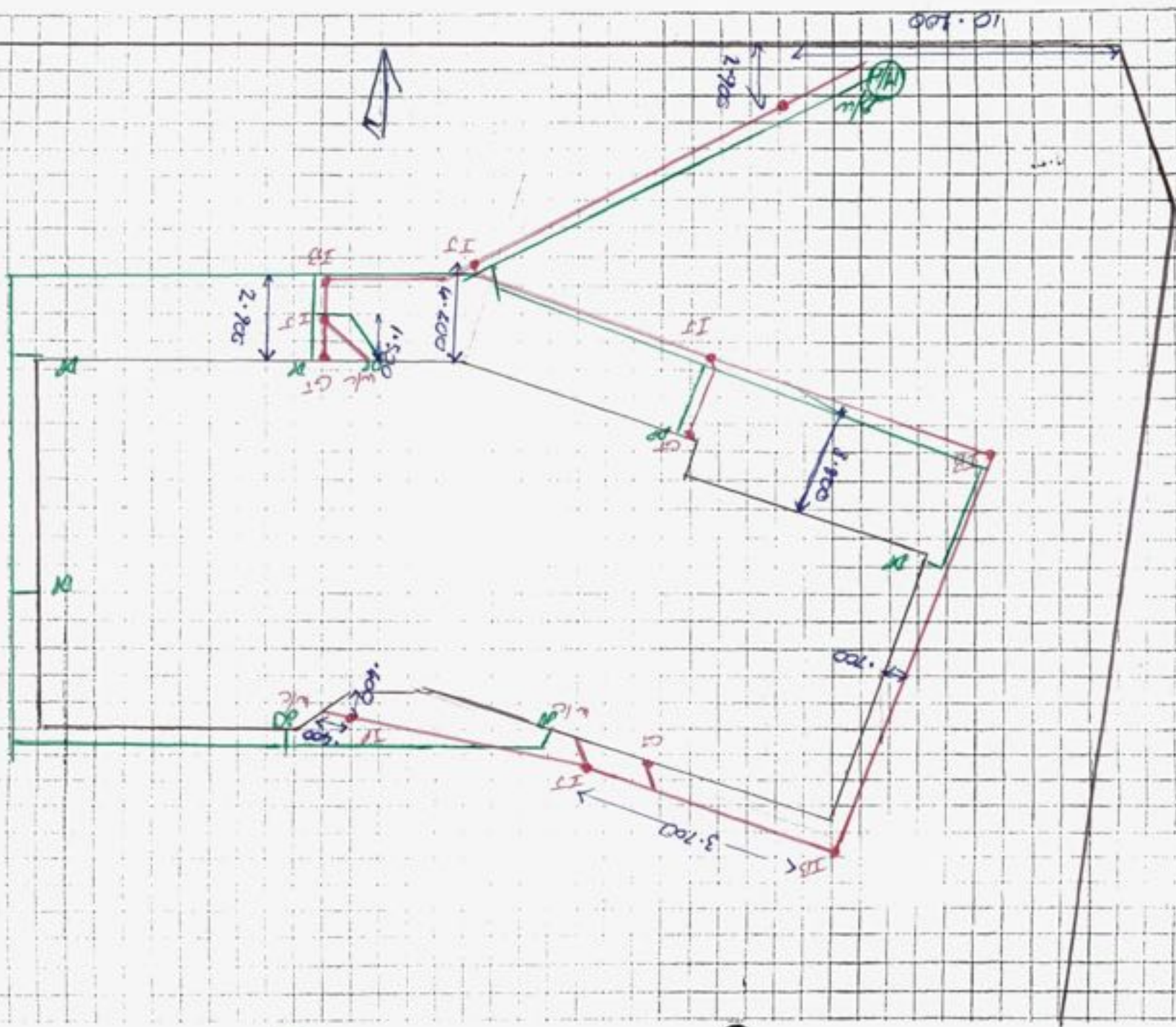
Drainage Permit No. 95/3632

**NOTE: Plan to be drawn in black ballpoint on graph opposite.**

---

## Plan to include:

1. The correct position of the drains in relation to the building and boundaries.
2. The position of the street frontage.
3. Depth of drains at connection point.
4. Both foulwater and stormwater drains to be drawn.
5. Clearly define all inspection openings, with accurate measurements from two points.
6. Clearly define all buildings and boundaries.
7. Refer to example drain plan back page.



CODE COMPLIANCE CERTIFICATE NO: 96/3632

Section 56, Building Act 1991

ISSUED BY **Bay Building Certifiers Ltd**

20 Park Street, P.O.Box 2230 Tauranga  
Ph. 07 578-3427 Fax 07 578-5395

Building Certifier No.9, currently registered and approved as a building certifier for all clauses of the New Zealand building code, without limitation.

Consent Number 96/3632



PROJECT	PROJECT LOCATION
All <input checked="" type="checkbox"/>	Address L674 Ranginui Rd welcome Bay
Stage No. .... of an intended .... stages	
New or relocated building <input checked="" type="checkbox"/>	
Alteration <input type="checkbox"/>	Lot 1&2FDU6
Intended use(s) (in detail)	D.P. S62448
Erect dwelling	
	<b>Owner</b>
Intended Life:	D O'Neil
Indefinite, but not less than 50 years <input checked="" type="checkbox"/>	Tauranga
Specified as ... years <input type="checkbox"/>	
Demolition <input type="checkbox"/>	

This is:

- ☒ A final code compliance certificate issued in respect of all of the building work under the above building consent excluding N.Z. Building Code clauses G9 (Electricity) and G11 (Gas as an energy source)
- ☐ An interim code compliance certificate in respect of part only, as specified in the attached particulars, of the building work under the above building consent
- ☐ This certificate is issued subject to the conditions specified in the attached .... page(s) headed 'Conditions of Code Compliance Certificate No. 96/3632' (being this certificate).

Signed

Name: .....

Position: .....

Wayne Wellington  
MANAGING DIRECTOR

Date: Thursday, 23 November 2000



- Winden

⊗ Smoke alarm



## Installation of Yunca Woodburner

Smoke Alarms to comply with F7 Warning systems (3m from every sleeping space and on exit path) Smoke Alarms will be centrally located in hallway which measures at least 800mm. Smoke alarms will not be installed in any dead air spaces.

No ridge line, purlin, batten, hip or valley will be impacted by this flue penetration.

Address: 6 Sunridge Estate – Lot 1 DPS 62448

Tauranga City Council  
Approved Building Consent Document  
BC331093 - Pg 2 of 3  
11/08/2023 mho1

1st Floor

-  Door
-  Window
-  Ridgeline
-  Hot Water Cylinder
-  Smoke Alarm





## Form 7

### Code compliance certificate

Section 95, Building Act 2004

#### The building

Street address of building: 674L/6 RANGINUI ROAD, WELCOME BAY,  
TAURANGA

Legal description of land where building is located: UNIT 6 DPS 62811

Building name: Main building

Location of building within site/block number: 6 Sunridge Estate, Welcome Bay, Tauranga, 3175

Level/unit number: 0

Current, lawfully established, use: 2.0 Housing: 2.0.2 Detached Dwelling

Year first constructed: 1997

#### The owner

Name of owner: Robert and Rosaleen Shaw

Customer number: 308944

Contact person: Robert and Rosaleen Shaw

Mailing address: 6 Sunridge Estate, Welcome Bay, Tauranga 3175

Street address/registered office: 6 Sunridge Estate, Welcome Bay, Tauranga 3175

Phone number: Landline: 02108797765 Mobile: 02108797765

Daytime: Landline: 02108797765 Mobile: 02108797765

After hours: Landline: 02108797765 Mobile: 02108797765

Facsimile number: No information provided

Email address: accounts@thefireman.co.nz

Website: No information provided

First point of contact for communications with the council/building consent authority:  
The Fireman Ltd ; Mailing Address: 54 Hewletts Road, Mount Maunganui 3116 3116; Phone: 07 5748171;  
Email: consents@thefireman.co.nz

#### Building work

Building consent number: BC331093

Description: Install freestanding Yunca Monte Multifuel solid fuel  
heater with Wetback

Issued by: Tauranga City Council

#### Code compliance

The building consent authority named below is satisfied, on reasonable grounds, that -  
the building work complies with the building consent.

Signature: Steve Pearce

Position: Manager: Building Services

On behalf of: Tauranga City Council

Date: 13 September 2023

# **Land Features and Natural Hazards**



## **General Description of Land Form within Tauranga District**

The land form and geology within Tauranga District have some features which demand particular attention.

### **(a) Minimum Building Platform Levels**

Significant areas of Tauranga District are at risk of flooding through sea level rise, tidal surges within the harbour, storm-wave runup on the ocean coastline and the flooding of streams, sewer drains, ponding areas and overland flow paths in extreme climatic conditions. Council has some “broadbrush” information on many possibly flood prone areas. More detailed investigations by appropriately qualified people may be required to be submitted in support of Resource and Building consents. Building Platforms should be constructed with adequate freeboard above flood levels. Council has adopted a minimum floor level policy. This level is available from Council on request from Council’s Development Engineer. However due to the dynamic nature of the environment and the ongoing investigative work these levels may be reviewed at any time. For the purposes of this clause, a “building platform” is defined as the area of ground within a line 1.0m outside the perimeter of the building proper.

### **(b) Low-lying Land**

There are many areas of low-lying land (often adjacent to the harbour) which comprise soft or very soft foundation conditions. These conditions are characterised by normally consolidated fine grained alluvial sediments (silts and clays) which have been deposited in marine or estuarine environments. In many areas they have been subject to random and non-engineered fillings. The materials are prone to settlement caused by consolidation under even minor loadings. These areas require particular care and appropriate geotechnical investigation and advice prior to development concepts being prepared. Whilst most of the Mount Maunganui/Papamoa area has an underlying sand formation, pockets of peat and “black sand” occur which exhibit poor foundation support qualities. These should be removed from building platforms and roading subgrades.

### **(c) Sloping Ground**

The foundation conditions of the low-lying areas in the District have been described in (b) above. The near surface geology of the higher ground within the District comprises a series of weathered fine grained rhyolitic ashes known locally as the Older Ashes. The Older Ashes consist of the Pahoia Tuffs overlain by the Hamilton Ash (the top of which is known locally as the “chocolate” layer).

Overlying the Older Ashes is a series of coarse friable silts, sands and pumice lapilli which tends to mantle the topography formed within the Older Ashes and are known locally as the Younger Ashes.

On some sloping ground, particularly the present and relic slips adjacent to the harbour, the ashes often have marginal stability and there are numerous examples of past and recent instability. Deep seated failures are generally confined to the steep banks which are or have in their history been subjected to active toe erosion. Development must be set back from the top of such steep banks, with the set back distance being determined by appropriate geotechnical investigations carried out by a Person who has pre-qualified with Council as a Specialist Geotechnical Advisor.

The majority of other failures on modest to steeply sloping ground are shallow failures (involving the top 1m to 3m of soil), but are nonetheless of serious consequence to any building development. Such failures are usually initiated by extreme climatic conditions. Any sloping ground greater than 15 degree gradient should be subject to appropriate geotechnical investigations to determine whether the ground is adequately stable for development.



**WORLEY CONSULTANTS LIMITED**

CONSULTING ENGINEERS, SURVEYORS, GEOLOGISTS & PLANNERS

MLC Bldg, Cnr Spring & Durham Sts, Tauranga,  
P.O. Box 524 Tauranga, New Zealand.  
Telephone (75) 82-485.  
Cables: PALGLAD.  
Offices also in: Auckland, Whangarei, Hamilton,  
Wellington, Christchurch, Fiji & Indonesia.

Your Ref:

Our Ref:

5-932-75

Please reply to:

Date:

October 1984

PROPOSED DEVELOPMENT FOR W.F. TAYLOR

RANGINUI ROAD, WELCOME BAY

REPORT ON GEOTECHNICAL INVESTIGATIONS

prepared for:

Harrison Grierson Consultants Limited  
P.O. Box 1199  
Tauranga

PROPOSED DEVELOPMENT FOR W.F. TAYLOR

RANGINUI ROAD, WELCOME BAY

REPORT ON GEOTECHNICAL INVESTIGATIONS

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3. SCOPE OF INVESTIGATIONS
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5. RECOMMENDATIONS & DEVELOPMENT
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  - 5.2 Stormwater Drainage
  - 5.3 Effluent Disposal
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  - 5.5 House foundations
  - 5.6 Slope Stability
  - 5.7 Gully Improvements
6. CONCLUSIONS

PROPOSED DEVELOPMENT FOR W.F. TAYLOR

RANGINUI ROAD, WELCOME BAY

REPORT ON GEOTECHNICAL INVESTIGATIONS

1. INTRODUCTION

Worley Consultants Ltd were engaged by (ref. 4232 of 16 August 1984) by Harrison Grierson Consultants Ltd to undertake geotechnical investigations at Mr Taylor's Ranginui Road site and to report on its suitability for the proposed residential development.

The field investigation work included an engineering geological inspection of the site, a number of hand augered boreholes, each with adjacent Scala penetrometer tests, and two deeper Dutch Cone penetrometer tests.

Information supplied by Harrison Grierson consisted of a 1:2000 contour plan of the original topography of the site, a 1:500 contour plan of the present topography and a 1:750 concept plan of the proposed development showing building platform areas and accessways.

This report presents a description of the work carried out, the findings of the investigations and makes recommendations for the satisfactory development of the site.

2. SITE DESCRIPTION

The site is on the west side of Ranginui Road; the northern boundary of the site is the City/County boundary. The original topography consisted of a rolling landscape and relatively steep sided gully system which drained to the Tauranga Harbour. The site has been extensively modified by earthworks, most of which were completed about six years ago. The earthworks have involved large scale excavation of soils from the western half of the site and the partial filling of the gully system at the eastern side of the site. The approximate limits of the fill are as shown on Figure 1. The present topography is one of an essentially level upper area to the south and a relatively gently sloping lower area to the north. These two areas are bisected by a system of excavated terraces which have timber or ponga facing walls. The filling has cut off natural drainage from the remnant gully to the east and drainage has been provided by a culvert underneath the fill, discharging in the original gully at the northern boundary to the site. The edges of the filled ground have been left relatively steep. The site is predominantly in lawn, with scrub and bush in the remaining gully areas.

2

On the lower area, there are several areas of the ground surface which remain wet for several days after periods of rain. These areas are approximately delineated on Figure 1.

The general geology of the area comprises the usual sequence of fine grained volcanic tephra which mantle the hinterland surrounding the Tauranga Harbour. These tephra are broadly classified as Younger Ashes, overlying Older Ashes, and these materials are underlain by the sediments known as the Tauranga Beds. At this site however, the geology has been modified by earthworks as generally described above.

### 3. SCOPE OF INVESTIGATIONS

Nine 50 mm diameter boreholes were drilled by hand auger to depths ranging to 6.0 m at the locations shown on Figure 1. The borelogs are presented in Appendix 1. Groundwater levels were measured in the boreholes at the time the investigations were undertaken. The boreholes were left open and further groundwater level measurements were taken on two subsequent occasions. This groundwater level information is presented in Table 1, Appendix 1.

Scala penetrometer tests were carried out at the locations shown on Figure 1, and the results being the number of blows for each successive 300 mm penetration of the ground, are given in Appendix 11.

To investigate the filled ground and the natural ground below the fill, two Dutch Cone penetrometer tests were undertaken at positions 5H and 7H as shown on Figure 1. These tests were carried out using the 20 ton rig from M.W.D. Hamilton District Office. The results are given in Appendix 111.

### 4. RESULTS

#### 4.1 Subsurface Conditions

A wide variety of fine grained soil types were encountered at this site, ranging from plastic clays to silts and sands. With cuts ranging to 6 m deep and fills to 6 m high, the original sequence of soils at the site has undergone extensive modification and interpretation of the geology has thus been made more difficult. It would appear that there are large areas where the Younger Ashes and in places some or all of the Older Ashes have been excavated, leaving the sediments of the Tauranga Beds at or near to the surface. The soils in the areas of fill appear to have been generally well compacted near the ground surface, but the Dutch Cone results indicate that the fill material is softer at depth. The ground beneath the fill is hard. The soils in the areas of deeper cut are generally stiff (for cohesive soils) or medium dense to dense (for cohesionless soils), probably due to pre-consolidation as a result of the excavation. The exception is at borehole positions 4, 5 and 8 where depths of between 2 m and 4 m of the soils are weaker than elsewhere, as demonstrated by the Scala penetrometer results.

In the Welcome Bay area, groundwater conditions vary considerably, and at this site the variations are probably more extreme as a consequence of the alterations to the topography. The groundwater levels in the boreholes were measured at the time of drilling and subsequently after periods of rain and fine weather (see Table 1). With the holes having been left open, the measurements taken on 31 August 1984 probably reflect the ingress of surface run-off water to the boreholes, whilst the measurements taken on 3 September 1984 probably more accurately reflect actual stabilised groundwater levels. It was found that the wet areas of ground referred to above was not indicative of groundwater level at the ground surface. Nevertheless groundwater levels close to the surface were measured at borehole positions 1 and 10.

#### 4.2 Slope Stability

Subsurface conditions and present topography at this site are such that the building platform areas as shown on the concept plan (Drawing no. 4232) have negligible risk of slope instability. It is probable that the earthworks that had been carried out have had an enhancing effect on slope stability, as the filled ground buttresses the natural gully slopes and generally the filled ground itself is in turn buttressed by natural ground. The unsupported fill slope above the culvert outlet in the north gully, while not directly adjacent to proposed building platform areas will require some remedial work to ensure adequate long term stability.

#### 4.3 Foundation Conditions

The Scala penetrometer results and Dutch Cone penetrometer results indicate that the soils at the site both in natural ground and filled ground have bearing capacities satisfactory for residential structures, provided that foundation bearing pressures do not exceed 50 kPa. This maximum allowable bearing pressure is to allow for weaker soils encountered near the surface at several test locations. Conventional footings for timber framed residential structures would not usually exceed 50 kPa, but if heavier loadings are required, specific site investigations and foundation design will be required.

The Dutch Cone Penetrometer results indicate that the ground beneath the fill at positions 5H and 7H (locations of proposed building platform areas) is hard. The fill material itself is hard near the ground surface, but becomes softer at depth. In view of the length of time that the fill has been in place (about 6 years) and the relatively light loading produced by most residential buildings, it is considered that any further settlement of the ground surface will be inconsequential to the completed structures. However, for any proposed structure which may be particularly susceptible to damage from differential settlement, site-specific investigations would be required to determine settlement characteristics of the soils, and the likely effect on the structure.

#### 5. RECOMMENDATIONS FOR DEVELOPMENT

The following recommendations are made for the satisfactory development of the site, from a geotechnical standpoint:

### 5.1 Subsoil Drainage

It is recommended that a subsoil "cut-off" drain be constructed between the toe of the terraces and the proposed accessway. This drain should be "Novaflo" or similar, laid in drainage metal. In addition, similar subsoil drains should be installed in the north gully (see 5.7 below) and in any other areas as required. The outlets of all subsoil drains should be piped into the stormwater system.

### 5.2 Stormwater Drainage

All stormwater runoff from roofs, sealed hardstand areas and accessways shall be collected and piped into the stormwater system. Disposal of stormwater into the ground via soakpits or soakage trenches is unacceptable.

### 5.3 Effluent Disposal

All household effluent shall be disposed of into the sanitary sewer system to be provided as part of the development. Septic tanks and their associated disposal media (eg soakpits) are unacceptable.

### 5.4 Earthworks

Any future earthworks at the site shall be constructed under the guidance of a Registered Civil Engineer.

### 5.5 House Foundations

House foundation bearing pressures shall be limited to 50 kPa. Where this is not practical, site-specific foundation investigations appropriate to the type of structure proposed shall be undertaken, and the foundations designed to suit the ground conditions.

### 5.6 Slope Stability

It is recommended that the location of residential structures be limited to the building platform areas (building envelopes) as shown on the concept plan, drawing no. 4232. These delineated building platform areas are considered to have adequate stability for residential development, subject to all of the recommendations cited in this report having been carried out. It is recommended that the construction of residential structures outside these delineated areas only be allowed subject to a favourable report, prepared by a Registered Civil Engineer experienced in slope stability, being presented to Council with the application for building permit.



### 5.7 Gully Improvements

It is recommended that the height and gradient of the fill slope to the remnant gully at the eastern side of the site should be reduced by excavation at the head of the slope and filling at the toe. The slope should be grassed on completion of these remedial works.

The following further works are required in the north gully area:

- a) extension of the culvert so that it discharges at the northern boundary.
- b) construction of subsoil drains ("Novaflo" or similar, surrounded by drainage metal) to drain present area/s of groundwater seepage and generally in a "ring drain" configuration to provide for possible future seepage.
- c) construction of a culvert headwall structure to provide toe support for further fill to be placed as per (d) below. Rock filled gabion baskets would provide an ideal construction medium for the headwall structure, as they are flexible to accommodate settlement and are free-draining.
- d) filling of the gully in accordance with accepted good earthworks practice to provide final surface profiles as shown diagrammatically in sections AA & BB on Figure 1. The intention is that the east west profile should be gently dished such that the fill provides support to the gully side slopes.
- e) grassing and planting low growing species of shrubs.

### 6. CONCLUSIONS

The investigations have shown that, subject to the recommendations listed above being carried out, the site is suitable for the proposed residential development. Suitable building areas as shown on the concept plan (dwg. no. 4232) have been identified, but foundations for buildings will require specific design should it be necessary to exceed the maximum foundation bearing pressure of 50 kPa. Construction of residential structures outside the delineated building areas can only proceed on favourable specialist advice being accepted by Council.



WORLEY CONSULTANTS LIMITED  
TAURANGA

APPENDIX 1

Borelogs and Groundwater Level Data

## HAND AUGER LOG

CLIENT Harrison Grierson Consultants Ltd BOREHOLE N° 1 5-932-75  
 PROJECT W. Taylor Site DATE 20-8-84 JOB N° GT 897  
 LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 2.8  
 TECHNICIAN B. Anderson

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	VANE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
0.5	V					light greyish black SILTY SAND, soft; moist; non-plastic Grades to light yellowish mottled brown becomes slightly moist Water present in hole - little sample recovery mottled brown SANDY SILT, firm; moist; slightly plastic
1.0						
1.5						light yellowish brown CLAYEY SILT, some SAND; stiff; moist; mod. plastic
2.0						
2.5						dark greyish brown SILTY SAND, stiff; wet; slightly plastic light brownish red CLAYEY SILT inclusion
3.0						End of Bore No further sample recovery possible
3.5						

## REMARKS

Scala results are number of blows per 300 mm penetration.

## HAND AUGER LOG

CLIENT Harrison Grierson Consultants Ltd BOREHOLE N° 2 JOB N° 5-932-75  
 PROJECT W. Taylor Site DATE 20-8-84 SHEET 1 of 1  
 LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 4.2  
 TECHNICIAN B. Anderson

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	VANE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
0.5						Black SILTY SAND, soft; moist; non plastic Grades to light yellowish brown
						light brownish red CLAYEY SILT, firm; moist; sl plastic
						light brownish yellow SILTY CLAY, firm; moist; mod plas
						dark greyish brown SILTY SAND, rare CLAY; firm; moist; slightly plastic
1.0						
						dark greyish brown SANDY SILT; some CLAY; firm; moist; moderately plastic
1.5						
						becoming wetter
2.0						
2.5						
						dark brown SILTY CLAY, stiff; moist; plastic
3.0						
						dark grey SILTY SAND, rare CLAY; firm; moist; moderately plastic (organic smell)
3.5						

## REMARKS

End of Bore 4.2 m no further sample recovery possible.

Scala results are number of blows per 300 mm penetration.

## HAND AUGER LOG

5-932-75

CLIENT Harrison Grierson Consultants Ltd BOREHOLE N° 3 JOB N° GT 897PROJECT W. Taylor Site DATE 20-8-84 SHEET 1 of 1LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 6.0TECHNICIAN B. Anderson

DEPTH (m)	WATER	GRAPHIC LOG	WAVE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
						Black SANDY SILT, soft, moist, non plastic - becomes light greyish brown
						light pinkish white CLAYEY SILT, firm; moist; sl plastic
						light yellowish brown SILTY SAND, firm; moist; mod. plastic
0.5						brownish black SANDY SILT, soft; moist; non plastic
						light greyish brown CLAYEY SILT, rare SAND; soft; moist
						dark brownish yellow CLAYEY SILT, sl. plastic firm; moist; plastic
1.0						
1.5						
2.0						light greyish brown SANDY SILT, stiff; firm; non plastic (powdery)
						light greyish brown SANDY SILT, stiff; wet; non plastic
2.5						
						light brownish yellow CLAYEY SILT, firm; moist; sl. pl
						whitish grey/light yellow (mottled) CLAYEY SILT, stiff; moist; non plastic
3.0						
3.5						- predominantly whitish grey
						no change to end of bore at 6.0 m

## REMARKS

Scala results are number of blows per 300 mm penetration.

HAND AUGER LOG

~~5-932-75~~

CLIENT Harrison Grierson Consultants Ltd BORE HOLE N° 4 JOB N° GT 897

PROJECT W. Taylor Site DATE 21-8-84 SHEET 1 of 2

LOCATION Ranginui Street, Welcome Bay HOLE DEPTH (m) 5.2

TECHNICIAN B. Anderson

[illegible]

## REMARKS

**Soils** results are number of blows per 300 mm penetration.



CLIENT Harrison Grierson Consultants Ltd BOREHOLE N° 4 JOB N° 5-932-75  
GT 897  
PROJECT W. Taylor Site DATE 21-8-84 SHEET 2 of 2  
LOCATION N Ranginui Street, Welcome Bay HOLE DEPTH (m) 5.2  
TECHNICIAN B. Anderson

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	VANE SHEAR STRENGTH kPa	SAMPLE Nº	SCALA PENETROMETER	SOIL DESCRIPTION
4.5						mottled yellow/white fine SANDY SILT, stiff; moist; non plastic
5.0						white SILTY CLAY, firm; moist; highly plastic End of Bore
5.5						
6.0						

Scale results are number of blows per 300 mm penetration.

## HAND AUGER LOG

5-932-75

CLIENT Harrison Grierson Consultants Ltd BORE HOLE N° 5 JOB N° GT 897  
 PROJECT W. Taylor site DATE 21-8-84 SHEET 1 of 1  
 LOCATION Ranginui Street, Welcome Bay HOLE DEPTH (m) 4.2  
 TECHNICIAN B. Anderson/A. Avar

DEPTH (m)	WATER LEVEL	APR. LOG	WANE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
0.5						Black SILTY SAND, soft; moist; non plastic
						light greyish brown CLAYEY SILT, rare SAND: firm; moist; mod. plastic
						grades to SILTY CLAY, some SAND
1.0						light greyish brown SANDY SILT, rare CLAY; soft; wet; moderately plastic
1.5						
2.0						light yellowish brown SILTY SAND, firm; moist; slightly plastic
2.5						becomes wet
3.0						-saturated
3.5						-poor recovery
						End of Bore at 4.2 m

## REMARKS

Scala results are number of blows per 300 mm penetration.

## HAND AUGER LOG

CLIENT Harrison Grierson Consultants Ltd BOREHOLE N° 6 JOB N° 5-932-75  
GT-897  
 PROJECT W. Taylor Site DATE 23-8-84 SHEET 1 of 2  
 LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 5.0  
 TECHNICIAN B. Anderson

DEPTH (m)	WATER LEVEL	GRAV °C LOG	VANE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
0.5						Dark brown SILTY SAND, soft; moist; non plastic - sand becomes coarser
1.0						dark greyish brown SILTY fine SAND, firm; moist; non-plast
1.5						yellowish brown SILTY CLAY, firm; moist; moderately plastic
2.0						dark orange-brown SILTY CLAY, firm; moist; moderately plastic
2.5						
3.0						light orange-brown SILTY SAND, firm; moist; slightly plastic
3.5						light greyish brown SILTY CLAY, stiff; moist; moderately plastic - becomes yellowish brown
						dark brown CLAYEY SILT, some SAND; stiff; moist; moderately plastic

## REMARKS

Scala res: are number of blows per 300 mm penetration.

HAND AUGER LOG

CLIENT Harrison Grierson Consultants Ltd BORE HOLE No 6 JOB No 5-932-75  
GT 897

PROJECT W. Taylor site DATE 23-8-84 SHEET 2 of 2

LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 5.0

TECHNICIAN B. Anderson

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	VANE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
4.5						dark brown SILTY CLAY, stiff; moist
5.0						grades to orange brown SILTY CLAY, very stiff; moist; mod. plastic
5.5						End of Bore

## REMARKS

Scale results are number of blows per 300 mm penetration.  
No water table.

## HAND AUGER LOG

CLIENT Harrison Grierson Consultants Ltd BOREHOLE N° 8 JOB N° 5-932-75  
GT-897  
 PROJECT W. Taylor site DATE 23-8-84 SHEET 1 of 2  
 LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 5.1  
 TECHNICIAN B. Anderson

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	VANE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
0.5						Topsoil yellowish brown SANDY SILT, soft; moist; slightly plastic
1.0						grades to rare CLAY
1.5						becomes an orange-brown SANDY SILT, rare CLAY, soft; moist; slightly plastic
2.0						becomes wet
2.5						light greyish brown SANDY SILT, rare CLAY; soft; moist; mod. plastic
3.0						light greyish brown SILTY SAND, soft; moist; non plastic
3.5						grades to a light greyish brown SANDY SILT, some CLAY; soft; moist; moderately plastic
						grades to a SILTY SAND, moist; soft; non plastic
						becomes wet.

## REMARKS

Scala results are number of blows per 300 mm penetration.

## HAND AUGER LOG

CLIENT Harrison Grierson Consultants Ltd BORE HOLE N° 8 JOB N° 5-932-75  
 PROJECT W. Taylor site DATE 23-8-84 GT 897 SHEET 2 of 2  
 LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 5.1  
 TECHNICIAN B. Anderson

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	VANE SHEAR STRENGTH (kPa)	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
4.5						Light mottled brown CLAYEY SILT, some SAND; firm; moist mottled yellow and brown SANDY pumiceous <u>moderately plastic</u> gravel with some CLAY & rare SILT, firm; moist; slightly plastic
5.0						light brownish yellow fine gravelly SAND, some SILT; stiff; moist; non plastic
						Light greyish brown SILTY SAND, stiff; moist; slightly plastic - light brown
5.5						End of Bore 5.1 m
6.0						

## REMARKS

Scala results are number of blows per 300 mm penetration.



## HAND AUGER LOG

CLIENT Harrison Grierson Consultants BOREHOLE N° 9 JOB N° 5-932-75  
Limited GT-897  
 PROJECT W. Taylor Site DATE 23-8-84 SHEET 1 of 2  
 LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 5.7  
 TECHNICIAN \_\_\_\_\_

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	VANE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
						Black SILTY SAND, soft; moist; non plastic
						Orange CLAYEY SILT, soft; moist; moderately plastic
0.5						Grades to a SILTY CLAY, soft; moist; plastic
1.0						dark greyish brown SILTY SAND, medium dense; moist; non-plastic
1.5						dark greyish brown CLAYEY SILT, stiff; moist; plastic
2.0						
2.5						
3.0						light orange brown CLAYEY SILT, firm; moist; moderately plastic
3.5						becoming stiff

## REMARKS

Scala results are number of blows per 300 mm penetration.

CLIENT Harrison Grierson Consultants BOREHOLE N° 9 JOB N° 5-932-75  
Limited GT 897  
 PROJECT W. Taylor Site DATE 23-8-84 SHEET 2 of 2  
 LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 5.7  
 TECHNICIAN B. Anderson/A. Avard

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	WANE SHEAR STRENGTH kPa	SAMPLE Nº	SCALA PENETROMETER	SOIL DESCRIPTION
4.5						
5.0						Dark orange-brown CLAYEY SILT with some SAND, stiff; moist; moderately plastic
5.5						light yellowish brown SILTY SAND, dense ; moist; non-plastic
6.0						End of Bore

Scale results are number of blows per 300 mm penetration.



# HAND AUGER LOG

CLIENT Harrison Grierson Consultants Limited BOREHOLE N° 10 JOB N° 5-932-75  
GT-897  
 PROJECT W. Taylor site DATE 23-8-84 SHEET 2 of 2  
 LOCATION Ranginui Road, Welcome Bay HOLE DEPTH (m) 5.0  
 TECHNICIAN B. Anderson/A. Avar

DEPTH (m)	WATER LEVEL	GRAPHIC LOG	VANE SHEAR STRENGTH kPa	SAMPLE N°	SCALA PENETROMETER	SOIL DESCRIPTION
4.5						Mottled brown SILTY SAND, firm; moist; slightly plastic
5.0						
5.5						End of Bore 5.0 m
6.0						

## REMARKS

Scala results are number of blows per 300 mm penetration.

W.F. TAYLOR, RANGINUI ROAD, WELCOME BAY

TABLE 1 : GROUNDWATER LEVELS IN BOREHOLES

<u>Borehole</u> <u>No</u>	G.W.L. (m) at time of drilling	G.W.L. (m) 31-8-84 *	G.W.L. (m) 3-9-84 **
1	0.40	0.30	0.60
2	2.50	2.25	2.75
3	5.75	2.40	4.65
4	4.10	4.55	4.60
5	2.30	1.15	1.80
6		3.80	5.00
8		4.80	4.70
9		0.00	2.80
10		0.60	1.10

\* Measurements made after several days of rain.

\*\* Measurements made after several days of fine weather.

APPENDIX II

Scala Penetrometer Test Results

# SCALA PENETROMETER TEST RESULTS

PROJECT TITLE Taylor Site TECHNICIAN A. Avarð

CLIENT Harrison Grierson Consultants Limited

JOB N° 5-932-75

DATE 20 August 1984

TEST DEPTH (m)	1	2	3	3	4	5
0.0 to 0.3	11	12	10	10	7	8
0.3 to 0.6	11	15	5	7	5	4
0.6 to 0.9	3	13	7	9	5	6
0.9 to 1.2	20	13	13	11	4	9
1.2 to 1.5	21	15	20	10	8	7
1.5 to 1.8	23	16	38	12	8	8
1.8 to 2.1	35	16	69	23	8	12
2.1 to 2.4	37	20	suspect object	44	13	15
2.4 to 2.7	33	19		73	12	13
2.7 to 3.0	39	27		80	18	15
3.0 to 3.3	31	28			48	15
3.3 to 3.6	31	23			50	14
3.6 to 3.9	37	27			56	25
3.9 to 4.2	30	35				21
4.2 to 4.5	32	45				27
4.5 to 4.8	41	42				29
4.8 to 5.1	50	44				34
5.1 to 5.4						33



# SCALA PENETROMETER TEST RESULTS

PROJECT TITLE Taylor Site TECHNICIAN A. Avar

CLIENT Harrison Grierson Consultants Limited

JOB N° 5-932-75

DATE 20 August 1984

TEST DEPTH (m)	6	7				
0.0 to 0.3	13	14				
0.3 to 0.6	12	10				
0.6 to 0.9	9	6				
0.9 to 1.2	14	10				
1.2 to 1.5	16	13				
1.5 to 1.8	15	15				
1.8 to 2.1	18	20				
2.1 to 2.4	25	20				
2.4 to 2.7	22	15				
2.7 to 3.0	43	16				
3.0 to 3.3	45	17				
3.3 to 3.6		13				
3.6 to 3.9		18				
3.9 to 4.2		26				
4.2 to 4.5		25				
4.5 to 4.8		32				
4.8 to 5.1		37				
5.1 to 5.4		46				
5.4 to 5.7		42				

# SCALA PENETROMETER TEST RESULTS

PROJECT TITLE Taylor Site TECHNICIAN A. Avar

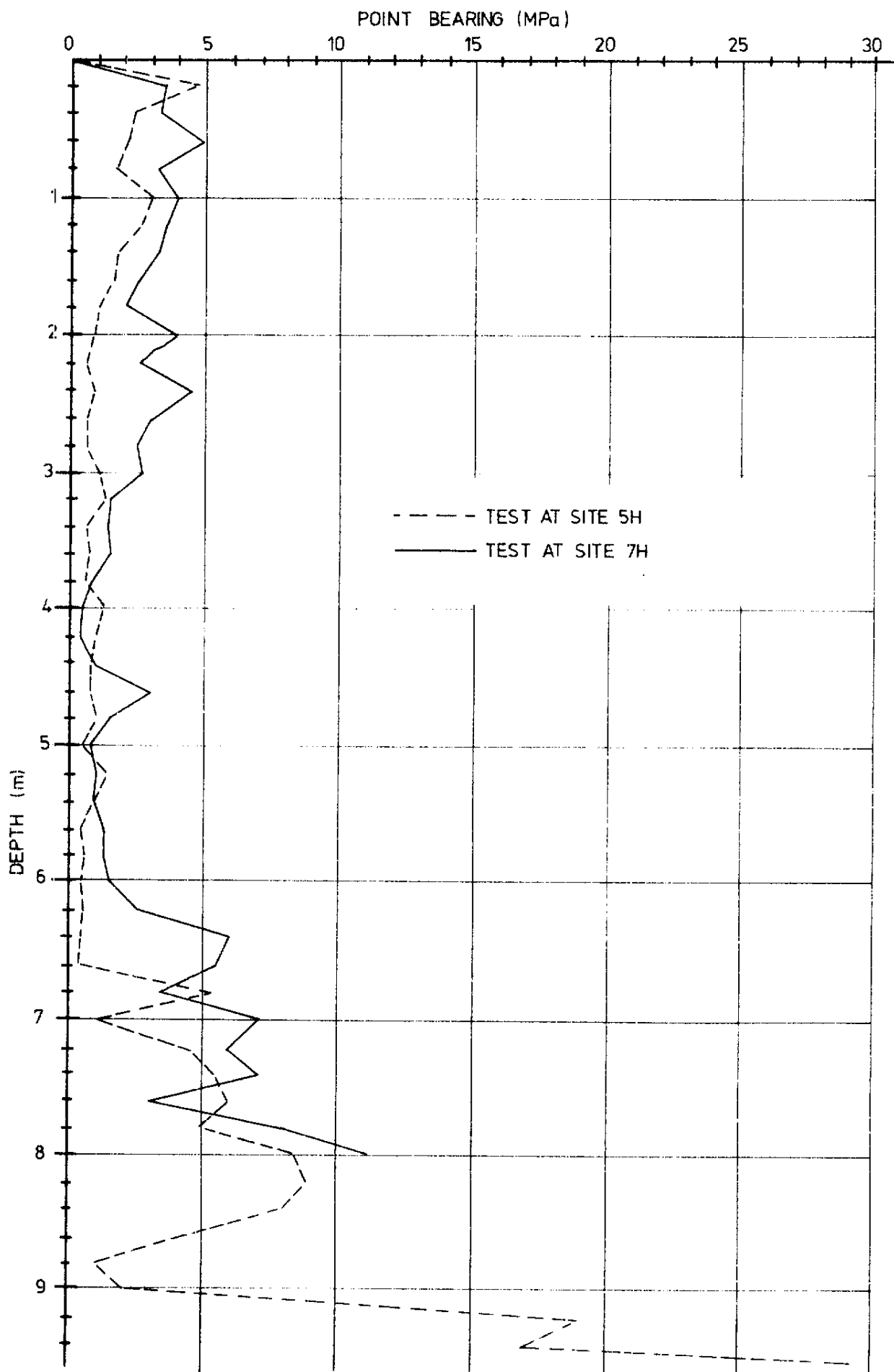
CLIENT Harrison Grierson Consultants Limited

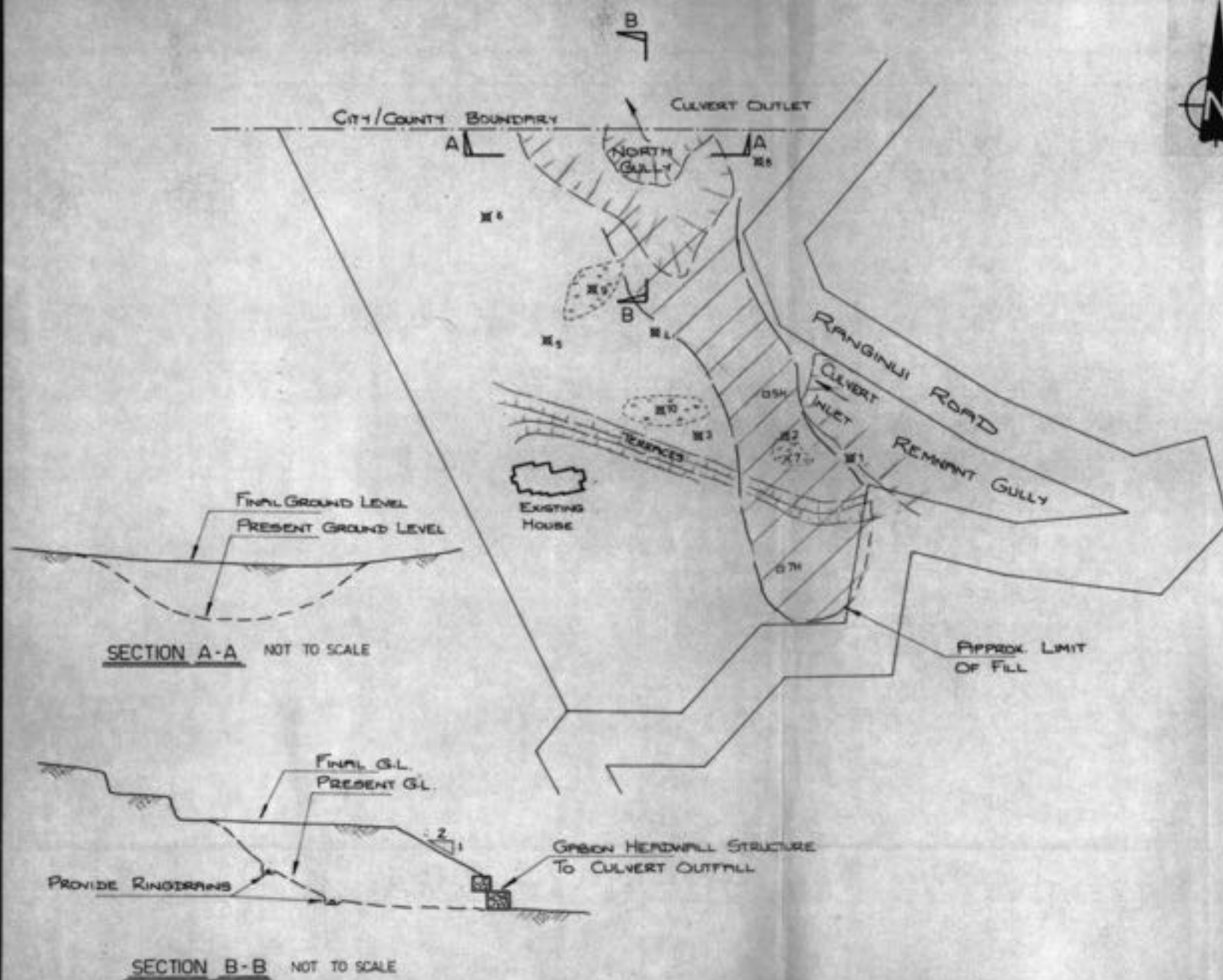
JOB N° 5-932-75/GT 897 DATE 23 August 1984

TEST DEPTH (m)	8	9	10	Bottom 5H	Top 7H	
0.0 to 0.3	5	5	14	36	16	
0.3 to 0.6	8	5	8	11	18	
0.6 to 0.9	5	13	20	7	20	
0.9 to 1.2	6	29	16	13	18	
1.2 to 1.5	4	15	14	22	19	
1.5 to 1.8	4	17	19	17	18	
1.8 to 2.1	5	29	21	23	32	
2.1 to 2.4	5	29	23	14	38	
2.4 to 2.7	4	29	27	8	46	
2.7 to 3.0	6	29	31	13	48	
3.0 to 3.3	5	26	28	19	42	
3.3 to 3.6	7	35	31	21	49	
3.6 to 3.9	15	45	35	29	46	
3.9 to 4.2	9	52	38	31	47	
4.2 to 4.5	40			22	47	
4.5 to 4.8	78			27	52	
4.8 to 5.1				26	48	
5.1 to 5.4				31	39	

APPENDIX III

Dutch Cone Penetrometer Test Results





- NOTES
- O DENOTES BOREHOLE LOCATION
  - X DENOTES SOIL LOCATION
  - (wavy line) DENOTES WET AREA
  - ⊞ DENOTES DUTCH CONE PENETROMETER TEST LOCATION
  - ////// DENOTES FILL AREA (APPROX)

NO	DESCRIPTION	DATE	CHK'D
REVISIONS			
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON THE JOB BEFORE COMMENCING WORK			
DESIGN	DATE	COPYRIGHT ©	
DRAWN		WORLEY	
CHECKED		CONSULTANTS LTD	
DATE PRINTED			

**W** **WORLEY CONSULTANTS LIMITED**  
 CONSULTING ENGINEERS SURVEYORS  
 GEOLOGISTS & PLANNERS

W.F. TAYLOR  
 RANGINUI ROAD  
 WELCOME BAY

GEOTECHNICAL INVESTIGATIONS  
 FIGURE 1

SHEET TITLE  
 SITE PLAN SHOWING INVESTIGATION LOCATIONS

ORIGINAL SCALE	
DRAWING NO.	1
5-932-75	
JOB NO.	SHEET NO.

Location: Street & No Barginui Road Valuation No 6670/185  
Lot 9A DPSI Owner Taylor, W.F.

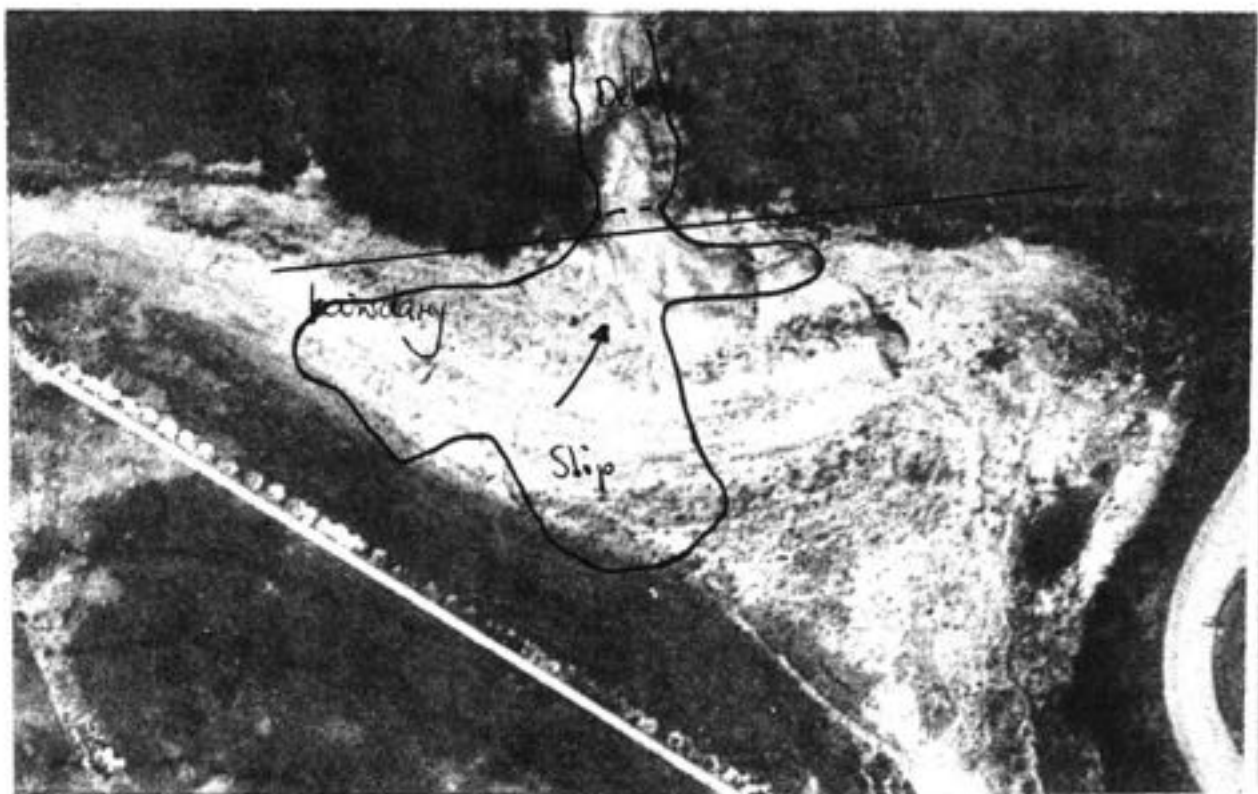
Brief Description of Damage: inspected 20/4/79

Major slip of recently filled material on Taylor property. Big cavernous hole 20-30m wide, 40m long, dropping 15-20m, first vertically then at 30° down to the old bed of the gully. Debris covering gully 1-2m high, 10m wide or more, extending for several hundred metres down to the estuary.

Remedial Works Carried Out to Date:

20/4/79 None

Location Plan: Scale 1:750



Sheet No. 80a  
Photographs

Ranganui Rd,  
Taylor.



Refer to Sheet 80



Sheet No. 806

Photographs

Rangimui Rd,  
Taylor.





# WORLEY CONSULTANTS LIMITED

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Your Ref:  
Our Ref: 5-233-12

Harrison Grierson Consultants Ltd  
PO Box 1199  
TAURANGA

Attention Mr C Aherne

Dear Sir

W.F. TAYLOR, BRIDGEVALE PROJECT, RANGINUI ROAD, WELCOME BAY

At your recent verbal request, we have investigated subsurface conditions at the swimming pool location at this site, as depicted on your drawing no. 4232 E/1, sheet 5.

The drawing indicates that the pool will be located at the boundary between areas of cut and fill. From the original contour information, it would seem that the depth of fill across the pool site will vary from zero to a maximum of not more than 1.0 m. Therefore, from the pool drawings that you supplied to us, the entire base of the pool will be founded in natural ground. At its northern side, the pool wall will be supported by fill, and although the top 0.5 m of the fill is soft, we consider that the fill is adequate to support the pool wall. Notwithstanding this, some minor slumping of the vertical excavation face could be expected during construction, but should this occur, it would only be of nuisance value to the builder of the pool.

We conclude that ground conditions at this site are suitable for the proposed swimming pool.

Thank you for the opportunity to advise you on this matter. The drawings that you supplied are returned herewith.

Yours faithfully  
WORLEY CONSULTANTS LIMITED

*A J Olsen*  
A J Olsen

encl

Please reply to: Mr Olsen  
Date: 19 July 1985  
Harrison Grierson Consultants Ltd - Tauranga

Rec'd 2-7-85  
File 4232

	Seen	Action
Sec	✓	
PWS		
CRA	✓	
DCS		
JSC		



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C.A. Keith BSc (Gas) C Eng FICE MASCE MIPENZ T.M. Batten BE MIPENZ P Eng (BC) R.A. Sic Brown BE Dip TP FIPE NZ MASCE MIEM P Eng P.S. Cole BE (Hons) MIPENZ MCIBS  
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A.I. Cullen BE MASCE MIPENZ A. Cullen BE MIPENZ A. Cullen BE MIPENZ A. Cullen BE MIPENZ A. Cullen BE MIPENZ A. Cullen BE MIPENZ

# Peter W.M. Ewart

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Associated: The Alandale Group  
Sandra Hardie R.E. M.I.P.N.Z.

Our ref: 4278  
22 January 1997

The Manager  
Building  
Tauranga District Council  
Private Bag  
TAURANGA

Attention: Terry Wynyard

Dear Sir

## Foundations to house for O'Neil at Sunridge

We have visited and tested the above Site and discovered that the footings have been dug into a wet layer of sticky older ash below the topsoil.

The site has apparently been remoulded from the original. While in its wet state this material is soft and hardens and shrinks on drying. We anticipate that once the building is replaced on the site the water will come up from the soil and it will return to a damp state with springs.

This natural state has a resistance to a penetrometer of 100 mm / blow and hence an allowable bearing pressure of 37 kpa. This compares with a calculated bearing pressure assuming a depth of 300 mm, a phi of 30 and C of 0.0 of 36.9 kPa

We have the calculated footings using an allowable bearing pressure of 37 kPa as shown on the attached sheets.

### A Summary of findings follows :-

- 1./ Increase the outside non - retaining footings below the timber walls on the front to 400 mm wide from 300 mm. This should be done so the footing is centrally placed on the wall. Use the same reinforcing as designed.
- 2./ All retaining footings shall have the length of toe increased by 75 mm with no increase in steel requirement or length.
- 3./ Retaining footings will satisfactorily carry the vertical loads with their designed width.

Yours faithfully

P.W.M. Ewart

Peter W.M. Ewart  
c.c. Richard Fenn

3 Sheets



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Sunder Hardie B.E. M.L.P.E.N.Z.

Design check to foundations of house for O'Neil at Sunridge Estate - Richard Fean - Builder

4278

22/01/97

## Calculate bearing capacity of footings

- By Terzaghi - Bowles Chapter 4

Phi = 30 degrees extend from 25 30  
 C = 0 kPa Ng = 9.7 19.7  
 Gamma = 18 kN/m<sup>3</sup> diff = 5 5  
 Depth footing = 0.3 m => Ng 19.7  
 Width footing - B = 0.3 m  
 Diameter footing - D = 0.25 m

	Qu	Qu=Qu/3	Qc=Qu/2
Continuous	110.7	36.9	55.4
Square	145.6	48.5	72.8
Round	202.3	67.4	101.2

$a = e^{(0.75 \cdot \pi - \phi/2) \tan \phi}$   $a = 3.350802$   
 $Nq = a^{2/2} \cdot \cos^2(45 + \phi/2)$   $Nq = 22.5$   
 $Nc = (Nq - 1) \cot \phi$   $Nc = 37.2$   
 $Ng = \tan \phi/2 \cdot (Kpy / \cos^2 \phi - 1)$   $Ng = 19.7$

Continuous  $Q_{ult} = C \cdot Nc + Q \cdot Nq = 0.5 \cdot B \cdot \gamma \cdot Ng$ Square  $Q_{ult} = 1.3 \cdot C \cdot Nc + Q \cdot Nq + 0.4 \cdot B \cdot \gamma \cdot Ng$ Round  $Q_{ult} = 1.3 \cdot C \cdot Nc + Q \cdot Nq + 0.3 \cdot D \cdot \gamma \cdot Ng$ 

Phi	Nc	Nq	Ng
0	5.7	1	0
5	7.3	1.6	0.5
10	9.6	2.7	1.2
15	12.9	4.4	2.5
20	17.7	7.4	5
25	25.1	12.7	9.7
30	37.2	22.5	19.7
34	52.6	36.5	36
35	57.8	41.4	42.4
40	95.7	81.3	100.4
45	172.3	173.3	297.5
48	258.3	287.9	780.1
50	347.5	415.1	1153.2

Q ult (kPa) =	110.7426
Qall = Qult/3 = kPa	36.91
Qcap = Qult/2 = kPa	55.37
Q ult (kPa) =	145.61
Qall = Qult/3 = kPa	48.54
Qcap = Qult/2 = kPa	72.81
Q ult (kPa) =	202.3476
Qall = Qult/3 = kPa	67.45
Qcap = Qult/2 = kPa	101.17

Loads G roof = 0.40 kPa Q roof = 0.25 kPa Qc roof = 1.00 kN  
 G walls = 0.70 kN/m  
 G floor = 0.50 kPa Q floor = 1.50 kPa Qc floor = 1.8 kN  
 G walls = 8.64 kN/m  
 G subf = 1.28 kPa Q deck = 2 kPa

Footings at outside G =  $0.4 \cdot (8.2/2 + .60 + .7 + 7/2 \cdot .5 + .7 + 1.28)$  6.31 kN/m x 1.2 = 7.57 kN/m  
 Q =  $7/2 \cdot 2 + 2/2 \cdot 2.5$  9.5 kN/m x 1.6 = 15.2 kN/m  
 Total = 22.77 kN/m  
 kN/m

Below walls G = 6.31 G x 1.4 = 8.83 400 22kPa  
 G x 1.2 = 7.57 width, mm Pressure  
 Q9.50 x 1.6 = 15.20  
 12G+16Q Total 31.61 400 79kPa  
 12G+.8Q Total 15.17 400 38kPa

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Sandra Harder & E. H. P. E. R.

4278.....

22/01/97

**Cantilever retaining walls**

Hstem-m	2.4	Ldctsoi	13.29
phi =	30	M.rcctsoi	10.63
beta =	0	LdsurkN	1.73
K <sub>a</sub> =	0.307	M.fr sur	2.08
Gamma	16	Tot.H.kd	15.02
Sur-kPa	2.5	U <sub>H</sub> .kd x 1.6	24.04
		Tot. M.	12.71
		U <sub>H</sub> M x 1.6	20.34
		Ldactsup	0.846
		LdMrcfbas	15.60
		LdMsurbas	1.88

**Check sliding of wall**

phi =	30	Ti dbasla	17.48
k p =	3.33	WT kN =	30.19
gamma =	16		
		FPonftg	2.40
D2slbcgd	0	[kp*gamma*H <sup>2</sup> /2]	
D3keydep	0.1	Fricfbas	11.68
H2D1+2+3	0.3	TotW*.67*tan phi	
		TotResis	14.07
		FoSslide	0.81

**Design to base retaining wall**

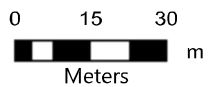
D1-slabm	0.2	Hstem+D1	2.6
L ftg-m	1.4	Delta	20
t1wstcm	0.2	Totldwa	15.99
t2-Lhoc	0.1	WITLsiDe	5.47
W1wtso	5.47	TotM all	12.71
W2wtwall	10.8	TotM*1.6	19.14
W3a-kPa	7.2	Mrcsoba	13.52
W3=W3a*	10.08	Msurbas	2.44
W4soiovh	3.84	OTM-Mtot	15.96
W Total=	w1+2+3+4	RM frtce	32.86
W T =	30.19		
WT *.9 =	27.17	FoS	2.06
X = [ RM - OTM ] / WT			0.560
c=L/2-X	0.14	L/6 =	0.23
If c < L/6 - O.K.		Sqdistpr	27.0
Max Soil Bearing Press kPa			34.5
Min Soil Bearing Press kPa			8.6
Actual soil press.q=W T/L(1+/-6c/L)			
Rectangular stress WT/2X =			27.0

Delta often taken as 2/3.phi





## Flooding From Intense Rainfall



Scale 1: 1500 @A4



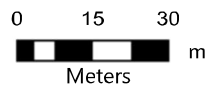
Information shown on this plan is indicative only. The Council accepts no liability for its accuracy and it is your responsibility to ensure that the data contained herein is appropriate and applicable to the end use intended.







### Depth x Velocity 100 Year Event



Scale 1: 1500 @A4








Information shown on this plan is indicative only. The Council accepts no liability for its accuracy and it is your responsibility to ensure that the data contained herein is appropriate and applicable to the end use intended.





# Natural Hazards Key

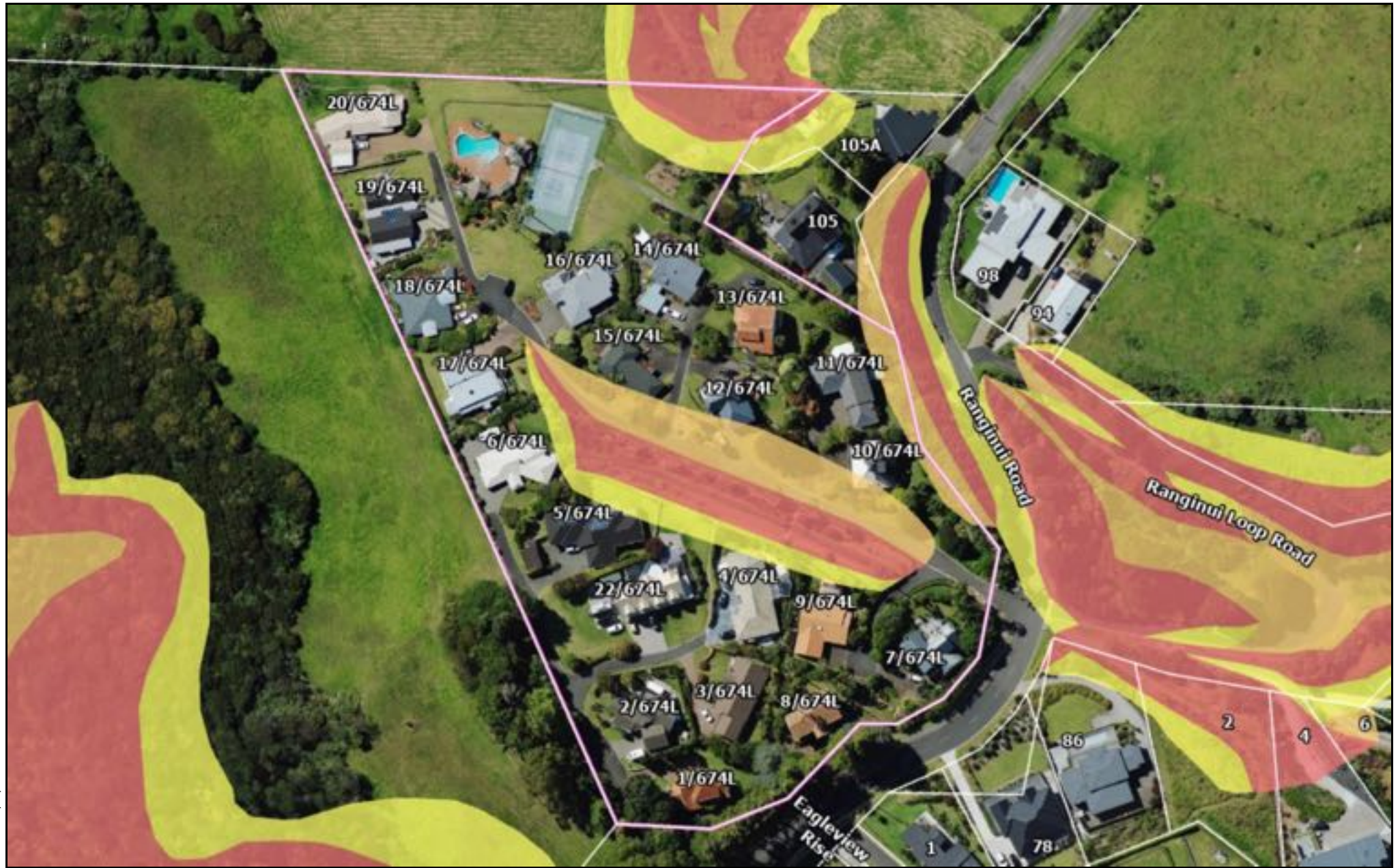
## Flooding From Intense Rainfall

	Floodplain
	Flood Prone Area (Depth 100-300mm)
	Flood Prone Area (Depth >300mm)
	Minor Overland Flow Path
	Major Overland Flow Path

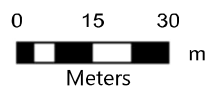
## Depth x Velocity – 100 Year Event

	< 0.4m <sup>2</sup> /s
	0.4 - 0.6m <sup>2</sup> /s
	0.6 - 0.8m <sup>2</sup> /s
	> 0.8m <sup>2</sup> /s





## Slope Hazard Zones Plan



Scale 1: 1500 @A4






Information shown on this plan is indicative only. The Council accepts no liability for its accuracy and it is your responsibility to ensure that the data contained herein is appropriate and applicable to the end use intended.









# Natural Hazards Key

## Slope Hazard Zones

	Failure Zone 2:1
	Regression Zone 3:1
	Runout Zone 4:1

## Relic Slip

	Slope debris lobe showing evidence of recent or current activity
	Possible slope debris lobe
	Probable slope debris lobe
	Interpreted head scarp with poorly defined morphology
	Interpreted head scarp with clearly defined morphology
	Slope