

P28/
SERIES
WELL
#

26/10/93

KING

996457

Meter # 73 ✓

WALDRON

WL 10736 m Pump On ✓

M 02113 m³

PR 0.001 m³/9

Meter # 90 ✓

MLB910391

WOODLANDS

00515 m³

Meter # 74 ✓

KNIGHT

3.768 m

1528.868 m³

057233 h³ (1 Rev = 100 h³)

Meter # 75 ✓

MARRIS

208222 m³

Meter # 49 ✓

MLB840063

water meters

MARRIS

5/10/93

208186 m³ ✓

Meter # 49

5/10/93

JASSENKIA MCB # 0069

3159.14 E ✓

IRADIN

039854.5 — 0752 ✓

Auto CONDERS 12/10/93

WL = 4.618 m @ 0815

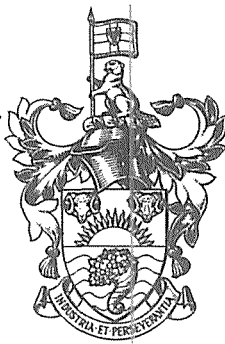
DP # 2 out # 4 in

BAT # 2 " # 4 in

Auto MARRIS 12/10/93

5 m # 1 out @ 953

Data added to Meters
Database



File Ref: MLB 840069
Ask For: Mrs Bembridge

29 July 1994

Marlborough District Council
P O Box 443
BLENHEIM

Dear Sir

MLB: 840069 Water Right: Take Underground Water
Location: Speeds Road Pumping Station, Picton
Purpose: Picton Public Water Supply
Expiry Date: 2 April 1995

The above consent is due to expire and in order to renew same you are required to complete the attached forms for a Resource Consent and return them to this office. Please see "Guidelines for Renewal of Resource Consents" attached.

Under the Resource Management Act 1991 you are required to consult with parties/neighbours who may be directly affected by the use of your consent and you should supply an environmental assessment, notes are attached for that purpose. This should address any problems you may have encountered i.e. such as consistency of flow of water, over the period of the previous permit and any detrimental effects which may have been experienced by yourself or neighbours. If you feel there have been no significant effects please state this.

If you require assistance in determining who is affected or what technical data is required please contact our Technical Adviser, who will be happy to assist you.

Please return your completed application as soon as possible or advise us if it is no longer required.

Yours faithfully

A handwritten signature in dark ink, appearing to be 'PB'.

PAT BEMBRIDGE
RESOURCE CONSENTS OFFICER

@P\O\RM\CONS\MDC1.DOC
mab



Picton Borough Council

HKM:HMJ

67 HIGH STREET, PICTON, NEW ZEALAND
Postal Address: P.O. Box 13
Telephone: (057) 37278

File Reference:

29th September 1986.

Mr. John Whale,
Marlborough Catchment Board,
P.O. Box 145,
BLENHEIM.

Dear Sir,

Water Consumption Figures - 1985/86

As discussed over the phone with regards to Speeds Road water supply, the following are monthly figures in gallons:

1/3/85 - 31/3/85	15,999,865
1/4/85 - 30/4/85	14,140,150
1/5/85 - 31/5/85	12,905,100
1/6/85 - 30/6/85	17,179,600
1/7/85 - 31/7/85	10,931,777
1/8/85 - 31/8/85	2,415,800
1/9/85 - 30/9/85	2,023,900
1/10/85 - 31/10/85	6,500,000
1/11/85 - 30/11/85	12,979,500
1/12/85 - 31/12/85	15,523,000
1/1/86 - 31/1/86	33,207,000
1/2/86 - 28/2/86	25,458,000

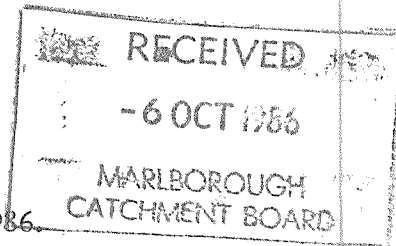
4546 m³/day -
W.R. MAX.

av. 5031 m³/day

Please do not hesitate to contact me if you require further information or further break-down of the figures above.

Yours faithfully,

H.K. MAHARAJ.
ENGINEERING OFFICER.



IBM	2
PAT	/
AWL	2
RKC	2
ROC	BC
JJC	2
JAW	JAW
For Reply	
DATE	
FILE No.	MLB 840069
C'ttee:	

Enquiries to: J.A. Whale

27 May, 1986

Town Clerk,
Picton Borough Council,
P.O. Box 13,
PICTON.

Dear Sir,

**WATER RIGHT MLB 840069
SPEEDS ROAD PUMPING STATION.**

Please note that your Water Right MLB 840069 issued on 2nd April 1985 has a condition 7 which requires that monthly records of water volumes pumped from your Speeds Road pumping station and storage tank are supplied to my Board. As the anniversary of the date of issue of the Right has now past, I would be grateful if you would comply with the condition and forward records to this office.

Yours faithfully,
I.B. MITCHELL,
GENERAL MANAGER.



Per: J.A. WHALE,
WATER RESOURCES OFFICER.

JAW:PAB

MARLBOROUGH

CATCHMENT BOARD & REGIONAL WATER BOARD

31 Parker Street,
Blenheim.
Telephone 89-099.

P.O. Box 145,
Blenheim,
New Zealand.

Enquiries to: J.A. Whale

2 April, 1985

The Town Clerk,
Picton Borough Council,
P.O. Box 13,
PICTON.

Dear Sir,

WATER RIGHTS ISSUE

I enclose Water Right MLB 840069 for the taking of underground water from your Speeds Road wells for Picton public water supply.

This Right is subject to the conditions stated. In particular please note condition 7 which reads as follows:-

7) WATER USE RECORDS

The grantee shall supply the Board with a monthly record of water volumes pumped from the Speeds Road pumping station and from the storage tank into the Picton Borough water reticulation system. The records may be submitted at yearly intervals.

Yours faithfully,
I.B. MITCHELL,
GENERAL MANAGER.

Per: P.A. THOMSON,
CHIEF ENGINEER.

PGM:PAB

Encl.

MARLBOROUGH CATCHMENT BOARD

(Acting as the Regional Water Board)

P.O. Box 145,
Blenheim.

WATER RIGHT NO. MLB 840069

BOARD MINUTE NO. 31247

The Chairman and Members of the Marlborough Catchment Board
(hereinafter referred to as the 'Board'), hereby grants to:

Picton Borough Council,
of P.O. Box 13, Picton


(Hereinafter referred to as the Grantee) a RIGHT pursuant to
Section 21 (3) of the Water and Soil Conservation Act 1967 to:-

take underground water for Picton public water supply.

Legal Description: Sec. 161 Picton Suburban R.D.

according to the Schedule hereto provided such RIGHT is exercised
in accordance with the General Terms and Conditions relating to
the RIGHT attached hereto.

Signed 
Chief Engineer

Signed 
Chairman

DATED THIS Second DAY OF April, 1985

MARLBOROUGH CATCHMENT BOARD
(Acting as the Regional Water Board)

WATER RIGHT No. MLB 840069

S C H E D U L E
=====

ITEM NO.	DESCRIPTION	QUANTITY	DATE OF APPROVAL
1	to take	4546 cubic metres per day	

MARLBOROUGH REGIONAL WATER BOARD

TERMS AND CONDITIONS RELATING TO WATER RIGHT NO. MLB 840069

The Board grants this RIGHT subject to all the relevant provisions of the Water & Soil Conservation Act 1967 and its Amendments, and to any regulations made thereunder. It is the obligation of the Grantee of this RIGHT to comply with all statutory requirements relating to the exercise thereof. The Board imposes the following conditions numbered 1 to 7 to promote the efficient and proper use of water in the public interest and to provide adequately for changing demands for water and for changing trends in water use during the period of this RIGHT.

1) TERM OF RIGHT

The Board grants this RIGHT for a period of ~~ten~~ years until it expires on 2nd April, 1995. However the RIGHT may be cancelled by notice in writing to the grantee of the Board if it is not exercised within 12 months of the date of the granting of the RIGHT.

2) CANCELLATION OF RIGHT IN PUBLIC INTEREST

The RIGHT may be cancelled by not less than 12 months notice in writing by the Board to the Grantee, if in the opinion of the Board the Public interest so requires, but without prejudice to the right of the grantee to apply for a further RIGHT in respect of the same matter.

3.) RECORDS TO BE KEPT

The grantee of this RIGHT shall keep such records as may reasonably be required by the Board, and shall if so requested, supply this information to the Board. If it is necessary to install measuring devices to enable satisfactory records to be kept, the grantee shall, at his own expense, install suitable devices.

4) ACCESS FOR BOARD, STAFF AND AGENTS

This RIGHT is granted subject to the Board or its servants or agents being permitted access at all reasonable times for the purposes of carrying out inspections and measurements.

5) STRUCTURES, CONSTRUCTION & WORKS

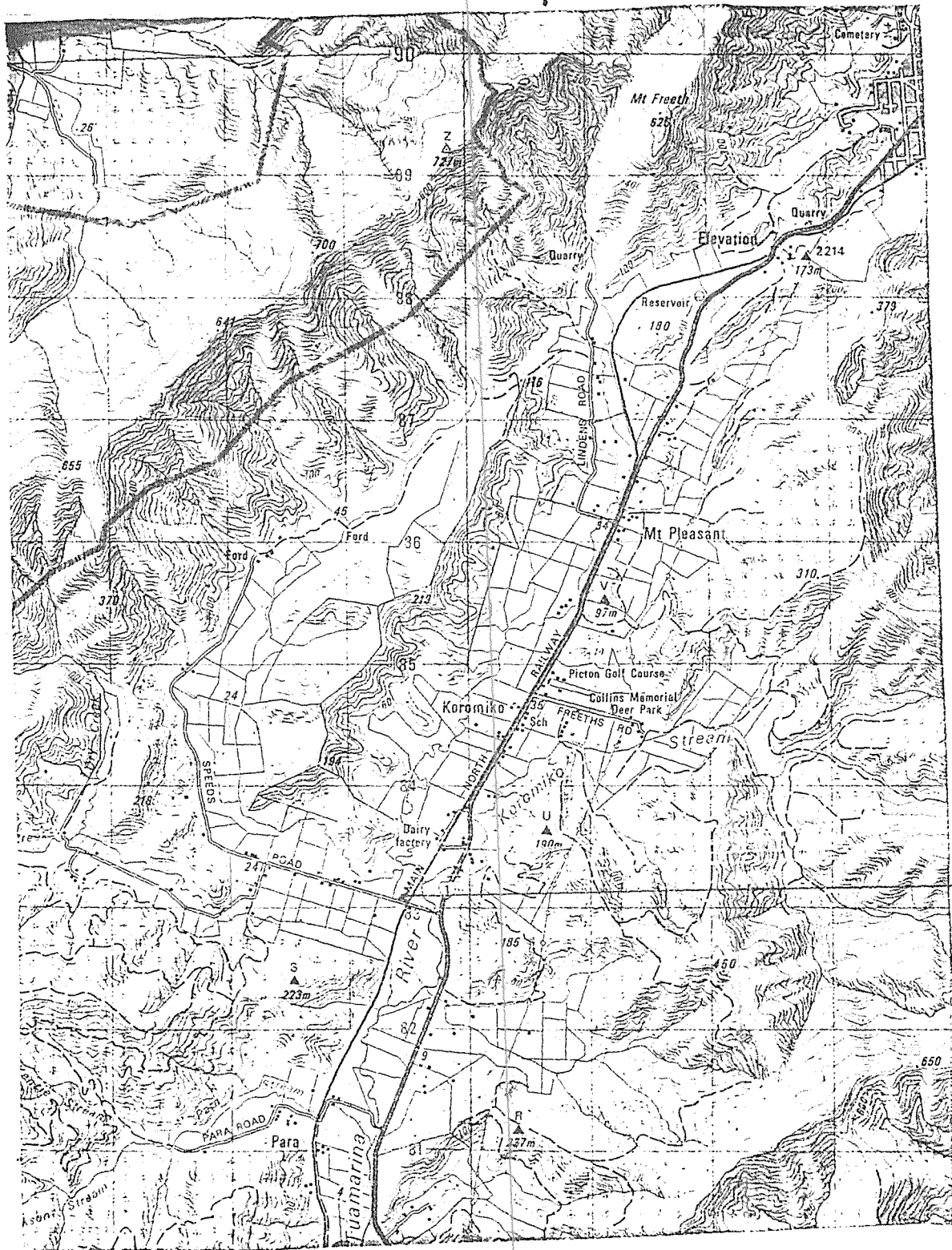
The design and maintenance of any works relating to this RIGHT must be of a standard adequate to meet any conditions of the RIGHT.

6) NOTIFICATION OF CHANGES IN DOCUMENTED INFORMATION

If significant changes or alterations relating to the operation or documentation of this Right occur, the Grantee shall inform the Chief Engineer to the Board by providing written details of the nature and reasons for the changes or alterations.

7) WATER USE RECORDS

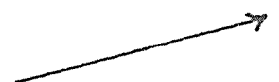
The grantee shall supply the Board with a monthly record of water volumes pumped from the Speeds Road pumping station and from the storage tank into the Picton Borough water reticulation system. The records may be submitted at yearly intervals.



Application MLB 840069 Picton Borough Council
 Sec. 161 Picton Suburban R.D.



Approximate location of extraction point.



21 March 1985

The Chairman,
Marlborough Catchment and Regional Water Board

Dear Sir,

The following is my report on Water Right Application No. MLB 840069.

APPLICATION DETAILS

Name of Applicant:	Picton Borough Council
Address of Applicant:	P.O. Box 13, Picton
Location of Right Required:	Speeds Road pumping station adjacent to the railway crossing.
Grid Ref:	P27:894831
Date Received:	26.11.84
Date Advertised:	22.01.85
Purpose of Right:	To take underground water for Picton public water supply.

Quantity to be taken: 4546m³ per day at a rate of 228m³ per hour.

Objections Received: Nil.

This application is for a replacement of Water Right MLB 720004.

The application is for taking underground water from three wells.

In recent times the District Health Officer has received complaints from Picton residents who object to tastes and odours in the Picton Borough water supply. Water testing has been conducted by D.S.I.R. Christchurch and the Health Inspector has made the result sheets available to the Board. In terms of chemical and organic purity the Health Department find the water satisfactory for human consumption.

The water is chlorinated and subject to pH adjustment by the addition of lime before it enters the Picton Borough reticulation system.

Prior to the original Water Right for the pumping station being granted in June 1972, extensive tests and analysis were undertaken to predict the effect the pumping of 4546m³ per day would have on the Tuamarina River and the Blue Hole spring. Calculations confirmed that in extended periods of low rainfall into the catchment of the Tuamarina River, groundwater abstraction from the Speeds Road bores could affect groundwater recharge of the Tuamarina River and reduce river flow by up to 28%. In the 13 years that the pumping station has been operating however, no adverse effects have been recorded on other water users or the Tuamarina River.

Further tests were conducted in 1978 to assess the recharge of the Tuamarina River and the effect of the pumping station on springs in the vicinity. These tests to a large extent confirmed earlier findings.

The actual useage of water by the Picton Borough Council has not yet been assessed. Flow meters have been fitted to both the pumping station and the outlet to the storage tank. Information from these meters has been requested from Picton Borough Council staff.

The closure of the freezing works at Shakespeare Bay, the development of the Port area and the change in status of Waikawa Bay all have had or may have effect on water demand from the bores. It is desirable that in future a record of actual water usage is available to the Board.

RECOMMENDATION

That a Right be granted for a period of 10 years to take underground water for public water supply at a rate of 4546m³ per day, subject to the following conditions:

1. TERM OF RIGHT

The Board grants this RIGHT for a period of 10 years until it expires on 2nd April 1995. However the RIGHT may be cancelled by notice in writing to the grantee by the Board if it is not exercised within 12 months of the date of the granting of the RIGHT.

2. CANCELLATION OF RIGHT IN PUBLIC INTEREST

The RIGHT may be cancelled by not less than 12 months notice in writing by the Board to the Grantee, if in the opinion of the Board the public interest so requires, but without prejudice to the right of the Grantee to apply for a further RIGHT in respect of the same matter.

3. RECORDS TO BE KEPT

The Grantee of this RIGHT shall keep such records as may reasonably be required by the Board, and shall if so requested, supply this information to the Board. If it is necessary to install measuring devices to enable satisfactory records to be kept, the Grantee shall, at his own expense, install suitable devices.

4. ACCESS FOR BOARD, STAFF AND AGENTS

This RIGHT is granted subject to the Board or its servants or agents being permitted access at all reasonable times for the purposes of carrying out inspections and measurements.

5. STRUCTURES, CONSTRUCTION & WORKS

The design and maintenance of any works relating to this RIGHT must be of a standard adequate to meet any conditions of the RIGHT.

6. NOTIFICATION OF CHANGES IN DOCUMENTED INFORMATION

If significant changes or alterations relating to the operation or documentation of this Right occur, the Grantee shall inform the Chief Engineer to the Board by providing written details of the nature and reasons for the changes or alterations.

7. WATER USE RECORDS

The grantee shall supply the Board with a monthly records of water volumes pumped from the Speeds Road pumping station and from the storage tank into the Picton Borough water reticulation system. The records may be submitted at yearly intervals.

MARLBOROUGH
CATCHMENT BOARD & REGIONAL WATER BOARD

31 Parker Street,
Blenheim.
Telephone 89-099.

P.O. Box 145,
Blenheim,
New Zealand.

11 February, 1985

Mr K. Biss,
District Inspector of Health,
Health Department,
P.O. Box 108,
BLENHEIM

Dear Mr Biss,

PICTON BOROUGH COUNCIL PUBLIC WATER SUPPLY.

I have received an application from Picton Borough Council in regards renewal of the Water Right to take water from 3 bores at the Speeds Road site for public water supply. (Copy enclosed).

I understand that you have been looking into reasons for the tainting of water from the bores and thank you for the copies of water quality analysis.

I would appreciate any comments you may have on the quality of water from the Speeds Road bores and any submissions you may wish to make in regards the issuing of a Water Right. The closing date for statutory objections is 4.00 p.m. on 19th February, 1985.

Yours faithfully,



P.A. Thomson
CHIEF ENGINEER

JAW:PAB

Received	<u>26. 11. 84</u>	Application No.	<u>MAB 840069</u>
Fees Paid	<u>26. 11. 84</u>	Receipt No.	<u>6251</u>
Advertised		Objections	
Board		Received	
Tribunal		Minute Nos.	
Granted		W/R Numbers	

To: The Secretary,
Marlborough Catchment Board,
P.O. Box 204,
BLLENHEIM.

Renewal.

WATER AND SOIL CONSERVATION ACT 1967

APPLICATION(S) FOR RIGHT(S) IN RESPECT OF NATURAL WATER

Pursuant to Section 21 (3) of the Water and Soil Conservation Act 1967

Full Name (Please Print) PICTON BOROUGH COUNCIL

Postal Address P.O. BOX 13 - PICTON

Phone 403

Occupation LOCAL AUTHORITY

Hereby applies for Right(s) to: Take/Discharge/Dam/Divert Water
(Delete those that do not apply)

as specified in the Schedule(s) attached. (Note: A fee of
\$30.00 must accompany each application schedule).

STATUTORY DECLARATION

Under Section 24 (5)

I GRAHAM BARRY DOGGETT
(Name in full)

OF DAVIDSON, AYSON & ASSOCIATES - P.O. BOX 256 BLLENHEIM
(Address)

OCCUPATION DRAUGHTSMAN

Solemnly and sincerely declare that the contents of this application
and the attached documents and schedules, signed by me on the
26th day of NOV 1984 are true and correct. And I make
this solemn declaration conscientiously believing the same to be true
and by virtue of the Oaths and Declarations Act 1957.

[Signature]
Signature of Applicant

Declared at Blenheim this 26th day of November 1984

Before me [Signature] and Regional Water Board (an officer authorised to take statutory
declarations)
S.P. (or Solicitor or Postmaster)

LEGAL DESCRIPTION OF PROPERTY
(Refer to your Rate Demand of Valuation Assessment)

SECTION 161 PICTON SUBURBAN R.D.

NAME(S) OF THE OWNER(S) OF THE PROPERTY

PICTON BOROUGH COUNCIL

NAME(S) OF THE OCCUPIER(S) OF THE PROPERTY

SITE PLAN

Please show site(s) of Taking/Discharge/Damming/Diversion in relation to Stream(s), Drain(s), River(s) and Road(s).
If applicable show property boundaries and names of adjoining property owners.

SEE PLAN 772 / 1 ATTACHED

APPLICATION TO TAKE WATER

(See Notes on Page 2)

FOR OFFICE USE ONLY

Water Right No. _____	Granted _____
Water Use _____	Gallons/Day _____ Litres/Day _____
Board Minute No. _____	Minute Dated _____
Map Ref. _____	Distance Upstream _____

1. SOURCE TAKING UNDERGROUND WATER FROM WELL IN SPEEDS ROP

2. PURPOSE (Tick as Applicable)

a) Irrigation By: Spray _____	For: Crops _____
Flooding _____	Pasture _____
Border Dyked _____	Orchard _____
Trickle _____	Other _____

Approximate area to be irrigated _____

b) Other Uses (State) PUBLIC WATER SUPPLY3. Is this Right required for an Indefinite Period? YES

If not please state period required for _____

4. a) Details of Water Required (Relate to Location by Number on site plan)

	Per Gals	Hour Litres	Hours Per Day	Per Day Gals Litres	Days Per Month	Months Per Year
Total to be taken at any one time						
<u>Location</u>						
1.		228000	24	4546000	31	12
2.				LITRES/DAY		
3.				THIS IS THE COMBINED RATE OF		
4.				EXTRACTION FOR ALL THREE WELLS		
5.						
6.						
7.						
8.						
9.						
10.						

5. Approximate Time of Day Used 24 HOURS

DETAILS OF BORES OR WELLS

a) Existing

	Size	Depth		Size	Depth
1	—		6.		
2	—		7.		
3	300mm ϕ	6.9 M	8.		
4	300mm ϕ	6.7 M	9.		
5	300mm ϕ	6.7 M	10.		

b) Proposed

	Size	Depth		Size	Depth
1.			4.		
2.			5.		
3.			6.		

c) If Being Pumped (State)

i) Pump Capacity _____ Gals/Hour _____ Litres/Hour

ii) Type of Pump _____

d) Lining Material

e) Method of Controlling Flow From Artesian Bore (If Applicable)

f) Construction of New Work Will Start

g) New Work Will be Completed By

NOTES

1. Taking of Water From More Than One Source

Where water is to be taken from Separate Sources, i.e. Different rivers or streams, or from underground, separate Rights will be issued for each source and it is necessary for you to complete a separate application schedule for each source and to pay a fee of \$10.00 per schedule.

2. Metric Conversion

By 1976 all measurements will be in metric units. You may complete your application in either gallons or litres, or both. 100 gallons equals 454.6 litres.

3. Detailed Plans

If major structures are proposed for taking water, detailed plans prepared by a competent person are to be submitted with the application.

Government Analyst
P.O. Box 29-181
Christchurch,
New Zealand.

CHEMISTRY DIVISION
CHRISTCHURCH
PRELIMINARY WATER REPORT

ILAM RESEARCH CENTRE
27 Creyke Rd.
Telephone: 516-019
Telegrams: CHEMDIV

Address correspondence to Government Analyst

Reference: S/1
M2774/1
M2774/2

The Medical Officer of Health
Department of Health
PO Box 647
NELSON

Supply : PICTON
Sampling location : VKB592 UNTREATED WATER HOSE IN TREATMENT PLANT
Sampling location : VKB593 TAP AT TREATMENT PLANT
Taken : 2/12/84 Received : 4/12/84 Reported : 6/12/84

Inspector's No. : VKB592

VKB593

ANALYSIS

Units g/m3, except pH or unless otherwise stated.

pH	6.0	##	6.5	#
pH after aeration	7.6		8.0	
Acidity to pH 8.3 (as CO ₂)	50		23	
Total alkalinity to pH 4.5 as HCO ₃	31		57	
Alkalinity to pH 8.3 (as CO ₃)	NIL		NIL	
Turbidity (NTU units)	0.06		0.23	
Absorbance units (270nm, 1cm cell)	0.003		0.003	
Nitrite Nitrogen	LT 0.001		LT 0.001	
Nitrate Nitrogen	2.5		2.5	
Phosphate (as P)	LT 0.1		LT 0.1	
Sulphate	3.1		3.1	
Bromide	LT 0.05		LT 0.05	
Chloride	11.9		13.0	
Fluoride	0.05		0.05	
Calcium	7.6		12	
Magnesium	3.5		2.9	
Potassium	1.3		1.3	
Sodium	9.2		9.2	
Copper	LT 0.01		0.02	
Iron	LT 0.01		LT 0.01	
Manganese	LT 0.01		LT 0.01	
Zinc	LT 0.01		LT 0.01	
Total hardness (as CaCO ₃)	83		57	
Conductivity at 20 deg C (mS/m)	10.7		14.8	

Analytical results relate only to the sample as received.
The letters LT in the above report mean "less than".

This sample does not comply with the following W.H.O. requirements :
outside desirable range
outside permissible range

The methods of analysis and their precision are available on request.

J. J. Hogan

— DSIR

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

Government Analyst
P.O. Box 29-181
Christchurch,
New Zealand.

CHEMISTRY DIVISION CHRISTCHURCH

ILAM RESEARCH CENTRE
27 Creyke Rd.
Telephone: 516-019
Telegrams: CHEMDIV

Address correspondence to Government Analyst

Reference:

5/1
M2774/1
M2774/2

SOURCE AND TREATMENT DETAILS FOR SOURCE 1 : SPEEDS RD WELL

Source controlled by : PICTON BOROUGH
NZMS1 map reference for source : 243 178
Source type : deep well non-artesian
Catchment conditions -
 Human pollution : not likely
 Animal pollution : not likely
 Treatability : water of constant quality
Treatment operations : chlorination-proportional
Treatment supervision : trained operator, no regular supervision

SUPPLY AND DISTRIBUTION DETAILS FOR PICTON

Public supply controlled by : PICTON BOROUGH
B.O.R. Grading : Ab
Use : human consumption
Community code No. : 140620
Distribution system -
 Condition : fair/good
 Attention : regular
 W.S.P.R. : enforced
 Fire hydrants : <50% ball type
 Pressure : continuous
 Distribution supervision : consulting engineer
 Chlorine testing : daily, consistent residuals
 Bacteria : always <10 coliforms/100ml
 Reservoirs after treatment : covered

N.B. : Please inform Chemistry Division of any change or omission
in the source or supply details.

D.C. Hogan
for Government Analyst

Page 1 of 1

— DSIIR

Government Analyst
P.O. Box 29-181
Christchurch,
New Zealand.

Address correspondence to Government Analyst

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

CHEMISTRY DIVISION
CHRISTCHURCH

ILAM RESEARCH CENTRE
27 Creyke Rd.
Telephone: 516-019
Telegrams: CHEMDIV

Reference:

5/1
M2774/1
M2774/2

SAMPLE DETAILS FOR VKB592

Supply name : PICTON
Inspector's name : UK BISS
Sampling location : UNTREATED WATER HOSE IN TREATMENT PLANT
Grid reference for sampling location : S22 243178
Type of sample : Consumer complaint
Nature of complaint : taste
 odour
Sample of : untreated water
Sample from : plant before treatment
Pipe material at sampling point : asbestos cement
 copper
Pipe material in reticulation system : asbestos cement
Reason for sampling : MUSTY TASTE AND ODOUR

SAMPLE DETAILS FOR UKB593

Supply name : PICTON
Inspector's name : VK BISS
Sampling location : TAP AT TREATMENT PLANT
Grid reference for sampling location : S22 243178
Type of sample : Consumer complaint
Nature of complaint : taste
 odour
Sample of : treated water
Sample from : plant after treatment
Pipe material at sampling point : asbestos cement
 copper
Pipe material in reticulation system : asbestos cement
Treatments in operation : chlorination-auto
 pH adjustment
Free available chlorine at time of sampling : 1.54
Total chlorine at time of sampling : 1.54
Reason for sampling : TASTE AND ODOUR PROBLEM

Government Analyst
P.O. Box 29-181
Christchurch,
New Zealand.

**CHEMISTRY DIVISION
CHRISTCHURCH**

PRELIMINARY WATER REPORT

ILAM RESEARCH CENTRE
27 Creyke Rd.
Telephone: 516-019
Telegrams: CHEMDIV

Address correspondence to Government Analyst

Reference:

5/1
M2774/3
M2774/4

The Medical Officer of Health
Department of Health
PO Box 647
NELSON

Supply : PICTON
Sampling location : VKB594 RESERVOIR
Sampling location : VKB595 SMITH FURNISHERS, HIGH STREET, PICTON
Taken : 2/12/84 Received : 4/12/84 Reported : 6/12/84

Inspector's No. : VKB594

VKB595

ANALYSIS

Units g/m3, except pH or unless otherwise stated.

pH	6.9	#	6.8	#
pH after aeration	8.0		8.0	
Acidity to pH 8.3 (as CO ₂)	11		14	
Total alkalinity to pH 4.5 as HCO ₃	56		56	
Alkalinity to pH 8.3 (as CO ₃)	NIL		NIL	
Turbidity (NTU units)	0.18		0.37	
Absorbance units (270nm, 1cm cell)	0.002		0.006	
Nitrite Nitrogen	LT 0.001		LT 0.001	
Nitrate Nitrogen	2.1		2.1	
Phosphate (as P)	LT 0.1		LT 0.1	
Sulphate	3.1		3.1	
Bromide	LT 0.1		LT 0.03	
Chloride	12.7		12.7	
Fluoride	0.05		0.05	
Calcium	17		17	
Magnesium	3.0		3.1	
Potassium	1.1		1.2	
Sodium	9.4		9.4	
Copper	LT 0.01		0.03	
Iron	0.04		0.04	
Manganese	0.01		LT 0.01	
Zinc	LT 0.01		0.01	
Total hardness (as CaCO ₃)	55		55	
Conductivity at 20 deg C (mS/m)	14.5		14.3	

Analytical results relate only to the sample as received.
The letters LT in the above report mean "less than".

This sample does not comply with the following W.H.O. requirements :
outside desirable range

The methods of analysis and their precision are available on request.

D.J. Hogan
D.J. Hogan

Page 1 of 1

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

**CHEMISTRY DIVISION
CHRISTCHURCH**

ILAM RESEARCH CENTRE
27 Creyke Rd.
Telephone: 516-019
Telegrams: CHEMDIV

Address correspondence to Government Analyst

Reference:

5/1
M2774/3
M2774/4

SAMPLE DETAILS FOR VKB594

Supply name : PICTON
Inspector's name : UK BISS
Sampling location : RESERVOIR
Grid reference for sampling location : S22 268230
Type of sample : Consumer complaint
Nature of complaint : taste
 odour
Sample of : treated water
Sample from : reservoir after treatment
Pipe material in reticulation system : asbestos cement

Treatments in operation : chlorination-auto
 pH adjustment
 aeration

Free available chlorine at time of sampling : 1.42
Total chlorine at time of sampling : 1.42

Reason for sampling : TASTE AND ODOUR PROBLEMS

Lab No. : M2774/S
Taken : 2/12/84
Received : 4/12/84



Government Analyst
P.O. Box 29-181
Christchurch,
New Zealand.

CHEMISTRY DIVISION
CHRISTCHURCH

ILAM RESEARCH CENTRE
27 Creyke Rd.
Telephone: 516-019
Telegrams: CHEMDIV

Address correspondence to Government Analyst

Reference 5/1
M2774/3
M2774/4

SAMPLE DETAILS FOR VKB595

Supply name : PICTON

Inspector's name : VK BISS

Sampling location : SMITH FURNISHERS, HIGH STREET, PICTON

Grid reference for sampling location : 822 294255

Type of sample : Consumer complaint

Nature of complaint : taste
odour

Sample of : treated water

Sample from : reticulation

Pipe material at sampling point : polyethylene

Pipe material in reticulation system : asbestos cement
iron
polyethylene

Treatments in operation : chlorination-auto
pH adjustment
aeration

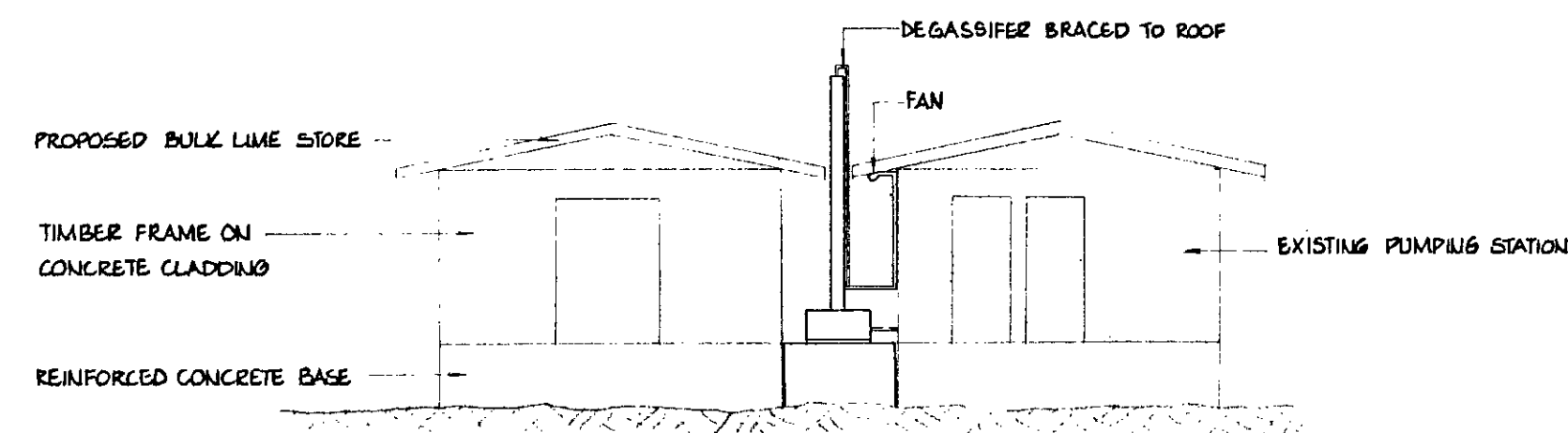
Free available chlorine at time of sampling : 1.44

Total chlorine at time of sampling : 1.46

Reason for sampling : TASTE AND ODOUR PROBLEMS

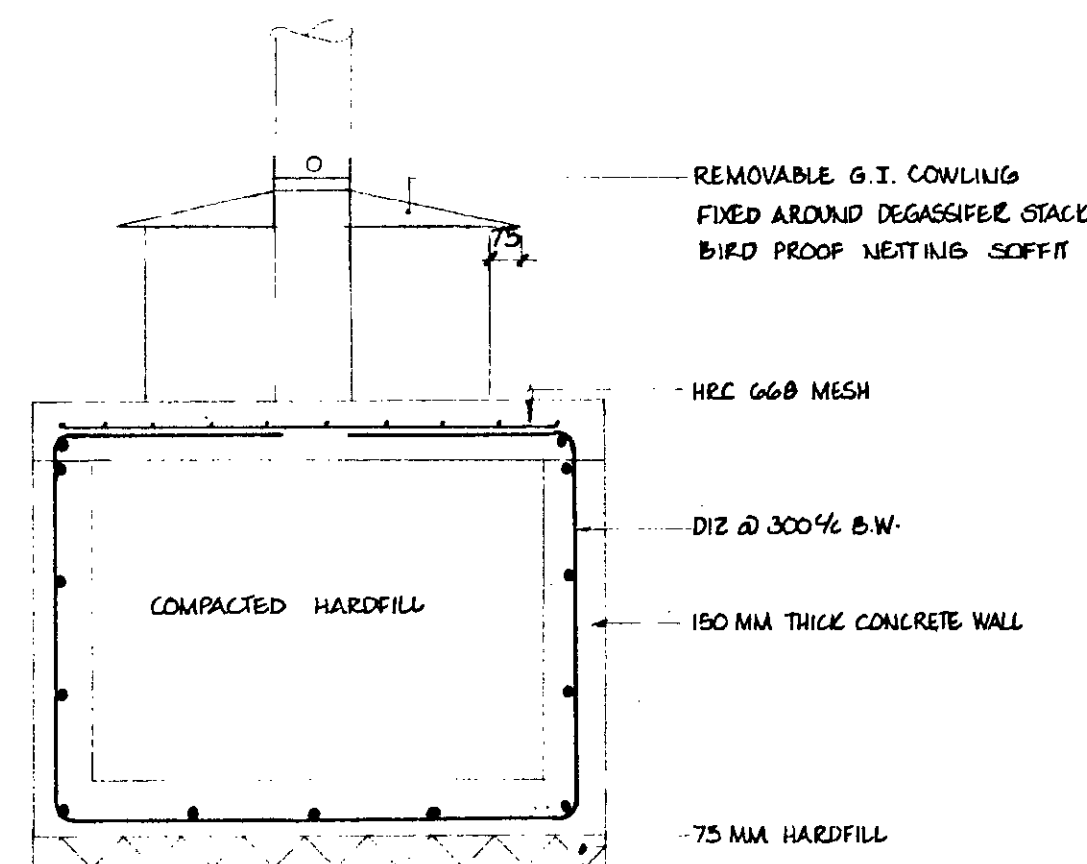
SITE & LOCATION PLAN

Scale 1:100
S.O. 5253



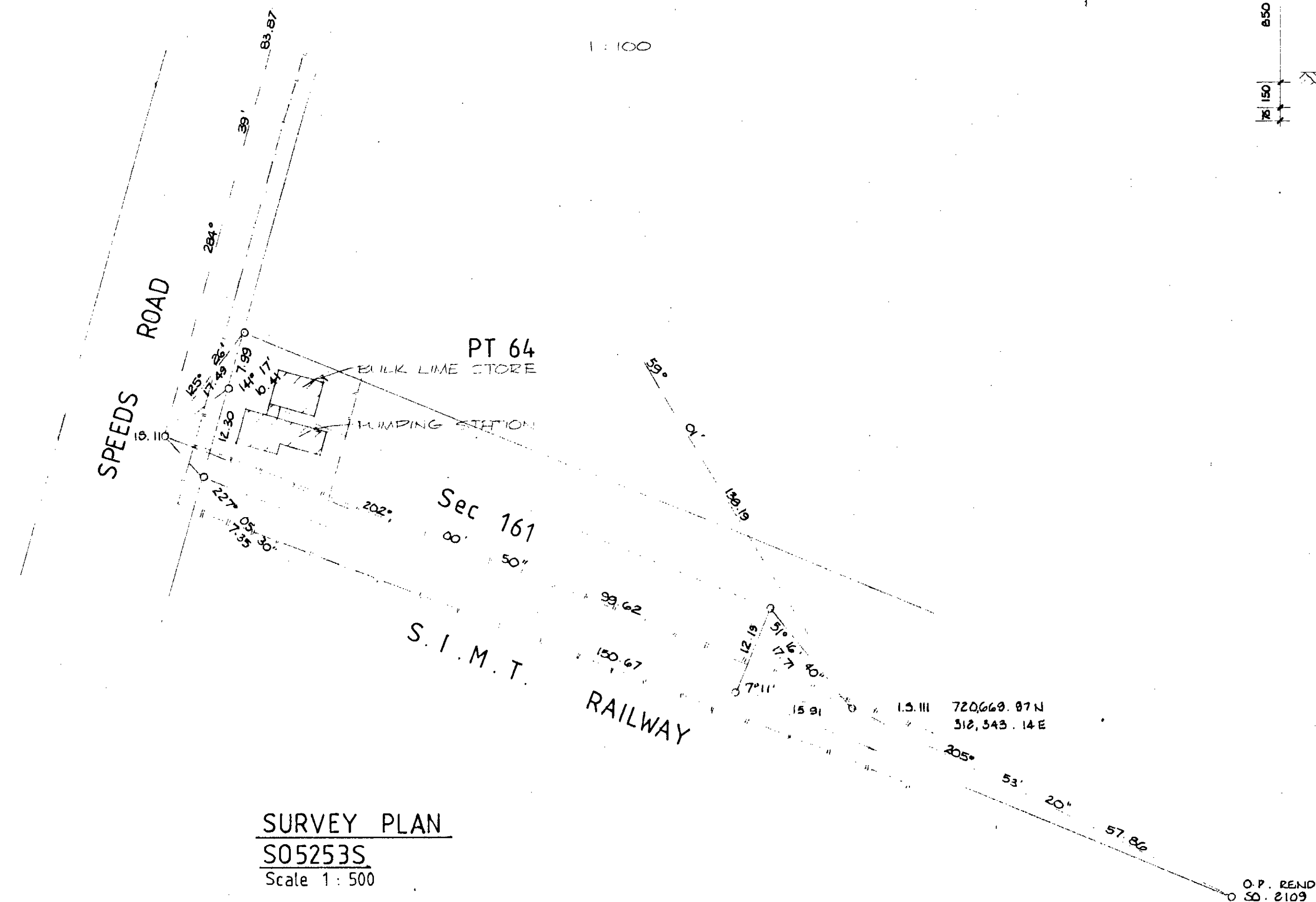
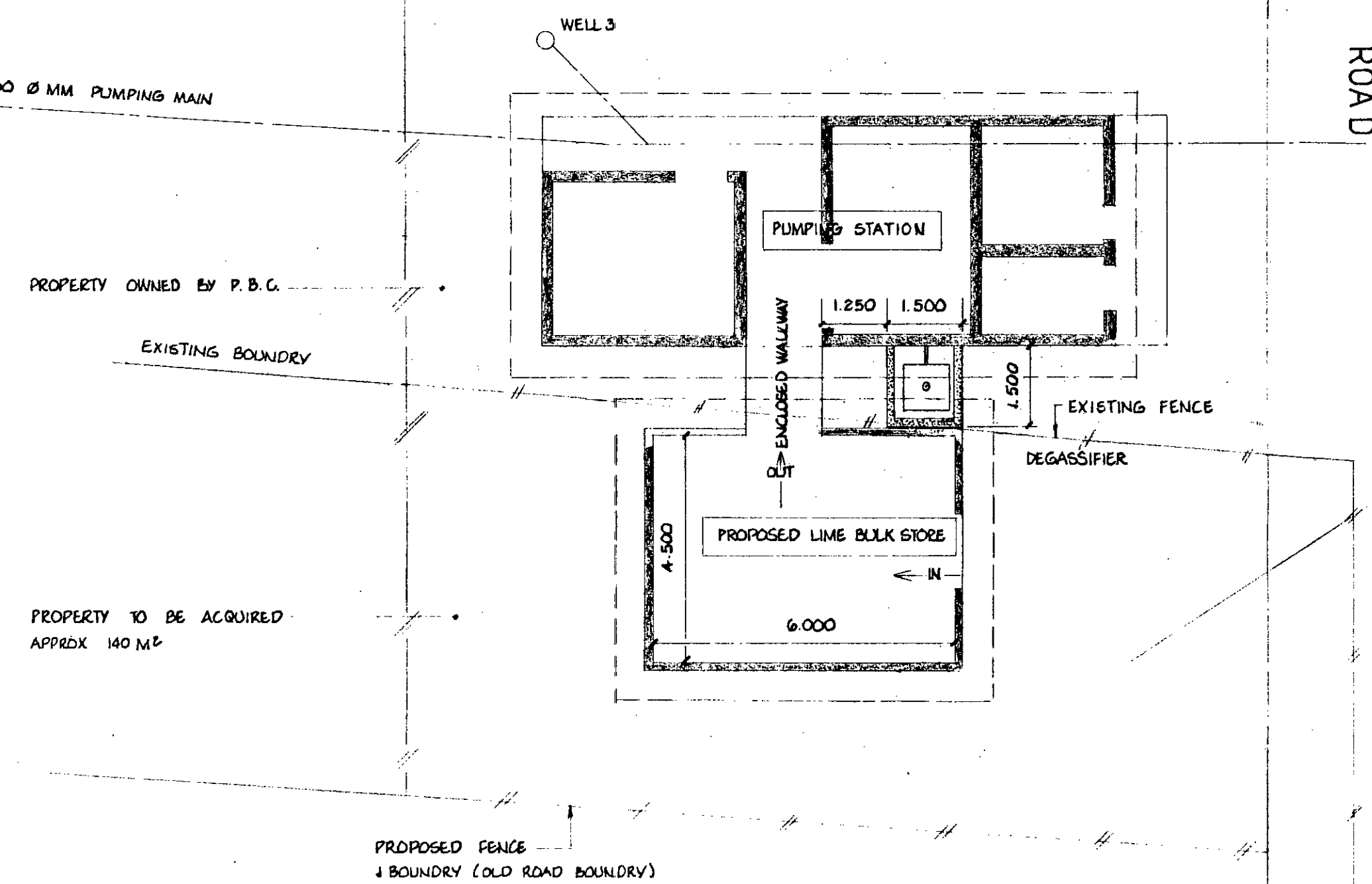
ELEVATION

Scale 1:100



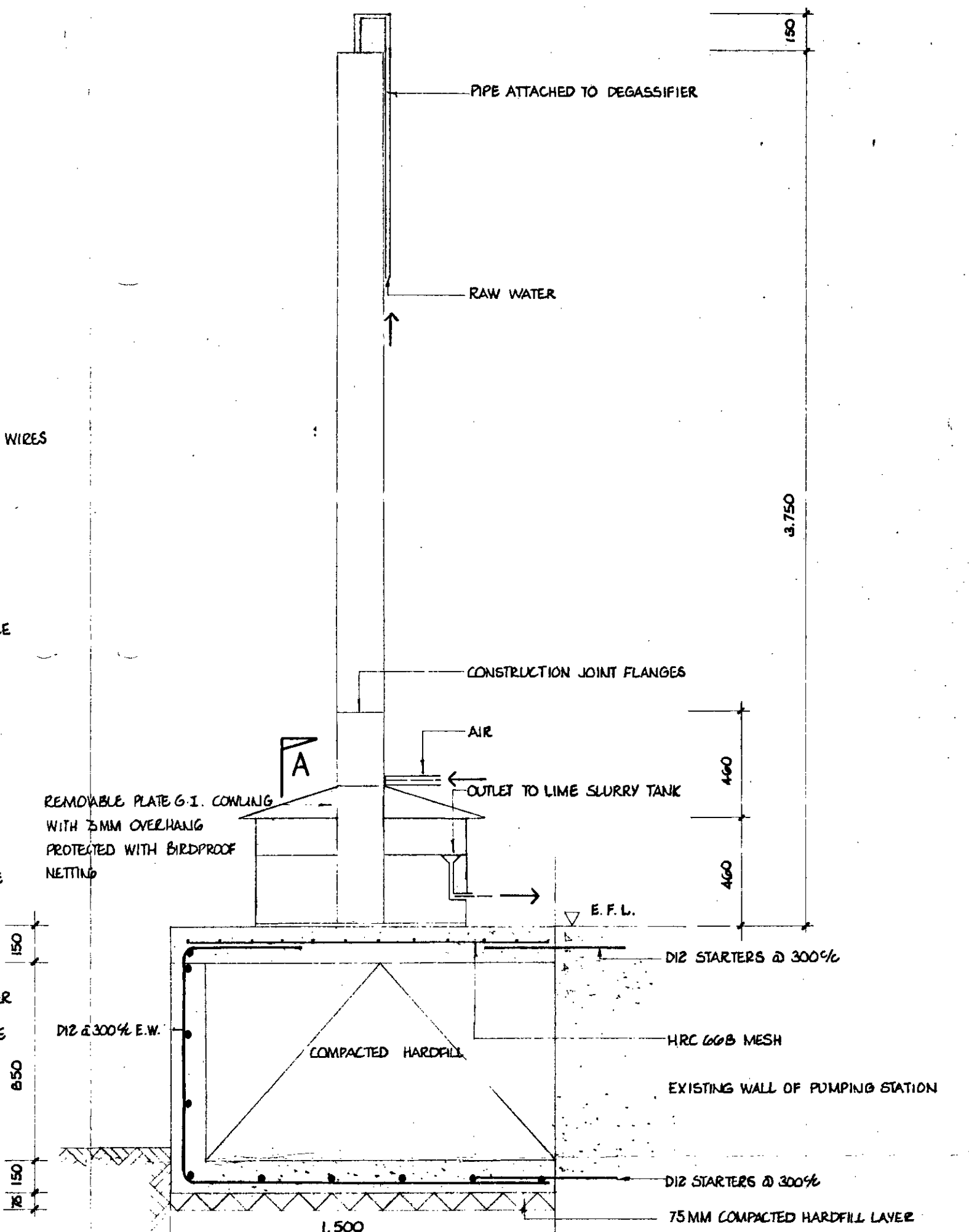
SECTION A-A

Scale 1:20



SURVEY PLAN

S05253S
Scale 1:500



DEGASSIFIER

Scale 1:20

DATE	REVISION	BY
3-21	PUMPING STATION ADDED TO SURVEY PLAN	CB

PICTON BOROUGH COUNCIL
SPEEDS VALLEY PUMPING STATION

PROPOSED LIME BULK STORE & DEGASSIFIER DETAILS

DAVIDSON AYSON AND ASSOCIATES

CONSULTING CIVIL AND STRUCTURAL ENGINEERS
REGISTERED SURVEYORS
35 GROVE ROAD
P.O. BOX 256
BIENHEIM, N.Z.
PHONE 7029

DESIGNED	SCALE	J/N	SHEET	OF
DRAWN	as shown	772	1	1
DATE	ISSUE	2		

