RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA57A/1054**
Land Registration District	**North Auckland**
Date Issued	11 December 1984

Prior References
NA1696/34

Estate	Fee Simple
Area	801 square metres more or less
Legal Description	Lot 307 Deposited Plan 103754

Registered Owners
Darren Lee Benseman as to a 1/2 share
Jodi Helen McMurtrie as to a 1/2 share

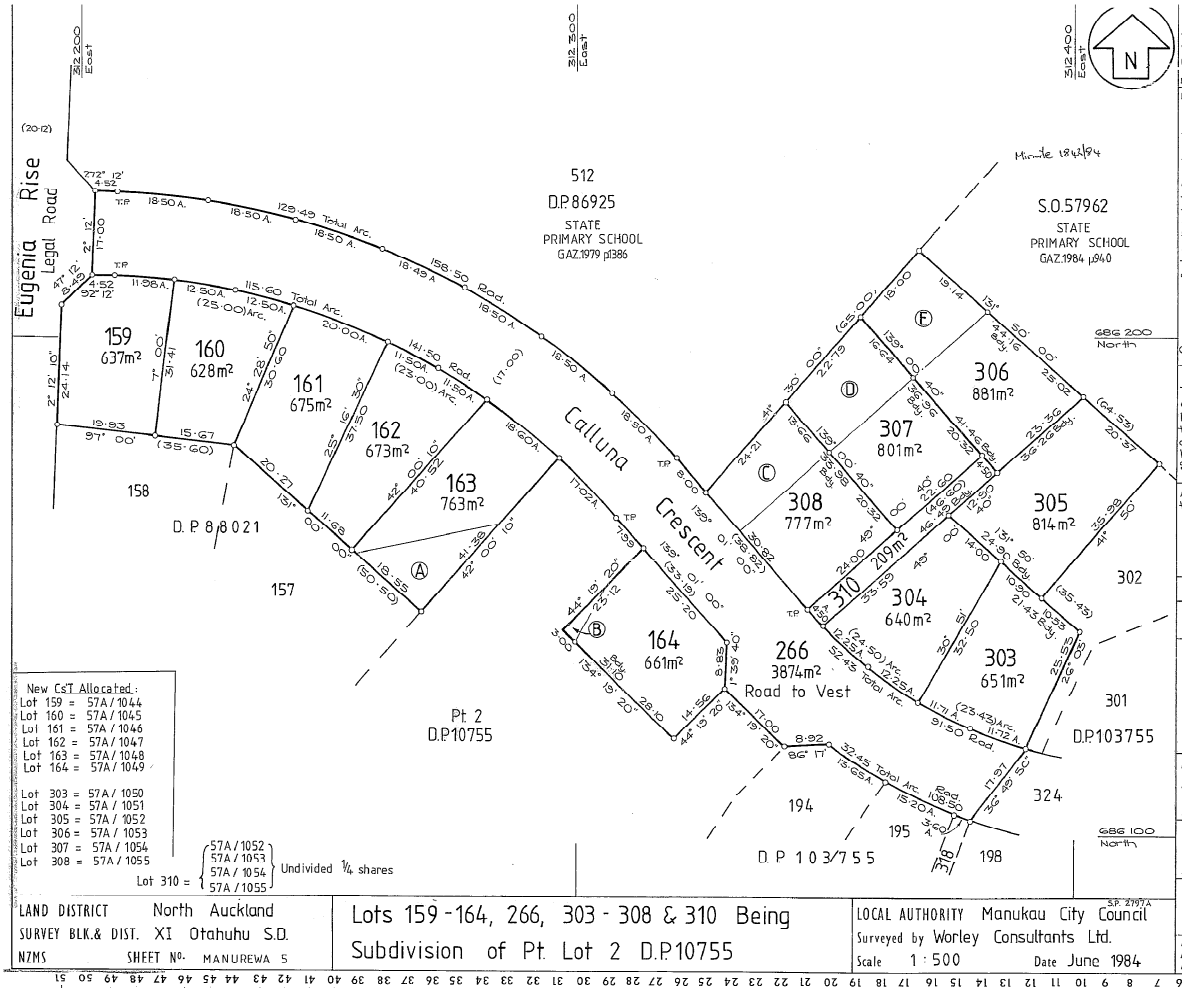
Estate	Fee Simple - 1/4 share
Area	209 square metres more or less
Legal Description	Lot 310 Deposited Plan 103754

Registered Owners
Darren Lee Benseman as to a 1/2 share
Jodi Helen McMurtrie as to a 1/2 share

Interests

Subject to Section 308 (4) Local Government Act 1974
B360509.2 Resolution pursuant to Section 321(3) (c) Local Government Act 1974 - 11.12.1984 at 9.16 am
B360509.9 Encumbrance to The Manukau City Council - 11.12.1984 at 9.16 am
11273703.2 Mortgage to Kiwibank Limited - 2.11.2018 at 3:02 pm

Statement of passing over information
This information has been supplied by the Vendor or the Vendors agents. We cannot guarantee its accuracy and reliability as we have not checked, audited, or reviewed the information and all intending Purchasers are advised to conduct their own due diligence investigation into the same. To the maximum extent permitted by law A T Realty Limited do not accept any responsibility to any person for the accuracy of the information herein.



New CsT Allocated:
Lot 159 = 57A / 1044
Lot 160 = 57A / 1045
Lot 161 = 57A / 1046
Lot 162 = 57A / 1047
Lot 163 = 57A / 1048
Lot 164 = 57A / 1049

Lot 303 = 57A / 1050
Lot 304 = 57A / 1051
Lot 305 = 57A / 1052
Lot 306 = 57A / 1053
Lot 307 = 57A / 1054
Lot 308 = 57A / 1055

Lot 310 = 57A / 1052, 57A / 1053, 57A / 1054, 57A / 1055 Undivided ¼ shares

LAND DISTRICT North Auckland
SURVEY BLK.& DIST. XI Otahuhu S.D.
NZMS SHEET No. MANUREWA 5

Lots 159 - 164, 266, 303 - 308 & 310 Being Subdivision of Pt. Lot 2 D.P.10755

S.P. 21974

LOCAL AUTHORITY Manukau City Council
Surveyed by Worley Consultants Ltd.
Scale 1 : 500 Date June 1984

Approved
The Common Seal of Challenge Properties Ltd was affixed hereto in the presence of:
Director ____ Director ____

Pursuant to a resolution of the Manukau City Council passed on the 26th day of July 1984 approving pursuant to Section 305 of the Local Government Act 1974 this survey plan subject to the conditions of amalgamation set out hereon and certifying that the survey plan is in accordance with the requirements and provisions of the operative district scheme and the proposed new district scheme for the area to which the survey plan relates the common Seal of the Manukau City Council was affixed hereto in the presence of:

Mayor ____
Acting C.E. City Manager ____

Amalgamation Conditions

That Lot 310 hereon be held in 4 undivided one quarter shares by the owners of Lots 305 to 308 inclusive hereon as tenants in common in the said shares and that individual certificates of titles be issued in accordance therewith. See A.625135.

Areas marked Ⓐ Ⓑ Ⓒ Ⓓ and Ⓔ to be subject to restrictive covenants.

This plan is concurrent with D.P.'s 103755 - 103757

Total Area 1.2684 ha.
Comprised in C.T. 1696 - 34 Pt.

I Hamish Alexander Wright of Auckland registered surveyor and holder of an annual practising certificate for who may act as a registered surveyor pursuant to the proviso to section 33 (2) of the Surveyors Act 1966) hereby certify that this plan has been made from surveys executed by me or under my directions, and that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972.
Dated at Auckland this 28th day of August 19 84 Signature H A Wright

Field Book p. Traverse Book p.
Reference Plans
Examined Noren Noll Correct

Approved as to Survey
21/11/84 Chief Surveyor

Deposited this 7th day of December 1984
Land Registrar

File 3-510-20
Received
Instructions

D.P. 103754

DATE OF PHOTOGRAPHY 27 JAN 1985

B 360509.9 ENC

(Approved by the District Land Registrar, Auckland, No. 4394/82)

MEMORANDUM OF ENCUMBRANCE

040034 24924 DT [illegible] 01.00
NEW ZEALAND STAMP DUTY ACTS

Encumbrancer: CHALLENGE PROPERTIES LIMITED

(in this Memorandum called "the Encumbrancer")

Council: THE MANUKAU CITY COUNCIL
(in this Memorandum called "the Council")

WHEREAS:

(1) The Encumbrancer is registered as proprietor of an estate in fee simple in the land described in the *Second Schedule*.

(2) The land is situate in the district of the Council.

(3) As a result of the circumstances disclosed in the *Third Schedule* the Encumbrancer has agreed: —

(a) to grant and make the rent charge with the Council as set out, and subject to the conditions expressed, in the *First Schedule;* and

(b) to enter into the covenants in the Council's favour as set out in the *Fourth Schedule.*

NOW THIS MEMORANDUM WITNESSES that the Encumbrancer ENCUMBERS the land for the benefit of the Council as set out in the *First Schedule* AND COVENANTS with the Council as set out in the *Fourth Schedule.*

IN WITNESS WHEREOF this Memorandum has been executed this 26th day of October 1984.

SIGNED by
THE COMMON SEAL of)
CHALLENGE PROPERTIES)
LIMITED)
)
)
)
)
was affixed hereto in)
the presence of:—)

AUTHORISED OFFICER

COMPANY SECRETARY

CHALLENGE PROPERTIES LIMITED The Common Seal of

Correct for the purposes of the Land Transfer Act 1952

Solicitor for the
Encumbrancee Council

FIRST SCHEDULE
(Terms and Conditions of Encumbrance)

1. The term of this Encumbrance is 999 years commencing from the date hereof subject to earlier determination in the events provided in the *Fifth Schedule.*

2. The rent charge is ONE DOLLAR ($1.00) to be paid to the Council by the 1st day of January in each year if demanded by that date. The first payment if so demanded is due on or before the 1st day of January next succeeding the date of this Memorandum.

3. The covenants of the *Fourth Schedule* shall be enforceable only against the owners and occupiers for the time being of the land and not otherwise against the Encumbrancer and his successors in title.

4. Section 104 of the Property Law Act 1952 applies to this Memorandum of Encumbrance but otherwise (and without prejudice to the Council's rights of action at common law as a rent-chargee):—

   (a) The Council shall be entitled to none of the powers and remedies given to Encumbrancees by the Land Transfer Act 1952 and the Property Law Act 1952; and

   (b) No covenants on the part of the Encumbrancer and his successors in title are implied in this Memorandum other than the covenants for further assurance implied by Section 154 of the Land Transfer Act 1952.

5. Insofar as the exercise of its discretion by the Council in the circumstances set out in the *Third Schedule* may amount to moneys worth provided by the Council within the meaning of Section 3(1)(a) of the Credit Contracts Act 1981 then the moneys worth so provided equates or exceeds the aggregate of the annual rent charge payable by the Encumbrancer during the term hereof.

6. In the event of the Encumbrancer wishing to enter into a mortgage or mortgages of the land to have priority to this Memorandum the Encumbrancer shall be entitled at his own cost in all things to a Memorandum of Priority granted by the Council in favour of any such mortgages or mortgages PROVIDED that the mortgagee thereunder consents to and acknowledges that it is bound by the covenants of this Memorandum for the purposes of Section 105 of the Land Transfer Act 1952.

7. In this Memorandum and its Schedules:—

   (a) "the land" refers to that described in the *Second Schedule* and any part of it.

   (b) "Schedule" refers to the several Schedules attached to this Memorandum.

   (c) Words importing the singular number or plural number shall include the plural number and singular number respectively and words importing the masculine gender shall include the feminine or neuter gender.

THE SECOND SCHEDULE (The Land)

(a) 763m² more or less being Lot 163 on Deposited Plan 103754 being part Clendon's Grant and also being all Certificate of Title No. 57A/1048.

(b) 661m² more or less being Lot 164 on Deposited Plan 103754 being part Clendon's Grant being all Certificate of Title No. 57A/1049.

(c) 777m² more or less being Lot 308 on Deposited Plan 103754 and one-quarter share as tenants in common in 209m² more or less being Lot 310 on Deposited Plan 103754 being parts Clendon's Grant and being all the land in Certificate of Title No. 57A/1055

(d) 801m² more or less being Lot 307 on Deposited Plan 103754 together with a one-quarter share as tenant in common in 209m² more or less being Lot 310 on Deposited Plan 103754 being parts Clendon's Grant and being all the land in Certificate of Title No. 57A/1054.

(e) 881m² more or less being Lot 306 on Deposited Plan 103754 together with a one-quarter share as tenant in common in 209m² being Lot 310 on Deposited Plan 103754 being parts Clendon's Grant and being all the land in Certificate of Title No. 57A/1053.

(f) 907m² more or less being Lot 197 on Deposited Plan 103755 together with a one-half share as tenant in common in 144m² being Lot 318 on Deposited Plan 103755 being parts Clendon's Grant and being all the land in Certificate of Title No. 57A/1059.

(g) 898m² more or less being Lot 284 on Deposited Plan 103757 being part Clendon's Grant and being all the land in Certificate of Title No. 57A/1083.

(h) 782m² more or less being Lot 285 on Deposited Plan 103757 being part Clendon's Grant and being all the land in Certificate of Title No. 57A/1084

ALL the above parcels of land being subject to Fencing Agreement in Transfer 630718 and being all in the North Auckland Land Registration District.

THIRD SCHEDULE (The Circumstances)

Application has been made to the Council for approval of the subdivision shown on Land Transfer Plans 103754, 103755 and 103757 formerly shown on the Scheme Plan recorded by the Council under No. SO 2797 and in support of such application the Encumbrancer has offered to enter into this Memorandum and the covenants of the Fourth Schedule which are desirable having regard to the soil stability of the land.

FOURTH SCHEDULE (The Covenants)

1. THAT the Encumbrancer is, and shall ensure that all those coming to have an interest in the land are, aware of the Foundation and Soil Stability Investigation Report in respect of the land carried out by WORLEY DOWNEY MANDENO LIMITED bearing reference 3 519 20: IMP/MM and dated January 1982 of which a copy is annexed hereto AND shall comply with all recommendations of the aforesaid Report as to any buildings or development of the land to the satisfaction of the Council at all times.

2. THAT the Encumbrancer shall not request from the Council any permit to build nor shall he build any building or structure, including swimming pool, on those areas of land identified by the letters "A" to "H" (all inclusive) on the plans of subdivision attached hereto AND neither shall the Encumbrancer remove any tree or vegetation from the areas so identified except with the consent of the Council.

3. THAT the Encumbrancer shall pay all legal costs and disbursements directly or indirectly attributable to the preparation execution stamping registration enforcement and ultimate discharge of this Memorandum and its covenants.

FIFTH SCHEDULE (Events for Termination

Upon the Council being satisfied that the covenants of the Fourth Schedule have become obsolete unnecessary or no longer enforceable.

WORLEY DOWNEY MANDENO LIMITED
CHARTERED & REGISTERED ENGINEERS
REGISTERED SURVEYORS

47 George St, Newmarket, Auckland.
P.O. Box 4241 Auckland 1. New Zealand.
Telephone: 795-260, 773-227
Telex: NZ 21473 WORDOWN
Cables: PALGLAD
Offices also in:
Wellington, Tauranga, Christchurch, Fiji & Indonesia.

Your Ref:
Our Ref: 3 519 20 : IMP/MM

RECEIVED
17 FEB 1982
M.C.C.
TOWN PLANNING DEPT.

SLOPE STABILITY AND FILL INVESTIGATIONS

TOTARA HEIGHTS SUBDIVISION

STAGE 4

JANUARY 1982

Member of Association of Consulting Engineers in New Zealand • Member of ENEX of NZ Inc

Directors: D.G. Downey BE C Eng MICE FNZIE. M.M. Andrews BE C Eng FICE FNZIE. H.A. Wright MNZIS MPMI. D.J. Chapman MNZIE. D. Nunns C Eng FIMechE FIEE FNZIE AFNZIM. C.A. Kelly BSc (Glas) C Eng FICE MASCE MNZIE. P.S. Cole BE (Hons) MNZIE MCIBS. P.S. Crighton C Eng MICE MNZIE. J.R. Graving MNZIE. J.R. Irving BE (Hons) ME C Eng MIEE MNZIE. I.M. Parton BE (Hons) PhD (Eng) MASCE MASTM MNZIE. E.C. Smith C Eng FIEE MNZIE. J.W. Wilson ME B Com C Eng MIEE MIEEE MNZIE. L.J. Seear C Eng FIMechE MNZIE ANZIM

WORLEY CONSULTANTS LIMITED

CONSULTING ENGINEERS, SURVEYORS, GEOLOGISTS & PLANNERS

47 George St, Newmarket, Auckland.
P.O. Box 4241 Auckland 1, New Zealand.
Telephone: (9) 795-260.
Telex: NZ 21473 WORDOWN.
Cables: PALGLAD
Offices also in: Whangarei, Hamilton, Tauranga
Wellington, Christchurch, Fiji & Indonesia.

Your Ref:
Our Ref: 3 519 20

Please reply to:
Date: 1 October 1984

SLOPE STABILITY AND FILL INVESTIGATIONS

TOTARA HEIGHTS SUBDIVISION

STAGE 4

January 1982

Corrigendum

The following correction to our report should be noted:

Section 5.2.3 Foundations

Replace "NZS4431:1978 Light Timber Framed Building"

with the words

"NZS3604:1981 Light Framed Buildings not requiring specific design".

WORLEY CONSULTANTS LIMITED

Member of Association of Consulting Engineers, New Zealand. Member of ENEX of NZ Inc. Member of Worley Group.

Directors D.G. Downey BE C Eng MICE FIPENZ MRSH M.M. Andrews BE C Eng FICE FIPENZ MRSH H.A. Wright MNZIS MPM D.J. Chapman MIPENZ MRSH D. Nunns C Eng FIMechE FIEE FIPENZ AFNZIM C.A. Keith BSc (Glas) C Eng FICE MASCE MIPENZ T.M. Batten BE MIPENZ P Eng (BC) R.A. St.C. Brown BE Dip TP FIPENZ MASCE MIEM P Eng P.S. Cole BE (Hons) MIPENZ MCIBS R.B. Cotter BE (Hons) ME FICE FIPENZ P.S. Crighton C Eng MICE MIPENZ J.F. Grayling MIPENZ J.R. Irving BE (Hons) ME C Eng MIEE MIPENZ A.M. Parton BE (Hons) PhD (Eng) MASCE MASTM MIPENZ L.J. Sear C Eng FIMechE MIPENZ ANZIM E.C. Smith C Eng FIEE MIPENZ J.W. Wilson ME B Com C Eng MIEE MIEEE MIPENZ A.J. Cranston BE MASCE MIPENZ J. Fogelberg BE MIPENZ J.J. Lorentz BE C Eng MIMechE MIPENZ

SLOPE STABILITY AND FILL INVESTIGATIONS

TOTARA HEIGHTS SUBDIVISION

STAGE 4

1. INTRODUCTION

This report describes investigations carried out at the Totara Heights subdivision within the area shown on Drawing 3-510-20-02 to evaluate stability of slopes and report on ground conditions where compacted fill is to be placed.

The work involved surface inspection for evidence of past instability, and the hand augering of several holes to obtain information on subsurface conditions (Appendix A). Shear vane tests were carried out in each hole, and samples were recovered for laboratory testing (Appendix B).

2. LOCAL GEOLOGY

The area is underlain by Waitemata Group sedimentary rocks which in places form residual soils close to the surface or are overlain by colluvium (i.e. transported soils). Fine-grained alluvium is present along stream courses.

3. PREVIOUS INVESTIGATIONS

An appraisal of the gully in the south-east part of the proposed area of subdivision (bounded by Lots 228 to 256) was

carried out by Tonkin and Taylor in January 1980 (Ref. 4373). Their report states "there is no evidence within the gully area of major deep seated instability" but indicated that "... at the head of the gully ... there is a considerable thickness of weak organic and alluvial soils".

4. RESULTS OF INVESTIGATIONS

4.1 Slope Stability

4.1.1 Surface Inspection

The land is mainly gently to moderately sloping. Evidence of past or recent instability is very minor and restricted to steeper slopes along gullies.

The following lots are situated on flatter ground where no instability is apparent:

159 to 162; 178; 179; 187; 188; 191 to 201; 207 to 227; 230; 233 to 235; 238; 239; 242 to 245; 250 to 252; 257 to 265; 286 to 305.

Of these areas some minor filling is proposed for Lots 178; 184 to 188; 191; and 199 to 201. This will not adversely affect stability provided proper subsoil drainage is installed, in the form of perforated pipes and free-draining back-fill.

The ground at the rear of Lots 163 to 177, and 306 to 308 slopes down to a stream and is covered with mature trees. Minor soil creep and shallow (<1m) slumping are apparent locally due to local oversteepening by the stream.

On the slope at the rear of Lots 181 to 186, a small failure has occurred, to a depth of 1 metre, but there is no evidence of recent movement. Most of the ground on this tree-clad

slope is to be cleared and filled to create larger building sites. Subsoil drainage constructed beneath the filled areas will ensure long term stability.

No evidence of significant instability was seen on Lots 190, and Lots 202 to 206, which back on to a gully with tree clad slopes.

Minor soil creep has occurred along the gully in the south-east of the area, forming part of Lots 228, 229, 231, 232, 237, 240, 241, 246 to 249 and 253 to 256.

In the north-east, a small slope failure has occurred at the rear of Lot 284, and a building line has been imposed on Lots 284 and 285. The stability of this slope was discussed in a previous report (WDM, 1981).

4.1.2 Subsurface Investigations

Four augerholes (7,9,12,13) were sunk, to depths of up to 3.7 metres, to obtain representative information on the nature of ground forming the gully sides. The materials encountered and shear-vane values are given in the accompanying logs (Appendix A).

On Lot 246, Augerhole 9 encountered mostly stiff silty clays of low plasticity. Vane shear strength values suggest insitu Waitmata Group Sediments may be not more than 1.5 metres below the surface. On nearby Lot 249, the Waitemata Group may be slightly deeper, probably about 2.5 metres.

Augering on the slope at the rear of Lot 182 indicated generally similar soils.

4.2 Fills

Nine hand auger holes were sunk to determine subsurface conditions at selected locations.

Augerholes 1 and 2 were located in the compacted fill which is to form Calluna Crescent where it crosses a shallow gully adjacent to Lots 164 and 308.

Undrained shear strengths were found to exceed the requirements for filled ground (as specified in the adjoining Stage 3 development) at depths exceeding 0.5 metres. Similarly, undisturbed samples taken at depths of 0.5 and 1.6 metres indicated low air voids (Appendix B).

Augerholes 3, 4 and 5 are located in the shallow gully behind Lots 183 and 184. It is proposed to build a crib wall approximately 3 metres in height at this location to retain compacted fill placed in the gully. Hard siltstone was encountered at shallow depths. The high undrained shear strengths measured (>175 kPa) indicate that adequate bearing capacity is available in this material.

Augerholes 6, 7, 8 and 9, are located in the swampy depression at the head of the south-east gully and on the surrounding slopes. It is intended to partially fill the head of this gully. Augerhole 6, located in the centre of the swampy area, indicated up to 3 metres of soft silts and clays may have to be removed before placing underdrainage and compacting fill: lesser amounts of material (1-2 m) will require excavation on the sides of the swamp.

Augerholes 10 and 11 are located in and adjacent to a shallow gully which is to be filled. Firm subsoils were penetrated at shallow depths and only minor earthworks will be required before placing underdrains and compacted fill.

5. SITE DEVELOPMENT

5.1 Slopes

While surface inspection and subsurface investigations indicated no major slope instability on any lots, the bush cover on the steeper bush-clad slopes along gullies should be preserved. For this reason, it is recommended that building should not be permitted on these slopes. The "dew-line" of existing mature trees at the top of the slopes provides an adequate building restriction line in most places. This applies to Lots 163 to 177; 179 to 183; 189; 190; 202 to 206; 212; 224 to 226; 228; 231; 232; 236; 237; 240; 249; 253; 255; 256; 262 to 265; 306; 307 and 308.

On Lots 232, 236, 237 and 240, the ground just outside the bush-line is slightly steeper than elsewhere, and it is recommended that the building line restriction be extended, as shown on the accompanying plan (3-510-20-02).

On Lots 284 and 285, an extension of the building line restriction recommended in the previous report on Lots 278, 279, 282, and 283 is advocated.

In the interests of maintaining stability of natural slopes it is recommended that all existing trees be preserved on slopes other than those shown as being cleared in areas of filling.

Undrained shear strengths measured during these investigations indicate that a minimum bearing capacity of 100 kPa is attainable on these sites. Strip and pad foundations as detailed in NZS 3604 Light Timber Framed Buildings, will provide satisfactory foundations for residential development.

5.2 Fills

5.2.1 Earthworks

Only minimal volumes of cut and fill are required to complete the earthworks. Compacted fill will be placed in accordance with NZS 4431:1978 Earth Fill for Residential Development and quality control tests carried out as required to ensure the minimum standards are obtained.

Compaction characteristics will be determined for all materials from borrow areas prior to placing in fills.

Lots 286 to 288 contain previously filled ground which will be reported on separately on by Tonkin & Taylor Ltd who supervised those earthworks.

5.2.2 Subsoil Drainage

Before fill is compacted in natural watercourses, subsoil drainage will be constructed to lead seepage from natural springs away to be discharged into watercourses in a manner not likely to cause erosion.

5.2.3 Foundations

Undrained shear strengths measured on laboratory compacted samples during these investigations indicate that minimum bearing capacities of 100 kPa will be readily attainable. Thus minimum sized pad and strip loadings as detailed in NZS 4431:1978 Light Timber Framed Buildings will provide adequate foundations.

5.2.4 Calluna Crescent Gully Crossing

Field and laboratory tests have shown that the shear strength and air voids percentage of the compacted material placed in this earth fill are within the specified limits for filled ground below 0.5 m depth.

It is recommended that 0.5 metres of fill be removed from the top and sides of the embankment prior to placing further material. Side slopes are to be benched to ensure proper founding. Side slopes of 1 or 2.5 (22^{o}) will allow the embankment to be completed without retaining walls at the culvert inlet and outlet.

6. CONCLUSIONS AND RECOMMENDATIONS

Investigations involving surface inspections for evidence of past instability and augerholes to determine subsurface conditions have been undertaken. The land to be subdivided incorporates mainly gently to moderately sloping ground, although slopes are steeper where covered in native bush along gullies. Evidence of past instability is minor and restricted to these steeper slopes along gullies. Natural ground on all lots is expected to provide a safe bearing pressure of not less than 100 kPa. Where ground has been filled in a controlled manner this ground can also be expected to have a safe bearing pressure of not less than 100 kPa.

The following recommendations are made for site development:

- earthworks required to construct the subdivision be carried out in accordance with NZS 4431:1978 Earth Fill for Residential Development.

- building lines established on lots containing steeper slopes (as shown on Drawing 3-510-20-02) be observed.

- that existing trees be preserved on gully slopes except in areas where earthworks are to be undertaken.

7. LIMITATIONS

Recommendations and opinions contained in this report are partly based upon data from augerholes sunk during these investigations. Inferences about the nature and continuity of subsoil away from the augerholes are made but cannot be guaranteed.

This report has been prepared for the particular project described in the brief to us and no responsibility is accepted for the use of any part of this report in other contexts or for any other purpose.

WORLEY DOWNEY MANDENO LTD

CONSULTING ENGINEERS AND
REGISTERED SURVEYORS

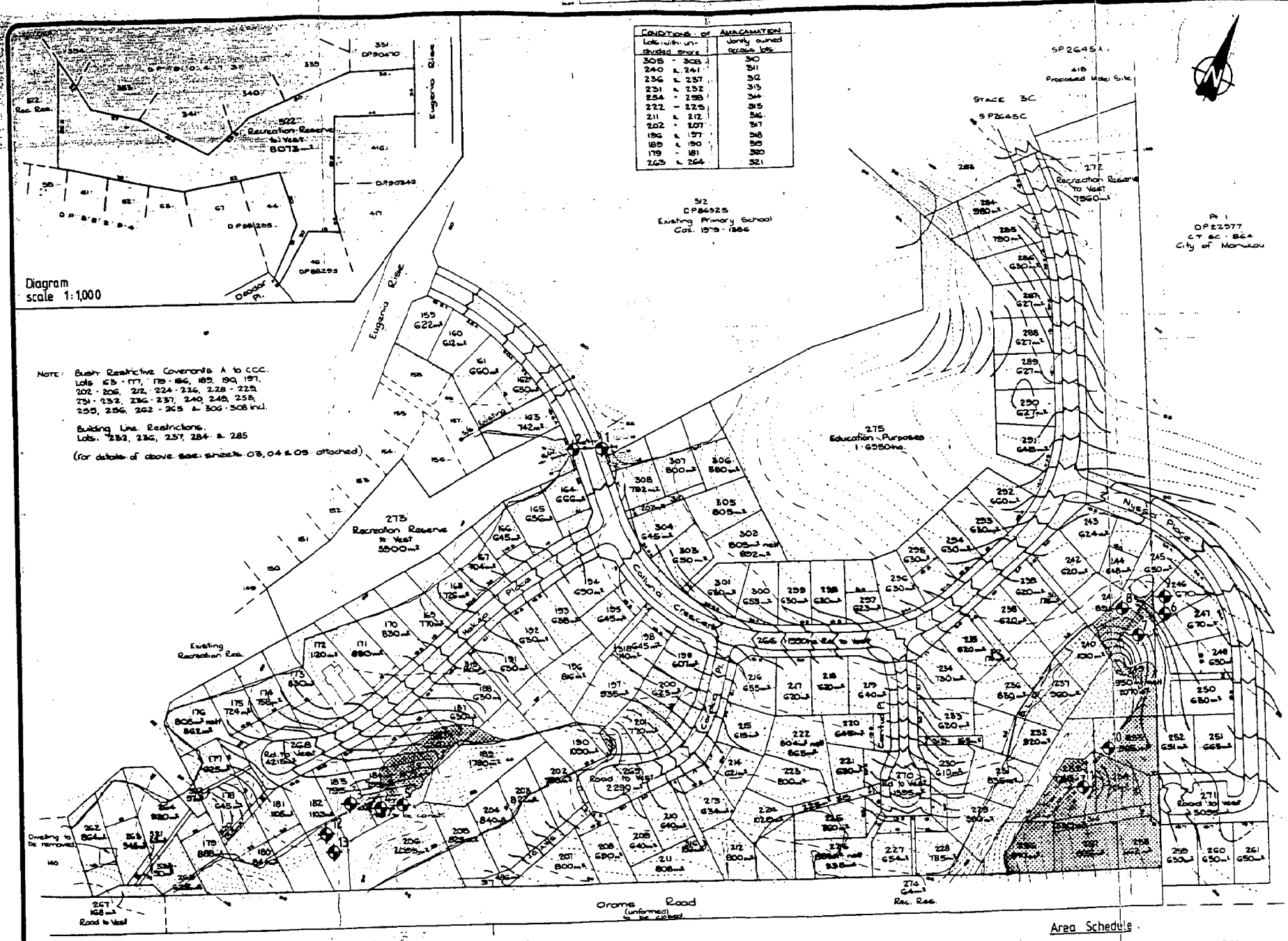
November 1981

Report Prepared By:-

I M Parton, Geotechnical Engineer
B W Riddolls, Engineering Geologist

8. REFERENCES

Tonkin & Taylor Ltd, 1980.	Broadlands Estates Ltd, Totara Heights S.E. Gully Stability Investigation. Ref. 4373.
Worley Downey Mandeno Ltd, 1980.	Slope Stability Investigations Totara Heights Subdivision, Stage 3. Lots 278, 279, 282, 283. Worley Downey Mandeno Limited Report.



Conditions of Amalgamation	
Lots with undivided shares	Jointly owned access lots
305 - 308	310
240 & 241	311
236 & 237	312
231 & 232	313
254 - 258	314
222 - 225	315
211 & 212	316
202 - 207	317
186 & 187	318
189 & 190	319
179 - 181	320
263 & 264	321

Note: Built Restrictive Covenants A to CCC.
Lots 163 - 177, 179 - 186, 189, 190, 197, 202 - 206, 212, 224 - 226, 228 - 229, 231 - 232, 236 - 237, 240, 249, 255, 256, 262 - 265 & 306 - 308 incl.

Building Line Restrictions.
Lots 252, 236, 237, 284 & 285

(for details of above see sheets 03, 04 & 05 attached)

Area Schedule

Lots 159 - 265 284 - 308. Res.	10·2056ha.
Lots 266 - 271. Rd. to Vest.	2·5353ha.
Lots 272 - 274 & 522. Rec. Res.	2·1597ha.
Lot 275 Education Purpose.	1·6950ha.
Lots 310 - 321. J.O.A.W.	2417m²
Lots 322 & 323	122m²
Total	16·8495ha.

Stream

Selective clearing to be carried out.

Augerholes

Revision Description	drawn date	checked date	approved date
Original Design			

Member of Association of Consulting Engineers New Zealand

Registered Surveyor

These drawings are the copyright of -

WDM WORLEY DOWNEY MANDENO LIMITED
CHARTERED & REGISTERED ENGINEERS
REGISTERED SURVEYORS
Auckland • Wellington • Tauranga • Christchurch • Fiji

Project

Proposed Subdivision of Pt Lot 2 D.P.10755 Pt Lot 1 D.P.39207. Pt. Clendons Grant D.P12885 & Pt. Lot 1 D.P.22977

Comprised in CT.1692 - 34
CT 6C - 864

Original Scale 1:1000

Drawing No. 3-510-28

Sheet No. 02

Revision

APPENDIX A

AUGERHOLE LOGS AND SHEAR-VANE STRENGTHS

LTD
Auckland & Tauranga

Record of Borehole No: (1)

Location Totaia heights, Stage III, Manurewa
Date 21-10-91 Elevation — Datum —
Co-ords See site plan.
Driller PJM Logged JA Checked [illegible]

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		ML		TOPSOIL.		
		CL	116/36	Yellow orangey brown with orange & brown mottles, SILTY CLAY, stiff, moist, low plasticity, moderately sensitive.		S = 3·2
			133/64			S = 2·1
		CL		Mixture of yellow brown, orange, light grey SILTY CLAY, rare gravel (< 2 mm) very stiff, moist, low plasticity.	S.T. (1)	
			186+			
1.0			186+	-becoming siltier with depth.		
			186+			
		ML	186+	Yellowish brown with mottles of pink, grey & dark brown, CLAYEY SILT. very stiff, moist, non-low plasticity.	S.T. (2)	
			186+			
2.0		ML/CL	186+	Mixed greenish brown, brownish yellow with rare pink mottle, SILTY CLAY - CLAYEY SILT. very stiff, moist, non-low plasticity.		
			186+			
		CL		Brownish yellow SILTY CLAY, very stiff, moist, low-moderate plasticity, insensitive.	S.T. (3)	S = 1·8
			179/44			
			186+			
3.0			186+	E.O.B. @ 3.0m		

Drilling Method: 150 mm ø Hand Auger
Minature Shear Vane No: DR 1373
Remarks: No ground water level encountered
S.T. = Sample Tube

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. 1 of 1

P.T. 02 1980

LTD
Auckland & Tauranga

Record of Borehole No: 2

Location TOTARA HEIGHTS, MANUREWA
Date 21/10/81 Elevation – Datum –
Co-ords CULVERT - EAST SIDE - REFER TO PLAN
Driller DBS Logged JA Checked

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Laboratory / Field Testing: Test Type
0		CL		Mixed yellow orange & brown & pink CLAY & SILTY CLAY (FILL)		
			153/47	stiff → very stiff; moist; moderate plasticity		S = 3.3
			175+	insensitive → moderately sensitive		
						Tube @ 0.6
1			149/83			S = 1.7
						Tube @ 1.0
			175+			
				– some gravel (< 20 mm)		
						tube @ 1.65
			172/89			S = 1.9
			141/77	– organic material		S = 1.8
2			114/62			S = 1.8
						tube @ 2.45
			172/87			S = 2.0
3			175+	END OF BORE = 2.93m		

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: DR 1751
Remarks:
No ground water level encountered
Tube = Sample tube (undisturbed)

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C = Unconfined Compression Strength (kPa)

Sheet No. 1 of 1

P.T 02 1980

LTD
Auckland & Tauranga

Location Tataraheights (Stage III) Manurewa
Date 21-10-91 Elevation — Datum —
Co-ords See site plan.
Record of Borehole No. (3) Driller PJM Logged GJS Checked GJS

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		ML		TOPSOIL		
		ML	129/13	Yellow brown SILT with rare clay. Stiff - very stiff, loose, dry, very sensitive - moderately sensitive		S = 9.9
			168/78			S = 2.2
			196+			
10		ML		Yellow brown and orange red SANDY SILT, some clay. Loose, dry, non plastic.		
		ML		Light brownish grey SANDY SILT with some clay. Very stiff, loose, dry, non-plastic.		
			186+			
			196+			
		ML		Orange brown and rare light grey SANDY SILT, rare clay. Very stiff, loose, dry, non-plastic		
20		ML	186+	Light grey SANDY SILT, rare clay. Very stiff, loose, moist, non-plastic		
		ML		Black, light brown and grey SANDY, CLAYEY SILT. Very stiff, moist, low - moderate plasticity. Rare siltstone fragments. becoming increasingly CLAYEY		
			186+	E.O.B. @ 2.5m		
30						

Drilling Method: 50 mm ø Hand Auger
Minature Shear Vane No: DR 1373
Remarks: No groundwater encountered.

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C = Unconfined Compression Strength (kPa)

Sheet No. of

P.T 02 1990

LTD
Auckland & Tauranga

Location TOTARA HEIGHTS, MANUREWA
Date 21/10/81 Elevation — Datum —
Co-ords RETAINING WALL BY CREEK BED
Record of Borehole No. (4) Driller MJA Logged DRS Checked

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		ML		TOPSOIL		
		CL	14/6	Bluish grey & orange brown CLAY with rare SILT & some SAND Very soft, wet, moderately sensitive low plasticity		S = 2.3
1				Darker bluish grey SILTSTONE		
				END OF BORE = 1.00m [Unable to penetrate with auger].		
2						
3						

Drilling Method: 50x50 mm ø Hand Auger
Minature Shear Vane No: DR 1751
Remarks: No ground water encountered.

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I = Atterberg Limits
U.C = Unconfined Compression Strength (kPa)

Sheet No. 1 of 1

P.T. 02 1980

LTD
Auckland & Tauranga

Location TOTARA HEIGHTS, MANUREWA.
Date 21/10/81 Elevation _____ Datum _____
Co-ords EAST OF RETAINING WALL.
Record of Borehole No. (5) Driller D.R.S. Logged J.A. Checked [illegible]

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Laboratory / Field Testing: Test Type
0		ML		TOPSOIL.		
		CL	103/27	ORANGE BROWN SILTY CLAY WITH SOME SAND, STIFF, MOIST, MOD. PLASTIC, MOD. SENSITIVE.		S = 3.9
		ML	30/6	LIGHT GREYISH YELLOW CLAYEY SILT WITH RARE SAND, VERY SOFT, MOIST, LOW - NON. PLASTIC, SENSITIVE.		S = 5.1
				-AS ABOVE WITH ORANGE VEINS.		
1			175+	-BECOMING ORANGE BROWN WITH DEPTH.		
			175+	-RARE CLAYSTONE CHIPS < 10mm ϕ.		
			176+	MIXED DARK BROWN, ORANGE & WHITE CLAYEY SILT WITH CLAYSTONE FRAGMENTS < 20mm ϕ - FRAGMENTS BECOMING SMALLER WITH DEPTH; VERY STIFF, LOW - NON PLASTIC, WET - MOIST.		
2			175+			
			175+	E.O.B = 2.15m		
3						

Drilling Method: 100/150 mm ϕ Hand Auger
Minature Shear Vane No: DR 1751
Remarks: NO G.W.L. ENCOUNTERED.

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. _____ of _____

P.T. 02 1990

LTD
Auckland & Tauranga

Location Ictaria Heights
Date 21-10-81 Elevation - Datum -
Co-ords See site plan.
Record of Borehole No. (6) Driller DRS Logged RJM Checked

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		ML		TOPSOIL	▽	Initial G.W.L Surface
		CH	45/7	Brownish yellow with rare greenish grey CLAY with some silt. Firm - soft, saturated, moderate-high plasticity, sensitive - moderately sensitive.		S = 6·4
		CH	22/7	Mixed orangey yellow and greyish green CLAY with some silt. Soft, saturated, high plasticity, sensitive.		S = 3·1
1·0			33/7			S = 4·7
2·0		ML		Mixed orangey yellow and bluish grey CLAYEY SILT with rare sand; Soft, saturated, low - moderate plasticity, insensitive.		
			26/22			S = 1·2
		ML	75/42	Mixed yellow, white and brown CLAYEY SILT, rare sandstone fragments (< 2 mm) firm - stiff, saturated, insensitive - moderately sensitive (Cont.)		S = 1·8
3·0						

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: DR 1573
Remarks: Free water lying on site surface

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C = Unconfined Compression Strength (kPa)

Sheet No. 1 of 2

P.T. 02 1980

LTD
Auckland & Tauranga

Location Totara heights
Date 21-10-91 Elevation – Datum –
Co-ords See site plan
Record of Borehole No: (6) Driller DRS Logged RJM Checked [illegible]

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Laboratory / Field Testing: Test Type
3.0		ML	130/55	Mixed yellow white and brown CLAYEY SILT, rare sandstone fragments (<2 mm) firm-stiff, saturated, insensitive - moderately sensitive.		S = 2.7
				End of bore @ 3.4 m.		
4.0						
5.0						

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: DR1373
Remarks:
Free water lying on site surface.

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C = Unconfined Compression Strength (kPa)

Sheet No. 2 of 2

P.T. 02 1980

LTD
Auckland & Tauranga

Record of Borehole No: (7)

Location TOTARA HEIGHTS, MANUREWA
Date 21/10/81 Elevation — Datum —
Co-ords As per site plan
Driller GJS Logged JA Checked

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		ML		TOPSOIL		
		CH	79/39	Yellowy orange & rare grey CLAY stiff, moist, moderate → high plasticity moderately sensitive – rare roots		S = 2·0
		CL	71/30	Grey & orange brown SILTY CLAY Firm, moist → wet, moderately plastic moderately sensitive – fine sand		S = 2·4
			66/23			S = 2·9
1		CL		Orange brown & grey SILTY SANDY CLAY – large amounts of SILTSTONE fragments – rare rounded gravel (< 5mm) Firm, wet, non → low plastic Moderately sensitive	Initial GWL	
			58/15			S = 3·9
		CL	27/24	Bluish grey with rare orange brown SILTY CLAY Soft → Very stiff, wet, non → low plasticity, insensitive → Very sensitive – rare rounded gravel (< 5mm) – large amounts of SILTSTONE fragments	Final GWL	S = 1·1
2		ML	154/18	Orange → dark brown, fine SANDY SILT – rare rounded SILTSTONE fragments Very stiff, wet, non → low plasticity sensitive → very sensitive		S = 8·6
			152/23	Light greyish yellow fine SANDY SILT – rare rounded SILTSTONE fragments wet, very stiff, non → low plasticity		S = 6·6
3			175+	sensitive END OF BORE = 3·00m		

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: CR 1751
Remarks:
Initial ground water level = 1·2 m
Final " " " = 2·05 m

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. 1 of 1

P.T. 02 1980

LTD
Auckland & Tauranga

Record of Borehole No. (8)

Location Totara heights
Date 21-10-81 Elevation — Datum —
Co-ords See site plan
Driller DRS Logged RJM Checked RJS

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Laboratory / Field Testing: Test Type
0		ML		Topsoil		
		ML	45/12	Yellowy orange and grey CLAYEY SILT. Firm-soft, wet, low-moderate plasticity, sensitive-moderately sensitive.		S = 3·8
					▽	Final G.W.L
					▽	Initial G.W.L
1.0			31/19			S = 1·6
		ML	150/16	Bluish grey SANDY SILT, rare clay. Stiff-very stiff, moist, non-plastic, very sensitive.		S = 9·4
2.0			186+			
		ML	186+	Dark orangey brown SANDY SILT, rare clay. Very stiff, moist, non-plastic.		
			186+	E.O.B. @ 2.70 m.		
3.0						

Drilling Method: 50 mm ø Hand Auger
Minature Shear Vane No: DR 1373
Remarks: Initial ground water level = 0·50 m
Final ground water level = 0·35 m

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
UC = Unconfined Compression Strength (kPa)

Sheet No. 1 of (

P.T. 02 1980

LTD
Auckland & Tauranga

Location IOTARA HEIGHTS, MANUKAU
Date 2/11/81 Elevation — Datum —
Co-ords As per site plan
Record of Borehole No. (9)
Driller DRS Logged GJS Checked [illegible]

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		ML	123/30	TOPSOIL		S = 4.1
		CL	135/38	Orangey brown SILTY CLAY stiff; damp → moist, low plasticity Moderately sensitive.		S = 3.6
			135/52	– very rare fine SILTSTONE fragments		S = 3.0
1			115/45			
		ML	143/36	Mixed whitish grey & yellow orange CLAYEY SILT stiff; moist, low plasticity, sensitive – very rare fine SILTSTONE fragments		S = 2.6 S = 4.0
		ML	151/45	Whitish grey & orange SILT with rare CLAY stiff; moist, non-plastic, moderately sensitive → sensitive		S = 3.4
2			169/36			S = 4.7
			156/36			S = 4.3
			186+	Pinkish white SILT stiff; moist, non-plastic, sensitive		
			186+	Whitish grey with orange SILT with rare black SILT lenses (< 10mm) stiff; moist, non-plastic, sensitive		
3			144/30	END OF BORE = 2.9m		S = 4.5

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: DR 1373
Remarks: No ground water level encountered.

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. 1 of 1

P.T. 02 1980

Auckland & Tauranga

Record of Borehole No: (10)

Date 2/11/81 Elevation — Datum —

Co-ords As per site plan

Driller DRS Logged GIS Checked [illegible]

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		ML	136/28	TOPSOIC		S = 4·9
		CL	127/33	Yellow orange CLAY stiff → Very stiff, moist, moderately plastic, moderately sensitive		S = 3·8
			150/52			S = 2·9
				Mixed yellow orange & whitish grey CLAY with SILT stiff, moist, low plasticity, moderately sensitive		
1			145/56			S = 2·5
				Grey & pink with orange yellow CLAY with rare SILT		
			145/63	stiff moist, non → low plasticity moderately sensitive		S = 2·3
			119/59			S = 2·0
		CL		Yellow & pink SILTY CLAY		
2			112/51	stiff moist, low-plasticity, moderately sensitive		S = 2·0
			106/42			S = 2·5
			91/40			S = 2·3
				Orange yellow SILTY CLAY with rare SILTSTONE fragments (< 2mm)		
			135/48	stiff, moist, low → non plastic moderately sensitive		S = 2·8
				END OF BORE = 2·55m [Difficult to auger]		
3						

Drilling Method: 100 mm ø Hand Auger

Miniature Shear Vane No: DR 1373

Remarks: No ground water level encountered.

Pd = Dry Density (t/m^3)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. 1 of 1

PT. 02 1980

LTD
Auckland & Tauranga

Location TOMAIN HEIGHTS, MANUKAU

Date 2/11/81 Elevation — Datum —

Co-ords As per site plan.

Record of Borehole No: 11

Driller DRS Logged GJS Checked

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		CL		Dark grey SILTY CLAY firm, moist, low plasticity, moderately sensitive		
		CL	156/42	Whitish yellow CLAY with rare SILT & organics		S = 3.7
			104/64	stiff → Very stiff, moist, low plasticity insensitive → moderately sensitive		S = 1.6
		CL	80/34	Mixed yellow orange & grey SILTY CLAY. stiff, moist, low → moderate plasticity, moderately sensitive		S = 2.4
1		ML	135/27	Mixed grey & rare yellow orange SILT. stiff → Very stiff, moist, non-plastic		S = 5.0
			186+	sensitive → moderately sensitive		
2			153/42			Intial GWL S = 3.6
						Final GWL
		CL		Whitish grey SILTY CLAY with fresh organic traces sensitive Very stiff, moist, non-plastic		
			150/26	Mixed orange & grey CLAYEY SILT with black organic lenses (≤ 10mm) Very stiff, moist, low plasticity sensitive		S = 5.8
			186+	GREY SILT with black organic lenses, stiff, moist, non-plastic		
3				END OF BORE = 2.83 m		

Drilling Method: 100 mm ∅ Hand Auger

Minature Shear Vane No: DR 1373

Remarks: 1

Intial ground water level = 2.10.

Final " " " = 2.25

Pd = Dry Density (t/m³)

w = Water Content (%)

S = Sensitivity (Virgin/Remould)

P.I. = Atterberg Limits

U.C. = Unconfined Compression Strength (kPa)

Sheet No. 1 of 1

P.T. 62 1980

LTD
Auckland & Tauranga

Record of Borehole No: (12)

Location Totara Heights Manurewa
Date 4-9-81 Elevation ____ Datum ____
Co-ords As per site plan.
Driller KJF Logged PJM. Checked J.A.

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		ML		Top soil		
		CL		Light yellow SILTY CLAY Stiff, wet, low plasticity.		
		CL	139/42	Orangey yellow SILTY CLAY Stiff, wet, moderate plasticity, moderately sensitive		S = 3·3
			147/57			S = 2·6
1			164/57	Mixed light grey and orangeish yellow SILTY CLAY. Very stiff, wet, moderate plasticity, mod. sensitive		S = 2·9
			175/66	Light grey with orangeish yellow SILTY CLAY Very stiff, moist, moderate plasticity, moderately sensitive.		S = 2·7
			169/68			S = 2·5
			175+			
		CH		Light grey with yellow CLAY with rare SILT Very stiff, moist, moderate to high plasticity, Insensitive		
			166/110			S = 1·5
2			140/89	Light grey with pinkish orange CLAY with rare SILT. Stiff, moist, moderate to high plasticity, Insensitive		S = 1·6
		ML	117/60	White with rare orange CLAYEY SILT. Stiff, moist, low plasticity, Moderately sensitive		S = 2·0
		ML		White with some orange SILT with rare CLAY. Stiff, wet, non-plastic,		
3						

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: DR 1751
Remarks: No groundwater encountered.

Pd = Dry Density (t/m^3)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. 1 of 2

P.T. 02 1980

LTD
Auckland & Tauranga

Record of Borehole No: (12)

Location Tetaru Heights Manurewa
Date 4-9-81 Elevation _____ Datum _____
Co-ords As per site plan
Driller KJF Logged PJM Checked J.A.

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
3	xxx x x xxx x x xxx x x xxx x x xxx	ML	175/45	Yellowish white SILT Stiff to very stiff, wet, non-plastic, moderately sensitive to sensitive.		s = 3·9
			103/24			s = 4·3
			166/30			s = 5·5
				End of Bore = 3.5m		
4						
5						
6						

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: DR 1731
Remarks: No groundwater encountered.

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. 2 of 2

P.T. 02 1980

POWER TECHNOLOGY LTD
Auckland & Tauranga

Client [illegible] JOB NO: P.T. 2123
Location: TOTARA HEIGHTS
Date 3.9.81. Elevation _____ Datum _____
Co-ords As per site plan
Record of Borehole No: (13) Driller P.J.M. Logged K.J.F. Checked [illegible]

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Test Type
0		CL		Orangey yellow SILTY CLAY stiff to very stiff, very dry, non to low plasticity, sensitive		
0.5			103/15			S = 6.9
			169/30			S = 5.6
1.0			89/12			S = 7.4
		ML		Orange SILT, very stiff, dry-moist, non plastic		
		ML	175+	Light orangey yellow CLAYEY SILT, very stiff, dry-moist, non plastic		
1.5			175+			
		ML		Orange SILT, very stiff, dry-moist non plastic		
		ML	137/15	Mixed orange and light brown SILT with rare GRAVEL (claystone <5mm) stiff to very stiff, moist, low plasticity, very sensitive.		S = 9.1
2.0			128/15			S = 8.5
			175+	becoming dark orange		
2.5			175+	Light brown SILT changing to dark orange SILT with rare CLAYSTONE chips		
3.0						

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: DR 1751
Remarks: No groundwater encountered

Pd = Dry Density (t/m³)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Atterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. 1 of 2

LTD
Auckland & Tauranga

Record of Borehole No: (13)

Location TOTARA HEIGHTS
Date 3.9.81. Elevation _____ Datum _____
Co-ords As per site plan.
Driller P.J.M. Logged K.J.F. Checked DAS

Depth (m)	Legend	Soil Symbol	Vane shear Strength (kPa)	Soil Description	Laboratory / Field Testing: Sample No.	Laboratory / Field Testing: Test Type
3.0		ML	154/41	Light brownish orange SILT with coarse SAND and rare GRAVEL (white claystone) <5mm very stiff, moderately sensitive		S=3.8
3.5				End of Bore = 3.7m		
4.0						
4.5						
5.0						
5.5						
6.0						

Drilling Method: 100 mm ø Hand Auger
Minature Shear Vane No: DR 1751
Remarks: NO GROUND WATER ENCOUNTERED.

Pd = Dry Density (t/m^3)
w = Water Content (%)
S = Sensitivity (Virgin/Remould)
P.I. = Afterberg Limits
U.C. = Unconfined Compression Strength (kPa)

Sheet No. 2 of 2

P.T. 02 1980

VANE SHEAR TEST

PROJECT: Site investigation for subdivision (Totara heights Stage III)
CLIENT: Broadlands Estates JOB NO: PT 2140
LOCATION: Totara heights Stage III, Manurewa DATE: 21.10.81
TESTED BY: PJM, JA CHECKED BY: [illegible]

SHEAR VANE CHARACTERISTICS $K = \frac{\pi D^2 H}{2 \times 10^6}(1 + \frac{D}{3H}) = 0.0200$ (19mm), 0.1043(33mm)*

Vane No: DR 1373 Vane Height H: 29,50 (mm)* Vane Width D: 19,33 (mm)*
Blade Thickness t: 1.6, 1.5(mm)* Rod Diameter d: 6.5, 6.4 (mm)* Area Ratio: 25.8, 13.1 (%)*
Type of Installation: Open borehole Friction Effects: Negligible

* Delete as appropriate.

Bore Hole	Vane Diam (mm)	Depth tested (m)	Virgin			Remould			Sensitivity (virgin/remould)	Soil Description
			Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)	Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)		
1	19	0.23	78	2.27	116	24	0.70	36	3.2	Stiff mod. sensitive
		0.42	89	2.60	133	43	1.24	64	2.1	Stiff mod. sensitive
		0.53	124+	3.62	186+	—	—	—	—	Very stiff —
		1.03	124+	3.62	186+	—	—	—	—	Very stiff —
		1.20	124+	3.62	186+	—	—	—	—	Very stiff —
		1.30	124+	3.62	186+	—	—	—	—	Very stiff —
		1.60	124+	3.62	186+	—	—	—	—	Very stiff —
		1.90	124+	3.62	186+	—	—	—	—	Very stiff —
		2.25	124+	3.62	186+	—	—	—	—	Very stiff —
		2.75	120	3.50	179	67	1.94	99	1.8	Very stiff insensitive
		2.90	124+	3.62	186+	—	—	—	—	Very stiff —
		3.00	124+	3.62	186+	—	—	—	—	Very stiff —
3	19	0.30	86	2.51	129	9	0.26	13	9.9	Stiff Very sensitive
		0.70	112	3.27	168	53	1.53	78	2.2	Very stiff mod. sensitive
		0.99	124+	3.62	186+	—	—	—	—	Very stiff —
		1.30	124+	3.62	186+	—	—	—	—	Very stiff —
		1.50	124+	3.62	186+	—	—	—	—	Very stiff —
		1.90	124+	3.62	186+	—	—	—	—	Very stiff —
		2.30	124+	3.62	186+	—	—	—	—	Very stiff —

REMARKS: $S = \frac{M}{K}$ Where M = Torque to shear soil obtained from calibration (N-m)
K = Constant depending on vane dimensions as calculated above

NOTE: Classification of soil sensitivity after Gillot, 1968.

TELARC [signature]

THIS LABORATORY IS REGISTERED BY THE TESTING LABORATORY REGISTRATION COUNCIL OF NEW ZEALAND. THE TESTS REPORTED HEREIN HAVE BEEN PERFORMED IN ACCORDANCE WITH ITS TERMS OF REGISTRATION. THIS REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL.

TEST SPECIFICATION PT MVT SO/1 (IN HOUSE)

PROJECT: SITE INVESTIGATION FOR PROPOSED SUBDIVISION

CLIENT: BROADLANDS ESTATES JOB NO: - PT 2140

LOCATION: TOTARA HEIGHTS, MANUREWA DATE: 21/10/81

TESTED BY: GJS CHECKED BY: DJS

SHEAR VANE CHARACTERISTICS $K = \frac{\pi D^2 H}{2 \times 10^6}\left(1 + \frac{D}{3H}\right) = 0.0198$ (19mm), ~~0.1061(33mm)~~*

Vane No: DR 1751 (2) Vane Height H: 28.5, ~~49.8~~(mm)* Vane Width D: 19, ~~33~~ (mm)*

Blade Thickness t: 1.6, ~~3.5~~(mm)* Rod Diameter d: 6.4, ~~6.3~~(mm)* Area Ratio: 29.5, ~~13.1~~ (%)*

Type of Installation: Open borehole Friction Effects: Negligible

* Delete as appropriate.

Bore Hole	Vane Diam (mm)	Depth tested (m)	Virgin			Remould			Sensitivity (virgin / remould)	Soil Description
			Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)	Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)		
2	19	29	107	3.03	153	31	.92	47	3.3	Very stiff, Moderately sensitive
		37	124+	3.45+	175+	—	—	—	—	" "
		1.00	100	2.84	144	56	1.64	83	1.7	Stiff, Insensitive
		1.36	124+	3.45+	175+	—	—	—	—	Very stiff —
		1.65	122	3.40	172	60	1.76	89	1.9	" Insensitive
		1.85	98	2.79	141	52	1.53	77	1.8	Stiff "
		2.06	78	2.26	114	42	1.23	62	1.8	" "
		2.45	122	3.40	172	58	1.71	87	2.0	Very stiff, Moderately sensitive
		2.99	124+	3.45+	175+	—	—	—	—	" —

REMARKS: $S = \frac{M}{K}$ Where M = Torque to shear soil obtained from calibration (N-m)
K = Constant depending on vane dimensions as calculated above

NOTE: Classification of soil sensitivity after Gillot, 1968.

TELARC

THIS LABORATORY IS REGISTERED BY THE TESTING LABORATORY REGISTRATION COUNCIL OF NEW ZEALAND. THE TESTS REPORTED HEREIN HAVE BEEN PERFORMED IN ACCORDANCE WITH ITS TERMS OF REGISTRATION. THIS REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL.

TEST SPECIFICATION NZ MWT 80/1 (IN HOUSE) SHEET NO: _____ OF _____

PROJECT: SUBDIVISION.

CLIENT: BROADLANDS. JOB NO: - PT 2140

LOCATION: TOTARA HEIGHTS, MANUREWA. DATE: 21/10/81

TESTED BY: P.J.M. CHECKED BY: [illegible]

SHEAR VANE CHARACTERISTICS $K = \frac{\pi D^2 H}{2 \times 10^6}\left(1 + \frac{D}{3H}\right) = 0.0198$ (19mm), ~~0.1041 (38mm)~~*

Vane No: DR 1751 (2) Vane Height H: 28.5, ~~49.8 (mm)~~* Vane Width D: 19, ~~38~~ (mm)*

Blade Thickness t: 1.6, ~~1.6 (mm)~~* Rod Diameter d: 6.4, ~~6.3 (mm)~~* Area Ratio: 29.5, ~~13.1~~ (%)*

Type of Installation: Open borehole ..... Friction Effects: Negligible .....

* Delete as appropriate.

Bore Hole	Vane Diam (mm)	Depth tested (m)	Virgin			Remould			Sensitivity (virgin / remould)	Soil Description
			Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)	Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)		
5	19	.22	70	2.04	103.2	18	0.53	26.8	3.9	MODERATELY SENSITIVE, STIFF
		.57	20	0.60	30.3	4	0.12	6.1	5.1	SENSITIVE, VERY SOFT.
		1.02	124+	3.45+	174.5+	—	—	—	—	VERY STIFF.
		1.34	124+	3.45+	174.5+	—	—	—	—	" "
		1.70	124+	3.45+	174.5+	—	—	—	—	" "
		2.0	124+	3.45+	174.5+	—	—	—	—	" "
		2.15	124+	3.45+	174.5+	—	—	—	—	" "
4	19	.43	9	.27	14	4	.12	6.1	2.3	Very soft, moderately sensitive

REMARKS: $S = \frac{M}{K}$ Where M = Torque to shear soil obtained from calibration (N-m)
K = Constant depending on vane dimensions as calculated above

NOTE: Classification of soil sensitivity after Gillot, 1968.

TELARC [signature]

THIS LABORATORY IS REGISTERED BY THE TESTING LABORATORY REGISTRATION COUNCIL OF NEW ZEALAND. THE TESTS REPORTED HEREIN HAVE BEEN PERFORMED IN ACCORDANCE WITH ITS TERMS OF REGISTRATION. THIS REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL.

VANE SHEAR TEST

PROJECT: Site investigation for subdivision (Totara heights, Stage III)
CLIENT: Proadlands Estates JOB NO: PT 2140
LOCATION: Totara heights, Waiuku DATE: 21-10-81
TESTED BY: GJS, PJM CHECKED BY: [signature]

SHEAR VANE CHARACTERISTICS $K = \frac{\pi D^2 H}{2 \times 10^6}\left(1 + \frac{D}{3H}\right)$ = 0.0200 (19mm), 0.1043(33mm)*

Vane No: DR 1373 Vane Height H: 29,50 (mm)* Vane Width D: 19,33 (mm)*
Blade Thickness t: 1.6, 1.5(mm)* Rod Diameter d: 6.5, 6.4 (mm)* Area Ratio: 25.8, 13.1 (%)*
Type of Installation: Open borehole ..... Friction Effects: Negligible .....

* Delete as appropriate.

Bore Hole	Vane Diam (mm)	Depth tested (m)	Virgin			Remould			Sensitivity (virgin / remould)	Soil Description
			Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)	Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)		
6	19	0.39	30	0.87	45	5	0.14	7	6.4	firm sensitive
		0.75	15	0.43	22	5	0.14	7	3.1	soft mod. sensitive
		1.50	22	0.64	33	5	0.14	7	4.7	soft sensitive
		2.50	17	0.50	26	15	0.43	22	1.2	soft insensitive
		2.90	51	1.47	75	28	0.81	42	1.8	firm insensitive
		3.25	100	2.92	150	37	1.07	55	2.7	stiff mod. sensitive
8		0.30	30	0.87	45	8	0.23	12	3.8	firm mod. sensitive
		1.15	21	0.61	31	13	0.38	19	1.6	soft insensitive
		1.60	100	2.92	150	11	0.31	16	9.4	stiff very sensitive
		2.10	124+	3.62	186+	—	—	—	—	very stiff —
		2.18	124+	3.62	186+	—	—	—	—	very stiff —
		2.75	124+	3.62	186+	—	—	—	—	very stiff —

REMARKS: $S = \frac{M}{K}$ Where M = Torque to shear soil obtained from calibration (N-m)
K = Constant depending on vane dimensions as calculated above

NOTE: Classification of soil sensitivity after Gillot, 1968.

TELARC [signature]

THIS LABORATORY IS REGISTERED BY THE TESTING LABORATORY REGISTRATION COUNCIL OF NEW ZEALAND. THE TESTS REPORTED HEREIN HAVE BEEN PERFORMED IN ACCORDANCE WITH ITS TERMS OF REGISTRATION. THIS REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL.

TEST SPECIFICATION PT MVT SO/1 (IN HOUSE)

VANE SHEAR TEST

PROJECT: SITE INVESTIGATION FOR SUBDIVISION

CLIENT: BROADLANDS ESTATES JOB NO: PT 2140

LOCATION: TOTARA HEIGHTS, MANUKAU DATE: 2/11/81

TESTED BY: GJS & DRS CHECKED BY: RJG

SHEAR VANE CHARACTERISTICS $K = \frac{\pi D^2 H}{2 \times 10^6}\left(1 + \frac{D}{3H}\right) = 0.0200$ (19mm), ~~0.1015 (33mm)~~*

Vane No: DR 1373 Vane Height H: 29, ~~50~~ (mm)* Vane Width D: 19, ~~33~~ (mm)*

Blade Thickness t: 1.6, ~~1.5~~ (mm)* Rod Diameter d: 6.5, ~~6.4~~ (mm)* Area Ratio: 25.8, ~~13.1~~ (%)*

Type of Installation: Open borehole Friction Effects: Negligible

* Delete as appropriate.

Bore Hole	Vane Diam (mm)	Depth tested (m)	Virgin			Remould			Sensitivity (virgin / remould)	Soil Description
			Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)	Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)		
9	19	.15	82	2.39	123	20	.58	30	4.1	stiff sensitive
		.49	90	2.63	135	26	.75	38	3.6	" Moderately sensitive
		.65	90	2.63	135	35	1.01	52	3.0	" "
		1.05	77	2.24	115	30	.87	45	2.6	" "
		1.40	95	2.78	143	24	.70	36	4.0	" sensitive
		1.66	101	2.95	151	30	.87	45	3.4	Very stiff, Moderately sensitive
		2.06	113	3.30	169	24	.70	36	4.7	" sensitive
		2.25	104	3.04	156	24	.70	36	4.3	" "
		2.55	124†	3.62†	186†	—	—	—	—	" —
		2.70	124	3.62†	186†	—	—	—	—	" —
		3.00	96	2.80	144	20	.58	30	4.8	stiff, sensitive
10	19	.14	91	2.66	136	19	.55	28	4.9	stiff, sensitive
		.30	85	2.48	127	22	.64	33	3.8	" Moderately sensitive
		.55	100	2.92	150	35	1.01	52	2.9	Very stiff "
		1.00	97	2.83	145	39	1.13	58	2.5	stiff "
		1.24	99	2.89	148	42	1.22	63	2.3	" "
		1.58	80	2.33	119	40	1.16	59	2.0	" "
		2.00	75	2.18	112	37	1.07	55	2.0	" "
		2.10	71	2.06	106	28	.81	42	2.5	" "
		2.30	61	1.77	91	27	.78	40	2.3	" "
		2.60	90	2.63	135	32	.93	48	2.8	" "

REMARKS: $S = \frac{M}{K}$ Where M = Torque to shear soil obtained from calibration (N-m)
K = Constant depending on vane dimensions as calculated above.

NOTE: Classification of soil sensitivity after Gillot, 1968.

TELARC

THIS LABORATORY IS REGISTERED BY THE TESTING LABORATORY REGISTRATION COUNCIL OF NEW ZEALAND. THE TESTS REPORTED HEREIN HAVE BEEN PERFORMED IN ACCORDANCE WITH ITS TERMS OF REGISTRATION. THIS REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL.

TEST SPECIFICATION PT MVT 80/1 (IN HOUSE)

SHEET NO: 1 OF 1

VANE SHEAR TEST

PROJECT: SITE INVESTIGATION FOR SUBDIVISION

CLIENT: BROADLANDS ESTATES JOB NO: PT 2140

LOCATION: TOTARA HEIGHTS, MANURAU DATE: 2/11/81

TESTED BY: DRS & EJS CHECKED BY: DRS

SHEAR VANE CHARACTERISTICS $K = \frac{\pi D^2 H}{2 \times 10^6}\left(1 + \frac{D}{3H}\right)$ = 0.0200 (19mm), 0~~.1042(33mm)~~*

Vane No: DR 1373 Vane Height H: 29, ~~50~~ (mm)* Vane Width D: 19, ~~33~~ (mm)*

Blade Thickness t: 1.6, ~~1.5~~(mm)* Rod Diameter d: 6.5, ~~6.4~~ (mm)* Area Ratio: 25.8, ~~13.1~~ (%)*

Type of Installation: Open borehole Friction Effects: Negligible

* Delete as appropriate.

Bore Hole	Vane Diam (mm)	Depth tested (m)	Virgin			Remould			Sensitivity (virgin/remould)	Soil Description
			Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)	Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)		
11	19	.13	104	304	156	28	.81	42	3.7	Very stiff Moderately sensitive
		.32	70	203	104	43	1.24	64	1.6	stiff insensitive
		.65	54	156	80	23	.67	34	2.4	" Moderately sensitive
		1.05	90	263	135	18	.52	27	5.0	" sensitive
		1.33	124†	362†	186†	—	—	—	—	Very stiff —
		2.11	102	298	153	28	.81	42	3.6	" Moderately sensitive
		2.63	100	292	150	17	.50	26	5.8	" sensitive
		2.87	124†	362	186†	—	—	—	—	" —

REMARKS: $S = \frac{M}{K}$ Where M = Torque to shear soil obtained from calibration (N-m)
K = Constant depending on vane dimensions as calculated above

NOTE: Classification of soil sensitivity after Gillot, 1968.

TONKIN & TAYLOR

THIS LABORATORY IS REGISTERED BY THE TESTING LABORATORY REGISTRATION COUNCIL OF NEW ZEALAND. THE TESTS REPORTED HEREIN HAVE BEEN PERFORMED IN ACCORDANCE WITH ITS TERMS OF REGISTRATION. THIS REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL.

TEST SPECIFICATION NZS 4402/1 (IN HOUSE)

SHEET NO: ____ OF ____

PROJECT: Geotechnical Investigation

CLIENT: Broadlands Properties Ltd JOB NO: PT 2123

LOCATION: Totara Heights Manurewa DATE: 4-9-81

TESTED BY: KJF & PJM. CHECKED BY: J.A.

SHEAR VANE CHARACTERISTICS $K = \frac{\pi D^2 H}{2 \times 10^6}\left(1 + \frac{D}{3H}\right) = 0.0198$ (19mm), ~~0.1041(33mm)~~*

Vane No: DR 1751 2 Vane Height H: 28.5, ~~49.8~~(mm)* Vane Width D: 19, ~~33~~ (mm)*

Blade Thickness t: 1.6, ~~1.5~~(mm) Rod Diameter d: 6.4, ~~6.3~~(mm)* Area Ratio: 29.5, ~~13.1~~ (%)*

Type of Installation: Open borehole Friction Effects: Negligible

* Delete as appropriate.

Bore Hole	Vane Diam (mm)	Depth tested (m)	Virgin			Remould			Sensitivity (virgin / remould)	Soil Description	
			Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)	Max. Reading	Torque (M) (N-m)	Shear Strength S (kPa)			
12	19	0.55	96	2.74	139	28	0.83	42	3.3	Stiff	Moderately Sensitive
		0.8	102	2.90	147	38	1.12	57	2.6	"	"
		1.0	116	3.25	164	38	1.12	57	2.9	Very Stiff	"
		1.3	124	3.45	175	44	1.30	66	2.7	"	"
		1.5	120	3.35	169	46	1.35	68	2.5	"	"
		1.6	124+	3.45+	175+	—	—	—	—	"	
		1.9	117	3.28	166	75	2.19	110	1.5	"	Insensitive
		2.1	97	2.77	140	60	1.76	89	1.6	Stiff	"
		2.4	80	2.32	117	40	1.18	60	2.0	"	Moderately Sensitive
		3.1	124	3.45	175	30	0.89	45	3.9	Very Stiff	" "
		3.25	70	2.04	103	16	0.48	24	4.3	Stiff	" "
		3.45	117	3.28	166	20	0.60	30	5.5	Very Stiff	Sensitive
13	19	0.55	70	2.04	103	10	0.30	15	6.9	Stiff	Sensitive
		0.80	120	3.35	169	20	0.60	30	5.6	Very Stiff	"
		1.1	60	1.76	89	8	0.24	12	7.4	Stiff	"
		1.3	124+	3.45+	175+	—	—	—	—	Very Stiff	
		1.6	124+	3.45+	175+	—	—	—	—	"	"
		1.95	95	2.72	137	10	0.30	15	9.1	Stiff	Very Sensitive
		2.25	88	2.53	128	10	0.30	15	8.5	"	" "
		2.4	124+	3.45+	175+	—	—	—	—	Very Stiff	
		2.8	124+	3.45+	175+	—	—	—	—	"	"
		3.2	108	3.05	154	27	0.90	41	3.8	"	" Moderately Sensitive

REMARKS: $S = \frac{M}{K}$ Where M = Torque to shear soil obtained from calibration (N-m)
K = Constant depending on vane dimensions as calculated above

NOTE: Classification of soil sensitivity after Gillot, 1968.

TELARC J.M. Lait

THIS LABORATORY IS REGISTERED BY THE TESTING LABORATORY REGISTRATION COUNCIL OF NEW ZEALAND. THE TESTS REPORTED HEREIN HAVE BEEN PERFORMED IN ACCORDANCE WITH ITS TERMS OF REGISTRATION. THIS REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL.

TEST SPECIFICATION PT NVT 60/1 (IN HOUSE) SHEET NO: _____ OF _____

APPENDIX B

LABORATORY TEST RESULTS

POWER TECHNOLOGY LTD

JOB NO: PT 2123, PT 2140

JOB NAME: TOTARA HEIGHTS

SUMMARY OF SOIL TEST RESULTS

DATE 7/9-22/10/81

BORE NO.	SAMPLE NO.	DEPTH (m)	SAMPLE TYPE	SOIL DESCRIPTION	NATURAL W %	NATURAL Bulk density t/m³	NATURAL Dry density t/m³	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	SIEVE ANALYSIS	HYDROMETER	SOLID DENSITY t/m³ ASSUMED	COMPACTION	CBR	CONSOL	TRIAXIAL	PERME-ABILITY x10⁻⁶m/s	AIR VOIDS %
1	1	0.5	US		35.4	1.89	1.39					2.67						0
	2	1.6	US		44.0	1.76	1.22					2.67						0.5
	3	2.65	US		41.5	1.78	1.26					2.67						0.8
2	1	0.6	US		40.7	1.79	1.27					2.67						0.8
	2	1.0	US		38.9	1.81	1.31					2.67						0.3
	3	1.65	US		36.4	1.84	1.35					2.67						0.7
	4	2.45	US		47.8	1.71	1.16					2.67						1.5
2	28	0.6			46.0			104	62									
	29	1.0	US		44.6	1.70	1.17											
	30	2.0	US		30.8	1.88	1.43											
	31	2.9	US		48.8	1.58	1.06											
	32	3.5	US		51.3	1.55	1.03											
3	33	0.8			46.1			85	36									
	34	1.1	US		45.7	1.64	1.12											
	35	2.1	US		42.7	1.66	1.16											
	36	3.0	US		43.5	1.72	1.20											

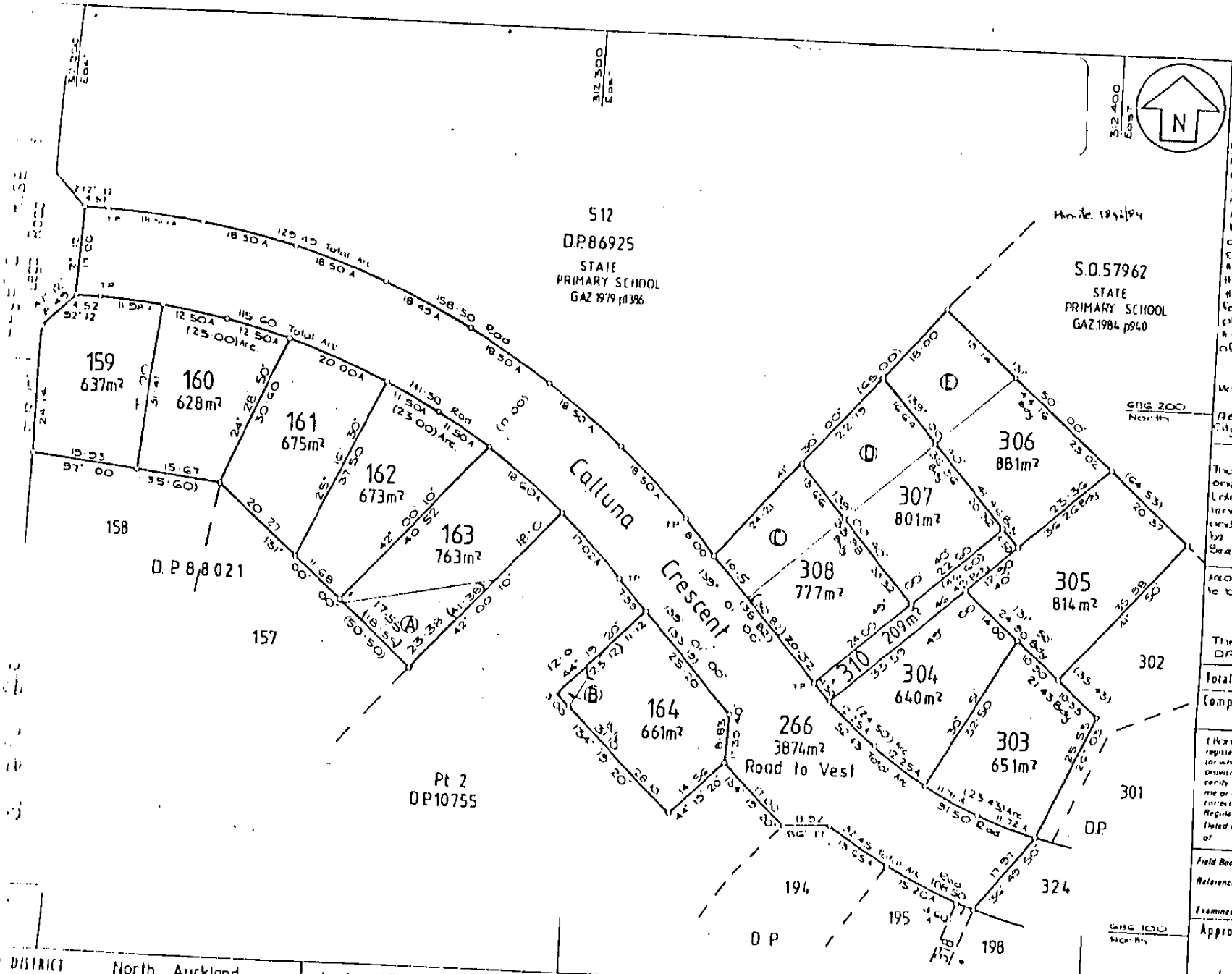
Test Standards: NZS 4402

US = undisturbed sample tube

[*] DATA ATTACHED

Certified

D. J. Schubert



Lots 159 - 164, 266, 303 - 308 & 310 Being Subdivision of Pt Lot 2 DP10755

LAND DISTRICT North Auckland
BLK BDR & DIST. XI Otahuhu SD
SHEET No

LOCAL AUTHORITY Manukau City Council
Surveyed by Worley Consultants Ltd.
Scale 1:500 Date June 1984

The Common Seal of the Manukau City Council was affixed hereto in the presence of

Director ..... Director

Pursuant to a resolution of the Manukau City Council passed on the ... day of ... 1984 approving this survey plan subject to the conditions of amalgamation set out hereon and certifying that this survey plan is in accordance with the requirements that previously applied to the operative district scheme and the proposed new district scheme for the area to which the survey plan relates the common seal of the Manukau City Council was affixed hereto in the presence of

Mayor .....

Actg City Manager .....

AMALGAMATION CONDITION

That Lot 2(A) hereon be held as to one undivided one quarter share by the owners of Lots 305 - 308 inclusive hereon as tenants in common in the said shares and that individual certificates of title be issued in accordance therewith. See A 625193

Areas marked (A) (B) (C) (D) (E) hereon are to be subject to restrictive covenants

This plan is concurrent with D.P.'s

Total Area 1.2684 ha.

Comprised in C.T 1696 - 34 Pt.

I Norman Alexander Wright of Auckland registered surveyor and holder of an annual practising certificate who may act as a registered surveyor pursuant to the provision to section 33 (2) of the Surveyors Act 1969 hereby certify that this plan has been made from surveys executed by me or under my directions and that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972

Dated at Auckland this ... day of ... 19 ... Signature

Field Book # Traverse Book #

Reference Plans

Examined Correct

Approved as to Survey

/ / Chief Surveyor

Deposited this ... day of ... 19

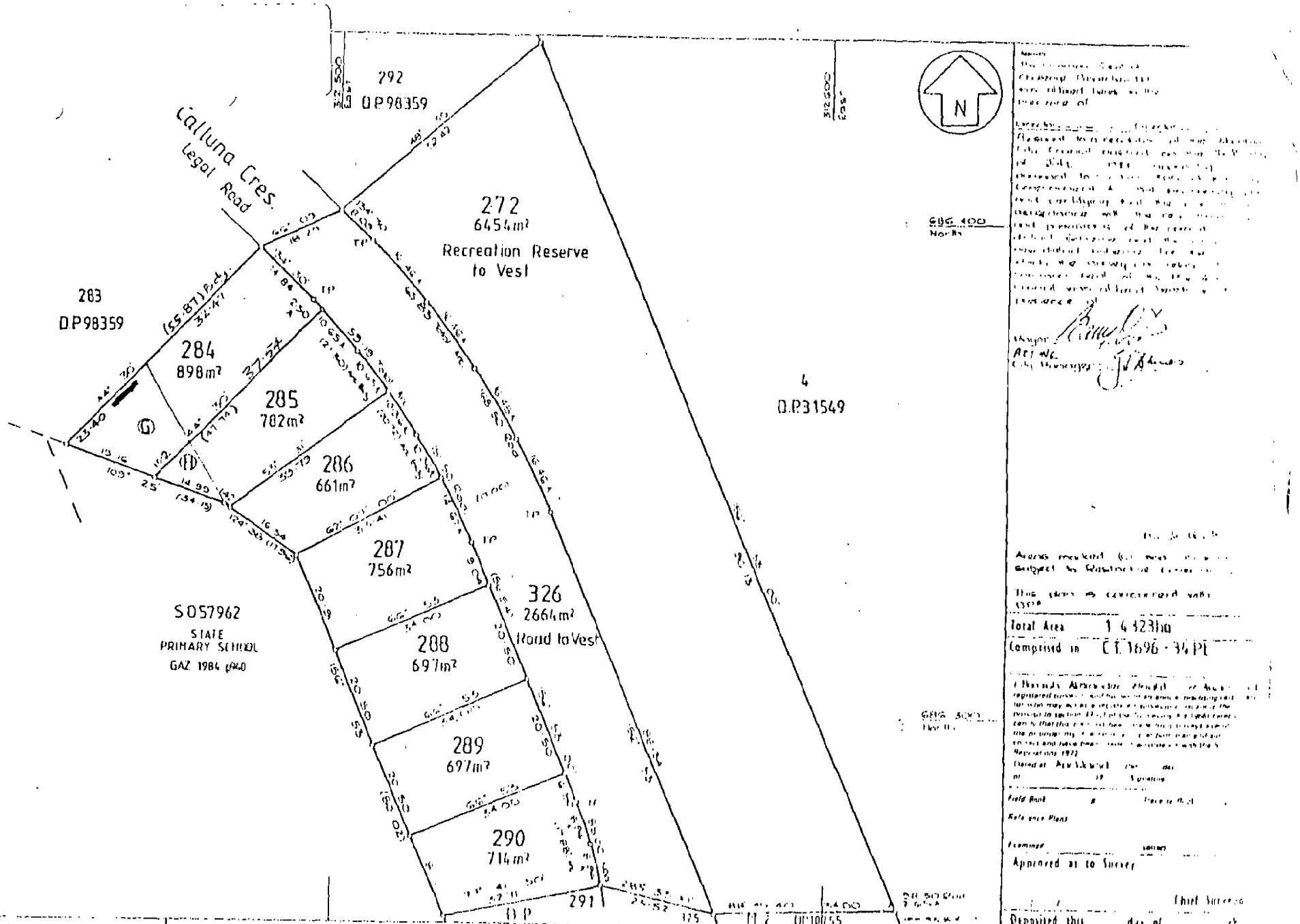
District Land Registrar

File 5 510 20

Received

Instructions

D.P 103794



Total Area 1.4323ha

Comprised in CT 1696 - 34 PL

Approved as to Survey

Deposited this day of

District Land Registrar

DP 10375

DISTRICT North Auckland

BLK & DIST XI Otahuhu S.D.

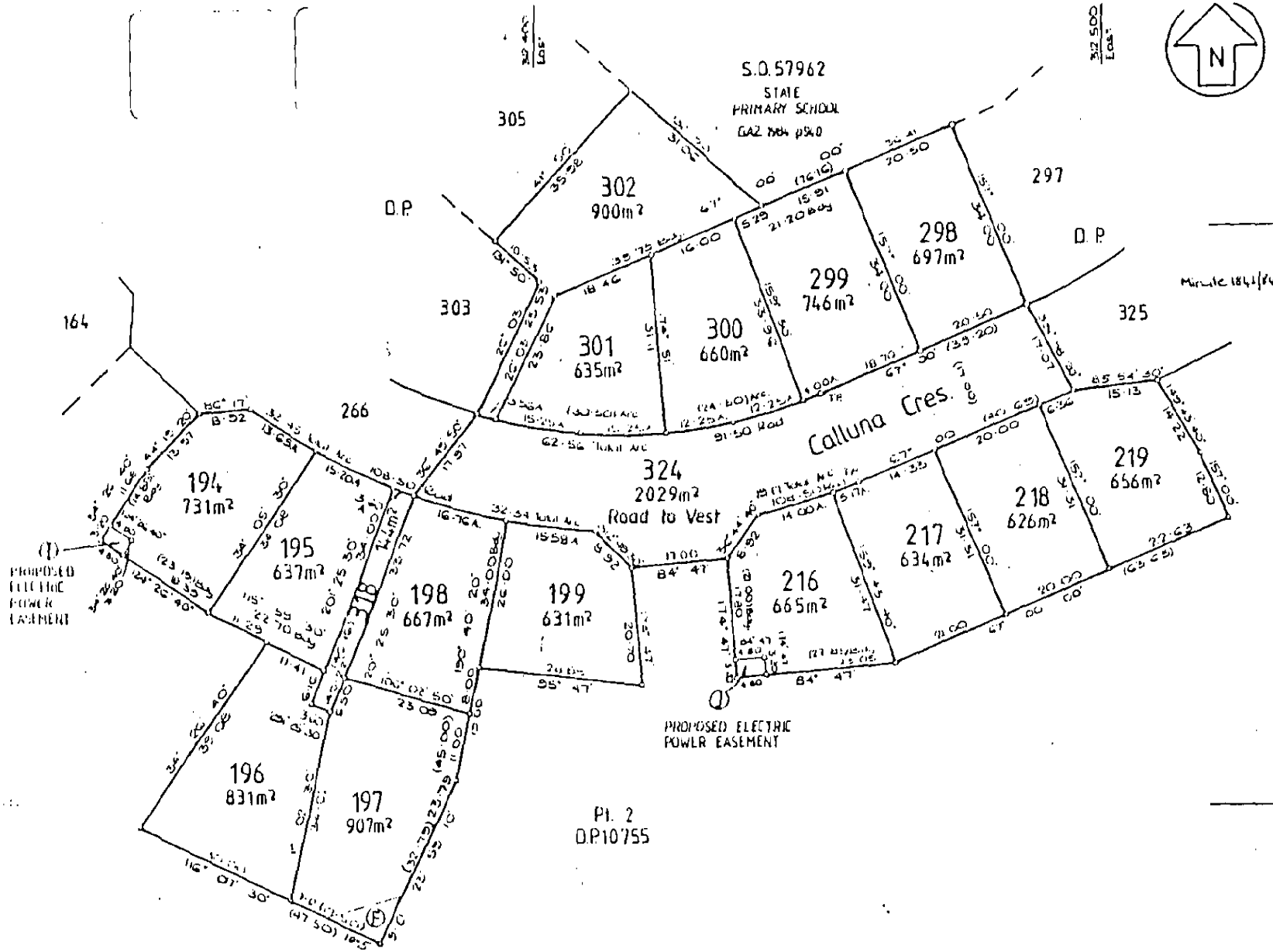
SHEET No

Lots 272, 284 - 290 & 326 Being
Subdivision of Pt Lot 2 DP 10755.

LOCAL AUTHORITY Manukau City Council

Surveyed by Worley Consultants Ltd

Scale 1:500 Date June 1984



Lots 194 - 199, 216 - 219, 298 - 302, 318 & 324
Being Subdivision of Pt. Lot 2 D.P.10755

LAND DISTRICT North Auckland
BLKS BLK & DIST. XI Orahuhu S.D.
SHEET No.

LOCAL AUTHORITY Manukau City Council
Surveyed by Worley Consultants Ltd
Scale 1:500 Date June 1984

Deposited this day of 19
District Land Registrar

File 3/510/20
Revised
(initials)

DP 103755

MEMORANDUM OF ENCUMBRANCE

CHALLENGE PROPERTIES LTD. Encumbrancer

THE MANUKAU CITY COUNCIL Council

9.16 11.DEC84 B 360509.9
PARTICULARS ENTERED IN REGISTER
NO. REGISTRY AUCKLAND

BROOKFIELD, PRENDERGAST & CO.,
SOLICITORS,
AUCKLAND.