



**EARTHWORKS COMPLETION REPORT
FOR
RURAL / RESIDENTIAL SUBDIVISION
AT PUKEHANGI RD, ROTORUA
FOR
EASTGATE DEVELOPMENTS LTD**

6 March 2006

173975-R-E-C176

EASTGATE DEVELOPMENTS LTD
PUKEHANGI RD SUBDIVISION

EARTHWORKS COMPLETION REPORT

1. **INTRODUCTION**

The Eastgate Developments Ltd subdivision comprises of the development of 34 Rural B1 lifestyle blocks and 2 Rural A blocks AT 237 Pukehangi Rd, which comprise approximately 64 hectares.

The property had been predominantly used as a grazing block with a cottage, a house and a Shed present on the site. All buildings have been removed as part of the development.

The property is abutted by 3 residential sections (4 houses) to the north, numerous houses on the other side of Pukehangi Rd and rural blocks to the west and south.

Access to the subdivision is via a private road which enters the site from Pukehangi Rd, in between Sunset Rd and Buchanan Pl. The site rises above Pukehangi Rd, with the majority of the sites being located on an old lake terrace some 60m above Pukehangi Rd.

The earthworks operation was carried out through winter from June 2005 to December 2005. A winter earthworks consent was obtained from EBOP to carry out the works in the winter exclusion period. The weather conditions were variable with above average rainfall over the period.

2. **TOPOGRAPHY AND SOILS**

The topography of the site varies from gently sloping lower ground adjacent to Pukehangi Rd to a moderately steep sloping bank (typically 14 degrees or 1 in 4.0) some 40m high up to the former lake terrace. The former lake terrace is gently sloping (typically 3.0 degrees or 1 in 20) to the base of upper steep slope which rises up from the rear of the terrace at between 26 and 31 degrees (1 in 2.0 to 1 in 1.7) some 25m to 40m above Lots 9 and 23 respectively. Cross sections have been taken through the critical areas on the site and they are shown on the attached drawings.

The initial geotechnical investigation confirmed that the ground below the site typically consists of 250mm of topsoil which is underlain by 1.0 to 1.2m of sandy silt which in turn is underlain by free draining granular pumice sands and gravels. These soils are the predominant soils in the Rotorua region. (refer attached Borehole Logs 2/6/2004)

As a "rule of thumb" in the Rotorua Region in the volcanic ashes / pumice soils, a slope of 26.6 degrees (1 in 2) is considered to be stable provided there are no unfavourable conditions such as uncontrolled stormwater, high ground water table, a long slope (i.e., in excess of 40m) and the grazing of stock which causes erosion.

The lower slope on the site between RL 325.00 and RL 365.00 complies with the maximum slope requirement at a maximum of 24 degrees. Therefore, all slopes on the subject site that are below the designated house platforms can be considered to be stable. In addition, the majority of the lower slopes are intended to be revegetated which will enhance stability of the lower slopes.

The upper steep slope on the site above the former lake terrace between RL 380.00 and RL 420.00 has a slope that is in excess of the general rule of thumb. The following factors positively affect the slope stability of this slope and allow a steeper slope than is generally accepted as follows:

- The slope had been revegetated with native trees and retired from grazing.
- the slope is only 20 to 40m high
- the ground under the slope is free draining volcanic ashes / pumice soils comprising sands and gravels which prevents pore water and ground water buildup which destabilises slopes
- the slope does not continue up above the top of the slope but slopes down on the southern side (rear) reducing the pressure on the slope and limiting stormwater infiltration, to that which falls on the slope. In essence the slope is more of a ridge than a continuous slope
- the ground level to the south of the ridge is at a lower level than on the northern side, which will provide a permanent drainage path for stormwater and prevent groundwater from rising and destabilising the slope.

As the slope has been cleared and farmed for at least 60 years, combined with the positive slope stability factors mentioned above, we consider that the slope will not be a hazard to Lots 15, 23 and 24 at the base of the slope.

A requirement of development on Lots 15, 23 and 24 at the base of the upper slope would be that the excavation into the upper slope is limited to 0.6m in height and is supported by a retaining wall designed by a suitably qualified Professional Engineer, as per the Council Condition of Consent.

3. EXTENT OF WORKS AND METHODOLOGY

The large scale earthworks of the development has resulted in approximately 2.2ha being worked during the siteworks operation. The operation involved stripping the topsoil to sediment control bunds, carrying out cut to fill operations within the site to allow for recontouring of the sections, stormwater swales, stormwater detention ponds and roads. At the completion of the contouring, the topsoil was respread across the lots, swales and pond areas to a maximum depth of 300mm (minimum 100mm) and grassed. A significant volume of topsoil was placed adjacent to the large Plane Trees at the main entrance to smooth the contour of the land.

The earthworks operations were carried out in stages to minimise the open areas of soil at any one time. When a house platform had been complete it was topsoiled and grass sowed.

In all areas within the residential part of the subdivision, all of the topsoil and any unsuitable materials were removed to a clean sand/pumice base, and clean sand/pumice fill was subsequently placed in layers and compacted with bulldozer and scoop.

Earthworks were undertaken to create generally level building platforms on the steeper front slopes, the rear sites, road alignments, stormwater swales and stormwater detention ponds. The majority of the sites on the former lake terrace have had no earthworks and the existing topography has not been altered by earthworks (refer table below). Of the sites located on the flat terrace only Lot 7 has earthworks, with approximately 0.5m fill placed to raise the level of the designated building platform, to remove a low spot. Where the building platforms have had earthworks, the cut and fill operation has produced a finished contour where the building platforms are generally flat with 0.5m to 1.0m fall to the front of the building platform.

With respect to the building platforms on the initial slope up from Pukehangi Rd (Lots 1, 2, 14, 20, 21, 22, 30, 31, 32, 33, 34), the earthworks generally consisted of cut to form building platforms. The resultant fill from the cut operation was typically used to fill the roads and the rear building platforms on the site (Lots 9, 15, 23, 24, 25). The rear building platforms were filled to reduce the necessity of the future owners carrying out earthworks under the steep slope behind these Lots. The extent of earthworks on the building platforms is shown in the following table:

NO EARTHWORKS	CUT EARTHWORKS	FILL EARTHWORKS	CUT AND FILL EARTHWORKS
3, 4, 5, 6, 8, 10, 11, 12, 13, 16, 17, 18, 19, 26, 27, 28, 29	1, 2, 14, 20, 22, 30, 31, 32, 33	7, 23, 24, 25	9, 15, 21, 34

Earthworks have also been carried out on Lots 36 and 37 to form possible future building platforms to make the Rural A Lots more saleable.

4. SUPERVISION AND TESTING OF EARTHWORKS

All earthworks were supervised on a regular, but not continuous, basis by a representative of MTEC Consultants Ltd, to ensure that topsoil, and any other unsuitable material, was completely removed and clean fill placed in an appropriate manner. We can confirm that sand/pumice fill material was placed in layers and compacted satisfactorily.

The depth of earthworks for roads varied from 4.0 metres cut to 3.3 metres fill with an typical depth outside the major earthwork areas of around 0.5 metres of cut and 0.5m of fill. Generally the larger depth of filling was carried out on the Main Road at chainage 400-450, 490-530, 600-675 and Road 2 from chainage 100 to 300.

The depth of earthworks for building platforms varied from 4.0 metres cut to 1.5 metres fill. Refer to the above table for cut and fill sites. The slopes above the cut sites are at a slope of 1 vertical to 2 horizontal (26 degrees)

A series of 4 boreholes prior to earthworks, 9 boreholes on the Lots with no earthworks, penetrometer testing during earthworks and 85 post earthworks Scala Penetrometer tests were undertaken. Each lot that was subject to earthworks, was tested with four scala penetrometer tests in the corners of the building platform. The sites that had no earthworks were tested with one penetrometer test in the centre of the building platform.

Penetration values per 5 blows ranged from 50mm to 250mm, indicating that a few of the sites had a lower bearing capacity than the normal Factored Ultimate Bearing Capacity of 150kPa (Allowable Bearing Capacity of 100kPa) which corresponds to 190mm per 5 blows of the penetrometer. It is noted that occasionally the top 300-350mm indicated a penetration value greater than the permissible. This is due to the loose upper soil layers, including the topsoil layer, that generally can not be compacted to the same level as the underlying soils due to a lack of confinement. As the

A schedule of the results is attached (refer Scala Penetrometer Test Results – Post Earthworks Summary). The schedule indicates that the following earthwork sites were softer than the required bearing capacity of NZS 3604 Non Specific Design of Light Timber Framed Buildings being a Factored Ultimate Bearing Capacity of 150kPa (Allowable Bearing Capacity of 100kPa)

LOT	TYPE OF SITE	BEARING CAPACITY	
		ALLOWABLE	FACTORED ULT.
1	CUT	76	114
2	CUT	76	114
31	CUT	88	132
32	CUT	76	114

5. TESTING OF SITES THAT HAVE NOT BEEN EARTHWORKED

The sites that have not had any earthworks carried out on them and are in their natural state are Lots 3, 4, 5, 6, 8, 10, 11, 12, 13, 16, 17, 18, 19, 26, 27, 28, 29. The testing of these Lots as part of the subdivision completion indicated that they generally complied with the required bearing capacity of NZS 3604, except for the following sites

LOT	TYPE OF SITE	BEARING CAPACITY	
		ALLOWABLE	FACTORED ULT.
4	NO EARTHW.	83	125
11	NO EARTHW.	83	125
13	NO EARTHW.	72	108
26	NO EARTHW.	84	126
28	NO EARTHW.	72	108

6. RECOMMENDED CONSENT NOTICE FOR BUILDING PLATFORMS THAT ARE SOFTER THAN REQUIRED BY NZS 3604

For Lots 1, 2, 4, 11, 13, 26, 28, 31, 32 where the bearing capacity of the ground is less than that required by NZS 3604 we recommend that the following consent notice be lodged on the title:

The foundations for any building requiring a Building Consent shall be

- (a) Specifically designed by a Chartered Professional Engineer for a Factored Ultimate Bearing Capacity of 108kPa (Allowable Bearing Capacity of 72kPa), or;*
- (b) The ground below the building shall be excavated and recompactd or replaced with granular material as follows, in order to provide suitable to support a building constructed to NZS 3604.*

- * Excavate 0.8m deep below existing ground level and extend to 1.5m minimum around the perimeter of the building.*
- * Compact the base of the excavation with a vibrating roller with a minimum of 4 passes to achieve a Factored Ultimate Bearing Capacity of 150kPa. (Allowable Bearing Capacity of 100kPa).*
- * Replace excavated material or replacement granular material in 200mm thick layers (maximum and compact as noted above).*

A Chartered Professional Engineer shall inspect the excavation, test the final compaction and certify that the filling operation achieves a Factored Ultimate Bearing Capacity of 150kPa (Allowable Bearing Capacity of 100kPa), suitable to support a building designed to NZS 3604.

7. BURIED UNSUITABLE MATERIAL

The pre construction and post construction earthworks testing did not encounter any prior buried unsuitable material. No buried unsuitable material was encountered during the earthworks

However during construction unsuitable material has been buried on Lot 35 adjacent to Lot 26, as shown on the as built cut fill drawing (refer attached). The material consists of topsoil contaminated fill, tree roots and stumps. The material has been buried at a depth so that there is a minimum of 1.0m of clean fill above the unsuitable material.

8. CONCLUSION

In our professional opinion, ground conditions on all lots within the Rural B1 part of the development (Lots 1 to 34), are suitable for construction of residential buildings in accordance with the requirements of clause B1 of the Building Regulations 2004.

A consent notice should be lodged on the titles of the following Lots where the bearing capacity of the ground is less than that required by NZS 3604

- Lots 1, 2, 4, 11, 13, 26, 28, 31, 32

9. LIMITATIONS

The recommendations given in this report are based on limited site data from discrete test locations. Variations in ground conditions could exist across the site. The nature and continuity of subsoil conditions away from the test sites are inferred and it must be appreciated that actual conditions could vary from the assumed model.

This report has been prepared only for the Rotorua District Council and for the initial purchaser of each property for their purposes. It is not to be relied upon or used out of context by any other person without reference to MTEC Consultants Ltd. The reliance by other parties on the information or opinions contained in the report shall, without prior review and agreement in writing, be at such parties sole risk.

Regards
MTEC Consultants Ltd



Steve Pittman
BE, MIPENZ (Civil, Struct), CPEng, IntPE

6 March 2006

Attachments: - RDC Form 1B
MTEC Consultants – Cross Sections through Slope
MTEC Consultants - As Built Cut And Fill Earthworks Plan
Borehole logs
Scala Penetrometer Test Results – Post Earthworks Summary
Scala Penetrometer Results

To: The District Engineer
 Rotorua District Council
 Private Bag
ROTORUA

**1B - STATEMENT OF PROFESSIONAL OPINION AS TO SUITABILITY OF LAND
 FOR BUILDING DEVELOPMENT**

Subdivision: PARKLAND ESTATES

Owner/Developer: EASTGATE DEVELOPMENTS

Location: PUKEHANGI RD, ROTORUA

I, Stephen Michael Pittman of MTEC Consultants Ltd, PO Box 878, Rotorua
 (Full Name) (Name and Address of Firm)

hereby confirm that:

1. I am a Certified Professional Engineer experienced in the field of soils engineering and was retained by the owner/developer as the Soils Engineer on the above subdivision.
2. The extent of my inspections during construction, and the results of all tests carried out are described in my report dated 6 March 2006.
3. In my professional opinion, not be construed as a guarantee, I certify that:
 - *a) That earth fills shown on the attached Plan No. 173975-R-E-D006 Sheet 27 have been placed in compliance with the Code of Practice of the Rotorua District Council.
 - *b) The filled ground is suitable for the erection thereon of residential buildings not requiring specific design in terms of NZ Building Act 2004 and NZ Building Regulations 2004, and related documents, providing that:

For Lots 1, 2, 31, 32 where the bearing capacity of the ground is less than that required by NZS 3604 we recommend that the following consent notice be lodged on the title:

The foundations for any building requiring a Building Consent shall be

(a) Specifically designed by a Chartered Professional Engineer for a Factored Ultimate Bearing Capacity of 108kPa (Allowable Bearing Capacity of 72kPa), or;

(b) The ground below the building shall be excavated and recompacted or replaced with granular material as follows, in order to provide suitable to support a building constructed to NZS 3604.

- * *Excavate 0.8m deep below existing ground level and extend to 1.5m minimum around the perimeter of the building.*
- * *Compact the base of the excavation with a vibrating roller with a minimum of 4 passes to achieve a Factored Ultimate Bearing Capacity of 150kPa. (Allowable Bearing Capacity of 100kPa).*

- * *Replace excavated material or replacement granular material in 200mm thick layers (maximum and compact as noted above).*

A Chartered Professional Engineer shall inspect the excavation, test the final compaction and certify that the filling operation achieves a Factored Ultimate Bearing Capacity of 150kPa (Allowable Bearing Capacity of 100kPa), suitable to support a building designed to NZS 3604.

- *d) The original ground not affected by filling is suitable for the erection thereon of residential buildings not requiring specific design in terms of NZ Building Act 2004 and NZ Building Regulations 2004, and related documents, providing that:

For Lots 4, 11, 13, 26, 28 where the bearing capacity of the ground is less than that required by NZS 3604 we recommend that the following consent notice be lodged on the title:

The foundations for any building requiring a Building Consent shall be

(a) Specifically designed by a Chartered Professional Engineer for a Factored Ultimate Bearing Capacity of 108kPa (Allowable Bearing Capacity of 72kPa), or;

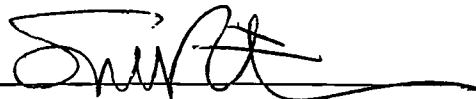
(b) The ground below the building shall be excavated and recompacted or replaced with granular material as follows, in order to provide suitable to support a building constructed to NZS 3604.

- * *Excavate 0.8m deep below existing ground level and extend to 1.5m minimum around the perimeter of the building.*
- * *Compact the base of the excavation with a vibrating roller with a minimum of 4 passes to achieve a Factored Ultimate Bearing Capacity of 150kPa. (Allowable Bearing Capacity of 100kPa).*
- * *Replace excavated material or replacement granular material in 200mm thick layers (maximum and compact as noted above).*

A Chartered Professional Engineer shall inspect the excavation, test the final compaction and certify that the filling operation achieves a Factored Ultimate Bearing Capacity of 150kPa (Allowable Bearing Capacity of 100kPa), suitable to support a building designed to NZS 3604.

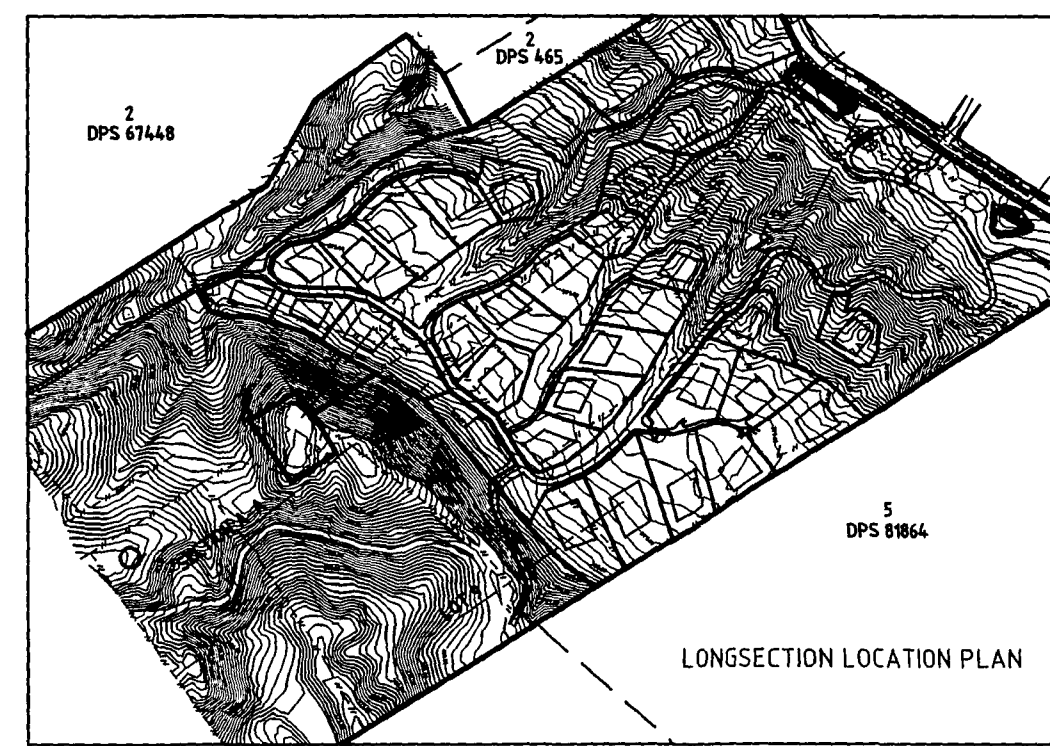
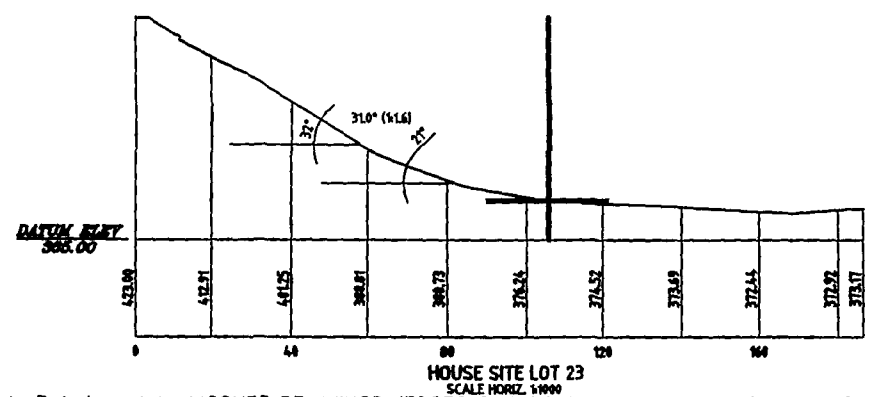
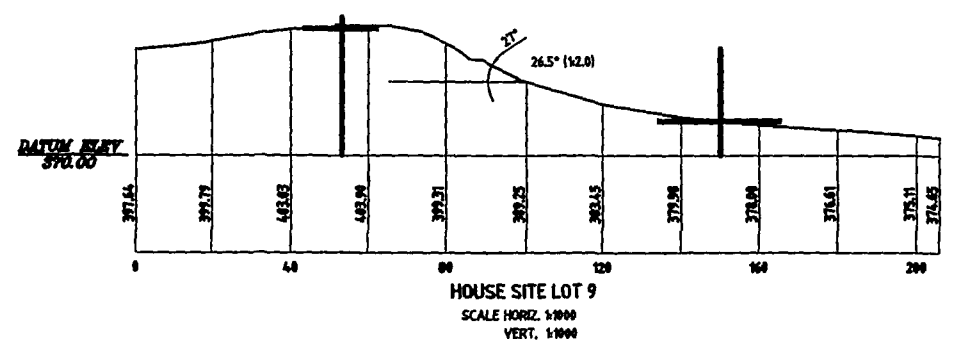
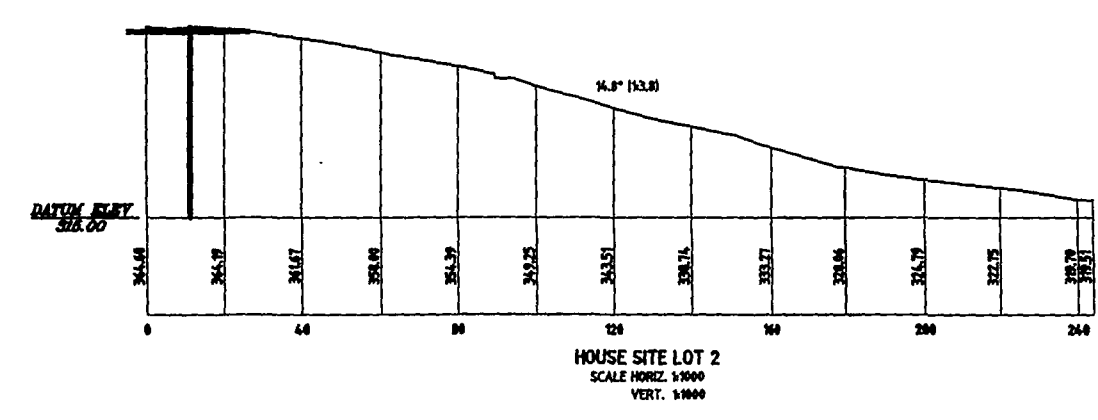
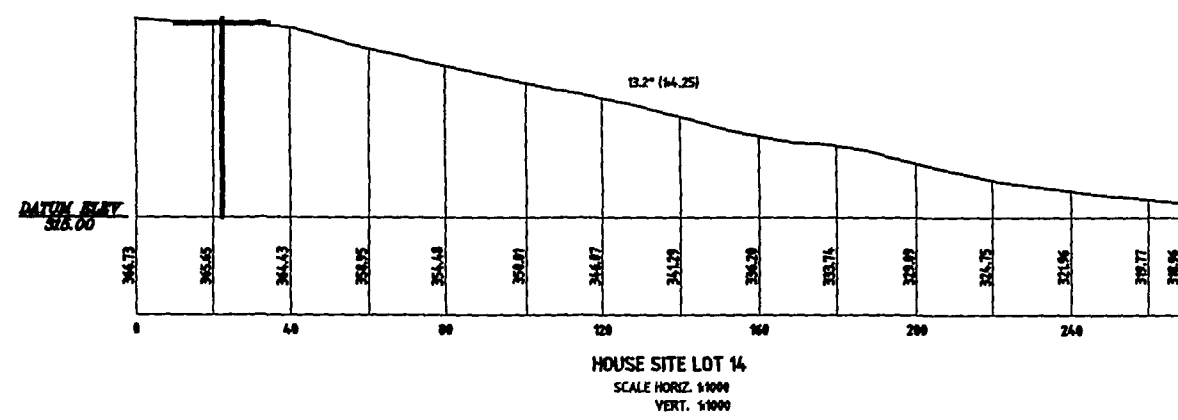
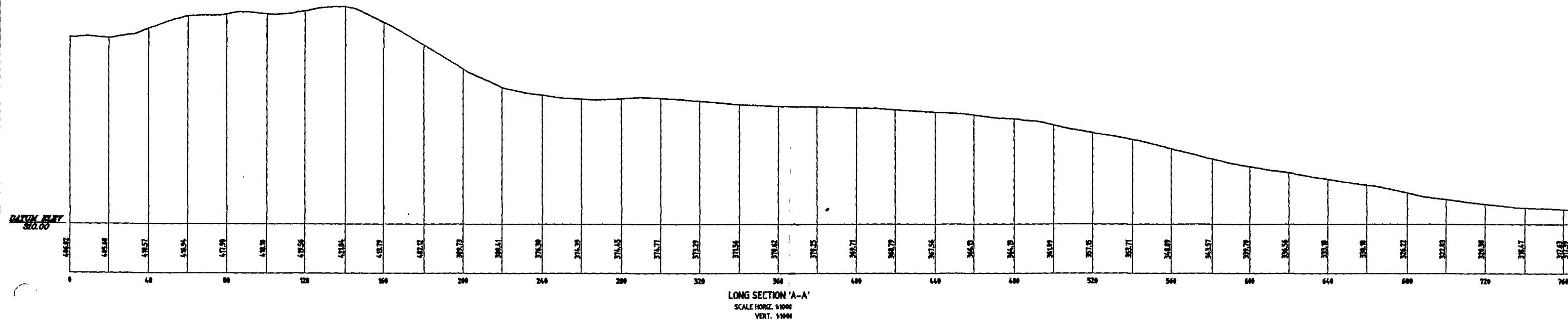
- 4. This professional opinion is furnished to the Council and the owner/developer for their purposes alone on the express condition that it will not be relied upon by any other person and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any dwelling.

Signed: _____

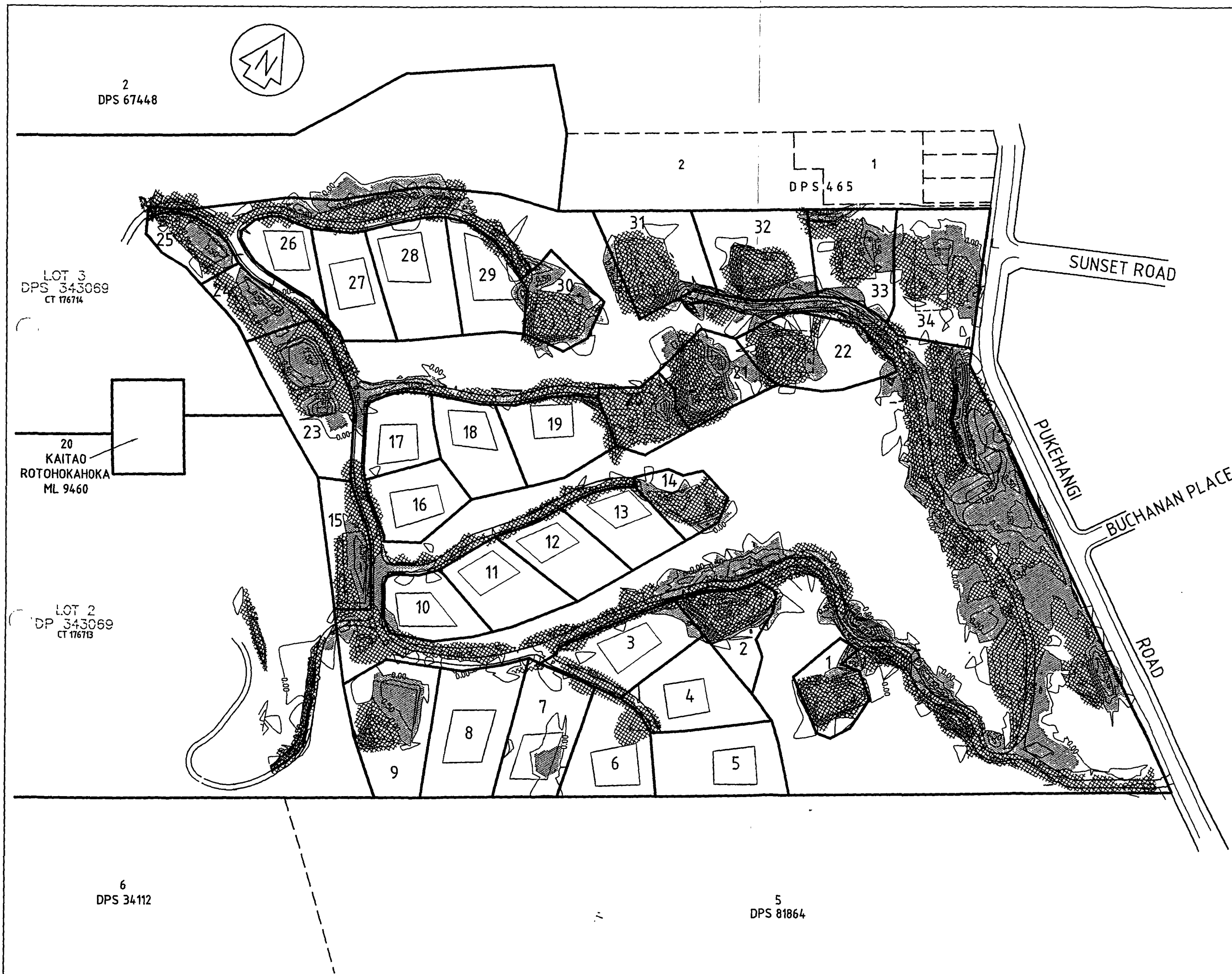


Date: 6 March 2006

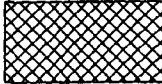
FILE



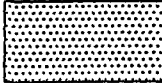
No. Date		Issue/Revision	
DRAWN: JM		DESIGNED:	
CHECKED:		APPROVED:	
SCALE: (A1) AS SHOWN		SURVEYED:	
CAD FILE NAME: 173975			
COPYRIGHT - MARTIN McCULLAY MORTON LTD THE DESIGN, DRAWING, AND CONSTRUCTION OF THIS DRAWING IS THE PROPERTY OF MARTIN McCULLAY MORTON LTD AND SHALL NOT BE USED IN ANY OTHER MANNER WITHOUT THE WRITTEN PERMISSION OF MARTIN McCULLAY MORTON LTD. THE DESIGN, DRAWING, AND CONSTRUCTION OF THIS DRAWING IS THE PROPERTY OF MARTIN McCULLAY MORTON LTD AND SHALL NOT BE USED IN ANY OTHER MANNER WITHOUT THE WRITTEN PERMISSION OF MARTIN McCULLAY MORTON LTD. THE DESIGN, DRAWING, AND CONSTRUCTION OF THIS DRAWING IS THE PROPERTY OF MARTIN McCULLAY MORTON LTD AND SHALL NOT BE USED IN ANY OTHER MANNER WITHOUT THE WRITTEN PERMISSION OF MARTIN McCULLAY MORTON LTD.			
MARTIN McCULLAY MORTON LTD ENGINEERS, ARCHITECTS, PLANNERS & RESOURCE MANAGERS			
PROJECT EASTGATE DEVELOPMENTS LTD ROTORUA PUKEHANGI ROAD			
DRAWING			
FILE No. 173975	SHEET 1	OF 1	ISSUE A



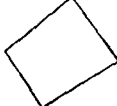
NOTES/KEY:



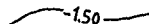
AREA OF CUT 0.0m TO -4.0m



AREA OF FILL 0.0m TO 3.0m



HOUSE SITES



CUT & FILL CONTOUR INTERVAL 0.5m

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THIS DOCUMENT SHALL BE USED ONLY FOR THE PURPOSE FOR WHICH IT WAS SUPPLIED AND MUST NOT BE USED IN ISOLATION FROM OTHER ASSOCIATED INFORMATION.

SERVICES:

THE EXISTING SERVICES SHOWN ON THIS PLAN ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL EXISTING SERVICES.
IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL EXISTING SERVICES PRIOR TO STARTING WORK.

No.	Date	By	Issue/Revision
A	18/02/06	GD	ISSUED FOR APPROVAL

DRAWN:	GD	DESIGNED:	CP
CHECKED:	CP	SURVEYED BY:	CP

LOCAL AUTHORITY REF:



**SURVEYORS
ENGINEERS
PLANNERS**

ROTORUA TE PUKE OPOTIKI
MT MAUNGANUI WHAKATANE

CLIENT
EASTGATE DEVELOPMENTS LTD

PROJECT/LOCATION
PUKEHANGI ROAD
ROTORUA

DRAWING DESCRIPTION
CUT TO FILL CONTOUR
AS BUILT PLAN

SCALE: 1 : 2000	ORIGINAL DWG. SIZE A2
DRAWING No. 173975-R-E-D006	SHEET No. 27 ISSUE A

MTEC CONSULTANTS LTD

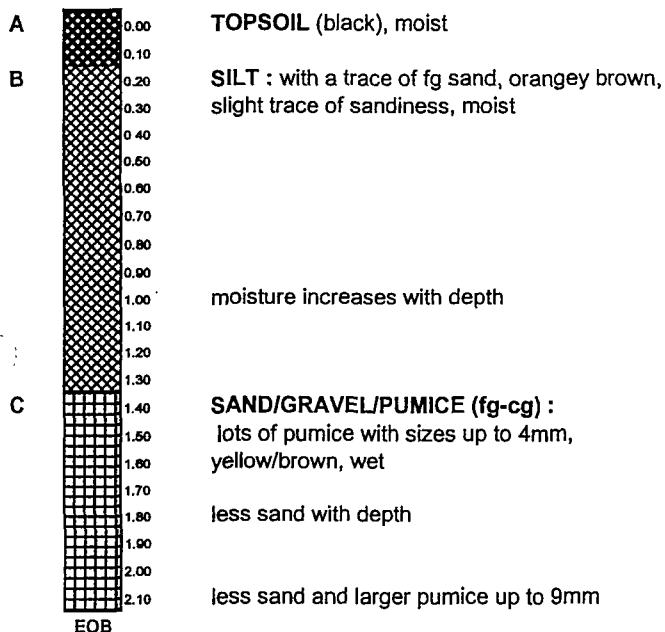
BOREHOLE LOGS - BEFORE CONSTRUCTION

JOB NAME: EASTGATE DEVELOPMENTS LTD - PUKEHANGI ROAD
SITE ADDRESS: PUKEHANGI ROAD
JOB NUMBER: 173975/E

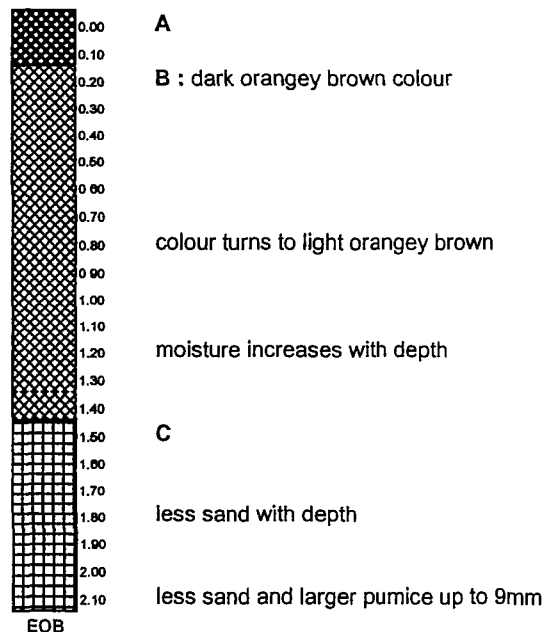
DATE: 2/06/2004
BY: GFB

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL

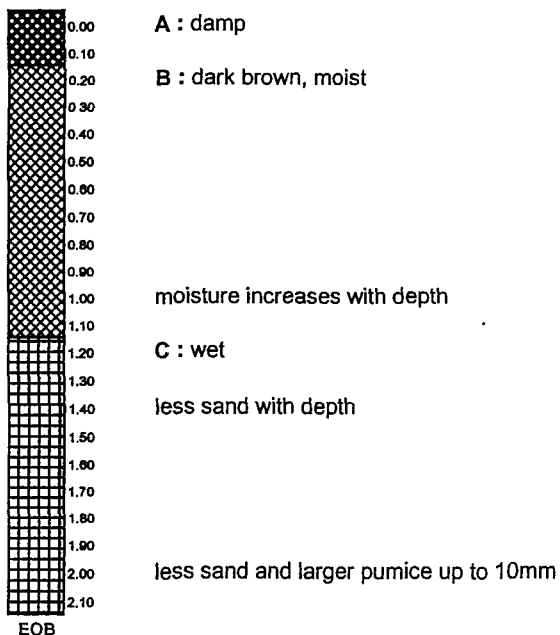
BOREHOLE 1



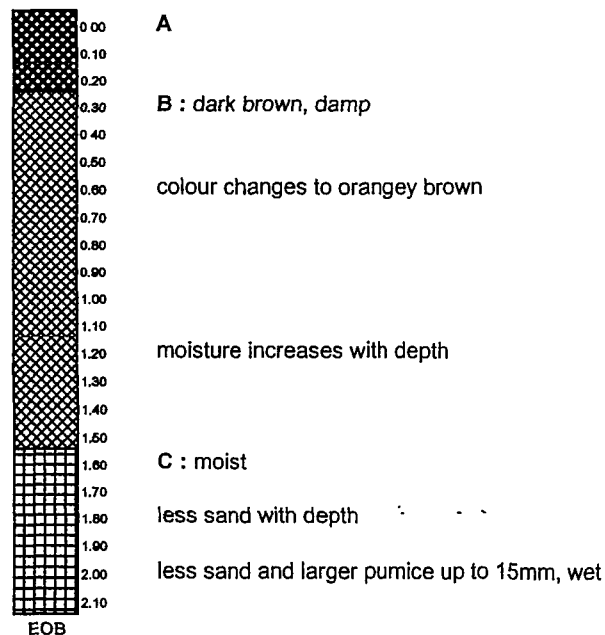
BOREHOLE 2



BOREHOLE 3



BOREHOLE 4



MTEC Consultants Ltd

BOREHOLE LOGS

JOB NAME: EASTGATE DEVELOPMENTS LTD - PUKEHANGI ROAD
SITE ADDRESS: PUKEHANGI ROAD
JOB NUMBER: 173975/E

DATE: 27/09/2005
BY: GFB

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL

Lot 3

A 0.00 TOPSOIL (black/brown), slightly damp
0.10
B 0.20 SILT : Trace of sand, orangey brown,
0.30 damp
0.40
0.50
0.60
0.70
0.80
0.90
1.00 moisture increases with depth
EOB

Lot 5

0.00 A: damp
0.10
0.20 B : moist
0.30
0.40
0.50
0.60
0.70
0.80
0.90
1.00
EOB

Lot 8

0.00 A : damp
0.10
0.20
0.30 B : moist
0.40
0.50
0.60
0.70
0.80
0.90
1.00
EOB

Lot 10

0.00 A: damp
0.10
0.20 B : moist
0.30
0.40
0.50
0.60
0.70
0.80
0.90
1.00
EOB

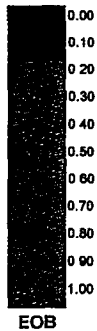
BOREHOLE LOGS

JOB NAME: EASTGATE DEVELOPMENTS LTD - PUKEHANGI ROAD
SITE ADDRESS: PUKEHANGI ROAD
JOB NUMBER: 173975/E

DATE: 27/09/2005
BY: GFB

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL

Lot 12



A : damp
B : moist

Lot 16



A : damp
B : moist

Lot 18



A : damp
B : moist

Lot 27



A : damp
B : damp

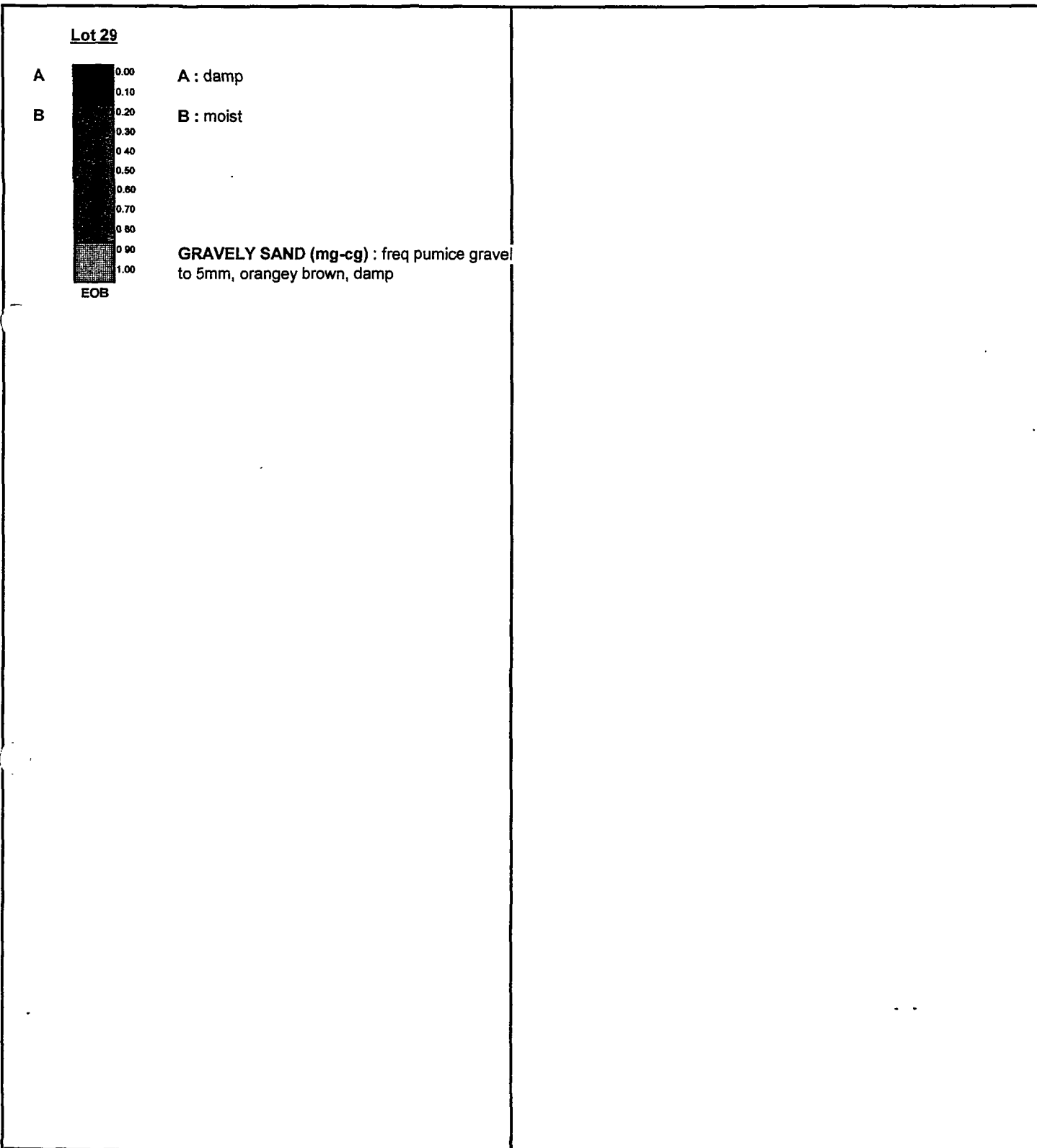
GRAVELY SAND (mg-cg) : freq pumice gravel to 5mm, orangey brown, damp

BOREHOLE LOGS

JOB NAME: EASTGATE DEVELOPMENTS LTD - PUKEHANGI ROAD
SITE ADDRESS: PUKEHANGI ROAD
JOB NUMBER: 173975/E

DATE: 27/09/2005
BY: GFB

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL



MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS - POST EARTHWORKS SUMMARY

JOB NAME: EASTGATE- PUKEHANGI ROAD
SITE ADDRESS: PUKEHANGI ROAD
JOB NUMBER: 173975

DATE: 6/03/2006
BY: SMP

- NOTE:** (1) TYPE OF SITE CUT = CUT EARTHWORKS
 FILL = FILL EARTHWORKS
 CUT/FILL = CUT AND FILL EARTHWORKS
 N/A = NO EARTHWORKS
- (2) PENETROMETER READING (mm/5 BLOWS) NEGLECTS THE UPPER 300MM OF GROUND DUE TO TOPSOIL AND THE LACK OF CONFINEMENT DUE TO THE SURFACE
- (3) MINIMUM READING IS AN AVERAGE OF THE MINIMUM READINGS ON EARTHWORKED SITES
- (4) 190mm / 5 BLOWS IS APPROX 150 FACTORED ULTIMATE BEARING CAPACITY (100kPa ALLOWABLE BEARING CAPACITY)
- (5) CONSENT NOTICE FOR SOFT GROUND REQUIRED WHERE GREATER THAN 190mm / 5 BLOWS

LOT	TYPE OF SITE (1)	READING (2)	BEARING CAPACITY (4)		CONSENT NOTICE
		MIN (3)	ALLOWABLE	FACTORED ULTIMATE	
1	CUT	240	76	114	Y
2	CUT	240	76	114	Y
3	N/A	190	100	150	
4	N/A	220	83	125	Y
5	N/A	180	>100	>150	
6	N/A	190	100	150	
7	FILL	180	>100	>150	
8	N/A	190	100	150	
9	CUT/FILL	190	100	150	
10	N/A	160	>100	>150	
11	N/A	220	84	126	Y
12	N/A	170	>100	>150	
13	N/A	250	72	108	Y
14	CUT	160	>100	>150	
15	CUT/FILL	190	100	150	
16	N/A	190	100	150	
17	N/A	190	100	150	
18	N/A	190	100	150	
19	N/A	190	100	150	
20	CUT	180	>100	>150	
21	CUT/FILL	190	100	150	
22	CUT	190	100	150	
23	FILL	180	>100	>150	
24	FILL	170	>100	>150	
25	FILL	160	>100	>150	
26	N/A	220	84	126	Y
27	N/A	130	>100	>150	
28	N/A	250	72	108	Y
29	N/A	160	>100	>150	
30	CUT	180	>100	>150	
31	CUT	210	88	132	Y
32	CUT	240	76	114	Y
33	CUT	190	100	150	
34	CUT/FILL	190	100	150	

MTEC CONSULTANTS LTD**SCALA PENETROMETER TEST RESULTS**

JOB NAME: EASTGATE DEVELOPMENTS LTD
SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
JOB NUMBER: 173975/E

DATE: 3/03/2006
BY: CBW

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
 TABLE OF PENETRATION IN mm PER 5 BLOWS
 LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 1 (1)			LOT 1 (2)			LOT 1 (3)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		240	200		250	210		180	140
10		390	150		500	250		470	290
15		500	110		710	210		750	280
20		560	60		900	190		1000	250
25		610	50		1000	100			
30		680	70						
35		740	60						
40		800	60						
45		870	70						
50		940	70						
55		1000	60						
60									
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 1 (4)								
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40							
5		400	360						
10		680	280						
15		820	140						
20		970(1)	150						
25		1000							
30									
35									
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

JOB NAME: EASTGATE DEVELOPMENTS LTD
SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
JOB NUMBER: 173975/E

DATE: 3/03/2006
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NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
TABLE OF PENETRATION IN mm PER 5 BLOWS
LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 2 (1)			LOT 2 (2)			LOT 2 (3)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		250	210		200	160		130	90
10		490	240		380	180		240	110
15		770	280		590	210		400	160
20		1000	230		840	250		510	110
25					1000	160		610	100
30								750	140
35								910	160
40								1000	90
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 2 (4)			LOT 3			LOT 4		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		200	160		310	270		340	300
10		350	150		500	190		560	220
15		610	260		660	160		750	190
20		810	200		770	110		900	150
25		1000	190		860	90		1000	100
30					1000	140			
35									
40					<u>SV</u>			<u>SV</u>	
45					62			53	
50					44			44	
55					47			35	
60					51			44	
65									
70									
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

JOB NAME: EASTGATE DEVELOPMENTS LTD
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JOB NUMBER: 173975/E

DATE: 3/03/2006
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NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
 TABLE OF PENETRATION IN mm PER 5 BLOWS
 LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 5			LOT 6			LOT 7 (1)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		290	250		250	210		310	270
10		470	180		440	190		490	180
15		640	170		630	190		640	150
20		790	150		750	120		770	130
25		920	130		870	120		880	110
30		1000	80		1000	130		1000	120
35									
40		<u>SV</u>			<u>SV</u>				
45		80			26				
50		62			33				
55		88			47				
60		77			35				
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 7 (2)			LOT 7 (3)			LOT 7 (4)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		200	160		200	160		250	210
10		300	100		300	100		400	150
15		420	120		460	160		550	150
20		650	230		630	170		700	150
25		830	180		770	140		820	120
30		1000	170		1000	230		920	100
35								1000	80
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

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SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
JOB NUMBER: 173975/E

DATE: 3/03/2006
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NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
 TABLE OF PENETRATION IN mm PER 5 BLOWS
 LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 8			LOT 9 (1)			LOT 9 (2)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		280	240		180	140		240	200
10		480	200		280	100		360	120
15		680	200		380	100		450	90
20		780	100		470	90		550	100
25		950(1)	170		630	160		700	150
30		1000			850	220		860	160
35					1060	210		1000	140
40		<u>SV</u>			1120	60		1100	100
45		46			1180	60		1180	80
50		32			1230	50		1240	60
55		22			1280	50		1310	70
60		33			1340	60		1380	70
65					1390	50		1440	60
70					1440	50		1500	60
75					1490	50		1560	60
80					1540	50		1650	90
85					1600	60		1730	80
90					1650	50		1810	80
95					1700	50		1880	70
100					1750	50		1950	70

NUMBER OF BLOWS	LOT 9 (3)			LOT 9 (4)			LOT 10		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		180	140		210	170		260	220
10		270	90		340	130		470	210
15		410	140		400	60		630	160
20		600	190		450	50		780	150
25		710	110		500	50		900	120
30		820	110		560	60		1000	100
35		920	100		650	90			
40		1050	130		730	80		<u>SV</u>	
45		1100	50		830	100		38	
50		1140	40		950	120		42	
55		1180	40		1010	60		36	
60		1220	40		1150	140		39	
65		1260	40		1230	80			
70		1300	40		1330	100			
75		1340	40		1390	60			
80		1380	40		1450	60			
85		1430	50		1520	70			
90		1470	40		1600	80			
95		1510	40		1660	60			
100		1550	40		1750	90			

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SCALA PENETROMETER TEST RESULTS

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NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
TABLE OF PENETRATION IN mm PER 5 BLOWS
LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 11			LOT 12			LOT 13		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		210	170		240	200		260	220
10		500	290		400	160		560	300
15		720	220		570	170		810	250
20		950(1)	230		700	130		1000	190
25		1000			820	120			
30					940(1)	120		<u>SV</u>	
35		<u>SV</u>			1000			46	
40		65						38	
45		58			<u>SV</u>			42	
50		58			41			42	
55		60			39				
60					42				
65					41				
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 14 (1)			LOT 14 (2)			LOT 14 (3)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		190	150		240	200		180	140
10		290	100		370	130		280	100
15		420	130		450	80		360	80
20		530	110		540	90		460	100
25		660	130		610	70		580	120
30		800	140		690	80		710	130
35		920	120		760	70		870	160
40		1000	80		860	100		1000	130
45					970(1)	110			
50					1000				
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

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SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
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DATE: 3/03/2006
BY: CBW

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
TABLE OF PENETRATION IN mm PER 5 BLOWS
LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 14 (4)			LOT 15 (1)			LOT 15 (2)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		190	150		200	160		190	150
10		290	100		350	150		330	140
15		390	100		480	130		410	80
20		500	110		610	130		600	190
25		600	100		750	140		710	110
30		750	150		870	120		800	90
35		1000	250		940	70		870	70
40					1060	120		950	80
45					1200	140		1020	70
50					1340	140		1100	80
55					1460	120		1200	100
60					1560	100		1350	150
65					1650	90		1500	150
70					1740	90		1640	140
75					1800	60		1740	100
80					1870	70		1830	90
85					1950	80		1920	90
90					2000	50		2000	80
95									
100									

NUMBER OF BLOWS	LOT 15 (3)			LOT 15 (4)			LOT 16		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		210	170		200	160		270	230
10		290	80		300	100		460	190
15		390	100		400	100		620	160
20		480	90		510	110		800	180
25		620	140		600	90		960(1)	160
30		720	100		680	80		1000	
35		810	90		760	80			
40		960	150		850	90		<u>SV</u>	
45		1080	120		950	100		59	
50		1190	110		1040	90		74	
55		1300	110		1150	110		84	
60		1410	110		1230	80		72	
65		1530	120		1310	80			
70		1620	90		1390	80			
75		1690	70		1480	90			
80		1740	50		1590	110			
85		1800	60		1630	40			
90		1850	50		1740	110			
95		1900	50		1880	140			
100		1960	60		2000	120			

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SCALA PENETROMETER TEST RESULTS

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DATE: 7/03/2006
BY: CBW

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
 TABLE OF PENETRATION IN mm PER 5 BLOWS
 LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 17			LOT 18			LOT 19		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		310	270		210	170		200	160
10		500	190		400	190		390	190
15		650	150		600	200		570	180
20		790	140		780	180		750	180
25		920	130		910	130		920	170
30		1000	80		1000	90		1000	80
35									
40		<u>SV</u>			<u>SV</u>			<u>SV</u>	
45		14			71			68	
50		15			58			62	
55		38			58			71	
60		22			62			67	
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 20 (1)			LOT 20 (2)			LOT 20 (3)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		180	140		250	210		200	160
10		310	130		360	110		340	140
15		400	90		410	50		470	130
20		450	50		770	360		600	130
25		520	70		930	160		720	360
30		660	140		1000	70		820	240
35		770	110					900	140
40		850	80					1000	60
45		910	60						
50		1000	90						
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

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JOB NUMBER: 173975/E

DATE: 7/03/2006
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NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
TABLE OF PENETRATION IN mm PER 5 BLOWS
LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 20 (4)			LOT 21 (1)			LOT 21 (2)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		150	110		170	130		160	120
10		220	70		250	80		290	130
15		310	90		330	80		410	120
20		380	70		440	110		550	140
25		470	90		550	110		750	200
30		600	130		670	120		900	150
35		970(1)	370		990(1)	320		1000	100
40		1000			1000				
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 21 (3)			LOT 21 (4)			LOT 22 (1)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		150	110		230	190		150	110
10		210	60		600	370		250	100
15		270	60		880	280		340	90
20		360	90		1000	120		480	140
25		520	160					660	480
30		820	300					860	300
35		1000	180					1000	100
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

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SCALA PENETROMETER TEST RESULTS

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DATE: 7/03/2006
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NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
TABLE OF PENETRATION IN mm PER 5 BLOWS
LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 22 (2)			LOT 22 (3)			LOT 22 (4)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		240	200		230	190		210	170
10		400	160		360	130		350	140
15		510	110		580	220		540	190
20		640	130		770	190		700	160
25		790	150		970(1)	200		820	120
30		950(1)	160		1000			900	80
35		1000						1000	100
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 23 (1)			LOT 23 (2)			LOT 23 (3)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		200	160		250	210		270	230
10		330	130		360	110		370	100
15		430	100		490	130		480	110
20		550	120		680	190		590	110
25		680	130		870	190		750	160
30		800	120		1010	140		900	150
35		910	110		1120	110		1030	130
40		1020	110		1210	90		1110	80
45		1100	80		1280	70		1190	80
50		1140	40		1350	70		1260	70
55		1200	60		1410	60		1320	60
60		1260	60		1480	70		1390	70
65		1310	50		1570	90		1450	60
70		1360	50		1660	90		1500	50
75		1410	50		1750	90		1570	70
80		1470	60		1820	70		1650	80
85		1530	60		1900	80		1720	70
90		1580	50		2000	100		1780	60
95		1640	60					1860	80
100		1690	50					1920	60

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SCALA PENETROMETER TEST RESULTS

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TABLE OF PENETRATION IN mm PER 5 BLOWS
LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 23 (4)			LOT 24 (1)			LOT 24 (2)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		220	180		280	240		200	160
10		340	120		440	160		320	120
15		500	160		580	140		380	60
20		670	170		670	90		470	90
25		900	230		800	130		680	210
30		1050	150		900	100		840	160
35		1130	80		970	70		920	80
40		1220	90		1070	100		1080	160
45		1300	80		1130	60		1150	70
50		1360	60		1170	40		1210	60
55		1390	30		1220	50		1270	60
60		1420	30		1270	50		1320	50
65		1450	30		1320	50		1360	40
70		1510	60		1370	50		1400	40
75		1600	90		1420	50		1430	30
80		1660	60		1480	60		1480	50
85		1710	50		1530	50		1550	70
90		1780	70		1630	100		1620	70
95		1840	60		1670	40		1690	70
100		1930	90		1730	60		1760	70

NUMBER OF BLOWS	LOT 24 (3)			LOT 24 (4)			LOT 25 (1)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		210	170		190	150		210	170
10		400	190		320	130		300	90
15		530	130		480	160		450	150
20		650	120		550	70		560	110
25		750	100		640	90		700	140
30		860	110		740	100		810	110
35		940	80		840	100		920	110
40		1110	170		900	60		1040	120
45		1160	50		950	50		1100	60
50		1210	50		1000	50		1140	40
55		1270	60		1100	100		1200	60
60		1330	60		1160	60		1240	40
65		1380	50		1220	60		1330	90
70		1420	40		1300	80		1380	50
75		1490	70		1350	50		1420	40
80		1540	50		1430	80		1450	30
85		1600	60		1480	50		1500	50
90		1660	60		1540	60		1550	50
95		1720	60		1580	40		1590	40
100		1810	90		1630	50		1640	50

MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

JOB NAME: EASTGATE DEVELOPMENTS LTD
SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
JOB NUMBER: 173975/E

DATE: 7/03/2006
BY: CBW

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
 TABLE OF PENETRATION IN mm PER 5 BLOWS
 LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 25 (2)			LOT 25 (3)			LOT 25 (4)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		210	170		180	140		200	160
10		360	150		250	70		310	110
15		520	160		390	140		420	110
20		620	100		520	130		540	120
25		730	110		680	160		690	150
30		810	80		870	190		800	110
35		900	90		1000	130		910	110
40		1000	100		1080	80		1050	140
45		1090	90		1120	40		1110	60
50		1140	50		1170	50		1170	60
55		1190	50		1220	50		1220	50
60		1240	50		1260	40		1280	60
65		1300	60		1320	60		1320	40
70		1360	60		1390	70		1380	60
75		1440	80		1450	60		1440	60
80		1500	60		1520	70		1490	50
85		1580	80		1590	70		1550	60
90		1650	70		1650	60		1600	50
95		1720	70		1710	60		1650	50
100		1800	80		1780	70		1700	50

NUMBER OF BLOWS	LOT 26			LOT 27			LOT 28		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		240	200		210	170		300	260
10		460	220		330	120		550	250
15		690	230		450	120		700	150
20		860	170		570	120		860	160
25		1000	140		700	130		1000	140
30					800	100			
35		<u>SV</u>			900	100		<u>SV</u>	
40		38			1000	100		46	
45		41						50	
50		46			<u>SV</u>			42	
55		42			104			46	
60					116				
65					92				
70					104				
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

JOB NAME: EASTGATE DEVELOPMENTS LTD
SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
JOB NUMBER: 173975/E

DATE: 7/03/2006
BY: CBW

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
 TABLE OF PENETRATION IN mm PER 5 BLOWS
 LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 29			LOT 30 (1)			LOT 30 (2)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		260	220		140	100		210	170
10		520	260		240	100		370	160
15		680	160		400	160		500	130
20		830	150		520	120		620	120
25		1000	170		640	120		730	110
30					730	90		850	120
35		SV			850	120		970(1)	120
40		56			950(2)	100		1000	
45		48			1000				
50		51							
55		52							
60									
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 30 (3)			LOT 30 (4)			LOT 31 (1)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		170	130		290	250		150	110
10		340	170		510	220		240	90
15		470	130		660	150		370	130
20		650	180		780	120		500	130
25		920(2)	270		900	120		630	130
30		1000			1000	100		780	150
35								900	120
40								1000	100
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

JOB NAME: EASTGATE DEVELOPMENTS LTD
SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
JOB NUMBER: 173975/E

DATE: 7/03/2006
BY: CBW

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
 TABLE OF PENETRATION IN mm PER 5 BLOWS
 LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 31 (2)			LOT 31 (3)			LOT 31 (4)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		350	310		280	240		180	140
10		650	300		440	160		300	120
15		850	200		650	210		440	140
20		1000	150		850	200		650	210
25					1000	150		800	150
30								950(2)	150
35								1000	
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 32 (1)			LOT 32 (2)			LOT 32 (3)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		290	250		180	140		200	160
10		560	270		290	110		290	90
15		910(2)	350		400	110		450	160
20		1000			540	140		560	110
25					690	150		700	140
30					900	210		1000	300
35					1000	100			
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD**SCALA PENETROMETER TEST RESULTS**

JOB NAME: EASTGATE DEVELOPMENTS LTD
SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
JOB NUMBER: 173975/E

DATE: 7/03/2006
BY: CBW

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
 TABLE OF PENETRATION IN mm PER 5 BLOWS
 LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 32 (4)			LOT 33 (1)			LOT 33 (2)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		260	220		210	170		260	220
10		450	190		360	150		410	150
15		700	250		490	130		700	290
20		900	200		600	110		890	190
25		1000	100		720	120		1000	110
30					850	130			
35					1000	150			
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

NUMBER OF BLOWS	LOT 33 (3)			LOT 33 (4)			LOT 34 (1)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		310	270		220	180		300	260
10		500	190		350	130		450	150
15		660	160		500	150		640	190
20		820	160		690	190		790	150
25		1000	180		800	110		920	130
30					910	110		1000	80
35					1000	90			
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

MTEC CONSULTANTS LTD

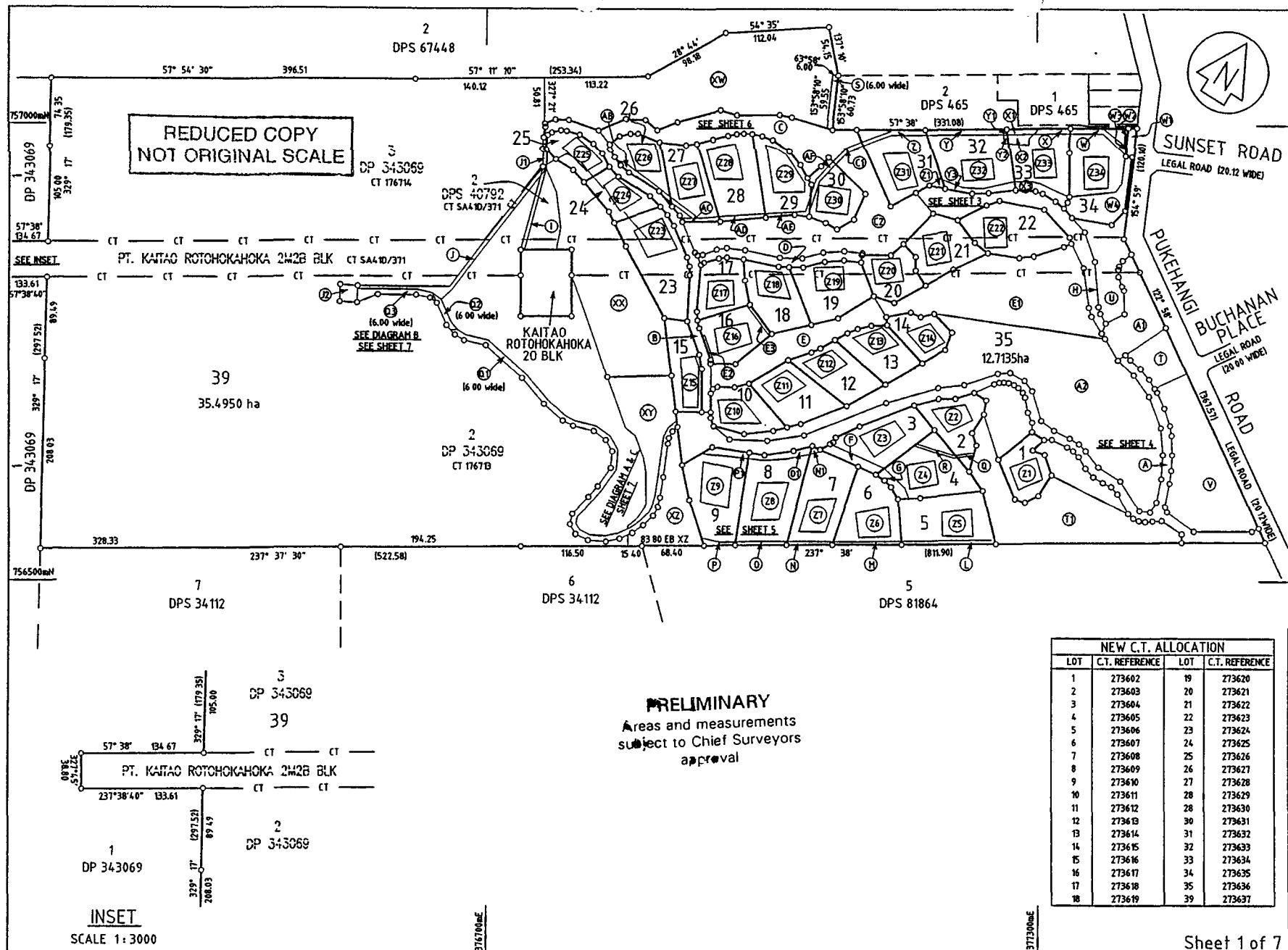
SCALA PENETROMETER TEST RESULTS

JOB NAME: EASTGATE DEVELOPMENTS LTD
SITE ADDRESS: PUKEHANGI ROAD, ROTORUA
JOB NUMBER: 173975/E

DATE: 7/03/2006
BY: CBW

NOTE: DEPTH OF PENETRATION BEGINS AT EXISTING GROUND LEVEL
TABLE OF PENETRATION IN mm PER 5 BLOWS
LINE INDICATES LEVEL OF FIRM GROUND

NUMBER OF BLOWS	LOT 34 (2)			LOT 34 (3)			LOT 34 (4)		
	RL	READING	PENETR.	RL	READING	PENETR.	RL	READING	PENETR.
RL START									
		40			40			40	
5		170	130		190	150		230	190
10		260	90		300	110		340	110
15		340	80		410	110		490	150
20		410	70		520	110		630	140
25		500	90		650	130		730	100
30		660	160		790	140		810	80
35		810	150		920	130		910	100
40		950(2)	140		1000	80		1000	90
45		1000							
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									



Approvals

EASTGATE DEVELOPMENTS LIMITED
REGISTERED OWNERS

I HEREBY CERTIFY THAT THIS PLAN WAS APPROVED BY THE ROTORUA DISTRICT COUNCIL PURSUANT TO SECTION 223 OF THE RESOURCE MANAGEMENT ACT 1991 ON THE ____ DAY OF ____ 20____ SUBJECT TO THE GRANTING OR RESERVING OF THE EASEMENTS SET OUT IN THE MEMORANDUM HEREON

CHIEF EXECUTIVE
SUB. 6305075

PURSUANT TO SECTION 224(c) OF THE RESOURCE MANAGEMENT ACT 1991 I HEREBY CERTIFY THAT SOME OF THE CONDITIONS OF THE SUBDIVISION CONSENT HAVE BEEN COMPLIED WITH TO THE SATISFACTION OF THE ROTORUA DISTRICT COUNCIL AND THAT A CONSENT NOTICE HAS BEEN ISSUED IN RESPECT OF THOSE CONDITIONS THAT HAVE NOT BEEN COMPLIED WITH DATED THIS ____ DAY OF ____ 20____

CHIEF EXECUTIVE

NOTE:

1) FOR AREAS OF LOTS 1-34 SEE SHEETS 2-5

2) 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 ARE CONSENT NOTICES

3) SEE SHEET 2 FOR MEMORANDUM OF EASEMENTS AND MEMORANDUM OF EASEMENTS IN GROSS

CLASS OF SURVEY: LOTS 1-35 = I; LOT 39 = III

Total Area ... 62.1258ha

Comprised in CT 176713, CT 176714
CT SA41D/371..

I, ... CHRISTOPHER... PAUL... HOPPER... being a person entitled to practice as a Licensed Cadastral Surveyor, certify that:
(a) The surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Survey-General's Rules for Cadastral Survey 2002/2
(b) This dataset is accurate, and has been created in accordance with that Act and those Rules

Signed ... Date ... / ... / ...

Field Book ... Traverse Book ...

Reference Plane ...

Examined ... Correct ...

Approval as to Survey by Land Information New Zealand on ... / ... / ...

Deposited by Land Information New Zealand on: ... / ... / ...

File
Received
Instructions

DP 367422

NEW C.T. ALLOCATION			
LOT	C.T. REFERENCE	LOT	C.T. REFERENCE
1	273602	19	273620
2	273603	20	273621
3	273604	21	273622
4	273605	22	273623
5	273606	23	273624
6	273607	24	273625
7	273608	25	273626
8	273609	26	273627
9	273610	27	273628
10	273611	28	273629
11	273612	29	273630
12	273613	30	273631
13	273614	31	273632
14	273615	32	273633
15	273616	33	273634
16	273617	34	273635
17	273618	35	273636
18	273619	39	273637

Sheet 1 of 7

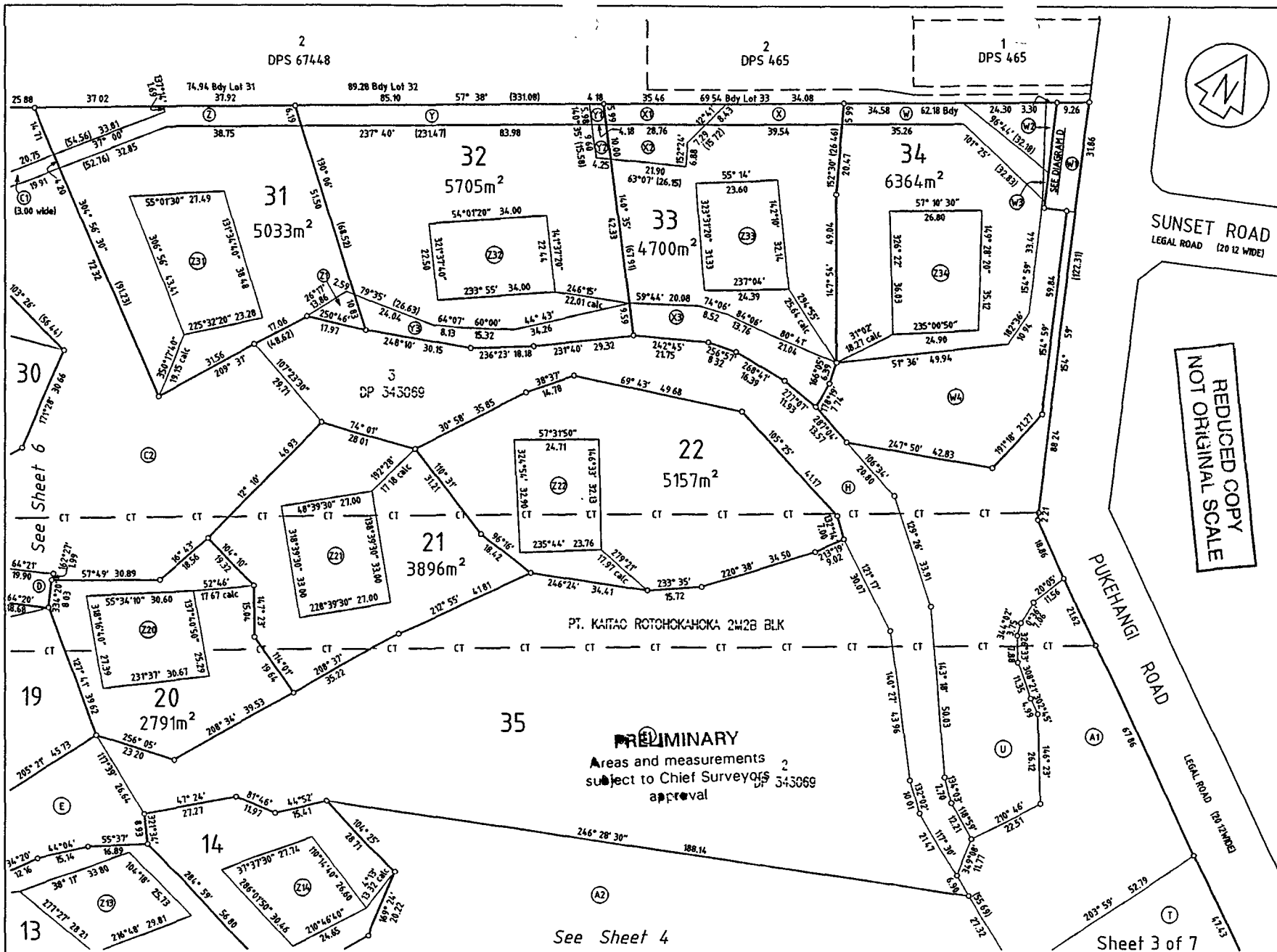
LAND DISTRICT ... SOUTH AUCKLAND ...

LOTS 1-35 & 39 BEING A SUBDIVISION OF LOTS 2 & 3 DP 343069,
LOT 2 DPS 40792 AND PART KAITAO ROTOHOKAHOKA 2M2B BLOCK

TERRITORIAL AUTHORITY ... ROTORUA DISTRICT
Surveyed by MTEC CONSULTANTS LTD
Scale ... 1:3000 ... Date JANUARY 2006 ...

MEMORANDUM OF EASEMENTS			
PURPOSE	SHOWN	SERV. TEN.	DOM. TEN.
Right of Way	(A)(B)(C)	Lot 35 Hereon	Lots 1-34 Hereon
Right to convey Water, Gas, Electricity	(D)(E)(F)	Lot 3 Hereon	Lots 4-7 Hereon
Telecommunications & Computer Media	(G)	Lot 4 Hereon	Lots 5 & 6 Hereon
Right of Way	(A)(B)(C)	Lot 35 Hereon	Lot 39 Hereon
Right to convey Water	(D)(E)(F)	Lot 35 Hereon	Lots 1-34 Hereon
	(G)(H)(I)	Lot 35 Hereon	Lots 39 Hereon
	(J)(K)(L)	Lot 34 Hereon	Lots 1-33, 35 & 39 Hereon
	(M)(N)(O)	Lot 33 Hereon	Lots 1-32, 34, 35 & 39 Hereon
	(P)(Q)(R)	Lot 32 Hereon	Lots 1-31, 33-35 & 39 Hereon
	(S)(T)(U)	Lot 31 Hereon	Lots 1-30, 32-35 & 39 Hereon
	(V)(W)(X)	Lot 30 Hereon	Lots 1-29, 31-35 & 39 Hereon
	(Y)(Z)(AA)	Lot 29 Hereon	Lots 1-28, 30-35 & 39 Hereon
	(AB)(AC)(AD)	Lot 28 Hereon	Lots 1-27, 29-35 & 39 Hereon
	(AE)(AF)(AG)	Lot 27 Hereon	Lots 1-26, 28-35 & 39 Hereon
	(AH)(AI)(AJ)	Lot 26 Hereon	Lots 1-25, 27-35 & 39 Hereon
	(AK)(AL)(AM)	Lot 3 Hereon	Lots 4 - 7 Hereon
	(AN)(AO)(AP)	Lot 4 Hereon	Lots 5 & 6 Hereon
Right To Drain Sewage	(AQ)	Lot 16 Hereon	Lot 17 Hereon
Right to Drain Water	(AR)(AS)(AT)(AU)(AV)(AW)(AX)(AY)(AZ)(BA)(BB)(BC)(BD)(BE)(BF)(BG)(BH)(BI)(BJ)(BK)(BL)(BM)(BN)(BO)(BP)(BQ)(BR)(BS)(BT)(BU)(BV)(BW)(BX)(BY)(BZ)(CA)(CB)(CC)(CD)(CE)(CF)(CG)(CH)(CI)(CJ)(CK)(CL)(CM)(CN)(CO)(CP)(CQ)(CR)(CS)(CT)(CU)(CV)(CW)(CX)(CY)(CZ)(DA)(DB)(DC)(DD)(DE)(DF)(DG)(DH)(DI)(DJ)(DK)(DL)(DM)(DN)(DO)(DP)(DQ)(DR)(DS)(DT)(DU)(DV)(DW)(DX)(DY)(DZ)(EA)(EB)(EC)(ED)(EE)(EF)(EG)(EH)(EI)(EJ)(EK)(EL)(EM)(EN)(EO)(EP)(EQ)(ER)(ES)(ET)(EU)(EV)(EW)(EX)(EY)(EZ)(FA)(FB)(FC)(FD)(FE)(FF)(FG)(FH)(FI)(FJ)(FK)(FL)(FM)(FN)(FO)(FP)(FQ)(FR)(FS)(FT)(FU)(FV)(FW)(FX)(FY)(FZ)(GA)(GB)(GC)(GD)(GE)(GF)(GG)(GH)(GI)(GJ)(GK)(GL)(GM)(GN)(GO)(GP)(GQ)(GR)(GS)(GT)(GU)(GV)(GW)(GX)(GY)(GZ)(HA)(HB)(HC)(HD)(HE)(HF)(HG)(HH)(HI)(HJ)(HK)(HL)(HM)(HN)(HO)(HP)(HQ)(HR)(HS)(HT)(HU)(HV)(HW)(HX)(HY)(HZ)(IA)(IB)(IC)(ID)(IE)(IF)(IG)(IH)(II)(IJ)(IK)(IL)(IM)(IN)(IO)(IP)(IQ)(IR)(IS)(IT)(IU)(IV)(IW)(IX)(IY)(IZ)(JA)(JB)(JC)(JD)(JE)(JF)(JG)(JH)(JI)(JJ)(JK)(JL)(JM)(JN)(JO)(JP)(JQ)(JR)(JS)(JT)(JU)(JV)(JW)(JX)(JY)(JZ)(KA)(KB)(KC)(KD)(KE)(KF)(KG)(KH)(KI)(KJ)(KK)(KL)(KM)(KN)(KO)(KP)(KQ)(KR)(KS)(KT)(KU)(KV)(KW)(KX)(KY)(KZ)(LA)(LB)(LC)(LD)(LE)(LF)(LG)(LH)(LI)(LJ)(LK)(LM)(LN)(LO)(LP)(LQ)(LR)(LS)(LT)(LU)(LV)(LW)(LX)(LY)(LZ)(MA)(MB)(MC)(MD)(ME)(MF)(MG)(MH)(MI)(MJ)(MK)(ML)(MN)(MO)(MP)(MQ)(MR)(MS)(MT)(MU)(MV)(MW)(MX)(MY)(MZ)(NA)(NB)(NC)(ND)(NE)(NF)(NG)(NH)(NI)(NJ)(NK)(NL)(NM)(NO)(NP)(NQ)(NR)(NS)(NT)(NU)(NV)(NW)(NX)(NY)(NZ)(OA)(OB)(OC)(OD)(OE)(OF)(OG)(OH)(OI)(OJ)(OK)(OL)(OM)(ON)(OO)(OP)(OQ)(OR)(OS)(OT)(OU)(OV)(OW)(OX)(OY)(OZ)(PA)(PB)(PC)(PD)(PE)(PF)(PG)(PH)(PI)(PJ)(PK)(PL)(PM)(PN)(PO)(PP)(PQ)(PR)(PS)(PT)(PU)(PV)(PW)(PX)(PY)(PZ)(QA)(QB)(QC)(QD)(QE)(QF)(QG)(QH)(QI)(QJ)(QK)(QL)(QM)(QN)(QO)(QP)(QQ)(QR)(QS)(QT)(QU)(QV)(QW)(QX)(QY)(QZ)(RA)(RB)(RC)(RD)(RE)(RF)(RG)(RH)(RI)(RJ)(RK)(RL)(RM)(RN)(RO)(RP)(RQ)(RR)(RS)(RT)(RU)(RV)(RW)(RX)(RY)(RZ)(SA)(SB)(SC)(SD)(SE)(SF)(SG)(SH)(SI)(SJ)(SK)(SL)(SM)(SN)(SO)(SP)(SQ)(SR)(SS)(ST)(SU)(SV)(SW)(SX)(SY)(SZ)(TA)(TB)(TC)(TD)(TE)(TF)(TG)(TH)(TI)(TJ)(TK)(TL)(TM)(TN)(TO)(TP)(TQ)(TR)(TS)(TT)(TU)(TV)(TW)(TX)(TY)(TZ)(UA)(UB)(UC)(UD)(UE)(UF)(UG)(UH)(UI)(UJ)(UK)(UL)(UM)(UN)(UO)(UP)(UQ)(UR)(US)(UT)(UU)(UV)(UW)(UX)(UY)(UZ)(VA)(VB)(VC)(VD)(VE)(VF)(VG)(VH)(VI)(VJ)(VK)(VL)(VM)(VN)(VO)(VP)(VQ)(VR)(VS)(VT)(VU)(VV)(VW)(VX)(VY)(VZ)(WA)(WB)(WC)(WD)(WE)(WF)(WG)(WH)(WI)(WJ)(WK)(WL)(WM)(WN)(WO)(WP)(WQ)(WR)(WS)(WT)(WU)(WV)(WW)(WX)(WY)(WZ)(XA)(XB)(XC)(XD)(XE)(XF)(XG)(XH)(XI)(XJ)(XK)(XL)(XM)(XN)(XO)(XP)(XQ)(XR)(XS)(XT)(XU)(XV)(XW)(XX)(XY)(XZ)(YA)(YB)(YC)(YD)(YE)(YF)(YG)(YH)(YI)(YJ)(YK)(YL)(YM)(YN)(YO)(YP)(YQ)(YR)(YS)(YT)(YU)(YV)(YW)(YX)(YY)(YZ)(ZA)(ZB)(ZC)(ZD)(ZE)(ZF)(ZG)(ZH)(ZI)(ZJ)(ZK)(ZL)(ZM)(ZN)(ZO)(ZP)(ZQ)(ZR)(ZS)(ZT)(ZU)(ZV)(ZW)(ZX)(ZY)(ZZ)		

MEMORANDUM OF EASEMENTS IN GROSS					
PURPOSE	SHOWN	SERV. TEN.	GRANTEE		
Pedestrian Access	(1)(2)	Lot 39 Hereon	Pukehangai Parkland Estate Incorporation		
Right To Drain Sewage	(3)	Lot 31 Hereon	Rotorua District Council		
	(A)(B)(C)(D)(E)(F)(G)(H)(I)(J)(K)(L)(M)(N)(O)(P)(Q)(R)(S)(T)(U)(V)(W)(X)(Y)(Z)(AA)(AB)(AC)(AD)(AE)(AF)(AG)(AH)(AI)(AJ)(AK)(AL)(AM)(AN)(AO)(AP)(AQ)(AR)(AS)(AT)(AU)(AV)(AW)(AX)(AY)(AZ)(BA)(BB)(BC)(BD)(BE)(BF)(BG)(BH)(BI)(BJ)(BK)(BL)(BM)(BN)(BO)(BP)(BQ)(BR)(BS)(BT)(BU)(BV)(BW)(BX)(BY)(BZ)(CA)(CB)(CC)(CD)(CE)(CF)(CG)(CH)(CI)(CJ)(CK)(CL)(CM)(CN)(CO)(CP)(CQ)(CR)(CS)(CT)(CU)(CV)(CW)(CX)(CY)(CZ)(DA)(DB)(DC)(DD)(DE)(DF)(DG)(DH)(DI)(DJ)(DK)(DL)(DM)(DN)(DO)(DP)(DQ)(DR)(DS)(DT)(DU)(DV)(DW)(DX)(DY)(DZ)(EA)(EB)(EC)(ED)(EE)(EF)(EG)(EH)(EI)(EJ)(EK)(EL)(EM)(EN)(EO)(EP)(EQ)(ER)(ES)(ET)(EU)(EV)(EW)(EX)(EY)(EZ)(FA)(FB)(FC)(FD)(FE)(FF)(FG)(FH)(FI)(FJ)(FK)(FL)(FM)(FN)(FO)(FP)(FQ)(FR)(FS)(FT)(FU)(FV)(FW)(FX)(FY)(FZ)(GA)(GB)(GC)(GD)(GE)(GF)(GG)(GH)(GI)(GJ)(GK)(GL)(GM)(GN)(GO)(GP)(GQ)(GR)(GS)(GT)(GU)(GV)(GW)(GX)(GY)(GZ)(HA)(HB)(HC)(HD)(HE)(HF)(HG)(HH)(HI)(HJ)(HK)(HL)(HM)(HN)(HO)(HP)(HQ)(HR)(HS)(HT)(HU)(HV)(HW)(HX)(HY)(HZ)(IA)(IB)(IC)(ID)(IE)(IF)(IG)(IH)(II)(IJ)(IK)(IL)(IM)(IN)(IO)(IP)(IQ)(IR)(IS)(IT)(IU)(IV)(IW)(IX)(IY)(IZ)(JA)(JB)(JC)(JD)(JE)(JF)(JG)(JH)(JI)(JJ)(JK)(JL)(JM)(JN)(JO)(JP)(JQ)(JR)(JS)(JT)(JU)(JV)(JW)(JX)(JY)(JZ)(KA)(KB)(KC)(KD)(KE)(KF)(KG)(KH)(KI)(KJ)(KK)(KL)(KM)(KN)(KO)(KP)(KQ)(KR)(KS)(KT)(KU)(KV)(KW)(KX)(KY)(KZ)(LA)(LB)(LC)(LD)(LE)(LF)(LG)(LH)(LI)(LJ)(LK)(LM)(LN)(LO)(LP)(LQ)(LR)(LS)(LT)(LU)(LV)(LW)(LX)(LY)(LZ)(MA)(MB)(MC)(MD)(ME)(MF)(MG)(MH)(MI)(MJ)(MK)(ML)(MN)(MO)(MP)(MQ)(MR)(MS)(MT)(MU)(MV)(MW)(MX)(MY)(MZ)(NA)(NB)(NC)(ND)(NE)(NF)(NG)(NH)(NI)(NJ)(NK)(NL)(NM)(NO)(NP)(NQ)(NR)(NS)(NT)(NU)(NV)(NW)(NX)(NY)(NZ)(OA)(OB)(OC)(OD)(OE)(OF)(OG)(OH)(OI)(OJ)(OK)(OL)(OM)(ON)(OO)(OP)(OQ)(OR)(OS)(OT)(OU)(OV)(OW)(OX)(OY)(OZ)(PA)(PB)(PC)(PD)(PE)(PF)(PG)(PH)(PI)(PJ)(PK)(PL)(PM)(PN)(PO)(PP)(PQ)(PR)(PS)(PT)(PU)(PV)(PW)(PX)(PY)(PZ)(QA)(QB)(QC)(QD)(QE)(QF)(QG)(QH)(QI)(QJ)(QK)(QL)(QM)(QN)(QO)(QP)(QQ)(QR)(QS)(QT)(QU)(QV)(QW)(QX)(QY)(QZ)(RA)(RB)(RC)(RD)(RE)(RF)(RG)(RH)(RI)(RJ)(RK)(RL)(RM)(RN)(RO)(RP)(RQ)(RS)(RT)(RU)(RV)(RW)(RX)(RY)(RZ)(SA)(SB)(SC)(SD)(SE)(SF)(SG)(SH)(SI)(SJ)(SK)(SL)(SM)(SN)(SO)(SP)(SQ)(SR)(SS)(ST)(SU)(SV)(SW)(SX)(SY)(SZ)(TA)(TB)(TC)(TD)(TE)(TF)(TG)(TH)(TI)(TJ)(TK)(TL)(TM)(TN)(TO)(TP)(TQ)(TR)(TS)(TT)(TU)(TV)(TW)(TX)(TY)(TZ)(UA)(UB)(UC)(UD)(UE)(UF)(UG)(UH)(UI)(UJ)(UK)(UL)(UM)(UN)(UO)(UP)(UQ)(UR)(US)(UT)(UU)(UV)(UW)(UX)(UY)(UZ)(VA)(VB)(VC)(VD)(VE)(VF)(VG)(VH)(VI)(VJ)(VK)(VL)(VM)(VN)(VO)(VP)(VQ)(VR)(VS)(VT)(VU)(VV)(VW)(VX)(VY)(VZ)(WA)(WB)(WC)(WD)(WE)(WF)(WG)(WH)(WI)(WJ)(WK)(WL)(WM)(WN)(WO)(WP)(WQ)(WR)(WS)(WT)(WU)(WV)(WW)(WX)(WY)(WZ)(XA)(XB)(XC)(XD)(XE)(XF)(XG)(XH)(XI)(XJ)(XK)(XL)(XM)(XN)(XO)(XP)(XQ)(XR)(XS)(XT)(XU)(XV)(XW)(XX)(XY)(XZ)(YA)(YB)(YC)(YD)(YE)(YF)(YG)(YH)(YI)(YJ)(YK)(YL)(YM)(YN)(YO)(YP)(YQ)(YR)(YS)(YT)(YU)(YV)(YW)(YX)(YY)(YZ)(ZA)(ZB)(ZC)(ZD)(ZE)(ZF)(ZG)(ZH)(ZI)(ZJ)(ZK)(ZL)(ZM)(ZN)(ZO)(ZP)(ZQ)(ZR)(ZS)(ZT)(ZU)(ZV)(ZW)(ZX)(ZY)(ZZ)	Lot 35 Hereon			
	(1)	Lot 5 Hereon			
	(H)	Lot 6 Hereon			
	(N)	Lot 7 Hereon			
	(O)	Lot 8 Hereon			
	(P)	Lot 9 Hereon			
	(AB)	Lot 26 Hereon			
	(AL)	Lot 27 Hereon			
	(AM)	Lot 28 Hereon			
	(AP)	Lot 29 Hereon			
	(AQ)	Lot 30 Hereon			
	(Q)	Lot 2 Hereon			
	(R)	Lot 4 Hereon			
	(W)	Lot 34 Hereon			
	(X)(Y)	Lot 33 Hereon			
	(Y)(Y)	Lot 32 Hereon			
	Right To Convey Telecommunications & Computer Media	(A)(B)(C)(D)(E)(F)(G)(H)(I)(J)(K)(L)(M)(N)(O)(P)(Q)(R)(S)(T)(U)(V)(W)(X)(Y)(Z)(AA)(AB)(AC)(AD)(AE)(AF)(AG)(AH)(AI)(AJ)(AK)(AL)(AM)(AN)(AO)(AP)(AQ)(AR)(AS)(AT)(AU)(AV)(AW)(AX)(AY)(AZ)(BA)(BB)(BC)(BD)(BE)(BF)(BG)(BH)(BI)(BJ)(BK)(BL)(BM)(BN)(BO)(BP)(BQ)(BR)(BS)(BT)(BU)(BV)(BW)(BX)(BY)(BZ)(CA)(CB)(CC)(CD)(CE)(CF)(CG)(CH)(CI)(CJ)(CK)(CL)(CM)(CN)(CO)(CP)(CQ)(CR)(CS)(CT)(CU)(CV)(CW)(CX)(CY)(CZ)(DA)(DB)(DC)(DD)(DE)(DF)(DG)(DH)(DI)(DJ)(DK)(DL)(DM)(DN)(DO)(DP)(DQ)(DR)(DS)(DT)(DU)(DV)(DW)(DX)(DY)(DZ)(EA)(EB)(EC)(ED)(EE)(EF)(EG)(EH)(EI)(EJ)(EK)(EL)(EM)(EN)(EO)(EP)(EQ)(ER)(ES)(ET)(EU)(EV)(EW)(EX)(EY)(EZ)(FA)(FB)(FC)(FD)(FE)(FF)(FG)(FH)(FI)(FJ)(FK)(FL)(FM)(FN)(FO)(FP)(FQ)(FR)(FS)(FT)(FU)(FV)(FW)(FX)(FY)(FZ)(GA)(GB)(GC)(GD)(GE)(GF)(GG)(GH)(GI)(GJ)(GK)(GL)(GM)(GN)(GO)(GP)(GQ)(GR)(GS)(GT)(GU)(GV)(GW)(GX)(GY)(GZ)(HA)(HB)(HC)(HD)(HE)(HF)(HG)(HH)(HI)(HJ)(HK)(HL)(HM)(HN)(HO)(HP)(HQ)(HR)(HS)(HT)(HU)(HV)(HW)(HX)(HY)(HZ)(IA)(IB)(IC)(ID)(IE)(IF)(IG)(IH)(II)(IJ)(IK)(IL)(IM)(IN)(IO)(IP)(IQ)(IR)(IS)(IT)(IU)(IV)(IW)(IX)(IY)(IZ)(JA)(JB)(JC)(JD)(JE)(JF)(JG)(JH)(JI)(JJ)(JK)(JL)(JM)(JN)(JO)(JP)(JQ)(JR)(JS)(JT)(JU)(JV)(JW)(JX)(JY)(JZ)(KA)(KB)(KC)(KD)(KE)(KF)(KG)(KH)(KI)(KJ)(KK)(KL)(KM)(KN)(KO)(KP)(KQ)(KR)(KS)(KT)(KU)(KV)(KW)(KX)(KY)(KZ)(LA)(LB)(LC)(LD)(LE)(LF)(LG)(LH)(LI)(LJ)(LK)(LM)(LN)(LO)(LP)(LQ)(LR)(LS)(LT)(LU)(LV)(LW)(LX)(LY)(LZ)(MA)(MB)(MC)(MD)(ME)(MF)(MG)(MH)(MI)(MJ)(MK)(ML)(MN)(MO)(MP)(MQ)(MR)(MS)(MT)(MU)(MV)(MW)(MX)(MY)(MZ)(NA)(NB)(NC)(ND)(NE)(NF)(NG)(NH)(NI)(NJ)(NK)(NL)(NM)(NO)(NP)(NQ)(NR)(NS)(NT)(NU)(NV)(NW)(NX)(NY)(NZ)(OA)(OB)(OC)(OD)(OE)(OF)(OG)(OH)(OI)(OJ)(OK)(OL)(OM)(ON)(OO)(OP)(OQ)(OR)(OS)(OT)(OU)(OV)(OW)(OX)(OY)(OZ)(PA)(PB)(PC)(PD)(PE)(PF)(PG)(PH)(PI)(PJ)(PK)(PL)(PM)(PN)(PO)(PP)(PQ)(PR)(PS)(PT)(PU)(PV)(PW)(PX)(PY)(PZ)(QA)(QB)(QC)(QD)(QE)(QF)(QG)(QH)(QI)(QJ)(QK)(QL)(QM)(QN)(QO)(QP)(QQ)(QR)(QS)(QT)(QU)(QV)(QW)(QX)(QY)(QZ)(RA)(RB)(RC)(RD)(RE)(RF)(RG)(RH)(RI)(RJ)(RK)(RL)(RM)(RN)(RO)(RP)(RQ)(RS)(RT)(RU)(RV)(RW)(RX)(RY)(RZ)(SA)(SB)(SC)(SD)(SE)(SF)(SG)(SH)(SI)(SJ)(SK)(SL)(SM)(SN)(SO)(SP)(SQ)(SR)(SS)(ST)(SU)(SV)(SW)(SX)(SY)(SZ)(TA)(TB)(TC)(TD)(TE)(TF)(TG)(TH)(TI)(TJ)(TK)(TL)(TM)(TN)(TO)(TP)(TQ)(TR)(TS)(TT)(TU)(TV)(TW)(TX)(TY)(TZ)(UA)(UB)(UC)(UD)(UE)(UF)(UG)(UH)(UI)(UJ)(UK)(UL)(UM)(UN)(UO)(UP)(UQ)(UR)(US)(UT)(UU)(UV)(UW)(UX)(UY)(UZ)(VA)(VB)(VC)(VD)(VE)(VF)(VG)(VH)(VI)(VJ)(VK)(VL)(VM)(VN)(VO)(VP)(VQ)(VR)(VS)(VT)(VU)(VV)(VW)(VX)(VY)(VZ)(WA)(WB)(WC)(WD)(WE)(WF)(WG)(WH)(WI)(WJ)(WK)(WL)(WM)(WN)(WO)(WP)(WQ)(WR)(WS)(WT)(WU)(WV)(WW)(WX)(WY)(WZ)(XA)(XB)(XC)(XD)(XE)(XF)(XG)(XH)(XI)(XJ)(XK)(XL)(XM)(XN)(XO)(XP)(XQ)(XR)(XS)(XT)(XU)(XV)(XW)(XX)(XY)(XZ)(YA)(YB)(YC)(YD)(YE)(YF)(YG)(YH)(YI)(YJ)(YK)(YL)(YM)(YN)(YO)(YP)(YQ)(YR)(YS)(YT)(YU)(YV)(YW)(YX)(YY)(YZ)(ZA)(ZB)(ZC)(ZD)(ZE)(ZF)(ZG)(ZH)(ZI)(ZJ)(ZK)(ZL)(ZM)(ZN)(ZO)(ZP)(ZQ)(ZR)(ZS)(ZT)(ZU)(ZV)(ZW)(ZX)(ZY)(ZZ)		Lot 35 Hereon	Telecom New Zealand Limited
		(F)		Lot 3 Hereon	
		(G)		Lot 4 Hereon	
(J)(H)(2)(A)		Lot 39 Hereon			
Right To Convey Electricity	(A)(B)(C)(D)(E)(F)(G)(H)(I)(J)(K)(L)(M)(N)(O)(P)(Q)(R)(S)(T)(U)(V)(W)(X)(Y)(Z)(AA)(AB)(AC)(AD)(AE)(AF)(AG)(AH)(AI)(AJ)(AK)(AL)(AM)(AN)(AO)(AP)(AQ)(AR)(AS)(AT)(AU)(AV)(AW)(AX)(AY)(AZ)(BA)(BB)(BC)(BD)(BE)(BF)(BG)(BH)(BI)(BJ)(BK)(BL)(BM)(BN)(BO)(BP)(BQ)(BR)(BS)(BT)(BU)(BV)(BW)(BX)(BY)(BZ)(CA)(CB)(CC)(CD)(CE)(CF)(CG)(CH)(CI)(CJ)(CK)(CL)(CM)(CN)(CO)(CP)(CQ)(CR)(CS)(CT)(CU)(CV)(CW)(CX)(CY)(CZ)(DA)(DB)(DC)(DD)(DE)(DF)(DG)(DH)(DI)(DJ)(DK)(DL)(DM)(DN)(DO)(DP)(DQ)(DR)(DS)(DT)(DU)(DV)(DW)(DX)(DY)(DZ)(EA)(EB)(EC)(ED)(EE)(EF)(EG)(EH)(EI)(EJ)(EK)(EL)(EM)(EN)(EO)(EP)(EQ)(ER)(ES)(ET)(EU)(EV)(EW)(EX)(EY)(EZ)(FA)(FB)(FC)(FD)(FE)(FF)(FG)(FH)(FI)(FJ)(FK)(FL)(FM)(FN)(FO)(FP)(FQ)(FR)(FS)(FT)(FU)(FV)(FW)(FX)(FY)(FZ)(GA)(GB)(GC)(GD)(GE)(GF)(GG)(GH)(GI)(GJ)(GK)(GL)(GM)(GN)(GO)(GP)(GQ)(GR)(GS)(GT)(GU)(GV)(GW)(GX)(GY)(GZ)(HA)(HB)(HC)(HD)(HE)(HF)(HG)(HH)(HI)(HJ)(HK)(HL)(HM)(HN)(HO)(HP)(HQ)(HR)(HS)(HT)(HU)(HV)(HW)(HX)(HY)(HZ)(IA)(IB)(IC)(ID)(IE)(IF)(IG)(IH)(II)(IJ)(IK)(IL)(IM)(IN)(IO)(IP)(IQ)(IR)(IS)(IT)(IU)(IV)(IW)(IX)(IY)(IZ)(JA)(JB)(JC)(JD)(JE)(JF)(JG)(JH)(JI)(JJ)(JK)(JL)(JM)(JN)(JO)(JP)(JQ)(JR)(JS)(JT)(JU)(JV)(JW)(JX)(JY)(JZ)(KA)(KB)(KC)(KD)(KE)(KF)(KG)(KH)(KI)(KJ)(KK)(KL)(KM)(KN)(KO)(KP)(KQ)(KR)(KS)(KT)(KU)(KV)(KW)(KX)(KY)(KZ)(LA)(LB)(LC)(LD)(LE)(LF)(LG)(LH)(LI)(LJ)(LK)(LM)(LN)(LO)(LP)(LQ)(LR)(LS)(LT)(LU)(LV)(LW)(LX)(LY)(LZ)(MA)(MB)(MC)(MD)(ME)(MF)(MG)(MH)(MI)(MJ)(MK)(ML)(MN)(MO)(MP)(MQ)(MR)(MS)(MT)(MU)(MV)(MW)(MX)(MY)(MZ)(NA)(NB)(NC)(ND)(NE)(NF)(NG)(NH)(NI)(NJ)(NK)(NL)(NM)(NO)(NP)(NQ)(NR)(NS)(NT)(NU)(NV)(NW)(NX)(NY)(NZ)(OA)(OB)(OC)(OD)(OE)(OF)(OG)(OH)(OI)(OJ)(OK)(OL)(OM)(ON)(OO)(OP)(OQ)(OR)(OS)(OT)(OU)(OV)(OW)(OX)(OY)(OZ)(PA)(PB)(PC)(PD)(PE)(PF)(PG)(PH)(PI)(PJ)(PK)(PL)(PM)(PN)(PO)(PP)(PQ)(PR)(PS)(PT)(PU)(PV)(PW)(PX)(PY)(PZ)(QA)(QB)(QC)(QD)(QE)(QF)(QG)(QH)(QI)(QJ)(QK)(QL)(QM)(QN)(QO)(QP)(QQ)(QR)(QS)(QT)(QU)(QV)(QW)(QX)(QY)(QZ)(RA)(RB)(RC)(RD)(RE)(RF)(RG)(RH)(RI)(RJ)(RK)(RL)(RM)(RN)(RO)(RP)(RQ)(RS)(RT)(RU)(RV)(RW)(RX)(RY)(RZ)(SA)(SB)(SC)(SD)(SE)(SF)(SG)(SH)(SI)(SJ)(SK)(SL)(SM)(SN)(SO)(SP)(SQ)(SR)(SS)(ST)(SU)(SV)(SW)(SX)(SY)(SZ)(TA)(TB)(TC)(TD)(TE)(TF)(TG)(TH)(TI)(TJ)(TK)(TL)(TM)(TN)(TO)(TP)(TQ)(TR)(TS)(TT)(TU)(TV)(TW)(TX)(TY)(TZ)(UA)(UB)(UC)(UD)(UE)(UF)(UG)(UH)(UI)(UJ)(UK)(UL)(UM)(UN)(UO)(UP)(UQ)(UR)(US)(UT)(UU)(UV)(UW)(UX)(UY)(UZ)(VA)(VB)(VC)(VD)(VE)(VF)(VG)(VH)(VI)(VJ)(VK)(VL)(VM)(VN)(VO)(VP)(VQ)(VR)(VS)(VT)(VU)(VV)(VW)(VX)(VY)(VZ)(WA)(WB)(WC)(WD)(WE)(WF)(WG)(WH)(WI)(WJ)(WK)(WL)(WM)(WN)(WO)(WP)(WQ)(WR)(WS)(WT)(WU)(WV)(WW)(WX)(WY)(WZ)(XA)(XB)(XC)(XD)(XE)(XF)(XG)(XH)(XI)(XJ)(XK)(XL)(XM)(XN)(XO)(XP)(XQ)(XR)(XS)(XT)(XU)(XV)(XW)(XX)(XY)(XZ)(YA)(YB)(YC)(YD)(YE)(YF)(YG)(YH)(YI)(YJ)(YK)(YL)(YM)(YN)(YO)(YP)(YQ)(YR)(YS)(YT)(YU)(YV)(YW)(YX)(YY)(YZ)(ZA)(ZB)(ZC)(ZD)(ZE)(ZF)(ZG)(ZH)(ZI)(ZJ)(ZK)(ZL)(ZM)(ZN)(ZO)(ZP)(ZQ)(ZR)(ZS)(ZT)(ZU)(ZV)(ZW)(ZX)(ZY)(ZZ)	Lot 35 Hereon	Unison		
	(F)	Lot 3 Hereon			
	(G)	Lot 4 Hereon			
	(J)(H)(2)(A)	Lot 39 Hereon			
Right To Convey Gas	(A)(B)(C)(D)(E)(F)(G)(H)(I)(J)(K)(L)(M)(N)(O)(P)(Q)(R)(S)(T)(U)(V)(W)(X)(Y)(Z)(AA)(AB)(AC)(AD)(AE)(AF)(AG)(AH)(AI)(AJ)(AK)(AL)(AM)(AN)(AO)(AP)(AQ)(AR)(AS)(AT)(AU)(AV)(AW)(AX)(AY)(AZ)(BA)(BB)(BC)(BD)(BE)(BF)(BG)(BH)(BI)(BJ)(BK)(BL)(BM)(BN)(BO)(BP)(BQ)(BR)(BS)(BT)(BU)(BV)(BW)(BX)(BY)(BZ)(CA)(CB)(CC)(CD)(CE)(CF)(CG)(CH)(CI)(CJ)(CK)(CL)(CM)(CN)(CO)(CP)(CQ)(CR)(CS)(CT)(CU)(CV)(CW)(CX)(CY)(CZ)(DA)(DB)(DC)(DD)(DE)(DF)(DG)(DH)(DI)(DJ)(DK)(DL)(DM)(DN)(DO)(DP)(DQ)(DR)(DS)(DT)(DU)(DV)(DW)(DX)(DY)(DZ)(EA)(EB)(EC)(ED)(EE)(EF)(EG)(EH)(EI)(EJ)(EK)(EL)(EM)(EN)(EO)(EP)(EQ)(ER)(ES)(ET)(EU)(EV)(EW)(EX)(EY)(EZ)(FA)(FB)(FC)(FD)(FE)(FF)(FG)(FH)(FI)(FJ)(FK)(FL)(FM)(FN)(FO)(FP)(FQ)(FR)(FS)(FT)(FU)(FV)(FW)(FX)(FY)(FZ)(GA)(GB)(GC)(GD)(GE)(GF)(GG)(GH)(GI)(GJ)(GK)(GL)(GM)(GN)(GO)(GP)(GQ)(GR)(GS)(GT)(GU)(GV)(GW)(GX)(GY)(GZ)(HA)(HB)(HC)(HD)(HE)(HF)(HG)(HH)(HI)(HJ)(HK)(HL)(HM)(HN)(HO)(HP)(HQ)(HR)(HS)(HT)(HU)(HV)(HW)(HX)(HY)(HZ)(IA)(IB)(IC)(ID)(IE)(IF)(IG)(IH)(II)(IJ)(IK)(IL)(IM)(IN)(IO)(IP)(IQ)(IR)(IS)(IT)(IU)(IV)(IW)(IX)(IY)(IZ)(JA)(JB)(JC)(JD)(JE)(JF)(JG)(JH)(JI)(JJ)(JK)(JL)(JM)(JN)(JO)(JP)(JQ)(JR)(JS)(JT)(JU)(JV)(JW)(JX)(JY)(JZ)(KA)(KB)(KC)(KD)(KE)(KF)(KG)(KH)(KI)(KJ)(KK)(KL)(KM)(KN)(KO)(KP)(KQ)(KR)(KS)(KT)(KU)(KV)(KW)(KX)(KY)(KZ)(LA)(LB)(LC)(LD)(LE)(LF)(LG)(LH)(LI)(LJ)(LK)(LM)(LN)(LO)(LP)(LQ)(LR)(LS)(LT)(LU)(LV)(LW)(LX)(LY)(LZ)(MA)(MB)(MC)(MD)(ME)(MF)(MG)(MH)(MI)(MJ)(MK)(ML)(MN)(MO)(MP)(MQ)(MR)(MS)(MT)(MU)(MV)(MW)(MX)(MY)(MZ)(NA)(NB)(NC)(ND)(NE)(NF)(NG)(NH)(NI)(NJ)(NK)(NL)(NM)(NO)(NP)(NQ)(NR)(NS)(NT)(NU)(NV)(NW)(NX)(NY)(NZ)(OA)(OB)(OC)(OD)(OE)(OF)(OG)(OH)(OI)(OJ)(OK)(OL)(OM)(ON)(OO)(OP)(OQ)(OR)(OS)(OT)(OU)(OV)(OW)(OX)(OY)(OZ)(PA)(PB)(PC)(PD)(PE)(PF)(PG)(PH)(PI)(PJ)(PK)(PL)(PM)(PN)(PO)(PP)(PQ)(PR)(PS)(PT)(PU)(PV)(PW)(PX)(PY)(PZ)(QA)(QB)(QC)(QD)(QE)(QF)(QG)(QH)(QI)(QJ)(QK)(QL)(QM)(QN)(QO)(QP)(QQ)(QR)(QS)(QT)(QU)(QV)(QW)(QX)(QY)(QZ)(RA)(RB)(RC)(RD)(RE)(RF)(RG)(RH)(RI)(RJ)(RK)(RL)(RM)(RN)(RO)(RP)(RQ)(RS)(RT)(RU)(RV)(RW)(RX)(RY)(RZ)(SA)(SB)(SC)(SD)(SE)(SF)(SG)(SH)(SI)(SJ)(SK)(SL)(SM)(SN)(SO)(SP)(SQ)(SR)(SS)(ST)(SU)(SV)(SW)(SX)(SY)(SZ)(TA)(TB)(TC)(TD)(TE)(TF)(TG)(TH)(TI)(TJ)(TK)(TL)(TM)(TN)(TO)(TP)(TQ)(TR)(TS)(TT)(TU)(TV)(TW)(TX)(TY)(TZ)(UA)(UB)(UC)(UD)(UE)(UF)(UG)(UH)(UI)(UJ)(UK)(UL)(UM)(UN)(UO)(UP)(UQ)(UR)(US)(UT)(UU)(UV)(UW)(UX)(UY)(UZ)(VA)(VB)(VC)(VD)(VE)(VF)(VG)(VH)(VI)(VJ)(VK)(VL)(VM)(VN)(VO)(VP)(VQ)(VR)(VS)(VT)(VU)(VV)(VW)(VX)(VY)(VZ)(WA)(WB)(WC)(WD)(WE)(WF)(WG)(WH)(WI)(WJ)(WK)(WL)(WM)(WN)(WO)(WP)(WQ)(WR)(WS)(WT)(WU)(WV)(WW)(WX)(WY)(WZ)(XA)(XB)(XC)(XD)(XE)(XF)(XG)(XH)(XI)(XJ)(XK)(XL)(XM)(XN)(XO)(XP)(XQ)(XR)(XS)(XT)(XU)(XV)(XW)(XX)(XY)(XZ)(YA)(YB)(YC)(YD)(YE)(YF)(YG)(YH)(YI)(YJ)(YK)(YL)(YM)(YN)(YO)(YP)(YQ)(YR)(YS)(YT)(YU)(YV)(YW)(YX)(YY)(YZ)(ZA)(ZB)(ZC)(ZD)(ZE)(ZF)(ZG)(ZH)(ZI)(ZJ)(ZK)(ZL)(ZM)(ZN)(ZO)(ZP)(ZQ)(ZR)(ZS)(ZT)(ZU)(ZV)(ZW)(ZX)(ZY)(ZZ)	Lot 35 Hereon	Natural Gas Corporation Limited		
	(F)	Lot 3 Hereon			
	(G)	Lot 4 Hereon			
	(J)(H)(2)(A)	Lot 39 Hereon			



Approvals

Diagram D
SCALE 1:400

CLASS OF SURVEY:
LOTS 1 - 35 = I; LOT 39 = III

Total Area

Comprised in

I, CHRISTOPHER PAUL HOPPER
being a person entitled to practice as a Licensed Cadastral Surveyor, certify that:
(a) The surveys to which this document relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Survey-General's Rules for Cadastral Survey 2002/2;
(b) This document is accurate, and has been created in accordance with that Act and those Rules.

Signed Date: / /

Field Book Traverse Book

Reference Plans

Examined Correct

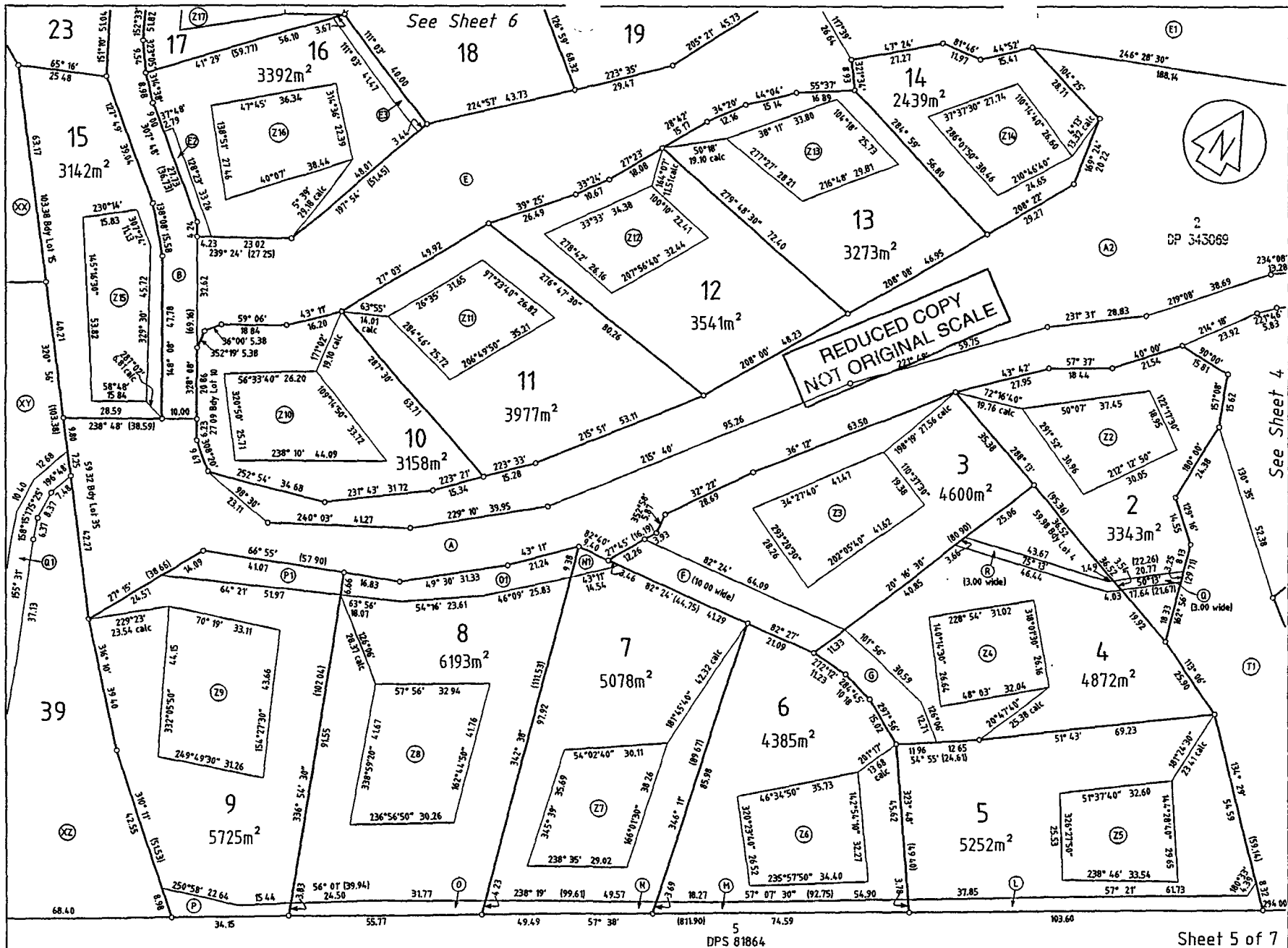
Approval as to Survey by Land Information New Zealand on: / /

Deposited by Land Information New Zealand on: / /

File Received Instructions

DP 367422

FILE



Approvals

PRELIMINARY
Areas and measurements
subject to Chief Surveyors
approval

CLASS OF SURVEY:

LOTS 1-35 = I; LOT 39 = III

Total Area

Comprised in

I, **CHRISTOPHER J. PAUL HOPPER**,
being a person entitled to practise as a Licensed Cadastral Surveyor, certify that:
(a) The surveys to which this document relates are accurate, and were undertaken
by me or under my direction in accordance with the Cadastral Survey Act
2002 and the Survey-General's Rules for Cadastral Survey 2002/2.
(b) This document is accurate, and has been created in accordance with that
Act and those Rules.

Signed _____ Date / /

Field Book _____ Traverse Book

Reference Plans _____

Examined _____ Correct

Approval as to Survey by Land Information New Zealand on:

Deposited by Land Information New Zealand on:

File
Received
Instructions

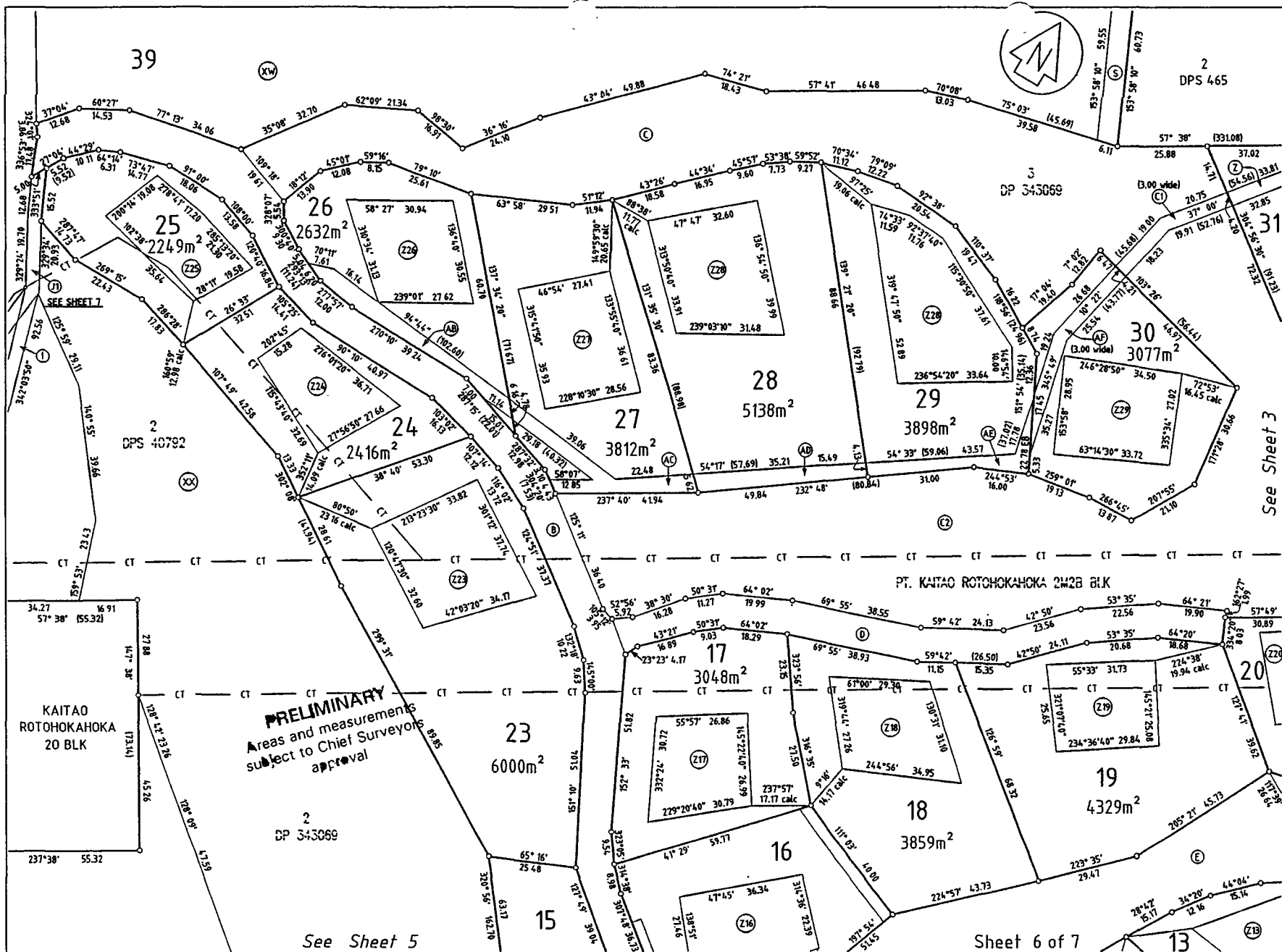
DP 367422

LAND DISTRICT SOUTH AUCKLAND

LOTS 1-35 & 39 BEING A SUBDIVISION OF LOTS 2 & 3 DP 343069,
LOT 2 DPS 40792 AND PART KAITAO ROTOHOKAHOKA 2M2B BLOCK

TERRITORIAL AUTHORITY ROTORUA DISTRICT
173975-R-S-0001-505
Surveyed by MTEC CONSULTANTS LTD
Scale 1:800 Date JANUARY 2006

Sheet 5 of 7



Approvals

REDUCED COPY
NOT ORIGINAL SCALE

CLASS OF SURVEY:
LOTS 1-35 = I; LOT 39 = III

Total Area
Comprised in

I, CHRISTOPHER PAUL HOPPER
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(a) The surveys to which this document relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Survey-General's Rules for Cadastral Survey 2002/2
(b) This document is accurate, and has been created in accordance with that Act and those Rules

Signed Date / /
Field Book Traverse Book
Reference Plans
Examined Correct

Approval as to Survey by Land Information New Zealand on:

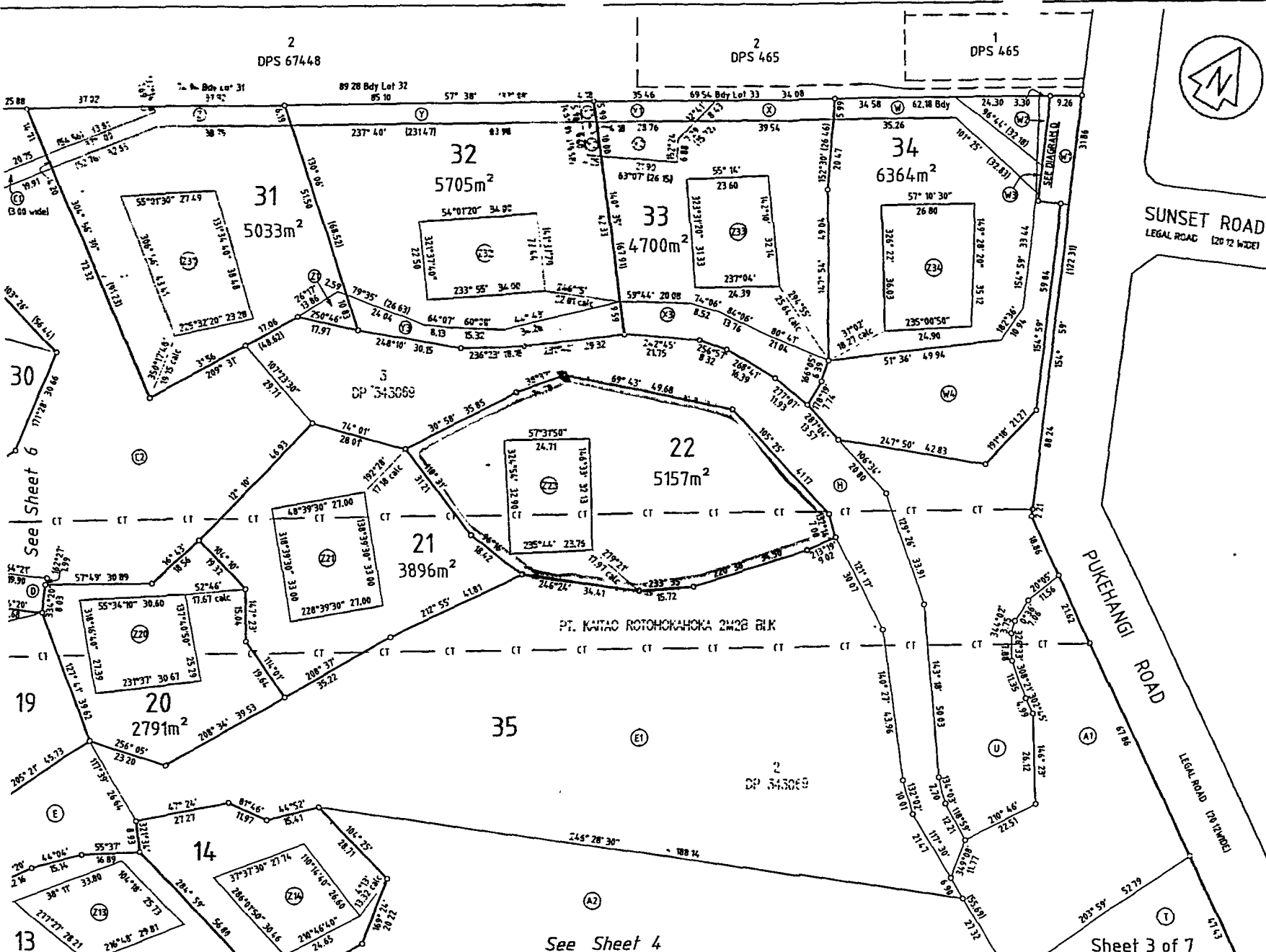
Deposited by Land Information New Zealand on:

File Received Instructions
DP 367422

LAND DISTRICT SOUTH AUCKLAND

LOTS 1-35 & 39 BEING A SUBDIVISION OF LOTS 2 & 3 DP 343069,
LOT 2 DPS 40792 AND PART KAITAO ROTOHOKAHOKA 2M2B BLOCK

TERRITORIAL AUTHORITY ROTORUA DISTRICT
173975-R-S-0001-S06
Surveyed by MTEC CONSULTANTS LTD
Scale 1:800 Date JANUARY 2006



Approvals

DIAGRAM D
SCALE 1:400

CLASS OF SURVEY:
LOTS 1-35 = I; LOT 39 = III

Total Area
Comprised in

I. CHRISTOPHER PAUL HOPPER
being a person entitled to practice as a Licensed Cadastral Surveyor, certify that:
(a) The surveys to which this document relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Surveyor-General's Rules for Cadastral Survey 2002/2;
(b) This document is accurate, and has been created in accordance with that Act and those Rules

Signed _____ Date / /

Field Book _____ Traverse Book _____
Reference Plans _____

Examined _____ Correct _____

Approval as to Survey by Land Information New Zealand: _____

Deposited by Land Information New Zealand on: _____

File Received Instructions _____

DP 367422

AND DISTRICT SOUTH AUCKLAND

LOTS 1-35 & 39 BEING A SUBDIVISION OF LOTS 2 & 3 DP 343069,
LOT 2 DPS 40792 AND PART KAITAO ROTOHOKAHOKA 2M2B BLOCK

TERRITORIAL AUTHORITY ROTORUA DISTRICT
173975-R-S-D001-S03
Surveyed by MTEC CONSULTANTS LTD
Scale 1:800 Date JANUARY 2006