

Engineering log - Excavation

Client: MARTIN FINDLATER & ASSOCIATES PTY LTD

Principal: GREENVIEW DEVELOPMENTS PTY LTD

Project: FRASER DRIVE, TWEED HEADS SOUTH

Test pit location:

Excavation No. TPC36

Sheet 1 of 1

Office Job No.: B17439/1

Date started: 8.2.2002

Date completed: 8.2.2002

Logged by: ALT

Checked by: *[signature]*

equipment type and model: CAT 330 EXCAVATOR				Pit Orientation:				Easting: 918.5 m				R.L. Surface: 13.29			
excavation dimensions: 3m long 1m wide				Northing: 5114.7 m				datum:							
excavation information						material substance									
method	penetration			support	water	notes samples, tests, etc	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	hand penetro- meter kPa	structure and additional observations	
	1	2	3				RL						100 200 300 400		
				N					CH	SILTY CLAY: high plasticity, red-brown, with some fine to coarse grained gravel.	M	St		COLLUVIAL SOIL.	
						U ₅₀ Bs	13.0 0.5						X	pp 110kPa	
							12.5		CH	SILTY CLAY: high plasticity, orange, with some fine to coarse grained gravel.				RESIDUAL SOIL	
							1.0								
							12.0		CH	SILTY CLAY: high plasticity, grading downward into extremely weathered metasiltstone.		H		X pp 510-600kPa	
						U ₅₀ Bs	1.5								
							2.0								
							11.0								
							2.5								
E							10.5			Test pit TPC36 terminated at 2.6m					
							3.0								
							10.0								
							3.5								
							9.5								
							4.0								

Sketch

Form GEO 5.2 Issue 3 Rev.2 TESTPIT EXCALOGS.GPJ COFFEY.GDT 04.04.02

method N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator		support S shoring N nil penetration 1 2 3 4  water  water level on date shown  water inflow  water outflow		notes, samples, tests U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal		classification symbols and soil description based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit		consistency/density Index VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense	
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B17439/1-B
4 April 2002

APPENDIX B

LABORATORY TEST RESULTS

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Moisture Content Report

Client : Martin Findlater & Associates	Report Number: E02-129 1/18
Job Number : B17439/1	Report Date: 04/03/2002
Project : Fraser Drive	Order Number:
Location : Tweed Heads South,	Test Method: AS1289 2.1.1

Lab No :	CB020204	CB020206	CB020207	CB020209
ID No :	CB020204	CB020206	CB020207	CB020209
Lot No :				
Item No :				
Date Sampled :	11/02/2002	11/02/2002	11/02/2002	11/02/2002
Sampled By :	COFFEY	COFFEY	COFFEY	COFFEY
Date Tested :	15/02/2002	15/02/2002	15/02/2002	15/02/2002
Material Source :	On Site	On Site	On Site	On Site
For Use As :	-	-	-	-
Sample Location :	TPC1 0.2-0.4m	TPC5 1.6-1.8m	TPC6 2.5-2.7m	TPC11 0.8-1.0m
Drying Temp (°C) :	108	108	108	108
Moisture Content (%) :	12.4	31.2	39.6	38.6
Remarks :				



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Moisture Content Report

Client : Martin Findlater & Associates	Report Number: E02-129 2/18
Job Number : B17439/1	Report Date: 04/03/2002
Project : Fraser Drive	Order Number:
Location : Tweed Heads South,	Test Method: AS1289 2.1.1

Lab No :	CB020210	CB020212	CB020213	CB020216
ID No :	CB020210	CB020212	CB020213	CB020216
Lot No :				
Item No :				
Date Sampled :	11/02/2002	11/02/2002	11/02/2002	11/02/2002
Sampled By :	COFFEY	COFFEY	COFFEY	COFFEY
Date Tested :	15/02/2002	15/02/2002	15/02/2002	15/02/2002
Material Source :	On Site	On Site	On Site	On Site
For Use As :	-	-	-	-
Sample Location :	TPC15 0.7-0.9m	TPC17 0.5-0.8m	TPC21 0.8-1.2m	TPC28 0.2-0.6m
Drying Temp (°C) :	108	108	108	108
Moisture Content (%) :	22.8	17.8	28.8	34.0
Remarks :				



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Moisture Content Report

Client : Martin Findlater & Associates

Job Number : B17439/1

Project : Fraser Drive

Location : Tweed Heads South,

Report Number: E02-129 3/18

Report Date: 04/03/2002

Order Number:

Test Method: AS1289 2.1.1

Lab No :	CB020217	CB020219	CB020220	
ID No :	CB020217	CB020219	CB020220	
Lot No :				
Item No :				
Date Sampled :	11/02/2002	11/02/2002	11/02/2002	
Sampled By :	COFFEY	COFFEY	COFFEY	
Date Tested :	15/02/2002	15/02/2002	15/02/2002	
Material Source :	On Site	On Site	On Site	
For Use As :	-	-	-	
Sample Location :	TPC30 1.0-1.2m	TPC35 2.0-2.2m	TPC36 1.2-1.6m	
Drying Temp (°C) :	108	108	108	
Moisture Content (%) :	32.6	35.0	17.8	

Remarks :



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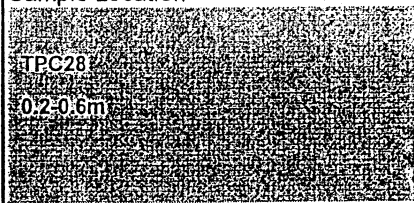
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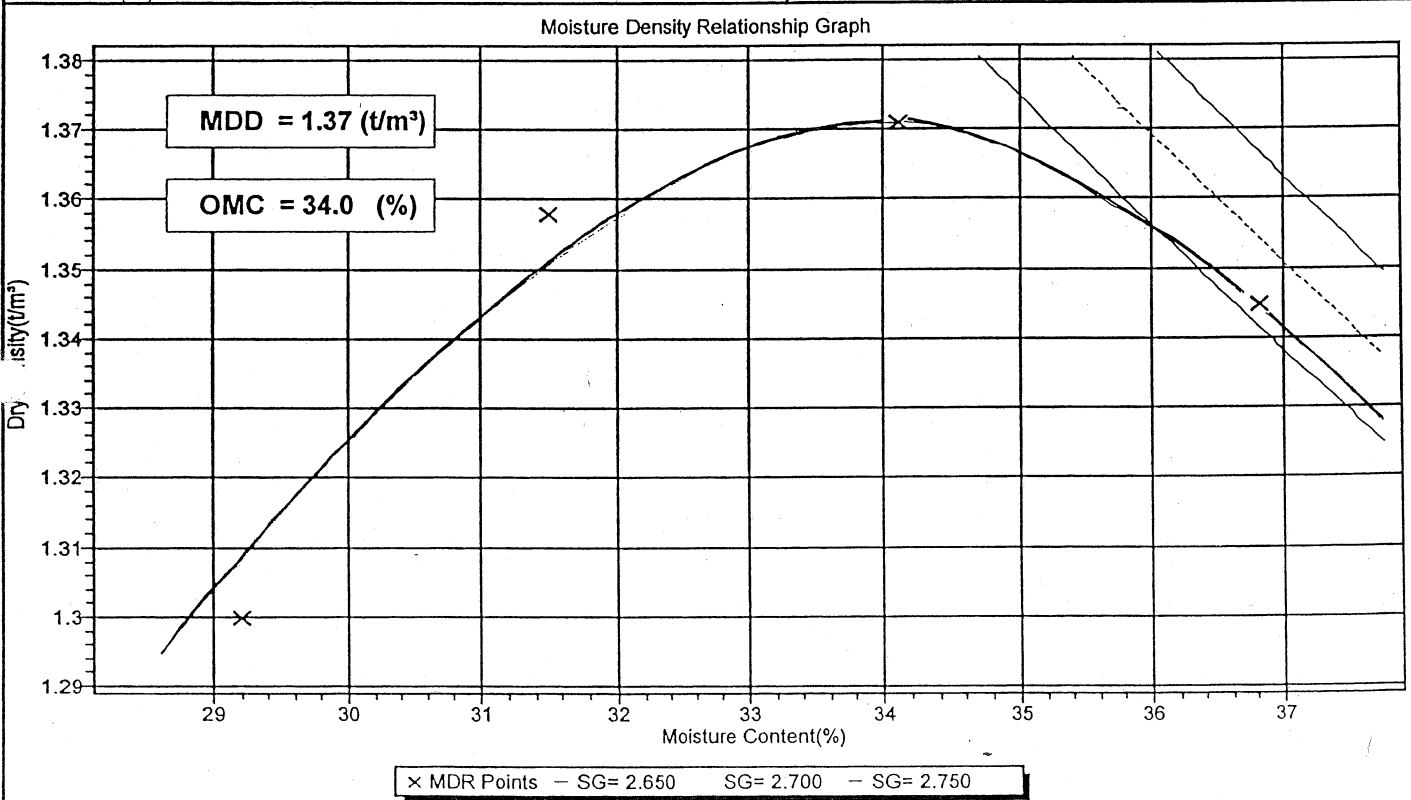
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Moisture Density Relationship Report

Client : Martin Findlater & Associates	Report Number : E02-129 4/18
Job Number : B17439/1	Report Date : 04/03/2002
Project : Fraser Drive	Order Number :
Location : Tweed Heads South ,	Test Method : AS1289.5.1.1
Lab No: CB020216 Sample ID : CB020216	Sample Location
Date Sampled: 11/02/2002	
Date Tested: 15/02/2002	
Sampled By: COFFEY	
Sample Method: AS1726	
Material Source: On Site	
For Use As: -	
Remarks:	

Compactive Effort : Standard	Moisture Content Test Method : AS 1289.2.1.1
Maximum Size (mm) : 19.0	Oversize Test Method : n/a
Oversize (%) : n/a	Oversize Density (t/m³) : n/a



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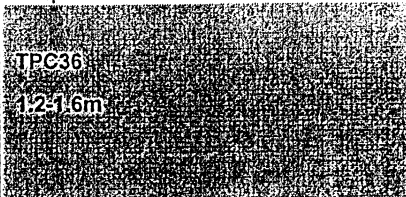
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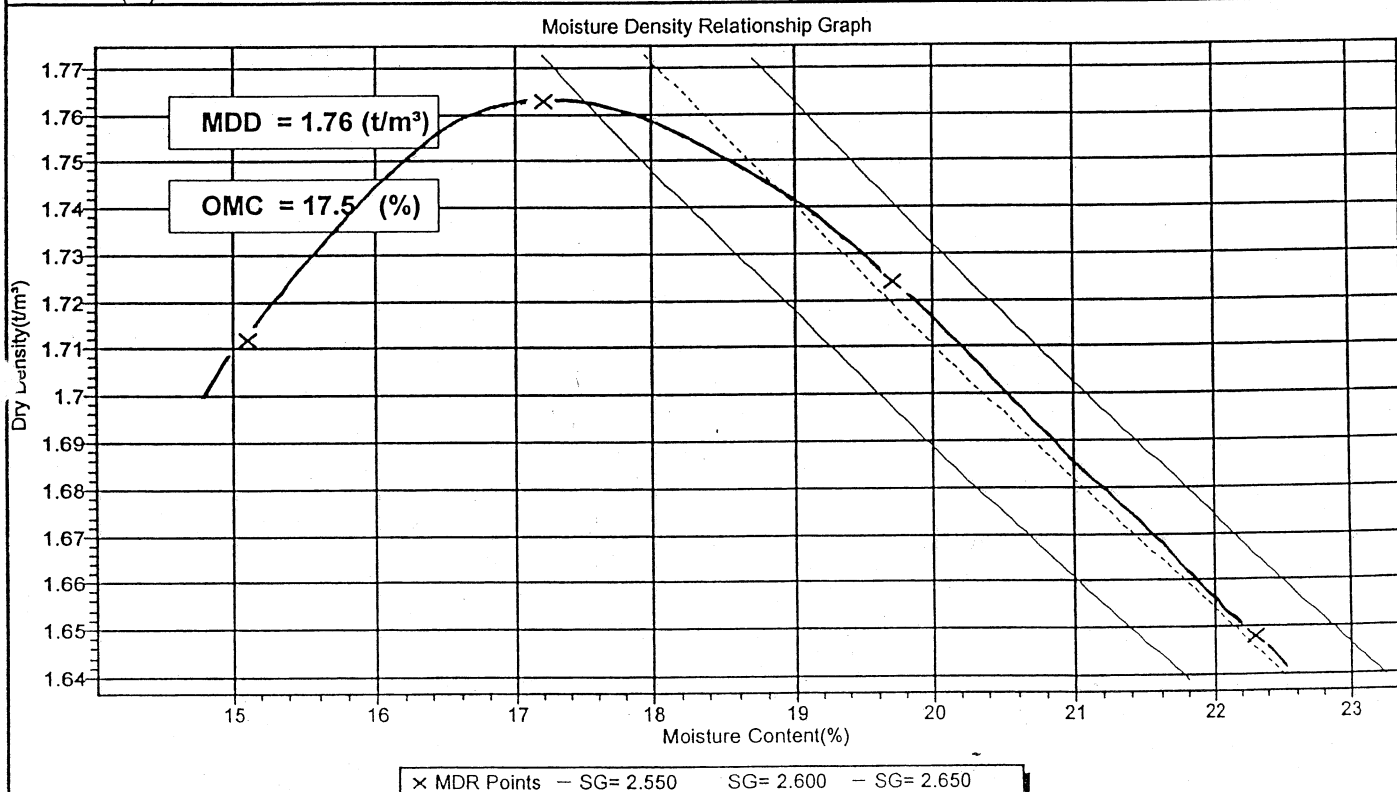
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Moisture Density Relationship Report

Client : Martin Findlater & Associates	Report Number : E02-129 5/18
Job Number : B17439/1	Report Date : 04/03/2002
Project : Fraser Drive	Order Number :
Location : Tweed Heads South ,	Test Method : AS1289.5.1.1
Lab No: CB020220 Sample ID : CB020220	Sample Location
Date Sampled: 11/02/2002	
Date Tested: 15/02/2002	
Sampled By: COFFEY	
Sample Method: AS1726	
Material Source: On Site	
For Use As: -	
Remarks:	

Compactive Effort : Standard	Moisture Content Test Method : AS 1289.2.1.1
Maximum Size (mm) : 19.0	Oversize Test Method : n/a
Oversize (%) : n/a	Oversize Density (t/m³) : n/a



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Atterberg Limits Report

Client: Martin Findlater & Associates	Report Number: E02-129 6/18
Job Number: B17439/1	Report Date: 04/03/2002
Project: Fraser Drive	Order Number:
Location: Tweed Heads South,	
Lab No: CB020204 Sample ID: CB020204	Sample Location
Date Sampled: 11/02/2002	TPC1
Date Tested: 20/02/2002	1.1-1.3m
Sampled By: COFFEY Air Dried	
Sample Method: AS1726 No Cracking or Crumbling Occurred	
Material Source: On Site	
For Use As: -	
Remarks:	

Atterberg Tests	Test Method		Result	
Liquid Limit (%)	AS 1289.3.1.1		28	
Plastic Limit (%)	AS1289.3.2.1		14	
Plastic Index	AS1289.3.3.1		14	
Linear Shrinkage (%)	AS1289.3.4.1		8.0	



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Job Number: B17439/1	Report Date: 04/03/2002
Project: Fraser Drive	Order Number:
Location: Tweed Heads South,	
Lab No: CB020206 Sample ID: CB020206	Sample Location
Date Sampled: 11/02/2002	TPC5
Date Tested: 19/02/2002	1.6-1.8m
Sampled By: COFFEY Air Dried	
Sample Method: AS1726 No Cracking or Crumbling Occurred	
Material Source: On Site	
For Use As: -	
Remarks:	

Atterberg Tests	Test Method		Result	
Liquid Limit (%)	AS 1289.3.1.1		57	
Plastic Limit (%)	AS1289.3.2.1		33	
Plastic Index	AS1289.3.3.1		24	
Linear Shrinkage (%)	AS1289.3.4.1		16.5	



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Atterberg Limits Report

Client: Martin Findlater & Associates	Report Number: E02-129 8/18
Job Number: B17439/1	Report Date: 04/03/2002
Project: Fraser Drive	Order Number:
Location: Tweed Heads South,	
Lab No: CB020207 Sample ID: CB020207	Sample Location
Date Sampled: 11/02/2002	TPC6
Date Tested: 19/02/2002	2.5-2.7m
Sampled By: COFFEY Air Dried	
Sample Method: AS1726 No Cracking or Crumbling Occurred	
Material Source: On Site	
For Use As: -	
Remarks:	

Atterberg Tests	Test Method		Result	
Liquid Limit (%)	AS 1289.3.1.1		58	
Plastic Limit (%)	AS1289.3.2.1		34	
Plastic Index	AS1289.3.3.1		24	
Linear Shrinkage (%)	AS1289.3.4.1		13.5	



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Client: Martin Findlater & Associates	Report Number: E02-129 9/18
Job Number: B17439/1	Report Date: 04/03/2002
Project: Fraser Drive	Order Number:
Location: Tweed Heads South,	
Lab No: CB020209 Sample ID: CB020209	Sample Location
Date Sampled: 11/02/2002	TPC11
Date Tested: 19/02/2002	0.8-1.0m
Sampled By: COFFEY Air Dried	
Sample Method: AS1726 No Cracking or Crumbling Occurred	
Material Source: On Site	
For Use As: -	
Remarks:	

Atterberg Tests	Test Method		Result	
Liquid Limit (%)	AS 1289.3.1.1		54	
Plastic Limit (%)	AS1289.3.2.1		33	
Plastic Index	AS1289.3.3.1		21	
Linear Shrinkage (%)	AS1289.3.4.1		14.0	



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Atterberg Limits Report

Client: Martin Findlater & Associates	Report Number: E02-129 10/18
Job Number: B17439/1	Report Date: 04/03/2002
Project: Fraser Drive	Order Number:
Location: Tweed Heads South,	
Lab No: CB020210 Sample ID: CB020210	Sample Location
Date Sampled: 11/02/2002	TPC15
Date Tested: 20/02/2002	0.7-0.9m
Sampled By: COFFEY Air Dried	
Sample Method: AS1726 No Cracking or Crumbling Occurred	
Material Source: On Site	
For Use As: -	
Remarks:	

Atterberg Tests	Test Method		Result	
Liquid Limit (%)	AS 1289.3.1.1		35	
Plastic Limit (%)	AS1289.3.2.1		25	
Plastic Index	AS1289.3.3.1		10	
Linear Shrinkage (%)	AS1289.3.4.1		5.5	



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Atterberg Limits Report

Client: Martin Findlater & Associates	Report Number: E02-129 11/18
Job Number: B17439/1	Report Date: 04/03/2002
Project: Fraser Drive	Order Number:
Location: Tweed Heads South,	
Lab No: CB020212 Sample ID: CB020212	Sample Location
Date Sampled: 11/02/2002	TPC17
Date Tested: 21/02/2002	0.5-0.8m
Sampled By: COFFEY Air Dried	
Sample Method: AS1726 No Cracking or Crumbling Occurred	
Material Source: On Site	
For Use As: -	
Remarks:	

Atterberg Tests	Test Method		Result	
Liquid Limit (%)	AS 1289.3.1.1		48	
Plastic Limit (%)	AS1289.3.2.1		20	
Plastic Index	AS1289.3.3.1		28	
Linear Shrinkage (%)	AS1289.3.4.1		14.0	



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