

Inorganics		
Our Reference:	UNITS	55771-1
Your Reference	-----	102
Sample Type	-----	Water
Date Sampled		11/10/07
Total Phosphorus as P	mg/L	<0.5
Total Nitrogen	mg/L	3.3
Total Kjeldahl Nitrogen	mg/L	3.3

Anions in water		
Our Reference:	UNITS	55771-1
Your Reference	-----	102
Sample Type	-----	Water
Date Sampled		11/10/07
Nitrite as N	mg/L	<1
Nitrate as N	mg/L	<1
Chloride, Cl	mg/L	8,400
Sulphate, SO ₄	mg/L	1,300

Trace HM (ICP-MS)-Dissolved		
Our Reference:	UNITS	55771-1
Your Reference	-----	102
Sample Type	-----	Water
Date Sampled		11/10/07
Arsenic	µg/L	6.4
Cadmium	µg/L	<0.10
Chromium	µg/L	6.3
Copper	µg/L	1.3
Lead	µg/L	<1.0
Zinc	µg/L	120
Nickel	µg/L	11
Cobalt	µg/L	22
Manganese	µg/L	1,300
Molybdenum	µg/L	2.6
Selenium	µg/L	23
Antimony	µg/L	<1.0
Beryllium	µg/L	<1.0
Barium	µg/L	190
Boron	µg/L	1,500

Metals in water by ICP-OES		
Our Reference:	UNITS	55771-1
Your Reference	-----	102
Sample Type	-----	Water
Date Sampled		11/10/07
Iron (Total)	mg/L	25

Metals in water by ICP-OES		
Our Reference:	UNITS	55771-1
Your Reference	-----	102
Sample Type	-----	Water
Date Sampled		11/10/07
Tin (Dissolved)	mg/L	0.03

Mercury Cold Vapor/Hg Analyser		
Our Reference:	UNITS	55771-1
Your Reference	-----	102
Sample Type	-----	Water
Date Sampled		11/10/07
Mercury (Dissolved)	mg/L	<0.0005

Method ID	Methodology Summary
SEI-067	Total Phosphorus - Jirka modification, followed by colorimetric determination using an Ascorbic Acid method, in accordance with APHA 20th ED, 4500-P-F. Analysis is carried out by SGS Environmental Services Welshpool.
SEI-033	Total Kjeldahl Nitrogen - determined titrimetrically, in accordance with APHA 20th ED, 4500-Norg B.
SEI-038	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA 20th ED, 4110-B.
AN318	Determination of elements at trace levels in waters by ICP-MS. Method based on USEPA 6020A
SEM-010	Metals - Determination of various metals by ICP-AES following aqua regia digest.
SEM-005	Mercury - Determination of Mercury by Cold Vapour Generation Atomic Absorption Spectroscopy.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Inorganics								
Total Phosphorus as P	mg/L	0.1	SEI-067	<0.10	55771-1	<0.5 <0.5	55771-1	93 [N/T]
Total Nitrogen	mg/L	1	SEI-033	<1.0	55771-1	3.3 [N/T]	[NR]	[NR]
Total Kjeldahl Nitrogen	mg/L	0.5	SEI-033	<0.5	55771-1	3.3 [N/T]	55771-1	104 [N/T]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Anions in water								
Nitrite as N	mg/L	0.05	SEI-038	<0.05	[NT]	[NT]	LCS	103 [N/T]
Nitrate as N	mg/L	0.05	SEI-038	<0.05	[NT]	[NT]	LCS	105 [N/T]
Chloride, Cl	mg/L	0.1	SEI-038	<0.1	[NT]	[NT]	LCS	102 [N/T]
Sulphate, SO ₄	mg/L	0.4	SEI-038	<0.4	[NT]	[NT]	LCS	102 [N/T]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Trace HM (ICP-MS)-Dissolved								
Arsenic	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	104 [N/T]
Cadmium	µg/L	0.1	AN318	<0.10	[NT]	[NT]	LCS	103 [N/T]
Chromium	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	104 [N/T]
Copper	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	102 [N/T]
Lead	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	107 [N/T]
Zinc	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	101 [N/T]
Nickel	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	98 [N/T]
Cobalt	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	101 [N/T]
Manganese	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	107 [N/T]
Molybdenum	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	101 [N/T]
Selenium	µg/L	2	AN318	<2.0	[NT]	[NT]	LCS	107 [N/T]
Antimony	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	114 [N/T]
Beryllium	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	99 [N/T]
Barium	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	105 [N/T]
Boron	µg/L	1	AN318	<1.0	[NT]	[NT]	LCS	102 [N/T]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Metals in water by ICP-OES								
Iron (Total)	mg/L	0.01	SEM-010	<0.01	[NT]	[NT]	LCS	107 [N/T]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Metals in water by ICP-OES								
Tin (Dissolved)	mg/L	0.03	SEM-010	<0.03	[NT]	[NT]	LCS	99 [N/T]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Mercury Cold Vapor/Hg Analyser								
Mercury (Dissolved)	mg/L	0.0005	SEM-005	<0.0005	[NT]	[NT]	LCS	90 [N/T]

Result Codes

[INS]	: Insufficient Sample for this test	[HBG]	: Results not Reported due to High Background Interference
[NR]	: Not Requested	*	: Not part of NATA Accreditation
[NT]	: Not tested	[N/A]	: Not Applicable

Result Comments

Nitrate and Nitrate LOR for sample # 1 has been raised by a dilution factor of 20 due to sample matrix interference.

Total Phosphorus LOR for sample # 1 has been raised by a dilution factor of 5 due to sample matrix interference.

Date Organics extraction commenced: N/A

NATA Corporate Accreditation No. 2562, Site No 4354

Note: Test results are not corrected for recovery (excluding Dioxins/Furans* and PAH in XAD and PUF).

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Quality Control Protocol

Reagent Blank: Sample free reagents carried through the preparation/extraction/digestion procedure and analysed at the beginning of every sample batch analysis. For larger projects, a reagent blank is prepared and analysed with every 20 samples.

Duplicate: A separate portion of a sample being analysed which is treated the same as the other samples in the batch. A duplicate is prepared at least every 10 samples.

Matrix Spike Duplicates: Sample replicates spiked with identical concentrations of target analyte(s). The spiking occurs during the sample preparation and prior to the extraction/digestion procedure. They are used to document the precision and bias of a method in a given sample matrix. Where there is not enough sample available to prepare a spiked sample, another known soil/sand or water (or Milli-Q water) may be used. A duplicate spiked sample is prepared at least every 20 samples.

Surrogate Spike: Added to all samples requiring analysis for organics (where relevant) prior to extraction. Used to determine the extraction efficiency. They are organic compounds which are similar to the target analyte(s) in chemical composition and behaviour in the analytical process, but which are not normally found in environmental samples.

Internal Standard: Added to all samples requiring analysis for organics (where relevant) after the extraction process; the compounds serve to give a standard of retention time and response, which is invariant from run-to-run with the instruments.

Control Standards: Prepared from a source independent of the calibration standards. At least one control standard is included in each run to confirm calibration validity.

Additional QC Samples: A calibration standard and blank are run after every 20 samples of an instrumental analysis run to assess analytical drift.

25 October 2007

TEST REPORT

Douglas Partners Pty Ltd

Box 324

Hunter Region Mail Centre

NSW 2310

Your Reference: 39823, Trinity Point

Report Number: 55935

Attention: Julie Wharton

Dear Julie

The following samples were received from you on the date indicated.

Samples:	Qty.	2 Soils
Date of Receipt of Samples:	18/10/07	
Date of Receipt of Instructions:	18/10/07	
Date Preliminary Report Emailed:	Not Issued	

These samples were analysed in accordance with your written instructions.

A copy of the instructions is attached with the analytical report.

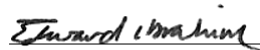
The results and associated quality control are contained in the following pages of this report.

Unless otherwise stated, solid samples are expressed on a dry weight basis (moisture has been supplied for your information only), air and liquid samples as received.

Should you have any queries regarding this report please contact the undersigned.

Yours faithfully

SGS ENVIRONMENTAL SERVICES



Edward Ibrahim
Lab Manager

Inorganics	UNITS	55935-1	55935-2
Our Reference:	-----	B101/2.5-2.	B102/5.5-5.
Your Reference		95	95
Sample Type	-----	Soil	Soil
pH 1:5 soil:water	pH Units	8.0	7.5
Chloride, Cl 1:5 soil:water	mg/kg	14	820
Sulphate, SO4 1:5 soil:water	mg/kg	26	170

Moisture			
Our Reference:	UNITS	55935-1	55935-2
Your Reference	-----	B101/2.5-2.	B102/5.5-5.
		95	95
Sample Type	-----	Soil	Soil
Moisture	%	14	15

Method ID	Methodology Summary
AN101	pH - Measured using pH meter and electrode in accordance with APHA 20th ED, 4500-H+.
SEI-038	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA 20th ED, 4110-B.
AN002	Preparation of soils, sediments and sludges undergo analysis by either air drying, compositing, subsampling and 1:5 soil water extraction where required. Moisture content is determined by drying the sample at 105 ± 5°C.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Inorganics								
pH 1:5 soil:water	pH Units	0	AN101	0.00	[NT]	[NT]	[NR]	[NR]
Chloride, Cl 1:5 soil:water	mg/kg	0.5	SEI-038	<0.5	[NT]	[NT]	LCS	100 [N/T]
Sulphate, SO ₄ 1:5 soil:water	mg/kg	2	SEI-038	<2	[NT]	[NT]	LCS	102 [N/T]
QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank				
Moisture	%	1	AN002	<1				

Result Codes

[INS]	: Insufficient Sample for this test	[HBG]	: Results not Reported due to High Background Interference
[NR]	: Not Requested	*	: Not part of NATA Accreditation
[NT]	: Not tested	[N/A]	: Not Applicable

Result Comments

Date Organics extraction commenced: N/A

NATA Corporate Accreditation No. 2562, Site No 4354

Note: Test results are not corrected for recovery (excluding Dioxins/Furans* and PAH in XAD and PUF).

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Additional QC Samples: A calibration standard and blank are run after every 20 samples of an instrumental analysis run to assess analytical drift.

PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.45
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

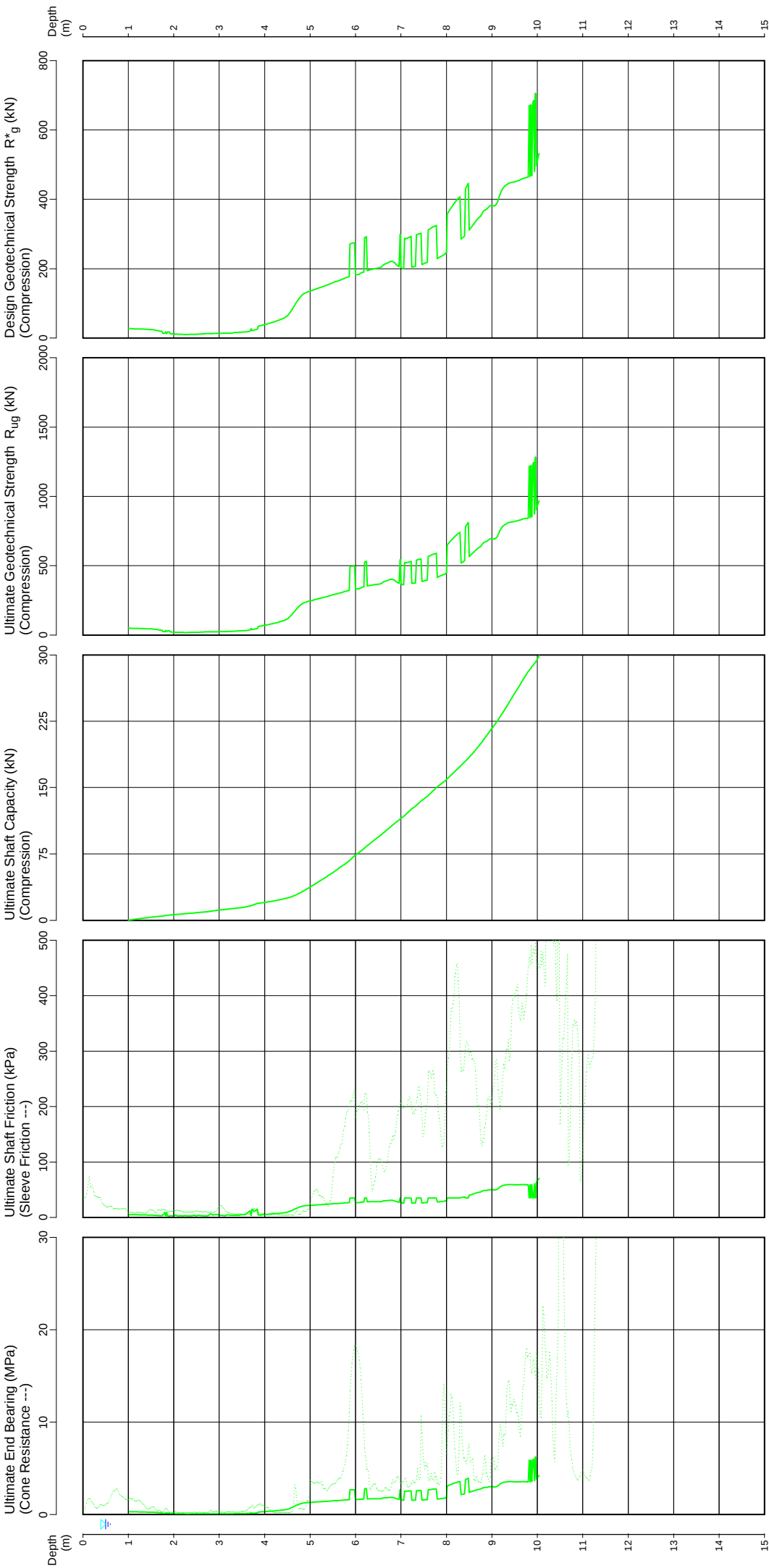
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 1

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.665



DISCLAIMER:

These capacities have been estimated using accepted static theory, and are a guide only. Suitable verification procedures should be adopted (refer to AS2159), and piling contractors should confirm pile suitability and capacities. Structural capacity should be checked, and due allowance made for inclined or eccentric loads, and possible corrosion effects.

Date
Plotted
Checked

Water depth after test: 0.50m depth

File: P:\39823\Field\39823-01.CP5
Cone ID: 413
Type: 2 Standard
ConePile Version 5.8.1
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PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.60
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

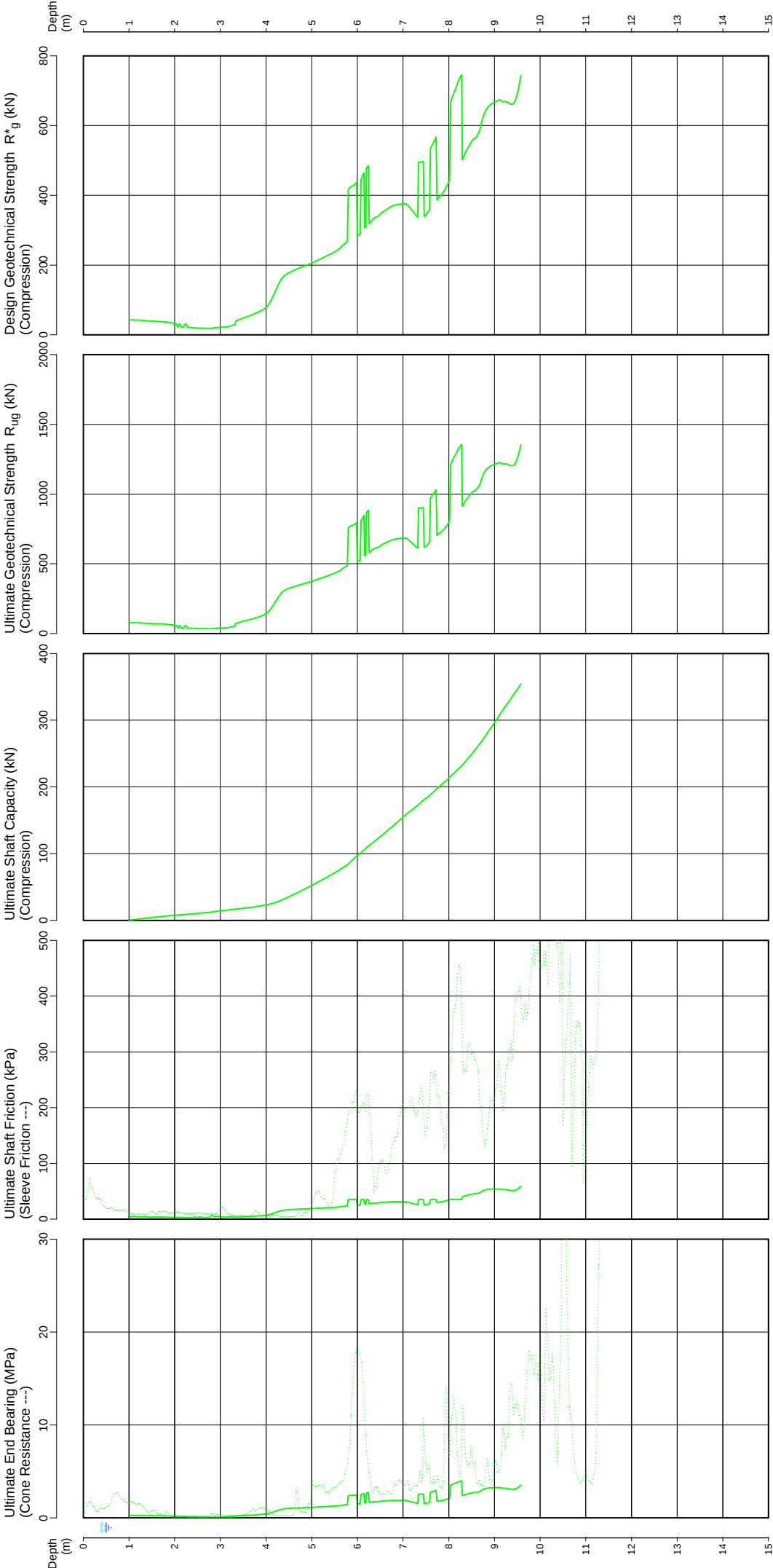
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 1

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.665



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Date
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Checked

Water depth after test: 0.50m depth

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Cone ID: 413
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Type: 2 Standard



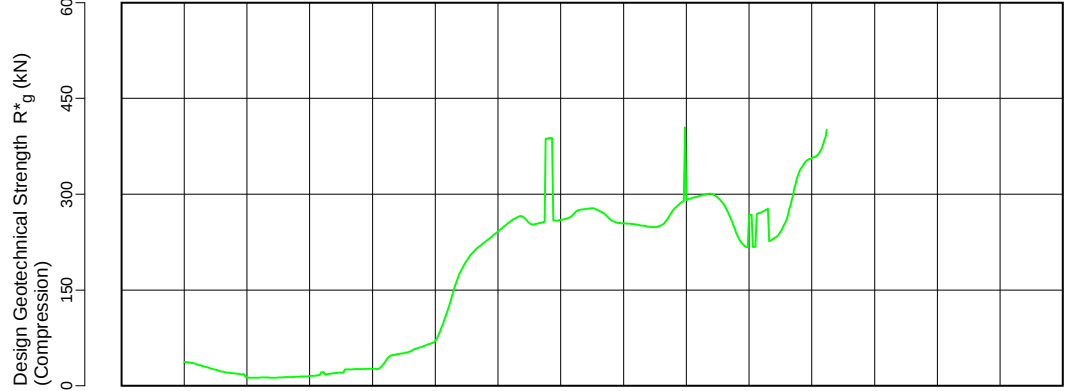
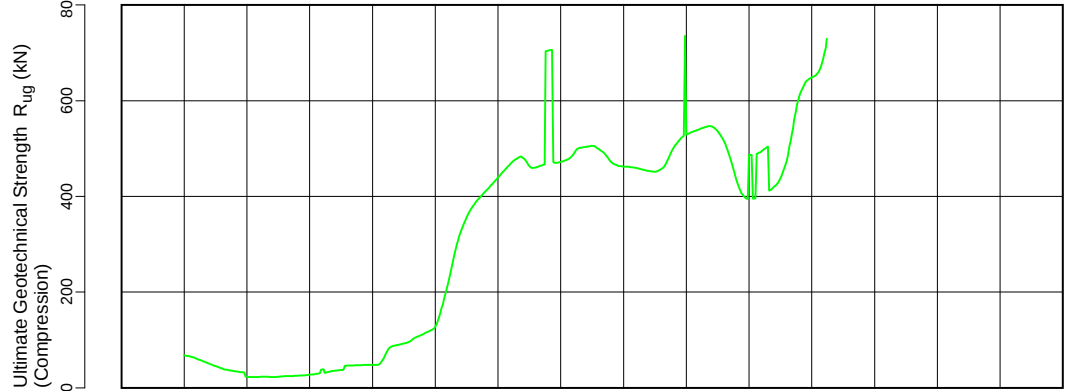
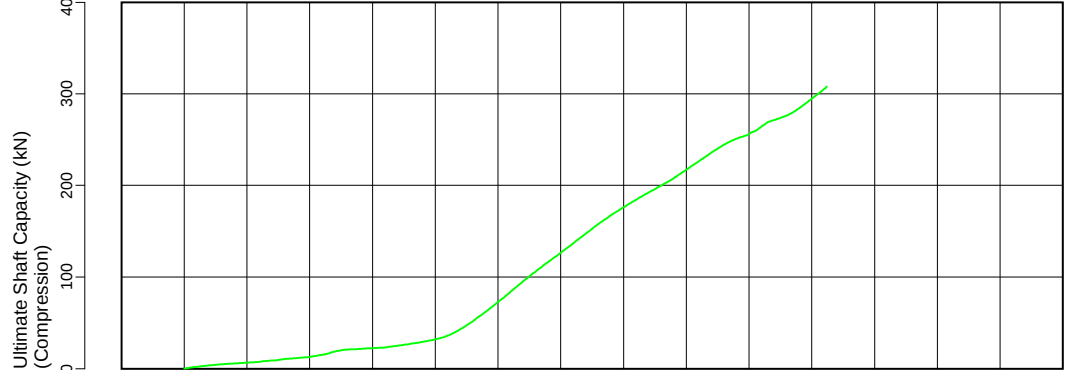
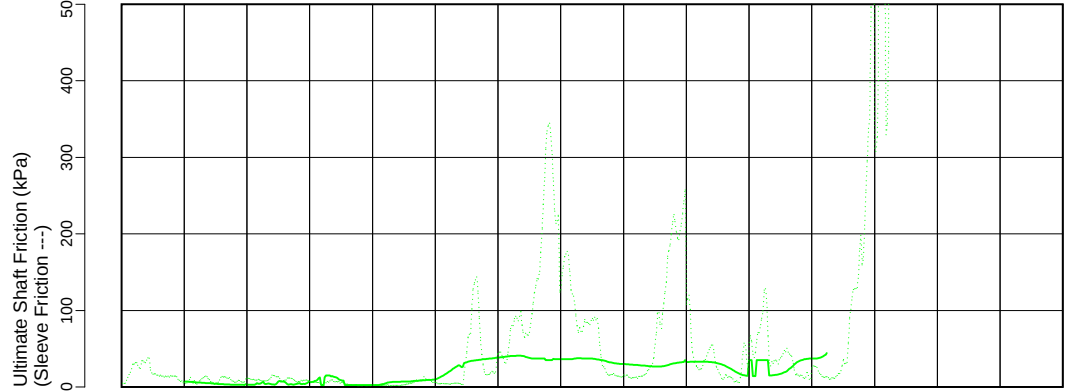
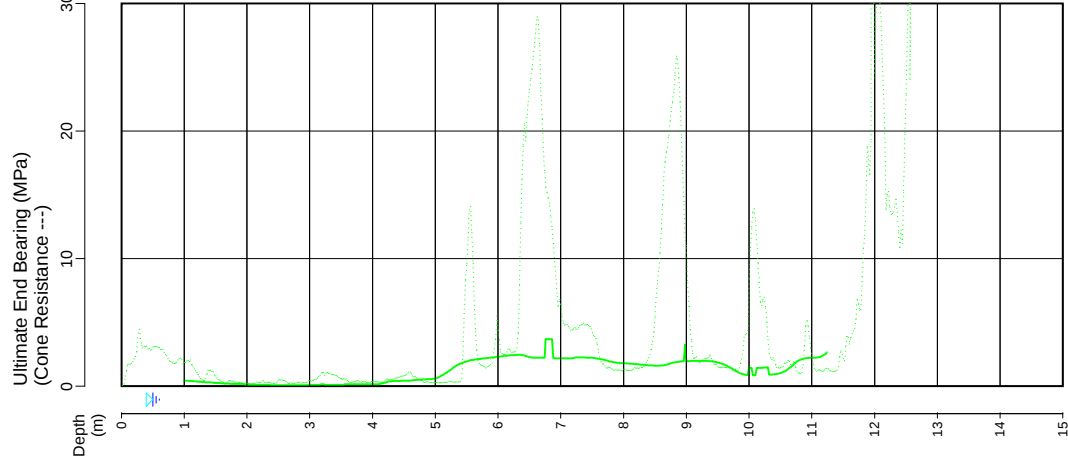
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PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.45
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 2
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.81



DISCLAIMER:

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Date
Plotted
Checked

Water depth after test: 0.5m

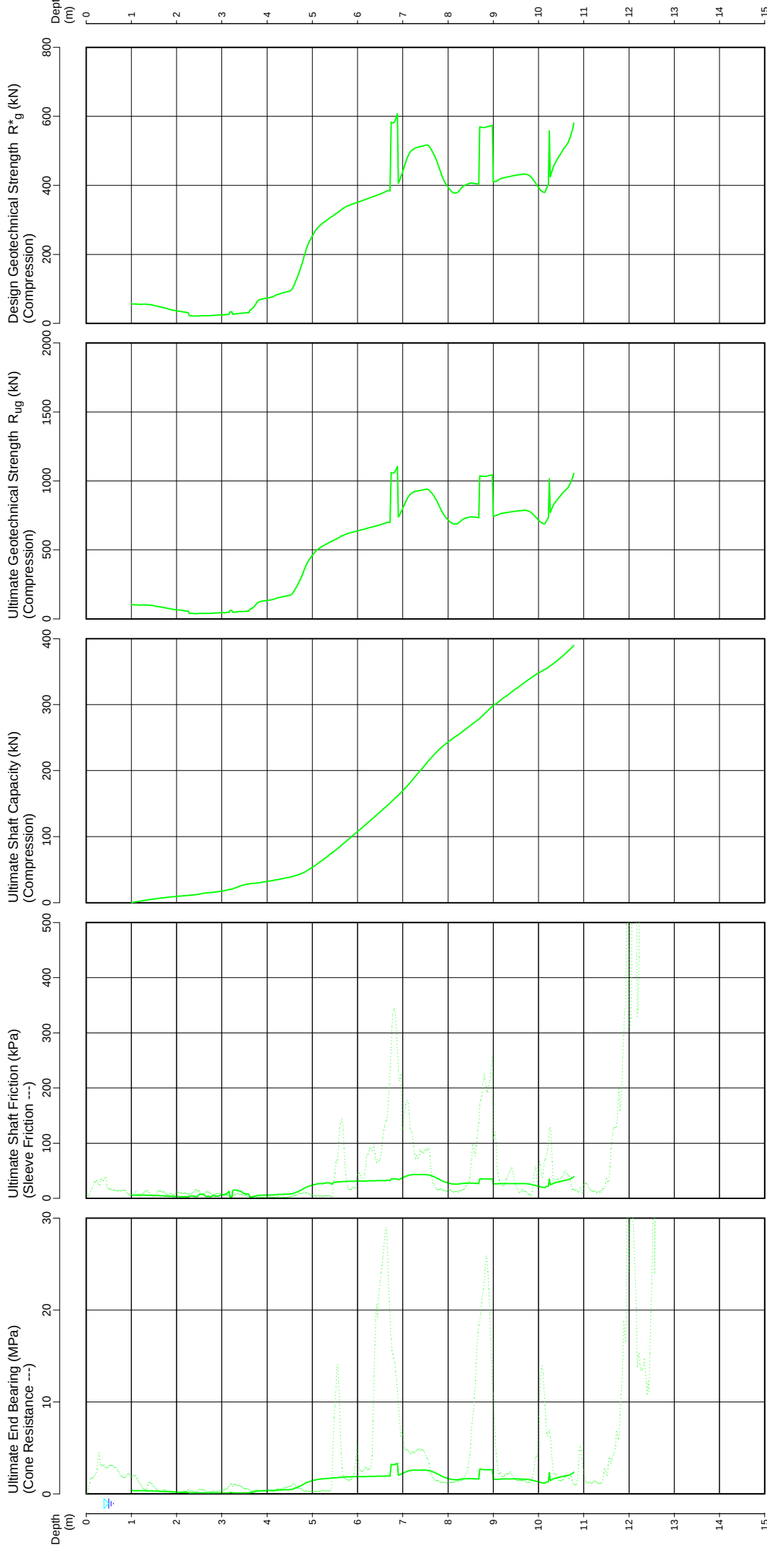
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Cone ID: 413
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PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.60
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 2
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.81



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Date
Plotted
Checked

Water depth after test: 0.5m

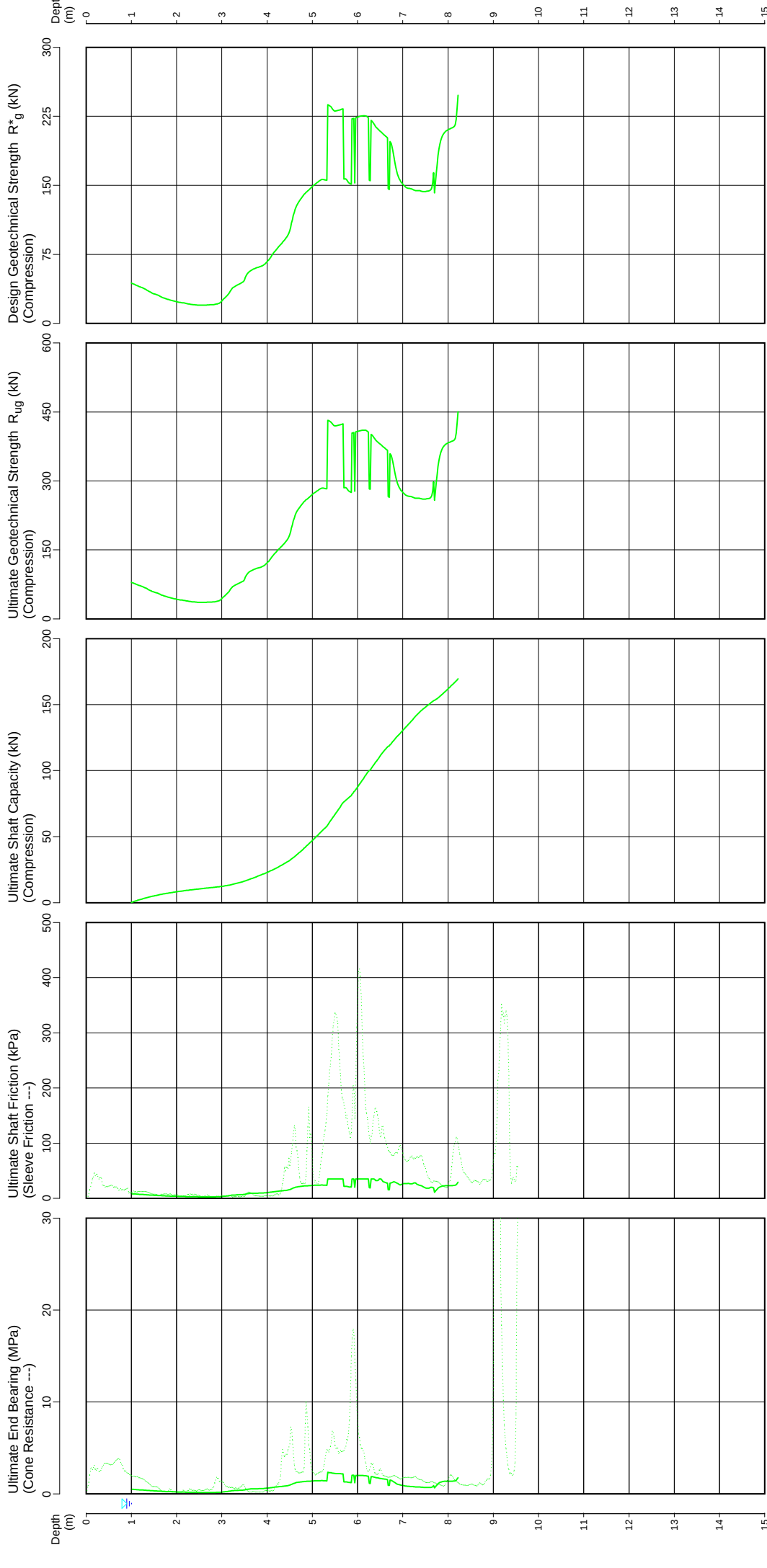
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Type: 2 Standard

PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.45
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 3
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.92



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Water depth after test: 0.90m depth

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Cone ID: 413
ConePile Version 5.8.1
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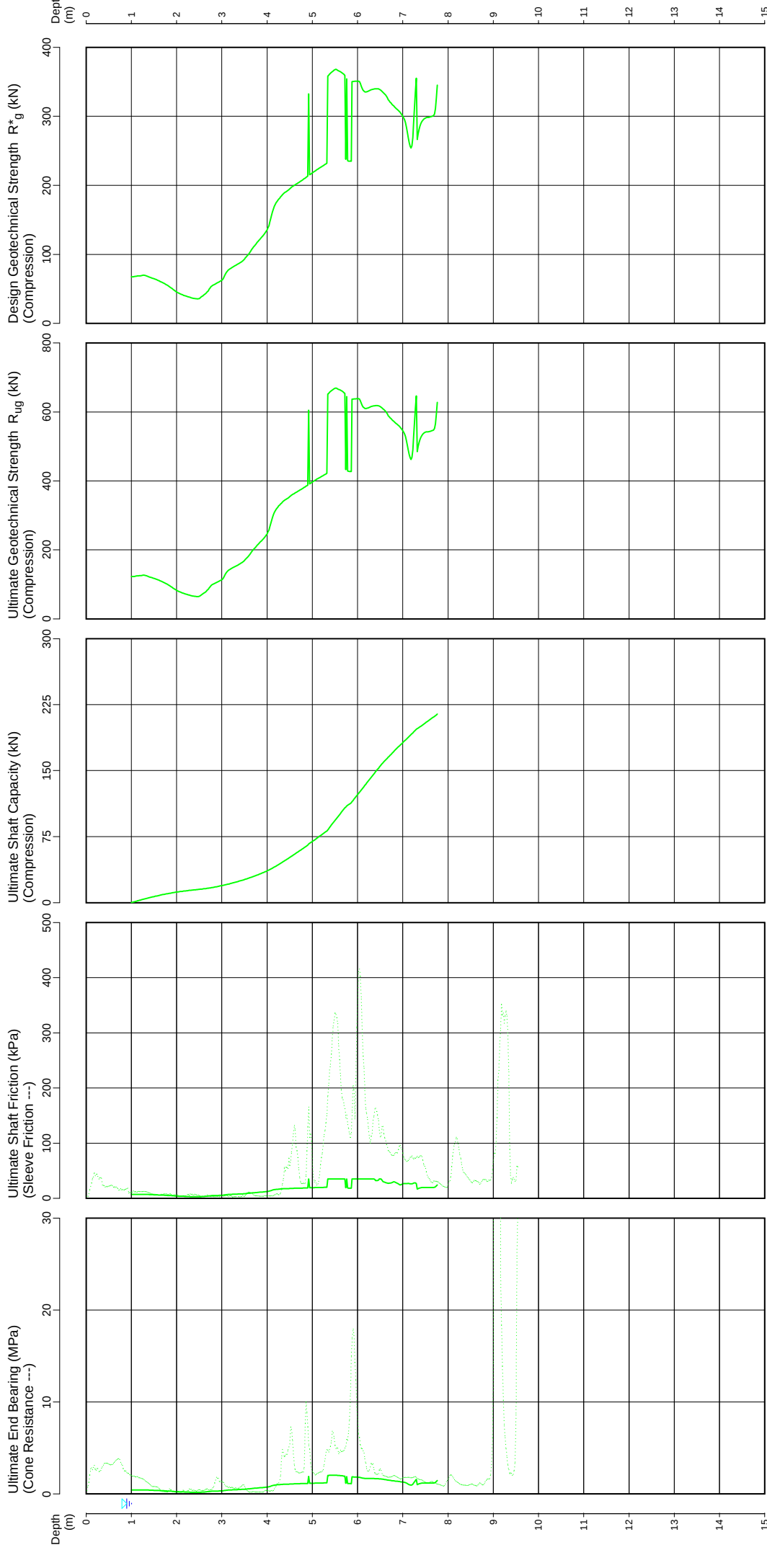
Date
Plotted
Checked

PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.60
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 3
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.92



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Water depth after test: 0.90m depth

File: P:\39823\Field\39823-03.CP5
Core ID: 413
ConePile Version 5.8.1
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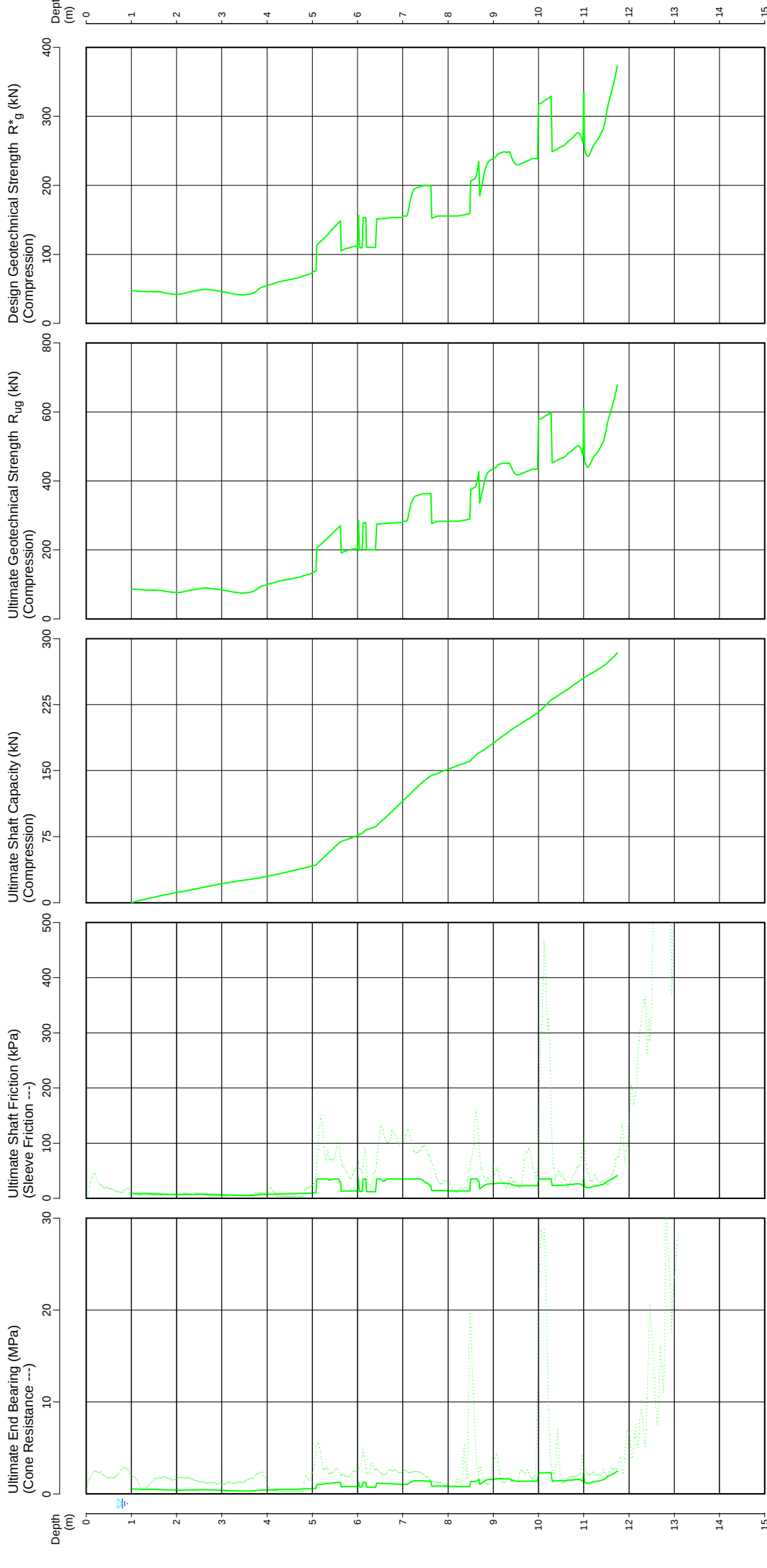
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Plotted
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PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.45
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 4
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.99



DISCLAIMER:
These capacities have been estimated using accepted static theory, and are a guide only. Suitable verification procedures should be adopted (refer to AS2159), and piling contractors should confirm pile suitability and capacities. Structural capacity should be checked, and due allowance made for inclined or eccentric loads, and possible corrosion effects.

Water depth after test: 0.80m depth

File: P:\39823\Field\39823-04.CP5
Cone ID: 413
ConePile Version 5.8.1
© 2003 Douglas Partners Pty Ltd

Date
Plotted
Checked

PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.60
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

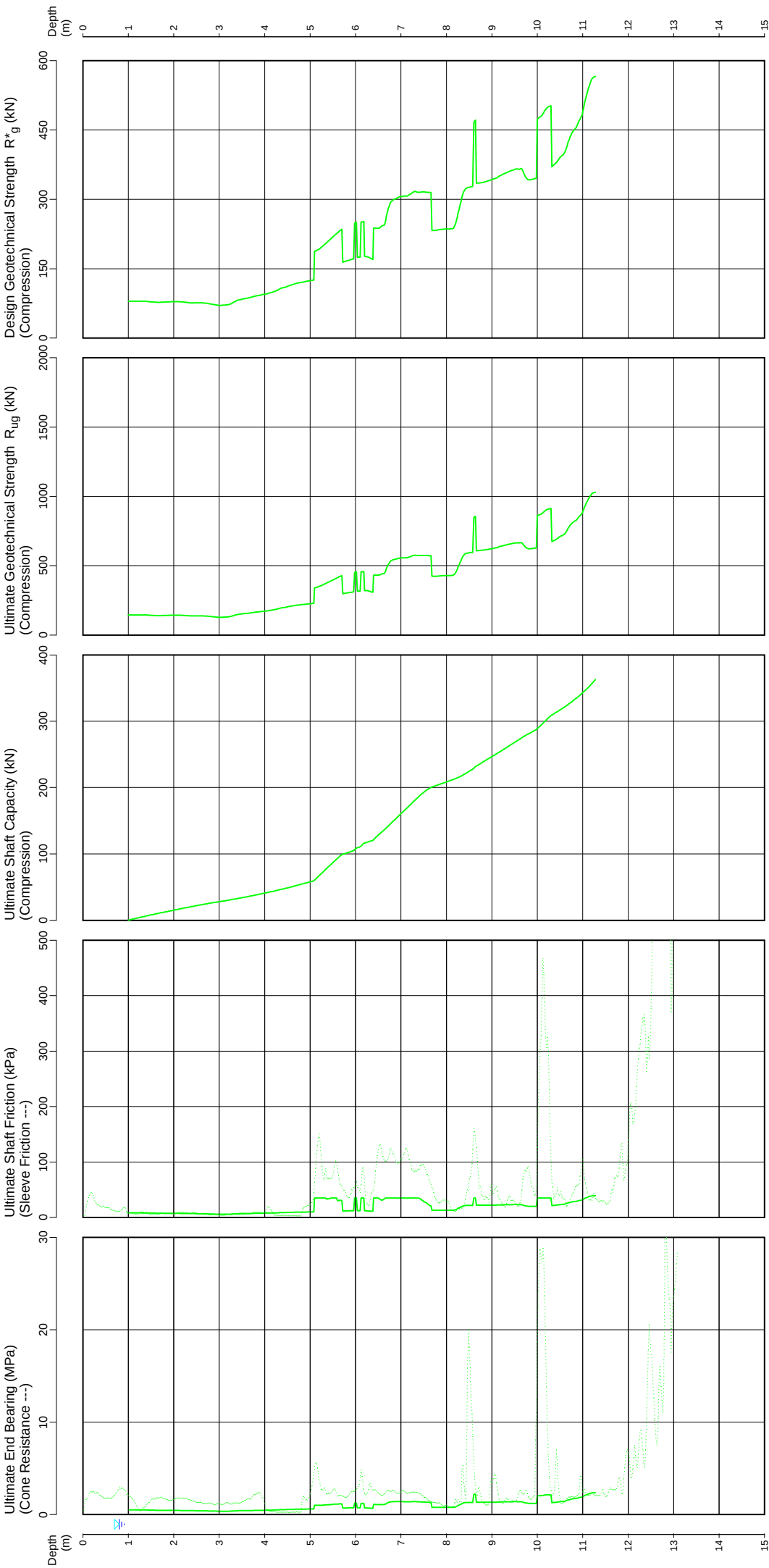
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 4

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.99



DISCLAIMER:

These capacities have been estimated using accepted static theory, and are a guide only. Suitable verification procedures should be adopted (refer to AS2159), and piling contractors should confirm pile suitability and capacities. Structural capacity should be checked, and due allowance made for inclined or eccentric loads, and possible corrosion effects.

Date
Plotted
Checked

Water depth after test: 0.80m depth

File: P:\39823\Field\39823-04.CP5
Cone ID: 413
ConePile Version 5.8.1
© 2003 Douglas Partners Pty Ltd

Type: 2 Standard



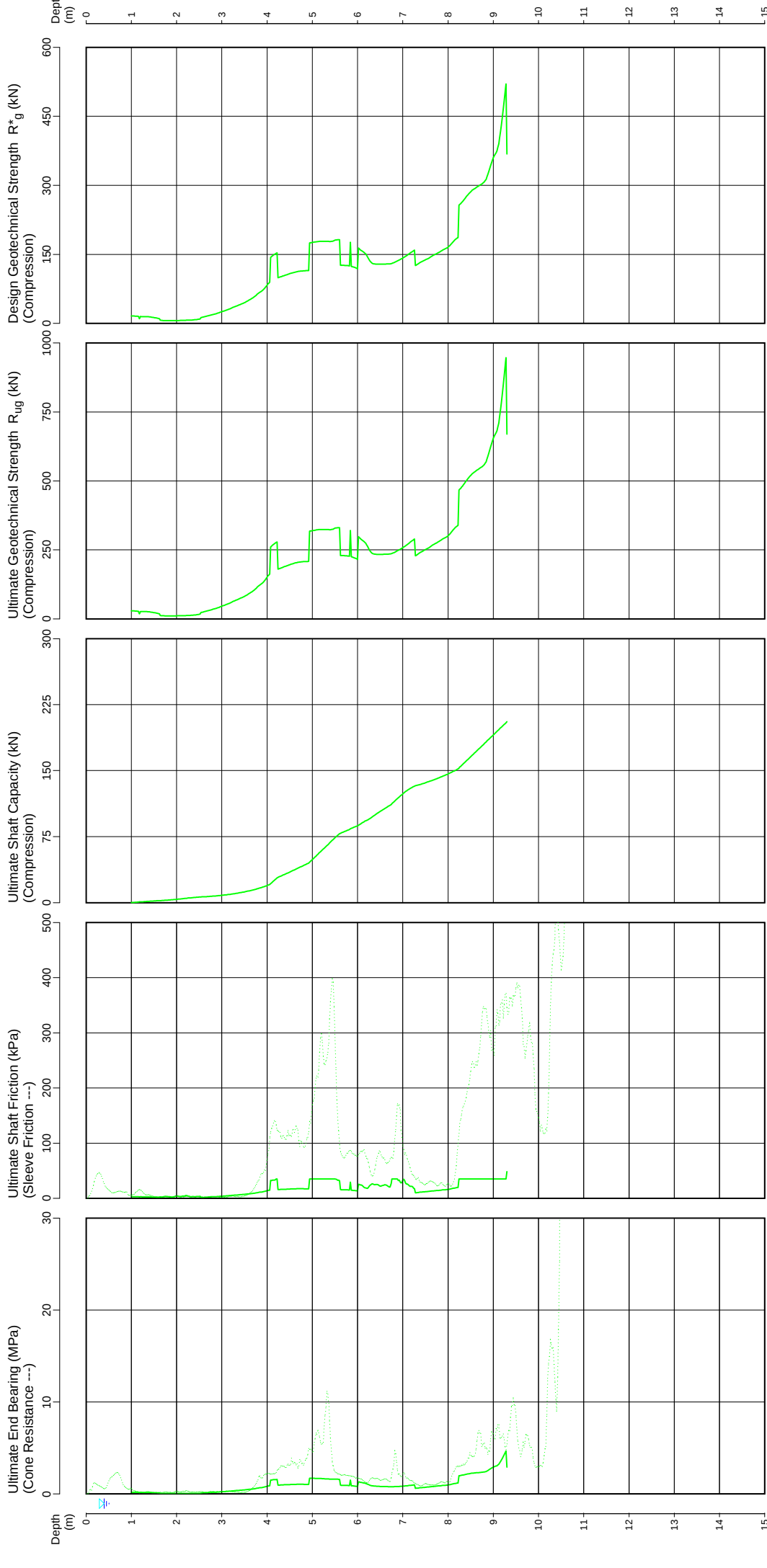
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PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.45
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 5
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.78



DISCLAIMER:
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Water depth after test: 0.40m depth

File: P:\39823\Field\39823-05.CP5
Cone ID: 413
Type: 2 Standard
ConePile Version 5.8.1
© 2003 Douglas Partners Pty Ltd

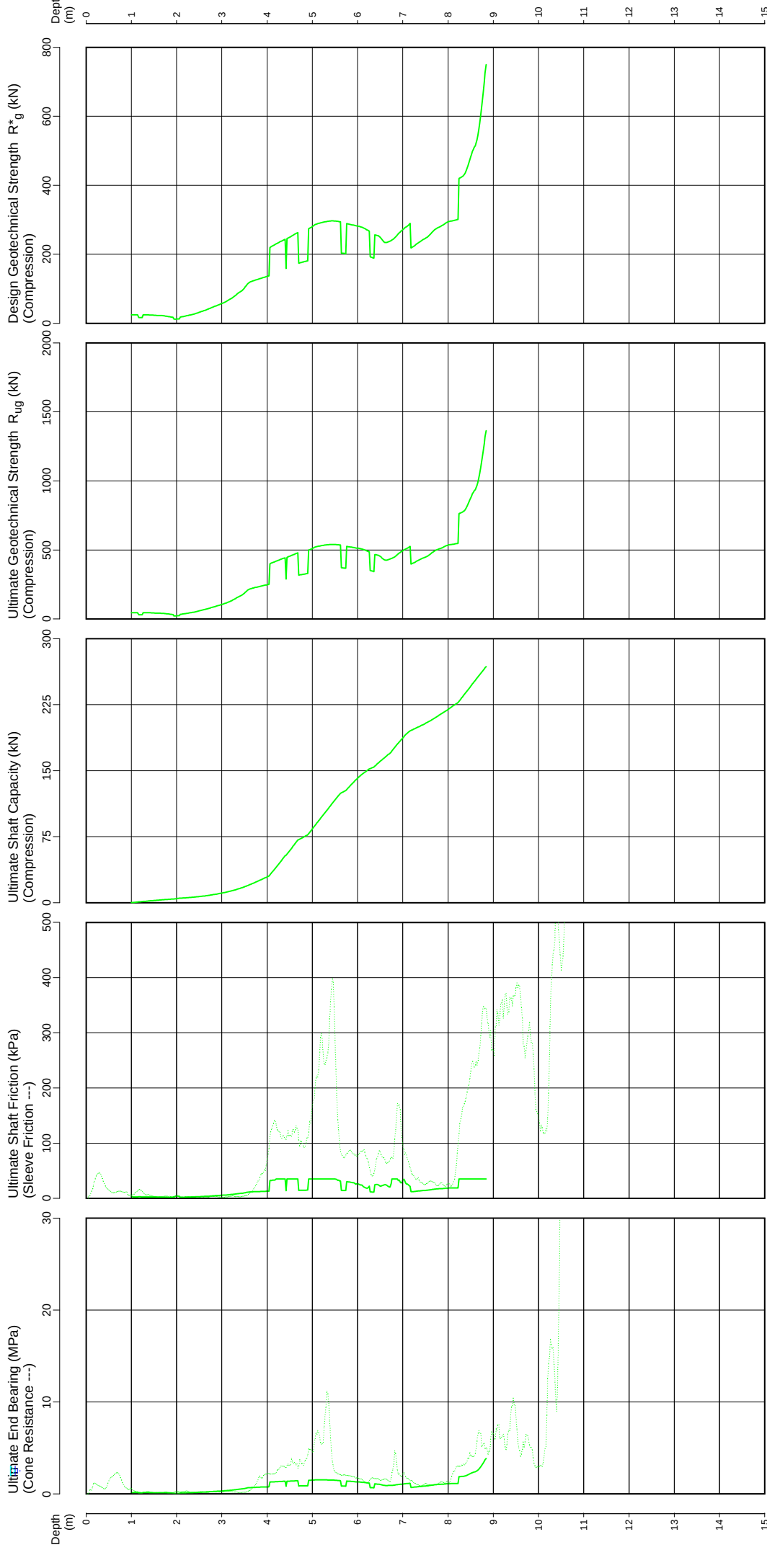
Date
Plotted
Checked

PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.60
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 5
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.78



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Water depth after test: 0.40m depth

File: P:\39823\Field\39823-05.CP5
Cone ID: 413
ConePile Version 5.8.1
© 2003 Douglas Partners Pty Ltd

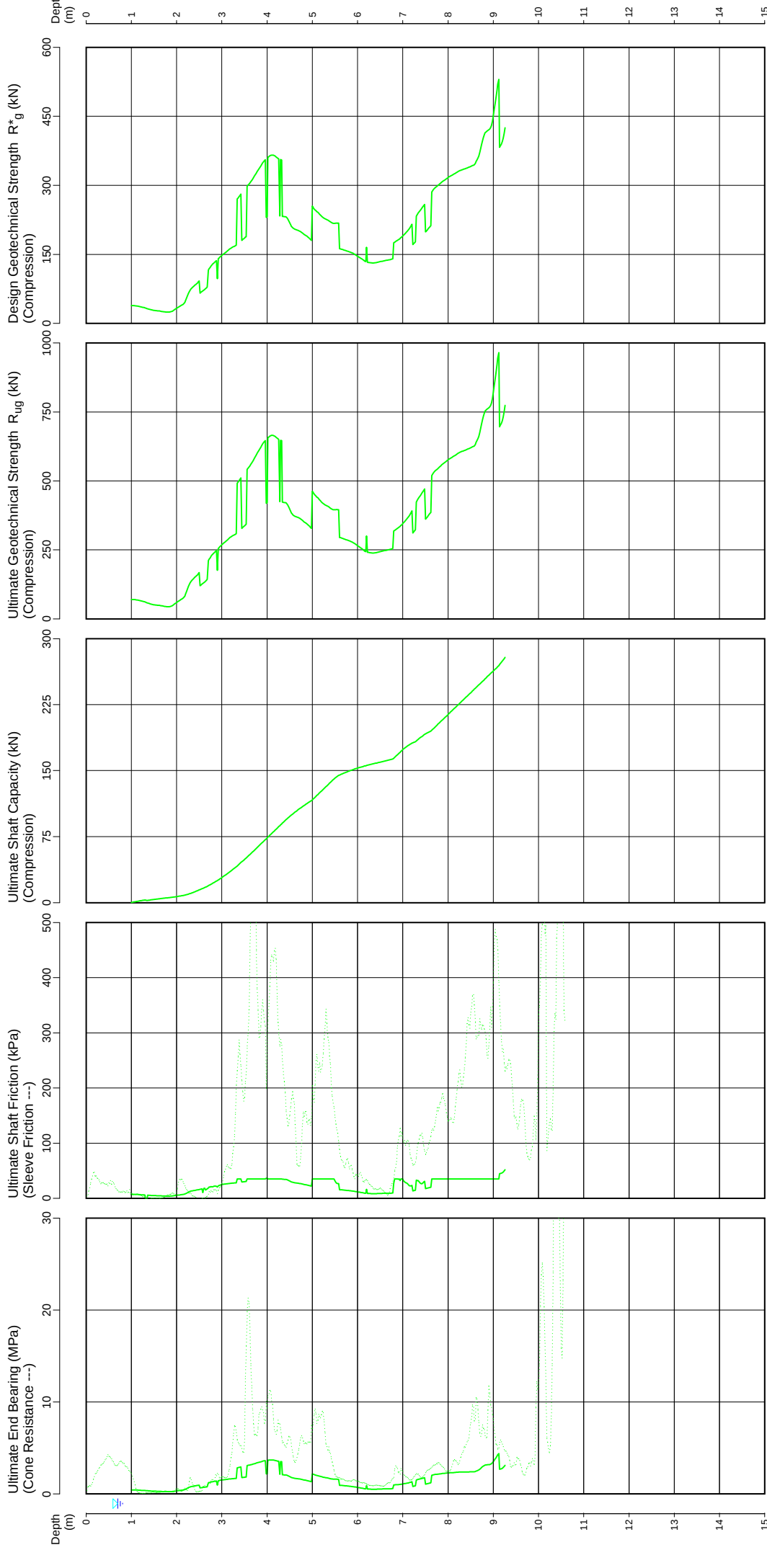
Date
Plotted
Checked

PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.45
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 6
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 1.05



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Date
Plotted
Checked

Water depth after test: 0.70m depth

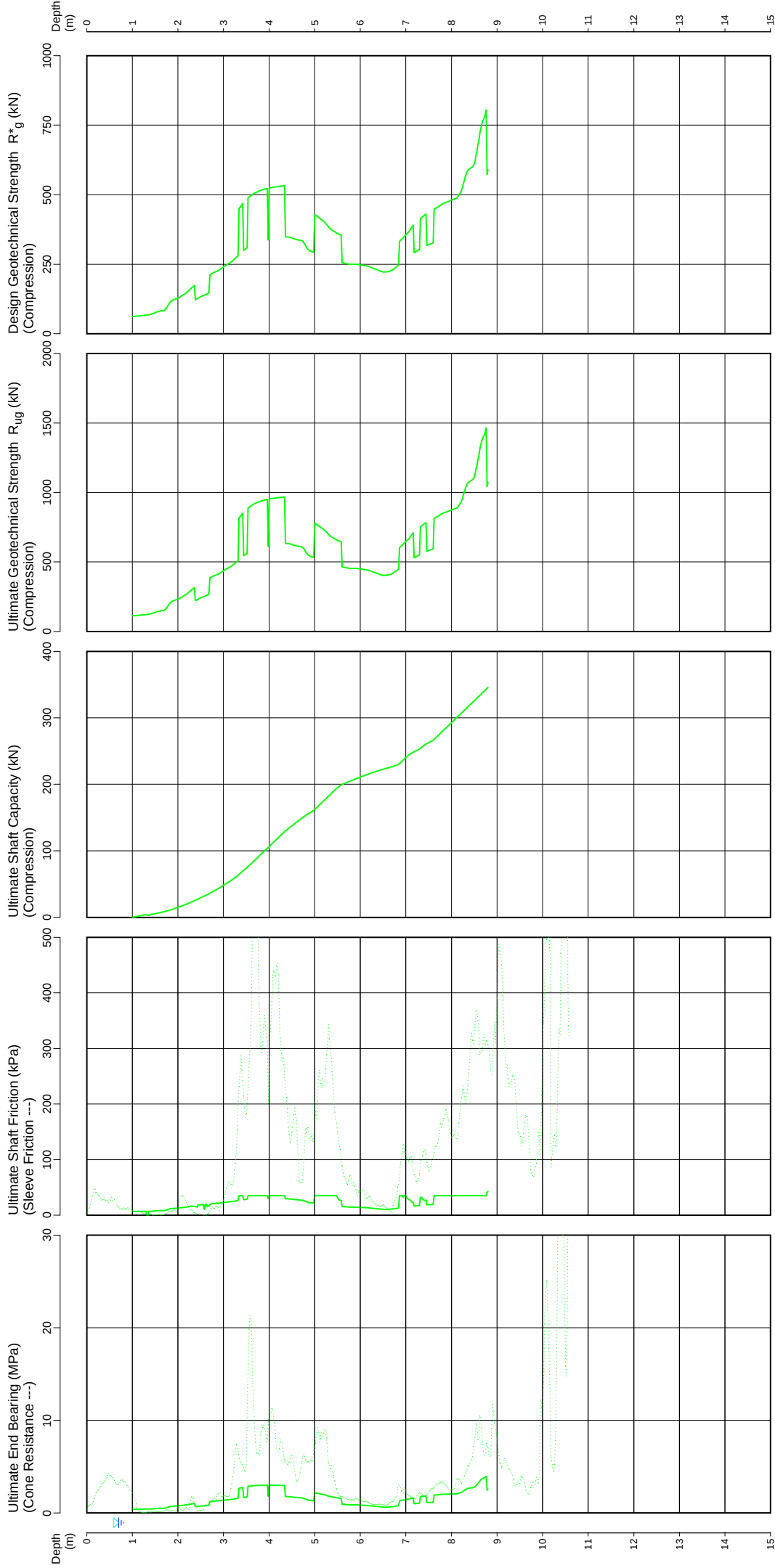
File: P:\39823\Field\39823-06.CP5
Cone ID: 413
ConePile Version 5.8.1
© 2003 Douglas Partners Pty Ltd
Type: 2 Standard

PILE CAPACITY ESTIMATE

PILE TYPE: Bored Concrete
PILE SHAPE: Round
PILE SIZE: Diameter = 0.60
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
CLIENT: JOHNSON PROPERTY GROUP

CPT 6
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 1.05



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Water depth after test: 0.70m depth

File: P:\39823\Field\39823-06.CP5

Cone ID: 413

Type: 2 Standard

ConePile Version 5.8.1

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Date
Plotted
Checked



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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.41 Outer Diameter = 0.56
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

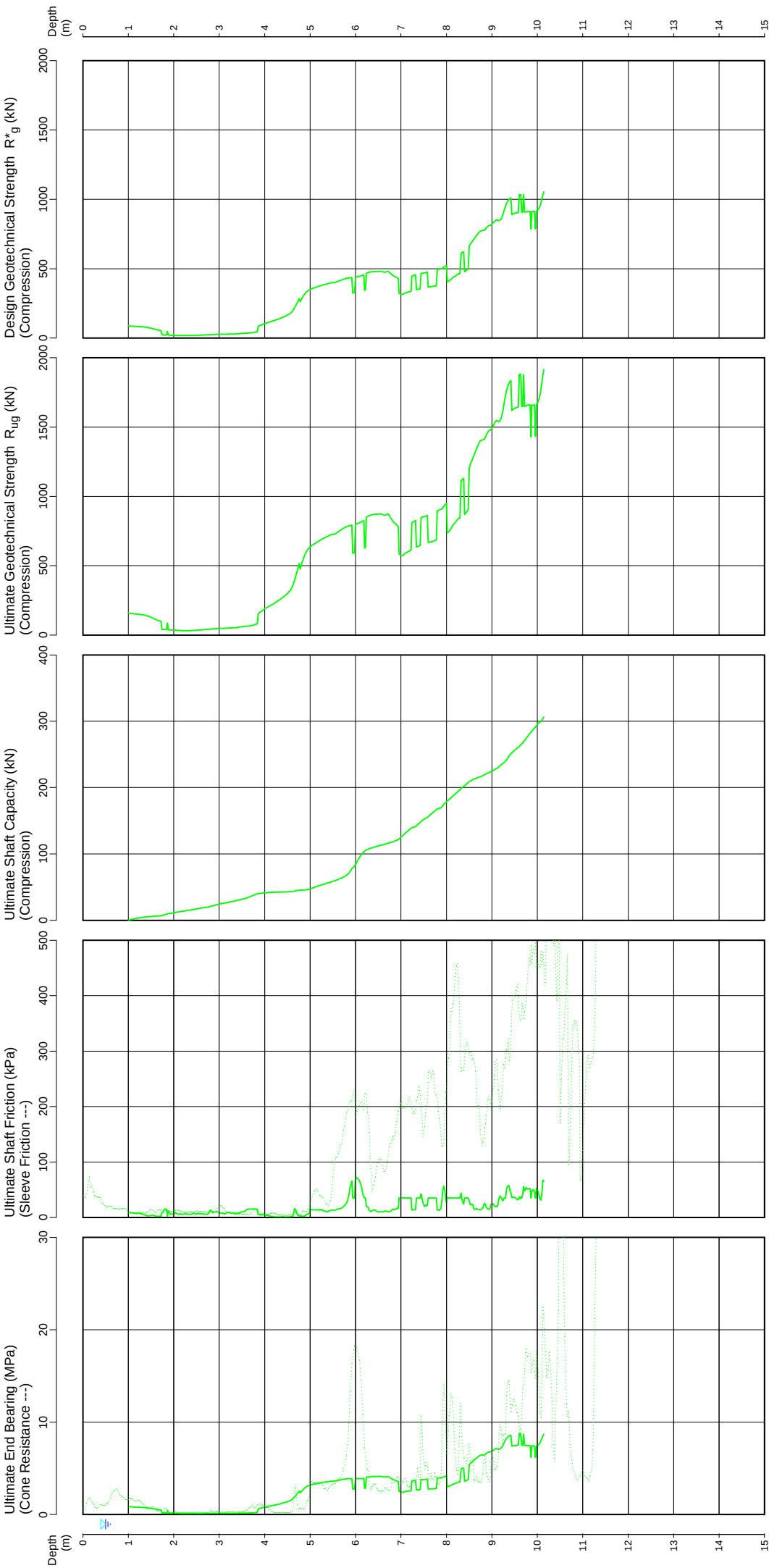
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 1

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.665



DISCLAIMER:

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Date
Plotted
Checked

Water depth after test: 0.50m depth

File: P:\39823\Field\39823-01.CP5
Cone ID: 413
Type: 2 Standard
ConePile Version 5.8.1
© 2003 Douglas Partners Pty Ltd



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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.51 Outer Diameter = 0.66
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

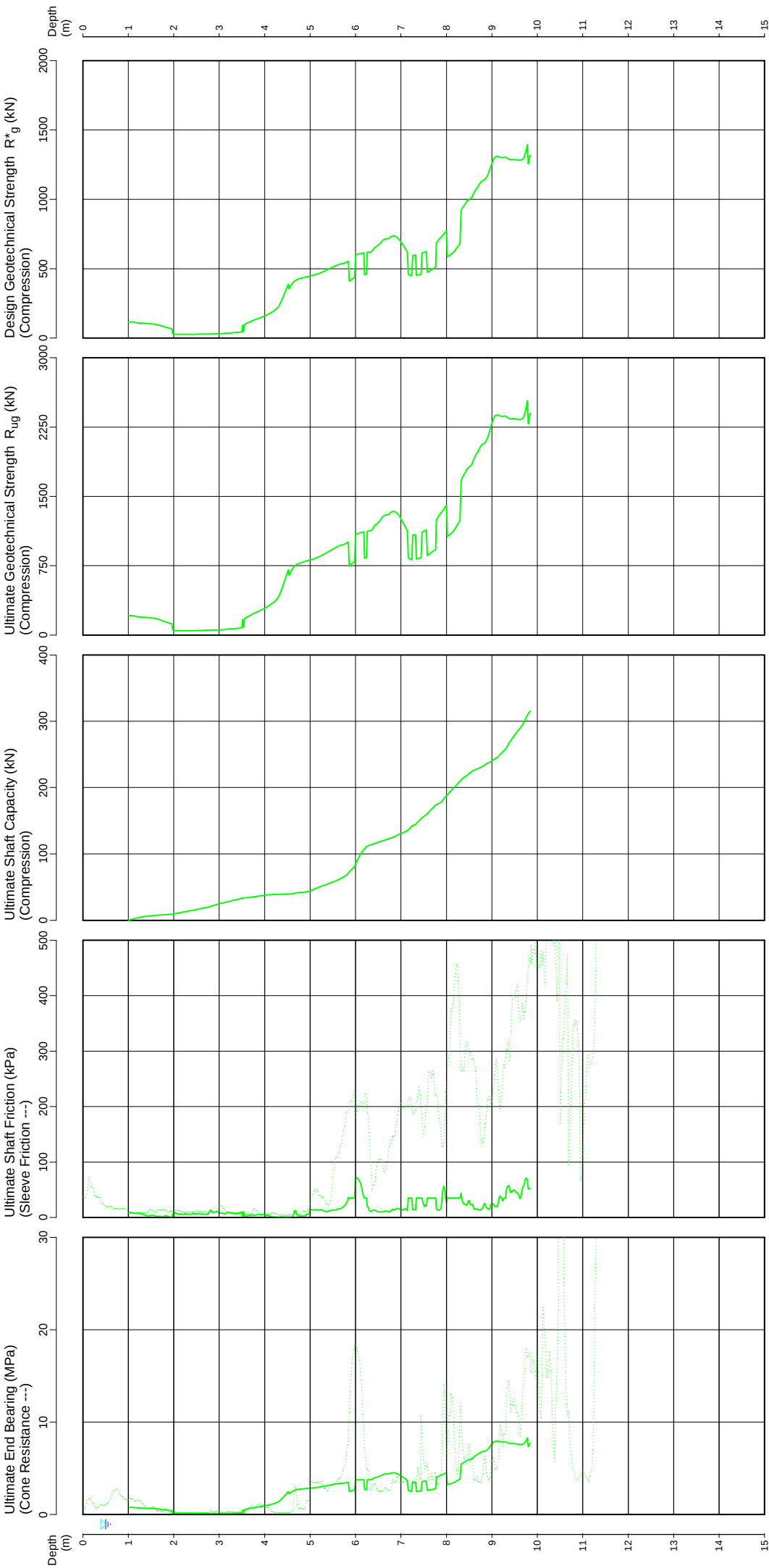
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 1

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.665



DISCLAIMER:
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Water depth after test: 0.50m depth

File: P:\39823\Field\39823-01.CP5
Cone ID: 413
ConePile Version 5.8.1
Type: 2 Standard
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Date
Plotted
Checked



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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.41 Outer Diameter = 0.56
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

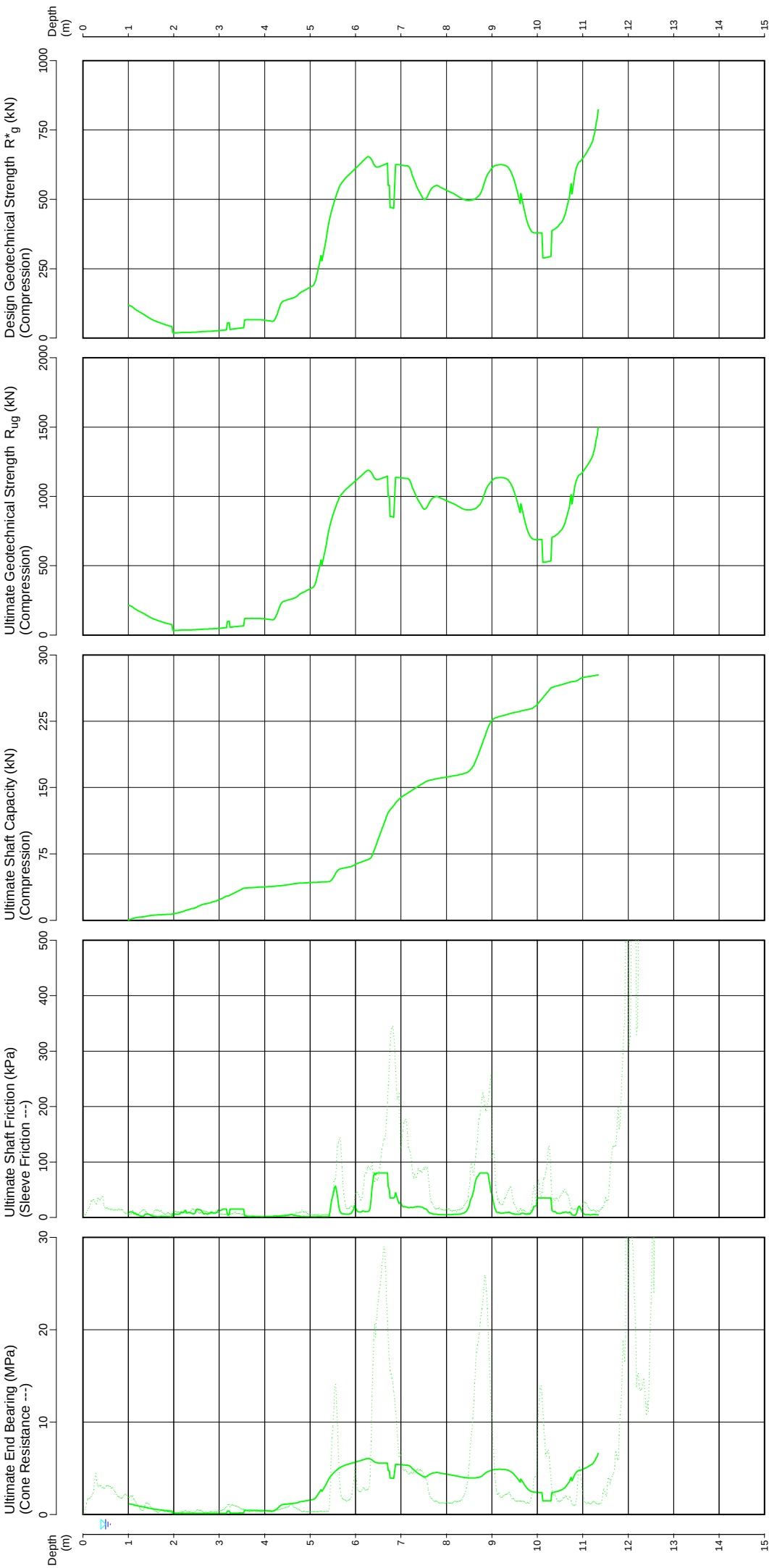
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 2

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.81



DISCLAIMER:

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Date
Plotted
Checked

Water depth after test: 0.5m

File: P:\39823\Field\39823-02.CP5
Cone ID: 413
Type: 2 Standard
ConePile Version 5.8.1
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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.51 Outer Diameter = 0.66
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

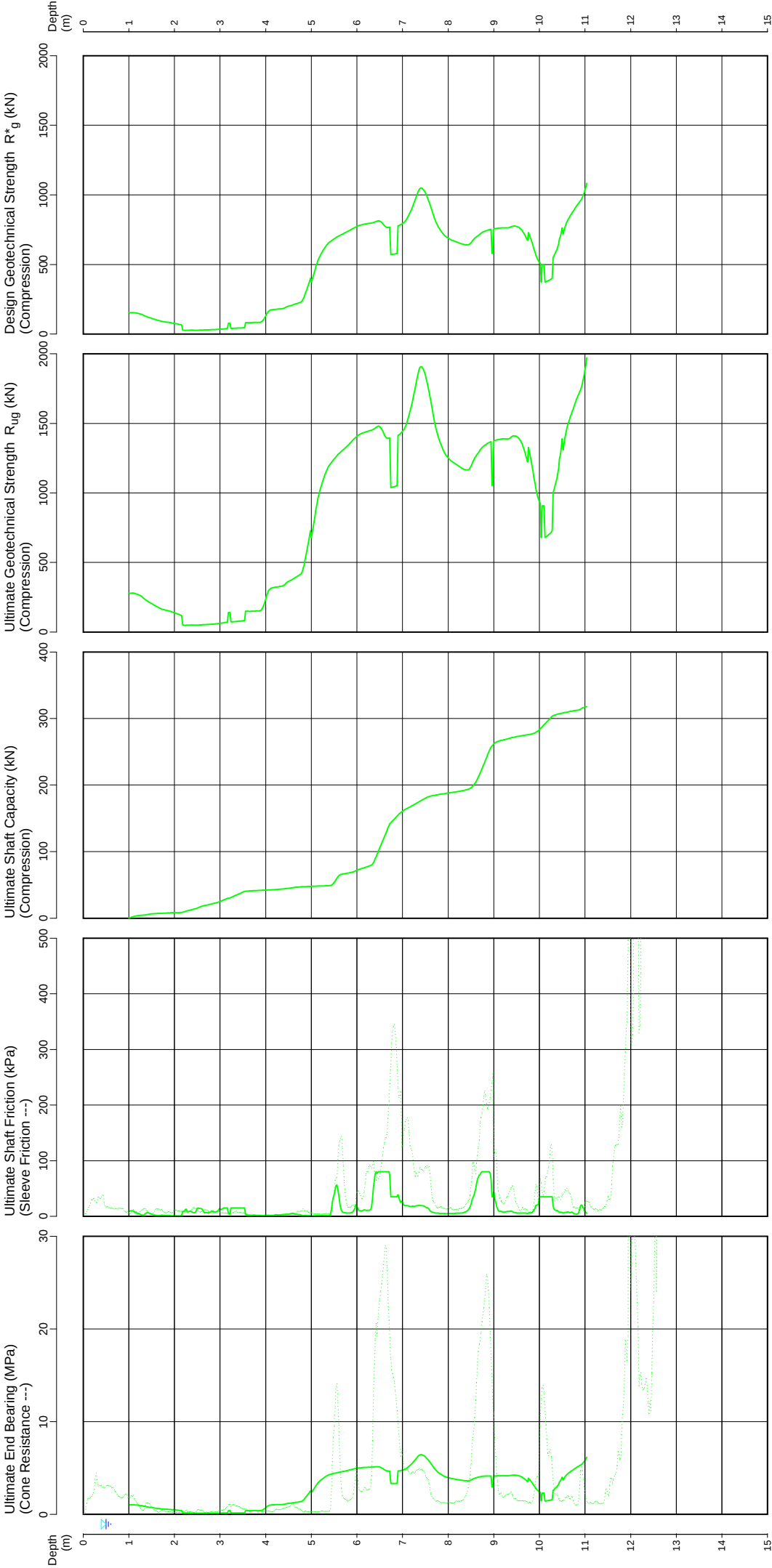
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 2

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.81



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Date
Plotted
Checked

Water depth after test: 0.5m

File: P:\39823\Field\39823-02.CP5
Cone ID: 413
Type: 2 Standard
ConePile Version 5.8.1
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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.41 Outer Diameter = 0.56
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

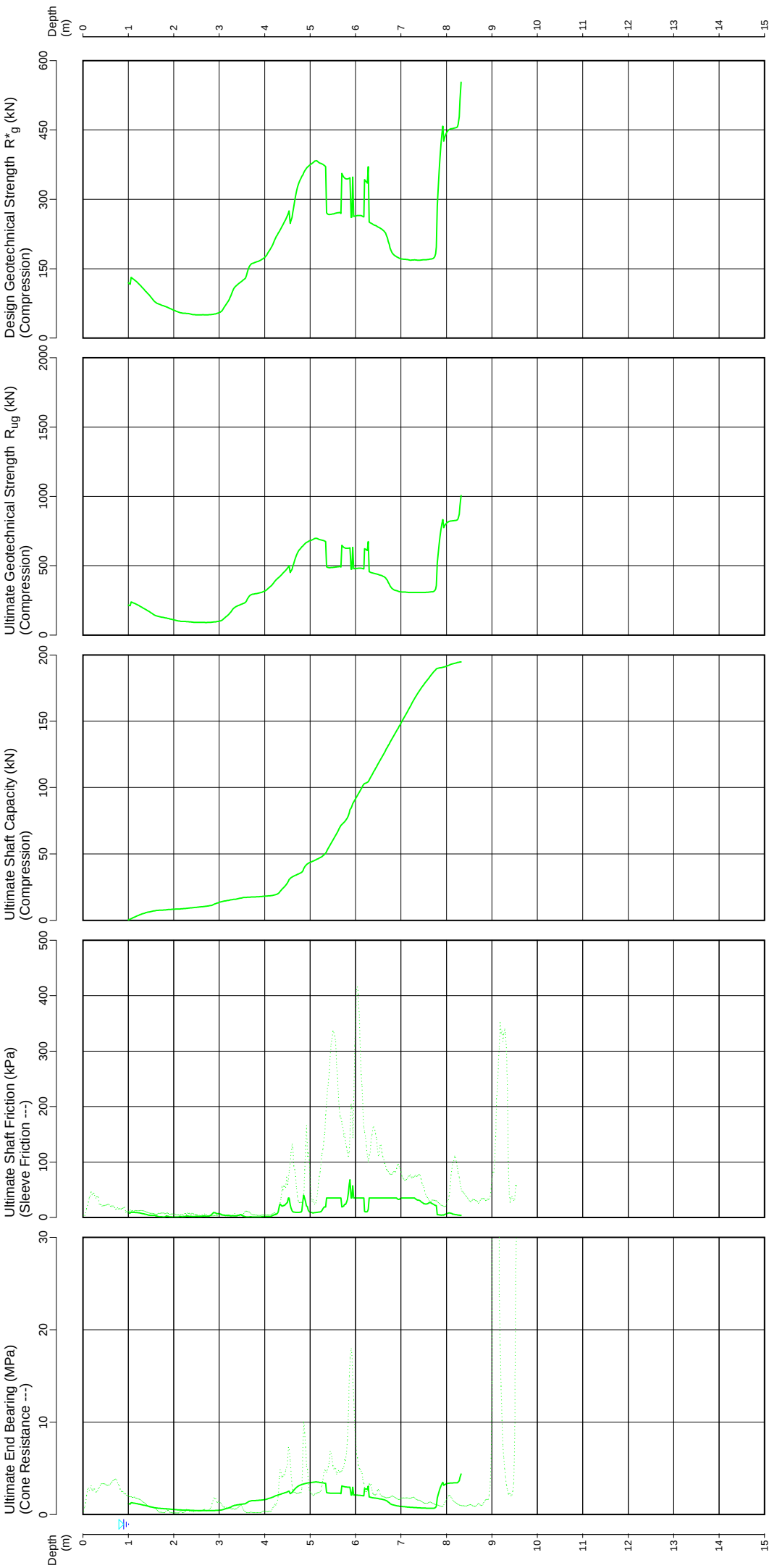
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 3

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.92



DISCLAIMER:
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Water depth after test: 0.90m depth

File: P:\39823\Field\39823-03.CP5
Cone ID: 413 Type: 2 Standard
ConePile Version 5.8.1
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Date
Plotted
Checked



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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.51 Outer Diameter = 0.66
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

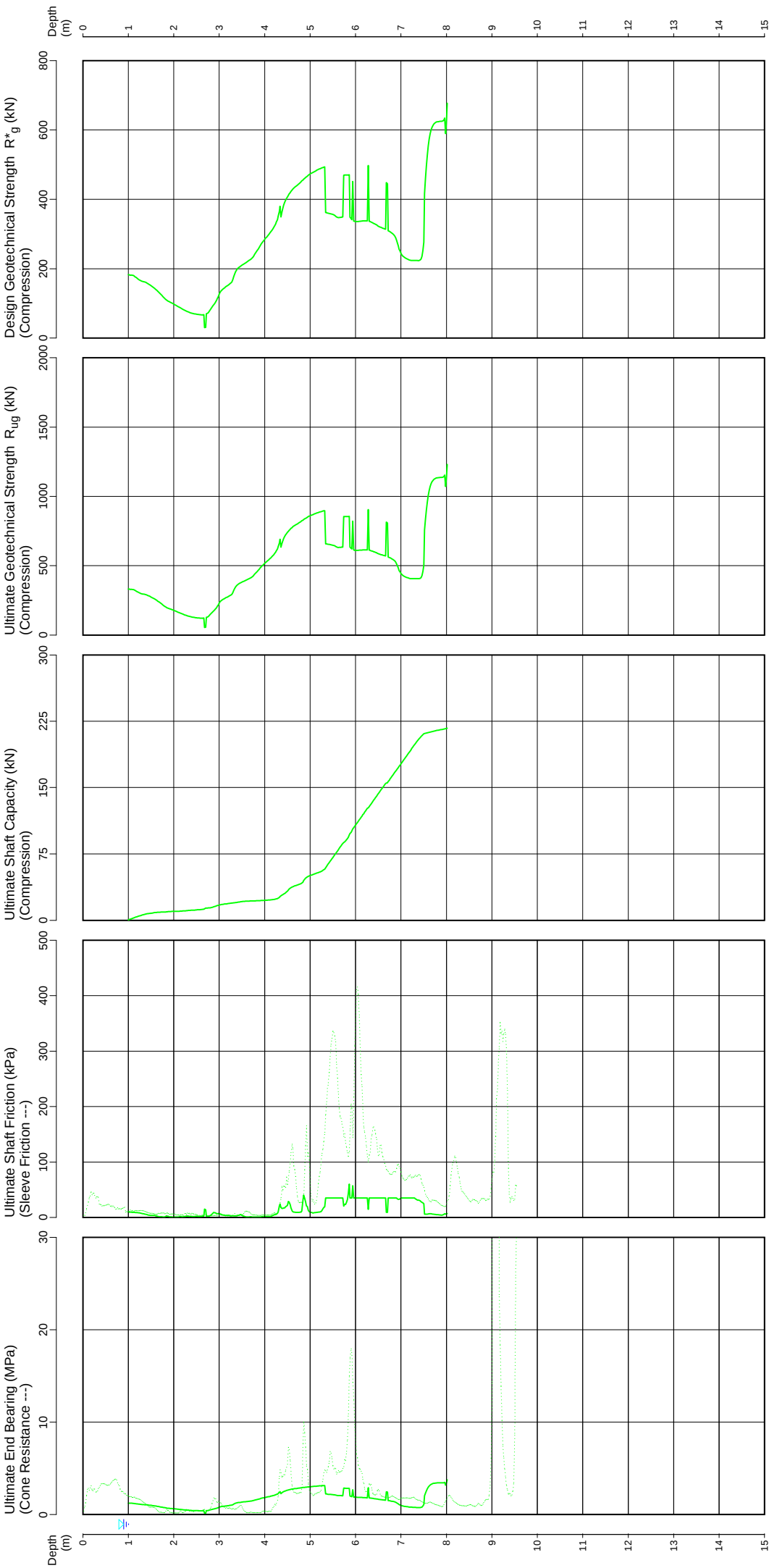
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 3

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.92



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Date
Plotted
Checked

Water depth after test: 0.90m depth

File: P:\39823\Field\39823-03.CP5
Cone ID: 413
ConePile Version 5.8.1
Type: 2 Standard
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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.41 Outer Diameter = 0.56
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 4

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.99



DISCLAIMER:

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Water depth after test: 0.80m depth

File: P:\39823\Field\39823-04.CP5

Cone ID: 413

Type: 2 Standard

ConePile Version 5.8.1

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Date
Plotted
Checked



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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.51 Outer Diameter = 0.66
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

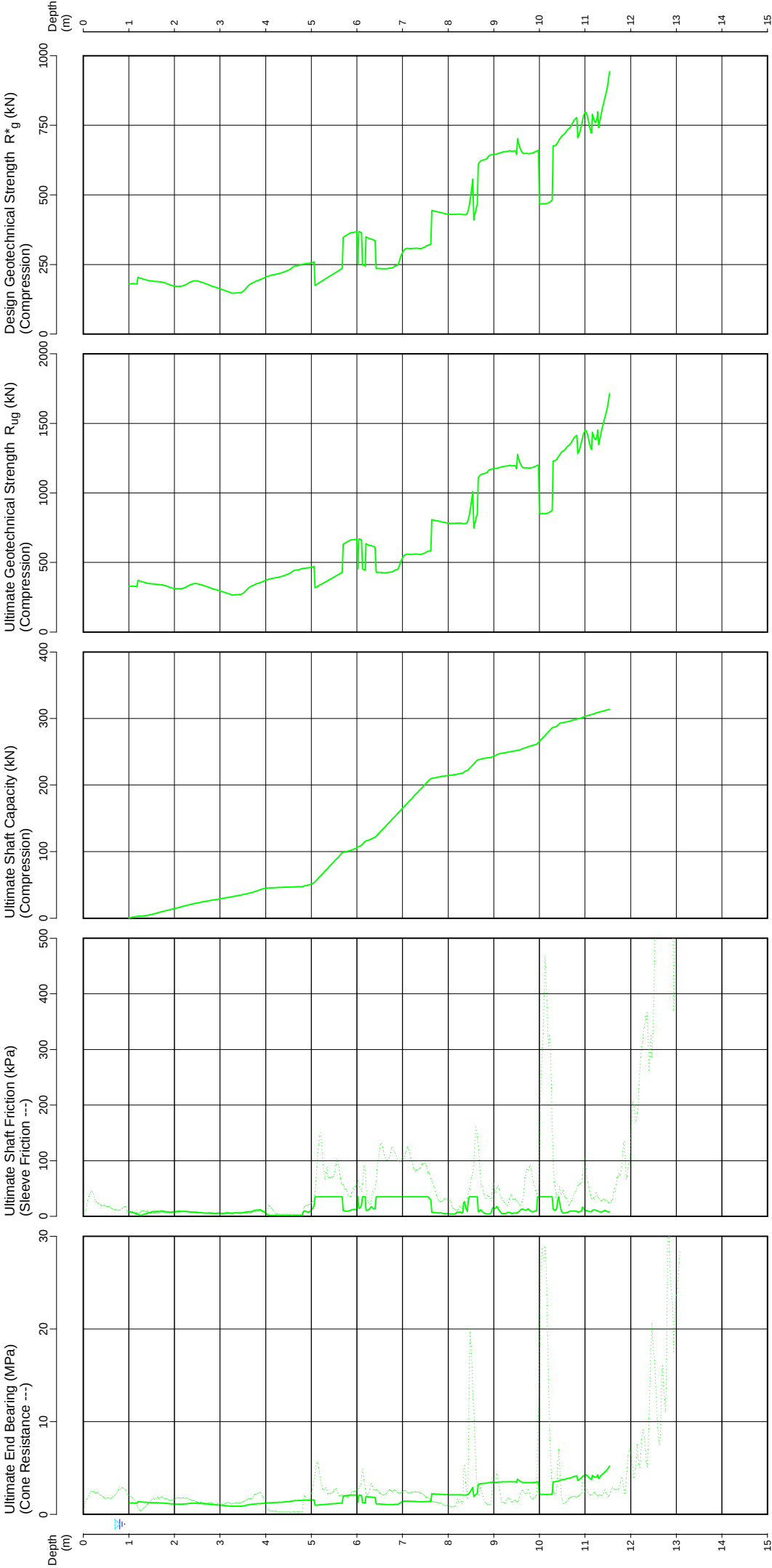
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 4

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.99



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Water depth after test: 0.80m depth

File: P:\39823\Field\39823-04.CP5

Cone ID: 413

Type: 2 Standard

ConePile Version 5.8.1

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Date
Plotted
Checked



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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.41 Outer Diameter = 0.56
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

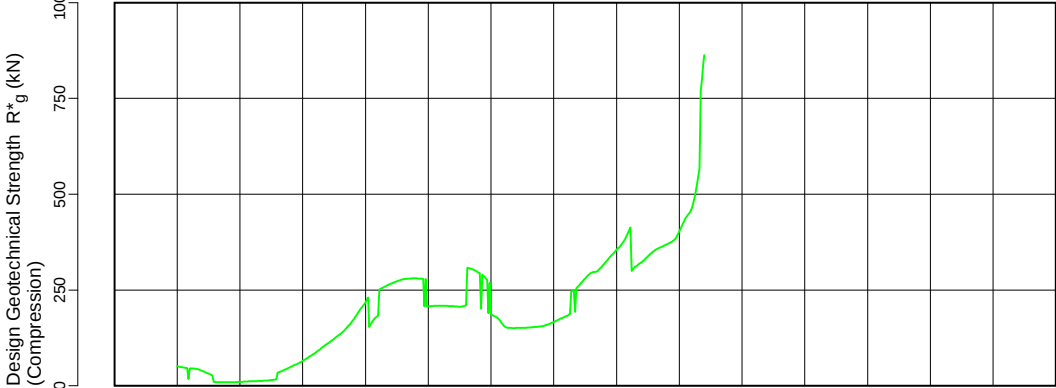
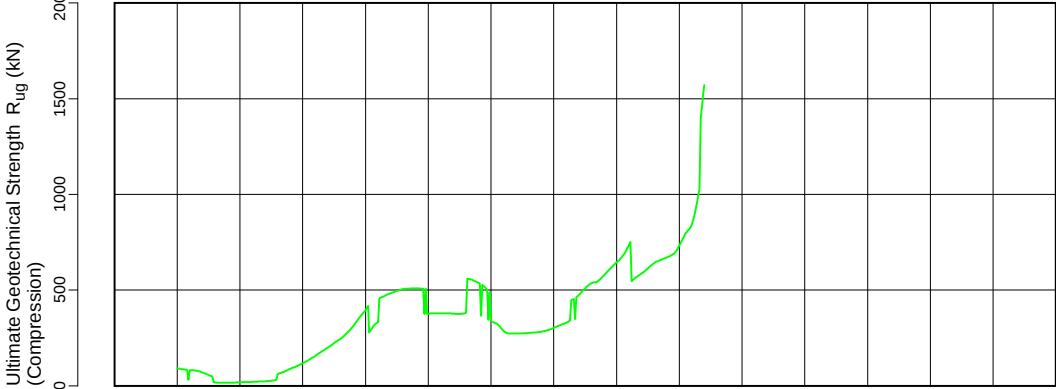
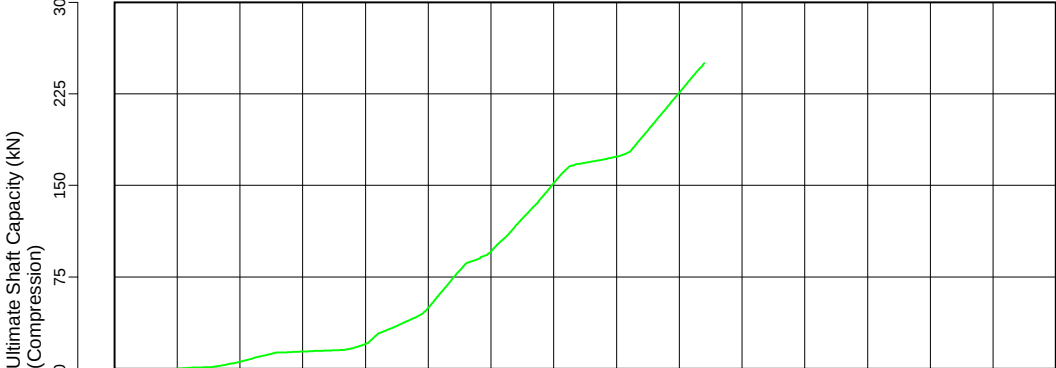
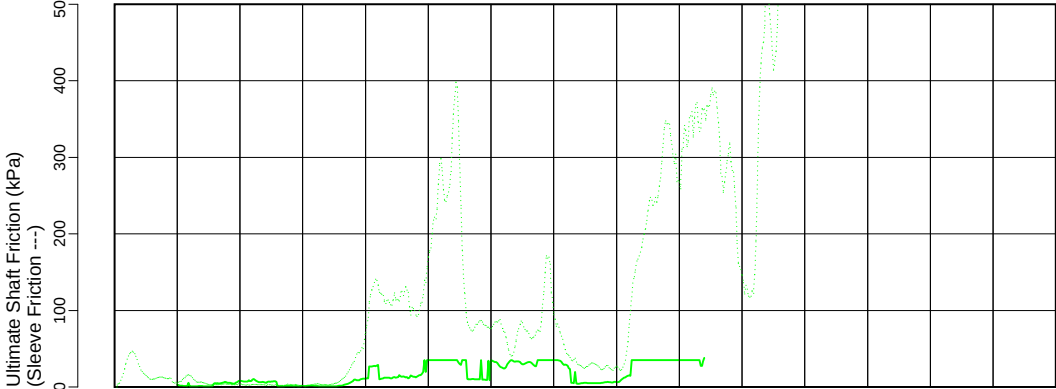
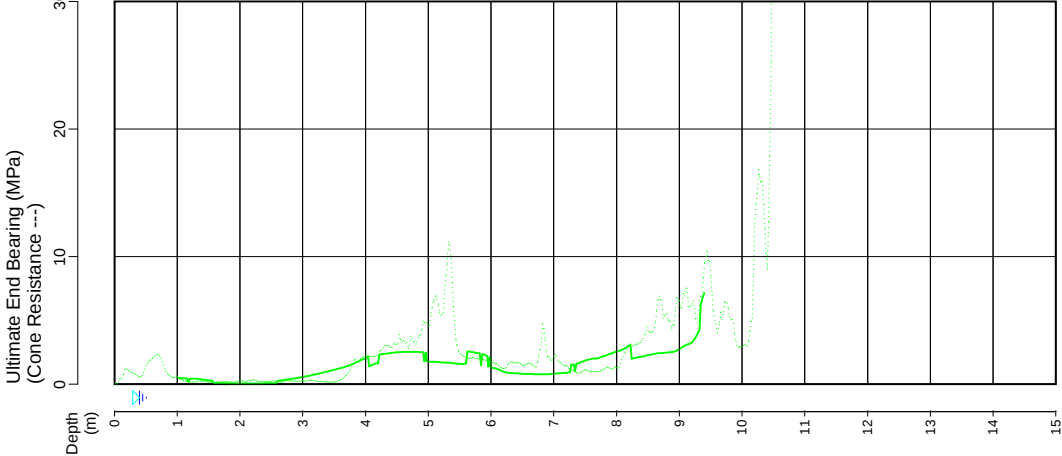
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 5

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.78



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Date
Plotted
Checked

Water depth after test: 0.40m depth

File: P:\39823\Field\39823-05.CP5
Cone ID: 413 Type: 2 Standard
ConePile Version 5.8.1
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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.51 Outer Diameter = 0.66
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

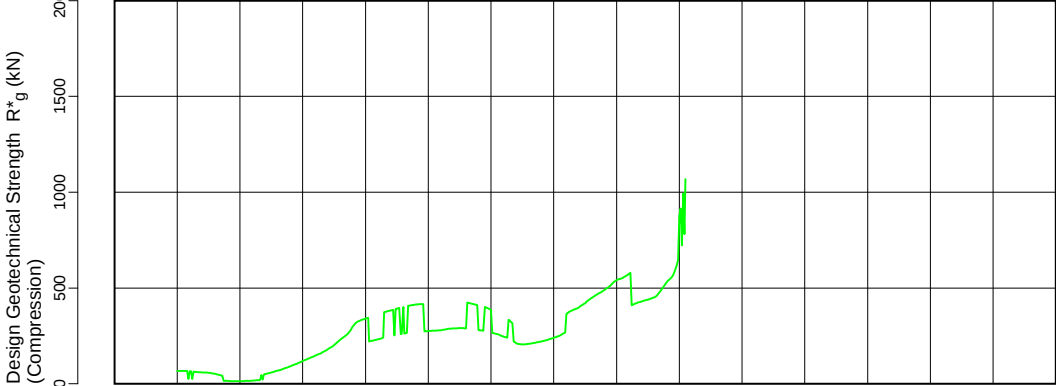
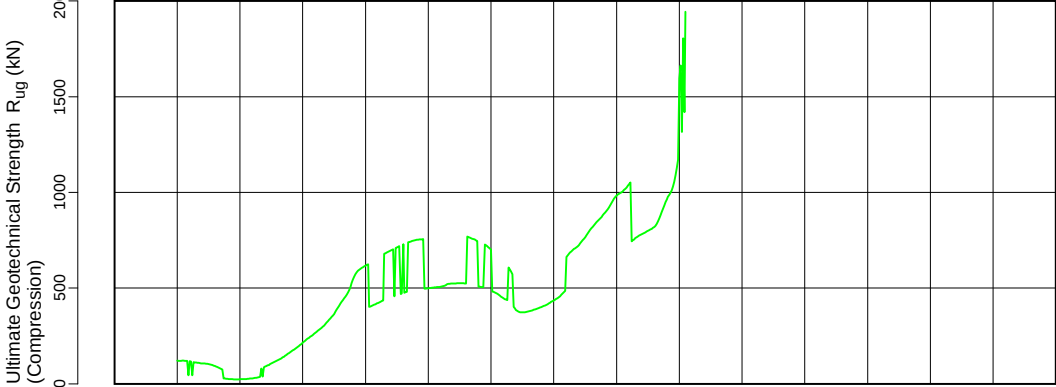
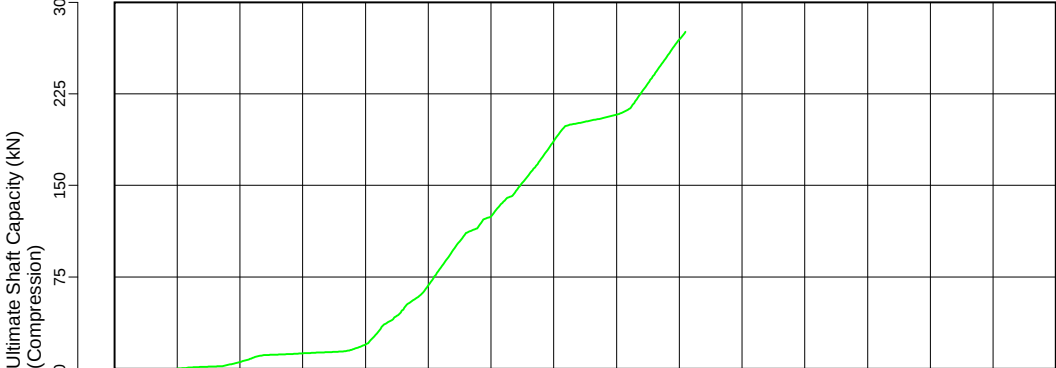
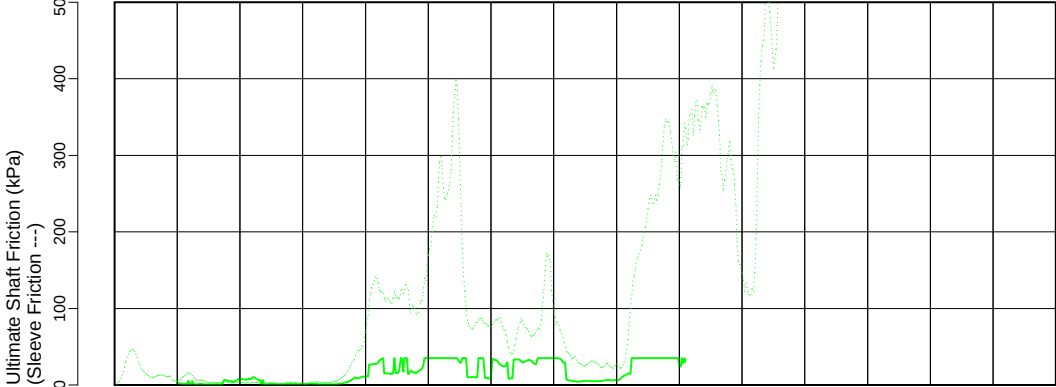
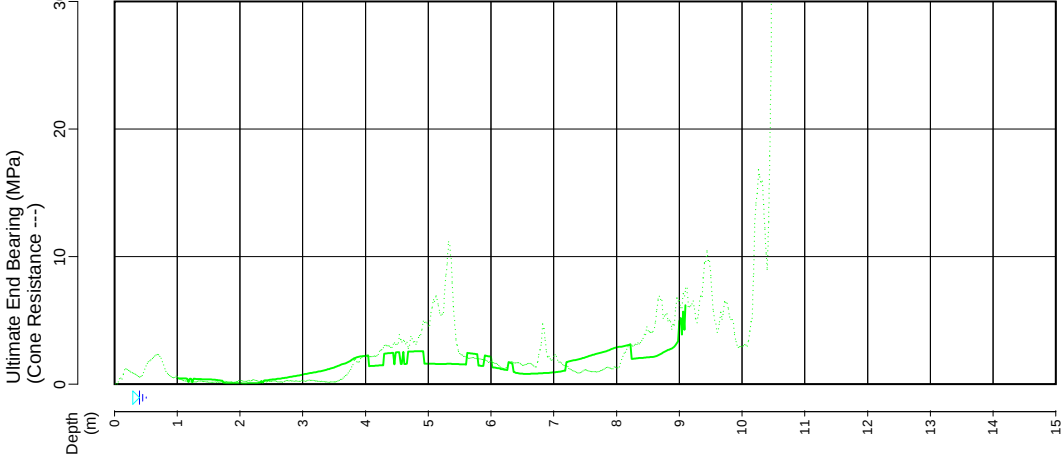
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 5

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 0.78



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Date
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Cone ID: 413
Type: 2 Standard
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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.41 Outer Diameter = 0.56
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

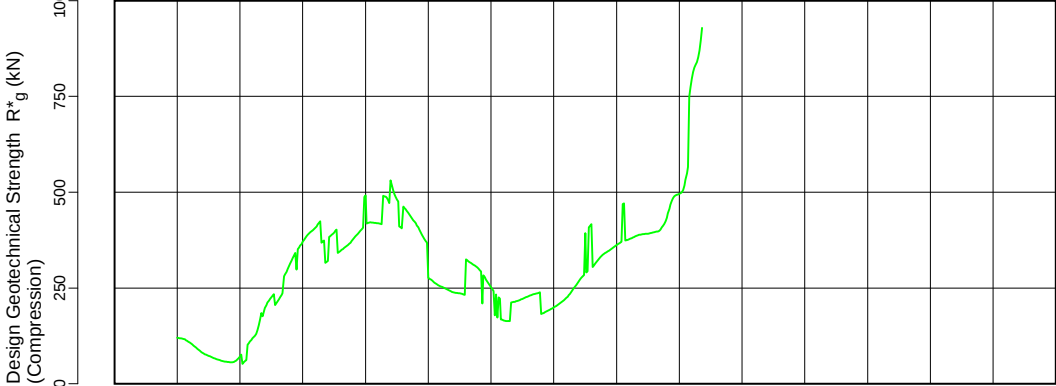
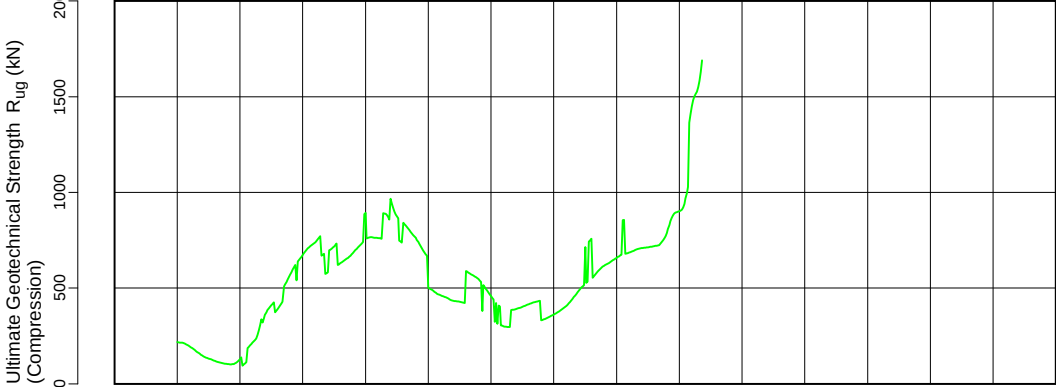
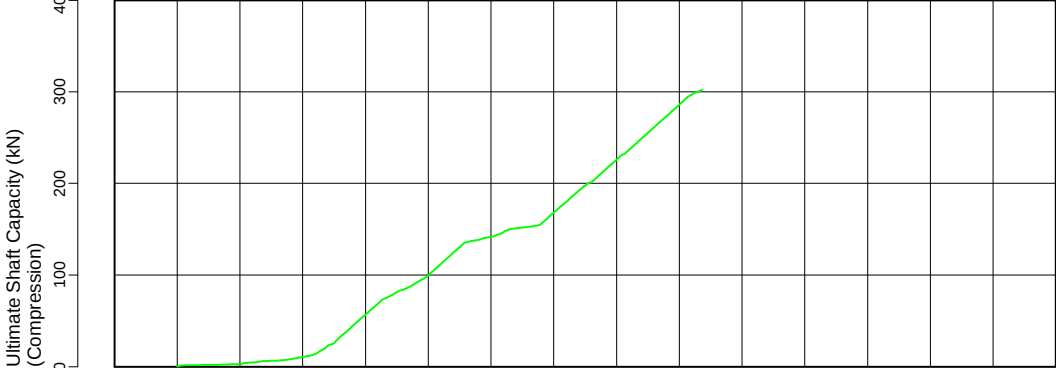
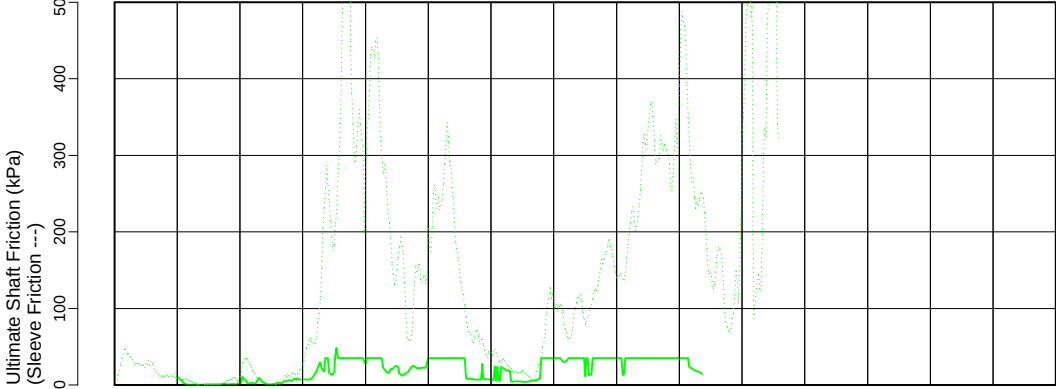
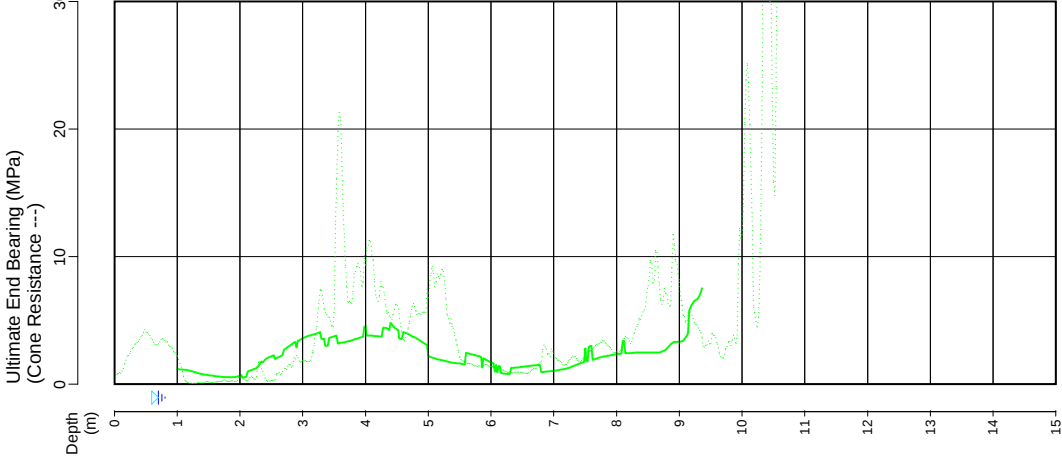
PROJECT: TRINITY POINT MARINA & MIXED USE RESORT

LOCATION: OFF HENRY ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP

CPT 6

Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
SURFACE RL: 1.05



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Date
Plotted
Checked

Water depth after test: 0.70m depth

File: P:\39823\Field\39823-06.CP5
Cone ID: 413 Type: 2 Standard
ConePile Version 5.8.1
© 2003 Douglas Partners Pty Ltd



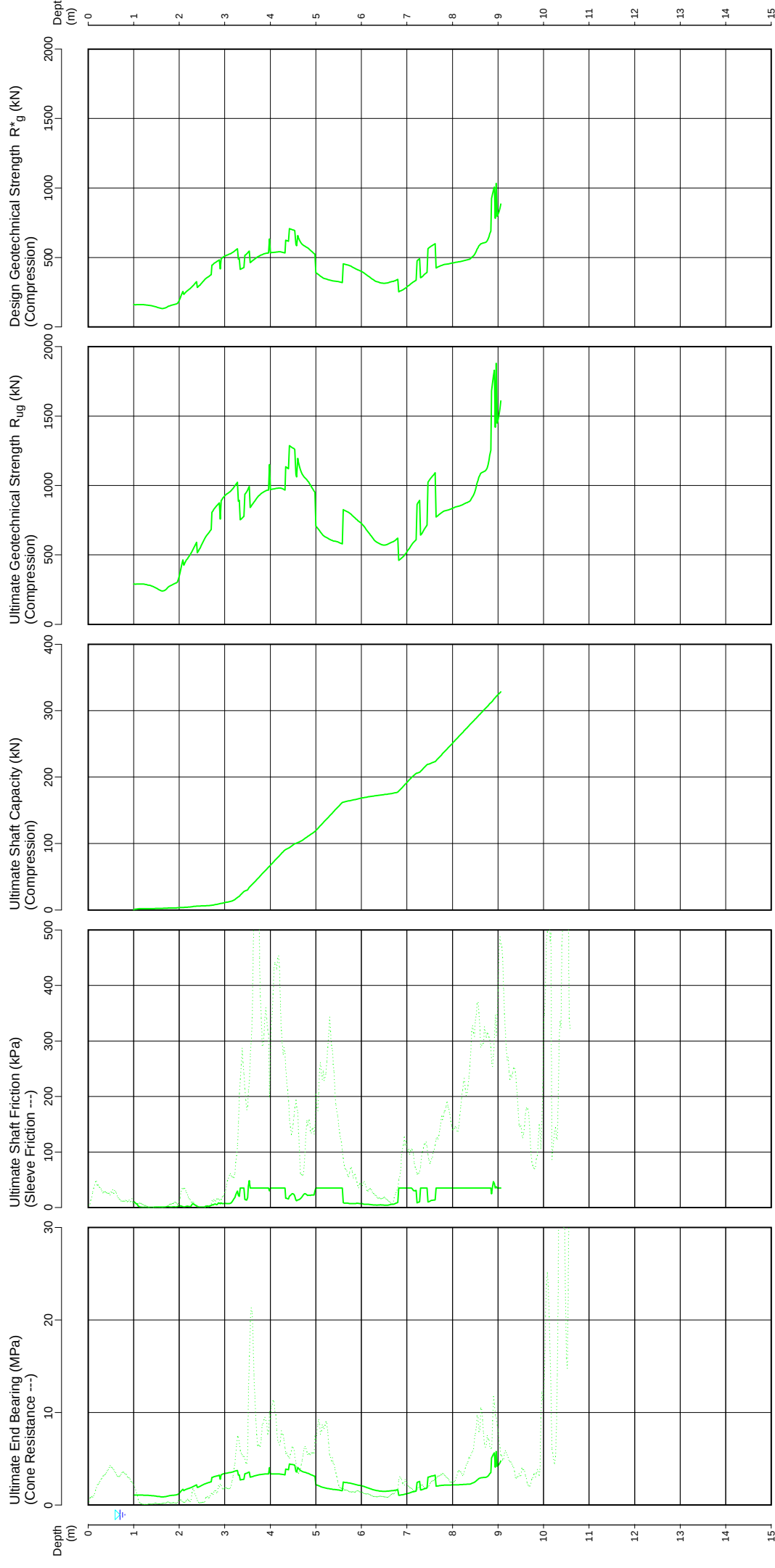
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PILE CAPACITY ESTIMATE

PILE TYPE: Screw Cast Concrete
PILE SHAPE: Round Screw
PILE SIZE: Inner Diameter = 0.51 Outer Diameter = 0.66
STRENGTH REDUCTION FACTOR ϕ_p : 0.55
CALCULATION METHOD: Douglas Method

PROJECT: TRINITY POINT MARINA & MIXED USE RESORT
LOCATION: OFF HENRY ROAD, MORISSET PARK
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CPT 6
Page 1 of 1
DATE 25/09/2007
PROJECT No: 39823
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Water depth after test: 0.70m depth

File: P:\39823\Field\39823-06.CP5
Cone ID: 413 Type: 2 Standard
ConePile Version 5.8.1
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Date
Plotted
Checked

In reply please send to: Head Office

Our reference: FN80-02100L0

Your reference:

Contact: Greg Cole-Clark

Mr Bryan Garland
Development Manager
Johnson Property Group
PO Box 34
COORANBONG NSW 2265

12 January 2007

Dear Bryan,

Preliminary Concept Plan - Trinity Point Marina.

Thank you for meeting with the Board on 11th December 2006 to discuss the above project.

A formal Development Application will need to be submitted for Stage 1 and approval will be subject to the decision of a Board Meeting. However, as a general guideline, the Mine Subsidence Board would consider development of structures up to seven storeys in Stage 1 (Concept Plan - Preliminary dated 29 November 2006).

Any approval would be subject to conditions including:-

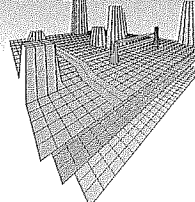
1. The submission of final drawings prior to the commencement of construction, and containing a certification by a qualified structural engineer that the improvements have been constructed for the following parameters and any damage would be slight, localized and readily repairable.

(a)	Maximum vertical subsidence	150 mm
(b)	Maximum ground strains	± 2 mm/m
(c)	Maximum tilt	2 mm/m
2. The final drawings are to be submitted to the Mine Subsidence Board prior to commencement of construction. The drawings are to show brickwork articulation in accordance with the Building Code of Australia.



Quality
Endorsed
Company
ISO 9001:2000
Lic 12871
Standards Australia

MINE SUBSIDENCE BOARD



HEAD OFFICE:

PO Box 488G
Newcastle 2300
Telephone: (02) 4908 4395
Facsimile: (02) 4929 1032

NEWCASTLE:

NSW Government Offices
117 Bull Street
Newcastle West 2302
PO Box 488G
Newcastle 2300
Telephone: (02) 4908 4300
Facsimile: (02) 4929 1032
DX 4322 Newcastle West

SPEERS POINT

143 Main Road
Speers Point 2284
PO Box 9 Boolaroo 2284
Telephone: (02) 4950 8088
Facsimile: (02) 4950 8101
DX 7820 Newcastle

WYONG:

Suite 3 Feldwin Court
30 Hely Street
Wyang 2259
PO Box 157 Wyong 2259
Telephone: (02) 4352 1646
Facsimile: (02) 4352 1757
DX 7317 Wyong

SINGLETON:

Coal Services Building
1 Civic Avenue
Singleton 2330
PO Box 524 Singleton 2330
Telephone: (02) 6572 4344
Facsimile: (02) 6572 4504

PICTON:

100 Argyle Street
Picton 2571
PO Box 40 Picton 2571
Telephone: (02) 4677 1967
Facsimile: (02) 4677 2040
DX 26053 Picton

EMAIL:

mail@minesub.nsw.gov.au

WEBSITE:

www.minesub.nsw.gov.au

3. Upon completion of construction, work as executed certification by a qualified structural engineer is to be forwarded to the Board confirming construction was in accordance with the plans submitted.

As explained, other stages of the project will be subject to surface development guidelines. The guidelines control the amount of subdivision and type of structures that can be built given the risk of mine subsidence damage.

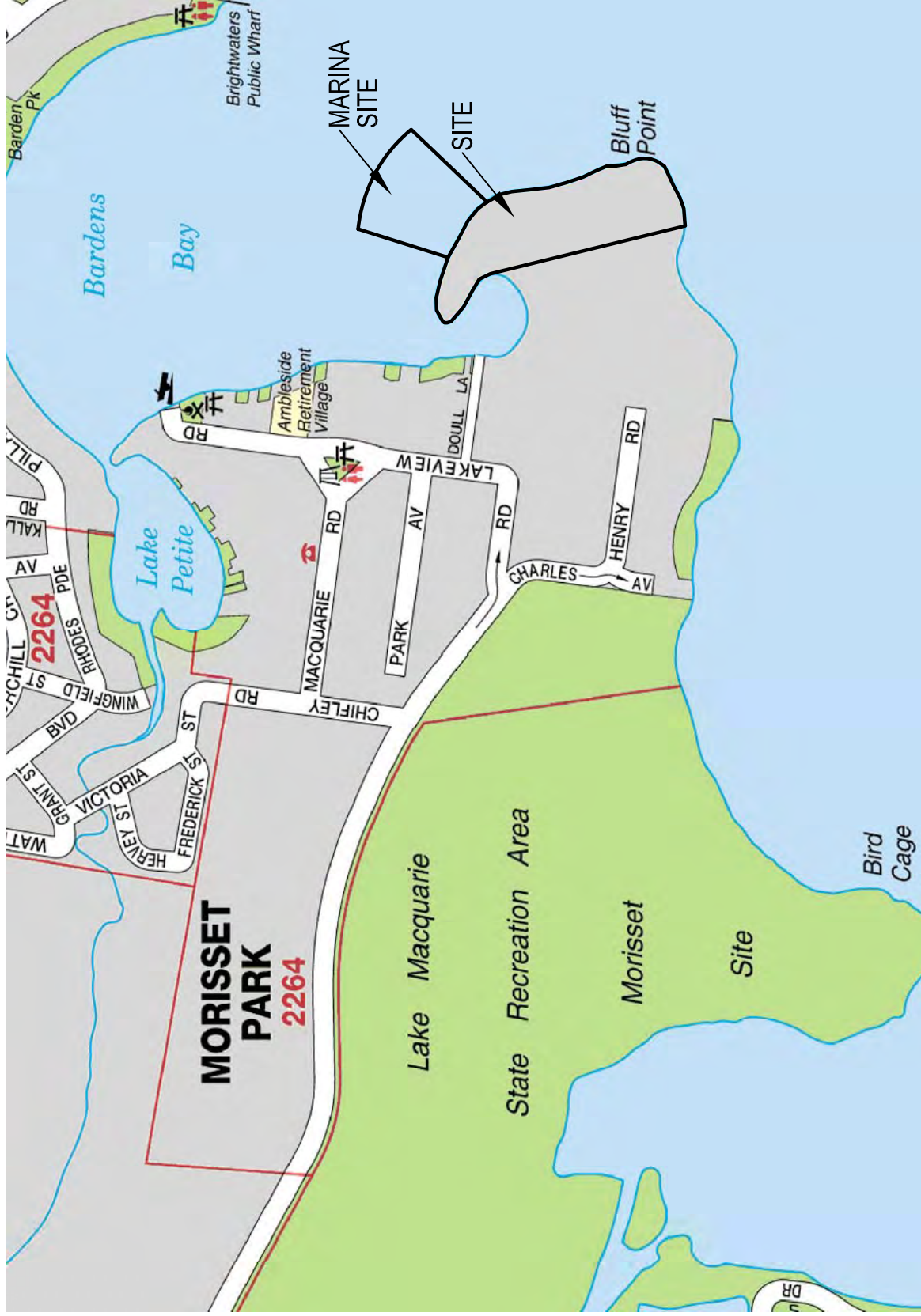
Please do not hesitate to contact Mr Paul Gray or myself if we can be of further assistance.

Yours faithfully



Mr G J Cole-Clark
Chief Executive Officer

Cc P Gray



Douglas Partners
Geotechnics Environment Groundwater

Sydney, Newcastle, Brisbane,
Melbourne, Perth, Wyoing,
Campbelltown, Townsville,
Cairns, Wollongong, Darwin

TITLE: LOCALITY PLAN

PROPOSED TRINITY POINT MARINA & TOURIST RESORT
49 LAKEVIEW ROAD, MORISSET PARK

CLIENT: JOHNSON PROPERTY GROUP PTY LTD

DRAWN BY: PLH T SCALE: NTS

PROJECT No: 39823

OFFICE: NEWCASTLE

APPROVED BY:

DATE:

DRAWING No: 1