Material Test Report

Report Number: GSSW1852-1
Issue Number: 1
Date Issued: 20/04/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15342
Date Sampled: 18/04/2023
Dates Tested: 18/04/2023 - 19/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1123-1131
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: WLRB4 Excavation (onsite)

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Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	1852-S1	1852-S2	1852-S3	1852-S4
Date Tested	18/04/2023	18/04/2023	18/04/2023	18/04/2023
Time Tested	14:45	14:55	15:14	15:25
Test Request #/Location	Lot #1131 refer to markup	Lot #1128 refer to markup	Lot #1126 refer to markup	Lot #1123 refer to markup
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	200	200	200	200
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.91	1.90	1.93	1.84
Field Moisture Content %	26.6	21.9	27.2	21.2
Field Dry Density (FDD) t/m^3	1.51	1.56	1.52	1.52
Peak Converted Wet Density t/m^3	1.83	1.91	1.84	1.84
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	2.0	-0.5	2.0	2.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**104.5**	**99.5**	**104.5**	**100.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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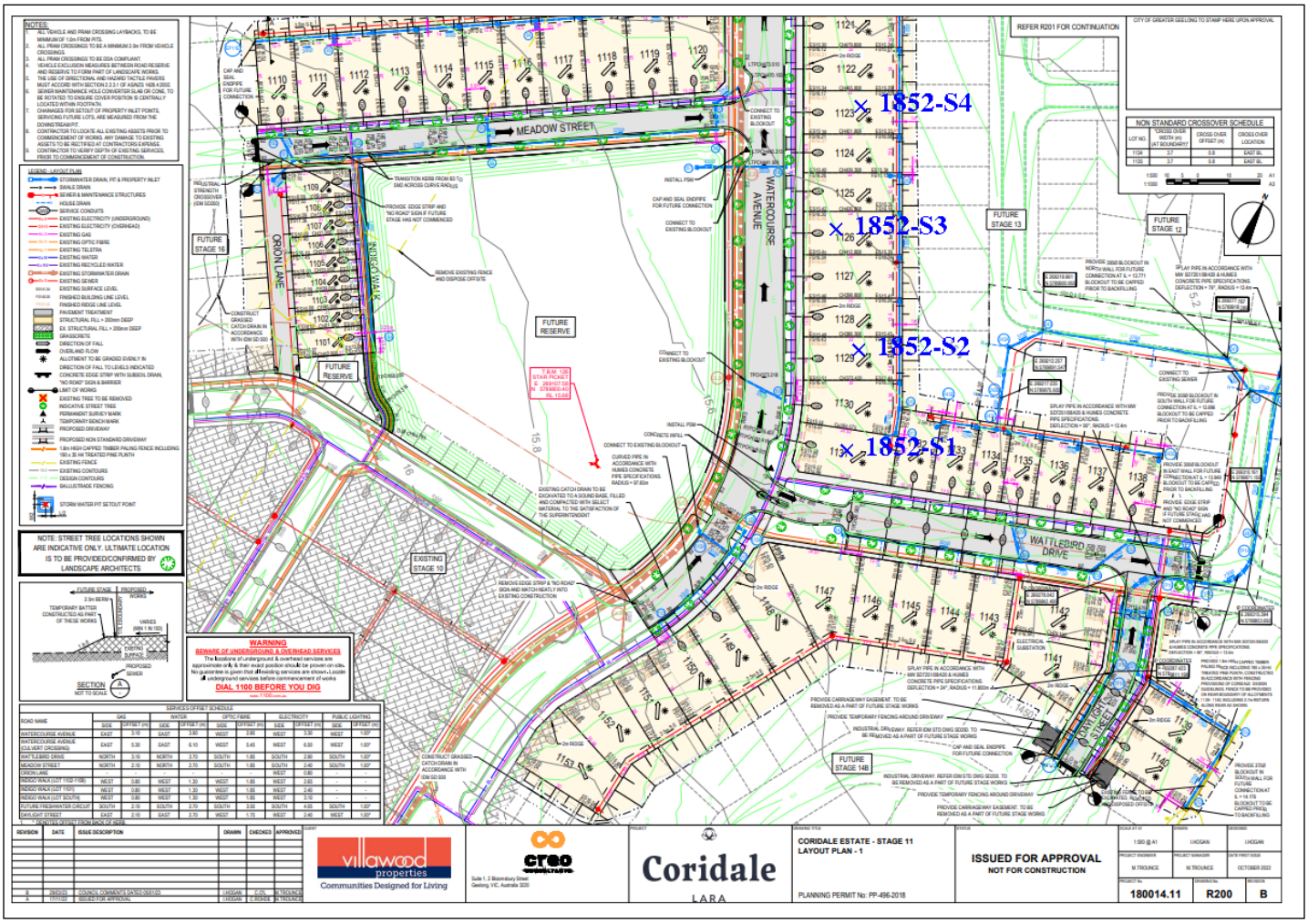

Material Test Report

Report Number: GSSW1852-2
Issue Number: 1
Date Issued: 21/04/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15371
Date Sampled: 19/04/2023
Dates Tested: 19/04/2023 - 20/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Material: CLAY, trace sand and gravel, medium to high Plasticity
Material Source: Site Won Fill

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Geotechnical & Environmental Consultants

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10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Chris Mamalis
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	1852-S5	1852-S6	1852-S7	1852-S8	1852-S9	1852-S10
Date Tested	19/04/2023	19/04/2023	19/04/2023	19/04/2023	19/04/2023	19/04/2023
Time Tested	14:46	14:55	15:22	15:32	15:52	16:06
Test Request #/Location	Lot 1142 Refer to markup	Lot 1150 Refer to markup	Lot 1130 Refer to markup	Lot 1122 Refer to markup	Lot 1133 Refer to markup	Lot 1137 Refer to markup
Layer / Reduced Level	1	1	2	2	1	1
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	CLAY, trace sand and gravel, medium to high PI	CLAY, trace sand and gravel, medium to high PI	CLAY, trace sand and gravel, medium to high PI	CLAY, trace sand and gravel, medium to high PI	CLAY, trace sand and gravel, medium to high PI	CLAY, trace sand and gravel, medium to high PI
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Field Wet Density (FWD) t/m^3	1.91	1.88	1.89	1.91	1.90	1.95
Field Moisture Content %	30.6	31.0	25.4	29.7	27.5	23.0
Field Dry Density (FDD) t/m^3	1.47	1.44	1.51	1.47	1.49	1.58
Peak Converted Wet Density t/m^3	1.79	1.83	1.88	1.81	1.85	1.93
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	-0.5	-2.0	0.5	2.0	2.0	1.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**107.0**	**103.0**	**100.5**	**105.5**	**103.0**	**101.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
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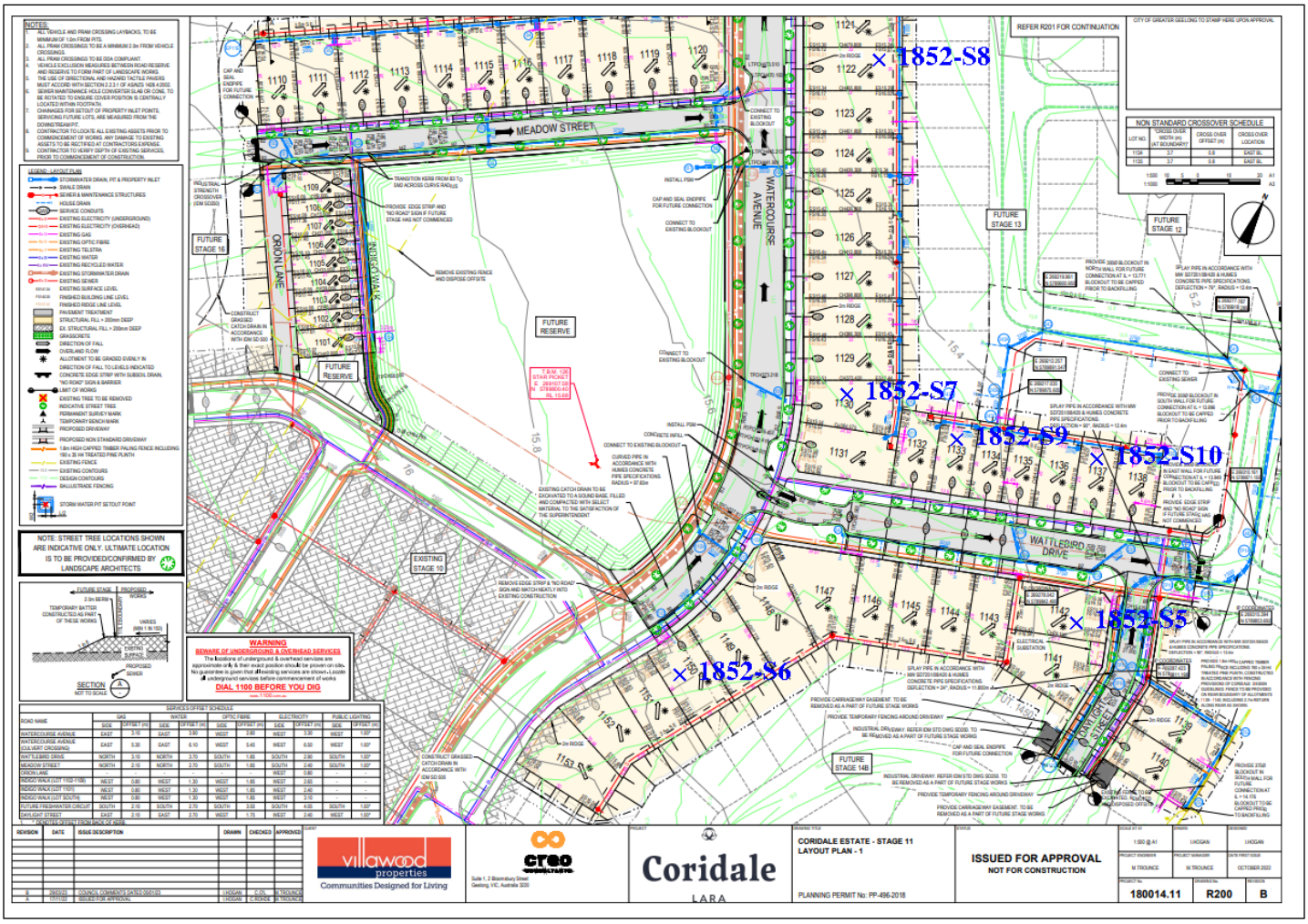

Material Test Report

Report Number: GSSW1852-3
Issue Number: 1
Date Issued: 21/04/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15391
Date Sampled: 20/04/2023
Dates Tested: 20/04/2023 - 21/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1122-1152
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: Insitu

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Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	1852-S11	1852-S12	1852-S13	1852-S14
Date Tested	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Tested	15:04	15:16	15:23	15:30
Test Request #/Location	Lot #1152 refer to markup	Lot #1143 refer to markup	Lot #1140 refer to markup	Lot #1134 refer to markup
Layer / Reduced Level	Layer 2	Layer 2	Layer 1	Layer 2
Thickness of Layer (mm)	300	300	300	300
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	**	0
Field Wet Density (FWD) t/m^3	1.85	1.89	1.88	1.87
Field Moisture Content %	30.5	25.5	30.7	28.6
Field Dry Density (FDD) t/m^3	1.42	1.51	1.44	1.46
Peak Converted Wet Density t/m^3	1.88	1.93	1.78	1.82
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	-1.0	0.0	2.0	1.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**98.0**	**97.5**	**105.0**	**102.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Report Number: GSSW1852-3
Issue Number: 1
Date Issued: 21/04/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15391
Date Sampled: 20/04/2023
Dates Tested: 20/04/2023 - 21/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1122-1152
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: Insitu

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	1852-S15	1852-S16	1852-S17	
Date Tested	20/04/2023	20/04/2023	20/04/2023	
Time Tested	15:36	15:41	15:48	
Test Request #/Location	Lot #1137 refer to markup	Lot #1130 refer to markup	Lot #1122 refer to markup	
Layer / Reduced Level	Layer 1	Layer 3	Layer 3	
Thickness of Layer (mm)	300	300	300	
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	
Test Depth (mm)	275	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	0	**	**	
Field Wet Density (FWD) t/m^3	1.89	1.91	1.89	
Field Moisture Content %	27.4	30.1	24.9	
Field Dry Density (FDD) t/m^3	1.48	1.47	1.51	
Peak Converted Wet Density t/m^3	1.82	1.87	1.83	
Adjusted Peak Converted Wet Density t/m^3	**	**	**	
Moisture Variation (Wv) %	0.0	-0.5	1.5	
Adjusted Moisture Variation %	**	**	**	
Hilf Density Ratio (%)	**104.0**	**102.0**	**103.0**	
Compaction Method	**Standard**	**Standard**	**Standard**	
Report Remarks	**	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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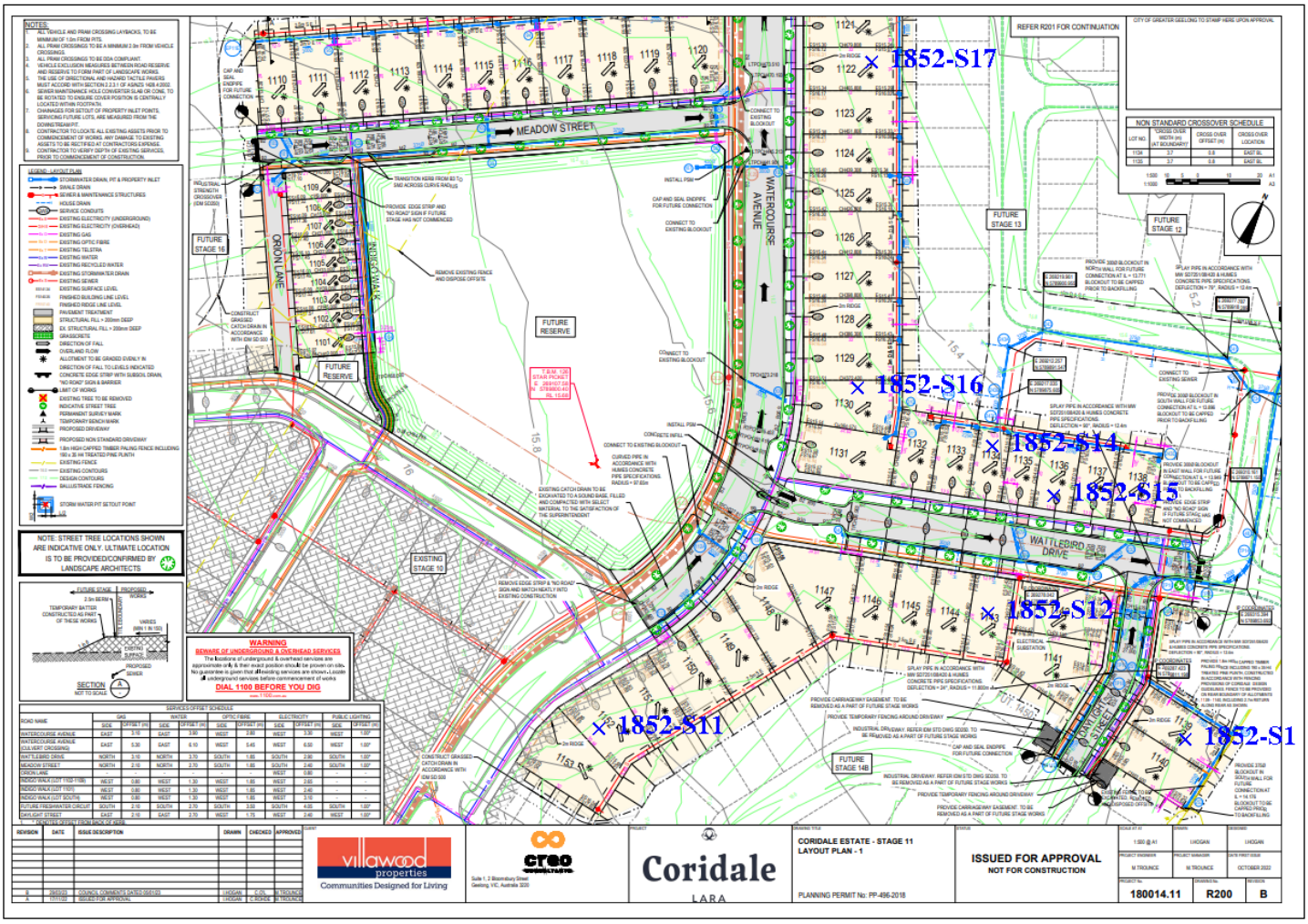

Material Test Report

Report Number: GSSW1852-4
Issue Number: 1
Date Issued: 26/04/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15413
Date Sampled: 21/04/2023
Dates Tested: 21/04/2023 - 26/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1121-1153
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: WLRB4 Excavation

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	1852-S18	1852-S19	1852-S20	1852-S21	1852-S22
Date Tested	21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Tested	14:15	14:26	14:44	14:55	15:34
Test Request #/Location	Lot #1151 refer to markup	Lot #1144 refer to markup	Lot #1140 refer to markup	Lot #1135 refer to markup	Lot #1126 refer to markup
Layer / Reduced Level	Layer 3	Layer 3	Layer 2	Layer 2	Layer 4
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0
Field Wet Density (FWD) t/m^3	1.98	1.89	1.88	1.89	1.92
Field Moisture Content %	21.9	24.9	25.8	26.5	31.1
Field Dry Density (FDD) t/m^3	1.63	1.51	1.50	1.49	1.46
Peak Converted Wet Density t/m^3	1.87	1.85	1.83	1.81	1.88
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.5	2.0	-0.5	2.0	-0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**106.5**	**102.5**	**103.0**	**104.0**	**102.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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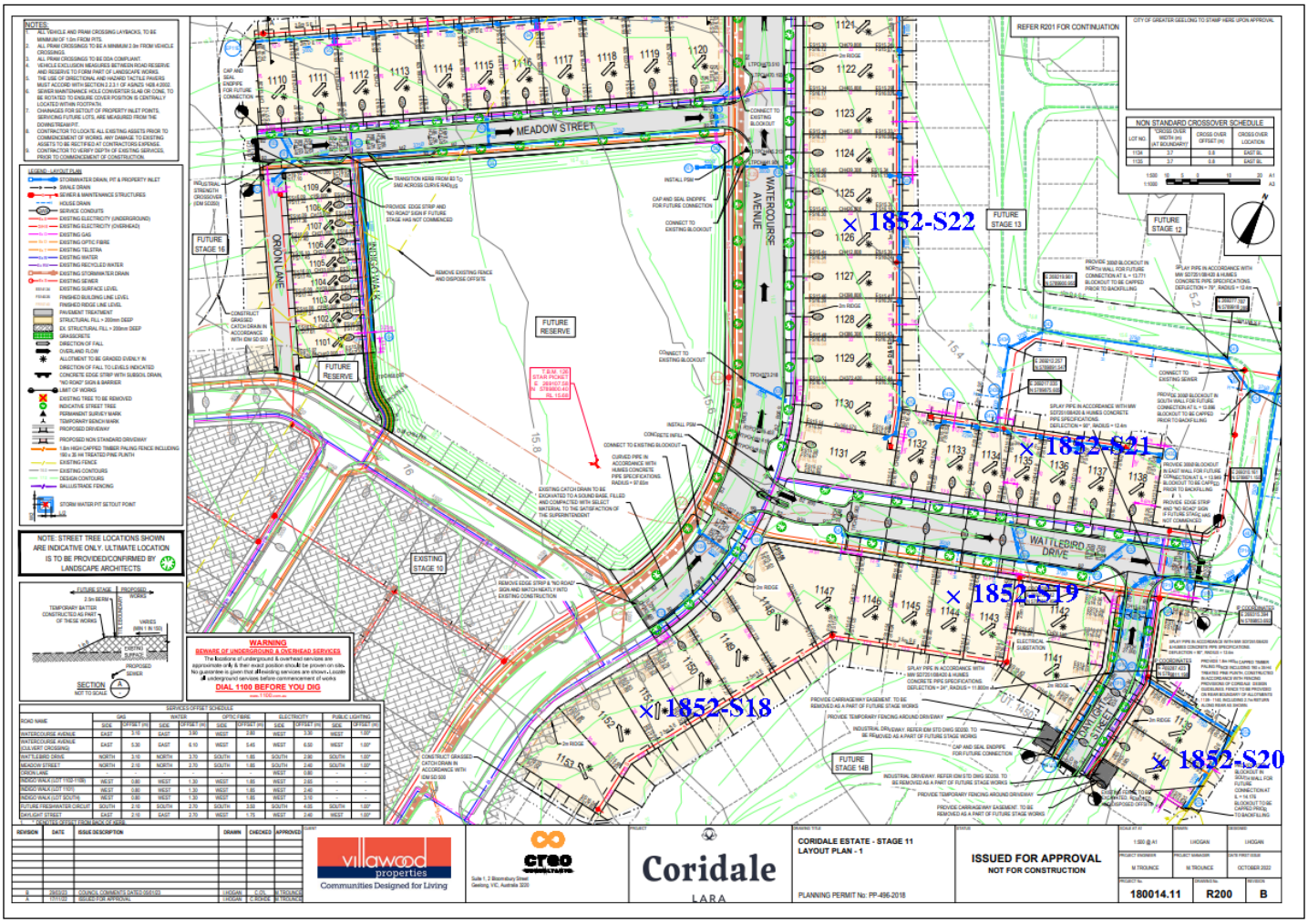

Material Test Report

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Report Number: **GSSW1852-5**
Issue Number: 1
Date Issued: 28/04/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15465
Date Sampled: 26/04/2023
Dates Tested: 26/04/2023 - 28/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1132-1149
Material: silty CLAY, trace sand and gravel, medium to high plasticity
Material Source: WLRB4 Excavation

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	1852-S23	1852-S24	1852-S25	1852-S26
Date Tested	26/04/2023	26/04/2023	26/04/2023	26/04/2023
Time Tested	13:56	14:07	14:23	15:41
Test Request #/Location	Lot 1143 refer to markup	Lot 1139 refer to markup	Lot 1135 refer to markup	Lot 1149 refer to markup
Layer / Reduced Level	Layer 4	Layer 3	Layer 4	Layer 4
Thickness of Layer (mm)	300	300	300	300
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.94	1.92	1.94	1.90
Field Moisture Content %	30.5	24.6	32.0	32.0
Field Dry Density (FDD) t/m^3	1.49	1.54	1.47	1.44
Peak Converted Wet Density t/m^3	1.80	1.90	1.85	1.92
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	-0.5	0.5	0.5	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**107.5**	**101.0**	**104.5**	**98.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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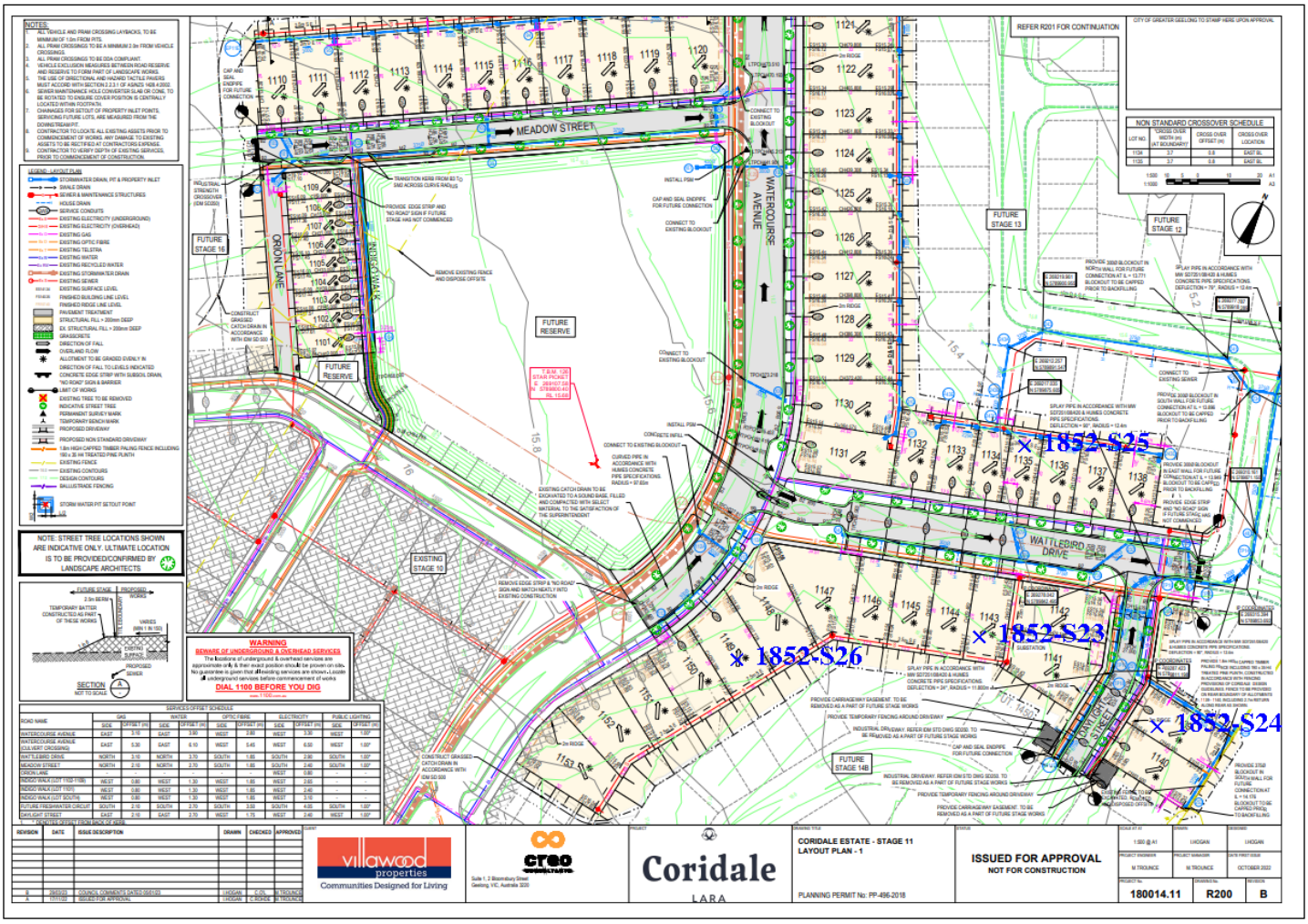

Material Test Report

Report Number: GSSW1852-6
Issue Number: 1
Date Issued: 01/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15484
Date Sampled: 27/04/2023
Dates Tested: 27/04/2023 - 01/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1130, 1123 & 1135
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: WLRB4 Excavation

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

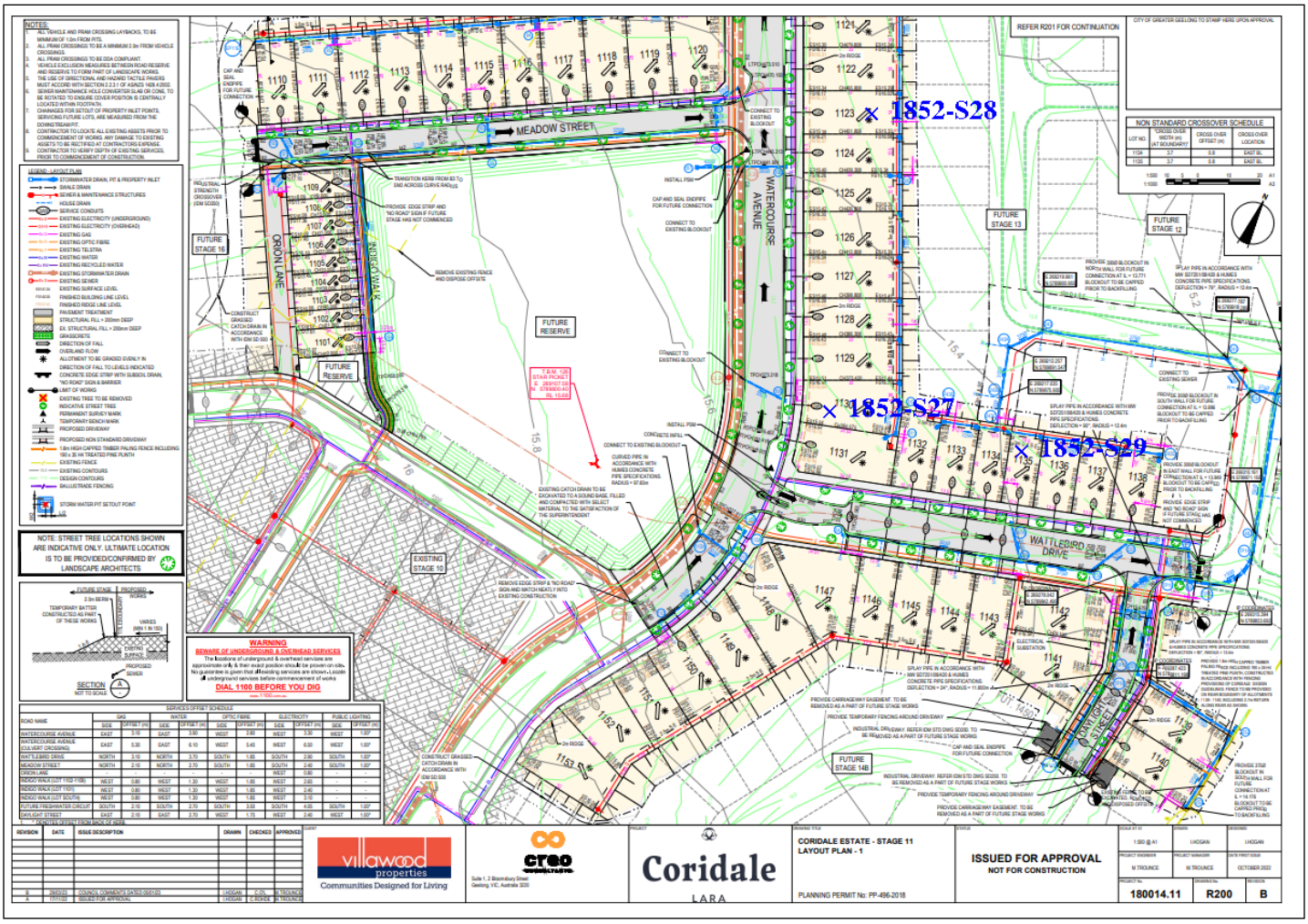
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S27	1852-S28	1852-S29
Date Tested	27/04/2023	27/04/2023	27/04/2023
Time Tested	14:47	14:59	15:12
Test Request #/Location	Lot 1130 refer to markup	Lot 1123 refer to markup	Lot 1135 refer to markup
Layer / Reduced Level	Layer 5	Layer 5	Layer 5
Thickness of Layer (mm)	300	300	300
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.93	1.96	1.96
Field Moisture Content %	28.8	34.2	31.7
Field Dry Density (FDD) t/m^3	1.50	1.46	1.49
Peak Converted Wet Density t/m^3	1.90	1.89	1.91
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-2.0	-2.5	-2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**101.5**	**103.5**	**103.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Report Number: **GSSW1852-7**
Issue Number: 1
Date Issued: 03/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15496
Date Sampled: 28/04/2023
Dates Tested: 28/04/2023 - 02/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1141, 1145 & 1151
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: WLRB 4 excavation

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

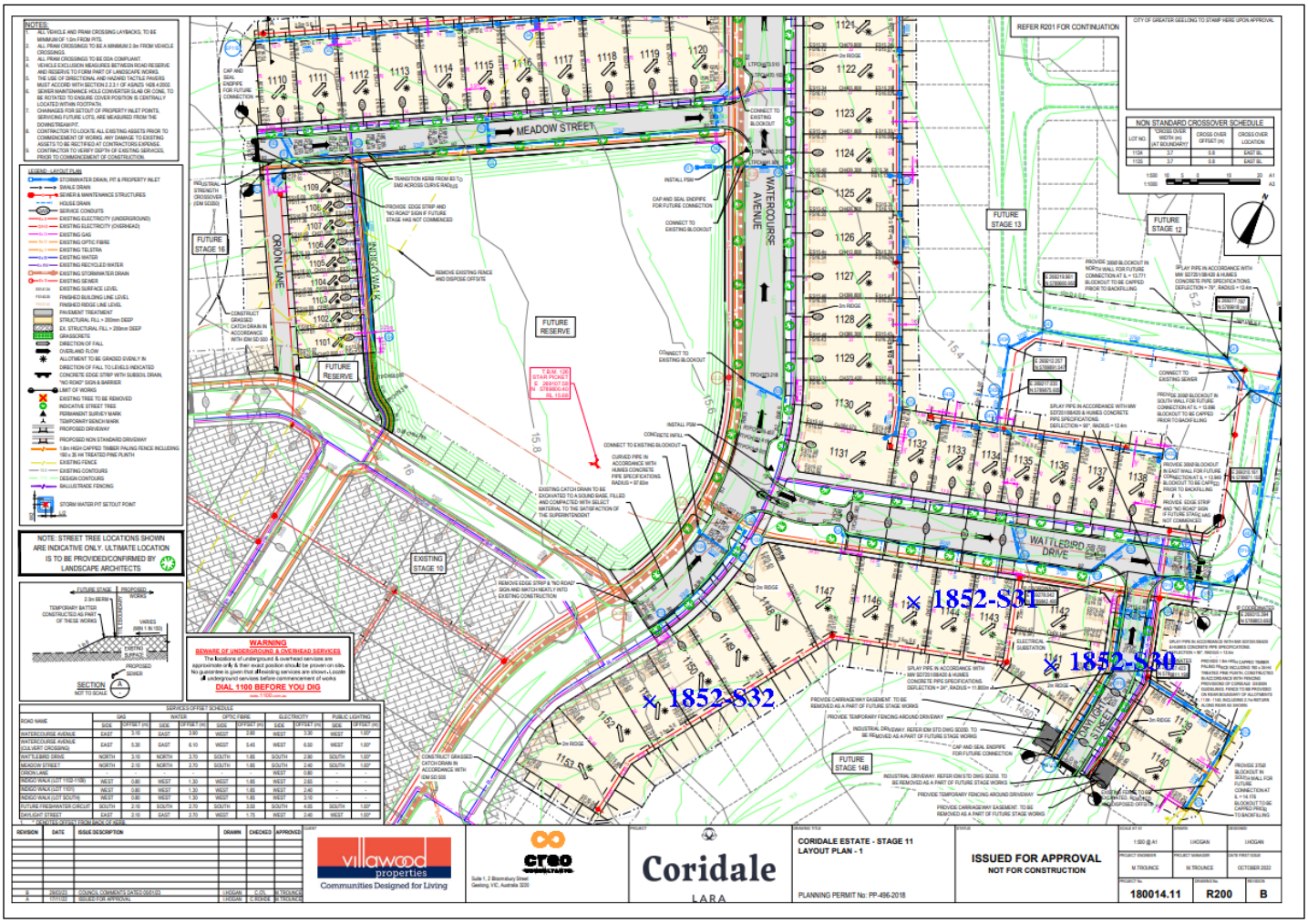
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S30	1852-S31	1852-S32
Date Tested	28/04/2023	28/04/2023	28/04/2023
Time Tested	15:00	15:10	15:20
Test Request #/Location	Lot 1141 refer to markup	Lot 1145 refer to markup	Lot 1151 refer to markup
Layer / Reduced Level	Layer 5	Layer 5	Layer 5
Thickness of Layer (mm)	300	300	300
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.94	1.98	1.93
Field Moisture Content %	24.8	26.3	25.6
Field Dry Density (FDD) t/m^3	1.56	1.57	1.54
Peak Converted Wet Density t/m^3	1.96	1.85	1.84
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	0.5	2.5	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**99.0**	**107.0**	**105.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Report Number: **GSSW1852-8**
Issue Number: 1
Date Issued: 03/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15533
Date Sampled: 01/05/2023
Dates Tested: 01/05/2023 - 03/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1150, 1129 & 1122
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: WLRB4 Excavation

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S33	1852-S34	1852-S35
Date Tested	01/05/2023	01/05/2023	01/05/2023
Time Tested	16:10	16:22	16:34
Test Request #/Location	Lot 1150 refer to markup	Lot 1129 refer to markup	Lot 1122 refer to markup
Layer / Reduced Level	2	6	6
Thickness of Layer (mm)	300	300	300
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.96	1.94	1.95
Field Moisture Content %	29.9	26.9	26.1
Field Dry Density (FDD) t/m^3	1.51	1.52	1.55
Peak Converted Wet Density t/m^3	1.85	1.89	1.85
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	0.0	-1.0	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**105.5**	**102.0**	**105.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
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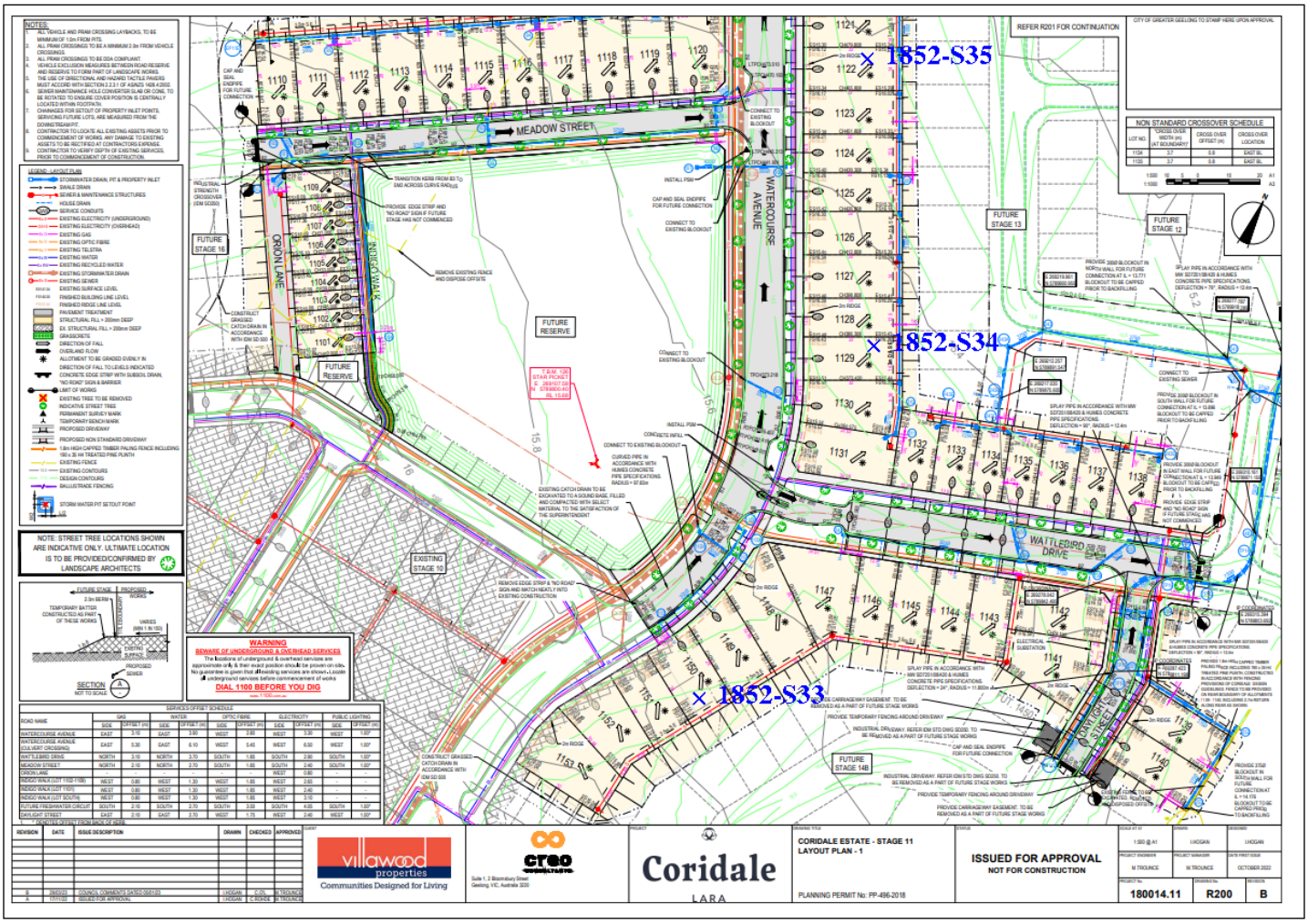

Material Test Report

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Report Number: **GSSW1852-9**
Issue Number: 1
Date Issued: 04/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15573
Date Sampled: 02/05/2023
Dates Tested: 02/05/2023 - 03/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1117, 1116 & 1118
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: On site

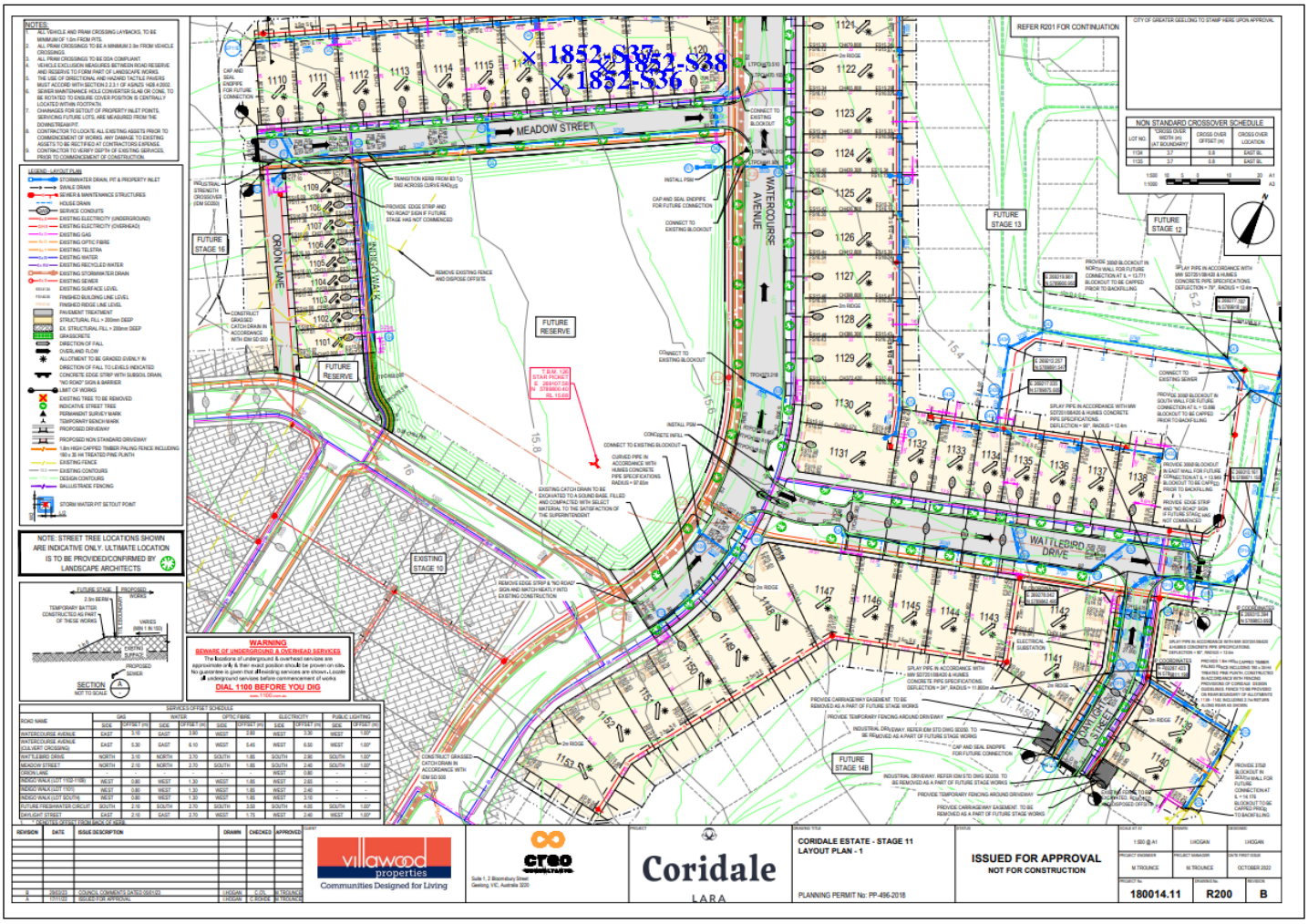
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S36	1852-S37	1852-S38
Date Tested	02/05/2023	02/05/2023	02/05/2023
Time Tested	13:19	13:35	16:28
Test Request #/Location	Lot 1117 refer to markup	Lot 1116 refer to markup	Lot 1118 refer to markup
Layer / Reduced Level	2	1	3
Thickness of Layer (mm)	300	300	300
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.91	1.92	1.99
Field Moisture Content %	24.8	25.3	24.4
Field Dry Density (FDD) t/m^3	1.53	1.54	1.60
Peak Converted Wet Density t/m^3	1.86	1.86	1.94
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	2.0	2.0	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**102.5**	**103.5**	**102.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Report Number: GSSW1852-10
Issue Number: 1
Date Issued: 08/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15590
Date Sampled: 04/05/2023
Dates Tested: 04/05/2023 - 05/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1112, 1114 & 1119
Material: sandy CLAY, with gravel, high plasticity
Material Source: Site Won Fill

Ground Science South West
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Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

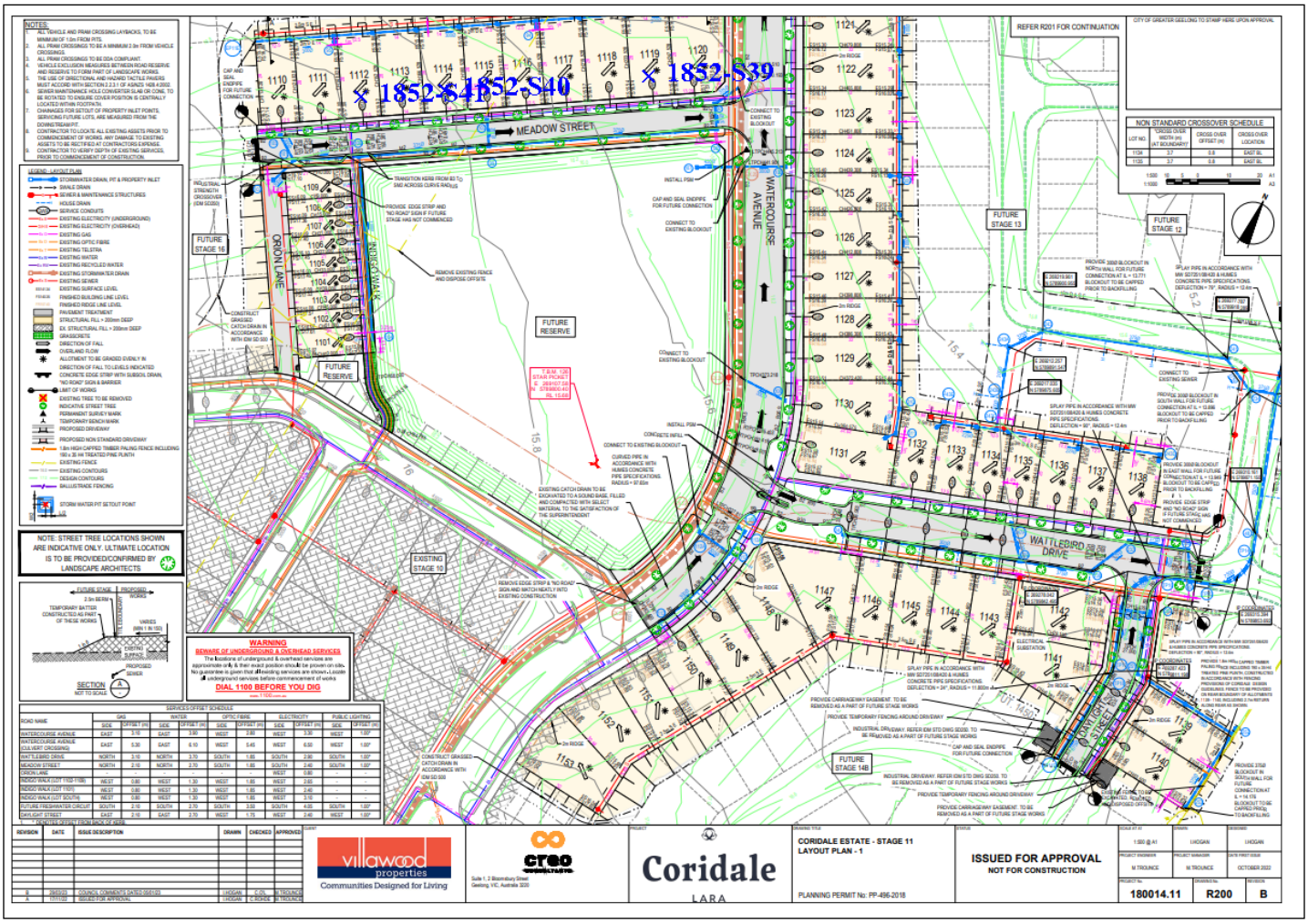
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S39	1852-S40	1852-S41
Date Tested	04/05/2023	04/05/2023	04/05/2023
Time Tested	08:39	16:05	16:19
Test Request #/Location	Lot 1119 refer to markup	Lot 1114 refer to markup	Lot 1112 refer to markup
Layer / Reduced Level	4	1	1
Thickness of Layer (mm)	300	200	200
Soil Description	sandy CLAY, with gravel, high plasticity	sandy CLAY, with gravel, high plasticity	sandy CLAY, with gravel, high plasticity
Test Depth (mm)	275	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	7	7	8
Field Wet Density (FWD) t/m^3	2.04	2.08	1.98
Field Moisture Content %	23.1	20.4	20.3
Field Dry Density (FDD) t/m^3	1.65	1.73	1.64
Peak Converted Wet Density t/m^3	**	**	**
Adjusted Peak Converted Wet Density t/m^3	1.98	2.04	2.05
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	3.0	0.0	1.0
Hilf Density Ratio (%)	**102.5**	**102.0**	**96.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Report Number: GSSW1852-11
Issue Number: 1
Date Issued: 08/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15606
Date Sampled: 05/05/2023
Dates Tested: 05/05/2023 - 08/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1112, 1114 & 1116
Material: silty CLAY, trace sand and gravel, medium to high Plasticity
Material Source: On site

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

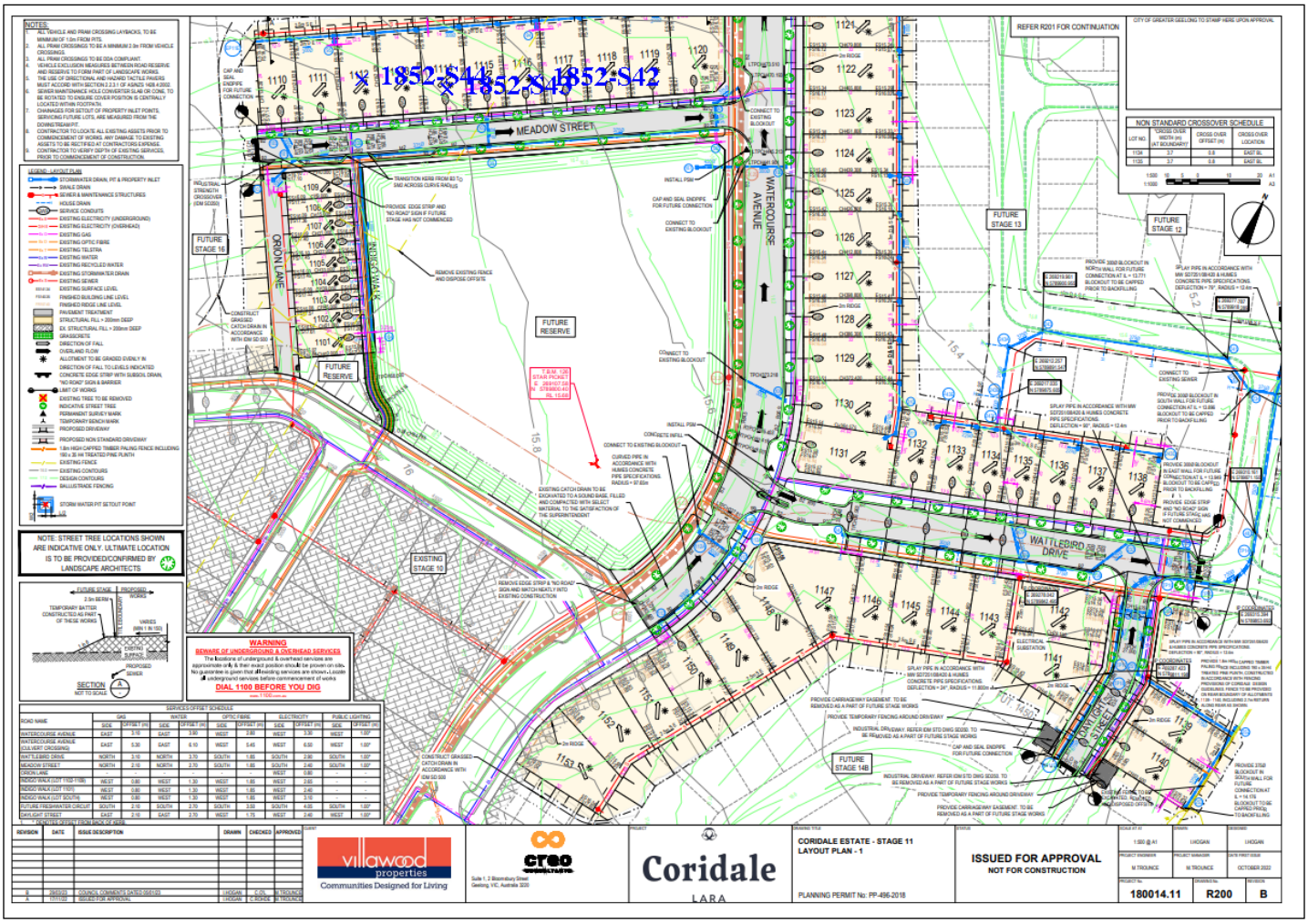
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S42	1852-S43	1852-S44
Date Tested	05/05/2023	05/05/2023	05/05/2023
Time Tested	15:11	15:21	15:35
Test Request #/Location	Lot 1116 refer to markup	Lot 1114 refer to markup	Lot 1112 refer to markup
Layer / Reduced Level	4	2	2
Thickness of Layer (mm)	300	300	300
Soil Description	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity	silty CLAY, trace sand and gravel, medium to high Plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	**
Field Wet Density (FWD) t/m^3	1.90	1.94	1.96
Field Moisture Content %	24.6	23.5	27.5
Field Dry Density (FDD) t/m^3	1.53	1.57	1.53
Peak Converted Wet Density t/m^3	1.93	1.94	1.90
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**99.0**	**100.0**	**103.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Report Number: GSSW1852-12
Issue Number: 1
Date Issued: 10/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15632
Date Sampled: 03/05/2023
Dates Tested: 09/05/2023 - 10/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1114, 1113, 1112
Material: Gravelly CLAY, with sand, medium to high plasticity
Material Source: Site Won Fill

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

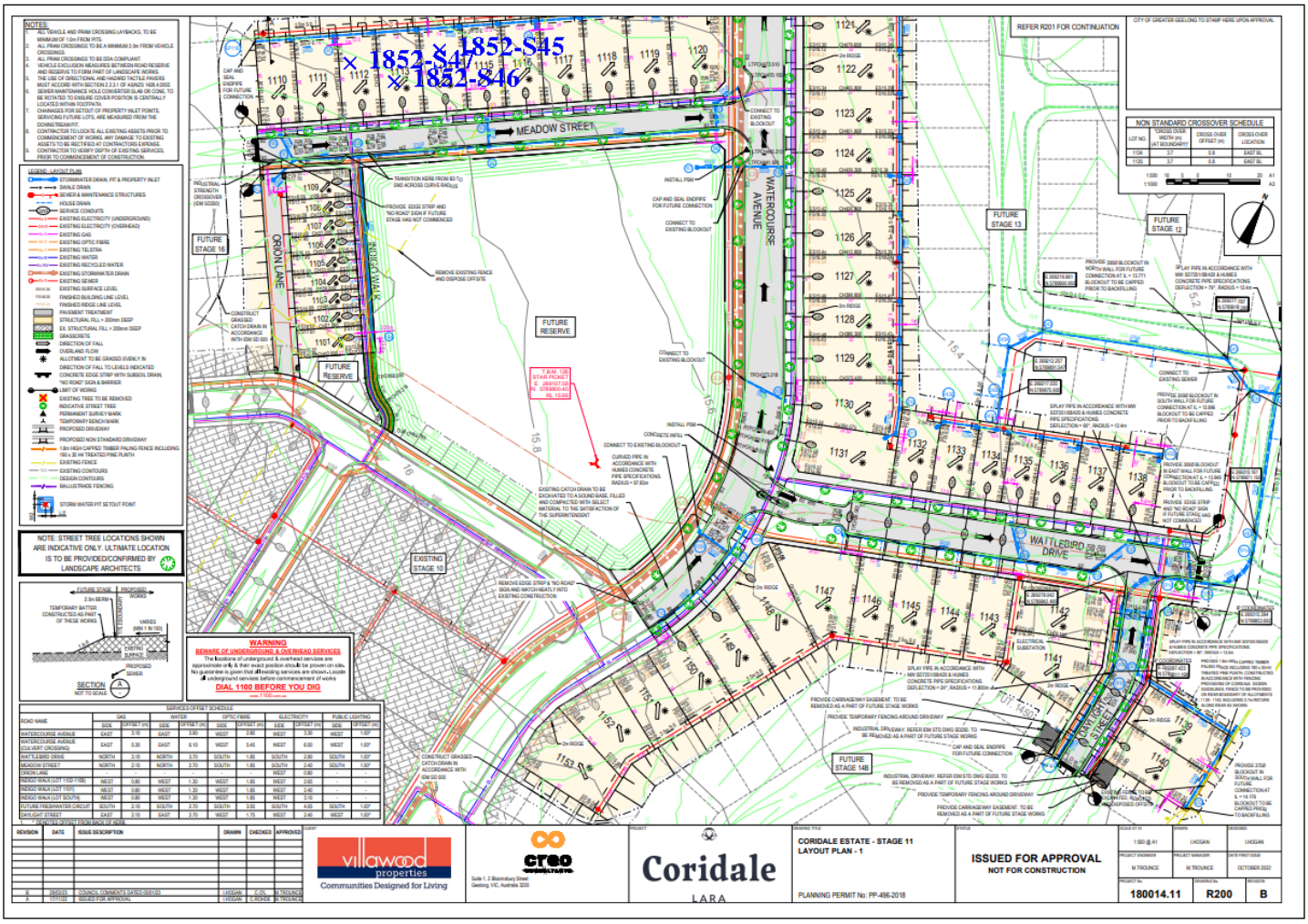
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S45	1852-S46	1852-S47
Date Tested	09/05/2023	09/05/2023	09/05/2023
Time Tested	15:45	15:53	16:08
Test Request #/Location	Lot 1114 refer to markup	Lot 1113 refer to markup	Lot 1112 refer to markup
Layer / Reduced Level	3	3	3
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.96	1.95	2.04
Field Moisture Content %	21.6	26.4	25.5
Field Dry Density (FDD) t/m^3	1.61	1.55	1.63
Peak Converted Wet Density t/m^3	1.95	2.00	2.03
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-0.5	0.0	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**100.5**	**97.5**	**100.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Report Number: GSSW1852-13
Issue Number: 1
Date Issued: 15/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15662
Date Sampled: 11/05/2023
Dates Tested: 11/05/2023 - 12/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1101, 1104 & 1108
Material: Gravelly CLAY, with sand, medium to high plasticity
Material Source: On site

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

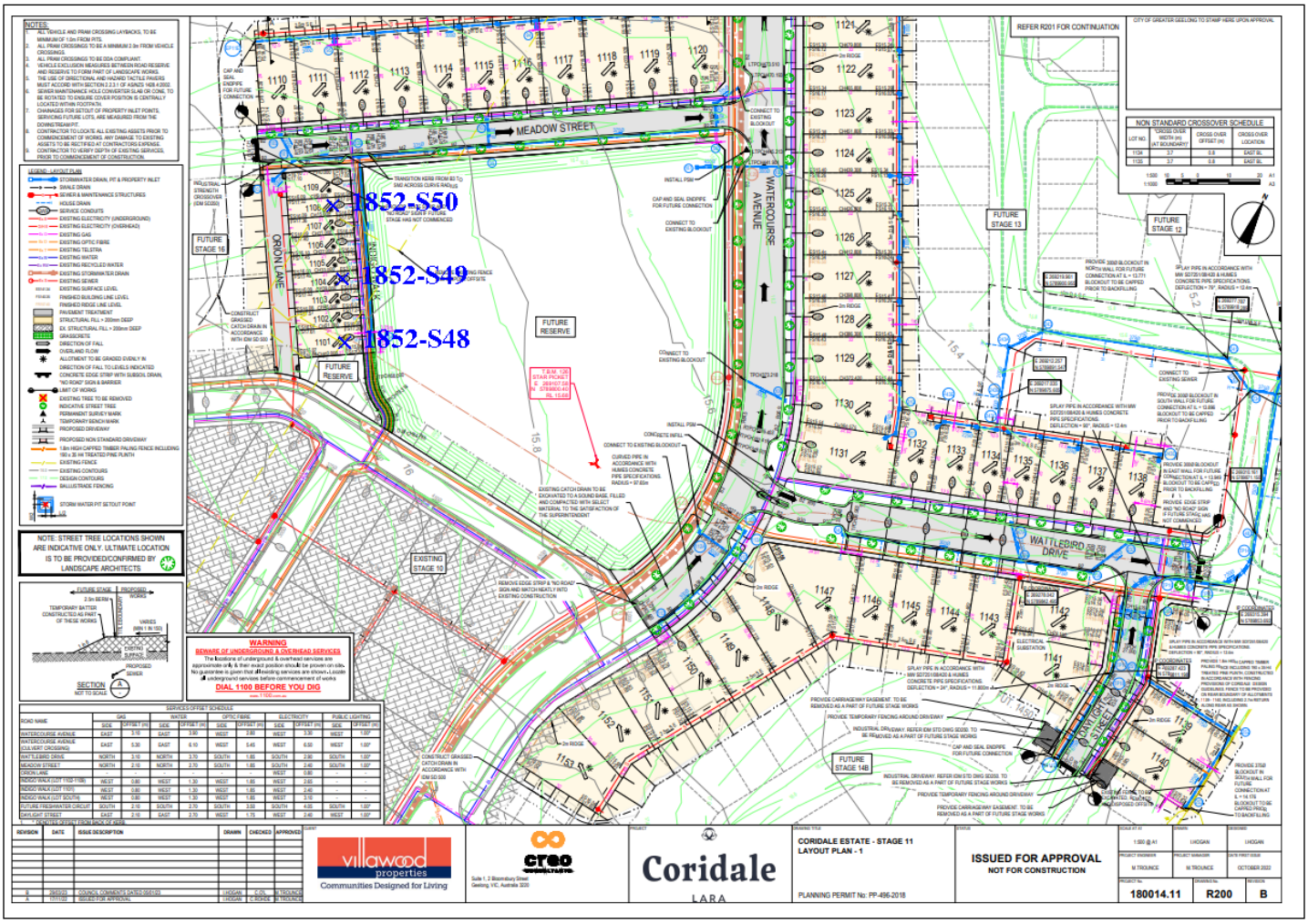
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S48	1852-S49	1852-S50
Date Tested	11/05/2023	11/05/2023	11/05/2023
Time Tested	16:02	16:15	16:33
Test Request #/Location	Lot 1101 refer to markup	Lot 1104 refer to markup	Lot 1108 refer to markup
Layer / Reduced Level	1	1	1
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	6	7	15
Field Wet Density (FWD) t/m^3	2.03	1.96	1.98
Field Moisture Content %	21.9	21.6	22.7
Field Dry Density (FDD) t/m^3	1.66	1.61	1.62
Peak Converted Wet Density t/m^3	**	**	**
Adjusted Peak Converted Wet Density t/m^3	2.08	2.06	2.05
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	0.0	0.5	0.0
Hilf Density Ratio (%)	**97.5**	**95.0**	**96.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Report Number: GSSW1852-14
Issue Number: 1
Date Issued: 16/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15668
Date Sampled: 12/05/2023
Dates Tested: 12/05/2023 - 15/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lot 1101, 1106 ,1111
Material: Gravelly CLAY, with sand, medium to high plasticity
Material Source: On site

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

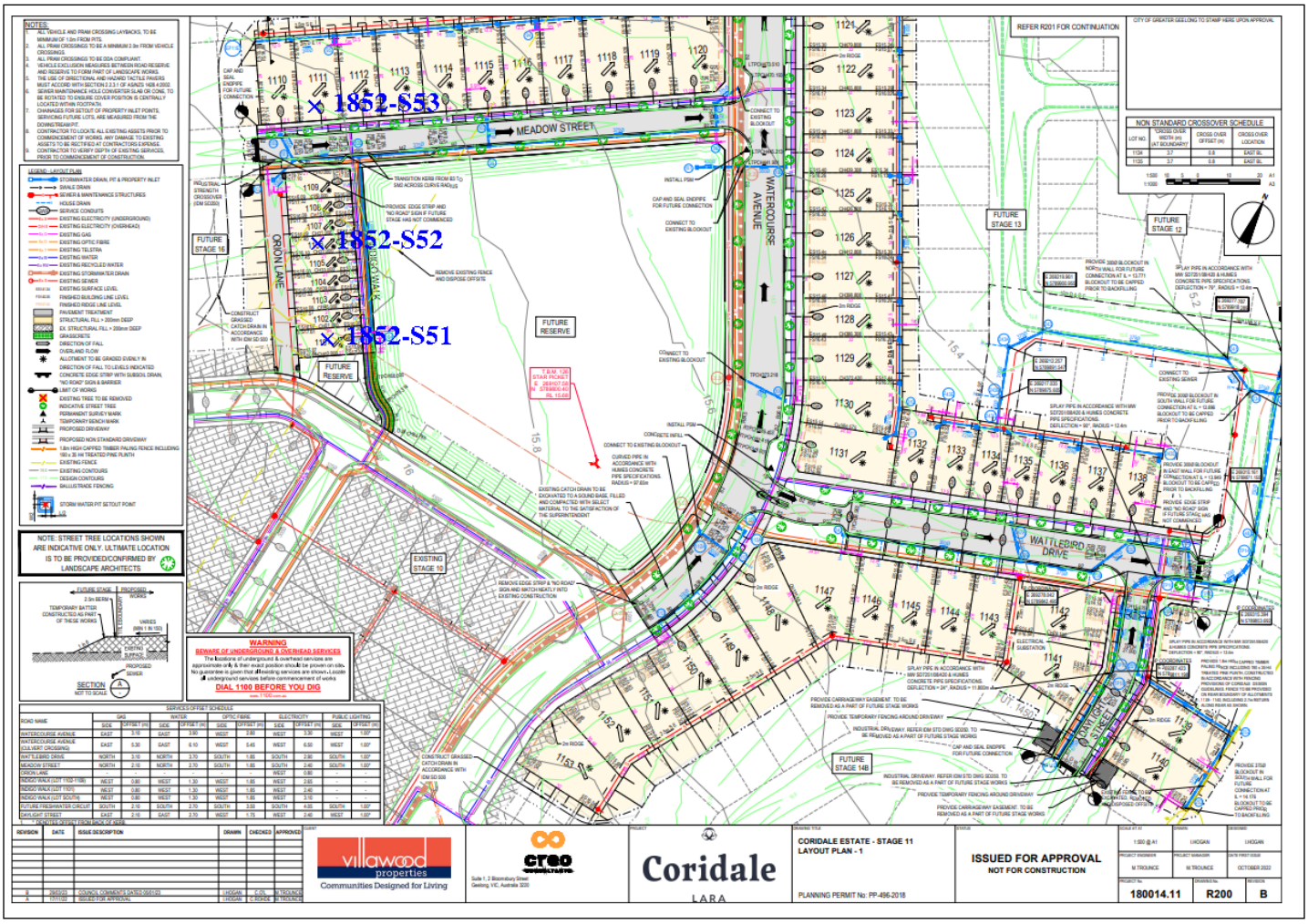
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S51	1852-S52	1852-S53
Date Tested	12/05/2023	12/05/2023	12/05/2023
Time Tested	15:58	16:10	16:21
Test Request #/Location	Lot 1102 refer to markup	Lot 1106 refer to markup	Lot 1111 refer to markup
Layer / Reduced Level	1	1	2
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	4	10	0
Field Wet Density (FWD) t/m^3	2.04	2.03	1.94
Field Moisture Content %	24.5	24.9	25.4
Field Dry Density (FDD) t/m^3	1.64	1.63	1.55
Peak Converted Wet Density t/m^3	**	**	1.91
Adjusted Peak Converted Wet Density t/m^3	2.00	2.02	**
Moisture Variation (Wv) %	**	**	1.5
Adjusted Moisture Variation %	-1.0	-0.5	**
Hilf Density Ratio (%)	**102.0**	**100.5**	**101.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Report Number: GSSW1852-15
Issue Number: 1
Date Issued: 26/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15795
Date Sampled: 25/05/2023
Dates Tested: 25/05/2023 - 26/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Material: CLAY, with gravel & sand, high plasticity.
Material Source: Site Won Fill

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Chris Mamalis
Laboratory Manager
NATA Accredited Laboratory Number: 20109

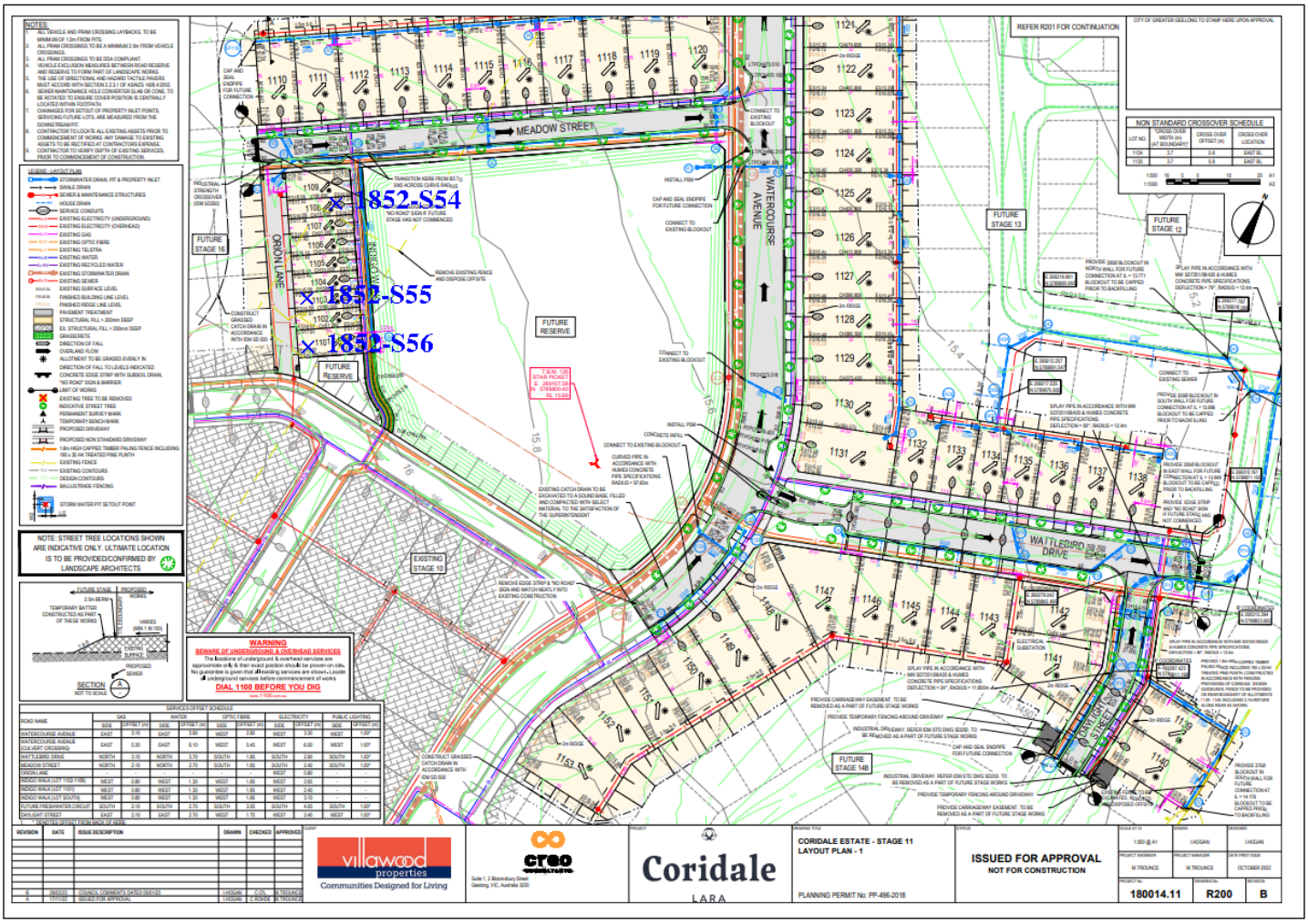
Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S54	1852-S55	1852-S56
Date Tested	25/05/2023	25/05/2023	25/05/2023
Time Tested	13:00	15:48	15:58
Test Request #/Location	Lot 1108 - See attached Plan	Lot 1103 - See attached Plan	Lot 1101 - See attached Plan
Layer / Reduced Level	2	3	3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY, with gravel & sand, m - h Pl	CLAY, with gravel & sand, m - h Pl	CLAY, with gravel & sand, m - h Pl
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	2.10	1.95	1.96
Field Moisture Content %	15.9	26.1	20.6
Field Dry Density (FDD) t/m^3	1.81	1.55	1.62
Peak Converted Wet Density t/m^3	2.01	1.93	1.90
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	3.0	-0.5	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**104.0**	**101.0**	**103.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants



Material Test Report

Report Number: GSSW1852-16
Issue Number: 1
Date Issued: 29/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15814
Date Sampled: 26/05/2023
Dates Tested: 26/05/2023 - 29/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Lot Number: Lot 1102, 1107, 1110
Material: CLAY, with sand, trace gravel, high plasticity
Material Source: Site Won Fill

Ground Science South West
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Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Chris Mamalis
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S57	1852-S58	1852-S59
Date Tested	26/05/2023	26/05/2023	26/05/2023
Time Tested	15:25	15:34	15:46
Test Request #/Location	Lot 1102 - See attached plan	Lot 1107 - See attached plan	Lot 1110 - See attached plan
Layer / Reduced Level	4	4	3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY, with sand, trace gravel, high plasticity	CLAY, with sand, trace gravel, high plasticity	CLAY, with sand, trace gravel, high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.98	1.99	2.03
Field Moisture Content %	21.4	22.8	22.4
Field Dry Density (FDD) t/m^3	1.63	1.62	1.66
Peak Converted Wet Density t/m^3	1.96	1.99	1.94
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**101.0**	**100.0**	**105.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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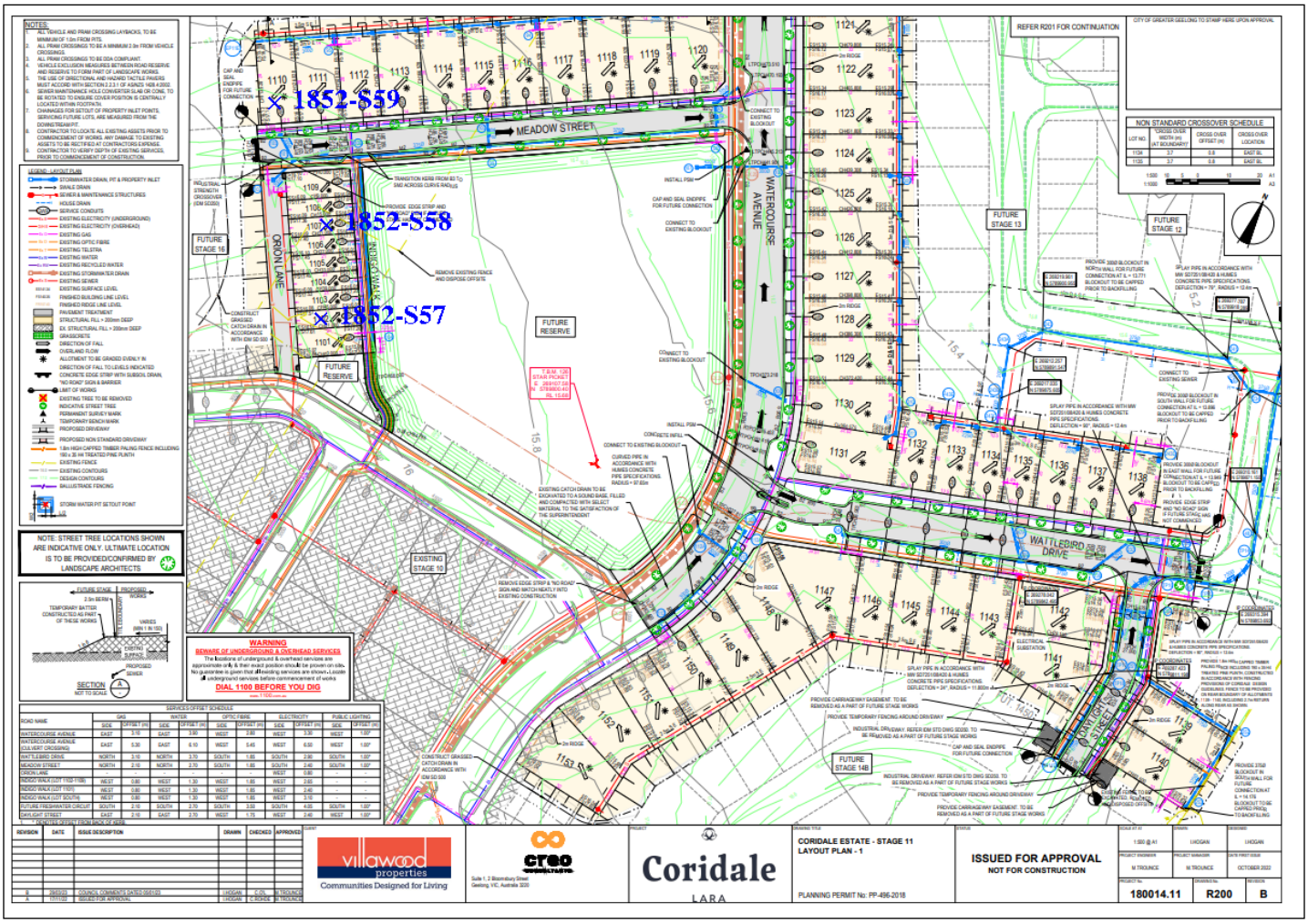
Geotechnical & Environmental Consultants



Material Test Report

Report Number: **GSSW1852-17**
Issue Number: 1
Date Issued: 31/05/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15823
Date Sampled: 29/05/2023
Dates Tested: 29/05/2023 - 30/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1101, 1105, 1110
Material: CLAY, with sand, trace gravel, medium to high plasticity
Material Source: Site Won Fill

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S60	1852-S61	1852-S62
Date Tested	29/05/2023	29/05/2023	29/05/2023
Time Tested	16:02	16:13	16:22
Test Request #/Location	Lot 1101 refer to markup	Lot 1105 refer to markup	Lot 1110 refer to markup
Layer / Reduced Level	5	5	4
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY, with sand, trace gravel, high plasticity	CLAY, with sand, trace gravel, high plasticity	CLAY, with sand, trace gravel, high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	4	0	2
Field Wet Density (FWD) t/m^3	1.99	1.96	1.98
Field Moisture Content %	26.9	25.5	25.1
Field Dry Density (FDD) t/m^3	1.57	1.56	1.59
Peak Converted Wet Density t/m^3	**	1.99	**
Adjusted Peak Converted Wet Density t/m^3	2.03	**	1.99
Moisture Variation (Wv) %	**	-1.5	**
Adjusted Moisture Variation %	-1.5	**	-2.0
Hilf Density Ratio (%)	**98.0**	**98.5**	**99.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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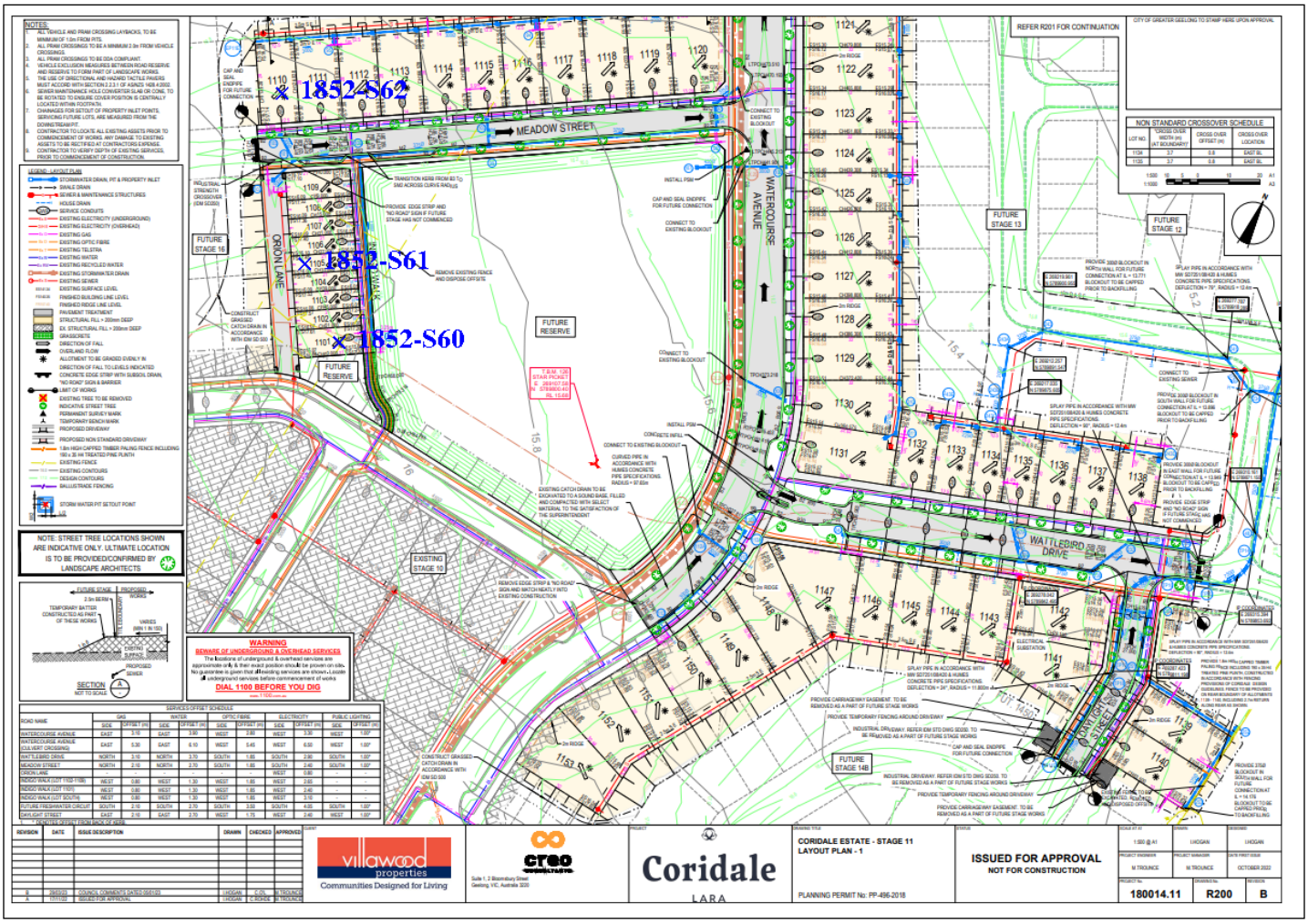
Geotechnical & Environmental Consultants



Material Test Report

Report Number: **GSSW1852-18**
Issue Number: 1
Date Issued: 01/06/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15840
Date Sampled: 30/05/2023
Dates Tested: 30/05/2023 - 31/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1101, 1106, 1111
Material: Gravelly CLAY, with sand, medium to high plasticity
Material Source: Site Won Fill

Ground Science South West
Geotechnical & Environmental Consultants

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10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S63	1852-S64	1852-S65
Date Tested	30/05/2023	30/05/2023	30/05/2023
Time Tested	16:23	16:35	16:46
Test Request #/Location	Lot 1101 refer to markup	Lot 1106 refer to markup	Lot 1111 refer to markup
Layer / Reduced Level	7	6	5
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	2.05	1.98	2.04
Field Moisture Content %	25.0	26.4	25.8
Field Dry Density (FDD) t/m^3	1.64	1.57	1.63
Peak Converted Wet Density t/m^3	1.99	1.99	1.99
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	0.0	-1.0	-1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**103.0**	**99.5**	**102.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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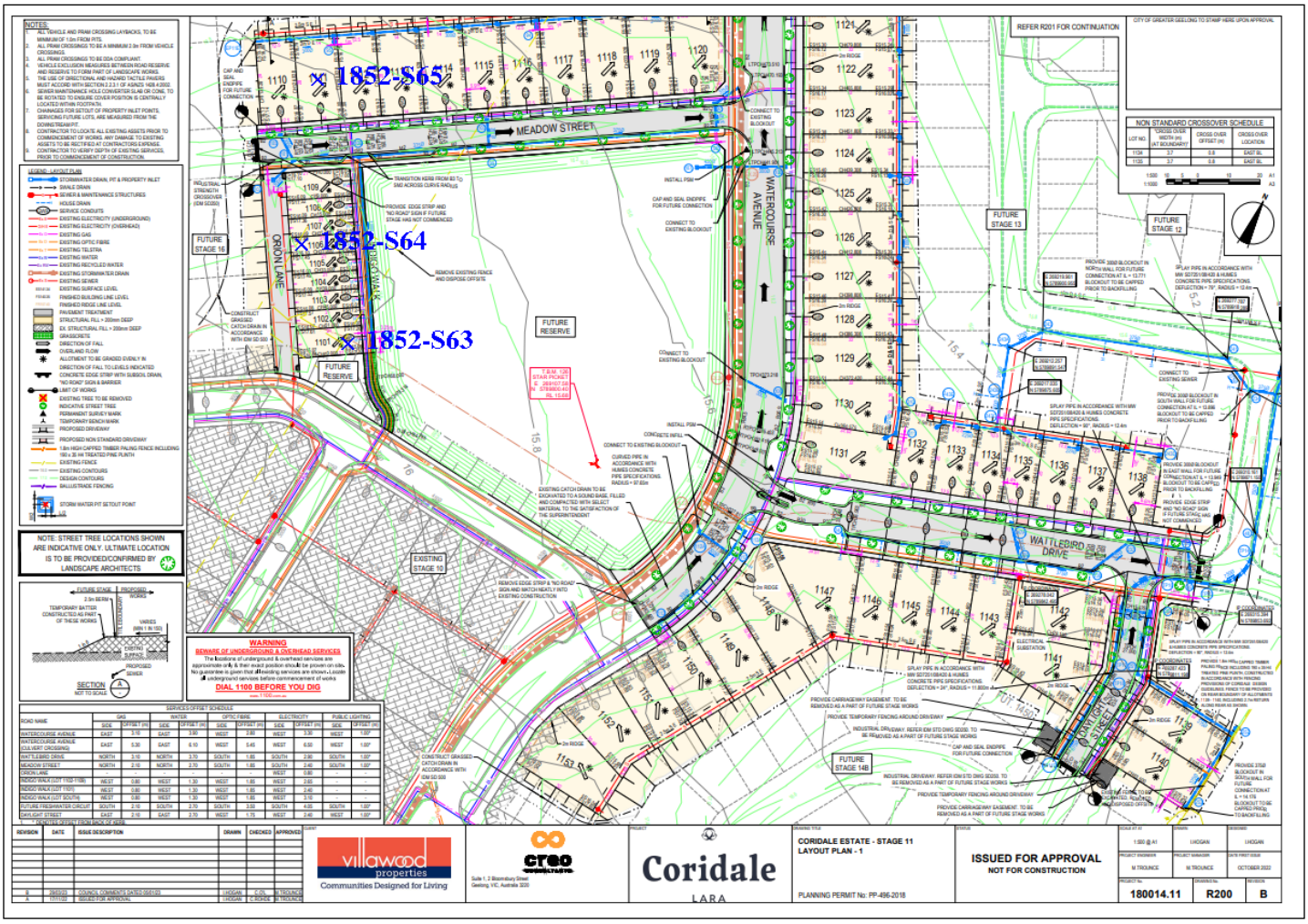

Material Test Report

Report Number: **GSSW1852-19**
Issue Number: 1
Date Issued: 02/06/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15860
Date Sampled: 31/05/2023
Dates Tested: 31/05/2023 - 01/06/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1108, 1105,1103
Material: Gravelly CLAY, with sand, medium to high plasticity
Material Source: Site Won Fill

Ground Science South West
Geotechnical & Environmental Consultants

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10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S66	1852-S67	1852-S68
Date Tested	31/05/2023	31/05/2023	31/05/2023
Time Tested	16:19	14:30	16:41
Test Request #/Location	Lot 1108 refer to markup	Lot 1105 refer to markup	Lot 1103 refer to markup
Layer / Reduced Level	7	7	7
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	5	0	0
Field Wet Density (FWD) t/m^3	2.02	2.00	2.00
Field Moisture Content %	22.4	21.2	24.1
Field Dry Density (FDD) t/m^3	1.65	1.65	1.61
Peak Converted Wet Density t/m^3	**	2.02	2.01
Adjusted Peak Converted Wet Density t/m^3	2.03	**	**
Moisture Variation (Wv) %	**	0.0	-0.5
Adjusted Moisture Variation %	-0.5	**	**
Hilf Density Ratio (%)	**100.0**	**99.0**	**99.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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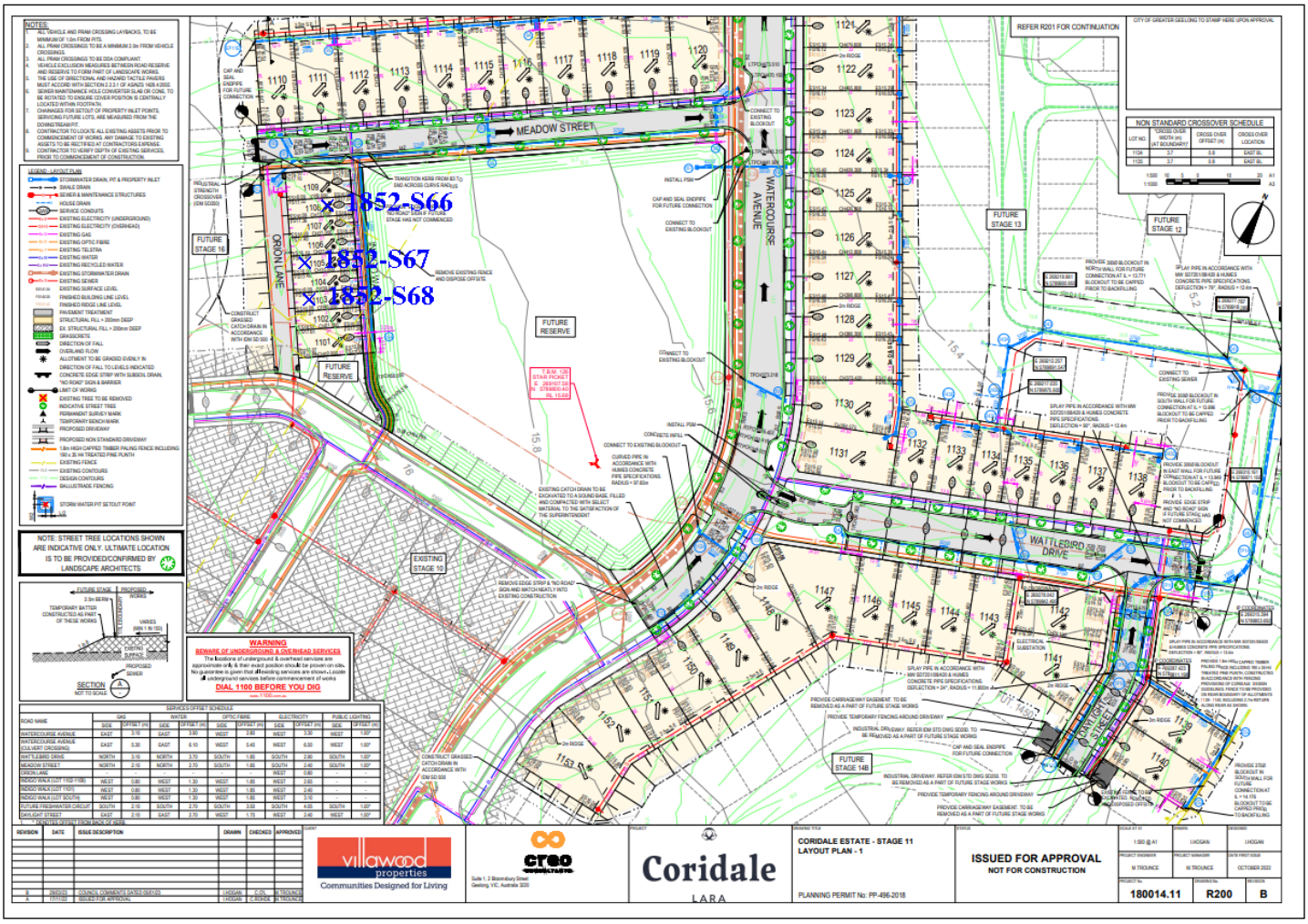
Geotechnical & Environmental Consultants



Material Test Report

Report Number: GSSW1852-20
Issue Number: 1
Date Issued: 05/06/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15874
Date Sampled: 01/06/2023
Dates Tested: 01/06/2023 - 05/06/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1119, 1111, 1109
Material: Gravelly CLAY, with sand, medium to high plasticity
Material Source: Site Won Fill

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S69	1852-S70	1852-S71
Date Tested	01/06/2023	01/06/2023	01/06/2023
Time Tested	16:14	16:25	16:39
Test Request #/Location	Lot 1119 refer to markup	Lot 1111 refer to markup	Lot 1109 refer to markup
Layer / Reduced Level	5	6	7
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	3	4	0
Field Wet Density (FWD) t/m^3	2.06	1.97	2.02
Field Moisture Content %	20.7	19.9	21.0
Field Dry Density (FDD) t/m^3	1.71	1.65	1.67
Peak Converted Wet Density t/m^3	**	**	1.97
Adjusted Peak Converted Wet Density t/m^3	2.00	1.97	**
Moisture Variation (Wv) %	**	**	0.5
Adjusted Moisture Variation %	0.5	2.5	**
Hilf Density Ratio (%)	**103.5**	**100.0**	**102.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

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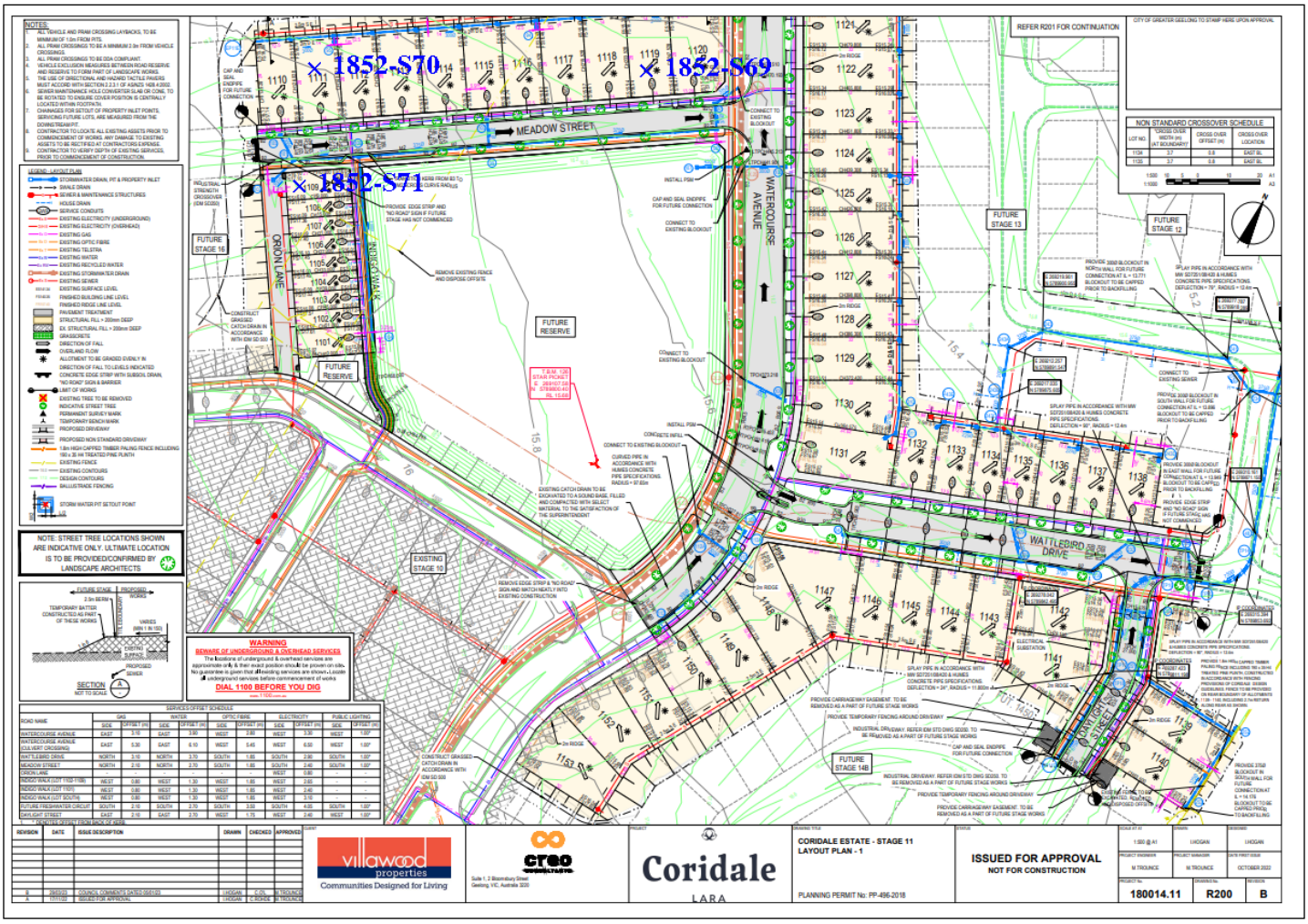
Geotechnical & Environmental Consultants



Material Test Report

Report Number: **GSSW1852-21**
Issue Number: 1
Date Issued: 07/06/2023
Client: CREO CONSULTANTS PTY LTD
Level 7/176 Wellington Parade, East Melbourne Victoria 3002
Project Number: GSSW1852
Project Name: CORIDALE ESTATE STAGE 11
Project Location: LARA
Work Request: 15917
Date Sampled: 05/06/2023 8:30
Dates Tested: 05/06/2023 - 07/06/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Lots 1110, 1115 & 1119
Material: Gravelly CLAY, with sand, medium to high plasticity
Material Source: Site Won Fill

Ground Science South West
Geotechnical & Environmental Consultants

Ground Science South West Pty Ltd
10 Dowsett Street South Geelong Vic 3220
Phone: (03) 5282 1566
Email: chrism@groundscience.com.au

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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Brent Elliott
Laboratory Manager
NATA Accredited Laboratory Number: 20109

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	1852-S72	1852-S73	1852-S74
Date Tested	05/06/2023	05/06/2023	05/06/2023
Time Tested	08:45	09:00	09:15
Test Request #/Location	Lot 1110 refer to markup	Lot 1115 refer to markup	Lot 1119 refer to markup
Layer / Reduced Level	FSL	FSL	FSL
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity	Gravelly CLAY, with sand, medium to high plasticity
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	8	6	0
Field Wet Density (FWD) t/m^3	2.04	2.02	2.07
Field Moisture Content %	21.9	19.5	17.7
Field Dry Density (FDD) t/m^3	1.67	1.69	1.76
Peak Converted Wet Density t/m^3	**	**	1.96
Adjusted Peak Converted Wet Density t/m^3	2.04	1.92	**
Moisture Variation (Wv) %	**	**	2.0
Adjusted Moisture Variation %	0.0	2.5	**
Hilf Density Ratio (%)	**99.5**	**105.0**	**105.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Sample Locations Plan

x - approximate test location

Ground Science South West
Geotechnical & Environmental Consultants