WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

TEST REPORT - AS 1289.5.2.1

Client:	LW & CA Dewar	*Ticket No.*	S13207
Client Address:	-	*Report No.*	WG24.7684_1_MMDD
Project:	Material Assessment	*Sample No.*	WG24.7684
Location:	CNR Gingin Brook Road and Indian Ocean Drive	*Date Sampled:*	15/05/2024
Sample Identification:	Fill Sand	*Date Tested:*	17/05/2024

TEST RESULTS - Modified Maximum Dry Density

Sampling Method: Sampled by Client, Tested as Received

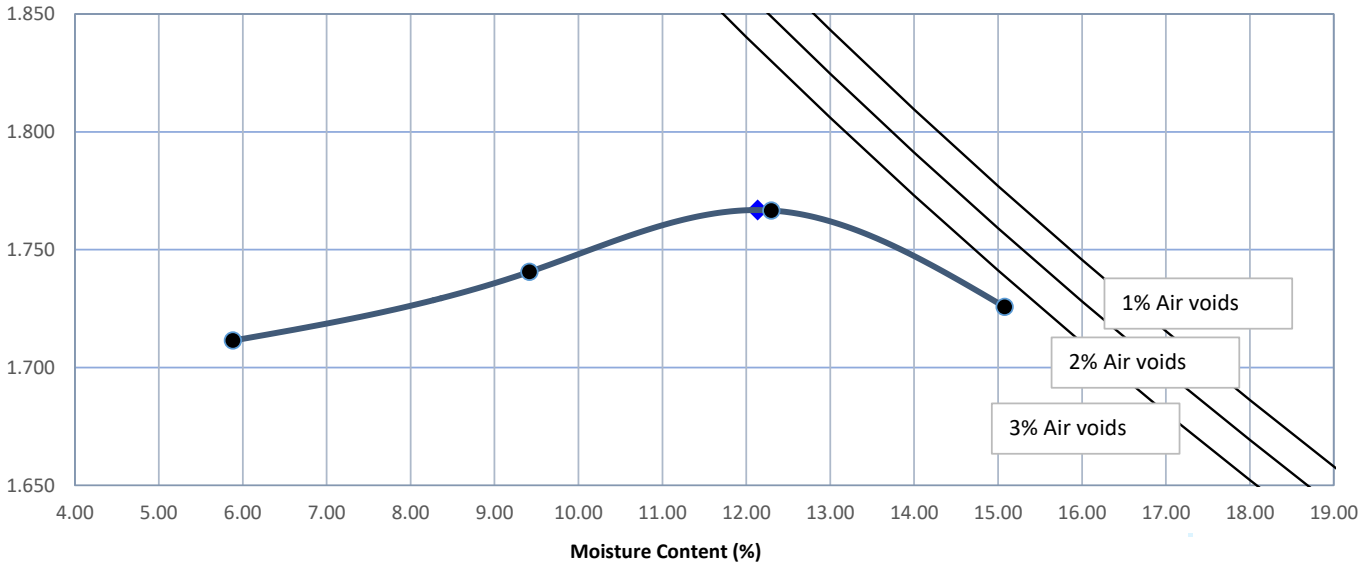
Sample Curing Time (Hours): 2

Method used to Determine Liquid Limit: Visual / Tactile Assessment by Competent Technician

Material + 19.0mm (%): 0 **Material + 37.5mm (%)** -

Moisture Content (%)	**5.9**	**9.4**	**12.3**	**15.1**	
Dry Density (t/m³)	**1.711**	**1.741**	**1.767**	**1.726**	

Dry Density (t/m³)



Modified Maximum Dry Density (t/m³) **1.77**

Optimum Moisture Content (%) **12.0**

Comments: *The above air void lines are derived from a calculated apparent particle density of 2.456 t/m³*

Approved Signatory:

Name: Cody O'Neill

Date: 20/May/2024

NATA WORLD RECOGNISED ACCREDITATION

Accreditation No. 20599

Accredited for compliance with ISO/IEC 17025 - Testing

WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

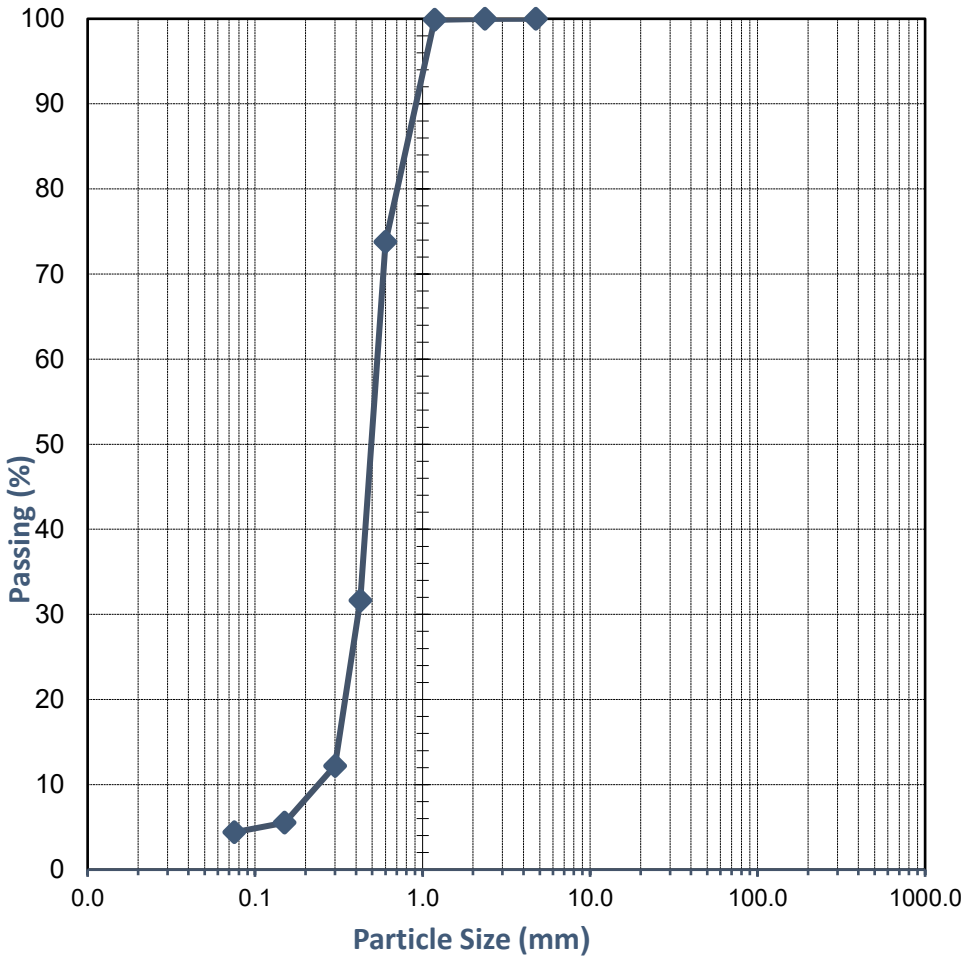
TEST REPORT - AS 1289.3.6.1

Client:	LW & CA Dewar	*Ticket No.*	S13207
Client Address:	-	*Report No.*	WG24.7684_1_PSD
Project:	Material Assessment	*Sample No.*	WG24.7684
Location:	CNR Gingin Brook Road and Indian Ocean Drive	*Date Sampled:*	15/05/2024
Sample Identification:	Fill Sand	*Date Tested:*	17/05 - 20/05/2024

TEST RESULTS - Particle Size Distribution of Soil

Sampling Method: Sampled by Client, Tested as Received

Sieve Size (mm)	Percent Passing Sieve (%)
150.0	
100.0	
75.0	
37.5	
19.0	
9.5	
4.75	100
2.36	100
1.18	100
0.600	74
0.425	32
0.300	12
0.150	6
0.075	4



Comments:

Approved Signatory:

Name: Matt van Herk

Date: 22/May/2024

NATA WORLD RECOGNISED ACCREDITATION

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WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

TEST REPORT - ǂIEEE Standard 442, ǂ ASTM D5334, AS 1289.2.1.1 & AS 1289.5.2.1

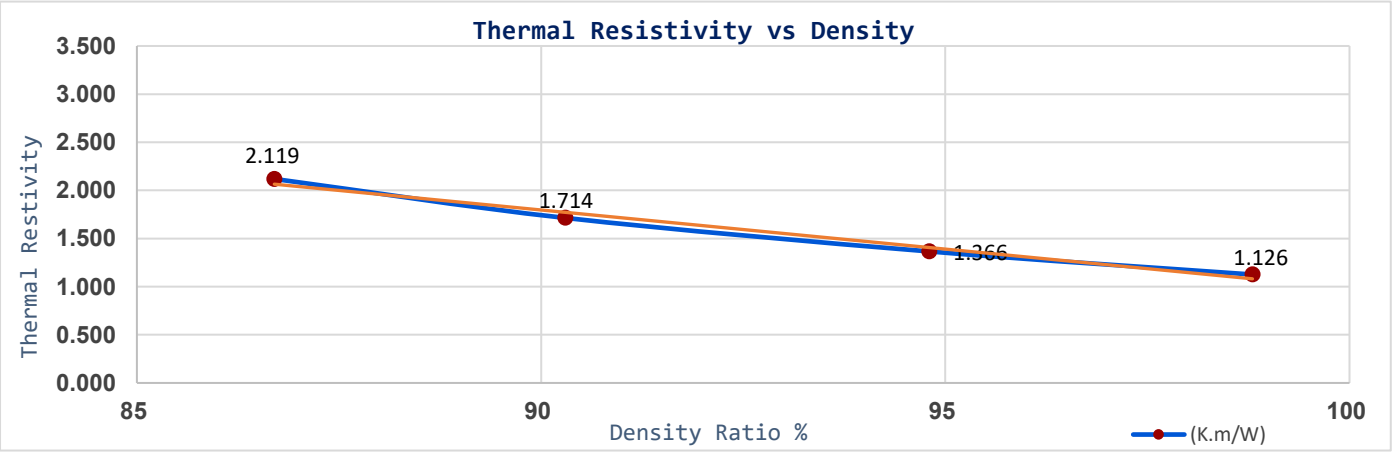
Client:	LW & CA Dewar	*Ticket No.*	S13207
Client Address:	-	*Report No.*	WG24.7684_1_TR
Project:	Material Assessment	*Sample No.*	WG24.7684
Location:	CNR Gingin Brook Road and Indian Ocean Drive	*Date Sampled:*	15/05/2024
Sample Identification:	Fill Sand	*Date Tested:*	21/05/2024

TEST RESULTS - THERMAL RESISTIVITY

Sampling Method: Sampled by Client, Tested as Received

Compaction Details		Reference MDD Details	
Maximum Dry Density (t/m^3)	1.770	Compaction Type	Modified
Optimum Moisture Content (%)	12.0	Compactive Effort (kJ/m^3)	2703
Target Dry Density Ratio (%)	Various	Mass of Rammer (kg)	4.5
Target Moisture Ratio (%)	0	Number of Layers	5
% Retained on the 19.0mm Sieve	0	Blows per Layer	Variable

Specimen Conditions At Test and After Compaction				
Specimen No.	1	2	3	4
Target Density Ratio (%)	85.0	90.0	95.0	100.0
Moisture Content (%)	0.2	0.2	0.2	0.3
Density Ratio (%)	86.7	90.3	94.8	98.8
Thermal Resistivity (K.m/W)	2.119	1.714	1.366	1.126



Comments:

Approved Signatory:

Name: Matt van Herk

Date: 22/May/2024

WESTERN GEOTECHNICAL & Laboratory Services

SOIL | AGGREGATE | CONCRETE | CRUSHING

TEST REPORT - ǂIEEE Standard 442, ǂ ASTM D5334, AS 1289.2.1.1 & AS 1289.5.2.1

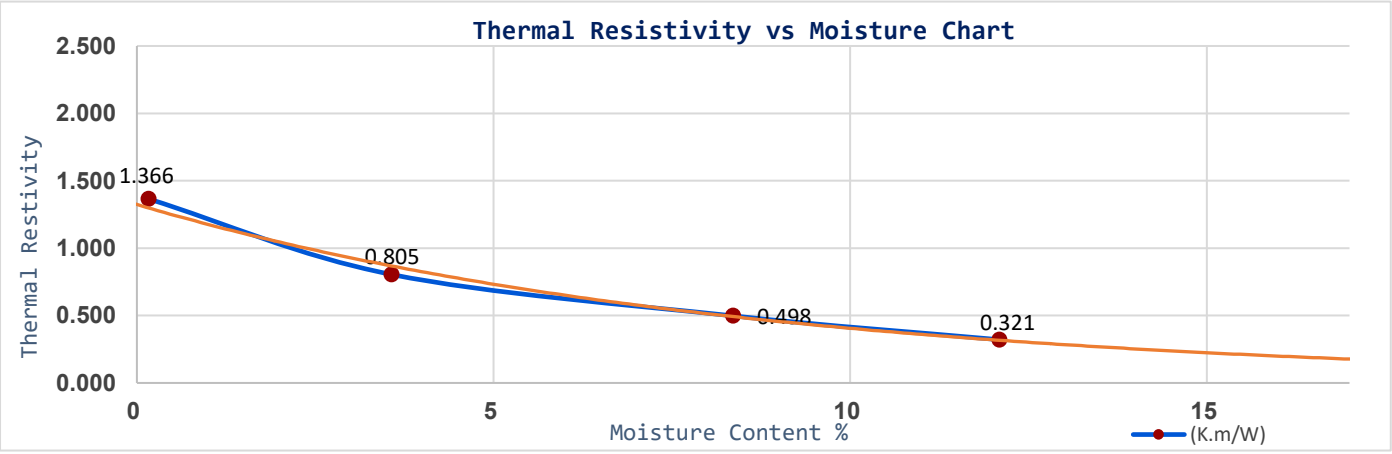
Client:	LW & CA Dewar	*Ticket No.*	S13207
Client Address:	-	*Report No.*	WG24.7684_1_TR
Project:	Material Assessment	*Sample No.*	WG24.7684
Location:	CNR Gingin Brook Road and Indian Ocean Drive	*Date Sampled:*	15/05/2024
Sample Identification:	Fill Sand	*Date Tested:*	21/05/2024

TEST RESULTS - THERMAL RESISTIVITY & CONDUCTIVITY

Sampling Method: Sampled by Client, Tested as Received

Compaction Details		Reference MDD Details	
Maximum Dry Density (t/m^3)	1.770	Compaction Type	Modified
Optimum Moisture Content (%)	12.0	Compactive Effort (kJ/m^3)	2703
Target Dry Density Ratio (%)	95	Mass of Rammer (kg)	4.5
Target Moisture Ratio (%)	See Below	Number of Layers	5
% Retained on the 19.0mm Sieve	0	Blows per Layer	14

Specimen Conditions At Test and After Compaction				
Specimen No.	1	2	3	4
Dry Density Ratio (%)	94.8	95.2	94.6	94.8
Target Moisture Ratio (%)	0.0	4.0	8.0	12.0
Moisture Content (%)	0.2	3.6	8.4	12.1
ǂ - Thermal Resistivity (K.m/	1.366	0.805	0.498	0.321



Comments: ǂ - NATA Accreditation does not cover the performance of this service . Tested as per clients request.

Approved Signatory:

Name: Matt van Herk

Date: 22/May/2024

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