TNZ M/4 : 2006 AP20
TEST REPORT

Project :	Quality Assurance
Location :	Production Stock
Client :	Road Metals Company Limited
Contractor :	Various
Sampled by :	David Ohs (Road Metals)
Date sampled :	14 April 2025
Sampling method :	NZS 4407: 2015 (2.4.6.3.2)
Sample description :	NZTA M/4 AP20
Sample condition :	Damp as received
Source :	Waimakariri River Quarry

Project No :	6-JRMCO.16/6LC
Lab Ref No :	CH12677
Client Ref No :	Chris Newcombe

Particle Size Distribution

Sieve Size (mm)	Percentage Passing Sample	Limits
63.0	-	100 - 100
37.5	-	100 - 100
19.0	100	100 - 100
9.5	67	55 - 75
4.75	44	33 - 55
2.36	31	22 - 42
1.18	23	14 - 31
0.600	18	8 - 23
0.300	14	5 - 16
0.150	10	0 - 12
0.075	7	0 - 8

% passing the finest sieve is obtained by difference

Grading Shape Control

Fraction (mm)	% Within Fraction Sample	Limits
9.5 - 2.36	36	20 - 46
4.75 - 1.18	21	9 - 34
2.36 - 0.600	13	6 - 26
1.18 - 0.300	9	3 - 21
0.600 - 0.150	8	2 - 17

Crushing Resistance

% Fines @ Spec. Load	-	%
Specification	-	%
Crushing Resistance	-	kN
Nom Aggregate Size	-	mm
Specified Load	-	kN

Broken Faces Content of Aggregate

Fraction (mm)	Percentage by Weight Sample	Lower Limit
19.0 - 9.5	94	70
9.5 - 4.75	95	70

Plasticity Index

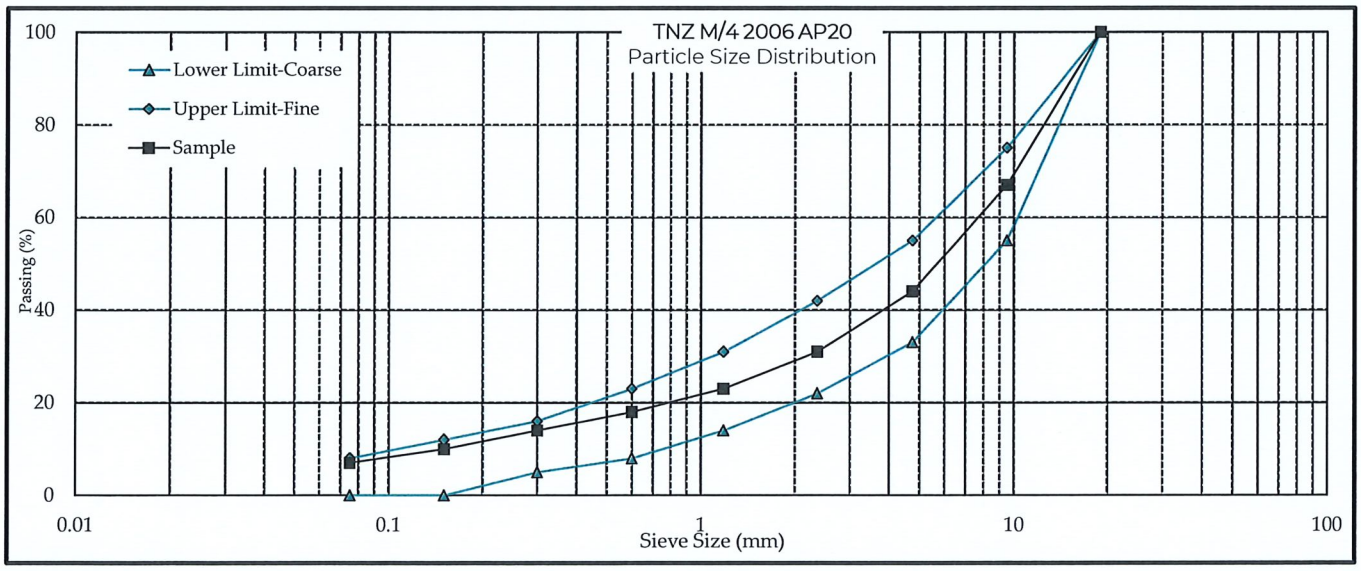
Sample PI	Non Plastic
Specification	<= 5

Clay Index

Sample CI	0.5
Specification	<= 3

Sand Equivalent (Washed, Mechanical Shaking)

Sample SE	31
Specified	>= 40



Test Methods

Plasticity Index	NZS 4407 : 2015 : Test 3.4		
Sand Equivalent	NZS 4407 : 2015 : Test 3.6	Broken Faces Content of Aggregate	NZS 4407 : 2015 : Test 3.14
Particle Size Distribution	NZS 4407 : 2015 : Test 3.8.1	Clay Index	NZS 4407 : 2015 : Test 3.5

Date tested : 6 May 2025
Date reported : 23 May 2025

Sampling is covered by IANZ Accreditation
This report may only be reproduced in full
All information supplied by Client

Approved Signatory

Designation : *Laboratory Manager*
Date : 23 May 2025

ACCREDITED IANZ TESTING LABORATORY

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

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Christchurch (Hayton Rd)
Quality Management Systems Certified to ISO 9001

52C Hayton Rd
PO Box 1482, Christchurch Mail Centre, 8140,
Christchurch, New Zealand

Telephone 03 343 0739
Website www.wsp.com/nz

DRY DENSITY / WATER CONTENT RELATIONSHIP
VIBRATING COMPACTION

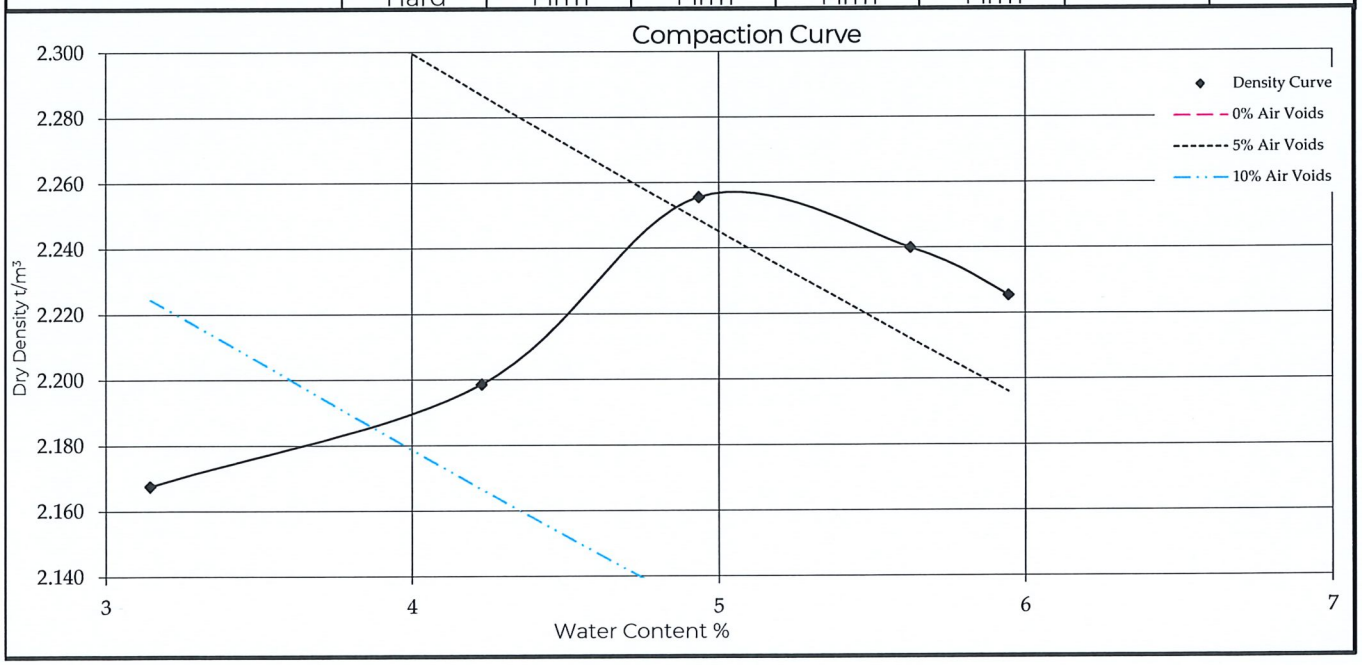
Project :	Quality Assurance
Location :	Production Stock
Client :	Road Metals Company Limited
Contractor :	Various
Sampled by :	David Ohs (Road Metals)
Date sampled :	14 April 2025
Sampling method :	NZS 4407: 2015 (2.4.6.3.2)
Sample description :	NZTA M/4 AP20
Sample condition :	Damp as received
Solid density :	2.68 t/m³ (Assumed)
Source :	Waimakariri River Quarry

Project No :	6-JRMCO.16/6LC
Lab Ref No :	CH12677
Client Ref No :	Chris Newcombe

Test Results

Maximum dry density	2.26 t/m³	Natural water content	4.9 %
Optimum water content	5.0 %	Fraction tested	Whole

Sample ID		-2%	-1%	NAT	+1%	+2%		
Bulk density	t/m³	2.236	2.292	2.367	2.366	2.358		
Water content	%	3.1	4.2	4.9	5.6	5.9		
Dry density	t/m³	2.168	2.199	2.256	2.240	2.226		
Sample condition		Moist Hard	Wet Firm	Wet Firm	Wet Firm	Saturated Firm		



Test Methods		Notes
Compaction	NZS 4402 : 1986 : Test 4.1.3	All information supplied by Client

Date tested : 24 April 2025
Date reported : 23 May 2025

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Approved Signatory

Designation : *Laboratory Manager*
Date : 23 May 2025

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