Work Order ID: CAN25W3902

Canterbury Laboratory
24 Miners Road, Templeton, Christchurch
PO Box 16-064, Christchurch 8441
Telephone: +64 3 349 9142
www.fultonhogan.com
0800 LABORATORY

Material Test Report

Report No: MAT:CAN25S-11406
Issue No: 1

Client:
KB Contracting & Quarries Ltd
PO Box 19746
Woolston

Christchurch 8241
NZ

Project: QA Testing - Aggregates

The tests reported herein (unless otherwise indicated) have been performed in accordance with the laboratory's scope of accreditation. Samples are tested as received, in natural condition, unless stated otherwise in the comments. This report may only be reproduced in full.

The results in this report relate only to the items / samples that were tested

Approved Signatory: Liam Brennan
(Laboratory Operations Manager)
IANZ Accreditation No:200
Date of Issue: 9/06/2025

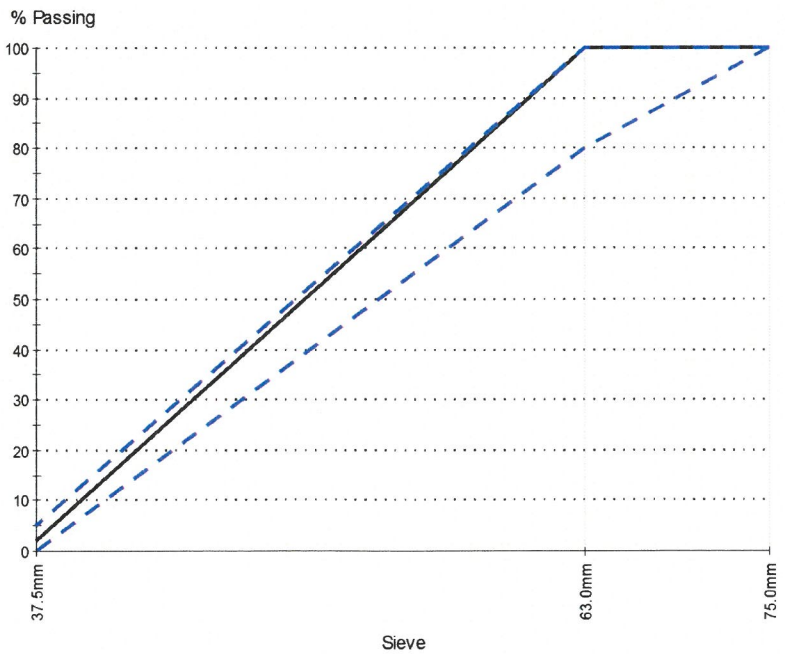
Sample Details

Sample ID:	CAN25S-11406
Client Sample ID:	103210
Material:	Drainage 65-40
Sample Source:	KB Quarry - Miners Rd
Site/Sampled From:	Miners Road
Date Sampled:	06/06/2025
Specification:	CCC - GC 65-40 2019
Sampled By:	Pete Haward
Sampling Method:	NZS 4407:2015 2.4.6.4 (SP/ROS/MACHINE)
Technician:	Grace van de Velden
Sampling Endorsed?:	Yes

Other Test Results

Description	Method	Result	Limits

Particle Size Distribution



Method: NZS 4407:2015 Test 3.8.2
Drying By: Oven
Date Tested: 6/06/2025
Tested By: Grace van de Velden

Sieve Size	% Passing	Limits
75.0mm	100	100 – 100
63.0mm	100	80 – 100
53.0mm	87	
37.5mm	2	0 – 5

Comments

Broken faces content = 64% (minimum = 50%).

Work Order ID: CAN25W4744

Canterbury Laboratory
24 Miners Road, Templeton, Christchurch
PO Box 16-064, Christchurch 8441
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0800 LABORATORY

Maximum Dry Density Report

Report No: MDD:CAN25S-13537
Issue No: 1

Client:
KB Contracting & Quarries Ltd
PO Box 19746
Woolston

Christchurch 8241
NZ

Project: QA Testing - Aggregates

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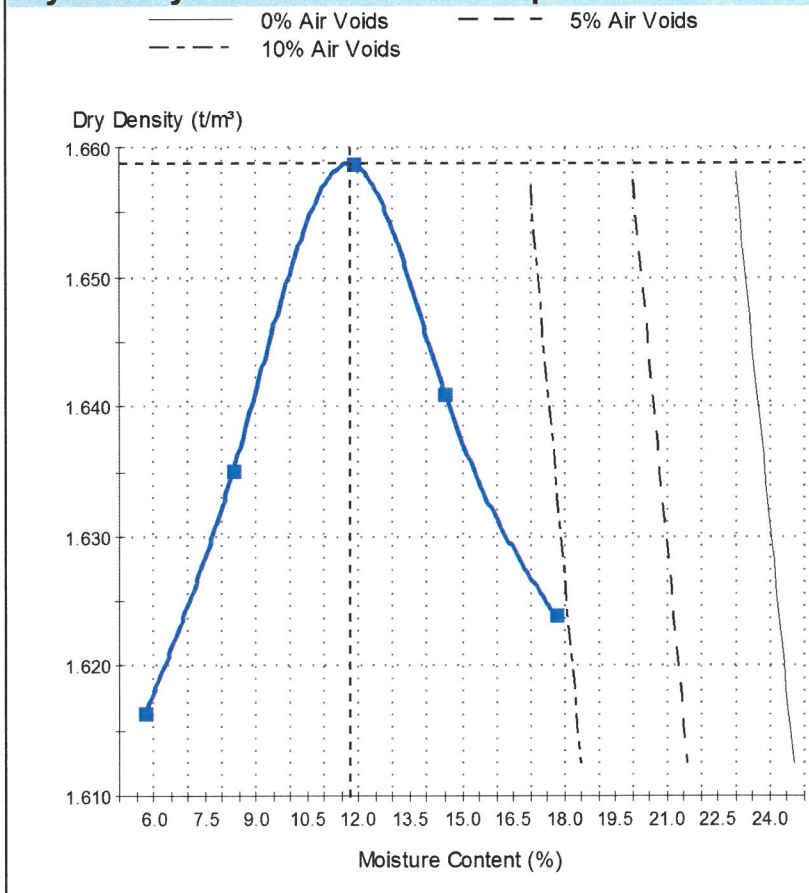
The results in this report relate only to the items / samples that were tested

Approved Signatory: Liam Brennan
(Laboratory Operations Manager)
IANZ Accreditation No:200
Date of Issue: 14/07/2025

Sample Details

Sample ID:	CAN25S-13537	**Client Sample ID:**	KB25/0377
Material:	Fine Sand	**Sample Source:**	Field Sample [Taken From Site]
Site/Sampled From:	Stockpile, 12 Cameo Grove, Burwood	**Date Sampled:**	10/07/2025
Specification:	Vibrating Hammer Compaction Test	**Sampled By:**	Mark Foster
Sampling Method:	As Received - Not Accredited	**Date Tested:**	11/07/2025
Tested By:	Atu Rova	**Sampling Endorsed?:**	No

Dry Density - Moisture Relationship



Test Results

NZS 4402:1986 Test 4.1.3 - 1986

Maximum Dry Density (t/m³):	**1.66**
Optimum Moisture Content (%):	**12**
Solid Density (t/m³):	2.68 assumed
Fraction Tested Passes (mm):	37.5
Material Removed (%):	0
Sample History:	Natural

Comments

Compaction for test points @ 14.5% & 17.8% ceased prior to 3 minutes due to oversaturation causing ejection of fines from sample.

CHRISTCHURCH LABORATORY
PO Box 11326, Sockburn, Christchurch, 8443

Test Report

Client: K.B. Contracting & Quarries Limited
Address: PO Box 19746, Woolston, Christchurch 8241

Laboratory No: C25/2269
Final Report No: 123952
Report Date: 30/07/2025

Sample Details

Job Location: Mcleans Island
Material: Pitrun
Material Source: Mcleans Island
Sampling method: * Unknown sampling method
** Sampling method not accredited.*

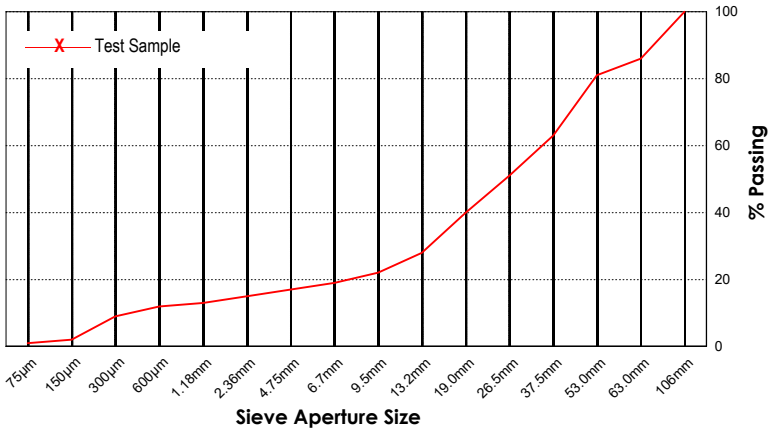
Date sampled: 23/07/2025 13:00
Sampled by: Pete Haward
Date of sample receipt: 23/07/2025

Sample Notes

Sample received in a damp condition.
Test results apply to sample as received.

Method Description	Testing Standard	Date tested
Particle size distribution - Subsidiary method by dry sieving	NZS 4407:2015 Test 3.8.2	25/07/2025

Sieve Size	% Passing	Specification
106mm	100	
63.0mm	86	
53.0mm	81	
37.5mm	63	
26.5mm	51	
19.0mm	40	
13.2mm	28	
9.5mm	22	
6.7mm	19	
4.75mm	17	
2.36mm	15	
1.18mm	13	
600µm	12	
300µm	9	
150µm	2	
75µm	1	



Note: *PSD results obtained from an oven dry test sample.*

Method Description	Testing Standard	Date tested
Clay index	NZS 4407:2015 Test 3.5	29/07/2025

Results

Clay Index: **1.5**

Note:The field sample was sourced from natural fines

Sabine Chambon
Key Technical Personnel
Laboratory Manager
IANZ Accreditation No: 439

ACCREDITED IANZ TESTING LABORATORY

Road Science
Leading Transport Technology

CHRISTCHURCH LABORATORY
PO Box 11326, Sockburn, Christchurch, 8443

Test Report

Client: K.B. Contracting & Quarries Limited
Address: PO Box 19746, Woolston, Christchurch 8241

Laboratory No: C25/1991
Final Report No: 121655
Report Date: 6/06/2025

Sample Details

Client reference:	Pitrun MDD	**Date sampled:**	03/06/2025 10:00
Job Location:	McLeans Island	**Sampled by:**	Pete Haward
Material:	Pitrun	**Date of sample receipt:**	03/06/2025
Material Source:	McLeans Island		
Sampling method:	*Unknown sampling method		

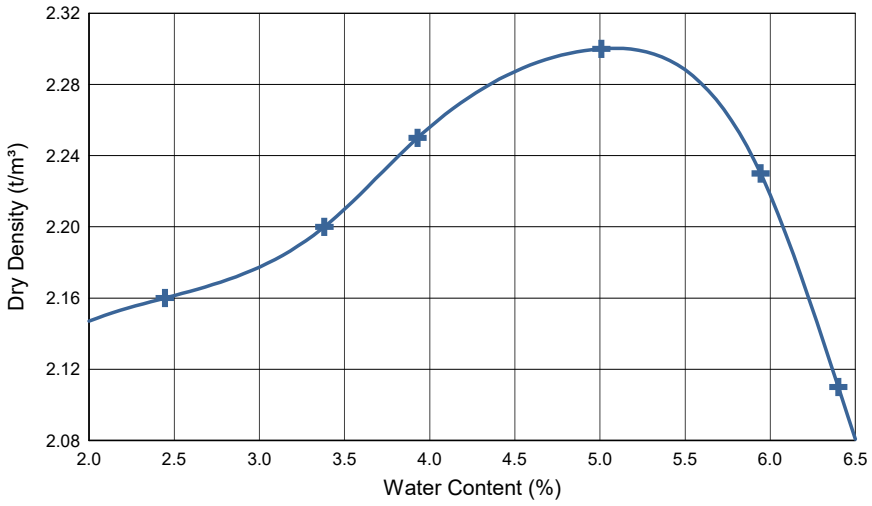
Sample Notes

Sample received in a damp condition.

Test results apply to sample as received.

Method Description	Testing Standard	Date tested
Determination of the dry density/water content relationship - New Zealand vibrating hammer compaction test	NZS4402:1986 Test 4.1.3	05/06/2025

Dry Density/Water Content Relationship



Dry Density (t/m³)	Water Content (%)
2.16	2.4
2.20	3.4
2.25	3.9
2.30	5.0
2.23	5.9
2.11	6.4

	Results
Optimum Water Content (%)	5.0
Maximum Dry Density (t/m³)	2.30
Test Fraction	Passing 37.5mm sieve

Sabine Chambon
Key Technical Personnel
Laboratory Manager
IANZ Accreditation No: 439

ACCREDITED IANZ TESTING LABORATORY

Appendix C
NDM Results

Project Prestons Park Cameo Grove
Project No. 235361
Date 13-Oct-25

Title Summary of Compaction

Test Date	Test ID#	Test #	Unique ID#	mE	mN	Stage	MDD	Type	Lift #	Lot ID	Compaction (%)	Pass (Yes/No)
31/07/2025	KB25/0405	4	1	395997	812374	Cameo Grove	2300	Pitrun	Lift 1	Lot 2	95	YES
31/07/2025	KB25/0405	3	2	396005	812388	Cameo Grove	2300	Pitrun	Lift 1	Lot 2	101	YES
31/07/2025	KB25/0405	1	3	395994	812401	Cameo Grove	2300	Pitrun	Lift 1	Lot 1	97	YES
31/07/2025	KB25/0405	2	4	396006	812414	Cameo Grove	2300	Pitrun	Lift 1	Lot 1	97	YES
1/08/2025	KB25/0406	4	5	396020	812375	Cameo Grove	2300	Pitrun	Lift 1	Lot 3	100	YES
1/08/2025	KB25/0406	3	6	396020	812391	Cameo Grove	2300	Pitrun	Lift 1	Lot 3	97	YES
1/08/2025	KB25/0406	2	7	396020	812401	Cameo Grove	2300	Pitrun	Lift 1	Lot 4	99	YES
1/08/2025	KB25/0406	1	8	396016	812416	Cameo Grove	2300	Pitrun	Lift 1	Lot 4	96	YES
1/08/2025	KB25/0407	1	9	396008	812389	Cameo Grove	2300	Pitrun	Lift 2	Lot 1	101	YES
1/08/2025	KB25/0407	2	10	396000	812374	Cameo Grove	2300	Pitrun	Lift 2	Lot 1	98	YES
4/08/2025	KB25/0415	1	11	396025	812372	Cameo Grove	2300	Pitrun	Lift 2	Lot 4	98	YES
4/08/2025	KB25/0415	2	12	396030	812393	Cameo Grove	2300	Pitrun	Lift 2	Lot 4	102	YES
4/08/2025	KB25/0415	3	13	396028	812402	Cameo Grove	2300	Pitrun	Lift 2	Lot 3	98	YES
4/08/2025	KB25/0415	4	14	396018	812416	Cameo Grove	2300	Pitrun	Lift 2	Lot 3	100	YES
5/08/2025	KB25/0421	1	15	396002	812372	Cameo Grove	2300	Pitrun	Lift 3	Lot 1	98	YES
5/08/2025	KB25/0421	2	16	396003	812391	Cameo Grove	2300	Pitrun	Lift 3	Lot 1	100	YES
5/08/2025	KB25/0422	1	17	396009	812400	Cameo Grove	2300	Pitrun	Lift 2	Lot 2	96	YES
5/08/2025	KB25/0422	2	18	395995	812414	Cameo Grove	2300	Pitrun	Lift 2	Lot 2	105	YES
7/08/2025	KB25/0428	1	19	396017	812414	Cameo Grove	2300	Pitrun	Lift 3	Lot 3	102	YES
7/08/2025	KB25/0428	2	20	396027	812399	Cameo Grove	2300	Pitrun	Lift 3	Lot 3	96	YES
7/08/2025	KB25/0428	3	21	396026	812390	Cameo Grove	2300	Pitrun	Lift 3	Lot 4	100	YES
7/08/2025	KB25/0428	4	22	396023	812375	Cameo Grove	2300	Pitrun	Lift 3	Lot 4	103	YES
8/08/2025	KB25/0433	1	23	396009	812385	Cameo Grove	2300	Pitrun	Lift 4	Lot 1	96	YES
8/08/2025	KB25/0433	2	24	395998	812379	Cameo Grove	2300	Pitrun	Lift 4	Lot 1	101	YES
8/08/2025	KB25/0434	1	25	395995	812408	Cameo Grove	2300	Pitrun	Lift 3	Lot 2	96	YES
8/08/2025	KB25/0434	2	26	396008	812408	Cameo Grove	2300	Pitrun	Lift 3	Lot 2	101	YES
12/08/2025	KB25/0445	1	27	396026	812375	Cameo Grove	2300	Pitrun	Lift 4	Lot 4	97	YES
12/08/2025	KB25/0445	2	28	396030	812390	Cameo Grove	2300	Pitrun	Lift 4	Lot 4	97	YES
12/08/2025	KB25/0445	3	29	396017	812400	Cameo Grove	2300	Pitrun	Lift 4	Lot 3	103	YES
12/08/2025	KB25/0445	4	30	396027	812417	Cameo Grove	2300	Pitrun	Lift 4	Lot 3	100	YES
13/08/2025	KB25/0450	1	31	395998	812387	Cameo Grove	2300	Pitrun	Lift 5	Lot 1	98	YES
13/08/2025	KB25/0450	2	32	396009	812374	Cameo Grove	2300	Pitrun	Lift 5	Lot 1	97	YES

Project Prestons Park Cameo Grove
Project No. 235361
Date 13-Oct-25

Title Summary of Compaction

Test Date	Test ID#	Test #	Unique ID#	mE	mN	Stage	MDD	Type	Lift #	Lot ID	Compaction (%)	Pass (Yes/No)
13/08/2025	KB25/0451	1	33	396006	812417	Cameo Grove	2300	Pitrun	Lift 4	Lot 2	100	YES
13/08/2025	KB25/0451	2	34	395998	812398	Cameo Grove	2300	Pitrun	Lift 4	Lot 2	99	YES
13/08/2025	KB25/0452	1	35	396031	812381	Cameo Grove	2300	Pitrun	Lift 5	Lot 4	100	YES
13/08/2025	KB25/0452	2	36	396022	812378	Cameo Grove	2300	Pitrun	Lift 5	Lot 4	104	YES
13/08/2025	KB25/0452	3	37	396017	812402	Cameo Grove	2300	Pitrun	Lift 5	Lot 3	99	YES
13/08/2025	KB25/0452	4	38	396028	812415	Cameo Grove	2300	Pitrun	Lift 5	Lot 3	103	YES
14/08/2025	KB25/0460	1	39	395996	812380	Cameo Grove	2300	Pitrun	Lift 6	Lot 1	95	YES
14/08/2025	KB25/0460	2	40	396009	812377	Cameo Grove	2300	Pitrun	Lift 6	Lot 1	102	YES
14/08/2025	KB25/0461	1	41	396008	812417	Cameo Grove	2300	Pitrun	Lift 5	Lot 2	99	YES
14/08/2025	KB25/0461	2	42	395995	812398	Cameo Grove	2300	Pitrun	Lift 5	Lot 2	99	YES
19/08/2025	KB25/0472	1	43	396022	812372	Cameo Grove	2300	Pitrun	Lift 6	Lot 4	96	YES
19/08/2025	KB25/0472	2	44	396029	812394	Cameo Grove	2300	Pitrun	Lift 6	Lot 4	96	YES
19/08/2025	KB25/0472	3	45	396030	812401	Cameo Grove	2300	Pitrun	Lift 6	Lot 3	99	YES
19/08/2025	KB25/0472	4	46	396015	812418	Cameo Grove	2300	Pitrun	Lift 6	Lot 3	98	YES
19/08/2025	KB25/0473	1	47	396007	812391	Cameo Grove	2300	Pitrun	Lift 7	Lot 1	96	YES
19/08/2025	KB25/0473	2	48	395998	812371	Cameo Grove	2300	Pitrun	Lift 7	Lot 1	95	YES
19/08/2025	KB25/0474	1	49	395994	812416	Cameo Grove	2300	Pitrun	Lift 6	Lot 2	95	YES
19/08/2025	KB25/0474	2	50	396005	812399	Cameo Grove	2300	Pitrun	Lift 6	Lot 2	95	YES
4/07/2025	KB25/0360	1	51	396068	812403	Cameo Grove	1660	Sand	Lift 1	Lot 7	93	NO
4/07/2025	KB25/0360	2	52	396068	812411	Cameo Grove	1660	Sand	Lift 1	Lot 7	96	YES
4/07/2025	KB25/0360	3	53	396067	812420	Cameo Grove	1660	Sand	Lift 1	Lot 7	96	YES
4/07/2025	KB25/0361	1	54	396065	812401	Cameo Grove	1660	Sand	Lift 2	Lot 7	95	YES
4/07/2025	KB25/0361	2	55	396066	812410	Cameo Grove	1660	Sand	Lift 2	Lot 7	98	YES
4/07/2025	KB25/0361	3	56	396065	812420	Cameo Grove	1660	Sand	Lift 2	Lot 7	102	YES
4/07/2025	KB25/0362	1	57	396066	812400	Cameo Grove	1660	Sand	Lift 3	Lot 7	100	YES
4/07/2025	KB25/0362	2	58	396068	812409	Cameo Grove	1660	Sand	Lift 3	Lot 7	96	YES
4/07/2025	KB25/0362	3	59	396067	812418	Cameo Grove	1660	Sand	Lift 3	Lot 7	97	YES
7/07/2025	KB25/0363	1	60	396067	812422	Cameo Grove	1660	Sand	Lift 4	Lot 7	100	YES
7/07/2025	KB25/0363	2	61	396068	812413	Cameo Grove	1660	Sand	Lift 4	Lot 7	100	YES
7/07/2025	KB25/0363	3	62	396069	812400	Cameo Grove	1660	Sand	Lift 4	Lot 7	101	YES
9/07/2025	KB25/0374	1	63	396035	812420	Cameo Grove	1660	Sand	Lift 1	Lot 6	94	NO
9/07/2025	KB25/0374	2	64	396038	812404	Cameo Grove	1660	Sand	Lift 1	Lot 6	99	YES

Project Prestons Park Cameo Grove
Project No. 235361
Date 13-Oct-25

Title Summary of Compaction

Test Date	Test ID#	Test #	Unique ID#	mE	mN	Stage	MDD	Type	Lift #	Lot ID	Compaction (%)	Pass (Yes/No)
9/07/2025	KB25/0374	3	65	396035	812393	Cameo Grove	1660	Sand	Lift 1	Lot 5	95	YES
9/07/2025	KB25/0374	4	66	396041	812376	Cameo Grove	1660	Sand	Lift 1	Lot 5	100	YES
9/07/2025	KB25/0374	5	67	396070	812390	Cameo Grove	1660	Sand	Lift 1	Lot 8	94	NO
9/07/2025	KB25/0374	6	68	396068	812390	Cameo Grove	1660	Sand	Lift 1	Lot 8	92	NO
10/07/2025	KB25/0375	1	69	396036	812417	Cameo Grove	1660	Sand	Lift 2	Lot 6	99	YES
10/07/2025	KB25/0375	2	70	396037	812401	Cameo Grove	1660	Sand	Lift 2	Lot 6	100	YES
10/07/2025	KB25/0375	3	71	396039	812392	Cameo Grove	1660	Sand	Lift 2	Lot 5	94	NO
10/07/2025	KB25/0375	4	72	396041	812373	Cameo Grove	1660	Sand	Lift 2	Lot 5	94	NO
10/07/2025	KB25/0375	5	73	396066	812392	Cameo Grove	1660	Sand	Lift 2	Lot 8	100	YES
10/07/2025	KB25/0375	6	74	396067	812397	Cameo Grove	1660	Sand	Lift 2	Lot 8	96	YES
10/07/2025	KB25/0376	1	75	396032	812419	Cameo Grove	1660	Sand	Lift 3	Lot 6	97	YES
10/07/2025	KB25/0376	2	76	396034	812402	Cameo Grove	1660	Sand	Lift 3	Lot 6	97	YES
10/07/2025	KB25/0376	3	77	396036	812391	Cameo Grove	1660	Sand	Lift 3	Lot 5	101	YES
10/07/2025	KB25/0376	4	78	396037	812374	Cameo Grove	1660	Sand	Lift 3	Lot 5	97	YES
10/07/2025	KB25/0376	5	79	396064	812394	Cameo Grove	1660	Sand	Lift 3	Lot 8	97	YES
10/07/2025	KB25/0376	6	80	396070	812393	Cameo Grove	1660	Sand	Lift 3	Lot 8	99	YES
14/07/2025	KB25/0378	1	81	396033	812417	Cameo Grove	1660	Sand	Lift 4	Lot 6	95	YES
14/07/2025	KB25/0378	2	82	396035	812405	Cameo Grove	1660	Sand	Lift 4	Lot 6	96	YES
14/07/2025	KB25/0378	3	83	396037	812389	Cameo Grove	1660	Sand	Lift 4	Lot 5	96	YES
14/07/2025	KB25/0378	4	84	396039	812372	Cameo Grove	1660	Sand	Lift 4	Lot 5	96	YES
14/07/2025	KB25/0378	5	85	396068	812395	Cameo Grove	1660	Sand	Lift 4	Lot 8	97	YES
14/07/2025	KB25/0378	6	86	396069	812397	Cameo Grove	1660	Sand	Lift 4	Lot 8	95	YES
14/07/2025	KB25/0379	1	87	396067	812404	Cameo Grove	1660	Sand	Lift 5	Lot 7	99	YES
14/07/2025	KB25/0379	2	88	396059	812414	Cameo Grove	1660	Sand	Lift 5	Lot 7	98	YES
14/07/2025	KB25/0379	3	89	396053	812422	Cameo Grove	1660	Sand	Lift 5	Lot 7	100	YES

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0360
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0360'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 7, 1st lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 04/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 7	300	1550	1740	12.0	93
2 - Lot 7	300	1600	1800	12.5	96
3 - Lot 7	300	1590	1810	13.4	96

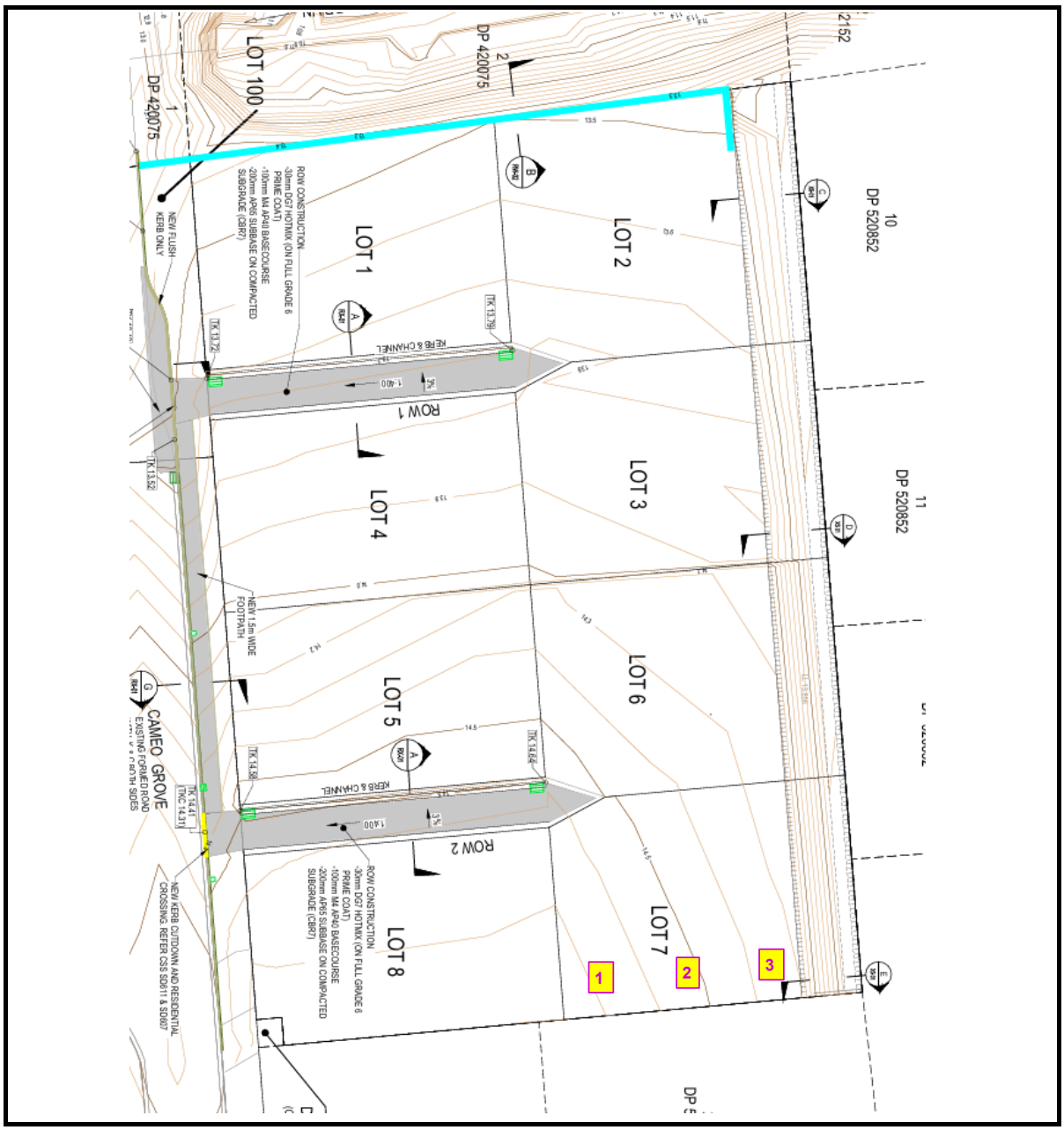
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0360**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lot 7, 1st lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
3 test sites were randomly selected as representative sample locations.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0361
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0361'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 7, 2nd lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 04/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 7	300	1580	1710	8.0	95
2 - Lot 7	250	1620	1770	9.0	98
3 - Lot 7	300	1690	1840	8.6	102

Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
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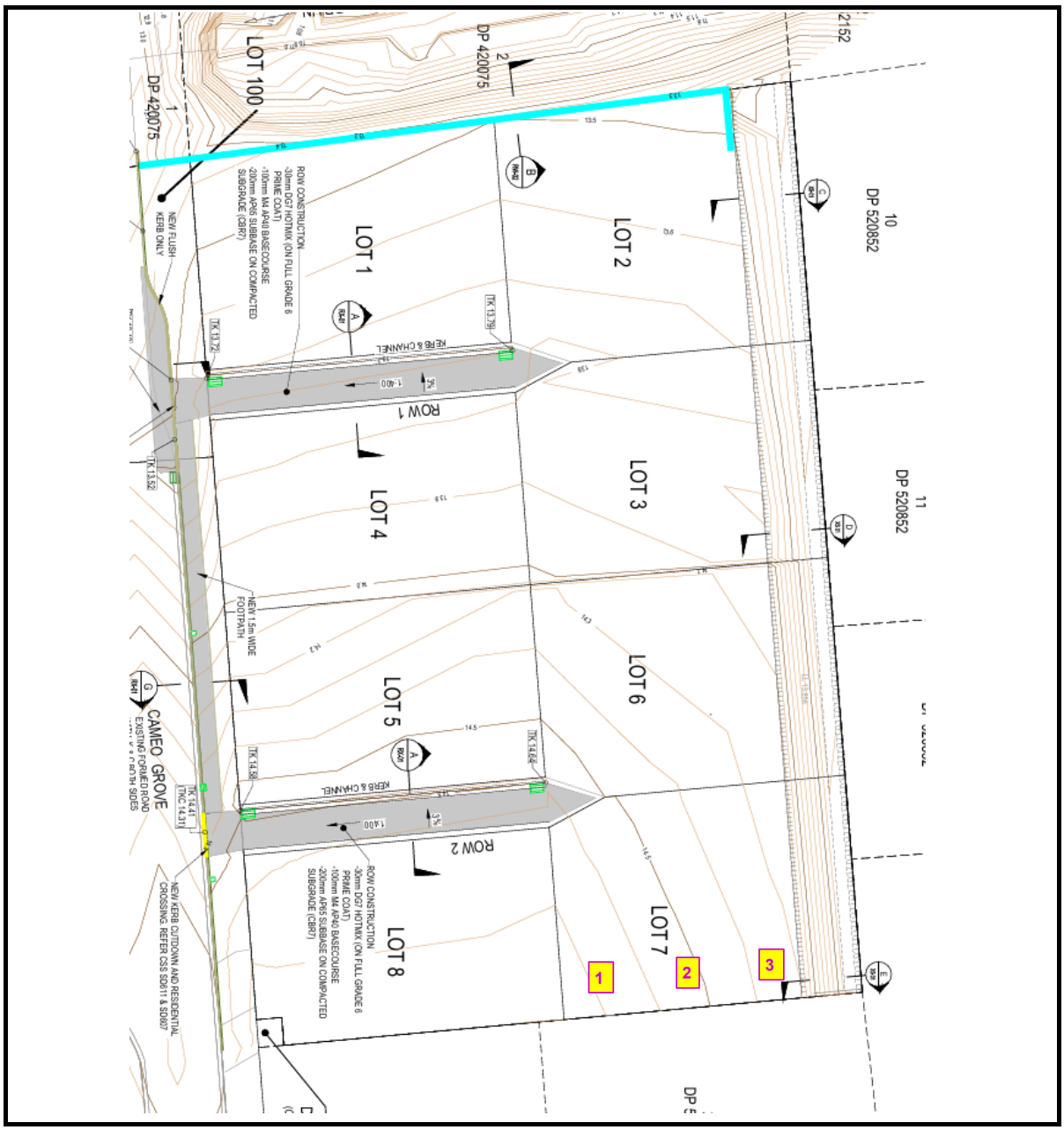
Office Phone: 03 343 5555

Laboratory No: **KB25/0361**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lot 7, 2nd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
3 test sites were randomly selected as representative sample locations.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0362
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0362'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 7, 3rd lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 04/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 7	300	1660	1760	6.1	100
2 - Lot 7	300	1600	1700	6.2	96
3 - Lot 7	300	1610	1700	5.3	97

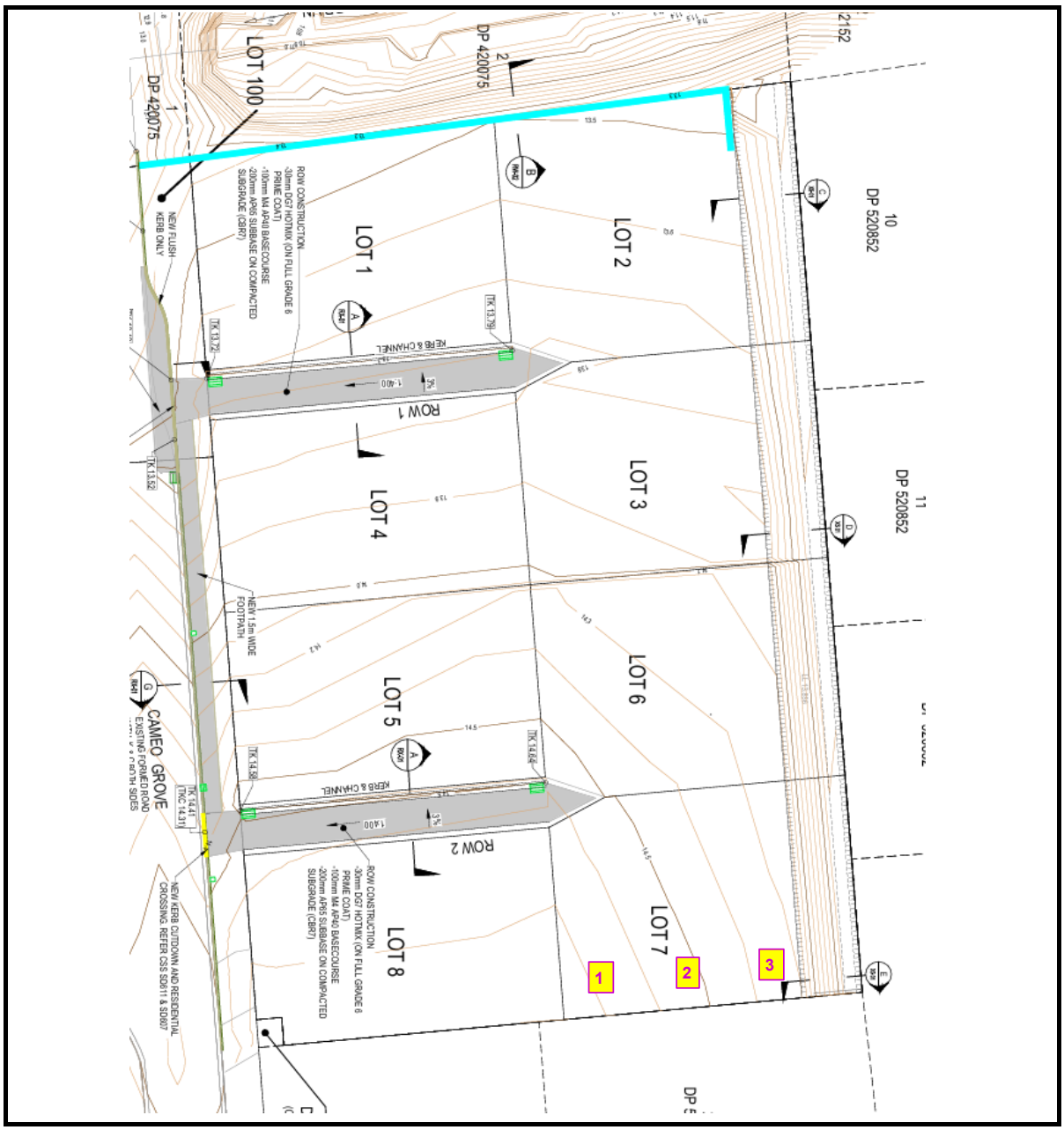
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0362**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lot 7, 3rd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
3 test sites were randomly selected as representative sample locations.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0363
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0363'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 7, 4th lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 07/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 7	300	1650	1750	5.8	100
2 - Lot 7	300	1660	1770	6.6	100
3 - Lot 7	300	1670	1770	5.9	101

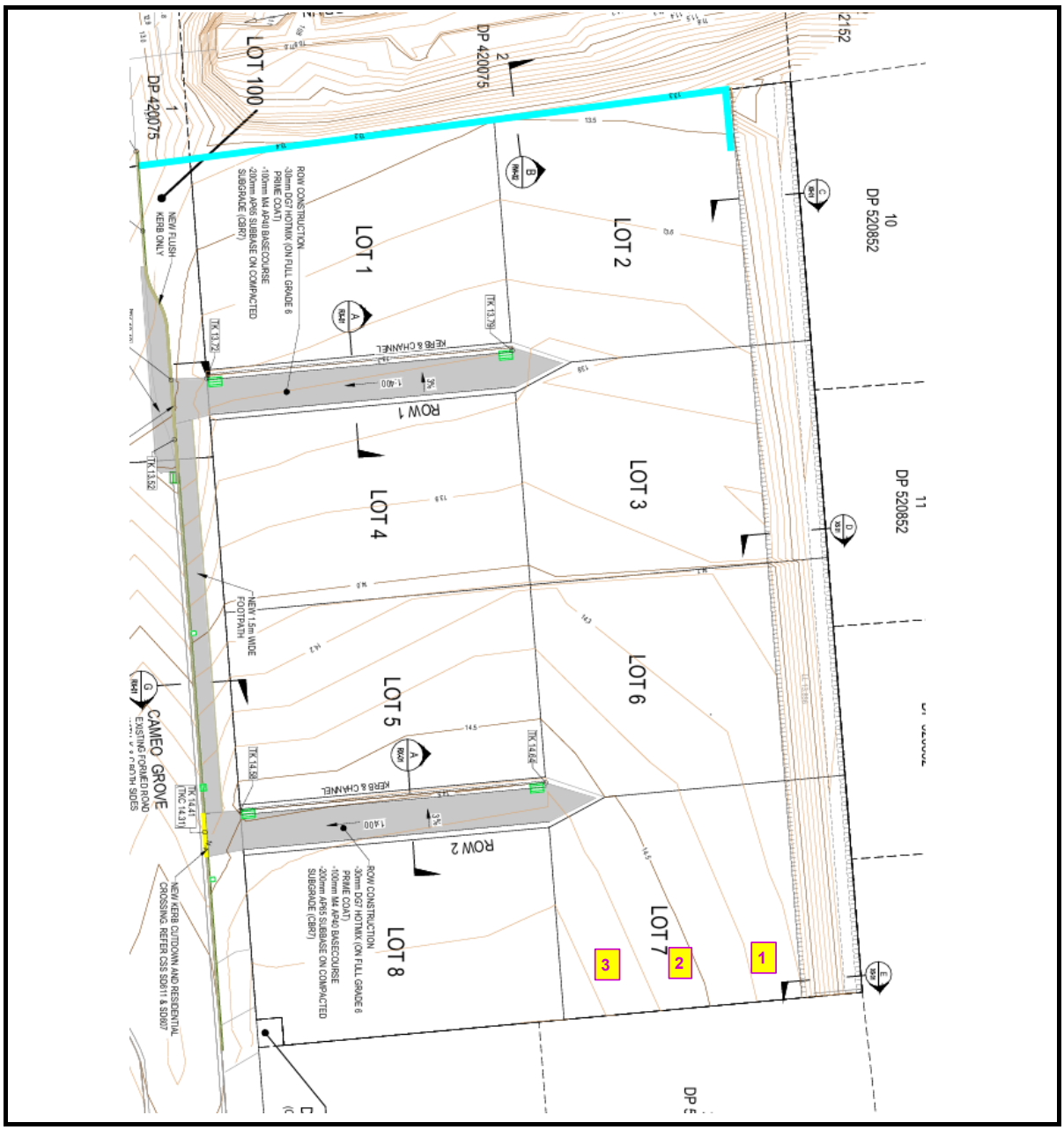
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0363**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lot 7, 4th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
3 test sites were randomly selected as representative sample locations.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
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PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0374
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0374'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 5, 6 & 8, 1st lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 09/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 6	300	1570	1670	6.6	94
2 - Lot 6	300	1640	1720	4.8	99
3 - Lot 5	300	1580	1680	6.3	95
4 - Lot 5	300	1660	1790	7.7	100
5 - Lot 8	300	1560	1710	9.0	94
6 - Lot 8	300	1530	1660	8.6	92

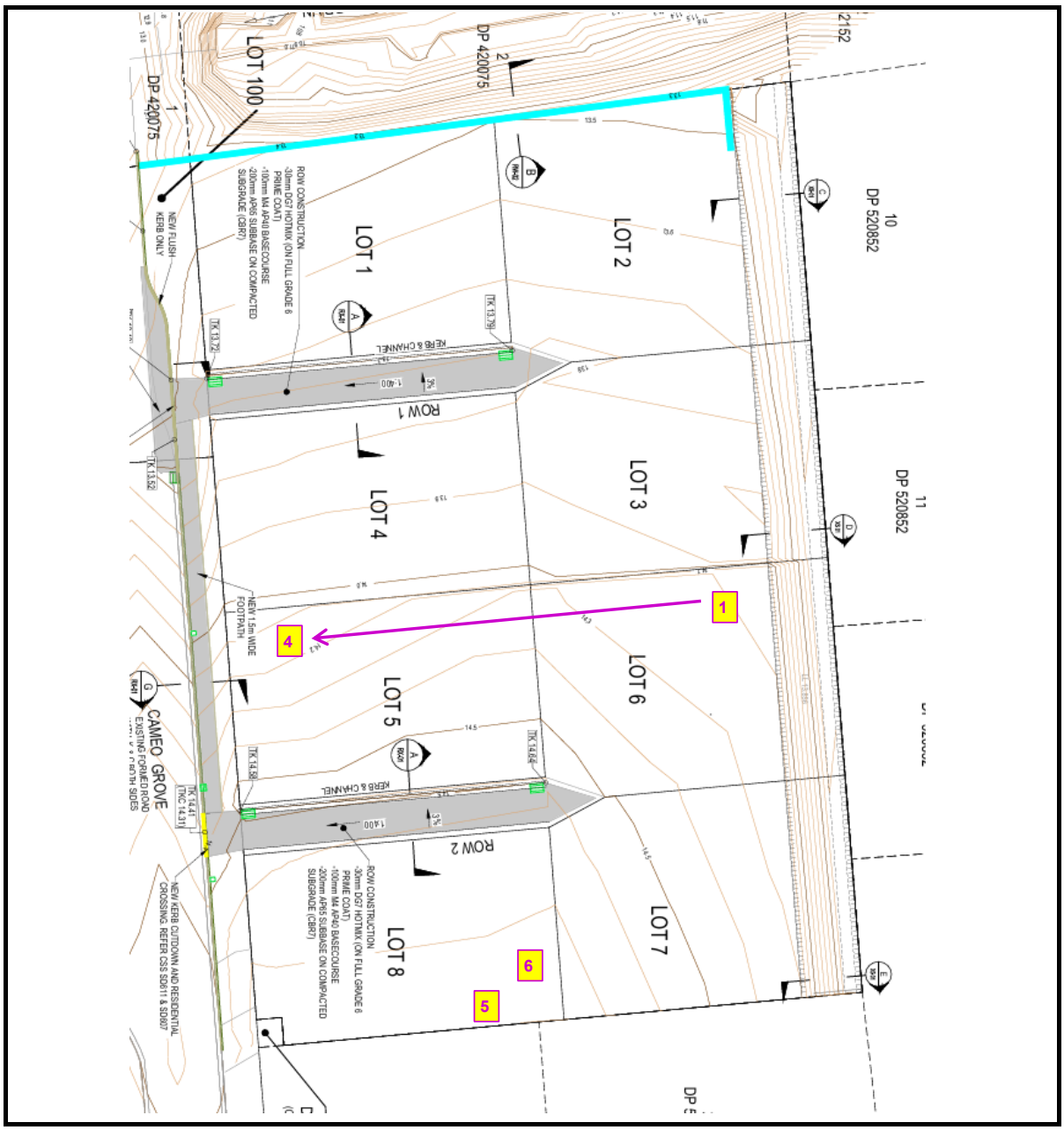
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0374**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lots 5, 6 & 8, 1st lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
2 test sites were randomly selected as representative sample locations in each lot.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
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PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0375
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0375'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 5, 6 & 8, 2nd lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 10/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 6	300	1640	1720	4.7	99
2 - Lot 6	300	1660	1730	4.0	100
3 - Lot 5	300	1570	1620	3.2	94
4 - Lot 5	300	1570	1630	4.2	94
5 - Lot 8	300	1660	1730	4.2	100
6 - Lot 8	300	1600	1670	4.4	96

Issued By:
(M. Foster, Laboratory Supervisor)

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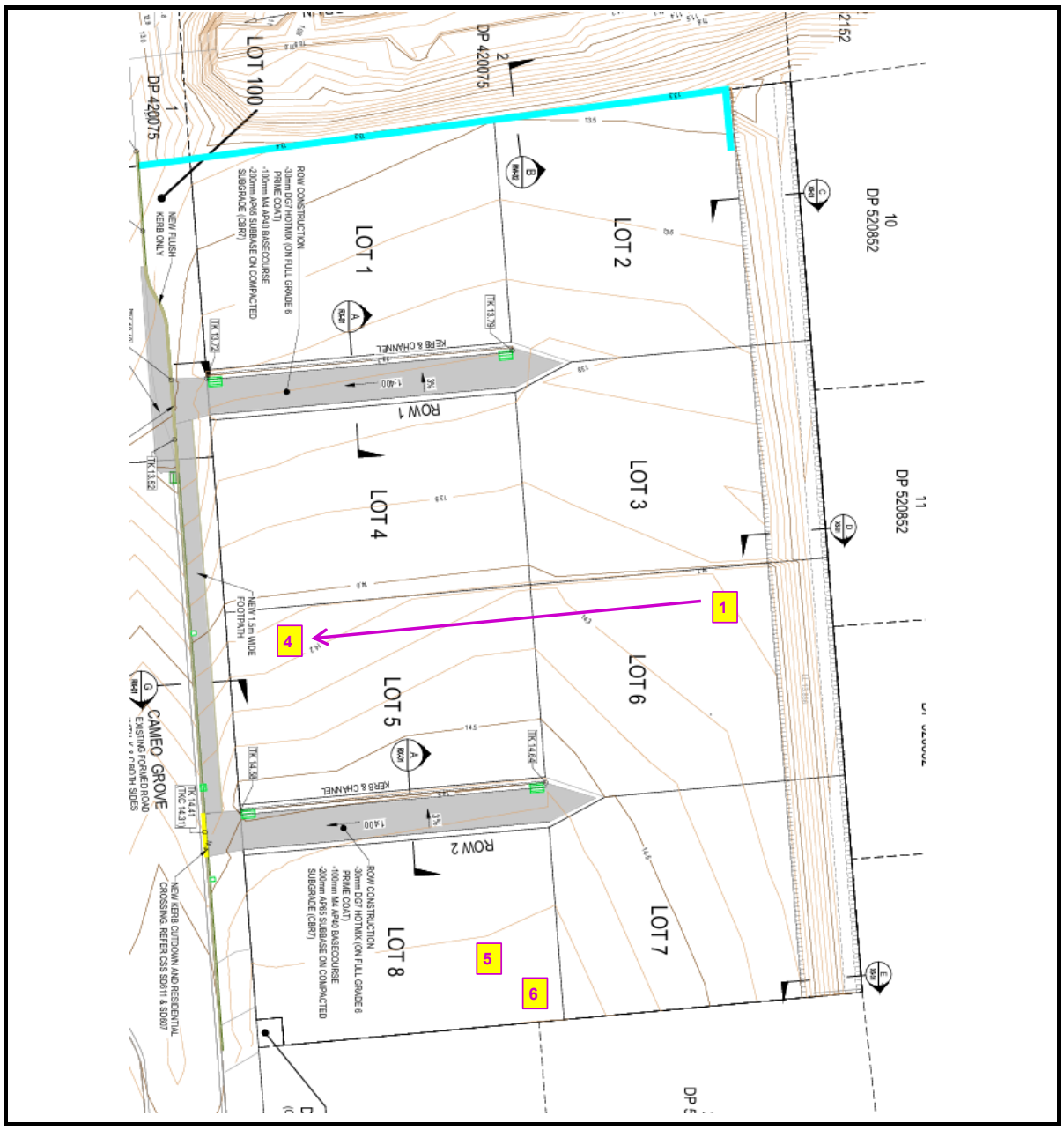
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0375**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lots 5, 6 & 8, 2nd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
2 test sites were randomly selected as representative sample locations in each lot.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
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Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0376
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0376'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 5, 6 & 8, 3rd lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 10/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 6	300	1610	1690	4.9	97
2 - Lot 6	300	1610	1690	4.6	97
3 - Lot 5	300	1680	1770	5.2	101
4 - Lot 5	300	1620	1670	2.9	97
5 - Lot 8	300	1610	1680	4.1	97
6 - Lot 8	300	1650	1720	4.4	99

Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
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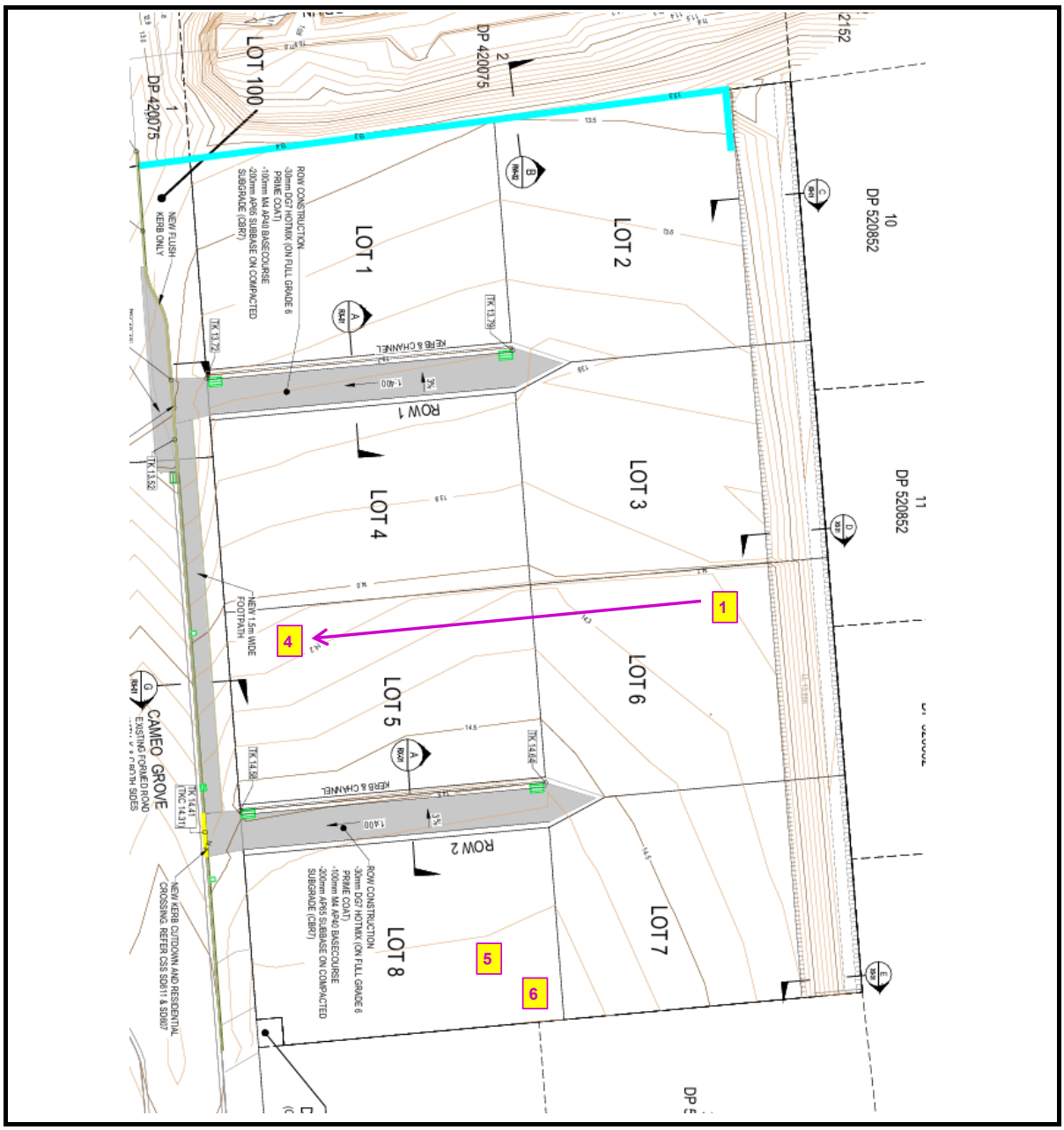
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0376**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lots 5, 6 & 8, 3rd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
2 test sites were randomly selected as representative sample locations in each lot.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
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Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0378
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0378'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 5, 6 & 8, 4th lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 14/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 6	300	1570	1630	3.5	95
2 - Lot 6	300	1590	1650	3.9	96
3 - Lot 5	300	1590	1660	4.3	96
4 - Lot 5	300	1600	1680	4.6	96
5 - Lot 8	300	1610	1700	5.8	97
6 - Lot 8	300	1580	1660	4.7	95

Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
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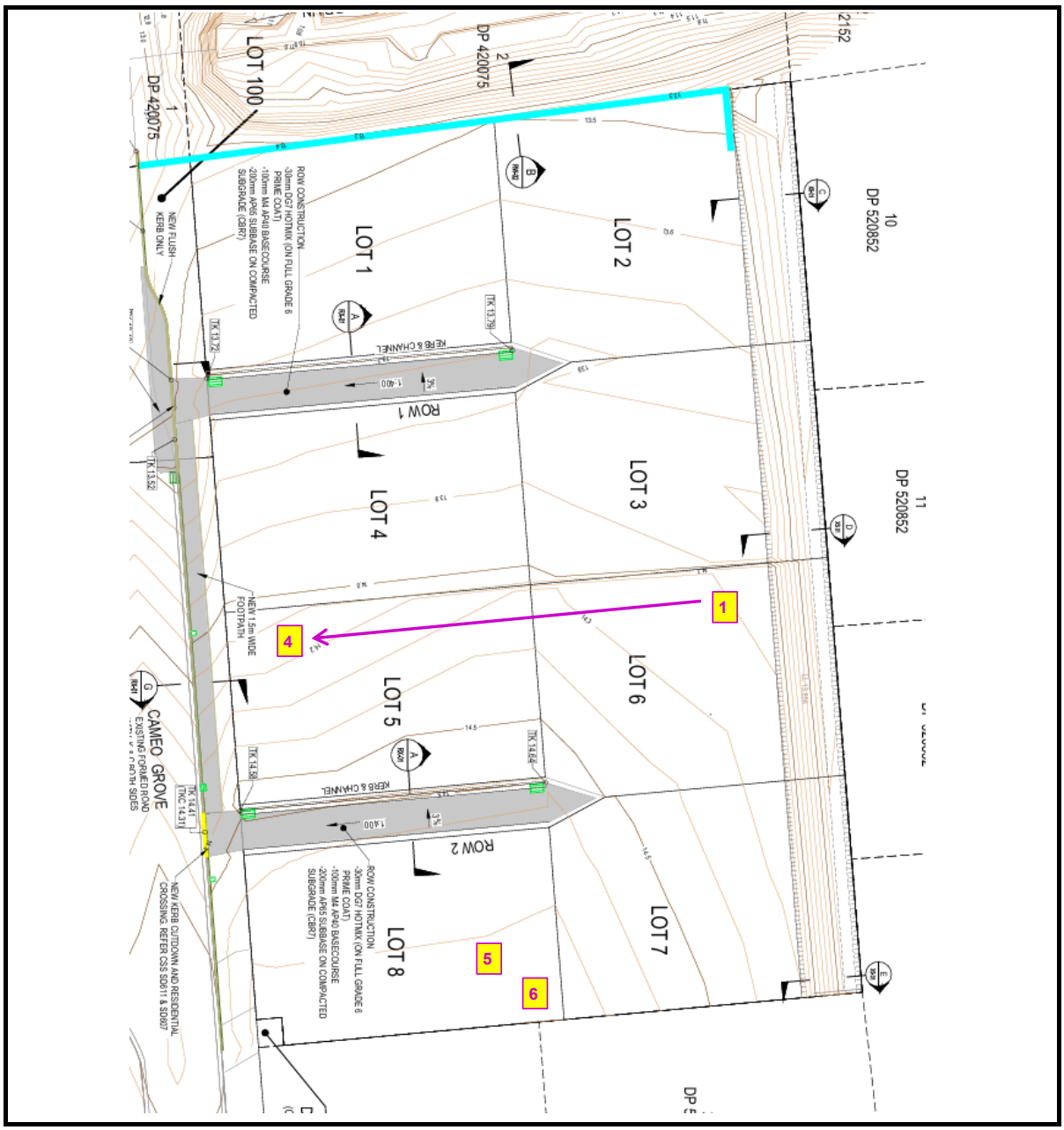
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0378**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lots 5, 6 & 8, 4th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
2 test sites were randomly selected as representative sample locations in each lot.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: KB25/0379
Report Date: 23/07/2025
Report Status: Replacement
This report replaces all previous issues of Laboratory No: 'KB25/0379'

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 7, 5th lift
Material: Fine Sand
Material Source: Stockpile, 12 Cameo Grove
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 14/07/2025

Test Method: NZS 4407:2015 Test 4.2 (direct transmission mode)
Note: Moisture contents and dry densities corrected against oven dried samples

Results:

Site/Location	Probe Depth (mm)	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 7	300	1650	1720	4.1	99
2 - Lot 7	300	1620	1700	4.5	98
3 - Lot 7	300	1660	1770	6.2	100

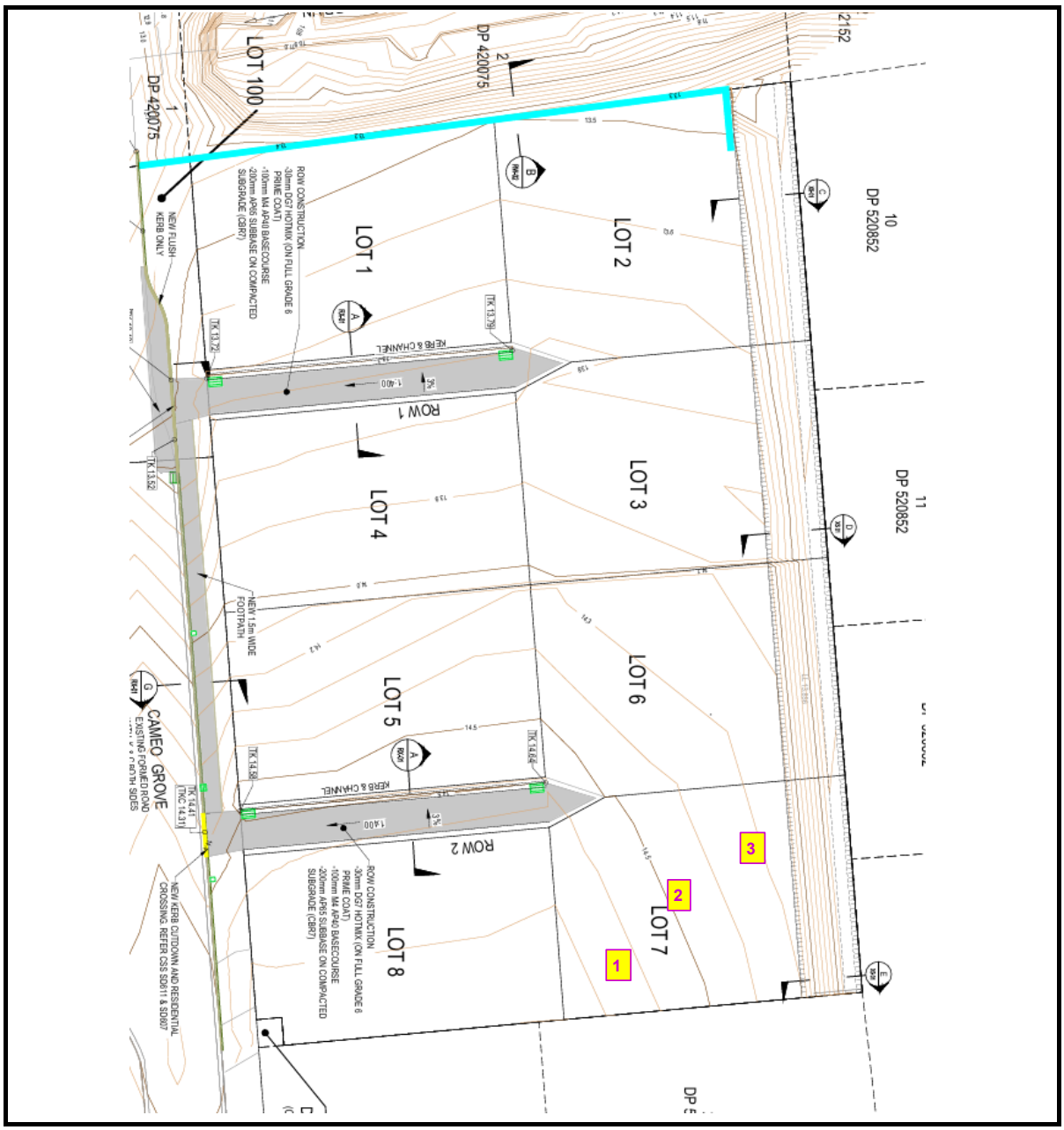
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0379**
Report Date: 23/07/2025
Report Status: Replacement

Cameo Grove, Lot 7, 5th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 1660 kg/m3 as determined by New Zealand Standard Compaction (Refer Fulton Hogan Lab Ref: MDD:CAN25S-13537, Issued 14 July 2025)
3 test sites were randomly selected as representative sample locations.

Comment:
Report has been reissued with corrected material, material source, maxumum dry density and recalculated relative compaction values.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0405**
Report Date: 01/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 1 & 2, 1st lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 31/07/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 2	2190	2310	5.2	95
2 - Lot 2	2320	2440	5.1	101
3 - Lot 1	2240	2360	5.7	97
4 - Lot 1	2230	2370	6.0	97

Issued By:
(M. Foster, Laboratory Supervisor)

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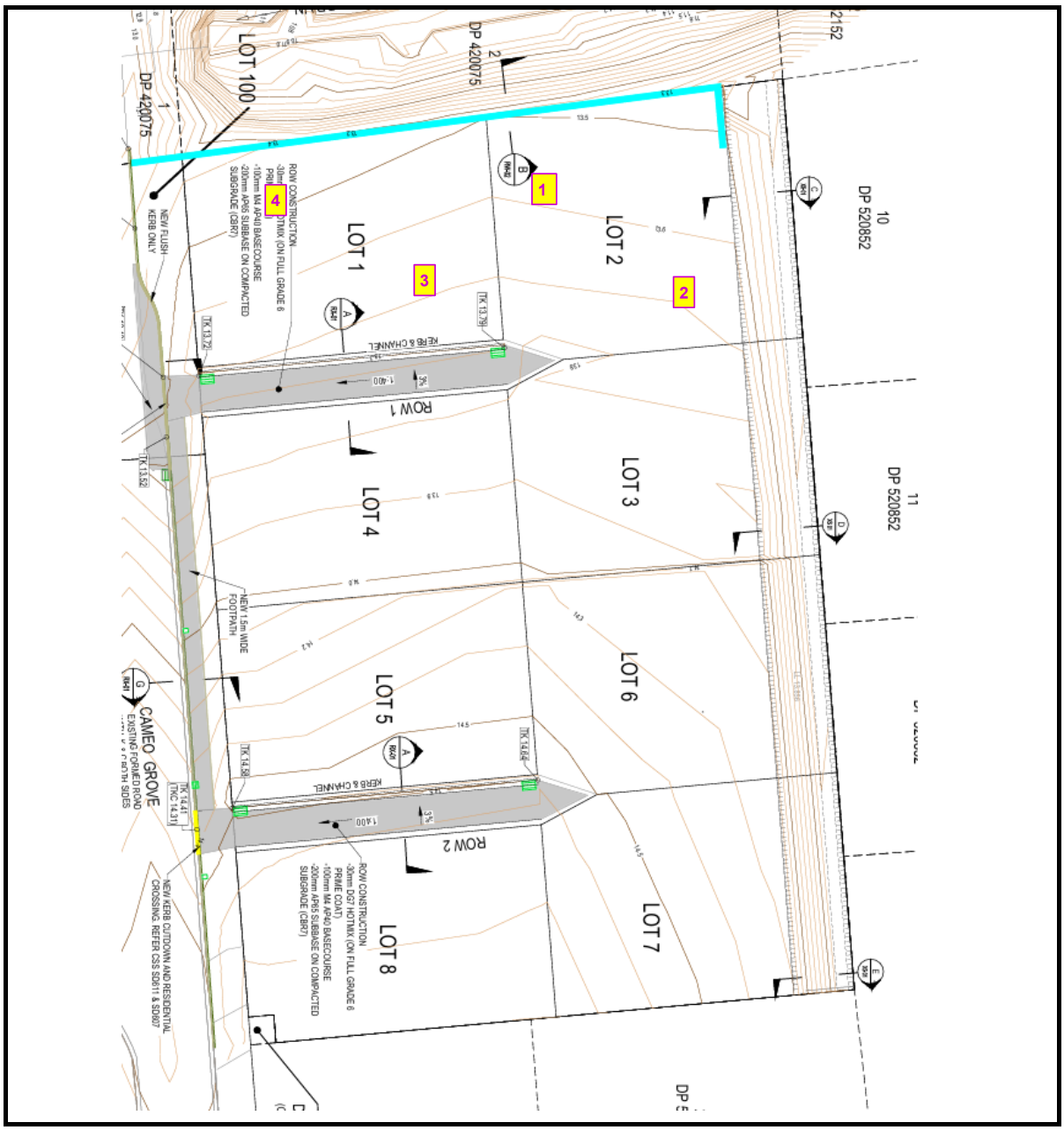
4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0405**
Report Date: 1/08/2025
Report Status: Final

Cameo Grove, Lots 1 & 2, 1st lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

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Christchurch
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Test Report

Laboratory No: **KB25/0406**
Report Date: 04/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 3 & 4, 1st lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 01/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 3	2210	2320	5.0	96
2 - Lot 3	2280	2400	5.2	99
3 - Lot 4	2220	2340	5.5	97
4 - Lot 4	2290	2400	4.8	100

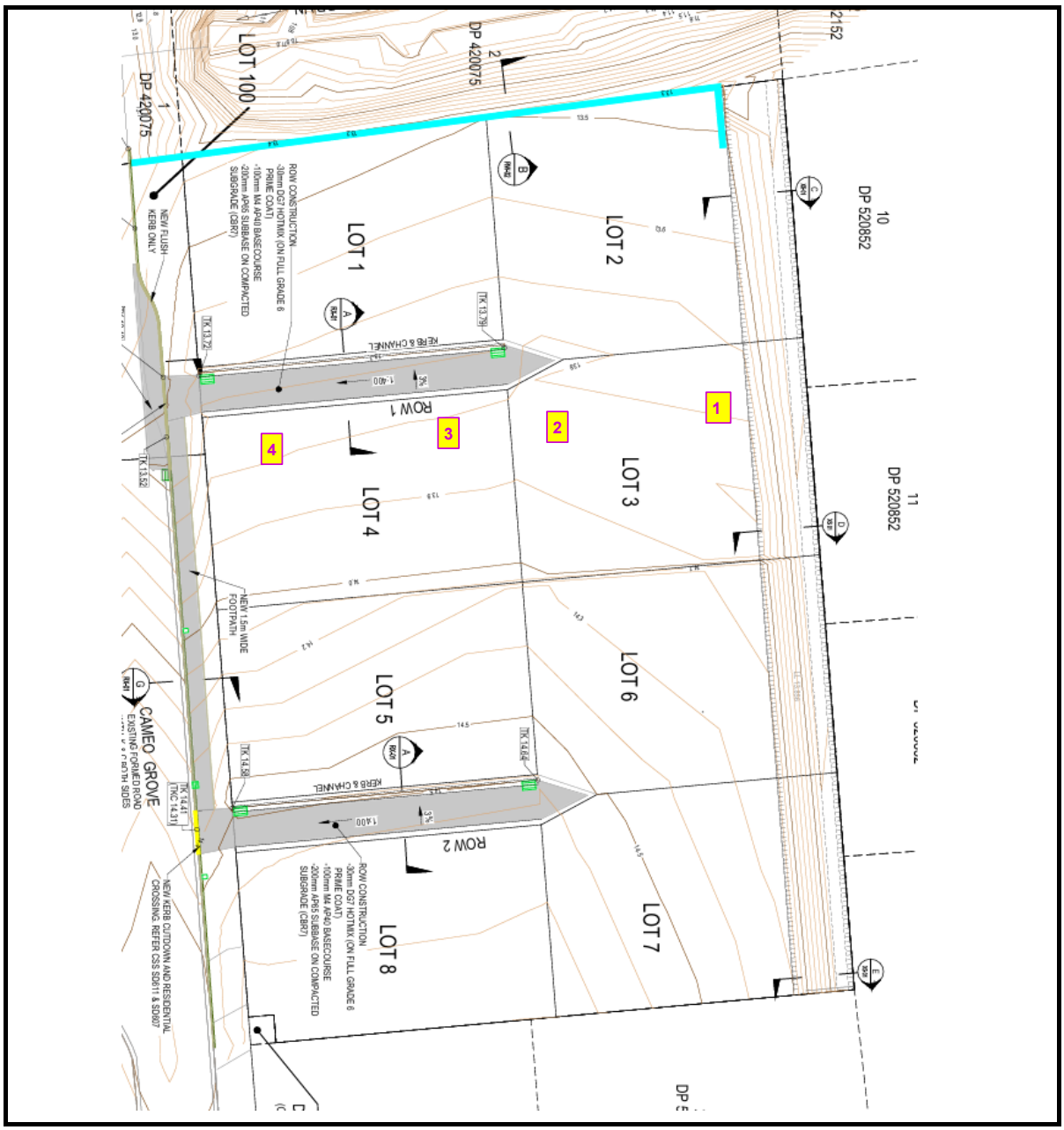
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0406**
Report Date: 4/08/2025
Report Status: Final

Cameo Grove, Lots 3 & 4, 1st lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0407**
Report Date: 04/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 1, 2nd lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 01/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2260	2370	5.1	98
2	2290	2400	4.8	99

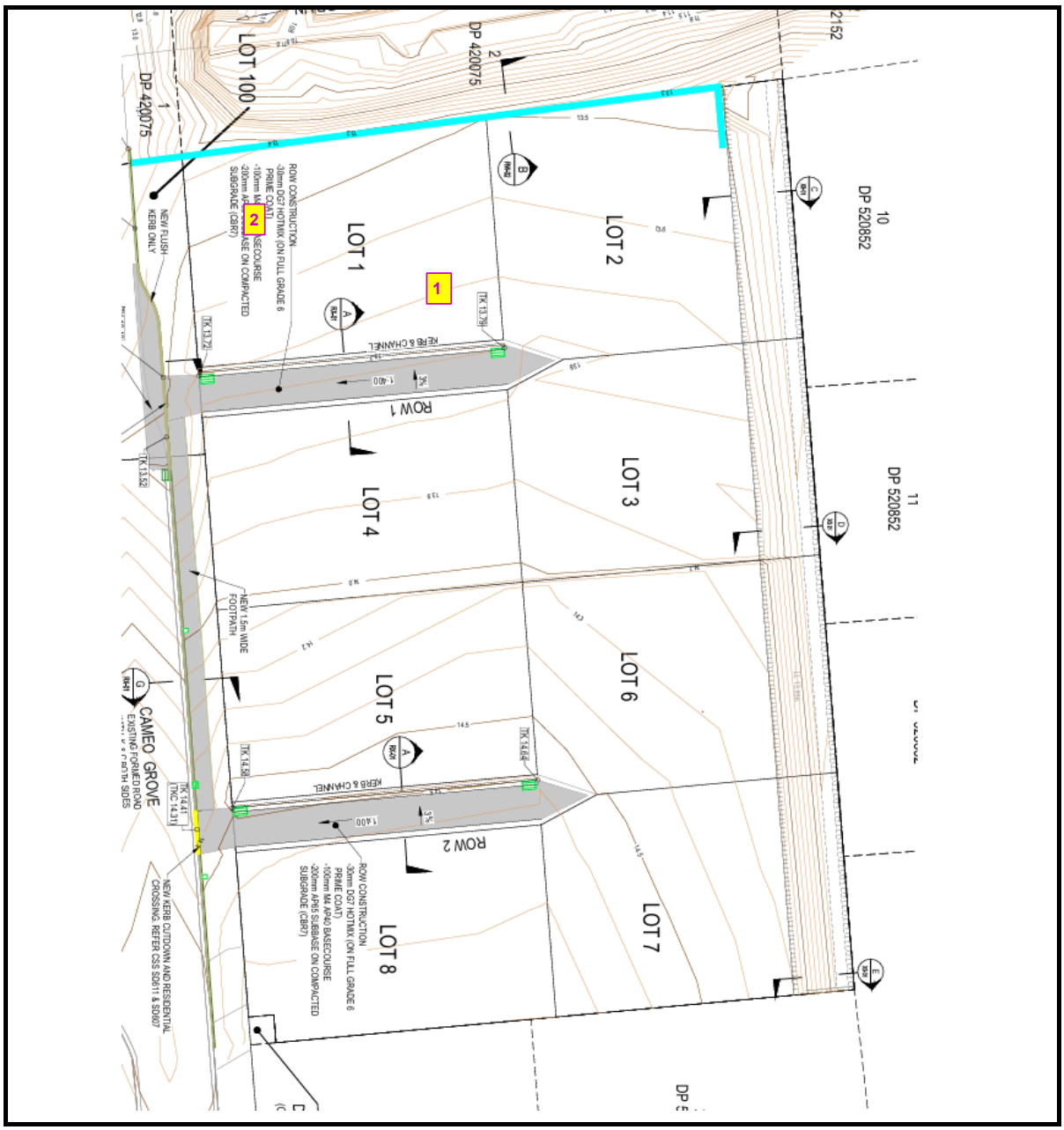
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0407**
Report Date: 4/08/2025
Report Status: Final

Cameo Grove, Lots 1, 2nd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0415**
Report Date: 05/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 3 & 4, 2nd lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 04/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 4	2260	2340	3.7	98
2 - Lot 4	2340	2440	4.5	102
3 - Lot 3	2260	2380	5.1	98
4 - Lot 3	2290	2390	4.4	100

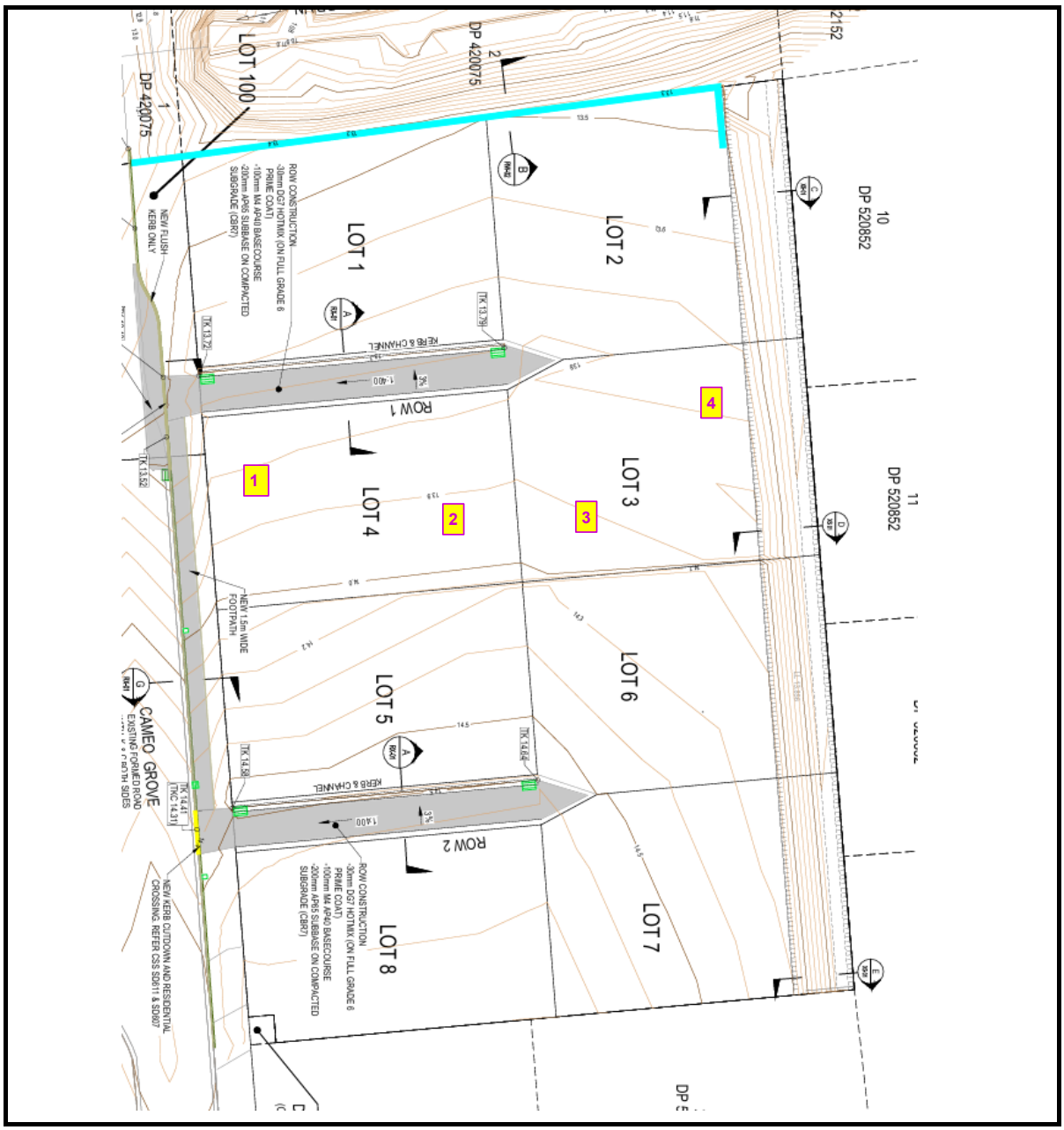
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0415**
Report Date: 5/08/2025
Report Status: Final

Cameo Grove, Lots 3 & 4, 2nd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0421**
Report Date: 06/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 1, 3rd lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 05/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2240	2320	3.6	98
2	2290	2390	4.1	100

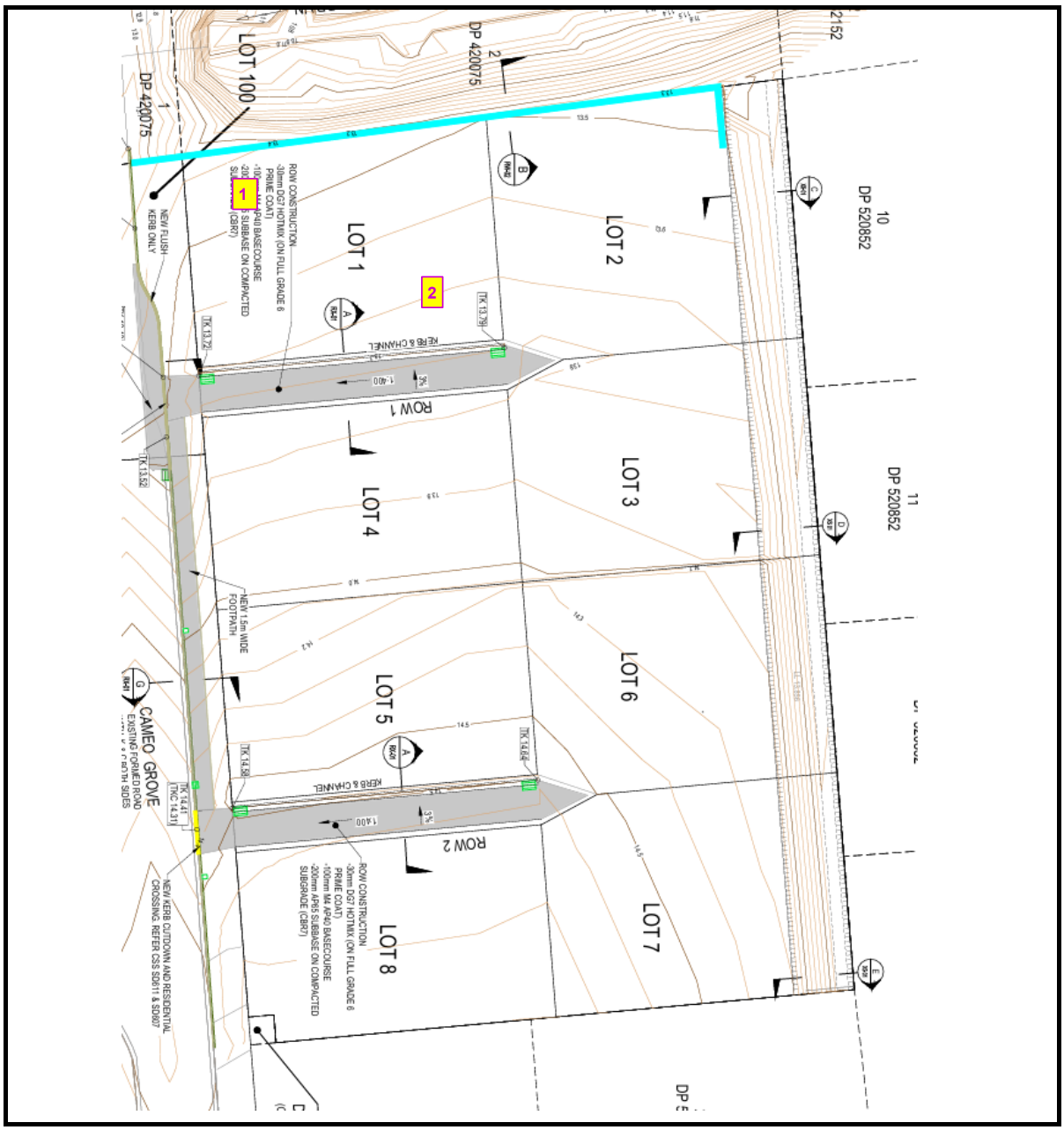
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0421**
Report Date: 6/08/2025
Report Status: Final

Cameo Grove, Lot 1, 3rd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0422**
Report Date: 06/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 2, 2nd lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 05/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2210	2310	4.4	96
2	2400	2490	3.5	105

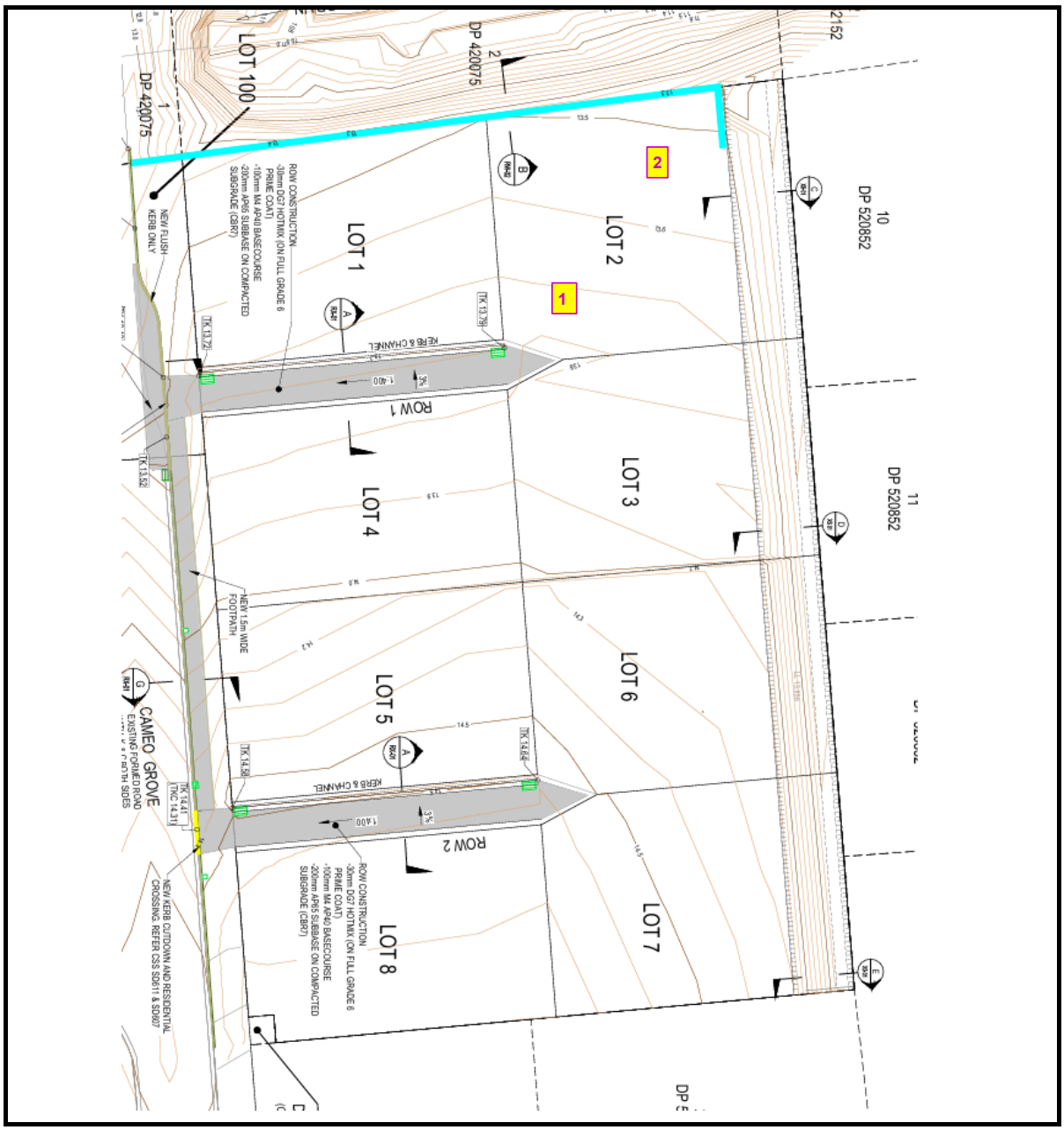
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0422**
Report Date: 6/08/2025
Report Status: Final

Cameo Grove, Lot 2, 2nd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0428**
Report Date: 08/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 3 & 4, 3rd lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 07/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 3	2340	2460	5.1	102
2 - Lot 3	2210	2300	4.2	96
3 - Lot 4	2300	2410	4.9	100
4 - Lot 4	2380	2490	5.0	103

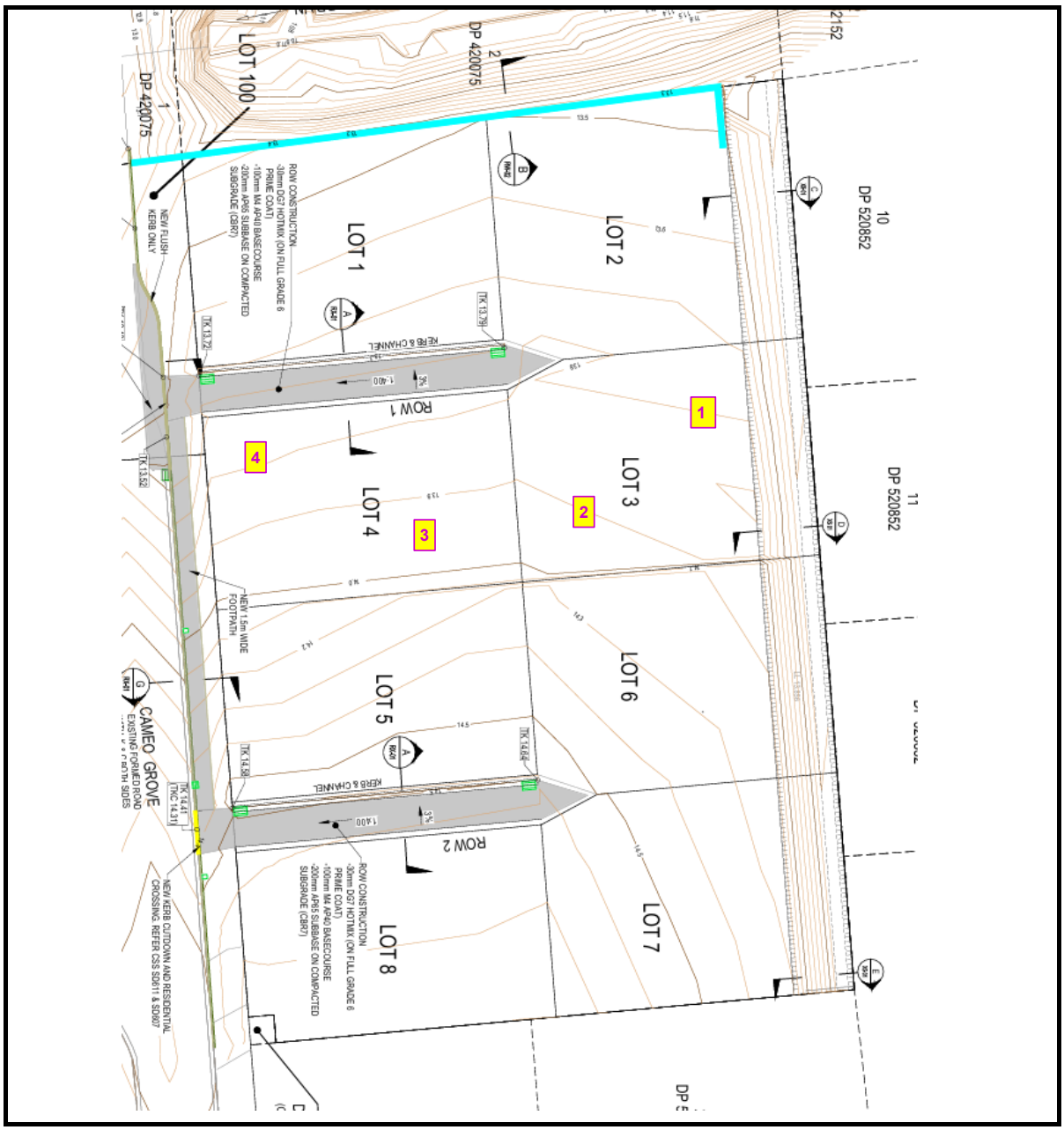
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0428**
Report Date: 8/08/2025
Report Status: Final

Cameo Grove, Lots 3 & 4, 3rd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0433**
Report Date: 11/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 1, 4th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 08/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2220	2340	5.4	96
2	2320	2390	3.3	101

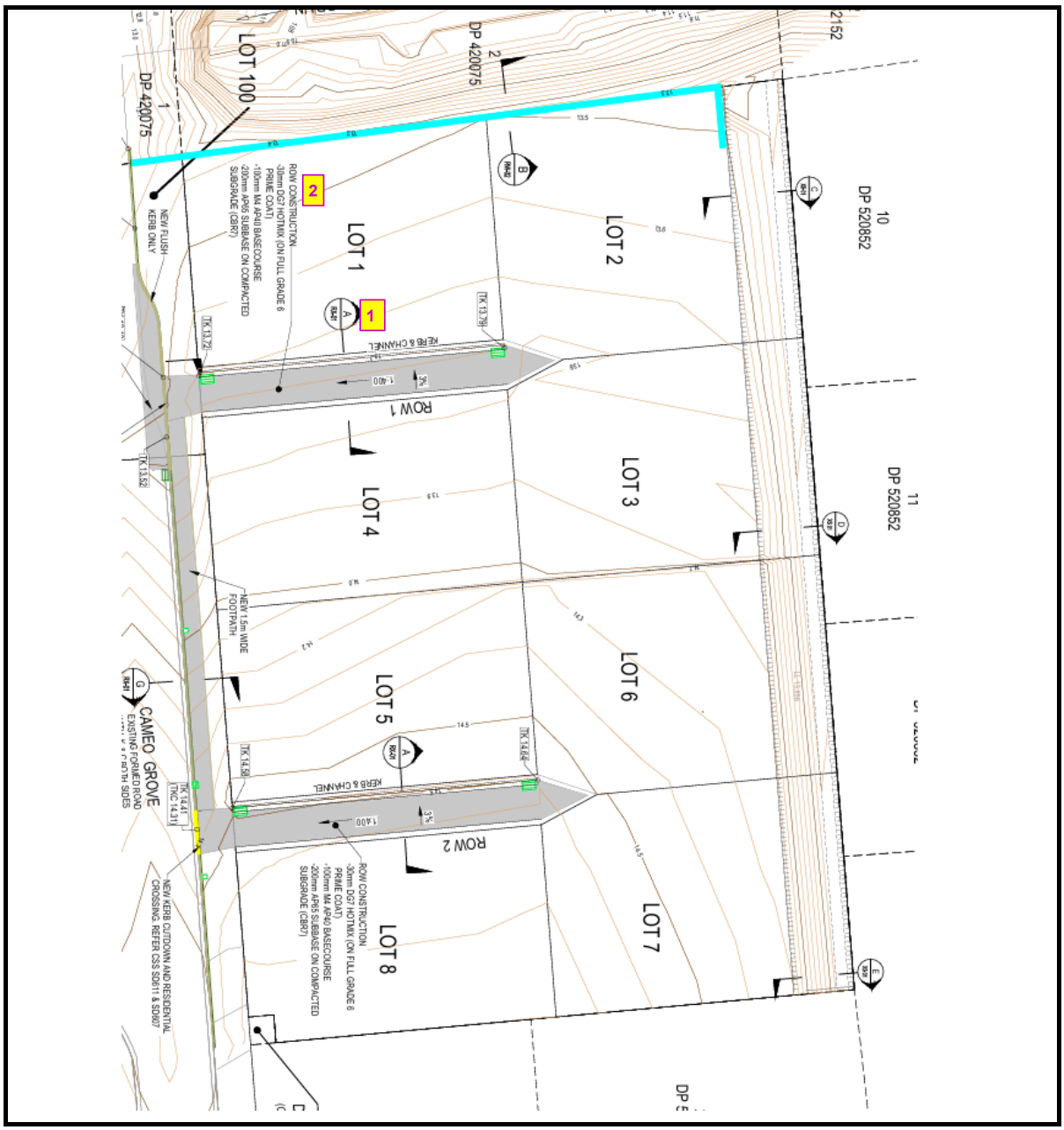
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0433**
Report Date: 11/08/2025
Report Status: Final

Cameo Grove, Lot 1, 4th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0434**
Report Date: 11/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 2, 3rd lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 08/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2200	2290	4.3	96
2	2330	2430	4.2	101

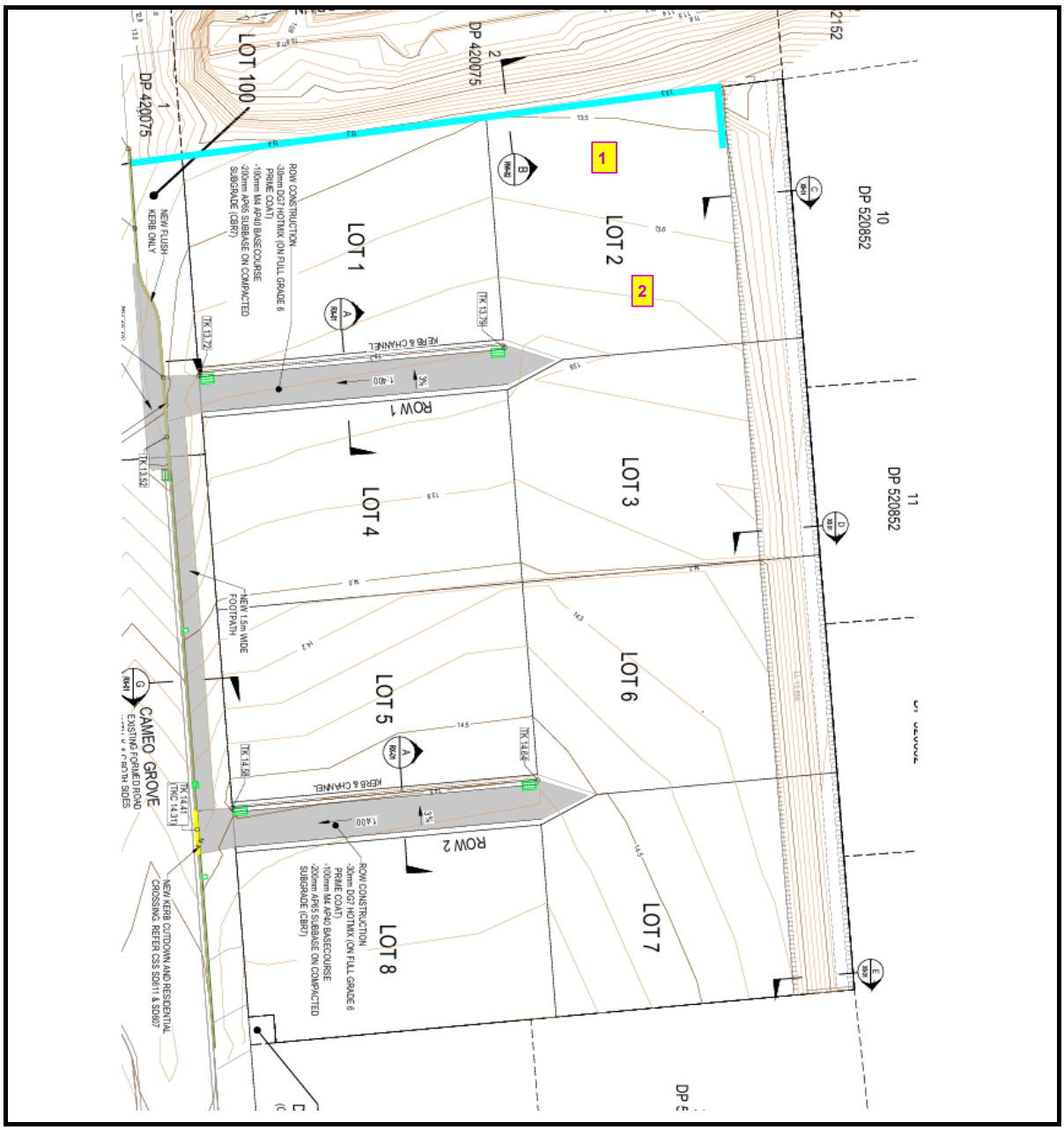
Issued By:
(M. Foster, Laboratory Supervisor)

CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0434**
Report Date: 11/08/2025
Report Status: Final

Cameo Grove, Lot 2, 3rd lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0445**
Report Date: 13/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 3 & 4, 4th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 12/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 4	2240	2360	5.3	97
2 - Lot 4	2220	2330	5.0	97
3 - Lot 3	2370	2480	4.7	103
4 - Lot 3	2300	2400	4.6	100

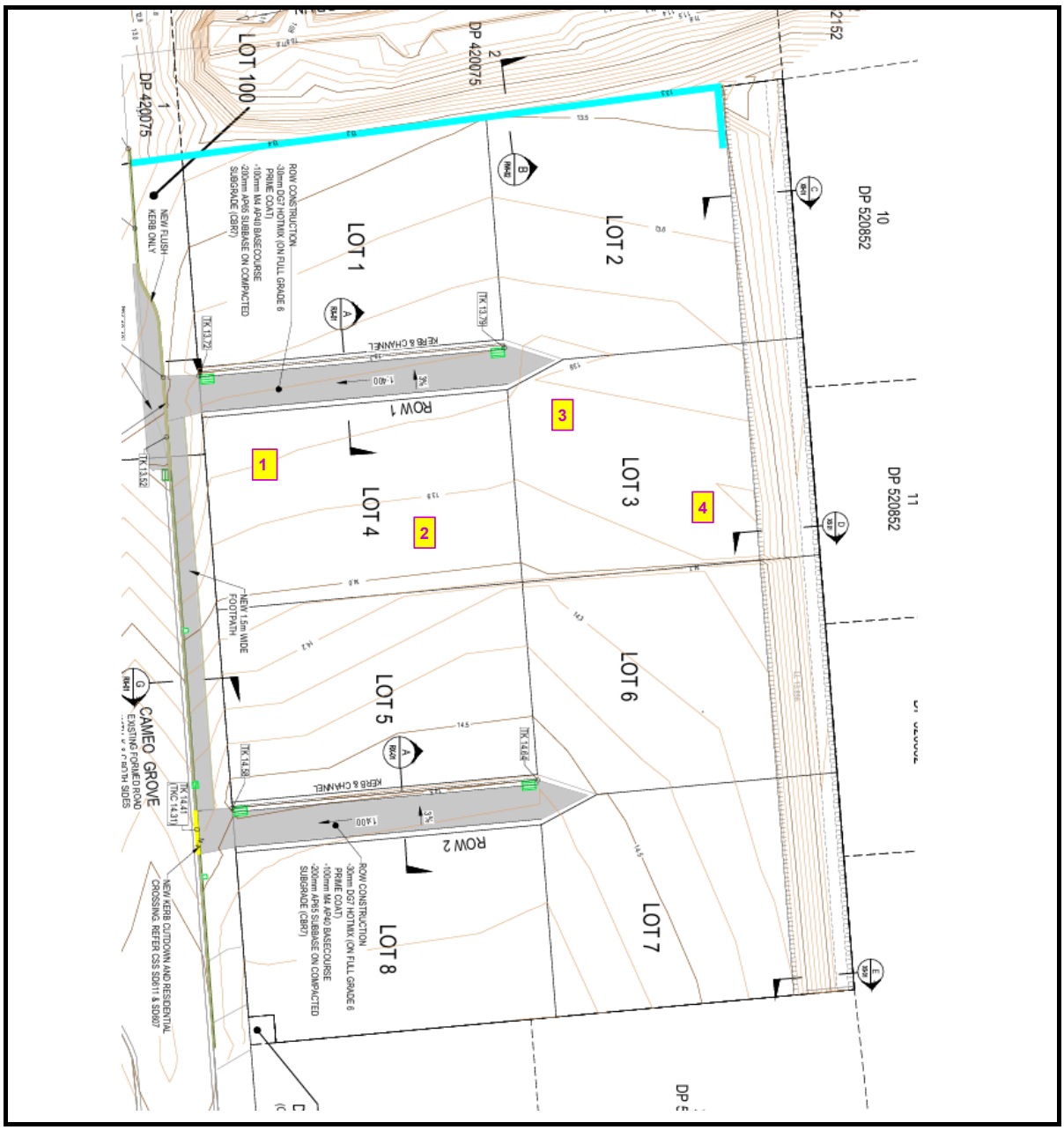
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0445**
Report Date: 13/08/2025
Report Status: Final

Cameo Grove, Lots 3 & 4, 4th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0450**
Report Date: 14/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 1, 5th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 13/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2250	2340	4.0	98
2	2240	2350	5.1	97

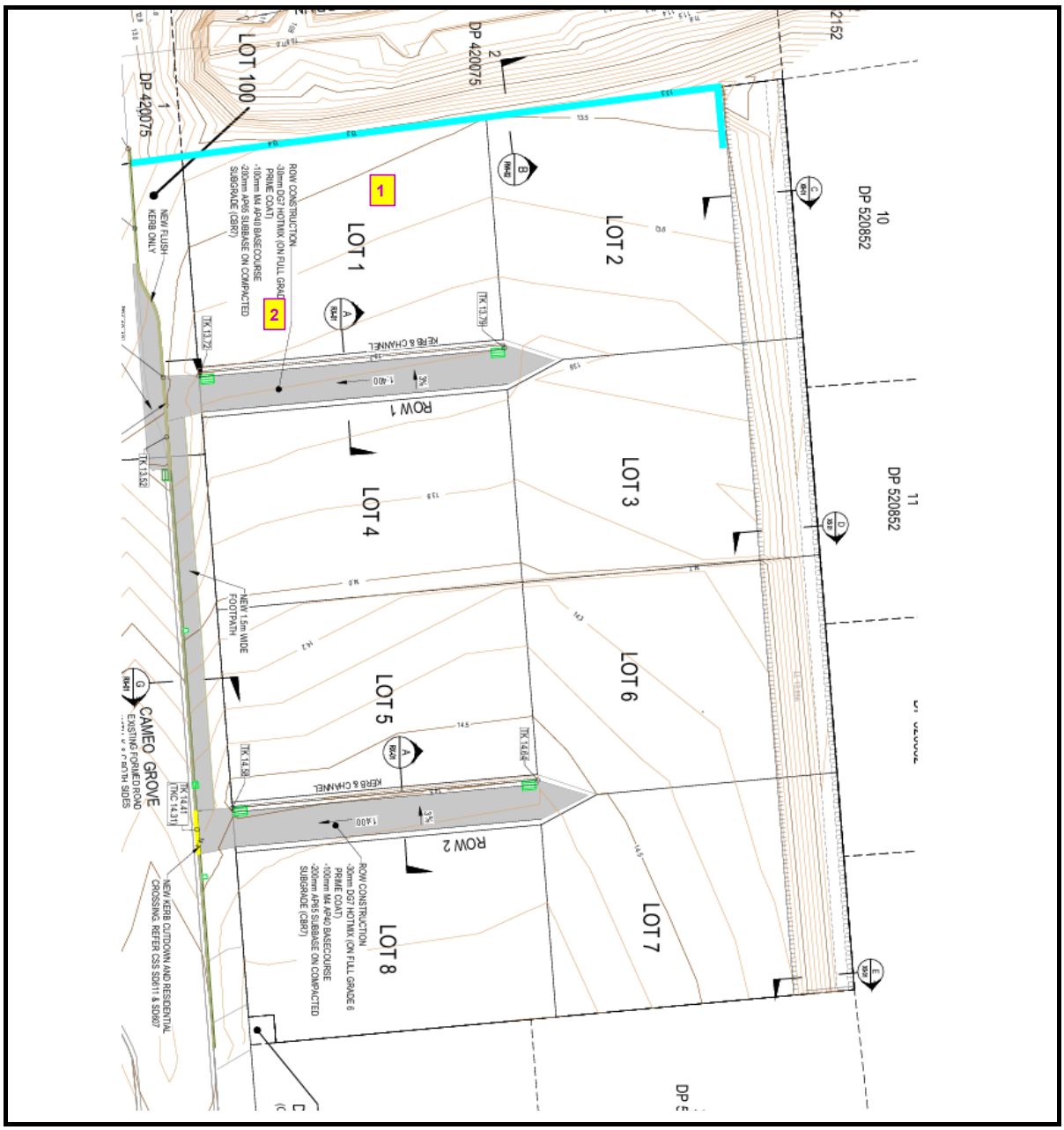
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0450**
Report Date: 14/08/2025
Report Status: Final

Cameo Grove, Lot 1, 5th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0451**
Report Date: 14/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 2, 4th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 13/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2310	2440	5.5	100
2	2280	2410	5.6	99

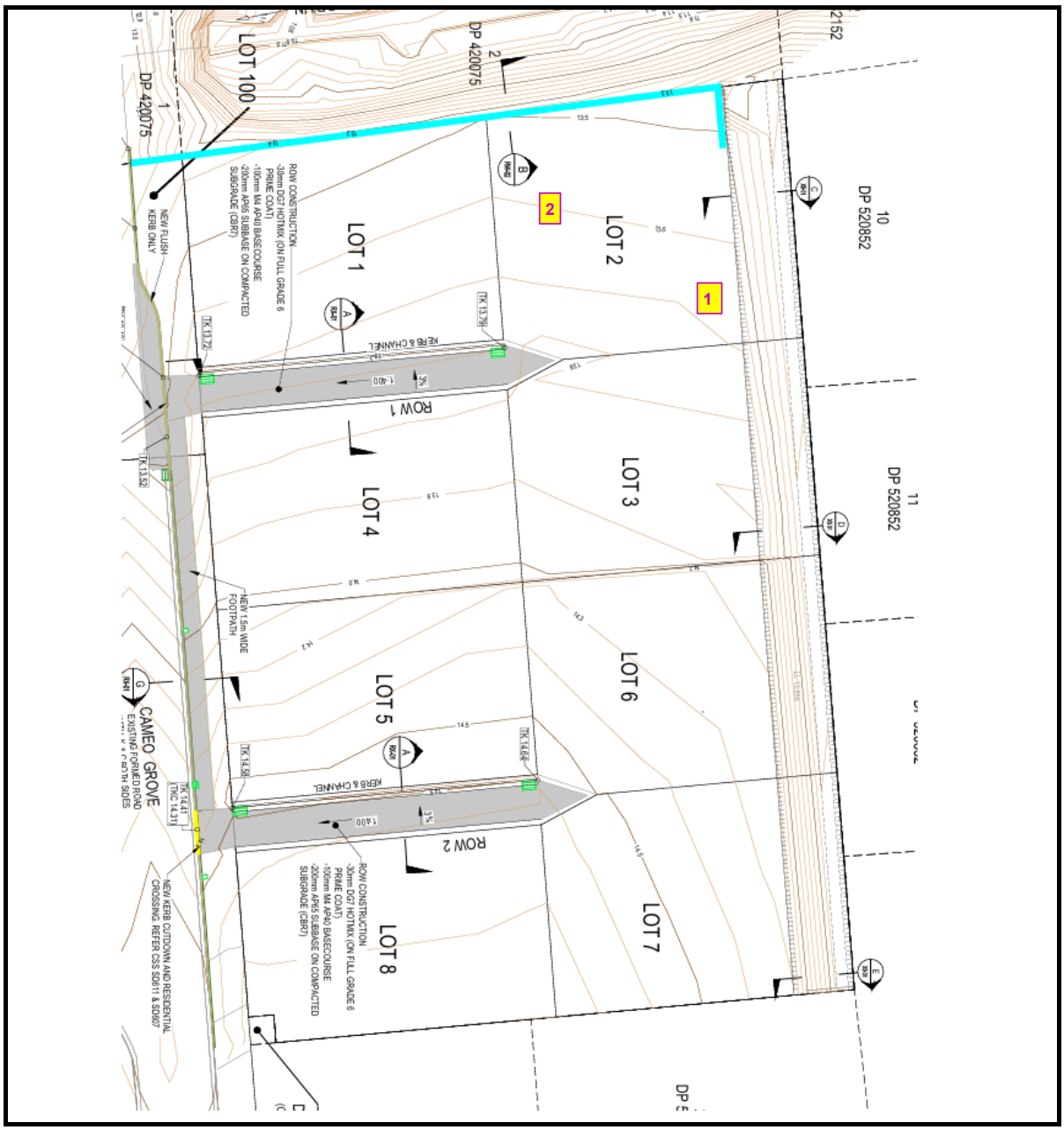
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0451**
Report Date: 14/08/2025
Report Status: Final

Cameo Grove, Lot 2, 4th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0452**
Report Date: 14/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 3 & 4, 5th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 13/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 4	2290	2390	4.3	100
2 - Lot 4	2390	2490	4.3	104
3 - Lot 3	2280	2370	4.1	99
4 - Lot 3	2370	2480	4.4	103

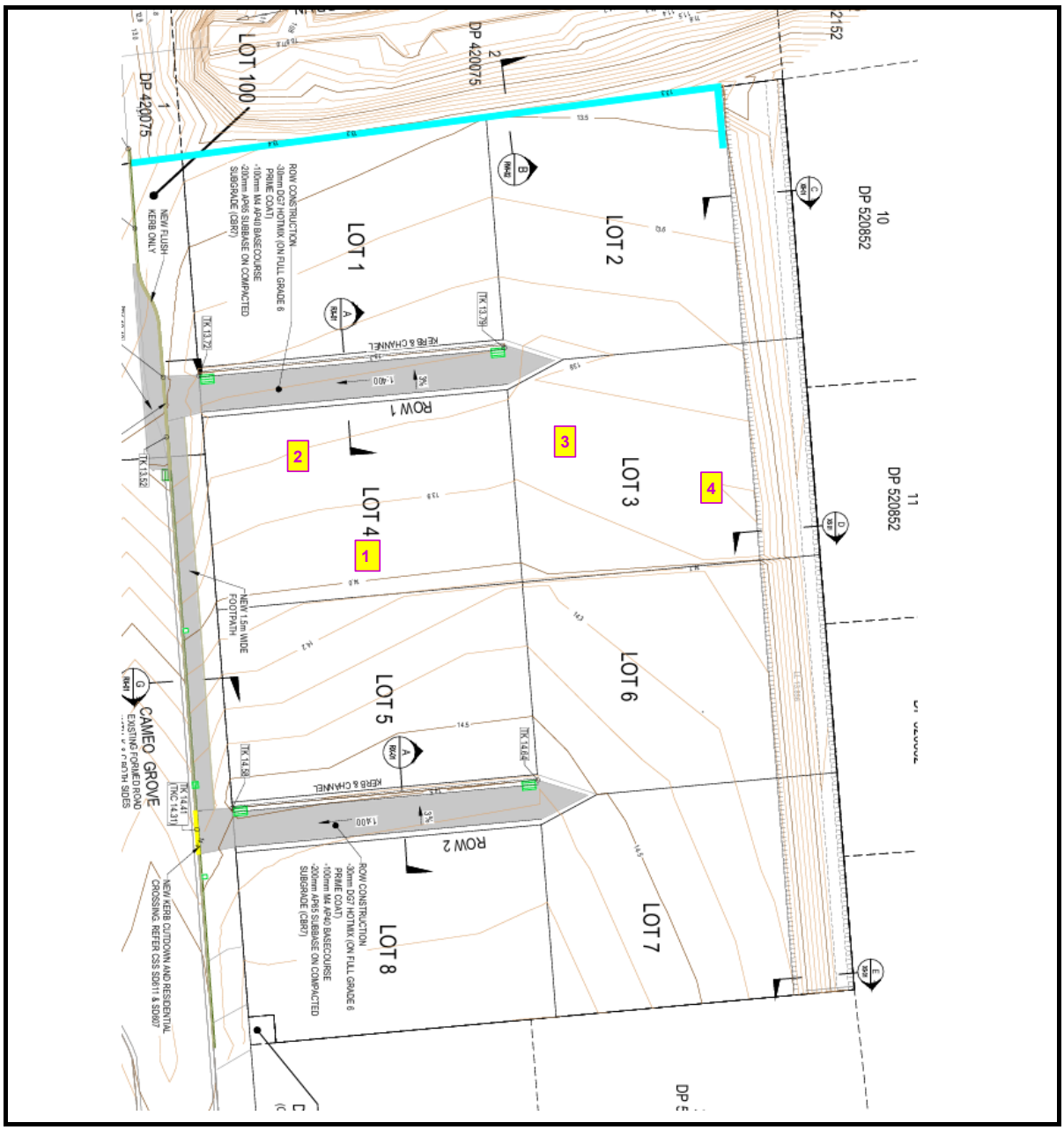
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0452**
Report Date: 14/08/2025
Report Status: Final

Cameo Grove, Lots 3 & 4, 5th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0460**
Report Date: 15/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 1, 6th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 14/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2190	2310	5.3	95
2	2340	2440	4.2	102

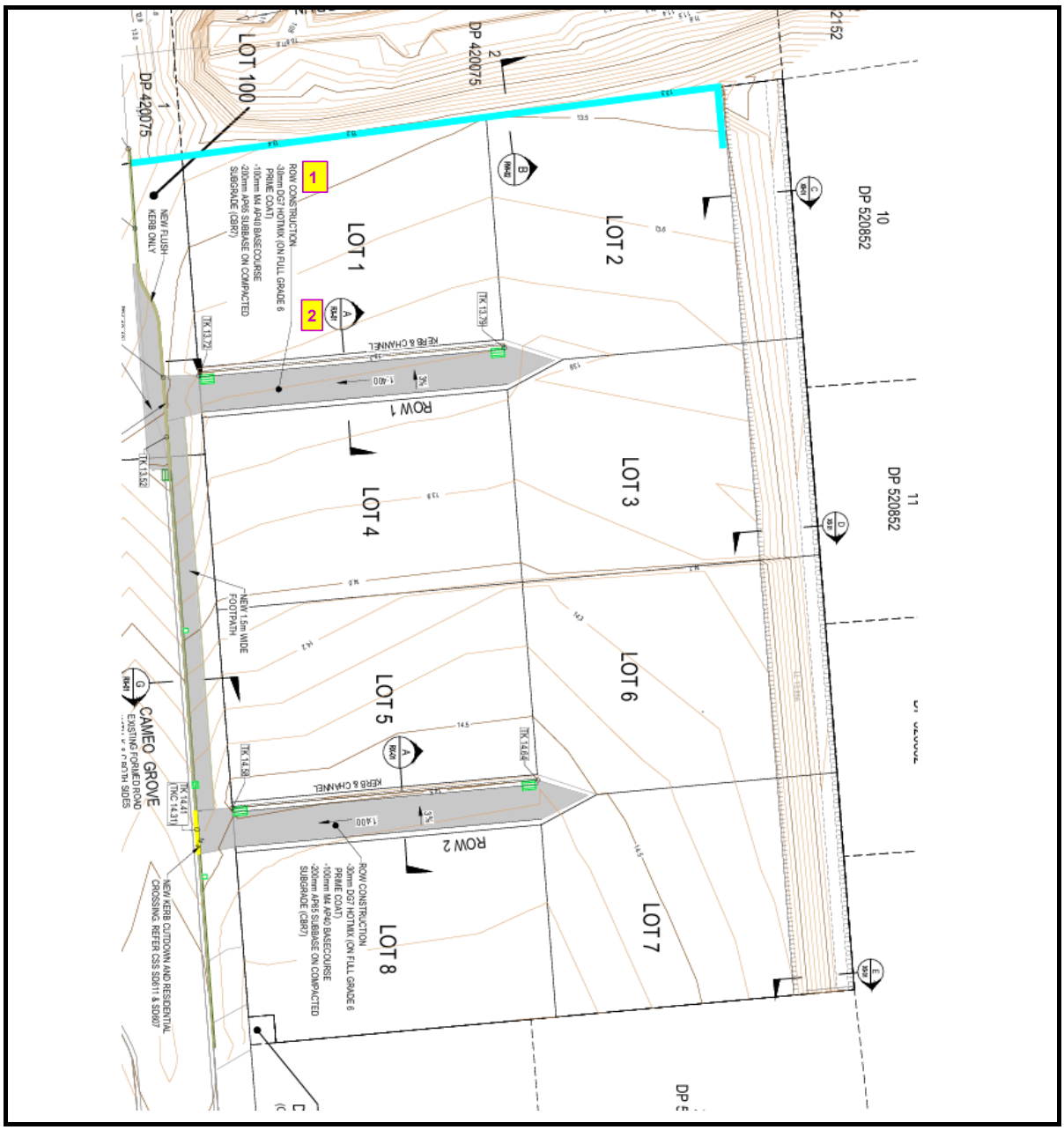
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0460**
Report Date: 15/08/2025
Report Status: Final

Cameo Grove, Lot 1, 6th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0461**
Report Date: 15/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 2, 5th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 14/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2270	2360	4.0	99
2	2270	2380	4.7	99

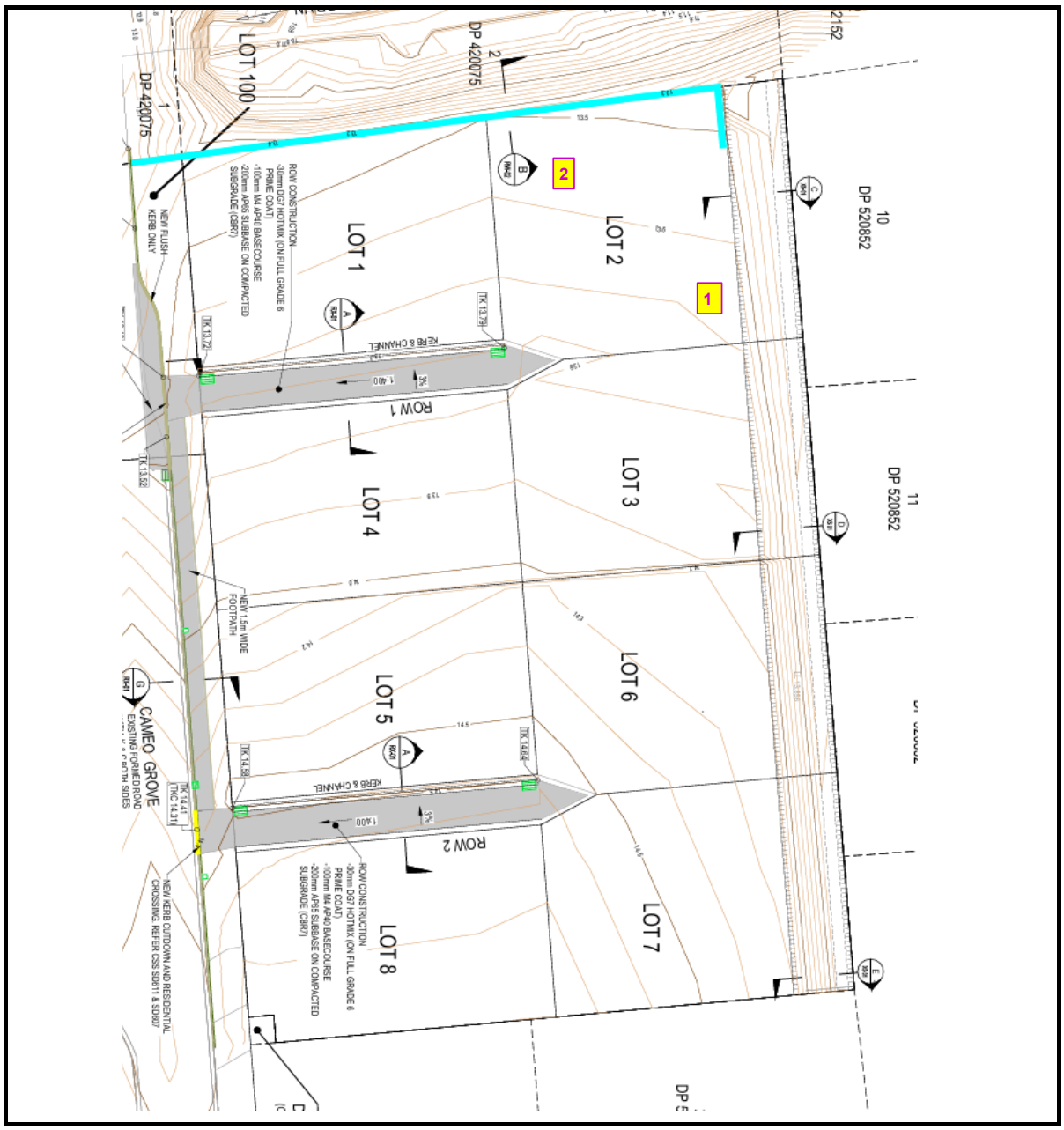
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0461**
Report Date: 15/08/2025
Report Status: Final

Cameo Grove, Lot 2, 5th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0472**
Report Date: 20/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lots 3 & 4, 6th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 19/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1 - Lot 4	2200	2330	5.8	96
2 - Lot 4	2210	2300	4.4	96
3 - Lot 3	2270	2370	4.6	99
4 - Lot 3	2240	2340	4.3	98

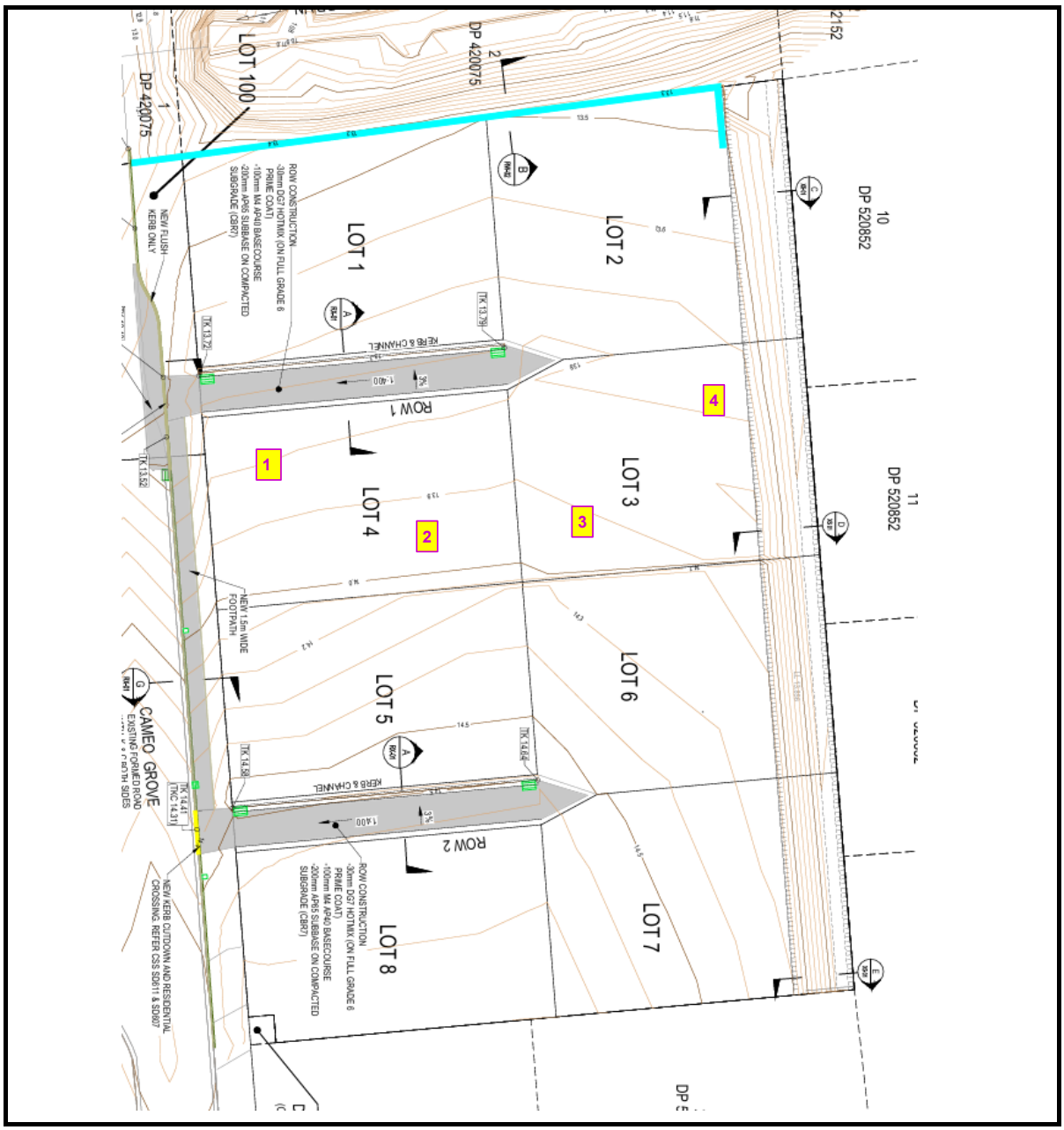
Issued By:
(M. Foster, Laboratory Supervisor)

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Laboratory No: **KB25/0472**
Report Date: 20/08/2025
Report Status: Final

Cameo Grove, Lots 3 & 4, 6th lift



Plans and test locations are not to scale

Notes: *Based on a maximum dry density of 2300 kg/m3 as determined by New Zealand Vibrating Hammer Compaction (Refer Road Science Lab Ref: C25/1991, Issued 6 June 2025)
2 test sites were randomly selected as representative sample locations in each lot.

KB CONTRACTING & QUARRIES LTD

4-8 Tanya Street
Bromley
PO Box 19746
Christchurch
Office Phone: 03 343 5555

Test Report

Laboratory No: **KB25/0473**
Report Date: 20/08/2025
Report Status: Final

Client: KB Contracting and Quarries Ltd
Contact Name: Mr A Hodgson
Location: Cameo Grove, Lot 1, 7th lift
Material: Pit Run
Material Source: McLeans Island Quarry
Contractor: KB Contracting and Quarries Ltd

Tested By: M. Foster
Date Tested: 19/08/2025

Test Method: NZS 4407:2015 Test 4.3 (backscatter mode)
Note: Moisture contents and dry densities as reported by the nuclear gauge

Results:

Location	Dry Density (kg/m^3)	Wet Density (kg/m^3)	Moisture (%)	* Relative Compaction (%)
1	2200	2310	5.0	96
2	2170	2290	5.4	95

Issued By:
(M. Foster, Laboratory Supervisor)