Technical Data Sheet Belmont Quarry

Basecourse Aggregate

Belmont Quarry Source Rock: Greywacke

Source Rock Characteristics	Test Method	Value
Crushing Resistance	NZS4407:1991 test 3.10	@ 130kN < 5% @230kN < 5%
Weathering Resistance	NZS 4407:1991 test 3.11	AA – BC
Solid Density	NZS4407:1991 3.7.1	~ 2700 kg/m^3
Los Angeles Abrasion (LAA)	NZS 4407:1991, test 3.12	<20

Sub Basecourse Aggregate (TNZ M/3 AP65)

Test	Test Method	Value
Max Dry Density	NZS4402:1986 test 4.1.3	> 2.20 T/m^3
Optimum Water Content		4% - 6%

Basecourse Aggregate (TNZ40 M/4)

Test	Test Method	Value
Max Dry Density	NZS4402:1986 test 4.1.3	> 2.3 T/m^3
Optimum Water Content		4% - 6%

Coarse Aggregate

Product	SE	63.0mm	37.5mm	19.0mm	9.5mm	4.75mm	2.36mm	0.075mm
TNZ M/3 AP65	>25	100%	100% - 38%	77% - 42%	58% - 26%	45% - 16%	34% - 10%	< 9%
TNZ40 M/4	>30		100% - 95%	85%- 58%	65% - 30%	45% - 15%	35% - 10%	< 8%

Winstone Aggregates Technical Datasheet

Concrete Aggregate

Belmont Quarry Source Rock: Greywacke

Source Rock Characteristics	Test Method	Value
Crushing Resistance	NZS3111 Section 14	>400kN to produce 10% Fines
Weathering Resistance	NZS3111 Section 15	AA-CB

Coarse Aggregate

Test		Test Method	Value
Unit Mass	Loose Poured - SSD*	NZS3111 Section 10	1400 Kg/m3
	Compacted -SSD*		1580 Kg/m3
	-voids		40-50%
Absorption		NZS3111 Section 12	1-2%
Density	-Dry		2650 Kg/m3
	-SSD*		2670 m3

* Saturated Surface Dry

Fine Aggregate (AP5) Dry

Test		Test Method	Value
Unit Mass	Loose Poured - SSD*	NZS3111 Section 10	16300 Kg/m3
	Compacted -SSD*		1770
	-voids		30-40%
Absorption		NZS3111 Section 16	1 - 2%
Density	-Dry		2550 Kg/m3
	-SSD*		2600 Kg/m3
Chloride Content			

* Saturated Surface Dry

Coarse Aggregate

Product	Cleanliness Value	37.5mm	26.5mm	19.0mm	13.2mm	9.5mm	4.75mm
40mm	>85	100%	100 - 90%	80 - 50%	20 - 0%	<5%	
20mm	>85		100%	100% - 90%	20% -10%	10% - 0%	0%
13mm	>85			100%	100% - 90%	50% - 40%	5% - 0%
10mm	>85				100%	100% - 85%	40% -5 0%

Fine Aggregate

Product	Moisture Content	SE	6.7 mm	4.75 mm	2.36 mm	1.18 mm	0.6 mm	0.3 mm	0.15 mm	0.075 mm
AP7 Washed	< 10	> 70	100 %	100% - 90%	70% - 60%	35% - 25%	20% - 10%	10 %- 5%	5% - 0%	< 3%
AP7 Dry	< 10	> 50	100 %	100% - 95%	80% - 70%	65% - 55%	60% - 40%	40% - 20%	20% - 10%	< 10%

Asphalt Aggregate

Belmont Quarry Source Rock: Greywacke

Source Rock Characteristics	Test method	Value
Crushing Resistance	NZS4407:1991 test 3.10	<5% - 230kN
Weathering Resistance	NZS 4407:1991 test 3.11	AA
Polished Stone Value *selected high PSV aggregate	BS EN 1097-8:2009	>55 >60*
Weak Particles	AS1141.32:1995	<1%

Coarse Aggregate

Test		Test Method	Value
Absorption		ASTM C127-07	< 1%
Density	-Dry		> 2.60 T/m3
	-SSD*		> 2.70 T/m3

* Saturated Surface Dry

Fine Aggregate

Test		Test Method	Value
Absorption		ASTM C128-07a	< 2%
Density	-Dry		>2.55 T/m3
	-SSD*		>2.60 T/m3
Degradation		AS1141.25.2	>90

* Saturated Surface Dry

Coarse Aggregate

Product	CV	ALD	19.0 mm	13.2mm	9.5mm	6.7mm	4.75mm	2.36mm
Grade 3	>80	8.5 – 10.0mm	100 %	100% - 80%	15 – 0%	<5%	0%	
Grade 4	>80	6.0 – 7.0mm		100%	80% - 50%	<10%	<0%	
Grade 5	>80	5.0 – 6.0mm		100%	100% - 95%	75% - 50%	8% - 0%	< 2%
Grade 6	>80	4.0 – 5.0mm			100%	100% - 95%	60% - 20%	<5%

Fine Aggregate

Product	Moisture Content	SE	6.7mm	4.75mm	2.36mm	1.18mm	0.6mm	0.3mm	0.15mm	0.075 mm
PAP	< 4%	>35	100%	100% – 90%	80% – 60%	50% – 35%	40% – 20%	30% – 15%	25% – 10%	15% - 10%

All testing carried out at an IANZ accredited laboratory. Test results available upon request. All results correct at time of publication, July 2012.