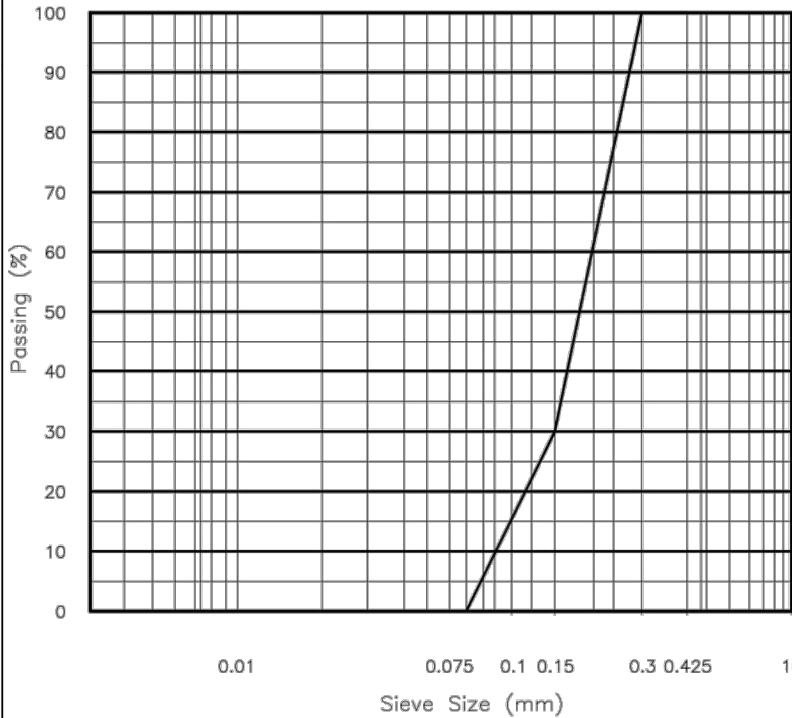


GRADING ENVELOPE



Notes:

1. This approval is for Woodhill sand as supplied by Winstone Aggregates Ltd.
2. The sand shall be a fine grained silty black sand without a clay fraction.
3. Properties of sample tested on 16 March, 1995.

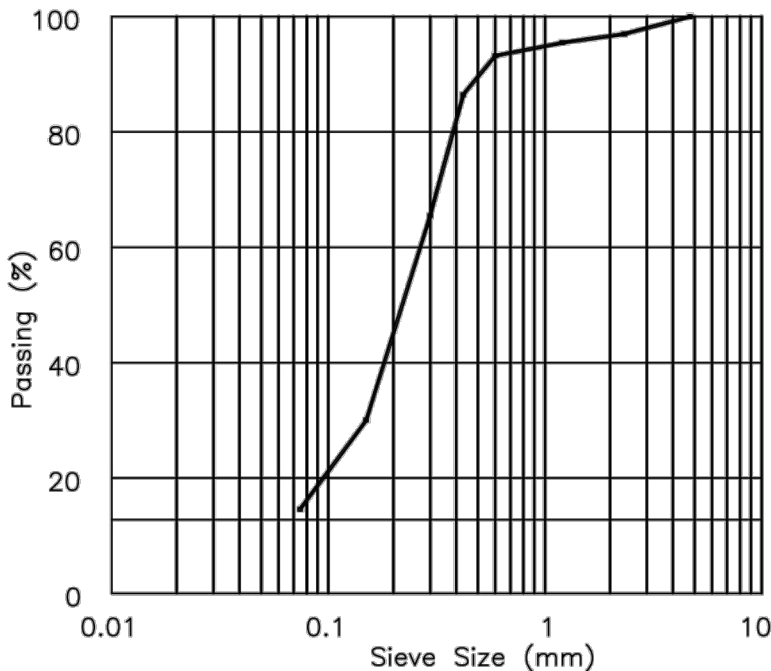
Grading:

SIEVE SIZE (um)	PERCENTAGE PASSING
425	100
300	99
150	32
75	0

4. CBR: 50% at max, Density of 1.9t/m (to ASTM D2049-69), Permeability: Average 1.337×10^{-4} m/sec to BS1377.

WOODHILL SAND

GRADING ENVELOPE



Notes:

1. This product is an alternative to Woodhill sand.
2. Properties of sample tested on 20 October 2004:

SIEVE SIZE (mm)	PERCENTAGE PASSING
4.750	100
2.360	97
1.180	95
0.600	93
0.425	86
0.300	65
0.150	30
0.075	13

3. CBR is 60% and tested methods are:
 Particle Size Distribution, NZS3111:1986:Test6.
 CBR, NZS4407:1991:Test 3.15.
 Water Content, NZS4407:1991:Test 3.15.
 Compaction, NZS4402:1986:Method 4.1.3 (Vibratory).

EXCELSIOR SAND

REVISION	BY	DATE



AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE SAND FOR USE IN
REPLACEMENT OF UNDERCUTS
IN ROADWORKS

SCALE:	N.T.S.
DRAWING No.	RP006
VERSION	1.0