Soil Description

Examine samples from two sets of soil profile. One profile is from the Darling Range (Kalamunda, Gosnells, Kelmscott etc). The other profiles are from near the coastal area. Write your answers on the soil description form on the following page.

Observe and describe the following physical properties of each soil sample:

Color

1. Note whether the sample is wet, moist, or dry.
2. Apply some water to the sample if it is dry. (To compare the color of the sample when it is wet.)
3. Note the color and size of any Spots or blotches found in the sample.

Stickiness

1. Wet a small amount of the sample (about the size of a large marble) with a little bit of water and press it between your thumb and forefinger.
2. Note if the material sticks to your finger and thumb or if it simply compresses.
3. Use this observation of stickiness in conjunction with the following guidelines to generally assess the grain size of the sample.

Table 1: Guidelines for Estimating Grain Size

If the material …	the sample contains…
Sticks	clay-sized grains (significant proportion)
compresses, feels and looks like velvet	silt-sized grains (significant proportion)
compresses, then falls apart	sand-sized grains (predominantly)

Plasticity

1. Wet the same small amount of the sample with a little bit of water.
2. Try to roll this moistened sample out and make a snake.
3. Note whether the snake you have made is long and thin, medium length and thick, or short, with no snake formed.

Table 2: Guidelines for Estimating Plasticity

If the material makes a …	the sample is considered to be…
long thin snake	clay-very plastic
medium length thick snake	plastic
short snake, or no snake	not plastic

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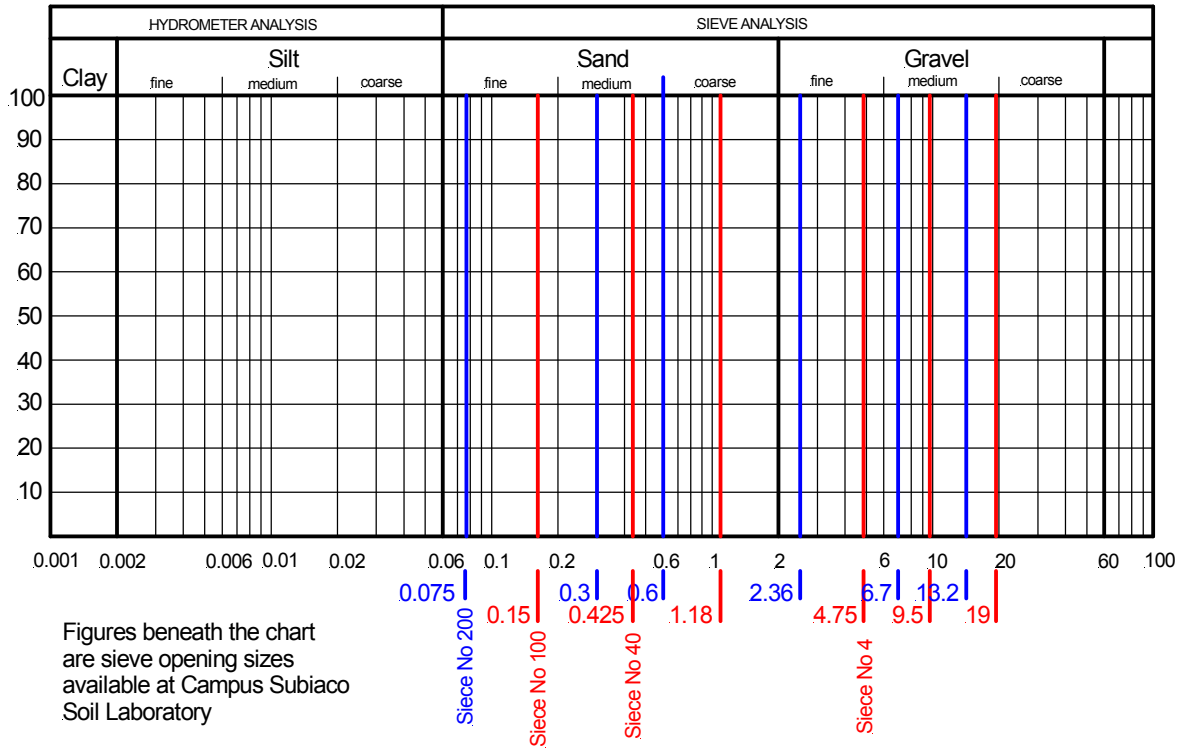
Sieve size	Mass retained	Mass passing	Summation percentage
(mm)	(g)	(g)	%
19.0			
13.2			
9.5			
6.7			
4.75			
2.36			
1.18			
0.60			
0.425			
0.300			
0.150			
0.075			
Pan			

1. The results of a sieve analysis is shown in the opposite table.

   Complete the mass passing figures and the percentages figures in the table

2. Plot the percentages figures in the chart below.

3. How would you classify this soil sample?



Figures beneath the chart are sieve opening sizes available at Campus Subiaco Soil Laboratory

4.3 - Classification:

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