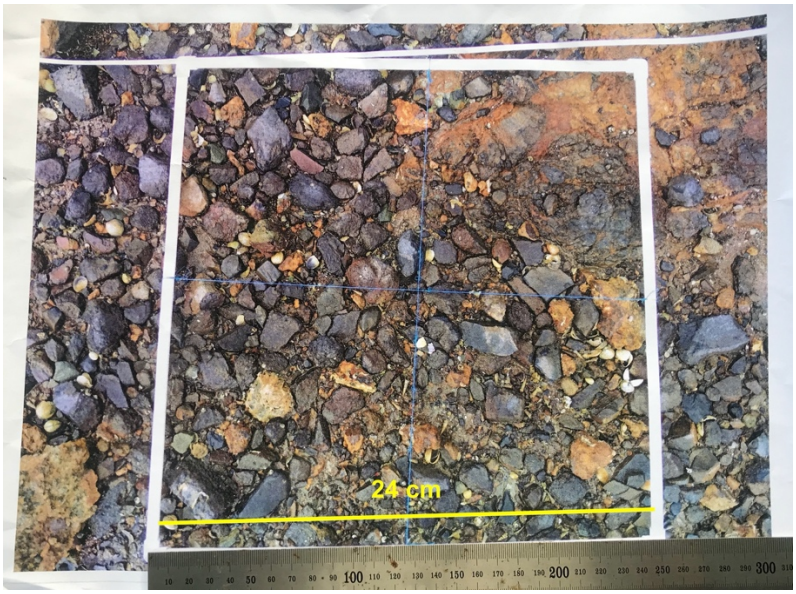
# Assessing the Accuracy of Percentage Coverage

A great critical thinking exercise is to reassess the accuracy of your estimations for the percentage cover of substrate.

This can be done by printing out a photograph of your quadrat onto an A3 (or larger) piece of paper. You will then need to divide the photograph into 100 evenly sized squares, this can be done in a few simple steps.
You will need:

- A printed out photograph of your quadrat
- A ruler
- A permanent marker

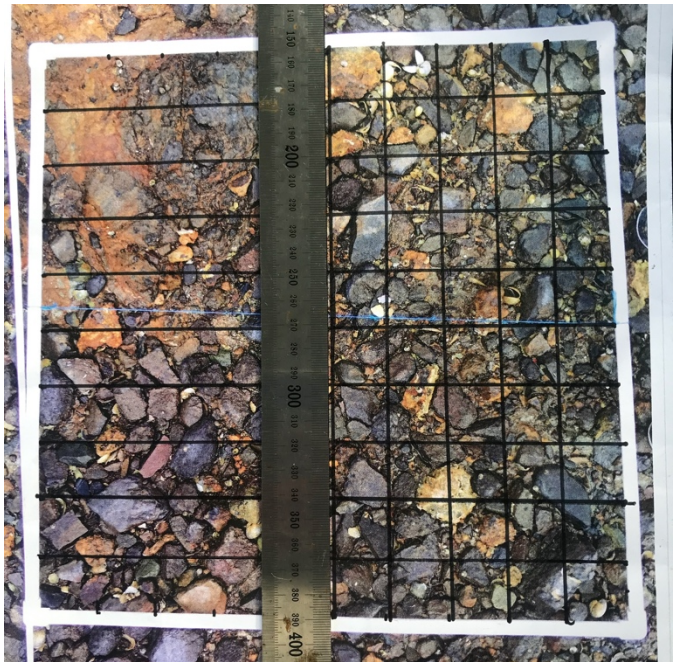
1) Measure each side of the quadrat frame printed on your sheet of paper.



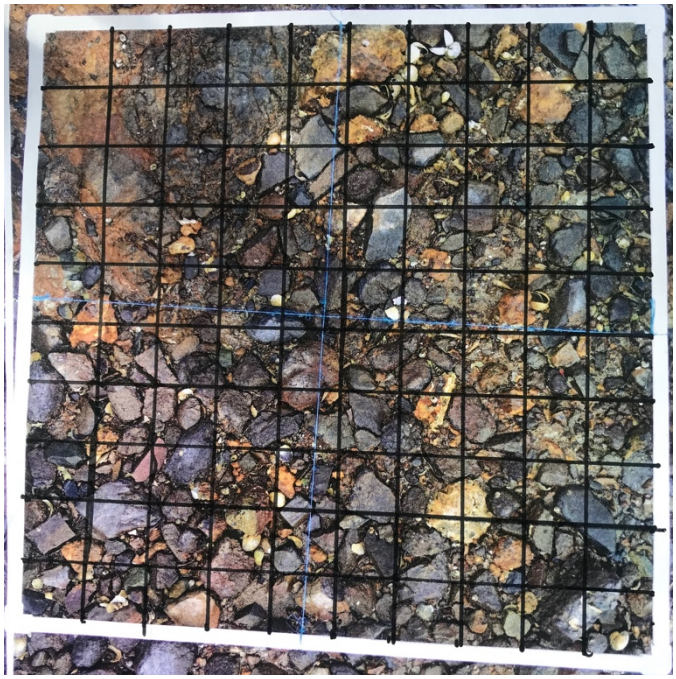

2) Divide the length of each side of the frame by 10. These will be the length of the small squares.
*For example, if one of the sides of your printed quadrat frame is 24 cm the small squares will be spaced out 2.4 cm apart (0, 2.4, 4.8, 7.2 ....). It can be helpful to write this out before you start marking your photo.*

3) Using a permanent marker, mark out the intervals on each side of your frame.

4) Draw lines vertically and horizontally across the photograph in permanent marker.



5) This will give you a grid that is 10 squares by 10 squares totalling to 100 squares



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Once you have drawn up your grid, assign a substrate type that best represents each small square.


You can use the following code for your substrate type:

R = Reef
B = Boulder
C = Cobble
G = Gravel
S = Sand
Se = Sediment
M = Mud

When all the squares are full, count up the number of squares assigned to each substrate type. To make sure you have counted all the squares, add up the valves for all the substrate types which should sum to 100. If not, you might need to re-check your grid.

Compare what you calculated in the photograph to what you calculated on the shore – were you close?

You can do some comparisons between the two methods. Some questions to answer may include:

- What were the benefits of each method?
- What were the challenges?
- Which method do you think is more accurate and why?