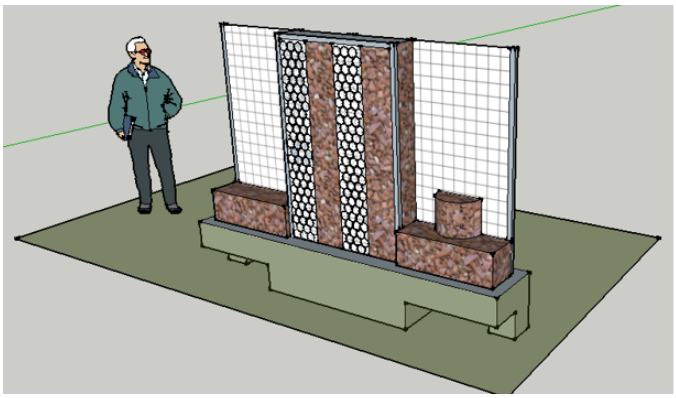
From: "Scott Kelly" <scott@shadeengineering.com.au>
Subject: RE: John's Personal Project
Date: 18 September 2016 at 12:17:55 PM AWST
To: "'John Wallis'" <19walj@helena.wa.edu.au>

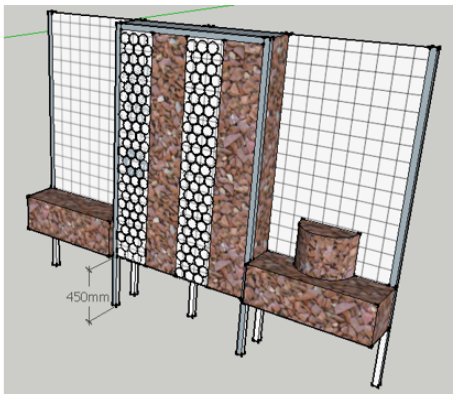
Hi John,
obviously the greatest mass is in the centre of your structure, where the 2x main rock features are and this is what would need the greatest support.
The outer sections appear to be significantly lighter - the 300mm high rock sections at either end will also need a reasonable foundation to stop these sections from moving.

I would think the footing spec for your design would not need to be any bigger than one of the footings we used for the tensile membrane structure at the GFC oval.

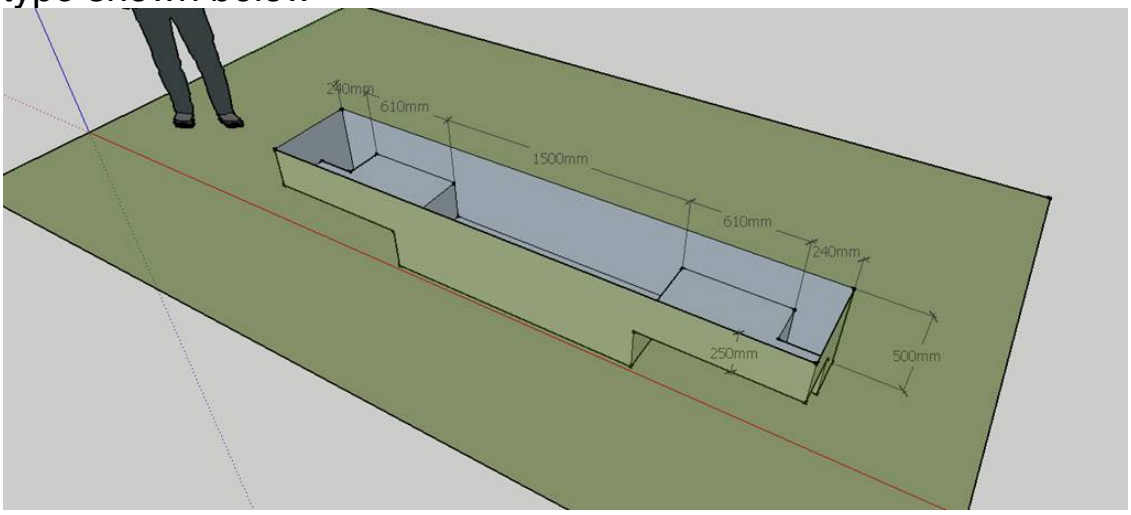
The restrictions of this site at the school (the limestone terraces and underground rock) meant we had to deviate from our standard footing design options - either a mass PAD footing or bored PIER footing.
Instead we used a STRIP footing detail – see photo “IMG 1353” and spec “1167_001” attached)

Based on your drawing, I think your structure would look something like this –





I would think your structure would need a STRIP footing of the type shown below –



Concrete spec should be a 20/20 (20mm agregate/20MPa) with a “60 slump” (wetness) with 2 layers of F82 reo mesh cast into the footing.

Sketchup model (John W.skp) attached FYI.

Please let me know if you need anything further?

Regards

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From: John Wallis [mailto:19walj@helena.wa.edu.au]
Sent: Sunday, 18 September 2016 9:49 AM
To: scott@shadeengineering.com.au
Subject: John's Personal Project

Dear Scott

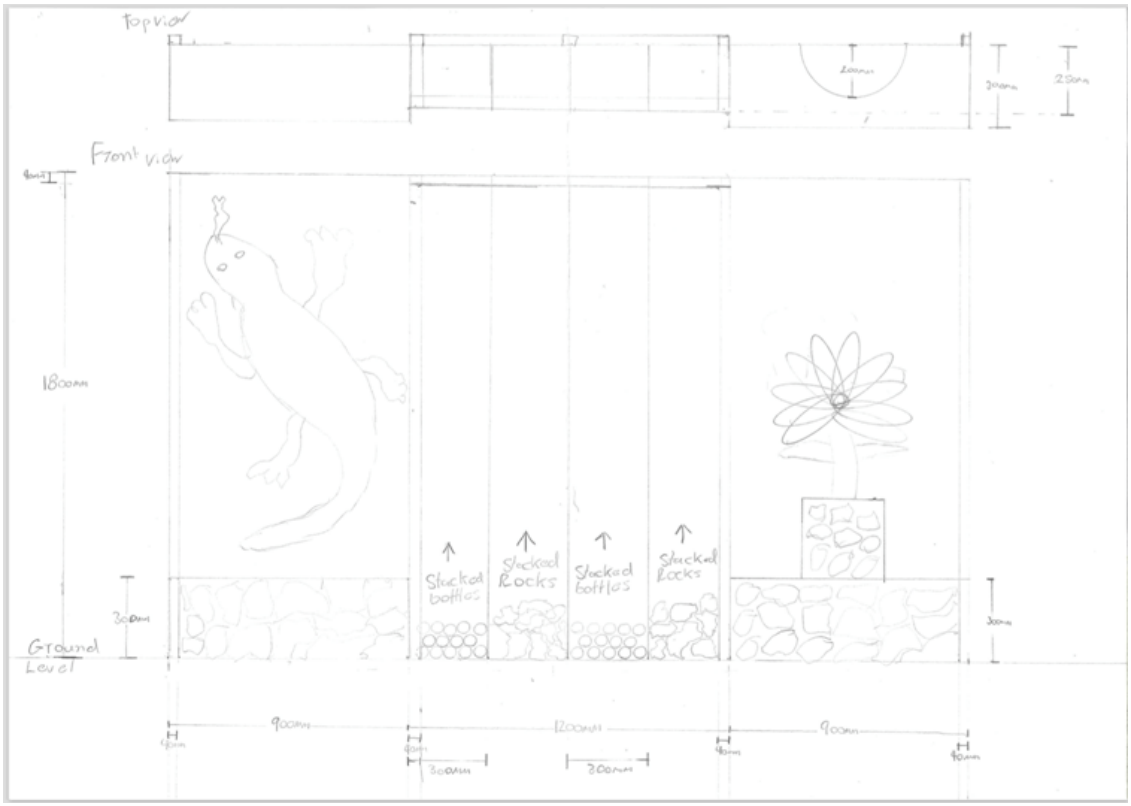
Thank you for the conversation we add about the school project.

Please find attached the drawing of the structure I am going to build. Essentially it will be used to screen a fence. The height will be 1800mm above ground level. The centre section which will have limestone rocks and empty bear bottles stacked in the gabion cages will be 1200mm long and 250mm wide which is about the length of a bear bottle. The two 900mm end sections of mesh will have various wall art hanging off of them. There are 5 posts along the back of the structure and 2 at the front as shown in the diagram. A single mesh sheet runs the length of the back of the structure.

The Frame is constructed out of 40x40x3mm square galvanised tubing, and the mesh is 50x50x4mm galvanised mesh.

The question I have is how deep to bury the upright posts and how wide the concrete footings should be.
Also is there a specific type of cement I should use and the ratio for the concrete mix.

Please let me know if there are any other detail that you need from design.



Kind regards

John Wallis