

WaSH Construction

Langrug, Franschhoek
November-December, 2012

Before



Before

- Back area overgrown with weeds, covered in trash and broken old Wendy House
- Greywater channel broken near toilet block
- Large pile of sand on concrete slab
- Three layers of concrete slab
- Two toilets, one completely broken
- Small tree next to the toilets

Prep Work



Shoveling off the pile of sand



Concrete slab after a lot of pick-axeing



The working team and WPI students



The group planning for the following weeks

Prep Work

- Picked up trash and rocks in back area
- Took out tree
- Cleaned up greywater sludge next to channel
- Got rid of all plants in back area and near channel
- Moved pile of sand to other side of Wendy house, exposing the entirety of the concrete slab
- Disconnected the toilet from the sewer and water lines
- Planned on starting days at 8am
- Attempted to plan communal lunches

Day 1

26/11

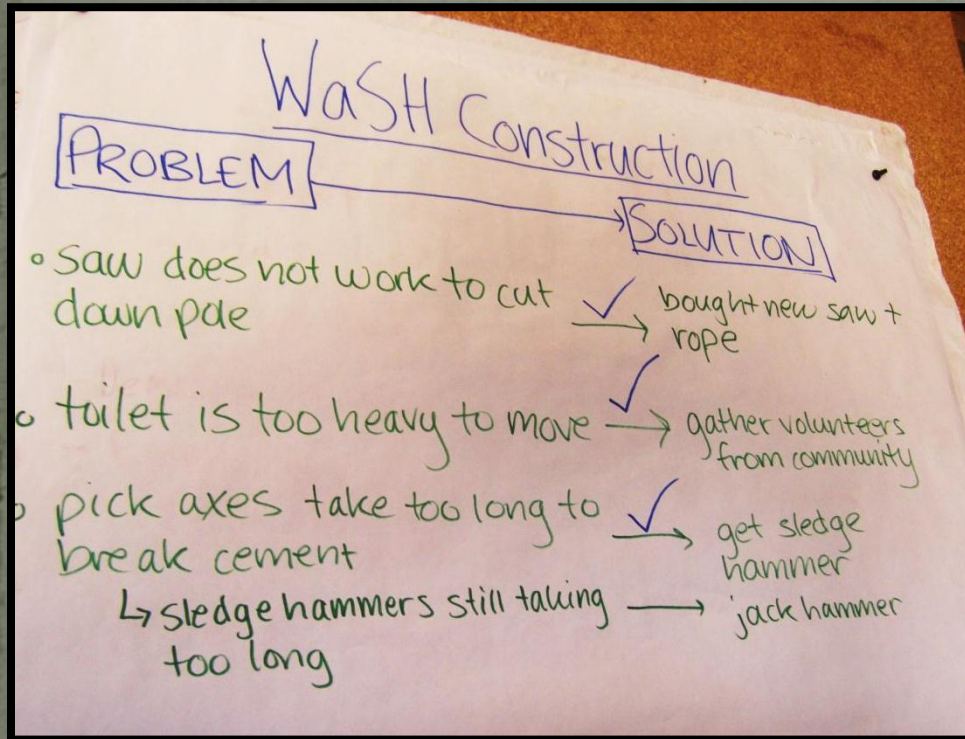


Safety goggles are key!



Scott using the sledge hammer to break the concrete slab

Day 1 26/11



List of problems that occurred and any solutions that were implemented

List of tools and their overnight location so that nothing gets lost

TOOLS	
TOOL DESCRIPTION	LOCATION
2 in screws	box
level	box
yellow rake 1	wendy
yellow rake 2	wendy
sledge hammer 1 (rental)	wendy
sledge hammer 2 (Hendri's)	w/ Hendri
shovel 1	wendy
shovel 2	wendy
shovel 3	wendy
shovel 4	wendy
long pick axe	wendy
short pick axe	wendy
red hand saw	wheelbarrow
wheelbarrow	wendy
push broom 1	wendy
shovel 5 - WPI	wheelbarrow
shovel 6	wendy
shovel 7	wendy
push broom 2	box
tape measure 1	in box
skil drill	box
tape measure 2	box
hammer 1	box
grey water gloves (2 pairs)	wendy
shovel 8	box
brick trowel	box
green rope	box
10m extension cord	box
hammer 2 (steel)	box
duct tape	box
power converter	drill box
drill bits (2 sets)	box
goggles 1	box
goggles 2	box
goggles 3	box
gloves 1	box
gloves 2	box
long yellow tape measure	
face masks	

Day 1

26/11

- Used pick-axes and sledgehammers to start breaking concrete slab
- Further cleaned greywater channel and dug it out deeper
- Formed rock pile, sand pile and sludge/dirt pile
- Took out pole near greywater channel
- Moved Mo2 toilet into the middle of the back area, away from where WaSH will be built
- Started marking out the area for construction
- Bought tools and materials, developed tool location list

Day 2

27/11

Cleaning up the broken concrete



Wood for staking out the area



Using the jackhammer



Beginning the
greywater channel

Day 2

27/11

- Broke up cement slab with jack hammer
- Partnership meeting between Joey and Scott
- Began greywater channel repair
 - Mixed cement
- Purchased some tools/material
- Began to stake out area

Day 3
28/11

Digging holes with shovels and a spear to put the poles in



Results of the greywater channel dam



Trevor beginning to repair the greywater channel

Day 3

28/11

Quick visit from some local boys



The poles have arrived!



Carrying water to be used for
mixing concrete



Juan trying to dig out a big rock



Anchoring the poles

Day 3

28/11

- Finished greywater channel repair
- Continued to measure and stake out the area
- Dug 6 holes (approximately 70mm deep each)
- Set up 5 poles
 - Anchored with supports
 - Filled in with concrete
- Bought more supplies and tools
- Closed fence at the end of the day

Day 4

29/11

WPI Students and Working Team with their Cape Town Project
Centre T-Shirts



Day 4

29/11

Breaking the Moi toilet



Getting the greywater out of the pole hole



Cutting the pole so it fits under the crossbeam



Figuring out how much of the pole to cut off

Day 4

29/11

Our new friend
Koko/Shadrick
helping us dig



Siyanda pouring
concrete around one of
the poles



Sarah made a clay
turtle



Trevor digging trenches



Caryn, Ralle, and the plumbers digging

Day 4

29/11

- Working team got T-shirts!
- Removed dam from greywater channel
 - Channel works! Water flows down and out of the WaSH area
- Continued digging holes and setting up poles
 - Finished all but one
- Plumber began digging out sewer line
- Trevor began creating trench between the poles

Day 5

30/11



Trevor, Hendri and Tim working on the greywater channel cover



Wooden frames to shape the greywater channel concrete covers

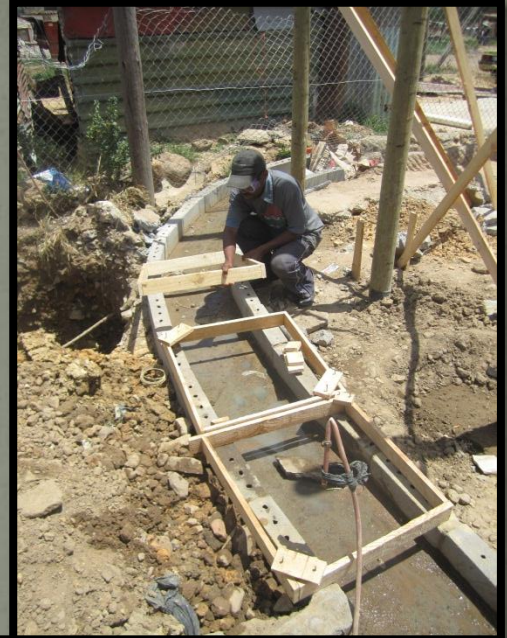


The women working team members mixing cement

Day 5

30/11

Alfred laying out the wooden frames over the greywater channel



Pieces of one giant rock that got in the way of a pole hole



Back view of the construction site



The Langrug goats climbing the rubble pile



Day 5

30/11



Covering up the hole with wood...after Caryn gets in



The plumbers working on the sewer line



The women preparing wire fencing to be used in the concrete slabs



Attempting to stop the broken waterline! The impromptu sprinkler was refreshing after a long day's work in the sun

Day 5

30/11

- Plumbers dug trenches for sewer line and pipes
- Second to last pole was placed and supported
- Hole near greywater channel
 - Accidentally hit water line while digging
 - Covered up with wood to prevent people from falling into it
- Wooden frames made for concrete pieces over greywater channel
- Supports removed from day 2 poles
- Trevor began digging trenches for concrete slab frame
- Koko/Shadrick and a couple of other community members helped us out for a while

Days 6 and 7

1/12 and 2/12

- The sewer pipes were finished
- During the weekend, the working team finished the frame for the concrete slab on the far side
- They then poured most of the concrete for that slab and all hung around keeping an eye on it
 - Some footprints (kids and dogs) were in the slab, but for the most part it was kept in tact



Day 8

3/12

Khungeka showing off her new clothes! It is traditional for Xhosa women to wear long skirts once they are married



A chaotic and overstuffed wendy house



Planning out a grocery list with the women co-researchers

Day 8

3/12

Framing out the
new concrete
slab



Soda bottles covering up the
sewer pipes on the concrete
slab

Pouring the
concrete
into the new
frame



Day 8

3/12

- Decided to extend the concrete slab further
- Re-measured the slab and built a new frame to reflect those measurements
- Braced the frame with rubble to prevent it collapsing when the concrete was poured
- Men from the community (hired by Trevor) began mixing a lot of concrete and pouring it
- Ordered wood for the next few construction days

Day 9

4/12

- As we drove into Langrug through Franschhoek, we noticed there were a lot more people standing around outside than usual. There was a dead dog in the road and rubble on the sidewalks and streets. Police cars were pulling in behind us and some were already on the road ahead of us. Khungeka and Zodwa emerged from the crowd (they appeared to be looking for us) and told us that the farmers were striking and advised us to turn around. The driver immediately drove us back to Stellenbosch where we met with Scott and Bob, and eventually Dawie, to discuss the issue.

Day 10

5/12

- The protest continued
 - Based more on political discontent than the farmers' strike
- We stayed in Cape Town.

Day 11

6/12



Scott and Trevor lifting a concrete slab for the greywater channel



Footprints in the concrete slab



The working team during the general meeting talking about how someone broke into the wendy house



Day 11

6/12

Scott with all
of the hard
hats!



Covered
greywater
channel



View from the roof: Langrug and the
construction site



Day 11

6/12

The lumber was delivered!



Starting to frame out the walls



Day 11

6/12

- Problem: someone had broken into the Wendy house and stole many of the tools (saw, hammers, tape measures)
 - New tools had to be purchased
 - Working team held an impromptu general meeting
 - Police got involved
- Last pole was put in
- Framing was completed for all but one side
- Problem: some of the poles were placed incorrectly so the measurements were off

Day 12

7/12



Building the
framing for
the zinc
walls



Day 12

7/12



The women
balancing the
zinc brackets
on their heads



Putting up the
zinc walls

Clearing
the
rubble



Day 12

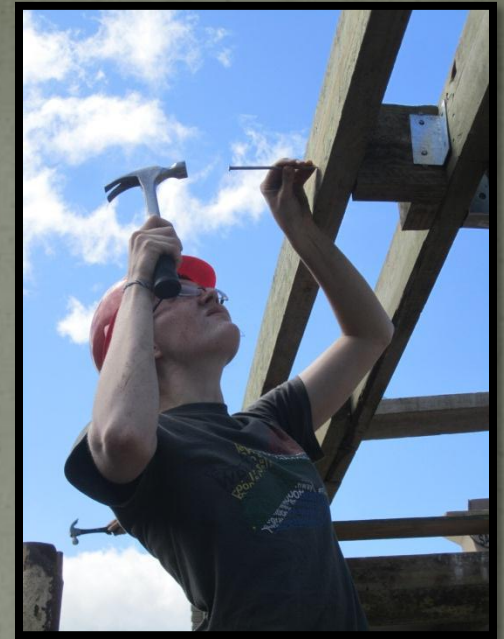
7/12

- Finished framing
- Zinc was delivered
- Finished the rafters for the high roof
- Started putting up zinc siding
- Figured out framing where the poles were not measured correctly
- Cut down part of the old crossbar poles

Day 13

8/12

Sarah
adding to
the
framing



Working on the roof



Leveling the ground inside

Day 13

8/12



Trevor using the grinder



Scott using the grinder



The roof in-progress

Day 13

8/12

- Started putting up zinc roofing
- Leveled out dirt around the concrete slabs
- Trimmed the zinc siding using the grinder
- Finished zinc side walls
 - Problem: walls were not straight initially and had to be readjusted
- Began digging holes for middle poles

Day 14

10/12

Fixing the
cement slab



Digging the last few pole holes



Twins!

Day 14

10/12



The finished roof!



Day 14

10/12

- Finished zinc roof
- Placed the three middle poles (with concrete)
- Put up framing for the plastic siding
- Fixed footprints in the cement slab

After

