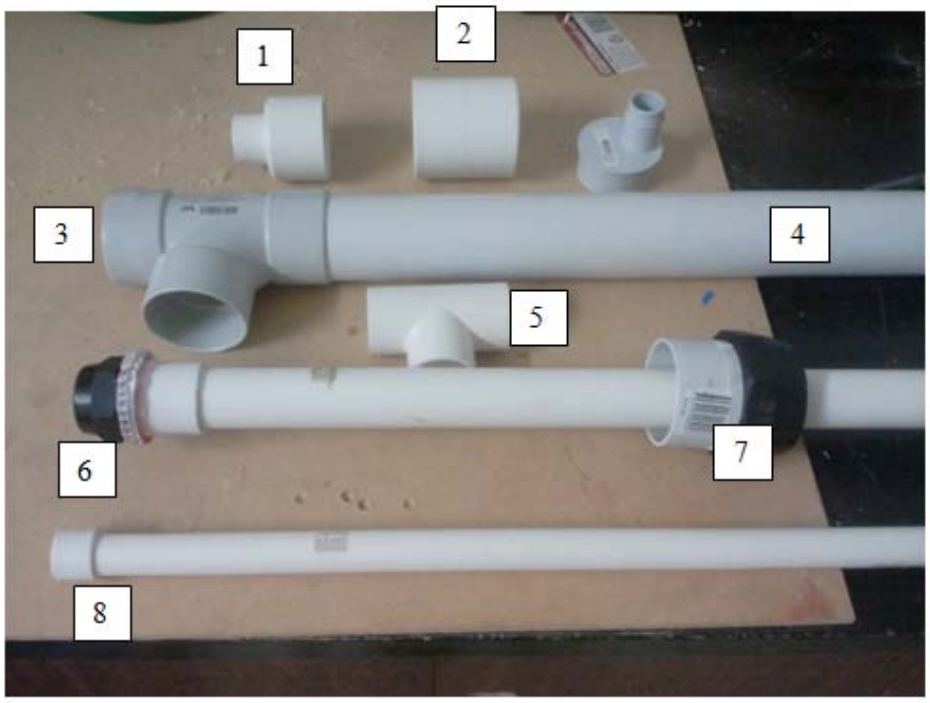



Ok this little hand dredge was inspired by videos of the YouTube and the desire to get to the bottom of crevices that eluded me at Tyrconnell.

When I mention glue, I am referring to using PVC Pipe Glue, take necessary precautions such as gloves and well ventilated area. If you have not used PVC pipe glue before then be careful, this is unforgiving glue, once glued it stays glued.. or use something else that will hold the pipes, only reason I used it is because I had some in the garage.

Basic structure is the Body, Handle/Plunger and the Nozzles.

Shopping list is as follows. Refer to the numbers on the photo above

1 - 50mm – 20 mm reducer HP (High Pressure)
2 – 50mm coupler HP
3 – 50 mm x 88 Connecter DWR (grey sewer pipe)
4 – 1m x 50mm Pipe
5 – 25 mm T piece
6 – 25 mm threaded cap and threaded connector DWR
7 – 50 mm threaded cap and threaded connector DWR
8 - 15 mm – 20mm connector and 15 mm x 1m length of PVC

First Part - Make the Plunger.

This is easier to make before you join all the other parts together.

Fit the T piece to the 25mm pipe and glue.

Step two.

Make an improvised gasket for the plunger; I tried several ways to make this, getting some pipe insulation and other bits of assorted rubber.

I ended up cutting two circles out of corflex, that is the plastic cardboard used in outdoor advertisements, found a bit attached to a for sale sign. Thanks Remax! (Edit – After a quick test, we found the suction was lacking, so I will be making a new gasket out of some rubber - Thanks GM)

Cut the outer circle then cut a circle that is just a bit smaller than the diameter of the thread, you can then screw it on to the 25mm threaded connector.

Tighten up the 25mm threaded cap. Test for fit, I would recommend putting the two cardboard disks at 90 degrees, that way it should resist folding when in the body.

Once you are happy with the fit of your gasket,

Don’t glue yet as you have to decide on the length - And fit the plunger/handle into the body cap, which we will make next.

You can go one of two ways here, you can buy a 50 mm end cap or go with a threaded cap, I chose a threaded cap, glued the thread piece into the body and I can unscrew the cap to change the gasket or clear the tube, if you use a 50 mm cap, don’t glue it.

Just use a hole saw to drill the hole out, I did not have a 25mm hole saw so I just used a chisel to enlarge the hole, you want a reasonably tight fit here so the plunger wont wobble around when in use and possibly snap, don’t go overboard on the borehole.

Ok now you have the hole in the cap so the plunger slides nice and smooth, fit the cap to the plunger and glue the gasket end to the plunger, you will need to glue this or it will come off in the tube.  DO THIS AFTER YOU DECIDE ON THE LENGTH, you want the plunger to stop just before the Y piece.

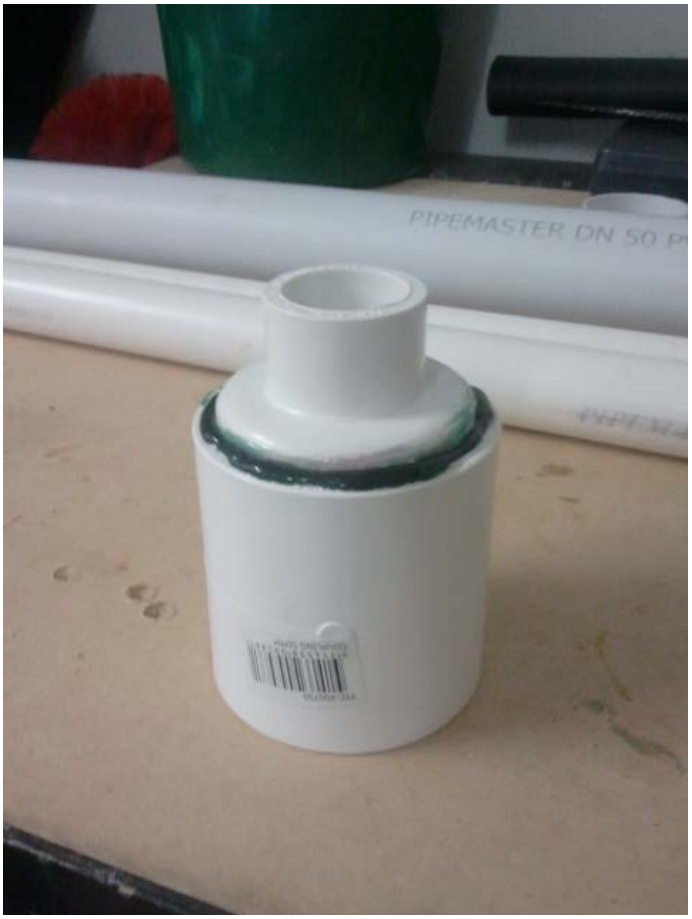
Step Two  - Make the Nozzle Assembly

The fun begins. As I used DWR for the cost factor, the grey don’t fit with the white all that cleanly, you can get a 50 mm – 25mm hose fitting near the water tank items in bunnings, you will just need to get the connection to fit the nozzle, that is the un numbered item in the first pic.

I cut the length of 15mm pipe to at 400mm, and 650 mm, this gave me one 400, one 350 and one 250 nozzle, I cut a 45 on the 350 mm. You can heat the pipe over a flame to close off the nozzle if you want; I will do this latter and put up a post on how it goes.

Ok now the nozzles are done, you need to make the nozzle connection piece. You can either glue the 15mm connector to the inside of the 50 – 20 reducer or buy three and glue to the nozzles, I will be gluing to the nozzles, makes for an easier change over in the field.
Take your 50mm connector, your 50 – 20 reducer, I found the 50 – 20 reducer was loose in the socket, the plumber at Masters where I bought the stuff told me to put two layers of PVC Pipe glue on to both surfaces, waiting for the glue to go tacky before putting on the next coat, on the third coat I slide the pieces together. A bit of glue oozed out, just clean up with a bit of the solvent. Make sure you wear gloves and are in a well ventilated area when doing this... the fumes are pretty nasty.


You should end up with something like this.




Step Three - Assemble the body!

I cut 130mm of the body pipe, this is the same length as the Y join. I then glued a 50mm cap onto this pipe to become the collection chamber.

If you find that the nozzle connector won't go over the one end of the Y join, you can gently heat the end of the Y join over a flame for about 5 mins, this will soften the pipe allowing you to push the nozzle connector into position. Hold the pieces together and you should end up with a tight fit, I did not glue this as I did not want to take the Nozzle off again. It is a pain but you will get there.

So now you should have three parts, the Nozzle and Y join with the collection chamber. The body with the plunger fitted and the nozzles themselves.

At this point you just need to fit the body pipe to the Y join assembly and then fit a nozzle and your good to go.

Here is a pic of the completed project..

Good luck