HOW TO BUILD A MINI MINI RAMP

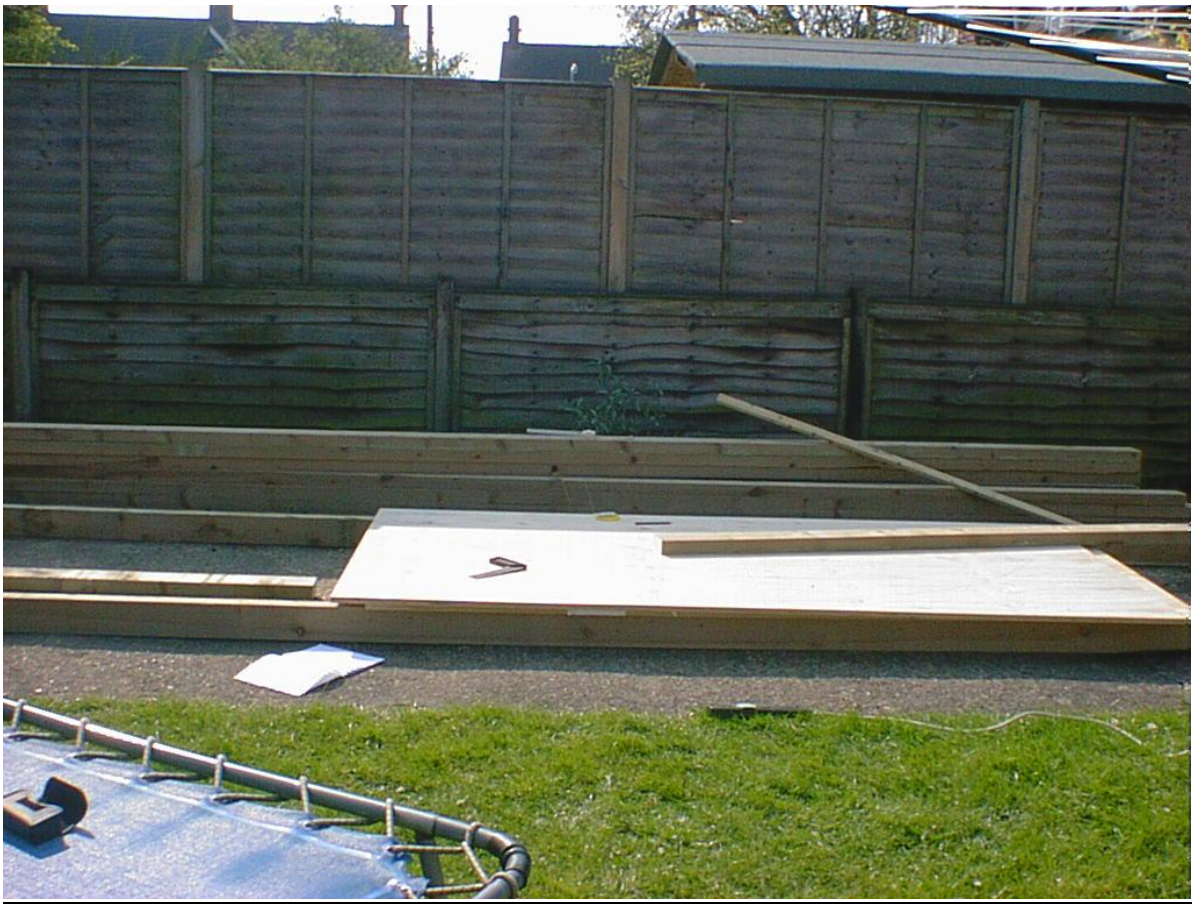
TOOLS

Jig saw
Pencil
Tape measure
Drill or electric screwdriver
13mm metal drill bit
6.5mm metal drill bit
5mm wood drill bit
3mm wood drill bit (these tend to break easily so you may need more than 1)
Phillips head screw bit

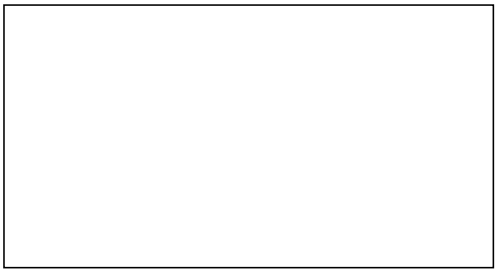
MATERIALS

Quantity	Item	Price (£)
34	8 foot long 2x4. Some builders' merchants sell these in 16' lengths	86.36
4	8x4 foot ¾" ply	89.32
8	Locks	32.00
4	Hinges (door hinges are best)	7.68
3lb	2 ½" screws	11.20
2lb	1 ½" screws	5.10
10	8x4 foot 4mm ply	75.00
7	8x4 foot OSB	49.00
2	8 foot (1¼" internal radius) coping. Scaffolding poles were used for the coping.	32.00
	Total	387.66

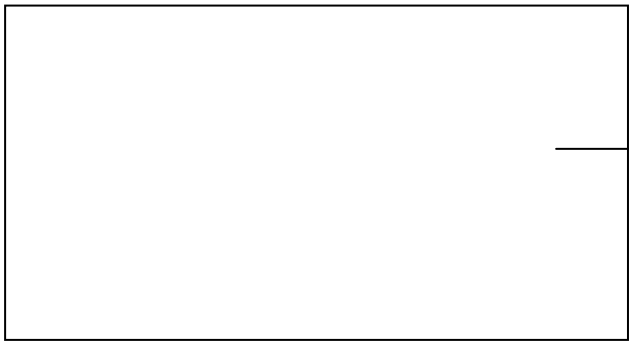
TRANNYS



1. lay out one piece of ¾ inch ply

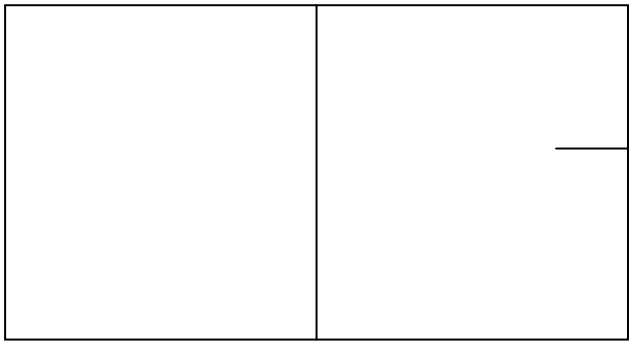


2. from the bottom right corner measure a line vertically on the right that is 2’3” (27”) long, and put a mark at the top

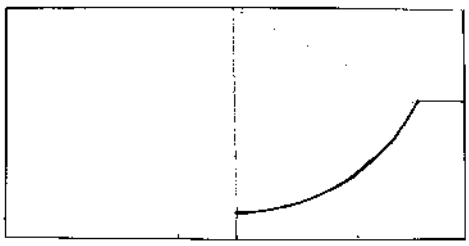


3. measure and draw a line horizontally from that point, 9.5” long(this is for the deck)

4. start at the bottom right corner again, and measure horizontally 5’, and 4’ away from the corner. mark both of these points

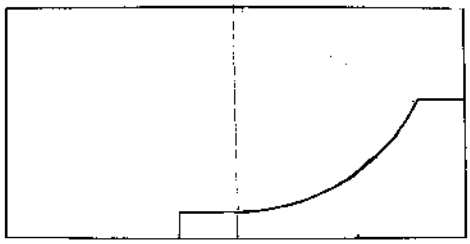


5. at the mark that is 4’ away, draw a faint line vertically the other end of the piece of wood



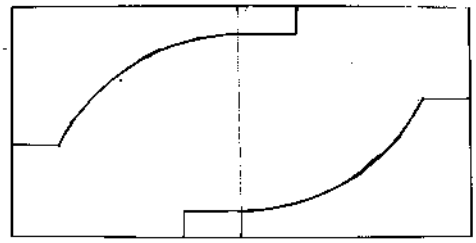
6. at the end of this line, hold down a piece of string and roll it out with your other hand until it reaches the point where you ended the line for the deck.

7. tie a pencil onto the string at this point and use the string like a compass, drawing a line from that point, to the faint line

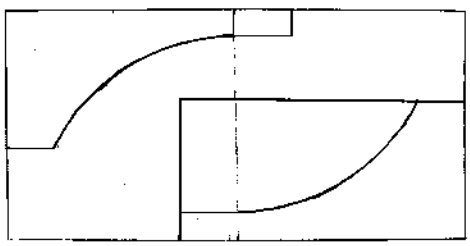


8. at the point where you stopped drawing the transition, draw a horizontal line across 1’

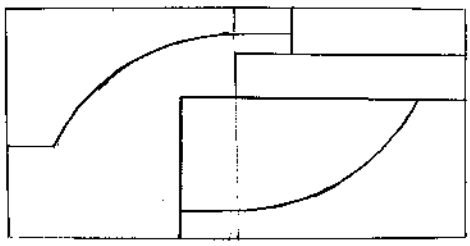
9. at the point you marked earlier that is 5’ away from the bottom right corner, draw a 4” line up(this should meet with the horizontal line you just drew



10. turn the wood the other way round and repeat steps1-9



11. turn one of the tranny walls into a complete rectangle(this is for the shed door)



12. draw a 8”x4’ box, and a 8”x3’ box to finish off(these are for joining bits together)

13. do this for the other four bits of ¾ ply, and then cut them out (remember to rub out the faint line, so you don't cut this out as well)

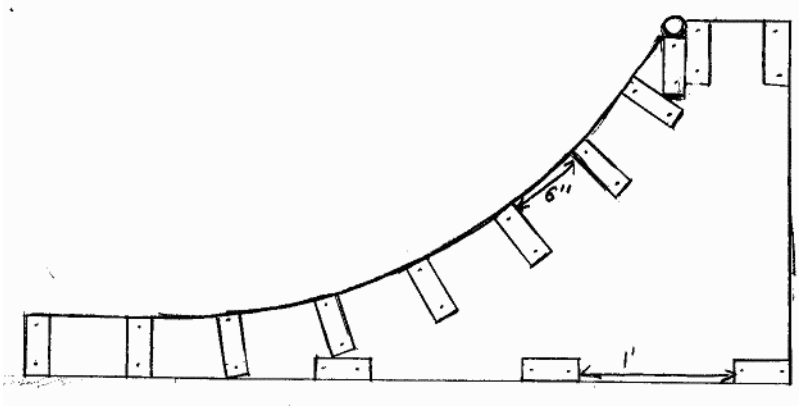
14. you should now have 8 tranny walls, 4 half doors, and 8 ready cut bits for joining things

FRAMEWORK

1. put the trannys together in pairs, so there are now 4 1½" trannys, and in the corner of the deck and the transition, cut a 1½" square

2. screw in 1¼ pieces of OSB to the bottom of each tranny structure before you start,(this is for the base and the walls

3. cut 1½' off 28 2x4s and screw them in like in this diagram



4. cut the leftover 2x4 1’ bits that you got from the 7’ frame work, and cut yourself 22 3” lengths.

5. screw these in 6” apart between the top 2 2x4s (see diagram) and make sure that the 2” side of the 2x4s are facing up(this is the support for the deck

6. cut the 8 ft coping down to 7ft

7. tape the coping in place with masking tape

8. Use a 6.5mm metal drill bit, drill holes all the way through the coping (through both sides of the pipe) about 1-inch in on either end of the pipes, as well as in the middle of the pipes, so that both pieces of coping have three holes drilled all the way through them.

9. On both pieces of coping, pick one side to be the front or back. On the sides you choose to be the front, use your 13mm metal drill bit to enlarge all three holes being careful not to enlarge the holes on the back.

10. Take your long Phillips head screw driver bit and screw the coping into the 2x4s in the coping cradle notch.

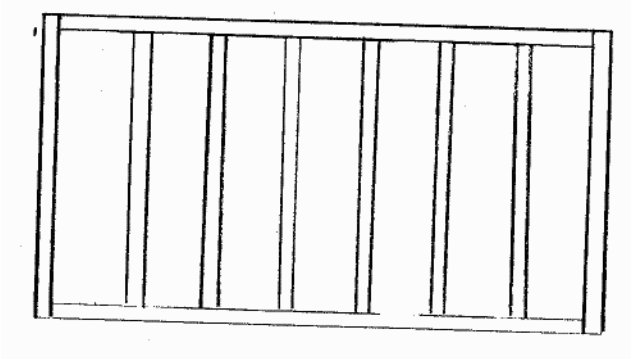
11. The enlarged holes in the front should allow the screw and the driver bit to get inside the pipe, while the smaller hole on the back should catch the head of the screw and keep it fastened to the 2x4s. Repeat for both sides of the ramp.

12. remove the tape

13. screw in half of a lock by the edge of each of the tranny walls, in the middle of the transition

BASE

1. cut 1 2x4 in half(making it 4’)
2. cut 19” off 2 2x4s(making them 77” long)
3. cut 3 2x4s into 6 44” pieces
4. use the 4’ and the 77’’to make a rectangle, and screw the 6 44” pieces in about 1’ apart. It should look something like this



5. screw in a OSB sheet to the bottom(this is to level it out with the walls

PLYING

1. now we can ply the 2 halves and the flat bottom. Lay a piece of 4mm ply horizontally across the tranny, and make sure it is just below the coping. Screw this down

2. lay another sheet down horizontally and make sure that the top of this sheet is flush with the bottom of the first sheet

3. cut off the access which is sticking out

4. now lay 1 sheet of 4mm ply on vertically on the tranny structure, and screw it down

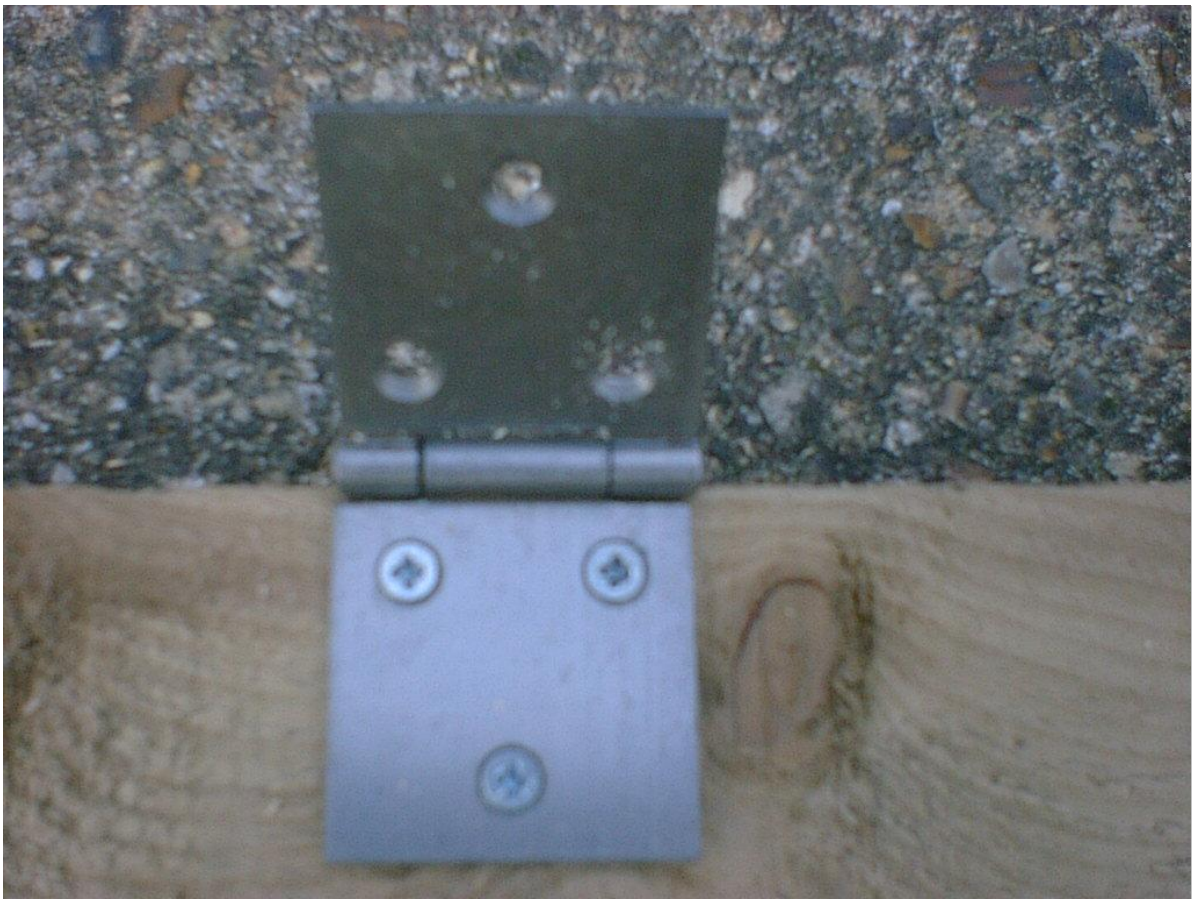
5. screw down another sheet next to it and cut off the access

6. do the same for the other tranny

7. screw down 2 pieces of 4mm ply on the flat bottom

8. use the access 4mm ply you have cut off from the plying the trannys to ply the decks

HINGES



1. measure the diameter of the round bit of your hinge(h)

2. measure the length of the flat bit (LFB)

3. 1’ in from the edge of the tranny wall and the flat bit measure a box that is LFB x radius of h

4. now measure the width of the flat bit of the hinge(WFB), and make the box go down as long as the WFB is

5. chisel this box out

6. do the same for the other 3 corners of the tranny, and the other 3 corners of the flat bit and then screw in the hinges

7. test to see weather the hinges work

DOOR

1. join the 2 doors you cut earlier together, and then fit them into place
2. do the same with the other doors

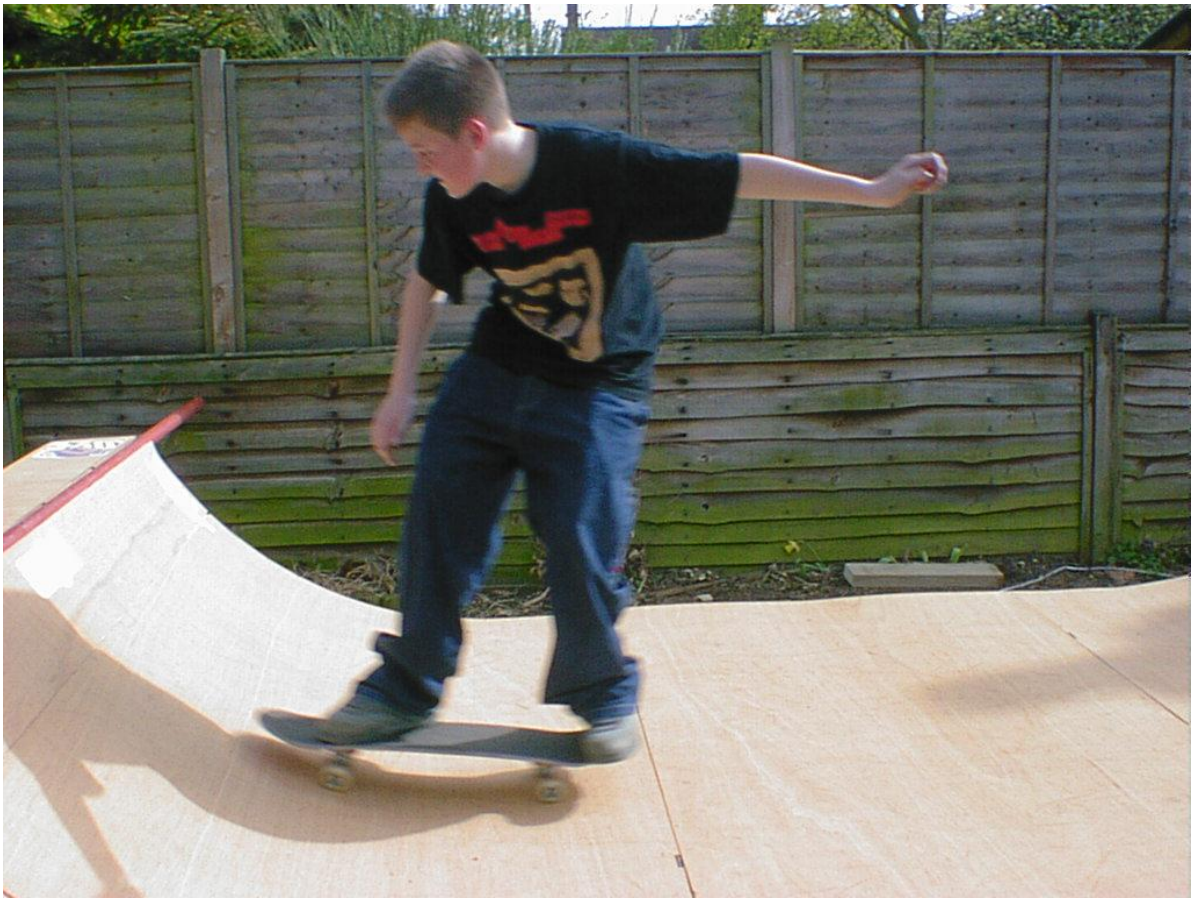
ROOF

1. fold the ramp up, and on top of the structure, lay down 2 sheets of OSB.

2. draw around these with a pencil

3. on the outside of this line screw in some leftover 2x4s and make sure that there is at least one on each side where the pieces of OSB join


rpm



CHANGES DURNG CONSTRUCTION

I only had to change two things during construction, and they were the hinges.

Instead of chiselling into both the tranny and the 2x4s we just screwed the hinges into the flat bottom and cut around the hinges into the ply
And we only put the OSB under the trannys instead of screwing them in.

EVALUATION

Overall it took us three days to complete and I think it would have turned out a lot better if we had made a foundation first before starting.