

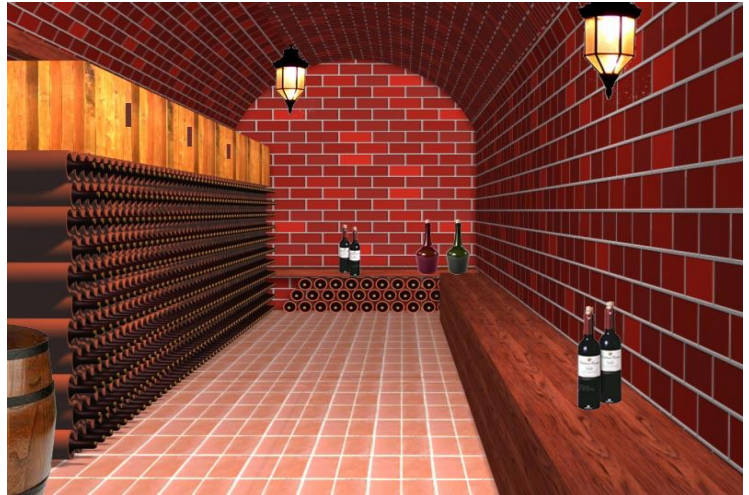
## BUILD AN UNDERGROUND CLAY BRICK WINE CELLAR



## HOW TO BUILD AN UNDERGROUND WINE CELLAR

### APPROXIMATE QUANTITIES

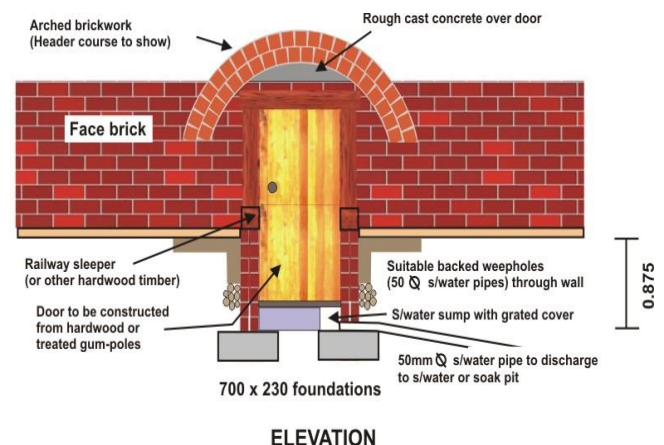
<b>Clay Face Bricks</b>	4200
<b>Clay Pavers</b>	60
<b>Cement</b> (Frogged Bricks)	18 pockets
(Smooth Bricks)	12 pockets
<b>Sand</b> (Frogged Bricks)	3.5m <sup>2</sup>
(Smooth Bricks)	2.5m <sup>2</sup>



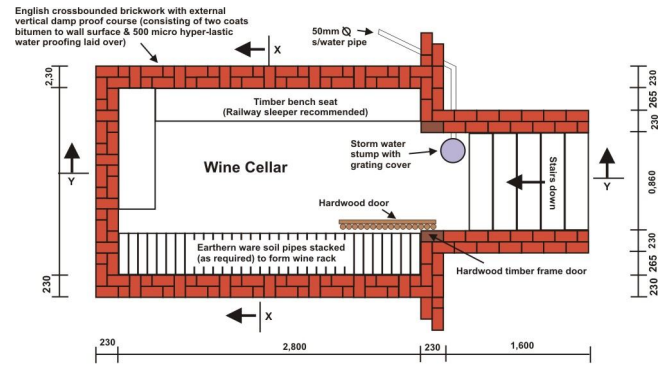
### INSTRUCTIONS

Study Instructions and Drawings before starting. This project should not be undertaken by anyone with no previous building experience. Given that this is a structure, it would be a good idea to contact a structural engineer. This wine cellar should be built in a cool, shaded area of the garden.

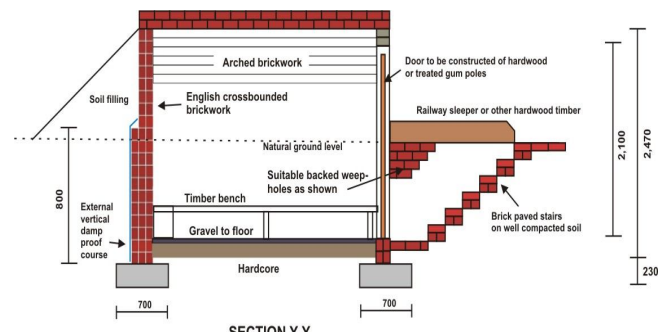
1. Excavate the ground to accommodate the size of the wine cellar. Banks should slope at a 45° angle from a ramp where stairs are to be built.
2. Set out foundation lines 700mm apart. Outer foundation dimensions should be 3720mm x 2770mm.
3. Excavate to a depth of 500mm for the foundations.
4. Cast concrete foundations to a depth of 230mm.
5. Mark out the brick lines on the foundations. Raise brickwork all around to required floor level. (normally 2/3 courses)
6. Raise corners and then construct 345mm cross-bonded brickwork up to the natural ground level - as in section x-x



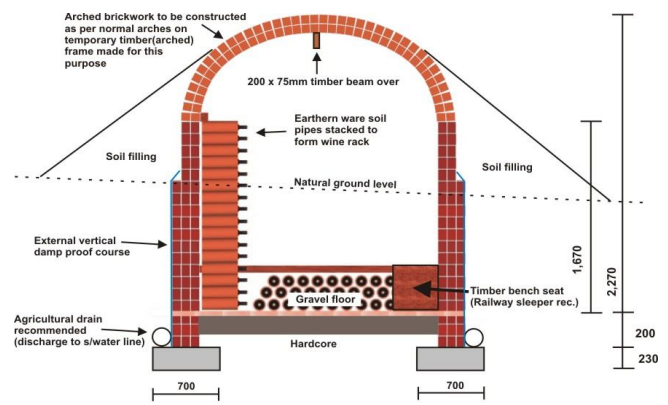
7. Continue in 230mm brickwork to start of arch, leaving opening for door as shown. Allow for fitting of a hardwood beam after arch is built by leaving a gap in brickwork on either side of arch
8. Construct a support frame out of timber and masonite to the shape of the arch. Design formwork that can be taken out afterwards.
9. Build two courses of arched brickwork, placing one layer of brickforce between the layers.
10. Allow arched brickwork to set for two days before removing the support frames.
11. Fit hardwood beam and fill in gaps (see section x-x on drawing).
12. Allow for sump as shown in drawing. This will prevent flooding after rain.
13. Construct side walls to stairs, bonding them into the wine cellar walls. Incorporate weep holes as shown in drawing.
14. Form stairs in the earth and build with Clay Brick paving.
15. Compact soil well in wine cellar and then lay loose gravel as a floor. Other floor finish can be chosen.
16. Before backfilling with soil to approximate height of 750mm, cover the arch with thick plastic D.P.C.
17. Restrain the soil with railway sleepers or wood to prevent the soil being washed away in heavy rain.
18. Plant groundcover in soil covering arch.
19. Clay pipes, stacked or built in, make one of the best storage systems for wine as the clay regulate correct cooling temperature.



SECTION PLAN



SECTION Y-Y



SECTION X-X

**Disclaimer:** The use of this information is based on recognised principles of design and construction and is at the discretion of the respective builder, contractor and end-user. ClayBrick.org is neither able to warrant the suitability of workmanship and the performance of any building material in a particular environment and does not accept responsibility for any claims arising from this information.