

**METHOD STATEMENT
FOR INSTALLATION OF SPIRAL CELLAR**

1. 11. 2007

1. No work will start until Health and Safety procedures have been put in place. In this instance, galvanised corrugated steel shuttering will be used to reduce the risk of ground collapse.
2. All plant used to perform the work is tested and green tagged according to HSE regulations and checked before any work commences.
3. Operatives and Site Manager, to wear steel capped boots, hard hats, jackets, gloves, masks and ear protectors when required. Gas meter to be worn when in the hole to detect low oxygen levels. Two types of winches to be attached to a frame for buckets and for safety harnesses.
4. Emergency procedures to be put in place and men to wear safety harnesses attached to arrest wheels when in the hole. This reduces the risk of height and ladder injury to improbable.
5. Skips to be provided and sited outside property. They will be coned and lit and covered at night.
6. Unloading to be overseen by Site Manager. Materials to be stored on site at safe position to be specified. Heavy items to be unloaded at door and wheeled to cellar site.
7. Client to agree exact siting of hole and trap door.
8. Clear area/room of clients' possessions, carpets, etc, and store in area designated by client.
9. Tape polythene sheeting over doors to living accommodation and ensure an air-tight seal, as far as is practicable. Protect door jambs and window frames with plywood sheeting where necessary.
10. At all times damp down the concrete dust, remove excess material and generally keep the site tidy.
11. Lift floor boards and timber joists where necessary.
12. Mark out 2.0 or 2.3 m diameter circle on ground/slab, depending upon necessity for reinforced concrete ring (see Chappell & Lynn's calculation sheets).
13. Within this circle break through the concrete slab/oversite and remove to skip.
14. Dirt to be excavated with spade or clay spade. Men to rotate use of clay spade. Dirt to be taken out in buckets on jimmy wheel and barrowed to skip.
15. Hole to be excavated to first 900mm and hole to be lined with galvanised corrugated steel shuttering. Hole to be excavated a further 800mm and next ring of steel shuttering to be installed. To continue as above until full depth of cellar plus 200mm is reached.
16. Clean and consolidate the base of the excavation and lay 50 mm thick bed of blinding concrete.
17. If water is encountered, submersible pumps to be installed. If a sump and pump are not sufficient or the ground is unstable then the excavation must stop. The excavation can be infilled, or if sufficiently deep, then a shallower Cellar can be installed.

Continued

18. Install the Butyl liner forming a waterproof bag around the inside face of the excavation, lay further protective felt inside the bag and cast a 150 thick concrete base (minimum – see table on drawing C.1689/2B) inside the liner.
19. Once set, build the pre cast concrete Cellar units up from the base to a height of 1.0m, ie four layers.
20. If no reinforced concrete ring is required then the excavation around the Cellar should be filled with sand, washed into place.
21. If a reinforced concrete ring is required then the butyl liner is to be protected by hardboard sheeting and then erect the steel reinforcement hoop and vertical bars. The vertical bars are to be sufficiently long to project at least 400 mm above the first lift of concrete. Pour concrete into the 150 mm wide ring (minimum) around the outside of the Cellar ensuring that the reinforcing bars remain in the middle of that ring.
22. Repeat items 19, 20, and 21 for the subsequent lifts of concrete, each lift being no more than 1.0 m high.
23. Once the top of the Cellar has been reached (usually 250 mm below ground floor level) the top step is positioned and pre-cast concrete roof slabs and coping stones placed over the area around the trap door. Install 2 no 40mm diameter ventilation pipes on run to external wall. Where necessary a concrete slab is cast over the roof planks and around the area delineated by the semi circular coping stone marking the edge of the entrance.
24. Install 2 lights and switch leaving cable to be linked into system by on-site electrician when appropriate.
25. The Butyl bag is drawn up around the trap door and is lapped with the existing damp proof membrane. The trap door is fitted into a steel angle frame cast into the concrete slab or bolted to the timber floor.
26. When positioned in a garage, the flat pre-cast concrete planks are replaced by a temporary shutter system and a 250 mm thick concrete slab is cast with an A252 mesh at 30mm up from the bottom.
27. Where timber floors are reinstated over the Cellar, new timbers are to be spliced to the old and double or triple trimmers are placed around the trap door.
28. Where a pre-cast beam and block floor is punctured by the entrance to the Cellar, it is usually found that the floor construction is more than 250 mm deep. In this case, the top of the Cellar is kept down to 500 mm below finished floor level. An additional step is introduced in the standard 'first step' position but there are no other Cellar units placed at that level. This first step may have to be trimmed to ensure that it fits entirely within the well below the trap door.
29. Install the trap door, ensure that it fits snugly without binding and that the lock and pressurised strut work smoothly.
30. All equipment to be removed from site. Site and cellar to be cleaned.
31. Work reports to be issued at end of job.