

Method Statement Trial / Inspection Pits and Trenches (Hand Excavated)

Inspection pits are normally excavated by hand to an appropriate depth at the locations of exploratory holes where services are suspected, known or found to be in close proximity, prior to drilling or boring commencing. They are also regularly used as part of investigations on existing structures to expose and determine foundation detail. Hand operated specialist tools (such as vacuum excavation or air spades) may be used to assist the excavation of inspection pits where it is considered to be safe and necessary.

All crews are trained and experienced in the use of the plant and equipment and have obtained an appropriate CSCS card.

Exploratory locations will be set out with reference to utility information and drawings/plans, access and egress routes, soft, uneven or sloping ground etc; maintaining safe distances from any overhead cables, lifting covers where required to check underground runs and CAT scanning each position.

Powered jack hammers and breaking bar tools may be used for breaking out surface obstructions but must be used with great care and only in concrete, mortared brick and similar materials where hand tools are not effective.

All excavation work should be completed from the surface to the required depth with continuous scanning as the pit is deepened. The appropriate depth of the inspection pit will depend on site specific circumstances, but in the case of service clearance should generally extend to a minimum depth of 1.2m below ground level, while in the case of foundation excavations the pit should be extended to the base of the foundation.

Man entry into an inspection pit should be avoided, however, if it is essential, only for shallow pits less than 1.2m depth, after a risk assessment has been undertaken, necessary safety measures put in place and operations controlled under a permit to work. Any temporary supports, as required for any depth below 1.2m or where unstable, must be designed and installed by specialists. As the pit progresses, the spoil will be segregated in such a way that it can be used to backfill the excavation in roughly the same order that it was removed. The spoil should be placed away from the side of the pit, on boards or plastic sheeting where required. A visual check will be maintained for asbestos or other potentially contaminated spoil as the pit progresses. If unmanageable materials (e.g. asbestos) or unexpected conditions (e.g. contamination, ground gases, groundwater, odours, dust) are encountered the pit will be aborted, backfilled and the method of investigation and health and safety arrangements re-appraised. In situ testing logging and sampling as required will be completed from outside the excavation.

Pits should not be left unattended or unfenced and should be backfilled as soon as reasonably practicable after completion.

Backfilling and reinstatement of the pit will take into account compaction requirements of the material excavated, specific site/project requirements and avoidance of creating hazards such as tip hazards or depressions. Due to bulking, mounded spoil may be inevitable but this will be left in a safe and tidy condition to allow for future settlement.

Risk Scoring and Assessment

Health, Safety and Environmental Risk is measured using a 5 x 5 matrix to obtain a result that, after control measures have been applied is scored as: Low (Proceed with care), Medium (If no alternative, proceed with care), High (Do not proceed, seek alternative).

		Severity					
		1	2	3	4	5	
		No Injury or Impact	Minor Injury or Impact	Reportable Injury or Impact	Serious Injury or Impact	Fatality, Disability or Major Impact	
Likelihood	Unlikely or Rare	1	1 LOW	2 LOW	3 LOW	4 LOW	5 LOW
	Remote possibility	2	2 LOW	4 LOW	6 LOW	8 MED	10 MED
	Possibly occur	3	3 LOW	6 LOW	9 MED	12 MED	15 MED
	Probably occur	4	4 LOW	8 LOW	12 MED	16 HIGH	20 HIGH
	Certain to occur	5	5 LOW	10 MED	15 HIGH	20 HIGH	25 HIGH

Hazard/Risk	Type	Affected	Control Measures	Score	Residual Risk
Operating equipment Lifting and Handling	H&S	Oprs	Trained and competent operators only, including lifting and manual handling practices	2 x 3	Low
Contact with underground or overhead services	H&S	Oprs	Review positions with reference to utility plans. CAT scan each position prior to and during excavation, use hand tools with insulated handles wherever possible.	1 x 4	Low
Vibration (when breaking out with powered jack hammer)	H&S	Oprs	Limit use to 15 min continuous or 2 hours aggregated per man per day. Penetrate 25mm at a time in close centres. Noise measured as around 80-85 Db. Wear gloves, eye and ear protection at all times.	2 x 3	Low
Pit collapse	H&S	Oprs	Do not excavate below the water table. Spoil should be placed away from the sides. No man entry permitted except with supports in place and under a Permit to Work.	3 x 4	Med
Internal works (if required)	H&S	Oprs	Ensure adequate ventilation, access, egress and lighting. Use electrical equipment for breaking out.	2 x 4	Med