

Standard Risk Control Arrangements

Excavations, Ground Works and Drainage

Training and Capability

- A. A competent person (One Day Training) will carry out inspections of excavations and their support.
- B. Mansell Manager should attend and passed either the IOSH Avoiding Danger from Underground Services or, New Road and Street Works Act Supervisors course (both within the last 5 years)
- C. A suitably trained CAT Scanner/Ground Radar Operator shall be involved in all investigations to raise "Permits to Dig" (SM-FM-48)

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- D. Plan earthworks to minimise risks to surface watercourses - use natural contours, settlement lagoons and silt traps.
- E. All excavations are to have a formal Risk Assessment and Method Statement (SM-FM-17 and 20)
- F. Any work carried out on a public highway must be in accordance with BB-PS-03, SRCA 41 and the New Roads & Streetworks Act (GE700 A10 and the NRSWA Red Book)
- G. Before work commences:
 - The Statutory Undertaker shall be consulted to confirm location of their utilities
 - The site will be examined to locate evidence of underground utilities e.g. manholes, marker posts, poles etc.
 - A survey of the area will be carried out using a CAT Scanner and Signal Generator or Ground Radar, as deemed appropriate.
- H. If there is any possibility of unexploded munitions being present on the site, advice must be sought from the relevant services i.e. Army, Navy, Air Force.
- I. A Permit to Dig (SM-FM-48) is required for all excavations and is to be kept with the work gang
- J. The Supervisor of the operatives shall wear either a arm band or high-vis denoting "Dig Supervisor"
- K. Every effort must be made to mitigate risk through design or isolation of the utility
- L. A trial hole must be excavated using insulated hand tools / suction excavation or air pick to prove the location of any utility, prior to the authorisation of any mechanical excavators.
- M. No mechanical excavations can be conducted with 1.0m of any utility, this distance can increase when working next to sensitive utilities e.g. 66Kv and Intermediate/High pressure gas
- N. Operatives working on any excavation must wear flame retardant personal protective equipment, including high-visibility clothing
- O. During the excavation works the ground will be continually scanned with a CAT & Genny every 300mm
- P. A competent person shall ensure excavations are inspected daily and recorded weekly (SS-FM-17)
- Q. All excavations (however shallow) must be safe. Excavations (some less than 1.2 m but all greater than 1.2 m) are to be kept safe by battering to a safe angle of repose, or shored and to have adequate signage
- R. Excavations shall be barriered off to protect workers and trespassers, those liable to flooding shall be provided with "deep water" signs
- S. Rigid guard rails or suitable fencing shall be provided to protect against falls into the excavation
- T. Secure ladders or other safe methods of access/egress are to be provided at all times into or across the excavation

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- U. Spoil heaps, plant and equipment is to be kept a safe distance (at least 1m) from the edges of the excavations so as not to have any effect on edge stability, or ingress of fumes
- V. Excavations arising leaving site shall be treated as waste (as per SRCA 18)
- W. Openings in manholes are to be securely covered by a permanent cover or equivalent temporary method
- X. Leptospirosis cards will be held by all those involved in ground works and appropriate hygiene methods shall be confirmed in the RA.
- Y. All uncharted utilities must be reported as near misses
- Z. All utility damage strikes must be reported on the Accident Incident Report form (SS-FM-01)
- AA. Confined space entry shall be as SRCA 42
- BB. Subcontractors must be responsible for the management and supervision of the loading/unloading of their materials from vehicles.
- CC. Loading and/or off-loading of lorries will be undertaken in accordance with the Balfour Beatty guidance document BB-WI-05.

Other Local Control Arrangements

Issues to be Addressed in the Inspection Plan

1. Setting Out
2. Formation
3. Pipe laying and Jointing
4. Test for Watertightness and line
5. Final Bedding
6. Backfilling and Compaction
7. Reinstatement
8. Building Control tests