Work instruction:	Date Raised
Hand augered bore holes and sampling	18.6.12

Work Description

Extraction of material for sampling

Instruction

1. Refer to W0001 & W0002.
2. Following excavation of internal / external trial hole the first sample should be taken using the hand auger from directly beneath the foundation with a shear vane or mackintosh probe reading depending upon the soil strata. The first sample is the most important.
3. Continue down the excavation with the hand auger taking samples and strength readings at 0.5m intervals unless otherwise instructed. Always check instructions as some Loss Adjusters do not always require samples to be taken but still require logging.
4. Hand augered bore holes should be extended vertically down from the base of the open trial hole using 1m extension poles and appropriate manual handing techniques.
5. Most bore holes require a depth of 3m. Check instructions, if for any reason a depth cannot be achieved, a call to the office is necessary. Beyond 3m requires a return visit using window sampling.
6. If unsure, take samples, they can always be disposed of as opposed to having to return to re-do investigation.
7. All samples that need to be tested must be placed in the sealable bags provided to you.
8. Samples must weigh at least 2kg.
9. Sample bags must be labelled correctly showing job number, trial / bore hole number, date and depth of sample.
10. All samples must be clearly identified and described using the trial hole crib sheet on paperwork, soil descriptions, shear vane and mackintosh probe readings.
11. Shear vane test can be carried out in clay soils, usually at 0.5m intervals. This must be pushed down into clay with downward pressure, the fin/paddle at the base pushed into the clay ready to be turned. Ensure the measurement pointer on top is set to zero. Turn clockwise slowly with a smooth consistent movement until the spring loaded head reacts to the clays shear strength. The pointer on the top will be left on the correct reading usually between 0 and 140+.
12. Mackintosh probe test is carried out in granular made ground soils, chalk, peat, silts, sands and gravels usually at 0.5m intervals. The probe base should be driven into the soil with probe hammer then levelled off at ground level. Three marks put on probe rods at 100mm each, the hammer should then be pulled up and dropped, the number of blows to penetrate downwards to each 100mm is the reading you need to log, repeat process to 300mm.
13. **Root samples**, if any tree roots are present in trial / bore hole. Take samples, put in paper envelopes provided correctly labelled with job number, depth taken, date. If in any doubt always take the sample, it can always be thrown away at a later date.
14. **Water samples**, if water is present and you think it may be an influence, phone office to authorise and advise, put into labelled bottles.
15. **Concrete / fill samples**, sometimes concrete may need to be tested mostly on concrete floor slabs, this must be a large chunk or pieces the thickness of the floor and put into a labelled bag. The fill directly below the concrete must be samples and labelled separately to concrete.
16. Double check your paperwork is completed using digital pen, ensure all boxes are ticked and correct bore hole finish depth and testing schedule.
17. **Ensure loss adjuster has signed paperwork for testing.**

Responsibilities

Site Investigation Engineer

Key Objectives

Quality material to enable laboratory testing