

TRIAL PITS AND PLATE BEARING TESTS

ACTIVITY RAMS — ADAPT TO SITE BEFORE USE

Machine-dug trial pits · logging and sampling from the surface · plate tests against a reaction load

KD-RA-GW-001 Rev A0

Statutory basis: CDM 2015 reg 22 (excavations) and reg 25(4) — suitable and sufficient steps to prevent risk from underground services, with HSE HSG47 (3rd edition, 2014). COSHH 2002 for ground that proves to be contaminated; PUWER 1998 for the plate test equipment. This document is the recorded safe system of work required by HSWA 1974 s.2(2)(a) and MHSWR 1999 regs 3 and 5.

1 DOCUMENT AND PROJECT IDENTIFICATION

RAMS REFERENCE	PROJECT / SITE REF	SITE NAME AND ADDRESS	DATE PREPARED	NEXT REVIEW DATE
CLIENT / PRINCIPAL CONTRACTOR	PLANNED START	DURATION	OPERATIVES	SUPERVISING THE WORK

2 SCOPE OF WORKS

Digging trial pits and slit trenches by machine for ground investigation and to confirm founding conditions: locating services, excavating, logging and sampling from the surface without entering the pit, recording groundwater, plate bearing tests against a machine, loaded vehicle or kentledge as the reaction load, and backfilling or securing the pit the same shift.

This document does not cover: boreholes and window sampling (the specialist driller's), the investigation design and interpretation of results (the geotechnical engineer's), any entry into a pit — which needs support and the arrangements of KD-RAMS-GW-001 — and checking set-up positions against outrigger loads (KD-RA-PL-003).

SITE-SPECIFIC SCOPE, LOCATIONS AND LIMITATIONS

3 RISK ASSESSMENT — SCORE EACH RISK FOR THIS SITE, THEN ADD WHAT IS MISSING

The hazards and controls below are the starting point for this activity, written by a working main contractor. They are not complete for your site until a competent person has scored each risk, added the site-specific hazards, and struck out anything that does not apply. Rate risks High / Medium / Low before and after controls.

1. Striking buried services at positions nobody has dug before

At risk: Machine operator, logger, everyone nearby

Controls: Trial pits are often sited where there are no records. Plans obtained; each position scanned with a cable avoidance tool and signal generator by a trained operator, marked, and moved if a service is found; hand digging within 500mm of any located service and wherever services could be shallow; the operator digs in shallow lifts watching for marker tape, ducts, pipe surround or changed fill — any of them stops the dig. Where the desk study flags an unexploded ordnance risk, the specialist's assessment and any attendance it calls for are in place first.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

2. Collapse of pit sides onto anyone who enters

At risk: Logger, sampler, tester

Controls: Nobody enters an unsupported trial pit at any depth — not to log, sample, photograph or test. Logging is done from the surface and samples taken from the bucket. Where the engineer needs a face seen close up or a plate test below ground, the pit is first supported or battered and inspected under KD-RAMS-GW-001.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

3. Edge collapse under people, spoil and plant

At risk: Logger, machine operator

Controls: The logger stays back from the edge — the lip is the ground most likely to go; spoil placed back from the edge on the side away from the logger; the machine positioned with its tracks clear of the ground that would fail if the side went.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

4. Struck by the excavator or bucket while logging and sampling

At risk: Logger, sampler

Controls: Logger and sampler stay in the operator's view and outside the slew; nobody approaches for a sample until the bucket is grounded and the hydraulic isolation lever engaged, confirmed by eye contact and thumbs-up each time.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

5. Falls into open pits left unattended

At risk: Operatives, visitors, the public

Controls: Pits backfilled the same shift wherever the engineer allows; a pit that must stay open is fenced with barriers that stop a fall, covered where the public or children could reach it, and signed.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

6. Plate bearing test — reaction load lifting, jack kicking out, crushing

At risk: Tester, machine operator

Controls: Tests only at the surface, or in a pit supported or battered and inspected under KD-RAMS-GW-001. At the jacking point the reaction load exceeds the maximum test load by the margin the engineer states; jack centred and square under it; the machine used as reaction shut down, brakes on, nobody at its controls. While load is held the tester stands to the side of the plate and jack — out of the jack's line, never under the bucket, arm or counterweight — and reads the gauges from there; load released before anything is moved.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

7. Contaminated or unexpected ground

At risk: Logger, sampler

Controls: Staining, odour, fibrous material, drums or ash stop the dig; the find is recorded from the surface and reported to the engineer; suspect material sampled only with the gloves and packaging the brief sets out under the COSHH 2002 assessment; hands washed before eating.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

8. Groundwater, running sand and gas in the pit

At risk: Logger, machine operator

Controls: Water strikes recorded from the surface; the dig stops where water or running sand destabilises the sides. A pit giving off an odour of gas is left behind barriers with no ignition sources near it — no smoking, no hot work, the machine shut down or moved away — and reported; nobody leans in.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

9. Manual handling of samples and plate test equipment

At risk: Tester, sampler

Controls: Sample bags part-filled and carried in crates; plates, jack and reference beam moved by two people or on a trolley.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

Site-specific hazards not listed above — every site has at least one:

HAZARD	WHO IS AT RISK	CONTROLS	INITIAL H/...	RESIDUAL...	ACTION OWNER	BY WHEN

4 METHOD — SEQUENCE OF WORK

- Obtain the investigation brief: pit positions and depths, logging, sampling and test requirements, contamination information, and any unexploded ordnance risk the desk study flags.
- Obtain service plans; scan each position with a cable avoidance tool and signal generator; mark services and move any position that conflicts.
- Obtain the permit to dig; brief the operator, logger and sampler on no entry, the approach signal and the stop conditions.
- Break out the surface by hand where services could be shallow and within 500mm of any located service; dig in shallow lifts, watching for tape, ducts and surround.
- Place spoil away from the logger's side; log and photograph from the surface; take samples from the grounded bucket with the controls isolated.
- Record water strikes and any sign of contamination or gas. STOP and report on a service, contamination, gas or instability.
- Plate tests at the surface, or in a supported or battered pit inspected under KD-RAMS-GW-001 only: position the reaction load, shut down and brake the machine, set plate and jack square, stand to the side while load is held, release it before adjusting anything.
- Backfill and compact in layers the same shift where the engineer allows; reinstate the surface.
- Where a pit must stay open, fence it with barriers that stop a fall, cover it if the public could reach it, and sign it.
- Hand logs, photographs, samples and test records to the engineer; record backfilled and open pits on the permit.

SITE-SPECIFIC AMENDMENTS TO THE SEQUENCE

5 PLANT, EQUIPMENT AND MATERIALS

Excavator	Plate bearing test kit — plates, jack, gauge, reference beam
Cable avoidance tool and signal generator	Reaction load — machine, loaded vehicle or kentledge
Hand tools for breaking out	Barriers and covers for open pits
Sample tubs, bags, crates and labels	

INSPECTION / THOROUGH EXAMINATION REFS

COSHH ASSESSMENT REFS

6 PPE — THE LAST LINE OF CONTROL, NOT THE FIRST

Head protection	High visibility	Eye protection
Safety footwear	Gloves — task-rated	Hearing protection

RPE TYPE, FACE-FIT STATUS, AND ANY OTHER PPE REQUIRED

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continued

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7 PERMITS REQUIRED BEFORE THIS WORK STARTS

A permit authorises this work in that place, on that day. It extends the safe system of work in this document — it does not replace it (HSE HSG250). The site issues the permit; record its number before work starts.

KD-PTW-EX-005 — Excavation & Permit to Dig
Before each trial pit is dug.

PERMIT NUMBER

8 EMERGENCY ARRANGEMENTS — COMPLETE FOR THIS SITE

FIRST AIDER AND LOCATION

NEAREST A&E

ASSEMBLY POINT

HOW THE ALARM IS RAISED

EMERGENCY ACCESS FOR THIS WORK AREA

SPILL / ENVIRONMENTAL RESPONSE

9 BRIEFING RECORD — EVERYONE WORKING UNDER THIS RAMS SIGNS BEFORE STARTING

By signing you confirm the contents of this RAMS have been explained to you, you understand the hazards and controls, and you will work to the sequence stated. Tell the supervisor if the work or the site does not match this document — work stops until it does.

NAME	COMPANY	SIGNATURE	DATE

10 PREPARED AND ACCEPTED

Prepared / adapted for this site by — I confirm I have adapted this document to the site, scored the risks, and that it describes how the work will actually be done.

PRINTED NAME	ROLE / COMPETENCE	COMPANY	SIGNATURE	DATE	TIME

Accepted for the site by — principal contractor or site manager review.

PRINTED NAME	ROLE	COMPANY	SIGNATURE	DATE	TIME

Review this RAMS if the work, the site or the law changes, and at least before each new phase of the works. Flatten the completed PDF before filing so the record cannot be silently edited.

R REVISION HISTORY

Every revision of this document, and every review that found nothing to change. The revision on the front of this sheet is the one you are holding — check kubitdocs.com for the current one before use.

Rev	Date	Class	What changed	Authorised by
D0	2026-09-11	first-issue	First issue.	— not yet approved —
A0	2026-09-11	review	Approved for issue by the author. Content unchanged from the reviewed draft; the draft status strip is removed. No independent third-party review has been carried out.	Author — director, UK principal contractor, SMSTS. Not an independent review.

Class: first-issue · material (the law, a control, a field or the scope changed — past buyers are notified) · editorial (wording or layout only) · review (checked, nothing changed) · withdrawal. Revision prefix D = draft, not approved and not for sale; A = approved for issue by the person named, on the date shown.