



Risk assessment and method statement

Plant and excavator risk assessment

Use of excavators, dumpers and rollers. Pre-filled with typical hazards, controls and sequence: edit it for this site.

PROJECT

SITE ADDRESS			
ACTIVITY		RAMS REFERENCE	
Use of excavators, dumpers and rollers			
CONTRACTOR CARRYING OUT THE WORK		PRINCIPAL CONTRACTOR	
PREPARED BY	APPROVED BY	REVISION	DATE

Revision record

Reissue and rebrief when the sequence, the programme, the team or the conditions change. If you would have written it differently had you known, it needs a new revision.

REV	DATE	WHAT CHANGED	BY

THE WORK

The activity, the place and the people

Pre-filled for this kind of work. Make every line specific to this site: this sequence, this access, these people, this weather.

Scope of the activity

What is being done, and what is not included.

MHSWR REGULATION 3(1)

Use of [excavators, mini diggers, dumpers and rollers] at [site] for [digging, loading, moving spoil and compaction], including delivery and collection, daily checks, attachment changes and refuelling. Machines: [make, model, fleet number]. Lifting by excavator only under a separate lift plan. Not included: [forklifts and telehandlers, covered by their own RAMS].

Location and access

Where on site, how people and materials get there, and the restrictions.

Plant delivered via [gate] to the unloading area at [location], on firm, level ground. Plant routes, walkways and crossing points as shown on the traffic plan. Overhead lines at [location] marked with barriers and goalposts. Fuel point at [location]. Working hours [08:00 to 17:00].

Programme and interfaces

When the work runs, and who else is working nearby.

CDM REGULATION 15(2)

START DATE

DURATION

WORKING HOURS

INTERFACES WITH OTHER TRADES

Groundworkers working beside the machines: [trades]. Other trades crossing plant routes: [trades]. Deliveries and lorry movements agreed with the site manager. Lifts by excavator and by crane in the same area agreed through [name].

Documents this RAMS relies on

Plant and operator register; operator cards; daily check sheets and weekly inspections; thorough examination reports for lifting machines and accessories; service plans and permit to dig [ref]; lift plan [ref]; traffic management plan; construction phase plan.

The team, and their competence

CDM REGULATION 8

ROLE	NAME	CARD, TICKET OR TRAINING NEEDED	CONTACT
Excavator operators		A card for the machine, such as CPCS A58 (360 below 10 tonnes) or A59 (above 10 tonnes), NPORS or equivalent, with familiarisation on the model and hitch.	
Dumper and roller drivers		A card for the machine, such as CPCS A09 forward tipping dumper or A31 ride on roller, NPORS or equivalent.	
Lifting by excavator		Operator with the lifting operations endorsement for the category, and a slinger signaller trained for excavators, such as CPCS A40.	
Plant and vehicle marshaller		Trained to direct plant from a protected position and to manage people on foot nearby.	
Supervisor		Trained to supervise the use of the plant, as PUWER regulation 9(2) requires, and to check seat belts, safety levers and hitch pins.	
Lift planner		Competent to plan lifts under LOLER regulation 8, including lifts by excavator.	

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METHOD STATEMENT

The sequence of work

The order the team will work in on the day, with the controls built into each stage. If the sequence changes on site, revise the RAMS and brief it again.

STAGE	WHAT IS DONE, AND HOW	CONTROLS AT THIS STAGE	BY
Plan the plant	List the tasks and choose machines and attachments that suit them, the ground and the space, with short tail swing where room is tight. Find the services and overhead lines, and plan any lift by excavator as a separate lift.	Machine suited to the ground and gradients; service plans and line heights found; lift plan for lifting on slings.	Site manager
Check the operators	Check each operator's card covers the machine and category, including the lifting endorsement where needed. Give familiarisation on the model and its hitch, then authorise them on the plant and operator register.	Register complete; keys issued by the supervisor; trainees only under close supervision.	Supervisor
Receive the plant	Unload on firm, level ground with the trailer braked and ramps secure. Check the hire paperwork: last inspection, thorough examination for lifting machines and accessories, and the maker's handbook in the cab.	Nobody beside the ramps; machine not used until its paperwork is seen.	Supervisor
Set out the site	Mark plant routes, walkways and crossing points. Barrier exclusion zones, fit stop blocks at edges and tipping points, and set goalposts and barriers under overhead lines. Mark the services found.	People on foot separated from plant; edges protected; 6 m safety zone at overhead lines unless the owner advises otherwise.	Site manager
Brief the team	Brief this assessment to operators, marshallers, slingers and everyone working near the plant: the routes, exclusion zones, safety lever rule, no riding rule and how to report a defect.	Briefing signed; site rules for people on foot covered at induction.	Supervisor
Daily check	Before the shift the operator checks the machine to the handbook: tracks or tyres, brakes, steering, hydraulics and hoses, hitch and pin, seat belt, roll-over protection, mirrors, cameras, lights and alarms.	Check recorded; defects reported and the machine tagged out until repaired.	Operator
Fit attachments	Change attachments on level ground with everyone clear. Fit the retaining pin or confirm the lock, check it by eye, then carry out the attachment check the hitch maker sets out before work starts.	Maker's pin only; nobody under or in front of the bucket during the check.	Operator
Dig, load and travel	Work within the exclusion zone with the safety lever applied whenever someone approaches. Travel slowly with the bucket or skip low, up and down slopes rather than across, and keep back from edges.	Seat belt worn; marshaller where plant and people work close; services exposed by hand first.	Operator
Refuel and park up	Refuel at the fuel point with the engine off. At the end of the shift park on firm, level ground away from edges, lower the attachment, apply the brake, isolate the controls, stop the engine and return the keys.	No smoking at the fuel point; spill kit and extinguisher to hand; keys held securely.	Operator
Monitor and review	Watch how plant and people share the site and act on near misses. Update the assessment when the machines, operators, ground, layout or work change.	Unsafe practice corrected and retraining arranged; review recorded.	Site manager

CDM REGULATION 15(2): PLAN, MANAGE AND MONITOR THE WORK

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RISK ASSESSMENT

Hazards, controls and the risk that remains

Each significant hazard rated before and after its controls, as likelihood times severity. The ratings are typical: check them for this site.

LIKELIHOOD

5	5	10	15	20	25
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5

SEVERITY

1	2	3	4	5
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1 to 4 low

5 to 12 medium

15 to 25 high

HAZARD	WHO COULD BE HARMED, AND HOW	RISK BEFORE	CONTROLS	RISK AFTER	BY
Untrained or unauthorised operators	Anyone who drives an excavator, dumper or roller without training for that machine, and the people near them.	3 x 5 = 15 High	- Card checked for the machine and category, such as CPCS A58 or A59 for 360 excavators and A09 for dumpers, or NPORS or equivalent. - Familiarisation on the model and its hitch, then written authorisation recorded on the plant and operator register. - Keys held by the supervisor and removed when plant is parked, so nobody else can start it.	1 x 5 = 5 Med	Site manager
People on foot struck by plant	Groundworkers, banksmen, other trades and visitors near digging, loading, slewing and travelling plant.	4 x 5 = 20 High	- Exclusion zone around each working machine, barriered where people work nearby; walkways fenced off from plant routes. - Nobody approaches a working machine until the operator has seen them, stopped and applied the safety control lever. - Trained plant and vehicle marshaller, in a protected position, where plant and people must work close together.	2 x 5 = 10 Med	Supervisor
Crushing by the slewing excavator	Anyone caught between the slewing upper body or counterweight and a wall, vehicle, spoil heap or scaffold.	3 x 5 = 15 High	- Short or zero tail swing machine on tight sites, with more than 0.5 m kept between the machine and any fixed object. - Slew area barriered where that clearance cannot be kept; nobody enters it while the machine is running.	1 x 5 = 5 Med	
Unintended movement of the controls	Slings and groundworkers beside the bucket when a sleeve, a lean from the cab or a knock moves a joystick.	3 x 5 = 15 High	- Safety control lever or isolation device applied whenever anyone is in the working area, before they approach. - Operator warns everyone and sees them clear before releasing the lever and moving the machine. - Supervisors check the lever is used, as HSE's 2025 safety notice on excavator control levers asks.	1 x 5 = 5 Med	Operator
Attachment falling from the quick hitch	Groundworkers in the trench or near the bucket when a bucket or attachment drops off the hitch.	3 x 5 = 15 High	- Retaining pin or locking device checked before work and each time an attachment is fitted, from the ground if not visible from the cab. - Attachment check after every change, as the hitch maker's instructions set out, with everyone clear; only the maker's pins, never bolts or wire. - Operator trained on that hitch; nobody stands under or in front of the bucket.	1 x 5 = 5 Med	Operator
Excavator overturning	Operators when a machine tips on a slope, soft ground or an edge, or swings a heavy load out to the side.	3 x 5 = 15 High	- Gradients and ground checked against the maker's limits; travel up and down slopes, not across, with the bucket carried low. - Machine set on firm, level standing, kept back from unsupported edges, and loads kept within the rated capacity. - Seat belt worn wherever one is fitted, so the operator stays inside the protective cab.	1 x 5 = 5 Med	Operator
Dumper overturning	Dumper drivers, crushed when a dumper overturns on a slope, stockpile, ramp or tipping edge.	3 x 5 = 15 High	- Dumpers with roll-over protection, and the seat belt worn every time. - Kept to gradients within the maker's limits and off stockpiles; loads spread evenly and not above the skip edge. - Wheel stops at a safe distance from excavation edges wherever dumpers tip.	1 x 5 = 5 Med	Supervisor
Rollers at edges and on slopes	Roller drivers, when an edge gives way or a ride-on roller slides on a slope, camber or wet surface.	2 x 5 = 10 Med	- Edges of embankments, trenches and kerb lines marked, with a safe margin kept from any unsupported edge. - Roller with roll-over protection and the seat belt worn; slopes kept within the maker's limits.	1 x 5 = 5 Med	

MHSWR REGULATION 3(6): WITH FIVE OR MORE EMPLOYEES, RECORD THE SIGNIFICANT FINDINGS

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RISK ASSESSMENT, CONTINUED

More hazards, and those specific to this site

HAZARD	WHO COULD BE HARMED, AND HOW	RISK BEFORE	CONTROLS	RISK AFTER	BY
Plant falling into excavations or water	Drivers of excavators, dumpers and rollers near trenches, pits, spoil heaps, ponds and watercourses.	3 x 5 = 15 High	- Stop blocks or barriers at excavation, embankment and water edges, as CDM regulation 28(6) requires suitable measures. - Plant and spoil kept back from the sides so the ground beside an excavation is not overloaded. - Routes kept clear of open excavations, with covers or barriers on any that plant must pass.	1 x 5 = 5 Med	
Striking buried services	Operators and groundworkers when a bucket hits a cable, gas main or water main: shock, burns or gas escape.	3 x 5 = 15 High	- Service plans checked and the area scanned and marked before digging, as HSE HSG47 sets out; permit to dig issued. - Services exposed by hand digging before the machine works near them. - Strike plan briefed: stop, move everyone clear, call the service owner and do not touch damaged cables or pipes.	1 x 5 = 5 Med	Supervisor
Overhead power lines	Excavator and dumper drivers, and anyone touching a machine whose arm or body reaches a line.	2 x 5 = 10 Med	- Line owner asked to divert or switch off the line; otherwise barriers keep plant out of a 6 m safety zone, as HSE GS6 advises. - Goalposts and signs at crossing points; arms, booms and tipping bodies lowered to pass under. - Physical height or slew restraints where an excavator must work near a line; warning devices alone are not enough.	1 x 5 = 5 Med	
Lifting with an excavator	Slings and anyone nearby when an excavator lifts pipes, chambers or trench boxes on slings.	3 x 5 = 15 High	- Machine set up for lifting: lifting point, check valves, load warning device and capacity chart in the cab; LOLER examination in date. - Lift planned by a competent person; operator with a lifting endorsement; trained slinger signaller. - Bucket removed where the lifting point is not on it, or the bucket and hitch weight added to the load; nobody under the load.	1 x 5 = 5 Med	Lift planner
Reversing and blind spots	Anyone behind or beside an excavator, dumper or roller where the driver cannot see them.	4 x 5 = 20 High	- Site laid out to cut reversing, with one-way routes and turning areas. - Mirrors, cameras, beacons and alarms working; dumpers not loaded so high that the load blocks the driver's view. - Marshaller in a safe place in the driver's view where reversing cannot be avoided.	2 x 5 = 10 Med	
Defects and poor maintenance	Operators and people nearby when brakes, steering, hydraulics, hoses or the hitch fail in use.	3 x 4 = 12 Med	- Daily pre-use check by the operator, recorded, with a weekly inspection by a competent person. - Machine taken out of use and tagged until any safety defect is put right; servicing to the maker's intervals. - Hired plant arrives with evidence of its last inspection, as PUWER regulation 6(4) requires.	1 x 4 = 4 Low	Operator
Riding on plant and in buckets	Anyone given a lift on a dumper, on a step or in an excavator bucket, or raised to height in a bucket.	3 x 5 = 15 High	- Nobody rides on plant except in a safe place provided for that purpose, as CDM regulation 28(4) requires. - Nobody is ever lifted in a bucket; MEWPs, towers or scaffolds for work at height.	1 x 5 = 5 Med	
Loading and unloading plant trailers	Operators and helpers when a machine slides off the ramps or tips off a trailer or low loader.	3 x 5 = 15 High	- Trailer coupled and braked on firm, level ground, with ramps secured and clear of mud. - Machine driven on slowly and centrally with the attachment low; nobody beside the ramps or the trailer. - Machine chained down at the maker's lashing points before it is moved.	1 x 5 = 5 Med	
Refuelling plant	Operators refuelling from bowsters or cans, and anyone nearby, from spills, fire and diesel on the skin.	2 x 4 = 8 Med	- Engine off and no smoking; refuelling at a set point away from drains, watercourses and excavations. - Bunded, secure bowser with a sound hose and nozzle; spill kit and fire extinguisher at the fuel point. - Gloves worn; spills cleaned up at once and reported.	1 x 4 = 4 Low	
Getting on and off machines	Operators slipping from tracks, steps or a dumper as they climb on or jump down, often in mud.	3 x 3 = 9 Med	- Steps and handholds clean and sound; three points of contact, facing the machine; never jump down. - Machine parked, attachment lowered, controls isolated and engine off before the operator gets off.	2 x 3 = 6 Med	

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EQUIPMENT

Plant, equipment and PPE

Plant and equipment

Each item, the checks and certificates it needs, and who may operate it.

PUWER 1998, LOLER 1998

ITEM	CHECKS AND CERTIFICATES	OPERATOR COMPETENCE
360 excavator or mini digger	Daily check recorded; weekly inspection; hitch pin checked at every attachment change.	CPCS, NPORS or equivalent
Excavator used for lifting	Check valves, load warning, capacity chart; LOLER exam at least every 12 months.	Lifting endorsement
Quick hitch	Maker's pin only; examined with the machine, or every 6 months if moved between machines.	Trained on that hitch
Forward tipping dumper	Daily check; roll-over protection and seat belt sound; brakes, steering and skip.	CPCS, NPORS or equivalent
Ride-on roller	Daily check; roll-over protection and seat belt sound; brakes and drum.	CPCS, NPORS or equivalent
Slings, shackles and lifting buckets	Safe working load marked; checked before use; examined every 6 months.	Trained slinger signaller
Fuel bowser	Bunded and secure; hose and nozzle sound; spill kit and extinguisher.	Trained user

Personal protective equipment

PPE is the last line of defence, after the controls above. Specify the type, not just the item.

PPE AT WORK REGULATIONS 1992

ITEM	NEEDED	TYPE AND SPECIFICATION
Safety helmet	☒	To site standard
Safety footwear	☒	Toe protection and a grip sole
High-visibility clothing	☒	All on foot; operators out of the cab
Gloves	☒	For slinging, refuelling and attachments
Eye protection	☐	
Hearing protection	☒	Near breakers and compactors
Respiratory protection Type, and face-fit tested	☐	
Harness or restraint Anchor points identified	☐	

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CONTROLS

Substances, permits, emergencies and the environment

Hazardous substances

Each substance and its COSHH assessment.

COSHH 2002, REGULATION 6

SUBSTANCE	COSHH ASSESSMENT REFERENCE	CONTROLS
Diesel	COSHH assessment ref	Refuel with the engine off; gloves; spill kit to hand
Hydraulic oil and grease	COSHH assessment ref	Gloves; leaks reported; spill kit to hand
Diesel engine exhaust	COSHH assessment ref	Engines off when idle; no running plant in enclosed spaces

Permits and plans

PERMIT OR PLAN	NEEDED	REFERENCE
Hot work permit	☐	
Permit to work	☐	
Permit to dig or break ground	☒	
Confined space entry	☐	
Lift plan	☒	
Temporary works design	☐	

Emergency and rescue

First aid, fire, and how someone is rescued.
The rescue plan belongs in the RAMS, not after it.

If a machine overturns, stay in the seat with the belt on. Call the first aider and 999.
Overhead line contact: stay in the cab, or if you must leave, jump clear and do not touch the machine and ground together. Plant touching or arcing from an uninsulated line over 200 volts, or an excavator used for lifting collapsing or overturning, is a RIDDOR dangerous occurrence.

Environment and neighbours

Dust, noise, vibration, waste, spills and hours of work.

Fuel stored in a bunded, secure bowser, with spill kits at the fuel point and on each machine. Leaks of fuel or hydraulic oil cleaned up at once and reported. Engines switched off when not in use. Mud kept off the public road and noisy work kept to agreed hours.

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PLANT AND OPERATOR REGISTER

Plant, attachments and the people authorised to use them

Record each machine and accessory on site, who may operate it and what has been checked. The example rows are for a housing groundworks site: replace them with your own plant and people.

MACHINE OR ACCESSORY	ATTACHMENTS AND HITCH	OPERATOR	CARD, CATEGORY AND EXPIRY	AUTHORISED BY AND DATE	LIFTING EXAM DUE	SAFETY ITEMS SEEN
Mini digger, 1.5 tonne, [fleet no.]	Digging and ditching buckets; manual hitch with pin	[Name]	CPCS A58 tracked, expires [date]	[Supervisor], [date]	Not used for lifting	Hitch pin, seat belt, beacon
360 excavator, 13 tonne, [fleet no.]	Buckets; automatic hitch fixed to the machine, with lifting eye	[Name]	CPCS A59 tracked, lifting endorsement, expires [date]	[Supervisor], [date]	[Date]; hitch covered by the machine exam	Check valves, load warning, capacity chart
Forward tipping dumper, 6 tonne, [fleet no.]	None	[Name]	CPCS A09 wheeled, expires [date]	[Supervisor], [date]	Not lifting equipment	Roll-over frame, seat belt, camera
Ride-on roller, [fleet no.]	None	[Name]	[Card and category], expires [date]	[Supervisor], [date]	Not lifting equipment	Roll-over frame, seat belt
Chain sling and shackles, [ID]	Used with the 13 tonne excavator	Slinger: [Name]	CPCS A40 excavator only, expires [date]	[Supervisor], [date]	[Date], every 6 months	Safe working load marked

PUWER 1998, REGULATIONS 6 AND 9; LOLER 1998, REGULATIONS 8 AND 9; HSE QUICK HITCH GUIDANCE; CPA CIG 0801 (2009)

Briefed before the work starts

BRIEFED BY	REVISION BRIEFED	DATE AND TIME

[illegible]

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