

TOWER CRANE ERECTION AND DISMANTLING

ACTIVITY RAMS — ADAPT TO SITE BEFORE USE

Principal contractor and erection contractor interface · base and ties · erection, climbing, dismantling

KD-RAMS-PL-007 Rev A0

Statutory basis: LOLER 1998 reg 8 — every lifting operation properly planned by a competent person, appropriately supervised and carried out in a safe manner; reg 9(2) — where the safety of lifting equipment depends on the installation conditions, it is thoroughly examined after installation and before being put into service for the first time, and after assembly and before being put into service at a new site or in a new location; BS 7121-1:2016 and BS 7121-5:2019 for planning and managing crane and tower crane operations. CDM 2015 reg 19(2) — a temporary support or temporary structure is designed, installed and maintained to withstand the foreseeable loads imposed on it and used only for the purposes for which it was designed — with the base, foundation and ties controlled under BS 5975-1:2024. The Work at Height Regulations 2005 govern the erectors' work on the mast and jib. RIDDOR 2013 Schedule 2 lists the collapse, overturning or failure of any load-bearing part of lifting equipment, other than an accessory for lifting, as a dangerous occurrence. This document is the recorded safe system of work required by HSWA 1974 s.2(2)(a) and MHSWR 1999 regs 3 and 5. Written for Great Britain; in Northern Ireland the equivalent Northern Ireland regulations apply.

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

The principal contractor's part in erecting, climbing and dismantling a tower crane, and its interface with the crane supplier's erection contractor: the base, foundation and ties as designed temporary works, the ground and access for the mobile crane used to erect it, who holds the planning and supervision of the erection lifts and the lift plans that follow, exclusion zones on and off site, wind limits, the thorough examination before the crane is used, and the handover to the site. Climbing means raising the mast and tying it in to the structure.

This document does not cover: the erection contractor's own method statement for rigging, pinning, climbing and commissioning (received and checked under this document, not replaced by it); routine lifts once the crane is handed over (KD-RAMS-PL-003) and their lift plans (KD-LIFT family); the weekly inspection and wind record (KD-INS-TC-022); and rescue of the operator from the cab (KD-RES-CR-005).

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. Crane collapse from an inadequate base, foundation or ties

At risk: Everyone on and off site within reach of the crane

Controls: The base, foundation and any ties to the structure are temporary works: designed for the crane configuration and the loads the crane supplier gives, checked, and controlled through the site temporary works procedure to BS 5975-1:2024. Before erection the base is inspected against the design — anchors or grillage, level, drainage, and the concrete strength shown by test results rather than assumed from age — and released on KD-TW-IL-005. Ties are fixed only to parts of the structure the designer has confirmed can carry them, before any climb above the height the design allows free-standing.

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

2. Erection or dismantling out of sequence, or by people not competent for that crane

At risk: Erectors, everyone below

Controls: The erection contractor's method statement and lift plans are received and checked against the site before the mobile crane is booked. Erection, climbing and dismantling are carried out only by the crane supplier's team, competent for that make and model, in the sequence the manufacturer's instructions give — no shortcuts. Any change on the day stops that stage until the appointed person has revised the plan.

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

3. The mobile crane used for erection — ground, outriggers and lift plan

At risk: Everyone in the lift area

Controls: Every erection, climbing and dismantling lift planned by a competent person, supervised and carried out safely (LOLER 1998 reg 8), to BS 7121-1:2016 and BS 7121-5:2019. Where a crane is hired, HSE's guidance is that responsibility for planning, supervising and carrying out lifting operations rests with the user unless the hire company explicitly takes it on under a contract lift — so the principal contractor obtains written confirmation that the crane supplier's appointed person holds that planning and supervision, or appoints its own appointed person. The mobile crane position, outrigger loads and mats come from the lift plan; ground, voids and services at each outrigger checked before set-up (KD-RA-PL-003); overhead lines dealt with under KD-RAMS-PL-006.

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

4. Components, pins and tools falling from height

At risk: Everyone below, the public

Controls: An exclusion zone below the whole operation — including roads, footpaths and neighbouring land the jib or loads pass over — held by the principal contractor with barriers and marshals for the full duration; road and footpath closures and neighbours' agreement arranged beforehand; tools and pins tethered; nothing thrown or dropped; components moved by crane only.

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

5. Falls from the mast, jib and counter-jib*At risk: Erectors*

Controls: Erectors work from the crane's ladders, rest platforms and walkways, attached to anchor points the manufacturer designates whenever outside guarded areas, as the erection contractor's method statement sets out under the Work at Height Regulations 2005. The principal contractor confirms, before work starts, that a rescue plan for a person injured or suspended on the mast or jib exists and that the rescue kit and trained people are on site.

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

6. Wind during erection, climbing and dismantling*At risk: Erectors, everyone within reach of the crane*

Controls: Wind limits for erection, climbing and dismantling taken from the manufacturer's instructions and written on the lift plan — these are lower than the in-service limit, and this document prints no figure. Forecast checked before each day and each critical lift; wind measured at height; the stage stops before the limit is reached and the crane is left only in a condition the manufacturer's instructions state is safe for the forecast; no partly erected crane is left overnight without the erection contractor's written confirmation that it is.

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

7. Climbing — the crane out of balance while the mast is raised*At risk: Erectors, everyone below*

Controls: Climbs carried out only by the erection contractor to the manufacturer's climbing procedure: the crane balanced as instructed before the climbing gear is operated; no slewing, trolleying or lifting during the climb except as the procedure allows; the climbing wind limit observed; ties fitted at the heights the design states before the mast is raised beyond them.

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

8. The crane used before it has been examined after installation*At risk: Everyone on and around site*

Controls: No lift is made until a competent person has thoroughly examined the crane after installation and before first use (LOLER 1998 reg 9(2)) and the report is on site; limits, rated capacity indicator, zoning and anti-collision systems commissioned and tested; the handover from the erection contractor to the site recorded. The same applies after a climb or reconfiguration wherever the competent person's examination scheme requires it.

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

9. Oversailing neighbours, the public, highways and other cranes*At risk: Neighbours, the public, other crane operators*

Controls: Oversailing permissions and any highway or railway approvals obtained before erection; zoning set so loads are not carried over areas the plan excludes; anti-collision set where cranes or structures overlap; loads never carried over the public.

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

10. Plant and pedestrian interface*At risk: Everyone on site*

Controls: Segregated routes and crossings; banksman/marshal for reversing and blind movements; high-vis; eye contact and acknowledgement before approach; vision aids and alarms functional — checked daily.

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

- 01 Appoint the crane supplier and receive, before booking the erection, the crane configuration, the base loads, the erection contractor's method statement and the lift plans.
- 02 Obtain written confirmation that the crane supplier holds the planning and supervision of the erection, climbing and dismantling lifts as a contract lift; if it does not, the site appoints its own appointed person to plan and supervise them.
- 03 Commission the base and tie design through the temporary works procedure; check it; build the base and release it on KD-TW-IL-005 and the permit to load before erection.
- 04 Plan the erection day with the appointed person: mobile crane position and ground, delivery sequence and standing, the exclusion zone, road closures, and the wind limits for each stage.
- 05 Brief the site team on the exclusion zone, their marshalling duties and the stop signal; nobody else enters.
- 06 Check the forecast on the day; confirm the wind at height is within the limit before each stage starts.
- 07 The erection contractor erects to its method statement; the principal contractor holds the exclusion zone and keeps other work away from the operation throughout.

- 08 Before first use: thorough examination after installation, report on site, limits and safety systems commissioned, operator briefed, handover to the site recorded.
- 09 For each climb: ties installed to the design first; the erection contractor climbs to the manufacturer's procedure within the climbing wind limit; examination and handover as the scheme requires before use.
- 10 For dismantling: repeat the planning, ground check, exclusion zone and wind checks; confirm the dismantling lift plan allows for the finished structure around the crane.
- 11 STOP any stage if the wind approaches the limit, the ground or base shows movement, a component or pin does not fit as the instructions show, or anyone enters the zone. The collapse, overturning or failure of any load-bearing part of the crane, or of the mobile crane erecting it, is a dangerous occurrence listed in RIDDOR 2013 Schedule 2: make safe, preserve the scene and report it through the site procedure.
- 12 Remove the base only under the temporary works procedure once the crane has left; record the removal.

SITE-SPECIFIC AMENDMENTS TO THE SEQUENCE

5 PLANT, EQUIPMENT AND MATERIALS

Mobile crane for erection and dismantling, to the lift plan
Base, foundation and ties to the temporary works design
Anemometer and forecast service

Exclusion barriers, signs and road closure equipment
Radios on a dedicated channel
Tool and pin tethers

INSPECTION / THOROUGH EXAMINATION REFS

COSHH ASSESSMENT REFS

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

Head protection
Safety footwear

High visibility
Gloves — task-rated

Eye protection
Hearing protection

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

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-TL-022 — Permit to Load and Strike — Temporary Works

Before the base is loaded by the crane, and before it is removed.

PERMIT NUMBER

KD-PTW-LO-008 — Lifting Operations Permit

Every erection, climbing and dismantling lift.

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

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	2026-09-12	first-issue	First issue.	— not yet approved —
A0	2026-09-12	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.