DESIGNER RISK
BY DISCIPLINE

What every designer should look for — Architect · Structural · M&E · Interior

Guided by CDM 2015 Regulation 9 and the Safety CDM Ltd Hazard Risk Register categories

SAFETY CDM LTD
DESIGN SMART BUILD SAFE

How to Use This Guide

This presentation is a prompt list — a starting point for your Designer Risk Assessment. Every project is different. Use these as a checklist of the risks most likely to arise from your discipline, not a definitive or exhaustive register.

1

Identify

For each risk listed, consider whether it applies to your specific project, scope and design decisions. Not all risks will be relevant — but you must consider them.

2

Record

Capture relevant risks in your DRA using the Safety CDM Ltd Hazard Risk Register. Be specific — name the hazard, activity, location and who is at risk.

3

Eliminate

Work through the hierarchy: Eliminate → Reduce → Control. Only record a risk in your DRA when you cannot design it out entirely.

4

Share

Pass your completed DRA to the Principal Designer. Residual risks that cannot be managed by design must be communicated to the construction team.

Architect — Typical Design Risks

Architects create risks through building form, envelope, circulation, materials and means of escape. Your DRA must cover construction, maintenance and in-use risks arising from your design decisions.

Category	Typical Risk	At Risk	Score
Working at Height	Falls during installation or future maintenance of roof, facade, glazing. Specify permanent safe access — walkways, anchor points, cradle fixings.	Workers / Maintainers	High
Roofing	Fragile roof materials; unguarded leading edges during fit-out. Specify non-fragile materials; permanent edge protection or anchor points.	Construction Workers	High
Facade / Cladding	Falls or material failure during cladding installation. Complex interfaces with structure create sequence risks and waterproofing failures.	Workers / Public	High
Fire	Compartmentation failures through design; combustible external wall materials; complex atria or open-plan layouts affecting means of escape.	In Use Occupants	High
Access / Egress	Restricted access to plant, roof zones, cleaning gantries. Design in permanent safe access rather than leaving to contractor method.	Maintainers / Workers	Medium
Public Protection	Construction hoarding, pedestrian routing around site, protection of adjoining properties, temporary closure of public rights of way.	Members of Public	Medium
Fit Out / Finishing	Manual handling of heavy furniture/fixtures; COSHH exposure from adhesives, paints, surface treatments. Specify low-VOC products.	Construction Workers	Medium

Structural Engineer — Typical Design Risks

Structural designs directly control stability, loading and ground conditions. Risks from the permanent design cascade into temporary works, construction sequence and long-term structural integrity.

Category	Typical Risk	At Risk	Score
Structural	Frame instability during erection; partial loading during phased construction. Provide erection sequence and temporary propping details.	Construction Workers	High
Temporary Works	Propping, shoring, falsework required by permanent design. Flag requirements at Stage 2 — late notice causes programme and cost overruns.	Workers / Public	High
Excavation / Ground	Trench collapse, groundwater ingress, proximity to adjacent foundations. Specify adequate ground investigation and inform contractor of constraints.	Construction Workers	High
Piling	Vibration to adjacent structures; pile arisings contaminated by ground conditions; noise and ground movement risks.	Workers / Neighbours	High
Lifting Operations	Heavy precast or steel elements requiring crane operations. Design connections and sequences to minimise single-lift durations and crane radii.	Construction Workers	High
Contaminated Land	Design interventions that disturb contaminated ground — piling through known contamination plumes; basements in former industrial land.	Workers / Environment	Medium
Confined Spaces	Basement voids, drainage chambers, sub-floor access hatches. Design in adequate access and ventilation to avoid confined space working.	Maintenance Workers	Medium

M&E Engineer — Typical Design Risks

SAFETY CDM LTD
DESIGN SMART / BUILD SAFE

Mechanical and electrical designs affect COSHH exposure, electrical safety, fire, maintenance access and confined space working. Specify safe-to-maintain systems — not just systems that work.

Category	Typical Risk	At Risk	Score
Mechanical & Electrical	Live electrical work; isolation and lockout failures; working near energised HV equipment. Specify safe isolation routes and permit-to-work provisions.	Workers / Maintainers	High
Volatile Compounds / COSHH	Refrigerants, pipe lagging, soldering fluxes, COSHH-relevant fluids. Specify safer alternatives and ensure adequate ventilation.	Construction Workers	High
Fire	Fire dampers, penetrations through compartment walls, combustible duct insulation. Co-ordinate penetration locations with architect's fire strategy.	In Use Occupants	High
Asbestos	M&E routes through legacy plant rooms or voids in existing buildings. Flag ACM locations; do not specify routes through unconfirmed asbestos areas.	Workers / Maintainers	High
Confined Spaces	Plant rooms, duct access, riser shafts — especially in basement or below-slab locations. Design in adequate access, working height and ventilation.	Maintenance Workers	Medium
Working at Height	Overhead duct and pipework installations; roof plant servicing. Design in safe working platforms and fixed access routes for future maintenance.	Workers / Maintainers	Medium
Lifting Operations	Heavy plant (chillers, AHUs, generators) requiring crane or hoist access. Confirm roof loadings with structural engineer; design permanent lifting eyes.	Construction Workers	Medium

Interior Designer — Typical Design Risks

Interior designers specify materials, finishes, furniture and fit-out elements that create COSHH, fire, manual handling and working-at-height risks during construction and in ongoing maintenance.

Category	Typical Risk	At Risk	Score
Fit Out / Finishing	COSHH exposure from adhesives, solvents, resins, paints during installation. Specify low-VOC and water-based products; require ventilation during application.	Construction Workers	High
Hazardous Materials	Specified materials containing silica dust (stone worktops, tiles), isocyanates (spray finishes), or heavy metals (pigments). Specify safer alternatives.	Construction Workers	High
Fire	Combustible surface finishes on walls, ceilings, furniture. Ensure all specified materials meet required Class ratings; co-ordinate with architect's fire strategy.	In Use Occupants	High
Working at Height	Installation of bespoke joinery, artwork, lighting features, high-level wall finishes. Specify fixing systems that can be installed safely from standard platforms.	Construction Workers	Medium
Structural	Heavy feature elements (stone panels, bespoke staircases, large aquariums, artwork) imposing unexpected loads. Confirm all loadings with structural engineer.	Workers / In Use	Medium
Manual Handling	Heavy furniture, stone slabs, bespoke elements — specify maximum unit weights; require mechanical assistance for heavy items; design for delivery access.	Construction Workers	Medium
Access / Egress	Interior layouts affecting means of escape: pop-up furniture, sliding walls, high-density seating. Ensure fire escape routes remain compliant with the fire strategy.	In Use Occupants	Medium

Residual Risks — Managed by Client or Management Company

These are risks that REMAIN after all reasonable design measures have been applied. No designer has been able to eliminate or sufficiently reduce them through design. They must be formally passed to the client or management company via the Residual Risk Register as part of the Health & Safety File.

Category	Typical Risk	At Risk	Score
Working at Height	Ongoing access to roof plant, gutter cleaning, facade inspection where no permanent cradle or access system was reasonably practicable in the design.	Maintenance Workers	Medium
Mechanical & Electrical	Isolation and safe access for periodic inspection and maintenance of HV switchgear, lift motor rooms, roof plant. Requires documented maintenance regime.	Maintenance Workers	Medium
Hazardous Materials	Specified materials with residual COSHH risk during future maintenance or replacement — e.g. spray coatings, epoxy resins, fire-rated sealants.	Maintenance Workers	Medium
Contaminated Land	Known contamination remaining below finished ground level or within retained structures. Requires ongoing monitoring and ground gas management.	Future Occupants / Workers	Medium
Structural	Known structural constraints — e.g. span limits, maximum floor loadings, allowable penetration zones — that must be managed throughout the building's life.	Future Occupants / Workers	Low
Environmental	Surface water management, SuDS maintenance, planted roofs, tree protection zones — all require a client-managed regime for the building's lifetime.	Environment / Public / Occupants	Low

What Goes in Each DRA Entry

SAFETY CDM LTD
DESIGN SMART / BUILD SAFE

Whichever discipline you are — use the Safety CDM Ltd Hazard Risk Register. Every entry needs these five things:

1 Specific Hazard

Name the exact hazard, activity and location. Not 'fall risk' — 'falls during installation of glazed curtain wall panels at Level 5, east elevation (approx 18m above pavement)'.

2 Persons at Risk

Example: Construction Workers · Members of the Public · Maintenance Workers · In-Use Occupants ·

3 Initial Risk Score

Score BEFORE any design measures: High / Medium / Low. This shows the severity of the hazard in its uncontrolled state and justifies the measures you take.

4 Design Measures

The critical column. Describe exactly what you changed in the design. Specific: what decision, what it replaced, and how it reduces the risk. This is your professional evidence.

5 Residual Risk Score

Score AFTER your measures. If still High or Medium — can anything more be done? If not, pass it as a residual risk to the Principal Designer with a clear description.

Column 4 — Design Measures Taken — is the most important column in the entire register. It is your professional evidence that you have applied Regulation 9(2). Vague entries offer no legal protection.

Key Takeaways

1. Every designer — architect, structural, M&E or interior — has their own set of foreseeable risks. You must assess your own discipline, not rely on others.

2. Use this guide as your prompt list at the start of each RIBA stage. Ask: do any of these risks arise from my design decisions on this project?

3. Be specific in your DRA entries. Generic descriptions — 'fall risk', 'COSHH risk' — provide no legal protection and no useful information to contractors.

4. Your Design Measures column is your professional evidence. Describe exactly what you changed, what it replaced, and why it reduces the risk.

5. Residual risks are not failures — they are risks that remain after reasonable design measures. Record them clearly and pass them to the Principal Designer.

6. Co-ordinate with the wider design team. The risks at discipline interfaces — structure/M&E, facade/services, fit-out/fire strategy — are the ones most often missed.

SAFETY CDM LTD

DESIGN SMART BUILD SAFE

Any Questions?

Contact us on info@cdm2015regs.co.uk

Or call 01494 445774