DESIGNER RISK ASSESSMENT

Training for Designers

Principles, Practice & Legal Duties under CDM 2015

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Who is a Designer under CDM 2015?

CDM 2015 defines 'designer' very broadly — far beyond just architects.

Architects	Any individual or practice preparing drawings, specifications or design briefs that influence build.
Structural Engineers	Structural frame, foundation design, temporary works — any engineered design element.
M&E Engineers	Mechanical, electrical, plumbing and fire systems — including routes that affect access and maintenance.
Civil & Ground Engineers	Earthworks, drainage, infrastructure — including designs that affect future ground conditions.
Specialist Sub-Designers	Cladding, glazing, roofing, fit-out — any specialist who produces design information for others to build from.

If you prepare any design that others will build from, you are a designer — and Regulation 9 applies to you.

Your Legal Duties — CDM 2015 Regulation 9

Regulation 9 creates three distinct duties — ALL must be met, on every project.

Duty 1 — BEFORE Design Starts

- Satisfy yourself the client is aware of their CDM duties
- Confirm whether the project is notifiable (F10)
- Check a Principal Designer has been appointed if required
- Do not commence design until you have this assurance

Duty 2 — DURING Design

- Identify all foreseeable construction, maintenance and demolition risks
- Apply the hierarchy of control — eliminate first, then reduce
- Record significant residual risks in a Designer Risk Assessment
- Review and update your DRA at every design stage

Duty 3 — SHARE & CO-OPERATE

- Co-operate with the Principal Designer and other designers
- Share your risk information with the wider design team
- Provide information for Pre-Construction Information pack
- Communicate residual risks to those who need to manage them

What is a Designer Risk Assessment (DRA)?

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A DRA IS:

- A formal record of health & safety risks arising from your design decisions
- Your professional evidence that you have applied the hierarchy of control
- A communication tool — passing risk information to those who must manage it
- A living document — started early, updated at every design stage
- A legal requirement under CDM 2015 Regulation 9 for every designer

A DRA is NOT:

- x A contractor method statement or safe system of work
- x A generic hazard checklist completed at the end of a project
- x A tick-box exercise — vague entries provide no legal protection
- x The responsibility of the Principal Designer alone
- x Something that can be delegated to a junior without oversight

The Hierarchy of Risk Control — Reg 9(2)

You must work through this hierarchy in order. Start at the top. Only move down when you cannot, for example, Eliminate the Hazard or Risk.

1 — ELIMINATE

Remove the hazard entirely through design

Redesign to avoid the hazard altogether. The most powerful step. E.g. specify off-site prefabrication to remove on-site working at height, or use concrete encasement instead of intumescent spray to remove spraying hazard.

2 — REDUCE

Reduce the likelihood or severity of harm

Where elimination is not reasonably practicable, reduce the risk as far as possible. E.g. design permanent maintenance access so contractors never need temporary scaffolding; specify pre-treated materials to reduce COSHH exposure.

3 — CONTROL

Provide information so others can manage what remains

If a risk cannot be designed out, record it in your DRA and pass the information to the Principal Designer. Contractors must be told what risks remain and how to manage them.

Document your thinking at every step. If you considered elimination but it was not reasonably practicable, record WHY — this is your professional defence.

When Must You Produce — and Update — Your DRA?

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A DRA is not a one-off document. It must be started early and kept alive throughout the design process.

Appointment	**Start immediately:** As soon as you receive your appointment, consider the risks your scope of design may create. Do not wait for a formal design stage to begin.
Concept & Scheme	**RIBA Stages 1–2:** Identify significant risks early when they are cheapest to eliminate. Flag major constraints: demolition, contamination, height, unstable ground, existing services.
Developed Design	**RIBA Stage 3:** Update as design is coordinated with other disciplines. Review interface risks — where your design meets the structural frame, M&E routes, access strategy.
Technical Design	**RIBA Stage 4:** Finalise DRA before tender. All residual risks must be clearly recorded and passed to the Principal Designer for Pre-Construction Information.
Design Changes	**Any change, any time:** Any design change — however minor — must trigger a review. A change to one element can remove an existing control or introduce a new risk elsewhere.

How to Identify Foreseeable Risks

Think beyond the finished building. Every design decision creates risk — at some stage of its life.



Construction risks

What risks does building your design create? Structural instability, working at height, excavations, confined spaces, lifting operations, COSHH hazards from specified materials.



Maintenance risks

How will it be maintained in use? Cleaning, servicing plant, replacing glazing, accessing roof drainage — consider the whole maintenance lifecycle.



Public & third-party

What risks does the construction phase create for people not on site? Adjacent properties, public highways, schools, hospitals, underground services, overhead lines.



Demolition & end of life

How will it be taken apart? Specify hazardous materials carefully. Consider how fixings, connections and frame systems affect future demolition.

Ask yourself: if a contractor died building or maintaining this, what would the inquest say about the design?

Common Risk Categories for Designers

These are the hazard types most commonly arising from design decisions. Your DRA should address any that are relevant to your scope.

Working at Height

Falls during installation, cleaning or maintenance. Consider permanent safe access — fixed walkways, roof edge protection, anchor points.

Structural

Instability during construction, alteration, or demolition. Temporary works requirements arising from the permanent design.

Excavation & Ground Works

Collapse, flooding, contamination, proximity to existing foundations or services. Specify adequate ground investigation.

Hazardous Materials / COSHH

Specified materials containing silica, isocyanates, solvents, lead paint, asbestos products. Specify safer alternatives where possible.

Fire

Compartmentation, means of escape, material spread of flame. Also fire risk during construction from hot works or combustible materials.

Lifting Operations

Heavy components requiring crane lifts or MEWP use. Consider lifting sequences in your detailing and specification.

Mechanical & Electrical

Isolation, live working risks, proximity to electrical equipment. Ensure safe access for maintenance is designed in.

Demolition

Fragility, stability, hazardous materials, proximity to occupied areas. Provide a demolition sequence and pre-demolition survey.

Confined Spaces

Tanks, ducts, voids requiring entry. Consider access and ventilation at design stage to avoid confined space working.

Public Protection

Pedestrian barriers, traffic management, scaffold fans, hoardings. Design the site interface as carefully as the building.

Temporary Works

False work, propping, shoring required by your permanent design. Flag to the contractor early — temporary works design takes time.

Contaminated Land

Ground contamination arising from site history. Commission investigation early; specify appropriate remediation and waste disposal.

Writing a Strong DRA Entry — The 5 Elements

A vague entry is worthless. A good entry demonstrates professional judgement and gives contractors actionable information.

1. **SPECIFIC HAZARD:**
   Name the actual hazard precisely — not just 'fall risk' but 'falls from leading edge during installation of structural steel at Level 4, approximately 12m above ground.'

2. **WHO IS AT RISK:**
   Identify who could be harmed: construction workers, members of the public, maintenance workers, in-use occupants. Be specific — it affects who needs to act.

3. **INITIAL RISK SCORE:**
   Score the risk before any design measures. This baseline shows how serious the hazard is in its uncontrolled state — High / Medium / Low.

4. **DESIGN MEASURES TAKEN:**
   The critical element. Describe exactly what you changed in the design. Be specific: what decision was made, what it replaced, and how it reduces the risk. This is your professional evidence.

5. **RESIDUAL RISK SCORE:**
   Score the risk after your measures. If it remains High or Medium, you must consider whether more can be done — and record the residual risk for contractors to manage.

Good Entry vs Poor Entry — Side by Side

Both entries cover the same hazard. One will satisfy a Principal Designer and withstand legal scrutiny. The other will not.

POOR ENTRY	
Hazard	Fall risk
At Risk	Workers
Score	**High**
Measures	Ensure safe working procedures are followed
Residual	Medium

- No specific activity or location
- Contractor instruction, not a design measure
- Risk not actually reduced — nothing was done

GOOD ENTRY	
Hazard	Falls during installation of structural steel at Level 4 (approx. 12m), open leading edge on east elevation
At Risk	Construction Workers
Score	**High**
Measures	Specified pre-erected perimeter crash deck at Level 3 + permanent fixing points for fall-arrest lanyards integrated into steelwork connection details. Erection sequence agreed with steelwork contractor at Stage 4.
Residual	**Low**

- Specific activity, location and height
- Design decision clearly described
- Risk demonstrably reduced from High to Low

Coordinating with the Design Team

Risk does not stop at disciplinary boundaries — designers must co-operate with each other.



The Principal Designer's role

The PD co-ordinates H&S during the design phase. They do not replace your Reg 9 duties — they rely on you to identify and pass on the risks your design creates. You must engage with them actively.



Interface risks

Where your design meets another discipline is where the highest risk often sits. Structural openings, M&E penetrations, cladding attachment — review these interfaces together, not separately.



Sharing your DRA

Your completed DRA must be shared with the PD and other relevant designers. It is not a private document — it is how risk information flows through the design team.



Recording co-ordination

Document your co-ordination activities. Meeting notes, emails confirming risk reviews, updated DRA versions — these demonstrate you have met your Reg 9(3) co-operation duty.

Residual Risks & Pre-Construction Information

Risks that cannot be designed out must be formally passed on — they do not simply disappear.

What is a residual risk?

- A risk that REMAINS after all reasonable design measures have been applied
- You have applied the hierarchy — but cannot fully eliminate or reduce the risk
- It must be documented in your DRA with a clear description of what remains
- It must be passed to the Principal Designer without delay
- Contractors will need to manage it — give them enough information to do so

Pre-Construction Information (PCI)

Your DRA feeds into the PCI pack compiled by the Principal Designer. Contractors must receive this before work starts.

Significant design risks:
Residual risks that contractors must manage — with enough detail to plan their method.

Material hazards:
Asbestos, contamination, COSHH-relevant specifications, hazardous ground conditions.

Structural information:
Loadings, temporary works requirements, sequence constraints from your permanent design.

Existing H&S file:
Information from the building's H&S file (if a refurbishment) — previous hazards, asbestos surveys, structural drawings.

Common Designer Mistakes — And How to Avoid Them

Common Mistake	What to Do Instead
x Starting the DRA at the end of the project	Start at appointment — early identification leads to elimination. Late DRAs only document what cannot be changed.
x Writing contractor instructions, not design decisions	Your DRA must record what YOU did in the design. 'Contractor to use scaffolding' is their choice — not a design measure.
x Generic hazard descriptions	Name the specific activity, element, location and height. 'Falls during installation of feature staircase at atrium void (8m)' — not 'fall risk'.
x Completing the DRA once and forgetting it	Every design change is a DRA trigger. Set it as a standard agenda item at every design team meeting.
x One discipline completing everyone's DRA	Each designer must identify the risks their own design creates. The PD co-ordinates — they do not do it for you.
x Leaving residual risks unrecorded	If a risk remains after your measures, record it explicitly and pass it to the PD. Silence is not a safe option.

Key Takeaways

1. You are a designer under CDM 2015 if you prepare any design that others build from — Reg 9 applies.
2. Apply the hierarchy: Eliminate first, Reduce second, Control last — and document your reasoning at every step.
3. Start your DRA at appointment and update it at every design stage and after every design change.
4. Be specific: name the hazard, the activity, the location — and describe exactly what design decision you took.
5. Co-ordinate with the design team. Interface risks are the most commonly missed — review them together.
6. Pass all residual risks to the Principal Designer. They feed into Pre-Construction Information for contractors.
7. Your DRA is your professional evidence. Vague entries protect no one — not the contractor, not you.



Any Questions?

Contact us on info@cdm2015regs.co.uk

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