Level 1 Award in Health and Safety in a Construction Environment - Revision Pack

Section 1: Responsibilities, Laws, and Regulations

This section will help learners fully understand what's expected of them, their employers, and external bodies in relation to UK health and safety law — especially in the construction sector.

Topic 1: The Law

Why Health and Safety Laws Matter

Health and safety laws in the construction industry:

- Protect lives: Reduce accidents and health risks.
- Ensure accountability by clearly defining roles and responsibilities.
- Prevent Legal Consequences: For Employers and Workers.
- Create safer environments: For workers, the public, and the environment.

Key Laws You Must Know

1. Health and Safety at Work etc. Act 1974

This is the foundation of all UK health and safety legislation.

- Employers must:
 - o Provide a safe workplace.

- Offer proper training and supervision.
- Manage and reduce risks.

Employees must:

- Take care of their own safety.
- Follow health and safety procedures.
- Report hazards or unsafe conditions
 This Act applies to all workplaces, including construction, and forms the legal basis for holding both employers and workers accountable.

2. Management of Health and Safety at Work Regulations 1999

This regulation builds on the 1974 Act. Employers must:

- Carry out risk assessments
- Provide clear information and training.
- Monitor risks continuously

This is especially important in construction, where sites are constantly changing.

3. Health and Safety (First Aid) Regulations 1981

Employers must:

- Ensure first aid is available
- Appoint trained first-aiders
- Provide first aid kits on-site.
 This ensures workers get prompt help in an emergency.

4. Control of Substances Hazardous to Health Regulations 2002 (COSHH)

Employers must:

- Control exposure to hazardous substances.
- Train workers to use them safely.

Only expose workers when necessary.

5. Manual Handling Operations Regulations 1992

This regulation lays out the process for reducing injury during manual tasks:

- 1. Avoid manual handling where possible.
- 2. **Assess the risk** if handling is necessary.
- 3. Reduce the risk using safe systems of work.



Topic 2: Responsibilities

Employee Responsibilities

- Follow health and safety policies.
- Operate equipment and tools safely.
- Wear PPE at all times as instructed.
- Report hazards and unsafe conditions.
- Participate in training sessions.

Employees must demonstrate that they take responsibility seriously.

Employer Responsibilities

Under the Health and Safety at Work Act 1974, employers must:

- Provide training and supervision
- Ensure safe equipment and processes.
- Supply free, well-maintained PP.E
- Carry out regular risk assessment.s
- Provide safe access and exit routes.
- Control fire risks through assessments.
- Communicate clearly with staff.
- Follow **RIDDOR** reporting requirements.
- Ensure all hazards are identified and controlled.

CDM Regulations 2015:

Employers must also follow the Construction (Design and Management) Regulations:

- Plan and manage health and safety from start to finish
- Coordinate with all parties (designers, contractors, clients)

External Bodies' Responsibilities

Role	Duties	
HSE (Health and Safety Executive)	Enforce law, investigate incidents, issue fines	
Principal Contractor	Oversee the construction phase and coordinate safety	
Professional Bodies (e.g. RICS, CIOB, ICE)	Set industry standards and promote best practices	
Contractors	Ensure workers are trained, supervised, and safe	
Clients (under CDM)	Ensure principal roles are fulfilled and share site info	

Topic 3: RIDDOR & Reporting Responsibilities

What Is a Hazard?

A hazard is anything with the potential to cause harm, such as:

- Broken ladders
- Exposed wiring
- Slippery floors

What Is a Near Miss?

An unplanned event that **almost caused harm**, but didn't. Example: A heavy object falling and narrowly missing someone.

Why Reporting Matters

- Prevents future accidents
- Helps identify patterns of risk
- Keeps the site legally compliant
- Encourages a culture of safety

How to Report Hazards or Near Misses

- 1. Tell your supervisor or site manager immediately.
- 2. Fill out a hazard or near-miss form (usually available on-site)
- 3. Include:
 - What happened
 - Where and when
 - Who was involved or witnessed it

RIDDOR: Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations 2013

Employers must report:

- Deaths or serious injuries
- Incidents that result in 7+ days off work
- Fractures, amputations, crush injuries
- Illnesses like carpal tunnel or asthma
- Scaffolding collapses, chemical leaks, or equipment tipping.

Workers **must report anything that could fall under RIDDOR** to help the employer remain compliant.

Summary for Revision:

- Know what RIDDOR is.
- Understand what qualifies as a reportable incident.
- Know how to report a hazard or a near miss.
- Remember: Reporting protects everyone.

Section 2: Construction Site Safety and Risk Management

Topic 1: Common Hazards on Construction Sites

Construction sites are full of potential risks. Knowing how to **identify and control hazards** is crucial for ensuring safety and compliance with legal requirements.

Slips, Trips, and Falls

Common Causes:

- Wet or uneven surfaces
- Poor housekeeping (tools, cables, debris left out)
- Inadequate lighting
- Worn or incorrect footwear

Control Measures:

- Keep walkways clean and dry
- Use slip-resistant footwear
- Improve lighting in work areas.
- Use warning signs to highlight slippery areas.

Electrical Hazards

Risks: Electric shocks, burns, fires

Causes:

- Damaged wires, overloaded sockets
- Contact with overhead/buried power lines.
- Faulty tools
- Lack of PPE

Control Measures:

- Inspect equipment regularly
- Use **RCDs** (Residual Current Devices)
- Enforce **PPE** use
- Label hazardous areas clearly.

Noise and Vibration

Risks: Hearing loss, hand-arm vibration syndrome (HAVS)

Sources:

- Demolition
- Heavy tools and machinery
- Drilling, cutting, grinding

Control Measures:

- Provide hearing protection
- Rotate tasks to reduce exposure.
- Maintain equipment to reduce noise.
- Conduct exposure assessments

Confined Spaces

Risks: Asphyxiation, gas exposure, fire, or difficult rescue situations

Typical Hazards:

- Poor ventilation
- Toxic gas build-up
- Restricted access

Control Measures:

- Risk assessment before entry
- Gas detection equipment
- Permit-to-work systems
- Emergency rescue plan in place

Moving Plant and Vehicles

Risks: Collisions, crushing injuries

Causes:

- Poor visibility
- Reversing or turning in tight areas
- Lack of pedestrian segregation

Control Measures:

- High-vis clothing for all workers
- Physical barriers & walkways
- Trained spotters and reversing alarms
- Only licensed operators

Takeaway:

Everyone must take personal responsibility for identifying hazards and using the proper **control measures**. Stay alert, follow procedures, and speak up when necessary.

Topic 2: First Aid and Emergency Response

Quick and effective first aid and emergency action can save lives.

First Aid Requirements

- One trained first aider must be available at all times
- First aid kits must be fully stocked and easy to access
- All workers should:
 - Know who the first aider is
 - Report all injuries, no matter how small
 - Never give first aid unless trained.

First Aid Kit Must Be:

- Clearly marked and accessible
- Checked and stocked regularly
- Reported for replenishment when used

Emergency Contacts and Evacuation

Every worker must:

- Know where to find emergency contacts (usually on the noticeboard)
 - Site manager

- First aider
- Fire marshal

Evacuation Procedure:

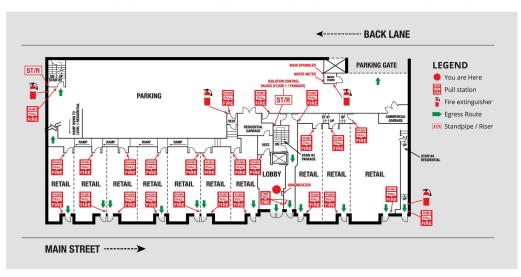
When the alarm sounds:

- 1. Stop work immediately.
- 2. Use the designated evacuation routes.
- 3. Go to the assembly point.
- 4. Report to the fire marshal/site manager.

Common Emergencies:

- Fires
- Gas leaks
- Structural collapse
- Medical emergencies

EMERGENCY PLAN: GROUND FLOOR



IF YOU DISCOVER A FIRE

- ACTIVATE a fire alarm pull station
 PHONE 9-1-1 to report a fire at the building
 EVACUATE to a safe area within the building or
 outside the building to the assembly area via the
 nearest safe exit
- DO NOT lock doors behind you
 ASSIST persons requiring assistance

WHEN YOU HEAR THE ALARM

- WHEN YOU HEAR THE ALARM

 Upon FIRE ALARM evaluate if you are at risk before evacuation

 EVACUATE to a safe area within the building or outside the building to the assembly area via the nearest safe exit.

 DO NOT lock door behind you.

 ASSEMBLE clear of the building and arriving fire apparatus

 ASSIST persons requiring assistance

 DO NOT GO BACK IN THE BUILDING FOR ANY REASON.

 The Fire Department will advise when it is safe to do so.

 PHONE 9-1-1 to report a fire at building

DESIGNATED ASSEMBLY AREA

Do not use the elevator.

Topic 3: COSHH (Control of Substances Hazardous to Health)

COSHH protects workers from exposure to harmful substances.

Why COSHH Matters:

- Prevents illnesses like cancer, asthma, and COPD.
- Helps identify, assess, and control health risks.
- Keeps accurate records of hazardous substances.

COSHH in Action:

Employers Must:

- 1. Identify hazardous substances.
- 2. Carry out risk assessments.
- 3. Use control measures (ventilation, PPE, safe handling).
- 4. Train employees.
- 5. Monitor and review exposure.
- 6. Maintain records.



Topic 4: Hazardous Substances & Correct PPE

Exposure to chemicals, dust, and fumes is a common occurrence in the construction industry. Proper PPE can save your life.

Examples of Hazardous Substances and PPE:

Substance	Risks	Required PPE	
Dust (e.g., silica, wood) Lung disease, cancer		RPE (masks), goggles, gloves	
Solvents (paints, adhesives)	Irritation, respiratory issues	RPE, goggles, gloves, apron	
Lead (old paint)	Neurological damage	RPE (P3), gloves, coveralls	
Asbestos	Fatal lung diseases	P3 respirator, disposable coveralls, gloves	
Cement	Skin/eye damage	RPE, gloves, goggles, coveralls	
		RPE, monitor levels, ventilate the	
Carbon Monoxide	Poisoning	area	
Microorganisms	Infections	RPE, gloves, hygiene supplies	

Always check the Safety Data Sheet (SDS) for each substance!



Topic 5: Fire Safety

Fire Risk Assessment

- Identify hazards: sources of heat, oxygen, and fuel.
- Control risks: remove or separate flammable materials.
- Provide fire-fighting equipment and alarms.

Types of Site Fire Alarms:

Туре	Use Case
Manual Call Points	Push-button alarms
Air Horns/Whistles	Small or remote areas
Battery Alarms	Sites with no power
Wireless Systems	Flexible, large sites
Hardwired Alarms	Permanent or large-scale projects

Fire Extinguisher Types and Uses:

Class	Fire Type	Extinguishers
А	Solid materials	Water, foam, powder
В	Flammable liquids	Foam, CO ₂ , powder
С	Flammable gases	Powder
D	Flammable metals	Powder
E	Electrical	CO ₂ , powder (disconnect power first)
F	Cooking oil/fat	Wet chemical

Only use an extinguisher if trained and it's safe to do so.



Evacuation Routes Must Be:

- Clearly marked
- Free of obstacles
- Fire-resistant
- Include fire doors

Topic 6: Working at Heights

Falls are the #1 cause of death in construction.

What Counts as Work at Height?

- Ladders
- Scaffolding
- Roofs
- Platforms
- Any area where a fall could cause injury

Legal Duties: Work at Height Regulations 2005

Employers must:

- Avoid working at height where possible.
- Use proper equipment (MEWPs, scaffolds).
- Minimise fall risks.
- Ensure workers are trained.
- Inspect equipment regularly.

Workers must:

- Follow safety rules.
- Use equipment correctly.
- Report unsafe conditions.

Safe Ladder Use:

Only for:

- Short-duration tasks.
- Low-risk jobs.
- When tied off/stabilised on flat surfaces.

Fall Protection Systems:

Туре	Description	
Collective	Guardrails, scaffolds, safety nets	
Personal	Harnesses, fall arrest systems	

Weather & External Hazards:

Do **not** work at height during:

- High winds
- Heavy rain
- Ice or poor visibility

Topic 7: Mental Health and Wellbeing

Why It Matters:

- Construction has high rates of stress, anxiety, and suicide.
- Poor mental health impacts safety and productivity.

Common Risk Factors:

- Long hours
- Job insecurity
- Isolation
- Tight deadlines
- Physical fatigue

Warning Signs:

- Mood changes
- Withdrawal
- Poor focus
- Absenteeism
- Substance use

Support Strategies:

- Mental health first aiders
- Posters and helplines
- Training and awareness

- Breaks and flexible work
- Zero tolerance for bullying
- Anonymous reporting options

Worker's Role:

- Look after your own well-being.
- Check on colleagues.
- Report concerns early.
- Use the support available.

Section 3: Manual Handling in Construction

Manual handling refers to lifting, carrying, pushing, or pulling loads. These tasks are physically demanding and are a major source of **injuries in the construction industry**. Preventing manual handling injuries requires training, planning, teamwork, and the correct use of equipment.

Topic 1: Manual Handling Injuries and Prevention in Construction

Common Manual Handling Injuries

Injury Type	Cause	Impact
Back Injuries	Lifting heavy materials (bricks, steel, concrete) incorrectly	Strains, herniated discs, and chronic pain
Hand & Wrist Injuries	Handling tools or materials without protection or using poor technique	Cuts, fractures, repetitive strain
Shoulder Injuries	Repeated lifting above shoulder height or using tools awkwardly	Strains, tendinitis, rotator cuff injuries
Knee & Leg Injuries	Carrying heavy loads on uneven surfaces or kneeling for long periods	Strains, ligament tears, fractures
Foot Injuries	Dropping heavy materials or working in cluttered spaces	Crush injuries, fractures
Hernias	Overexertion or poor lifting techniques	Abdominal strain or hernia
Neck Injuries	Carrying loads incorrectly or poor posture	Muscle strain, discomfort

Injury Prevention Strategies:

General Safe Handling Practices

• Plan the lift: **Size up the load**, check the path, and clear any obstructions.

- Keep the load close to your body.
- Use your legs to lift, not your back.
- Avoid twisting your torso.
- Break large loads into smaller ones when possible.
- Ask for help with awkward or heavy objects.

Equipment and Aids

- Use **mechanical aids**, such as forklifts, hoists, cranes, and wheelbarrows, to assist with tasks.
- Use **ergonomic tools**, such as those with comfortable grips and low vibration.
- Use team lifting for large items.

Body Conditioning

- Encourage warm-up and stretching before shifts.
- Promote core strength and physical fitness.
- Wear **supportive footwear** with cushioning and grip.
- Take regular breaks to avoid fatigue.

Hand & Wrist Safety

- Wear the correct gloves for the task (e.g., cut-resistant, impact-resistant).
- Use ergonomic tools with padded grips.
- Keep your wrist in neutral when lifting or working with tools.
- Limit the use of vibrating tools (rotate tasks).

Shoulder Protection

- Avoid overhead lifting when possible.
- Use lift-assist tools or adjustable platforms.
- Rotate tasks frequently.
- Maintain tools in **good condition**.
- Provide **shoulder braces** if needed.

Knee and Leg Safety

- Use knee pads or mats for tasks like tiling or flooring.
- Educate on **bending knees** instead of the back when lifting.
- Provide safe ladders and scaffolding.
- Keep walkways clear and level.
- Encourage stretching and posture awareness.

Foot Safety

- Wear steel-toe, slip-resistant boots.
- Install **toeboards** on scaffolding to prevent tools/materials from falling.
- Mark **pedestrian-only paths**.
- Train in **safe lifting** to avoid dropping materials.
- Practice good site housekeeping.

Preventing Hernias

- Don't **overload** use **team lifts** for heavy objects.
- Use mechanical aids.

- Promote correct lifting posture (knees bent, back straight).
- Avoid twisting while lifting.

Avoiding Neck Strain

- Keep loads close to the body, not at arm's length.
- Set up workstations at comfortable heights.
- Use lift-assist tools to reduce overhead work.
- Train workers in posture and alignment.
- Provide neck supports if necessary.

Manual Handling Legislation

Under the **Manual Handling Operations Regulations 1992**, employers must:

- Avoid hazardous manual handling where possible.
- Assess the risk of manual tasks that can't be avoided.
- Reduce the risk of injury using correct methods, training, and equipment.

These duties are **legal obligations** — workers and supervisors are both expected to follow safe handling procedures.

Section 4: Site Operations, Vehicles, and Environmental Controls

This section focuses on **environmental protection**, **noise control**, and **safe operation of vehicles and machinery** — all essential knowledge for working safely and responsibly on construction sites.

Topic 1: Environmental Awareness on Construction Sites

Why It Matters

Construction work impacts:

- The environment (waste, pollution, resource use).
- Local communities (noise, dust).
- Wildlife and ecosystems.

Being environmentally aware means reducing harm while working efficiently and safely.

Waste Management & Recycling

Key Goals:

- Reduce waste.
- Reuse where possible.
- Recycle what can be salvaged.
- Follow legal and local requirements.

Best Practices:

- Segregate waste: use clearly labelled bins for:
 - o General waste.

- Recyclables (wood, plastic, cardboard).
- Hazardous waste.
- Reuse materials when possible (e.g. bricks, timber).
- Follow your Site Waste Management Plan (SWMP).

Pollution Prevention

Noise Control

- Use **low-noise tools** where possible
- Work on noisy tasks during approved hours.
- Install barriers or enclosures around loud machinery to prevent noise exposure.

Dust Control

- Dampen surfaces regularly.
- Use dust extraction systems on saws, drills, and grinders.
- Wear RPE (respiratory protective equipment, such as dust masks or respirators).

Water Pollution

- Keep cement, oil, and chemicals out of drains.
- Store fuels in bunded, secure areas.
- Never wash tools near stormwater drains.
- Use **spill kits** for leaks or spills.

Site Cleanliness & Housekeeping

Why it matters:

• Prevents injuries (trips, slips, falls).

- Makes the site more efficient.
- Reduces environmental damage.

Best Practices:

- Clear up debris and scrap daily.
- Store materials neatly and securely.
- Keep emergency exits and walkways clear.
- Report spills and clean them immediately.

Protecting Wildlife & Natural Resources

Good Practices:

- Don't disturb **protected species** (bats, nesting birds).
- Follow ecological survey recommendations.
- Fence off trees, ponds, or natural habitats.
- Conserve resources: limit water, fuel, and energy use.
- Follow any site-specific ecological rules.

Every worker plays a role in protecting the environment.

Topic 2: The Control of Noise at Work Regulations 2005

These regulations are designed to prevent **hearing loss** and **tinnitus** in noisy work environments, such as construction sites.

Legal Noise Limits:

• Above 85 dB(A): Hearing protection required.

• Above 80 dB(A): Employers must provide protection and training.

Control Measures:

- Use quieter equipment.
- Isolate or screen noisy work areas.
- Avoid unnecessary reversing alarms.

Hearing Protection:

- Provide ear defenders or earplugs.
- Make sure workers wear them consistently.

Health Surveillance:

- Carry out regular hearing tests.
- Monitor anyone exposed to high noise levels.

Regular Reviews:

- Update noise risk assessments.
- Adapt controls if site conditions or tasks change.

Hearing loss is permanent. Preventive measures are legally required.

Topic 3: Mobile Plant and Site Vehicles

Heavy machinery is essential for construction, but it can also be hazardous when not properly managed.

Common Site Vehicles (Mobile Plant):

- Excavators
- Dumpers
- Forklifts
- Rollers
- Bulldozers
- Telehandlers
- Delivery lorries

Each has its own set of risks based on visibility, size, and usage.

Key Hazards:

Hazard	Risk	
Pedestrian Strikes	Workers hit by a moving plant	
Reversing	Blind spots cause collisions	
Overturning	Uneven terrain or overloading	
Visibility Issues	Weather, corners, obstructions	
Load Hazards	Falling or swinging loads	

Traffic Management

Controls:

• Develop and implement a comprehensive traffic management plan.

- Separate pedestrian and vehicle routes.
- Use barriers, signs, and one-way systems to create a clear and safe path.
- Assign banksmen (spotters) to guide reversing vehicles.

Vehicle Safety Checks

- Carry out daily inspections.
- Maintain **logbooks** and defect reports.
- Use mirrors, cameras, and alarms.
- Apply wheel chocks on gradients.

Driver Competence

- Operators must be **trained and authorised**.
- Must hold a valid licence (e.g. CPCS or NPORS card).
- Site-specific training is required.

Pedestrian Safety

- Wear hi-vis clothing
- Never walk behind a reversing plant.
- Restrict access to high-risk areas.

Safe Loading & Lifting

• Use **flat**, **stable areas** for loading/unloading.

- Secure and balance all loads.
- Don't stand under or near suspended loads.
- Follow LOLER (Lifting Operations and Lifting Equipment Regulations).

Incident Reporting

All accidents or near misses involving mobile plant:

- Must be reported **immediately**
- May need RIDDOR reporting
- Should be investigated to improve safety procedures

Summary: Site Operations & Environment

Topic	Key Takeaway	
Waste & Pollution	Segregate waste, prevent spills, minimise noise/dust	
Wildlife & Resources	Follow ecological guidance, fence off sensitive areas	
Noise at Work	Monitor decibels, provide hearing protection	
Vehicles & Plant	Use spotters, train drivers, and plan site traffic	

Section 5: Safety Signage on Construction Sites

Safety signage is essential on all construction sites. It communicates **hazards**, **prohibited actions**, **mandatory safety requirements**, and **emergency information** — all without needing words.

These signs are **colour-coded** and **regulated** under the *Health and Safety at Work, etc. Act* 1974 and the *Health and Safety (Safety Signs and Signals) Regulations* 1996.

Topic 1: Understanding Safety Signs

Warning Signs

- Shape & Colour: Yellow triangle with black border/symbol.
- Meaning: Warns of potential hazards.
- Examples:

"Danger: High Voltage"

"Caution: Hazardous Chemicals"

"Warning: Overhead Work"

o "Caution: Slippery Surface"



Always act with extra care when you see a yellow warning sign — a hazard is nearby.

Prohibition Signs

- Shape & Colour: A red circle with a diagonal bar on a white background.
- Meaning: You are not allowed to do this activity.
- Examples:
 - o "No Smoking"
 - "No Naked Flames"
 - o "No Unauthorised Access"



These signs indicate **rules that protect health, safety, or security**. Failing to follow them can lead to disciplinary action or injury.

Mandatory Signs

- Shape & Colour: A blue circle with a white symbol.
- Meaning: Shows what you must do to stay safe.
- Examples:

- o "Wear Hard Hats"
- o "Eye Protection Must Be Worn"
- "Hearing Protection Required"
- o "Use Footpath"



These are **action signs**. If you see blue, there's a **legal obligation** to follow the instruction.

Safe Condition Signs

- Shape & Colour: Green rectangle or square with white symbol/text.
- Meaning: Indicates emergency information or safety facilities.
- Examples:
 - o "Fire Exit"
 - o "First Aid Station"
 - o "Emergency Shower"
 - "Assembly Point"



These signs tell you where to **go** or **what to use** in an emergency. Learn these locations on day one.

Fire Safety Signs

- Shape & Colour: Red square or rectangle with white symbol
- Meaning: Indicates fire-fighting equipment or emergency procedures
- Examples:
 - o "Fire Extinguisher"
 - o "Fire Blanket"
 - "Break Glass to Sound Alarm"
 - o "Fire Exit Route"



Only use fire equipment **if trained** — otherwise evacuate and alert others immediately.

Traffic and Site-Specific Signs

- **Use**: Direct movement and site logistics.
- Examples:
 - "Speed Limit 5 mph"
 - "Pedestrians Only"
 - "Site Office This Way"
 - o "Vehicles Keep Out"



These signs manage **vehicular and pedestrian safety** on dynamic, high-risk sites.

Information Signs

- **Purpose**: General or site-specific information that supports safe operations
- Examples:
 - o Instructions for tool use
 - Health and Safety Policy
 - Emergency contact numbers

These may not be colour-coded like safety signs, but they must still be followed.

Where and How Signs Should Be Displayed

Requirement	Explanation	
Visible & Legible	Signs must be at eye level and in clear view	
Hazard-Linked	Positioned near the actual risk (e.g., above live	

	electrical panels)	
Well-Maintained	Replace signs that are damaged, faded, or obstructed	

Quick Reference Chart

Sign Type	Shape	Colour	Example
Warning	Triangle	Yellow & Black	Caution: Falling Objects
Prohibition	Circle	Red & White	No Smoking
Mandatory	Circle	Blue & White	Wear a Safety Helmet
Safe Condition	Rectangle	Green & White	Emergency Exit
Fire Safety	Rectangle	Red & White	Fire Extinguisher