

SITE SAFETY PLUS

Construction health and safety awareness



HSA WORKBOOK
OFFICIAL CITB
EXERCISE
ANSWERS

CONTENTS

Answers



General rules, regulations and responsibilities	2
Health and welfare	5
General safety	10
High-risk activities	12
Environmental awareness	14



**Scan the QR code to complete a brief survey,
and share your feedback on the course.**

General rules, regulations and responsibilities

1 General responsibilities

Section 1 - Knowledge check

1.1 - Which two of the following apply when using a ladder on site?

The Health and Safety at Work etc. Act 1974	✓
The Building Safety Act 2022	✗
The Work at Height Regulations 2005	✓
Fire safety in construction (HSG168)	✗

1.2 - Workers are responsible for providing their own safety helmet, high-visibility clothing and safety footwear.

True	✗
False	✓

1.3 - Employers are responsible for providing workers with a safe system of work.

True	✓
False	✗

2 Site inductions

2.5 Exercise 1: Understanding site rules

What I was told	
Where I can and cannot smoke or vape	✓
What PPE I need to wear	✓
Health is more important than safety	✗
What to do in an emergency	✓
That I will not need to follow rules after a year on site	✗
The rules always stay the same, and there will not be any updates or changes to them	✗
Where I can and cannot go	✓
Where I can get a good mobile signal on site	✗
Where I can go to have my breaks	✓
Why I need to know this	
The rules will stop me getting hurt	✓
So I know how to work faster	✗
It will help to stop and prevent accidents	✓
So that I know that I only need to follow site rules when my supervisor is watching	✗

Section 2 - Knowledge check

2.1 - What must they do first before they can begin work?

Suggested answer: Attend a site induction to find out about key health and safety procedures.

2.2 - What documents should he have read, understood and made sure that he is following from the safe system of work before he starts the task?

Suggested answer: He needs to have read and understood the risk assessment, method statement and the hot-works permit before he starts this task.

2.3 - Why is it important that Penelope's team all read, understand and follow the control of substances hazardous to health (COSHH) risk assessment?

Suggested answer: Because they need to understand the risks associated with the liquid paint stripper and how they can work safely with it.

3 Hazards and risks

3.3 Exercise 2: Spotting hazards and risks

Image 1

Hazards: The vehicle is reversing, and there are pedestrians in the path of the vehicle.

Risks: The pedestrians could be hurt by the vehicle when it is reversing, or could be killed if they are run over.

Image 2

Hazards: The objects on the floor are a trip hazard.

Risks: The worker could fall over and hurt themselves.

Image 3

Hazards: The ladder is not suitable for the task.

Risks: The worker could fall from height, or could drop tools or materials and hurt pedestrians.

Section 3 – Knowledge check

3.1. – A hazard is anything that can possibly cause harm.

True	✓
False	✗

3.2 – What is the first, most effective way of managing risks in the workplace?

Putting in place engineering controls	✗
Removing the hazard altogether	✓
Providing workers with PPE	✗

3.3 – What would the possible risk be of a rat being in an excavation?

Suggested answer: It is possible that the rat is carrying a disease such as leptospirosis (Weil's disease). Any workers that come into contact with the urine of a rat, for example in an excavation, would be at risk of getting leptospirosis.

4 Reporting and recording accidents**4.4 Exercise 3: Causes of occupational diseases**

Scenario – using pneumatic drills

Which occupational disease is Darius at risk of developing?

Suggested answer: Hand-arm vibration syndrome (HAVS).

Scenario – working with wet cement

Which occupational disease is Larissa at risk of developing?

Suggested answer: Occupational dermatitis.

Scenario – working in excavations

Which occupational disease is Peter at risk of developing?

Suggested answer: Leptospirosis (Weil's disease).

Section 4 – Knowledge check

4.1. – You only need to report an accident to your site supervisor or employer when someone is injured.

True	✗
False	✓

4.2 – How would you find out about how to report accidents on the site you are working on?

Suggested answer: This information should be given to you during the site induction.

4.3 – What are three possible health issues that a person could get from carrying out repetitive work over a long period, using a tool such as a hammer drill?

Suggested answer: Hand-arm vibration syndrome (HAVS); cramp in the hand or forearm; carpal tunnel syndrome; tendonitis.

5 Behaviours**5.5 Exercise 4: Behavioural choices on site**

Scenario – moving materials on site

Is Pawel showing positive or negative behaviour?

Positive	✓	Negative	✗
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Which of the following show the impact that this action will have on the work that Pawel is doing?

It will prevent slips, trips and falls	✓	It shows that Pawel is following safety procedures	✓	It means that the work will take longer to do	✗
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Scenario - trimming metal sheets

Which of the following are negative behaviours from this scenario?

Nadiya is not wearing PPE	✓	Nadiya's supervisor has provided PPE	✗	Nadiya is distracted	✓
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What impact could this have on Nadiya?

Suggested answer: She could cut herself and be at risk of an injury. This injury could range from a minor one to a very serious one. This could then cause delays to the job, as well as personal time off work for Nadiya.

Scenario - drilling into a concrete wall

Who is showing positive behaviour here?

Kai	✗	Gemma	✓
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What impact could Gemma's action have on site?

Suggested answer: She is promoting a culture where you can talk about safety procedures and challenge each other. It improves teamwork, and she might have saved Kai from an injury.

Section 5 - Knowledge check

5.1. - Negative behaviour can lead to accidents, injuries and even deaths on site

True	✓
False	✗

5.2 - Which of the following are examples of negative behaviour?

Not wearing PPE	✓
Doing tasks in a quicker way that does not follow procedures	✓
Telling your supervisor when you see something unsafe	✗
Putting pressure on new workers to do a job quicker	✓
Stopping a job when you do not feel safe	✗

5.3 - What type of positive behaviour would help to improve teamwork?

Suggested answer: Communicating well with the team and reporting anything that might feel unsafe.

6 Lone working

Section 6 - Knowledge check

6.1. - You are classed as a lone worker even if you are just out of sight or earshot of others.

True	✓
False	✗

6.2 - What should he do?

Talk to his supervisor or manager	✓
Check in more often with other workers	✓
Put music on and carry on with the task	✗
Do the work quicker so that it is over sooner	✗

6.3 - What is one way to avoid the risks that come with lone working?

Suggested answer(s): Make sure that there are ways for workers to communicate, **or** work in pairs where possible, **or** make sure that workers are trained and supervised.

Health and welfare

7 Health and welfare

7.5 Exercise 5: Ways to protect and improve mental health

All answers and feedback for this exercise are contained within the exercise online, or on the reverse of the cards.

Section 7 - Knowledge check

7.1 - Sepsis is your body's extreme reaction to an infection.

True	✓
False	✗

7.2 - What are three possible methods for improving your mental health?

Suggested answer(s):

- Talk to someone you trust.
- Get some exercise and get out of the house.
- Do something that you enjoy, like a hobby.

7.3 - Which of these is the effect of the use of drugs and alcohol?

Slower reaction times	✓
Improved ability to work	✗
Better decision making	✗
Clearer vision	✗

8 First aid and emergency procedures

Section 8 - Knowledge check

8.1 - Workers do not need to know how to raise the alarm in an emergency. This is the first aider's responsibility.

True	✗
False	✓

8.2 - Which three pieces of site information should a worker know?

Who the first aider or appointed person is	✓
How to contact the first aider in an emergency	✓
Where to get first-aid treatment	✓
Which qualifications the first aider has	✗

8.3 - What is the first step you should take if you find an injured person on site?

Suggested answer(s): Assess the situation. Do not put yourself in danger.

9 Personal protective equipment

Section 9 - Knowledge check

9.1 - Which three of the following must an employer tell you before you start a task?

The suitable and compatible PPE for the task	✓
How to use the PPE	✓
The reason you need to use it	✓
How much the PPE costs to use	✗

9.2 - It is your responsibility to make sure that your PPE is well maintained and used properly.

True	✓
False	✗

9.3 - What is one type of eye protection PPE that you may be given?

Suggested answer: Safety glasses or impact-resistant goggles.

10 Asbestos

10.5 Exercise 6: Being aware of asbestos

All answers and feedback for this exercise are contained within the exercise online, or on the reverse of the cards.

Section 10 – Knowledge check

10.1. – Asbestos is only dangerous if you are repeatedly exposed to it.

True	✗
False	✓

10.2. – Put a tick under the building you are most likely to find asbestos in.

		
New home, built 2024	Garage building, built 1976	Block of flats, built 2010
✗	✓	✗

10.3 – What is the first step to follow if you believe you have discovered or disturbed asbestos?

Suggested answer: Stop work immediately.

11 Dust and fumes (respiratory hazards)

11.4 Exercise 7: Following control measures

Scenario – grinding concrete surfaces

Avoid	Suggested answer: The company tries to use pre-finished concrete that does not need to be ground down.
Substitute	The company provides dust-free or wet grinders for the workers, so that they can suppress the dust.
Capture	A dust extraction system with a filter is used to prevent the dust from spreading into the air.
Dampen	Workers are instructed to spray water onto the concrete surface before grinding.
RPE	Suggested answer: Workers are given and required to wear a specific respirator, used to prevent them from breathing in dust.

Scenario – cutting MDF boards

Avoid	The company buys in pre-cut, to measure MDF panels to avoid the need for any on-site cutting.
Substitute	Suggested answer: The company chooses plywood, which has low emissions and produces less dust when cutting.
Capture	Dust extraction guards are connected to the tools to capture any dust.
Dampen	Suggested answer: Workers are told to keep work areas clean by damp-wiping and lightly misting boards with water pre-cutting.
RPE	The company provides workers with suitable RPE, and training on how to use this RPE.

Section 11 – Knowledge check

11.1. – Which of the following is not a respiratory hazard?

		
Asbestos	Bird and bat droppings	Laying turf
✗	✗	✓

11.2. – Cement contains silica dust. What is a potential respiratory disease that develops because of repeated exposure to silica dust?

Suggested answer: Silicosis.

11.3 – Wearing RPE should always be the first way to control exposure to respiratory hazards.

True	✗
False	✓

12 Noise and vibration

12.8 Exercise 8: Reducing risk of hearing damage

All answers and feedback for this exercise are contained within the exercise online, or on the reverse of the cards.

12.10 Exercise 9: Employer and worker responsibilities for reducing vibration risks

	Employer's responsibility	Worker's responsibility
		
Buy equipment that makes the lowest levels of vibration, and make sure this is well maintained.	✓	
Make sure that they know their usage limits, and not go over them.		✓
Wear any PPE provided, and report any damage to it.		✓
Limit the time that vibrating equipment is used, and provide information on usage limits (trigger times).	✓	
Assess the risk of exposure to vibration.	✓	
Take regular breaks and exercise fingers during these breaks.		✓
Keep hands warm, because cold hands are more likely to be damaged by vibration.		✓
Give information and training so that all risks are known by everyone using the tools.	✓	
Choose work methods that prevent exposure to vibration.	✓	
Relax the grip on the tool, and let the tool do the work.		✓
Set up health surveillance if someone is exposed to vibration.	✓	

Section 12 – Knowledge check

12.1. – Which of these tools are likely to cause noise or vibration risks?

		
Compressed-air breaker	Hand saw	Angle grinder
✓	✗	✓

12.2 – What are three symptoms of hand-arm vibration syndrome (HAVS)?

Suggested answer(s): Tingling; loss of sensation; loss of colour.

12.3 – Tinnitus, hearing damage, whole-body vibration (WBV) and HAVS do not have cures.

True	✓
False	✗

13 Hazardous substances

13.2 Exercise 10: Hazardous substances

Hazardous	Non-hazardous
Asbestos fibres	Gravel
Lead fumes	Washed sand
Silica dust	Clean water
Paint-thinning solvent	Vegetable oil
Concrete dust	

Section 13 – Knowledge check

13.1. – You cannot be hurt by a hazardous substance just by breathing it in.

True	✗
False	✓

13.2 – Whose responsibility is it to read and understand the COSHH risk assessment that covers how and when hazardous substances may be used for a task?

Suggested answer: The worker.

13.3 – What are the hazards associated with this product, based on the warning pictograms?

Suggested answer: This product is flammable, causes acute toxicity and is a serious health hazard.

14 Manual handling

14.4 Exercise 11: Carrying out manual tasks

Scenario – moving bags of cement

Before lifting, what should Priya make sure of?

That she knows the route she is taking	✓	That she has planned the lift	✓	That she knows what weight she can comfortably lift	✓
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To follow a safe method of lifting, what should Priya not do?

Maintain the natural curve of her spine	✓	Snatch the load	✗	Bend her knees	✓
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Scenario – carrying scaffolding boards

What is the safest and best option for Amira and Piotr to use to move the boards?

Each of them should carry one board at a time	✗	Both should carry one board together, using team lifting	✓	They should grab as many of the boards as they can lift at once, and put them on the flatbed lorry themselves	✗
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If Piotr tries to carry a board alone and twists his back, what injury is most likely?

Lower-back strain	✓	A broken finger	✗	Heat exhaustion	✗
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Scenario – loading bricks onto a platform

If Kwame repeatedly lifts the bricks above shoulder height without breaks, and develops a dull ache in his shoulder, what could this be a sign of?

Bruising	✗	Sunburn	✗	Tendonitis	✓
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What is one correct technique that Kwame could use if he could not avoid the manual lifting?

Suggested answer: Keep the load close to the body, avoid twisting, and use a stable platform to bring the load closer to waist height before lifting.

Section 14 – Knowledge check

14.1. – What is the first step that you should always follow before starting any type of manual task?

Suggested answer: Plan how you will lift before you start.

14.2 – Write three pieces of advice to someone who is going to lift a heavy object, and relate to the kinetic method.

Suggested answer(s):

- Let your leg and thigh muscles do the work.
- Do not snatch the load.
- Avoid twisting your back.

14.3 – Manual-handling injuries only affect your back, and not any other part of the body.

True	✗
False	✓

General safety

15 Safety signs

Section 15 - Knowledge check

15.1. - A **warning** sign means that you **must not** do something.

True	✗
False	✓

15.2 - What type of sign is shown in a green box?

Suggested answer: A first-aid or emergency escape sign.

15.3 - What is the likely meaning of this sign?

Suggested answer: You must wear safety footwear.

16 Fire prevention and control

16.4 Exercise 12: Preventing fires and following emergency procedures

Scenario - covering a fire with a blanket

What was the ignition source of the fire?

The paint thinner	✗	The oily rag	✗	The sparks	✓
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How could this fire have been prevented in the first place?

By keeping the oily rag in the container instead of next to it	✗	By pouring the paint thinner down the drain, scrunching the rag up and putting it in the bin	✗	By storing the paint thinner far away from the sparks, and following correct safety procedures to dispose of the oily rag	✓
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Scenario - using a fire extinguisher

What was the fuel source of this fire?

The petrol	✓	The generator sparks	✗	The foam fire extinguisher	✗
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How could this fire have been prevented in the first place?

Suggested answer: The fuel spill should have been cleaned up straight away, and the generator should not have been switched on near the spill.

Scenario - dropping a cigarette

Which element of the fire triangle did the fire blanket remove?

Suggested answer: It removed the air/oxygen source from the fire.

How could this fire have been prevented in the first place?

Suggested answer: Oliver should only smoke in a designated smoking area, and should not have thrown the cigarette in the bin with the cardboard.

Section 16 - Knowledge check

16.1. - Which three are part of the fire triangle?

Fuel	✓	Carbon dioxide	✗	Oxygen	✓	Heat	✓
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16.2. - Hot work, naked flames and incorrect storage of flammable materials are common causes of fires on construction sites.

True	✓
False	✗

16.3 - What are the dangers of flammable liquids and gases?

Suggested answer(s):

- They can release harmful vapours.
- They may cause sparks or may ignite.
- They can explode.

17 Electrical safety

Section 17 – Knowledge check

17.1. – Using a lower-voltage tool is safer than using a battery-powered tool.

True	✗
False	✓

17.2. – Which of the following are examples of safe practices with lithium-ion batteries?

Checking casings for damage	✓	Disposing of used batteries in general waste	✗	Taping up a damaged phone charger lead	✗
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17.3 – What is the best way to prevent cables becoming a trip hazard?

Suggested answer: Run cables or leads overhead or under protective ramps.

18 Work equipment and handheld tools

Section 18 – Knowledge check

18.1 – Rachel needs to use a handheld angle grinder to cut through metal pipes. What are the potential hazards and risks of using an angle grinder?

Suggested answer(s):

- The blade can cause hot sparks, and metal fragments could fly off during cutting, which could injure Rachel.
- If the electrical cord is damaged, there is a risk of electric shock.
- There could be harmful dust or fumes from the metal.

18.2. – Which of these are features of a safe system of work with handheld tools?

Competence	✓	Loose clothing and baggy sleeves	✗	Pre-use checks	✓
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18.3. – It is the employer's responsibility to do pre-use checks on handheld tools.

True	✗
False	✓

19 Mobile plant and work equipment

Section 19 – Knowledge check

19.1. – Which of the following are examples of mobile plant?

		
MEWPs	Large power generators	Mobile cranes
✓	✗	✓

19.2. – An excavator digging can still be a danger to you even if it is not travelling.

True	✓
False	✗

19.3 – Benji is new to the site. He is working around mobile plant today. Write three pieces of advice for Benji about working safely around the plant.

Suggested answers:

- Wear high-visibility clothing, so that you are visible.
- Keep to the walkways and pedestrian routes.
- Be alert to plant movements.

High-risk activities

20 Working at height

20.5 Exercise 13: Working safely at height

All answers and feedback for this exercise are contained within the exercise online, or on the reverse of the cards.

Section 20 – Knowledge check

20.1. – Which of these is not an example of a fragile roof surface?

		
Asbestos cement sheets	Reinforced concrete roof	Slates and tiles
✓	✗	✓

20.2. – Warning signs are not needed for voids and holes because the training before use is enough.

True	✗
False	✓

20.3 – Write down three hazards of using access equipment like MEWPs.

Suggested answers:

- Falling – overreaching out of the platform with no harness used or attached.
- Electrocution from operating or touching/coming into contact with live electricity cables.
- Objects may be dropped and injure people below.
- Being crushed between the structure and the MEWP.
- They can overturn or collapse.
- People or machinery could get entangled in moving parts.

21 Excavations

Section 21 – Knowledge check

21.1 – Name three types of underground services.

Suggested answers:

- Electrical cables.
- Water mains.
- Telecommunications.

21.2 – On site, there is an excavation with no barriers or warning signs. What are the potential risks and hazards of this?

Suggested answer: People, plant or vehicles could fall into the excavation, which could cause injuries and harm.

21.3 – Excavations can collapse if the ground dries or shrinks.

True	✓
False	✗

22 Confined spaces

Section 22 – Knowledge check

22.1. – Which of these are examples of confined spaces?

		
Trench	Open-air loading bay	Basement room
✓	✗	✓

22.2 - Name three risks of working in a confined space.**Suggested answer:**

- Fires and explosions.
- Asphyxiation or loss of consciousness.
- Becoming trapped.

22.3 - What is the first consideration before work in confined spaces begins?

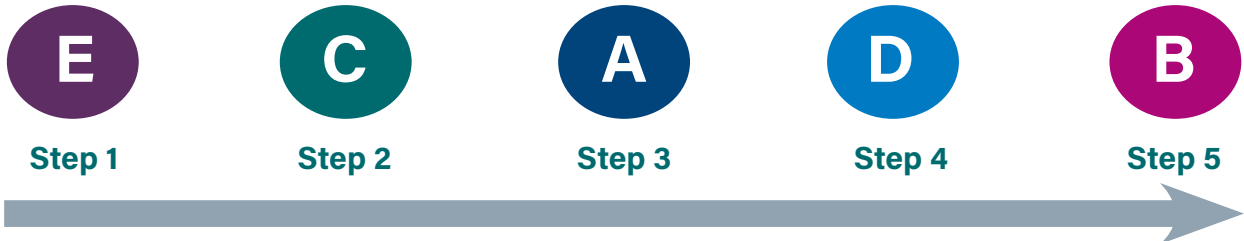
Suggested answer: Whether the work can be avoided or not.

Environmental awareness

23 Environmental awareness

23.9 Exercise 14: Dealing with a pollution incident

Scenario – chemical spill



Section 23 – Knowledge check

23.1 – Noise does not count as a possible form of nuisance.

True	✗
False	✓

23.2 – If there is a pollution incident or spill on site, what can you use to control it?

Suggested answer: A spill kit.

23.3 – What is one way of controlling environmental nuisance on site?

Tell people about potential nuisance after work has started	✗	Not reporting any spills or incidents	✗	Look at other ways of carrying out the work	✓
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24 Waste management

Section 24 – Knowledge check

24.1 – Which two of these are examples of hazardous waste?

Oil-based paint	✓	Wood scraps	✗	Batteries	✓
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24.2 – What can help with good environmental practice and keeping waste organised on site?

A site waste management plan	✓	A traffic management plan	✗	A construction phase plan	✗
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24.3 – Write three ways to correctly manage, dispose of and recycle materials on site.

Suggested answer:

- Separate waste.
- Follow site recycling procedures.
- Reduce waste where possible.