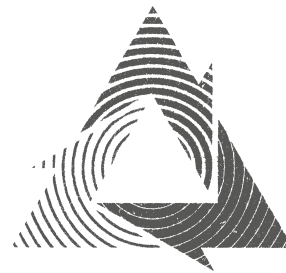

2 TRAINING MODULE 2

Safe Working on Building Sites



Module updated: 09 June 2021

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Staying safe on collections

Everyone at community wood recycling enterprises must undertake this training and have it recorded in their Individual Training Log before going out on any collections.

We know through years of experience that more minor incidents occur during collections than during any other community wood recycling activity. So we must ensure everyone collecting fully understands the risks involved and always follows the correct procedures and working practices that will help keep them safe.

Thankfully, the building industry is constantly implementing ever-stricter H&S practises. Most builders insist that all workers and visitors to sites hold a CSCS (Construction Skills Certificate Scheme) card. At the moment, most of our clients accept the training you receive from us via these modules as sufficient. The Labourer's card is the appropriate card for collection staff and requires taking a 1-day course in site H&S and a short multiple choice exam. Please ask your trainer if you would like to apply for a CSCS card.

The learning outcomes of module 2

After successfully completing this module, you will be able to:

- Understand some of the challenges involved in the construction process
- Understand the key hazards on a building site
- Adopt working practises that will help keep you safe on collections

Section 1—Overview of the construction sector

Construction is one of the UK's largest industries and in 2019, was worth more than £119 billion to the economy (around 6% of GDP). It directly and indirectly employs more than 2 million people and is the nation's largest consumer of natural resources, using around 400 million tonnes of materials each year.

It is an exciting, dynamic - and crucial industry—building the infrastructure and assets we need to grow the economy, modernise the country and help improve our public services and our standard of living.

But it is a very dangerous industry and thousands have been killed working on building sites. Over the years, Health & Safety (H&S) practices have improved immeasurably, but in 2020 there were still 40 fatalities on British sites.

We only spend a short time on site when collecting waste wood, nevertheless, we must still ensure that we always act strictly in accordance with our and the builder's own site procedures and put H&S first.

Thankfully H&S is now the number one priority on sites. The cost of poor practice is more than financial. It will affect a builder's reputation and their ability to win business as accident statistics are published and safety records are evaluated in the tender process. And those responsible for serious breaches of H&S might end up in prison.

Understanding the key features of the industry will give an insight into why sites operate as they do and why they are inherently risky places. Construction is:

- **Highly complex:** A building site is a complex web of man, materials and machines. Huge quantities of stuff enter the site on large vehicles, with even bigger vehicles digging holes, moving earth and lifting stuff to great heights. There are main contractors, main sub-contractors, specialist sub-contractors and trades people, architects, engineers, accountants, project managers, site managers and caterers. Some sites can have more people on them than your average village. This all makes security, H&S and overall management a tricky business requiring a very high level of organisation and discipline.
- **Space intensive:** Most sites are very limited for space. Even when the buildings are going up in different phases, it is always a challenge to find space to put in portacabins, park vehicles, store materials and segregate waste. The more crammed the site, the more potentially dangerous it is.
- **Highly competitive:** The building game is highly competitive with builders' net profits as low as 1% or 2%. With most projects put out to competitive tender, they have to cut expenses and work for less to win the jobs. Builds must be highly efficient, with only the minimum number of staff necessary, so everyone has to work hard, but not 'cut corners' and keep to strict budgets.
- **Time pressured:** All large building projects are highly time-sensitive with contractors paying substantial financial penalties for not completing on time. As well as the weather, other factors can slow the build, including holidays, late delivery of materials, breakdown of equipment or even archaeological finds (developers are obliged to report and allow excavation of potentially important finds). Challenges are hard to predict and the time pressure is always intense.
- **Human:** All of these factors and pressures can lead to human error, as workers get tired and are put under added stress by having to work in the cold, the hot, or in wet conditions. So everyone must play their part in being risk-aware and doing everything they can to keep safety at the forefront of everything they do on site.

Getting a big build finished to the desired standard, on time, on budget, and without significant injury to workers is a real challenge. It is easy to see why the industry needs highly efficient suppliers—like us—that understand the busy life of a site manager, and who can deliver good service time after time.

Section 2—Key hazards on construction sites

Below we outline some of the key hazards we face when visiting site. Some sites create a separate compound for waste, so we can avoid the working part. Nevertheless, we can often come into contact with workers and machines, so must be aware of the risks we face and have our eyes and ears open and our wits about us at all times.

Moving Vehicles

Many types of vehicles operate on construction sites. Site-based vehicles include excavators, bulldozers, dumper-trucks, compactors, fork-lifts, and mobile and static cranes. Most materials are delivered to site on articulated lorries or other HGVs, often equipped with their own cranes for unloading. Any incident with such vehicles is potentially fatal. Because space is usually limited, vehicles often have to drive between piles of materials or reverse into or out of tight spaces. This means the driver's vision could be limited and because these machines are noisy, drivers might not hear what's going on outside their cab.



▲ Large moving vehicles are always a major hazard on site



▲ A shocking example of an unguarded deep excavation

Excavations

Although sites have strict rules around how excavations are managed, even very shallow holes can be trip-and-fall hazards. Excavations are a major cause of accidents on site, especially in the early stages of work when foundations are being dug. Depending on how high the building under construction, these can be many metres deep.

Trenches and pits for sewage, drainage or other pipework are a real hazard.

The greatest danger to site workers is of trenches collapsing, burying them inside. But the biggest risk to community wood recyclers is of falling into them, potentially breaking bones, suffering concussion or worse. Inform site staff immediately if you come across an unguarded hole.

Height

A lot of work on site is done above head height, so scaffolds, scaffold towers, ladders, 'cherry pickers' (access platforms) and cranes are always in use. Falls from height are the biggest cause of death and injury to site staff. The risks to those working on the ground are being hit from falling items, or knocking into and destabilising scaffolds or ladders etc.—with potentially grave consequences.

Give all of these hazards a wide berth; avoid walking underneath them and take great care when manoeuvring a vehicle anywhere near them.

▶ A London block of flats under scaffolding. On cramped sites like this, there is not much room around the building, so great care must be taken at the base of the scaffold.



Slips & Trips

Sites have lots of general trip and slip hazards—especially in the wet when the ground can become a mass of churned-up mud or when the ground freezes and it resembles an ice rink. There are always objects lying around that can be tripped over, and lots of shallow holes in the ground to twist your ankle. So always watch your footing carefully.

Dust

Once the grass, or other surface covering has been removed and excavation begun, there is the potential for lots of dust to be created. Dust is at very best a nuisance that makes collecting from site more challenging. But it is also a hazard and exposure to consistently raised levels of dust can cause ill-health. As well as just blowing off of dry ground, it is made worse by vehicle movements. Lots of dust is generated through the cutting of blocks and slabs and through other drilling, grinding or sanding applications. We must always wear eye protection when visiting site, and have a dust mask available.

Hazardous materials—Asbestos

Asbestos is a group of six naturally occurring silicate minerals that were used mainly for their fire-retardant properties. Large amounts were used in all types of building. “Blue” (crocidolite) and “brown” (amosite) asbestos were banned in 1985, “white” asbestos (chrysotile) in 1999 and the rest in 2000.

Inhaling asbestos fibres causes serious (often fatal) harm to health. It can cause lung cancers, asbestosis and other conditions. Illnesses caused through asbestos inhalation develop between 25 and 50 years after exposure and although fibres are present in the environment at very low levels, the more the exposure, the greater the risk of developing an asbestos-related disease.

So working on or even touching asbestos-containing materials must be avoided at all times.

Whilst it is extremely unlikely that you will find asbestos in the wood pile, it is not impossible if the site is the demolition or refurbishment of an old building.

If you suspect that something in the pile is made of, or contains asbestos, you must stop work immediately, leave the immediate area and inform your supervisor. The site will have to arrange a licensed contractor to remove it.



▲ Asbestos roof tiles, typically used on industrial and agricultural buildings.



▲ An asbestos panel used around a gas meter.

Other hazardous materials

Visiting a building site puts you in close proximity to a range of potentially hazardous material. Although it is extremely unlikely that you will ever come into contact with asbestos, the industry uses lots of fuel and other oil-based products like paints, glues and finishes which can also be hazardous to health if spilt on the skin or inhaled. Compressed gasses are used on sites and large stacks of bricks/blocks, pipes, steelwork and other building materials waiting to be used also present further hazards.

If you suspect that you might be in danger from **any** hazardous material, always stop work immediately and tell your supervisor, or site staff before proceeding or handling the material.

Noise

Vehicles and many cutting, drilling and grinding applications on site produce relatively high levels of noise. Although our exposure to it will only be for a short period, it can still be distracting and care should be taken when issuing or receiving instructions if near to noisy work. Always have ear defenders with you.

Manual handling

The greatest risk of sustaining minor injuries is whilst loading. The wood that we pick up is often **heavy**. If particularly heavy or **bulky**, it might be possible to seek mechanical assistance from site workers (a fork lift or tele-handler). Roof joists can be very long and will need cutting to get on the truck or at least careful positioning. Some things are simply **awkward**—maybe full of nails or metal that needs to be removed before loading.

In Module 1, we covered safe manual handling, so always follow correct lifting methods and procedures—especially as you will be working around all those potential hazards listed above

Section 3—Safe working on construction sites

Pre-visit preparation

Before carrying out any collections community wood recyclers must have completed two documents; a collections **Risk Assessment** (Risk Assessments were covered in Module 1) and a collections **Method Statement**. This is a document that summarises how the job will be carried out. These two documents are usually combined into what is called a RAMS. Below you will find an example of a fully completed RAMS. Make sure you read it thoroughly and understand it.

Although usually generic, so completed only once, some builders will ask for a **site-specific** RAMS, that might require a visit before any collections are carried out to obtain the necessary site-specific information. Normally this only happens if the site has particular dangers—like it is a school that is still open or an office or factory that is still occupied during building work.

▼ SAMPLE Risk Assessment—Collection Vehicles on Construction Sites

Risk Assessment & Method Statement for working with (client name)

Reference: **AC-NW195DA-STA-001**

Contract Number: **CWR.458**

Version: **02**

Date: **18/08/19**

Review date: **17/02/20**

RAMS by: **Richard Mehmed**

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Introduction

All Community Wood Recycling affiliated wood recycling enterprises work to the highest standards of H&S and are committed to the protection of their own and the client's personnel and property at all times.

Each enterprise operates an NCWRP-approved H&S System that aims to ensure the safest working practices at all times. All collection staff are trained in the hazards of and how to work safely on construction sites (such training is documented and available upon request from the NCWRP).

In addition staff will hold CSCS cards, understand the Risk Assessment (below), and will follow the Method Statement (below) at all times.

Collections will be carried out by: *(the nearest enterprise)*

H&S – responsible person for collecting enterprise: *(Director name)*

H&S – responsible person for group: *(MD, NCWRP)*

Method Statement – Collections from Construction Sites

Client: Any Client

Site Address: Any Address

Site Reference No:

Site Tel:

Site Contact:

Position:

Job: Collection of timber waste from above client's sites.

Task	Method of Control
Pre-collection / emergency procedures plan	If required, collection staff will undergo a Site Induction before the first collection. In the event of an emergency, the site's Emergency Procedures will be followed. All collection staff will be aware of fire point and meeting points, fire escape routes and site office locations. In the event of an incident requiring First Aid, collection staff will report to the First Aid point, however all vehicles are equipped with a first aid kit and a member of the collection team is a trained first aider. Collection staff carry mobile telephones at all times and where appropriate will immediately report incidences to the appropriate emergency service or their supervisor. Incidents will be correctly logged and notified as appropriate. The Collection Supervisor is responsible for the supervision of all collection staff at all times.
Accessing site with vehicle	The driver will obey instructions of gate security staff and enter the site slowly with caution and park where directed or in a safe place. The collection Supervisor will report to the site office before starting to load the vehicle. Collection staff will remain with the vehicle until loading commences. Site speed limits will be adhered to at all times and hazard lights switched on at all times whilst on site.
Loading timber	The vehicle will be parked as close as possible to the stack of timber for collection. All collection staff will be wearing correct PPE, including BS EN ISO 20345:2011 protective boots, BS EN 388: 1994 gloves, BS EN 397:1995 hard hats, EN 166:2001 protective glasses and high visibility clothing (and any other equipment as directed by site). All loading will be carried out quickly and safely in accordance with proper manual handling and working procedures outlined in the NCWRP training modules <i>Basics of Safe Working</i> and <i>Safe Working on Building Sites</i> . Any electronic equipment used to cut timber to size, or prepare it in any other way for loading will only be used by properly trained staff and in accordance with training modules <i>Working with Power Tools Parts 1 and 2</i> .
Dealing with paperwork	Collection staff will not stray on to any other part of the site and after loading they will sit in the vehicle to wait. If after loading, the vehicle is potentially blocking access or causing a hazard, it will be moved to a safe parking area before the paperwork is dealt with. Paperwork will be completed as quickly as possible by the collection supervisor who will return directly to the vehicle, double check the load for safety and check that the loading doors are securely fastened before leaving site.
Leaving the site	The driver will obey any instructions from site staff. The site speed limit will be adhered to at all times. The collection vehicle will always give way to vehicles entering the site.

Prepared By: Richard Mehmed

Position: Managing Director

Signature:

R E Mehmed

Date: 18 August 2019

What are the Hazards	Who might be harmed and how	What are you already doing?	Do you need to do anything else to manage this risk	Action by whom ?	Action by when ?	Done
Striking site workers whilst entering site and accessing wood bay	Site workers	We enter site with extreme caution, obey site speed limits and are vigilant. Hazard lights/ beacons will be turned on before parking on site.				
Being struck by other vehicles when getting out of van.	Collection Staff	We park in safe areas. Always look carefully before opening van doors. Do not open them suddenly and look before stepping off van.				
Striking site workers and/ or damaging property with door when getting out of van.	Site Workers/ other Site Visitors	We always look carefully before opening van doors. Do not open them suddenly and look before stepping out of vans.				
Being hit by other vehicles when working around van.	Collection Staff	Collection staff wear high visibility jackets at all times and are warned to be cautious, assess risks from vehicles and work at a safe pace.				
Being hit by van when directing it.	Collection Staff	Eliminate all unnecessary distractions and hazards before allowing van to move. Keep in view of driver's mirrors. Agree in advance any signals to be given. Person directing vehicle should always have an escape route to prevent getting trapped by moving vehicle.				
Being hit by van while it is manoeuvring.	Collection Staff, Site Workers	Staff trained to never stand behind or to the side of vehicles whilst manoeuvring, and to never stand between the vehicle and another object whereby they could be trapped. Trained to look out for other site workers.				
Van rolling, being trapped behind van (or in front of it).	Collection Staff, Site Workers	Staff trained to apply the hand-brake firmly whenever stationary AND to leave the vehicle in first gear.				

Van started up whilst in gear and hitting worker.	Site Workers	Staff is trained to check vehicle is in neutral and to apply the clutch pedal before starting the van.				
Cage door im-properly secured open.	Collection Staff	Staff secures doors and driver checks before loading.				
Cage door im-properly secure shut and losing some of the load.	Collection Staff, Site Workers	Person responsible for closing door verbally confirms with driver. Driver checks doors before moving vehicle.				
Strain injuries while loading van	Collection Staff	Loaders will not lift more than they are comfortable with and all loading to be carried out in accordance with the correct procedures as given in training modules <i>The Basics of safe working</i> and <i>Safe Working on Building Sites</i> .				
Trips and slips while loading van	Collection Staff	Unobstructed paths are used while carrying. Slip, trip or other hazards are identified before loading starts.				
Collisions, blows and crushing injuries whilst loading van	Collection Staff	Work is done in a regular and predictable manner and all loading to be carried out in accordance with the correct procedures as given in training modules <i>The Basics of safe working</i> and <i>Safe Working on Building Sites</i> . Public are excluded as far as possible. Lookouts are posted to prevent collisions with public if necessary.				
Wood being thrown, into vehicle whilst loading.	Collection Staff, Site Workers	Wood is not thrown into the van. Wood is loaded only through back doors.				
Wood falling off van whilst stationary	Collection Staff	Staff loading the van will ensure that the load is level and even. They will identify and communicate any particular hazards. Any overhanging or unstable materials will be immediately repositioned.				
Wood falling off van whilst moving	Collection Staff, Site Workers, Site Visitors	We ensure that all loads are stable and properly secured with ropes or nets. Unsafe loads are refused at all costs. We check and double-check safety of load.				

Falling from load whilst adjusting or tying off,	Collection Staff	We avoid climbing on the load.				
Dust in eyes	Collection Staff	All staff are extra cautious in windy conditions and wear eye protection.				
Injury from nails, screws, splinters, glass, etc.	Collection Staff	Staff wears protective gloves and boots. Vans are swept regularly. All nails, splinters etc. are swept up from publicly accessible areas.				
Chemical & biological contaminants	Collection Staff	We are vigilant about contamination. Loads contaminated with any chemical, food, sanitary or other wastes are refused.				
General site hazards such as scaffolds, trenches and plant	Collection Staff	All staff trained and have CSCS cards and wear PPE at all times.				
Using tools to re-size any items too big for loading	Tool operator and those in the vicinity of the tool	Electronic tools and will only be used by properly trained staff and in accordance with training modules <i>Working with Power Tools Parts 1 and 2</i> . They will only be used a safe distance from any other people. If necessary, the area will be cordoned off and the tool used only for the duration to complete the job. Any tools used will then be immediately stored on the vehicle.				
Leaving site	Site Workers and other vehicles	Drivers look out for exit route and potential hazards and give way to vehicles entering site.				

Form Completed by:	<i>R Mehmed</i>	Date Completed:	18/08/19	Review Date:	17/02/20
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Personal protective equipment (PPE)

To protect health and help reduce the frequency and severity of accidents on building sites, builders have a legal requirement to enforce the use of PPE. The quality of this equipment is regulated and must reach a European standard and have an 'EN' number to be acceptable (this is likely to remain the same after Brexit).

Without PPE, entry on to the site will be forbidden, so we must arrive on site properly prepared and in possession of the following:

Safety boots (EN ISO 20345:2011): these must have steel toe and steel midsole protection (to prevent nails puncturing the boot and entering the foot).



High-visibility (High-viz) jacket (EN471. Class 2): made of very bright yellow and highly reflective material; can be weather-proof coats, jackets or just light vests. High-viz trousers are also mandatory on some sites. Railway workers wear orange equipment.

Hard hat (EN 397:1995): essential to protect the head and mandatory on all sites.

Protective gloves (EN 388: 1994): Also mandatory on all sites. There are many types, with the 'rigger' type being the most common (and the cheapest).

Safety glasses (EN 166:2001): can be either goggle or glasses type.

Dust mask (EN149): useful when dealing with sawdust/shavings in dry conditions or on any dusty site. 'Nuisance' masks are the cheapest disposal ones and are acceptable for most sites .

Ear defenders (EN352): not often needed on site but worth having in case of having to load wood close to slab cutters or other noisy work.



Arriving on site

All visitors to site must sign in before gaining access and some sites will ask visitors to undertake a short site-specific induction. To reduce the frequency and severity of accidents, builders must ensure that visitors are dressed correctly (so no shorts/uncovered arms) and that they have the appropriate PPE. Always check that all collection staff have completed this training (and had it recorded in their Individual Training Log), are properly dressed and equipped before trying to enter.

Once at the site remember to:

- Be aware of and understand site signage; ask a site worker or your colleagues if you are not sure
- Report directly to the site office unless you have an agreed collection point
- Obey all site rules
- Park only where instructed or where you consider safe
- Keep your eyes and ears open for potential hazards

Working on site

Carrying out collections safely and efficiently will enhance your enterprise's reputation and help win new business as builders will trust you, so always follow these simple site rules:

- **Obey the site speed limit** when entering and moving around the site.
- **Always park the vehicle as close to the wood pile as possible;** the further away from the pile, the more the risk of trips, slips and exposure to hazards whilst loading.
- **Always stay inside any designated area;** keep safe by staying as close as possible to the wood pile. Don't stray on to other parts of the site.
- **Don't touch** anything that might not be earmarked for collection without asking the appropriate person—don't risk touching potentially hazardous stuff or being accused of tampering with, pilfering or damaging site material.
- **Always use good manual handling** methods and procedures and load quickly and methodically—don't lift more than you feel comfortable with. Take care lifting items such as windows and doors that might contain glass. Look out for nails, screws or other sharp pieces of metal.
- **Load through the cage doors,** do not throw material over the cage sides—it could miss or bounce causing injury. Load the vehicle evenly, making sure that there is as little void (unfilled gaps) as possible. Avoid standing on the back of vehicle unless it is fitted with fall protection (a chain or rope that fits across the back of the truck from one side to the other).
- **Ensure the load is properly secured** and that none of the load is too high. Never start the vehicle until someone has confirmed to the driver that the cage doors are properly shut and the load is properly secured.
- **Clear up any mess** and sweep up any loose wood/mess on the ground—especially if there are nails or other bits of metal that might cause punctures.
- **Wait in the vehicle** for the WTN to be signed—don't wander around the site, let just one person go and get the note signed.
- **Ensure the driver always get assistance** from a colleague or site worker when reversing or manoeuvring in tight spaces.
- **Report if there is any accident or injury** sustained by you, your colleagues or site workers, whilst you are on site, to the Site Manager immediately. Also report any serious 'near misses' or any potential dangers you have spotted.
- **Obey site speed limits** when leaving and give way to traffic entering the site.



Section 4—Trainee exercises and questions

There are some questions for you to answer on the following pages.

Remember: don't hesitate to ask for help from your Trainer.

Module 2: Exercise 1

1. Approximately how much is the construction industry worth to the UK economy?	
2. Approximately how many million tonnes (mt) of materials does UK construction use in a year?	
3. How many fatalities were there on British sites in 2018?	
4. How many people directly and indirectly does the UK construction industry employ?	
5. Name the 5 key features of the construction sector:	1.
2.	3.
4.	5.
6. Name the 8 key hazards of construction sites:	
1.	2.
3.	4.
5.	6.
7.	8.
7. What 2 documents have to be completed before collecting from sites?	
1.	2.
8. Name the 5 pieces of PPE that must be worn to enter a building site:	
1.	2.
3.	4.
5.	
9. What are the 5 key points to consider when arriving on site?	
1.	2.
3.	4.
5.	
10. What are the 12 key rules of working on site?	
1.	2.
3.	4.
5.	6.
7.	8.
9.	10.
11.	12.

11. What might the site ask you to do before letting you on to the site?

12. Where should you park on site?

13. Why shouldn't you touch anything not earmarked for collection?

14. How should you load the vehicle?

15. What must be checked when loaded, but before starting the vehicle?

Office use only		Number of correct answers required to pass Module 2: 12			
Passed:		Retake:		Date:	
		Trainer's signature:			