

CSCS Card for the Archaeologist

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BAJR Practical Guide©

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This short guide looks at the requirements and process of obtaining CSCS cards for archaeologists.

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Introduction

THE HEALTH AND SAFETY TEST

While archaeology has a good safety record the construction industry has more than 25% of annual work-related deaths and over 4,000 major injuries every year. Developer-led archaeology brings the archaeologist into the sphere of the construction industry and its attendant risks. The **Construction Skills Health and Safety** test is designed to set an industry standard, ensuring that everyone working in construction has the same minimum level of health and safety awareness.



The scheme is linked to the Construction (Design and Management) regulations. An archaeologist will normally hold the white CSCS card for a **Construction Related Occupation (CRO)**, their CSCS occupation title will be **Archaeologist Technician**, occupation code **5363**.

This card is valid for five years and the **Health and Safety Test** must be passed to gain and renew the card. If you are an archaeological supervisor or manager this card should suffice as it is the only CSCS card for archaeologists, but ultimately it is at the construction site management's discretion which cards they require.

In Northern Ireland the scheme is called the **Construction Skills Register (CSR)**, call CSR for information on 028 9087 7150.

A common misconception is that the Health and Safety Test is like a first-aid certificate or other pass card and that some form of training course is required before taking the test. This is untrue and many people pay over-the-odds for substandard training courses, many companies offer this training which is usually based on official products that are readily available for anyone to buy through the ConstructionSkills website.

Currently there is an 8th edition question book, a CD-Rom, a networkable DVD and a 2nd edition question book for the Professionally Qualified Persons test. If you are booking a course for the test it is advisable to make sure you are booking one that includes the test fee and the card fee and arranges both the test and the card for you.

The Health and Safety Test can be booked online through (www.cskills.org/hstest), by calling 0344 994 4488, or by downloading a postal application form. The test costs £17.50 (in 2009) and is exempt from VAT.

Payment is by credit or debit card and required details include candidate home address, date of birth, and National Insurance number or ConstructionSkills registration number.

There are different options available depending on where the test can be taken and how many tests need to be booked, internet and mobile testing allow the test to be done on business premises. The mobile testing unit requires that at least sixteen people are taking the test at one time, and the location you choose must be large enough to allow the testing vehicle access. The Corporate Health and Safety Test Booking line number is 0161 868 9255. Tests should be available 3-8 weeks from when you book.

If your confirmation letter does not arrive in the period quoted phone 0870 600 4020 to check your test has been booked as CSCS do not take responsibility for postal delays. Unless there are exceptional circumstances (family bereavement, documented illness) you must cancel three working days in advance or your fee cannot be refunded.

The format and delivery of the Health and Safety Test is very similar to that of the DVLA Driving Theory Test. You will need to show photographic and signature identification, your confirmation letter or e-mail, and anything else listed in your confirmation. At the test centre you sign in, are given a locker key for your belongings, have your photograph taken (to check your identity, not for your photo card) and take a computerised multiple-choice test. The test is administered for CSCS by Prometric, an international testing company who have over 150 test centres in the UK. No special computer skills are required and there is the option for a practice tutorial before beginning the test, all tests are monitored so assistance is always available. Questions are answered by mouse-click or touch screen. Testing stations are equipped with headphones so the questions can be heard as well and it is possible to do the test in other languages via voiceover or interpreter.



The questions are taken from an approved selection and all the possible questions are in the book and CD-Rom. The core test has 40 questions to be answered in 45 minutes, ConstructionSkills note that many candidates finish well within this time. It is not necessary to have a detailed knowledge of regulations and their exact wording and there are no trick questions. The test is not hard by any means but there are areas that most archaeologists will be unfamiliar with, especially if they have worked mainly on projects that have been conducted in advance of construction. This guide to the sections of the test should provide, via short paragraphs, enough information to get you through the test comfortably and improve your knowledge of health and safety.



The results of your test will be available almost immediately. If you have failed the printout will show which areas you have failed in. When you pass your results will be entered into the CSCS database and do not need to be sent off with your application form, but you will need to send a cheque/postal order for **£24.47** (inclusive of VAT at 15%) and a passport photo to get your CSCS card.

The card should take 2-4 weeks to arrive.

Sections of the test

GENERAL RESPONSIBILITIES.

Much of the General Responsibilities section is common sense, such as asking a presenter to repeat anything you don't understand during an induction. The section covers chain-of-command issues such as: Your supervisor being your first port of call for most concerns and problems (a recurring point throughout the test); The site manager being responsible for managing health and safety on a construction site;

Awareness of legislation and on-site documentation is also mentioned. The Health and Safety at Work Act (in Northern Ireland the Health and Safety at Work Order (NI) 1978) makes the employer responsible for providing a safe workplace and places legal duties on all workers, such as making everyone responsible for reporting unsafe conditions. A **health and safety policy** document covers how health and safety are to be managed on site. A **method statement** states how work is to be carried out. A **risk assessment** details how a job is to be done safely, employees are **not** legally obliged to write their own.

Some construction industry terms and practices may be unfamiliar to archaeologists: A **Prohibition Notice** means a piece of equipment, an area, or an entire site is not to be used until it is made safe; An **Improvement Notice** issued by a Health and Safety Executive Inspector means you must improve the standard and safety of your work; A **toolbox talk** is a short training session on a particular safety topic; A **Permit to Work** allows certain jobs to be carried out under controlled conditions.

ACCIDENT PREVENTION AND REPORTING.

This section focuses on the prevention of common accidents and stresses again the importance of site inductions, toolbox talks, risk assessments and method statements. Reporting includes near miss and accident reporting which are done on paper, and the importance of verbally communicating important information to your supervisors and employers. Some types of accident, and illnesses such as Weil's disease have to be reported to the Health and Safety Executive and this is why it is important to have reporting systems in place.

Although not common in archaeology the **near miss book** is common in industry, the circumstances of a near miss are recorded every time there is an incident where someone could have been injured. These situations are then reviewed with a view to preventing the incident from happening again with more harmful results.

If someone is injured in any way it must be entered in the **accident book**. The injured person or someone acting for them should make the entry and the nature, date, and time of the injury should be entered along with the injured person's home address.

Also covered are basic facts such as slips, trips and falls being the most common workplace accident, that most construction workers are killed by falls from height, and that you are more likely to have an accident when you first start on a site.

HEALTH AND WELFARE.

The basic welfare facilities an employer must provide are a covered rest area with tables, chairs, and something to heat water. The minimum hand-washing facilities that should be provided are hot and cold or hot and warm water.

The importance of keeping hands clean is often overlooked in archaeology when digging in greenfield or deep strata, but on urban or brown earth sites where there is any recent history of land-use it is of utmost importance. Wearing gloves and hand-washing can stop the transfer of hazardous substances from hand to mouth. Soap and water should be sufficient to clean very dirty hands, using solvents such as white spirit can remove the protective layer of natural oils from the skin. Although barrier cream is not a reliable defence if it is applied it should be applied before work starts.

The sources of common occupational diseases are also covered. Direct sunlight, mineral oils (such as engine oil) and hazardous substances can cause skin disorders. Working near wet ground, standing water, waterways, and sewers carries the risk of an infectious disease called Leptospirosis (Weil's disease), the onset of which can easily be mistaken for flu. Cows and rats can both carry this disease in their urine and for this reason food waste should be securely disposed of, so that rats are not encouraged. The hazards posed by dust (occupational asthma), pigeon nests and droppings (infectious disease) and tetanus infection via open cuts are also acknowledged.

It should also be noted that the construction industry is completely intolerant of lunchtime drinking.

MANUAL HANDLING.

It is not necessary to know guideline figures for this section, as you are the only person who can decide what weight is safe for you to lift. If you have a pre-existing injury or condition you should tell your supervisor that lifting may be a problem. Erring on the side of caution is obviously key and remembering a few salient points will suffice to get through the questions from this section. Factors that reduce how much you can safely lift also feature. For example, lifting something down from above head height places extra strain on the arms and back, and makes it more difficult to maintain good posture and control the object. Lifting while sitting and twisting and turning also reduce the amount that can be safely lifted.

The regulations for manual handling mean all employees must make full use of their employer's safe systems of work. An employer must make a risk assessment for lifting any heavy load. Before you lift anything you will have to assess if it is safe to attempt lifting it. The object's volume, condition, weight, and handholds are all factors in safe lifting and simply finding out how much a load weighs is the safest method of assessing if it is too heavy. Obviously, when lifting anything up do so with your feet just less than shoulders width apart, keeping your back straight, and using your legs to do the lifting.

Uneven loads should be lifted with the heavy side nearest you. Remember that wearing back support does not eliminate the risk of injury when lifting.

Large loads should be divided up or help should be sought, even if the object is light but large enough to block your vision when you are moving it. Someone who is helping you to lift something should be around the same height as you and able to lift the same amount.

Archaeologists should note that wheelbarrowing counts as manual handling, with wheel barrows and trolleys being the safest way to move a load over distance.

WORKING AT HEIGHT.

Although archaeologists rarely work at height, doing so usually only to record buildings or to take site photographs falls from height are the biggest killer in the construction industry and feature prominently in the test. Any height where you could injure yourself falling from it counts as working at height.

Ladders should be checked before use by the person who is going to use the ladder. Damaged ladders should not be used, they should be marked as such and other people who might use them should be made aware they are damaged, never paint ladders as this can hide damage. The safe angle for a ladder in use is seventy-five degrees and tying the ladder at the top is the best way of making a ladder secure. Only one person should be on a ladder at any one time. A ladder can be used as a place of work only while doing light work for a short time. When ladders are used for access to a platform the ladder must extend five rungs above the platform and be tied in place at the top. You should have three points of contact with a ladder at all times.

Normal scaffold used in construction is referred to as **tube and fitting scaffold**, only competent and authorised people can erect, alter, or dismantle it. This means that even if a guard-rail is only temporarily removed and put back to allow access it must be done by a scaffolder. The best way to protect people working underneath from objects falling from a scaffold is to stop work below the scaffold and clear the area.



One area of working at height where archaeologists are particularly vulnerable is making occasional or one-off access to roofs for the purpose of taking overall site photographs. They should be able to recognise the fragile roof sign.

Understand that crawling boards should be used to cross fragile roofs, and that covering fragile roof panels with something that can take a person's weight is the safest working procedure. **Edge protection** refers to measures that stop people or objects falling off the edge, guard-rails (handrails) and toe-boards (upright edges to the platforms). When it is not possible to use these or **collective fall arrest** (soft landing systems) then a harness and lanyard attached to an anchor point must be used. Where there is a risk of falling while working over water a harness **and** lanyard and a lifejacket must be worn.

Although most archaeologists will probably never have to store materials on a scaffold there are questions on this in the test. Steel mesh known as **brick guards** are the best way to stop material stored on a scaffold from falling between the guard-rails and toe-board. Materials stored on a platform must be secure even in windy weather, the platform must be able to take their weight, and the materials should not make the platform unsafe for others working on it.

The use of mobile scaffold towers as photography platforms in archaeology is problematic in regard to health and safety regulations. Mobile tower scaffolds must not be used on soft or uneven ground, nor should they be used if their wheel brakes are not working. The only safe way to reach the platform of a mobile tower scaffold is to use the ladder built into the tower, climbing on the inside.

PERSONAL PROTECTIVE EQUIPMENT (PPE).

The risk assessment or method statement will state what PPE is required. Your employer must provide you with all the PPE you require to be protected, they must pay for all of it, even replacements are required due to loss or damage. Damaged PPE should be replaced straight away. A hard hat dropped from height onto a hard surface should be replaced immediately.

Never start work without the correct PPE. Never start work without the correct Respiratory Protective Equipment (RPE) and training in its use, a dust mask (or several) will not protect you against fumes. Likewise, expert advice and training is required if wearing a full body harness for the first time. Never start work if provided with disposable earplugs which do not fit properly, wait until you have suitable fitted earplugs. It should be recognized that different types of hazard require different types of gloves and that anti-vibration gloves may not provide protection from vibration.

Eye protection should be worn whenever there is risk of eye injury and should be impact-resistant goggles should if there is risk of flying material (while grinding for example). Hard hats should be worn square on the head and must be worn at all times on site unless in a safe area, such as a site office or mess area. Safety footwear should be worn all the time on site. When working outdoors in bad weather employers should provide waterproof clothing as muscle strains are less likely to happen when warm and dry.

EMERGENCY PROCEDURES AND FIRST AID.

Emphasis is on not moving or trying to treat casualties if you are not qualified. However, burns need immediate immersion in cold water and someone coming into contact with a live wire requires the power being turned off and help being called. The importance of getting a first aider and/or medical help and recognising signs are also key, such as:



Eye-wash station;



First Aid;



Assembly Point.

A first aider is someone who has completed the appropriate training course. First aiders cannot give medicines without authorisation and for this reason first aid kits should not contain painkillers. Employers must provide first aid boxes and where anything could get into someone's eyes eye-wash bottles must also be provided.

The first thing you should do on finding an injured person is check for any danger to yourself and alert others that something has happened. With most injuries the first thing to do is send for the first aider, if there is no first aider on site and there is a serious injury or illness call an ambulance. Emergency procedures and emergency telephone numbers should be covered in the site induction.

SAFE USE OF HAZARDOUS SUBSTANCES.

The safe use of hazardous materials is governed by the Care of Substances Hazardous to Health (COSHH) regulations. Whenever you have to use a harmful substance your supervisor must inform you of the COSHH assessment for that substance. The disposal of chemicals (including oil) also needs to be done safely.

Recognising the relevant COSHH symbols is also a large part of this unit:



Toxic;



Corrosive;



Harmful.

All colours and types of asbestos are dangerous and can cause lung disease.

ELECTRICAL SAFETY.

Recognise the sign for risk of electrocution:



Running an extension cable above head height is the safest way to protect it while working. If a cable needs to cross an area used by vehicles it should be have a protection ramp over it and Ramp Ahead signs put up for drivers. When using an extension cable you should uncoil the full length and check for damage. If a temporary 110v electrical distribution box is too far away you should ask your supervisor for it to be moved closer by an electrician.

Normally when working on-site battery-powered or air-powered tools, or 110v electricity are used, as they are less dangerous than 230v. 110v power cables and connectors are yellow. Residual current device (RCD) units are used with 230v appliances, the RCD cuts off the power if there is a fault, they have a test button to check that they are working. A 13amp plug indicates that the tool is 230v. Electrical hand tools should be checked before use for damage and the PAT test label should state when the next safety test is due. Burn marks on the casing of an electric tool can indicate an electrical fault. If you are using an electrical item and the fuse blows you should turn off the power and check for obvious signs of damage.

In water-logged areas air-powered tools should be used if possible.

HAND-HELD EQUIPMENT AND TOOLS.

Power or hand tools must be appropriate to the job and inspected before each use, even simple tools like trowels and chisels. Hand tools with loose heads or damage should be repaired or replaced immediately. Chisels and metal grid pegs should not be used if they have 'mushroomed' out at the head as this can send shards of metal into the air when they are struck.

You must be trained and competent to operate a powered hand tool, this is particularly relevant to cartridge-operated tools as they work like a gun and can be highly dangerous. Before adjusting an electric hand tool you should switch off and disconnect it, it should also be off and disconnected if it is not in use.

Using a disc-cutter on concrete will pose risks of flying fragments, high noise level and airborne dust to anyone in the area. Dust released by grinding or cutting can be controlled by fitting a dust extractor or collector by wet cutting. When using power tools with rotating blades the guard should be adjusted so that only the necessary amount of blade is uncovered, power tools with missing guards should not be used. The guard stops fragments flying up and protects you from the blade or wheel of the machine. Abrasive wheels should be used at speeds exceeding the recommended limit as the wheel could burst.

FIRE PREVENTION AND CONTROL.

This section includes the colour coding of fire extinguishers, probably the most confusing part of the test. At one time extinguishers were made in the different colours, but reverted back to being red with a panel of the appropriate colour, currently there is talk of going back to solid colour extinguishers.

By colour:

Red extinguisher. Contains water. This is the only colour that cannot be used on burning liquids/oils as they will dilute and spread. Do not use on electrical fires (like yellow) or metal fires (like all four colours).

Black extinguisher. Contains carbon dioxide (CO₂). Works by excluding oxygen. Can be used on electrical fires (as can blue). Do not use on metal fires (like all four colours). Do not hold the nozzle when operating as it can become very cold.

Yellow extinguisher. Contains foam. Can be used on liquid/oil fires (as can blue). Do not use on electrical fires (like red) or metal fires (like all four colours).

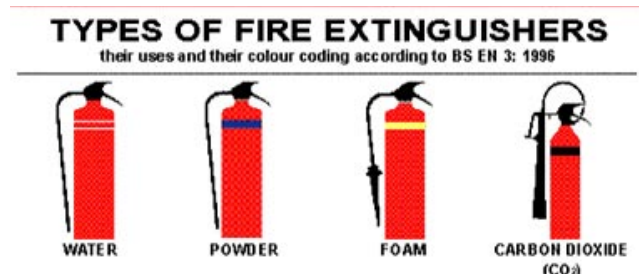
Blue extinguisher. Contains powder. Can be used on electrical fires (as can black). Do not use on metal fires (like all four colours).

More generally:

Black (CO₂) and blue (powder) can be used on electrical fires, the other two colours can't.

All four colours cannot be used on metal fires.

Only red (water) cannot be used on liquid/oil fires.



Apart from this the other questions from the fire section are quite straightforward: If you discover a fire raise the alarm; Do not block a fire escape route; Go to the fire assembly point when the fire alarm sounds; Remember that all fires need heat, fuel and oxygen, without any one of these there is no fire; Frost around the valve of a Liquid Petroleum Gas cylinder indicates it is leaking. Archaeologists will probably be unfamiliar with **hot work permits** which are needed to perform tasks which could potentially start a fire (such as cutting steel, welding, or soldering pipes), these jobs need to have an extinguisher at hand and checked for signs of fire when done.

SAFETY SIGNS AND SIGNALS.

Virtually all of this section is about safety signs, the only exceptions involves not giving hand signals to crane or truck drivers without the appropriate training.

Blue and white mandatory signs indicate things you must do:



Wear ear defenders.



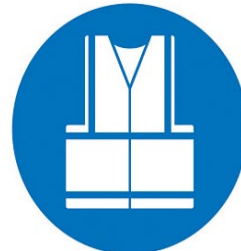
Wear eye protection.



Wear safety boot



Wear safety gloves.



Wear hi-vis clothing.

Red and white prohibition signs with a red line indicate things you must not do:



No access to pedestrians.



Unsafe scaffold, keep off.



Do not enter.

Yellow signs warn of hazards:



Flammable substance.



Laser.



Radiation.



Explosive.

Red signs give information for fire control:



Fire point.



Fire alarm.



Fire hose.

Green signs show safe conditions:

Emergency shower.



Emergency phone.



Drinking water.

Orange signs indicate COSHH symbols:

Harmful to the environment.



Flammable.



Explosive.

SITE TRANSPORT SAFETY.

Mostly common-sense and an area most archaeologists will be familiar with. Keep to pedestrian routes on site where possible, well-organised sites should have pedestrian routes divided from traffic by barriers; To operate site plant you must be competent and authorised; You can ride on plant only if it is designed to carry passengers; Mobile cranes and forklifts in use should be avoided completely; Faults with vehicles and plant such as flat tyres and leaks should be pointed out as the vehicle is unsafe.

NOISE AND VIBRATION.

Notes on noise: An early sign of hearing damage is temporary deafness, continual exposure to noise can cause irreversible damage; It is taken as a sign that noise could be at a problematic level if you have to shout to be heard by someone standing 2m away; If you are near excessive noise do not stay in the area without ear protection that fits and is in working order; Be aware that wearing ear protection can make you less aware of what is happening around you; If you think your hearing has been damaged by noise in the workplace you should ask your employer or doctor to arrange a hearing test.

Notes on vibration: This area is all about **vibration white finger**, a condition in which the nerves and blood vessels of the hand are damaged causing incurable disability. The three early signs of this condition are temporary loss of sensation in the fingertips, whiteness of fingertips, and tingling in the fingers. Any of these symptoms should be reported as soon as they appear.

Your supervisor should explain the risk assessment and how to use vibrating tools safely. Hand-arm vibration can be reduced by doing the work in short spells, and not holding the tool too tightly. Anti-vibration gloves do not guarantee protection from vibration.

EXCAVATIONS AND CONFINED SPACES.

In these two work environments the emphasis is on getting out immediately if there is any indication of hazardous conditions and on checking the integrity of the excavation and air quality of the confined space before each shift.

Excavations: The safe way to access an excavation is by ladder; The excavation must be supported if there is any risk of the sides collapsing; When digging near buried services you should dig with a spade or shovel and be aware that services are sometimes marked with yellow plastic tape. If you do damage a buried cable you should not touch it, stop, work and report it immediately; Guard-rails should be put around the top of an excavation to stop anyone from falling in; Strange smelling soil is probably an indicator of contamination; Be

aware of the danger posed by vehicles backing up to the edge of an excavation with the engine running filling the excavation with exhaust fumes.

Confined spaces: Working in a confined space requires three safety documents- method statement, risk assessment, and the appropriate in-date Permit to Work; Confined space work also requires a rescue plan, a rescue team, and a **top man** on duty outside the space to initiate the rescue plan; Air meters should be used before the shift starts and gas alarms should be in place; Sludge in the bottom of a confined space is a hazard as it is slippery and can release toxic or explosive gases, its presence requires the use of RPE; You should be aware of the dangers indicated by strange smells such as that of methane which is explosive and not breathable, and the rotten egg smell of hydrogen sulphide.

FRAUDULANT CARDS

It is a sad fact that within contract archaeology there are fraudulent cards in circulation. The validity of a card can be checked simply by phone or online. CSCS make it clear that they will fully support any prosecution with technical and factual evidence and issue the following guidelines for dealing with suspected fraudulent CSCS cards:

1. If possible retain the card.
2. Make photocopies of front and back.
3. Record the cardholder's name and address.
4. Ask the cardholder where the card was obtained.
5. Call the local police and report the matter.
6. Refuse access to site (subject to company rules).
7. Forward copies of all evidence to

Gordon Jenkins; CSCS Ltd, Manor Royal, Crawley, West Sussex RH10 9QP

marked "**SUSPECTED FRAUDULENT CARD**" with details of the crime number given by local police.

ABBREVIATIONS

COSHH	Care of Substances Hazardous to Health
CSCS	Construction Skills Certification Scheme
DAP	Combined Demolition and Plant
HSE	Health and Safety Executive
HIW	Highways
LAEE	Lift and Escalator
LPG	Liquid Petroleum Gas
MEWP	Mobile Elevating Work Platform
PAT	Portable Appliance Test
PPE	Personal Protective Equipment
RCD	Residual Current Device
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
RPE	Respiratory Protective Equipment
WAH	Working at Height

Other Card Schemes

ENERGY AND UTILITIES SKILLS REGISTER.

Affiliated with CSCS allowing EUSR cardholders access to construction sites. However it does not allow CSCS cardholders access to sites which required an EUSR card.

FÁS SAFE PASS.

The Safe Pass is a health and safety awareness training programme introduced by FÁS, the Training and Employment Authority of the Republic of Ireland. CSCS and FÁS have a mutual recognition agreement, so if you have one you do not need the other.

PTS.

The Personal Track Safety (PTS) Certificate is required by anybody working on Network Rail tracks in the UK. This card is specialised towards working on railways and includes hearing test and drug and alcohol testing components.

QUARRY PASSPORT

Run by Safety Pass Alliance, and often confused with Safe Pass. The Quarry Passport is an independent scheme used by some operators, it is not a legal requirement. From 1st November 2009 persons involved in Schedule 1 activities (which include operating digging machines, mobile cranes and site dumpers) in a quarry will be required to hold a Quarries Skills Certification Scheme registration card. Schedule 1 activities can be checked at the HAS website.

Useful Links

Health and Safety Test: <http://www.cskills.org/hstest>

Health and Safety Executive: <http://www.hse.gov.uk>

FAS Safe Pass <http://www.fas.ie/en/Training/Employee+Training/Safe+Pass/>

Energy & Utility Skills Register <http://www.eusr.co.uk/>

SPA Quarry Passport <http://www.safetypassports.co.uk/html/quarries.html>