

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5

# Award Code: Highways Maintenance (GF1R 22) Roadbuilding (GF1V 22)

# Candidate name:

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Note

The National Occupational Standards which form the basis of this award were developed by ConstructionSkills. This document is for candidate use only and should not be used as a substitute for the National Occupational Standards.

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# Section 1 — General information about SVQs

# Introducing SVQs

The qualification you are undertaking is a Scottish Vocational Qualification (SVQ).

SVQs are work-based qualifications which assess the skills and knowledge people have and need to perform their job role effectively. The qualifications are designed using National Occupational Standards.

For each industry sector there is a Sector Skills Council (SSC) which is made up of representatives from the industry or profession and it is the SSC's responsibility to develop the National Occupational Standards.

These standards define what employees, or potential employees, must be able to do, how well and in what circumstances to show they are competent in their work.

The Sector Skills Council/Standards setting body for Construction Operations and Civil Engineering Services (Construction): Highways Maintenance and Construction Operations and Civil Engineering Services (Construction): Roadbuilding is ConstructionSkills.

Access to SVQs is open to all and you can be assessed either against a particular Unit(s) or against the full SVQ. There are no entry requirements, no prescribed method of delivery, and no time constraints for completion or age limits.

SVQs are available at five levels of achievement which reflect the various technical and supervisory skills, knowledge, and experience which employees should have as they progress in their industry.

# Who offers SVQs?

An organisation which offers SVQs is called a centre. This may be a school, college, university, employer, training provider or a combination of these. The centre has responsibility for the quality of the qualification and is required to work within an awarding body's policies and guidelines.

The Scottish Qualifications Authority (SQA) is your awarding body for this SVQ. This means that we are an organisation approved by government to design qualifications and awards. An awarding body endorses candidates' certificates so that an employer can be sure the qualification has gone through a rigorous and effective assessment process. SQA provides qualifications throughout the world and was formed by the merger of the Scottish Examination Board (SEB) and the Scottish Vocational Education Council (SCOTVEC).

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# What is the structure of an SVQ?

All SVQs have a common structure and consist of standards which can be broken down into various parts:

Units and Elements	<b>Units</b> define the broad functions carried out in your particular job and are made up of a number of <b>Elements</b> . Each <b>Element</b> describes a specific work activity which you have to perform and may relate to skills or to the demonstration of Knowledge and Understanding.
Performance Criteria	The level and quality of how you should carry out these activities is determined by a number of statements called <b>Performance Criteria</b> . <b>Performance Criteria</b> are used to judge your competence.
Range/Scope Statements	A <b>Range Statement</b> tells you in what circumstances you must be able to prove your competence and allows you to demonstrate that you can carry out tasks in different circumstances. Items included in the Range Statements must not be treated as optional. <b>Range Statements</b> are also called <b>Scope</b> in some National Occupational Standards.
Evidence Requirements	The <b>Evidence Requirements</b> specify the amount and type of evidence which you will need to provide to your assessor to show that you have met the standards specified in the Performance Criteria and in all the circumstances defined in the Range Statements.
Knowledge and Understanding	The section on <b>Knowledge and Understanding</b> states what you must know and understand and how this knowledge applies to your job.

If you are not yet clear about how we define standards — just remember that the standards have been developed by experts within your industry or profession and that all candidates aiming for this particular SVQ are being assessed against the same standards.

You will find an example of an SVQ Element overleaf.

#### An example of an SVQ Element

UNIT: (1) Working safely in an engineering environment

#### Element 1 Comply with statutory regulations and organisational requirements <

#### **Performance Criteria**

You must ensure that you

**PERFORMANCE CRITERIA** set out the standard of performance you need to demonstrate consistently to claim competence in a particular **Element**.

- 1 Describe your duties Line congruence (as an inamedial) and a most and Health and Safety at Work Act 1974.
- 2 Comply with Statutory Regulations at all times.
- 3 Comply with organisational safety policies and procedures at all times.

#### Range

This means you need to cover:

1 Relevant sections of the Health and Safety at Work Act 1974 (eg with regard to your duties to work in a safe manner, not to interfere with remove or misuse equipment provided for the safety of yourself and others, not to endanger others by your acts or omissions).

The **RANGE** defines the various circumstances in which you must be able to prove you are competent.

You must cover all of the items in the **Range** Statement.

This is the **UNIT** title — it describes a role and task.

This is the **ELEMENT** title. It describes part of the main role and task.

#### **Evidence Requirements**

The things you must prove that you can do:

You need to demonstrate that you understand your duties and obligations under both statutory regulations and organisational requirements and you can do this by:

- 1 Giving an adequate explanation of the duties and responsibilities of every individual as described in the Health and Safety at Work Act 1974.
- 2 Ensuring that whilst carrying out your work and/or visiting other areas of the working environment you are aware of the specific safety requirements and regulations governing your activities.

#### Knowledge and Understanding

You must prove that you know and understand:

- 1 The roles and responsibilities of yourself and others under the Health and Safety at Work Act 1974.
- 2 The general regulations that apply to you being at work.
- 3 The specific regulations which govern your work activities.

The **KNOWLEDGE AND UNDERSTANDING** Requirements state what you must know and understand and how this knowledge applies to your job.

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### How are SVQs achieved?

When you consistently meet the standards described in the Elements and show that you have the required skills and knowledge across the Range, you can then claim that you are *competent* in each Unit. You can claim certification for single Units or whole awards. Your centre will register your claim to competence through the awarding body. The awarding body you are registered with for this SVQ is the Scottish Qualifications Authority (SQA).

The process of gaining an SVQ is flexible and depends on your needs. At the beginning of the process your assessor will review your existing competence in relation to the standards and identify the most suitable SVQ. The level you start at will depend on the type and breadth of your current job role together with your past experience, skills and any relevant prior learning.

To achieve an SVQ, or a Unit of an SVQ, you must:

 Demonstrate you meet the requirements of the Performance Criteria by collecting appropriate evidence as specified by the Evidence Requirements. This evidence is assessed against the national standards by a qualified assessor, who will be allocated to you by your centre. This will usually be someone who knows you, such as a manager or supervisor.

Evidence may come from:

- the accreditation of prior learning where evidence relates to past experience or achievements
- current practice where evidence is generated from a current job role
- a programme of development where evidence comes from assessment opportunities built into a learning/training programme whether at or away from the workplace
- a combination of these

### How are SVQs assessed?

Assessment is based on what you can do and involves you, your assessor, an internal verifier and an External Verifier — see 'Who does what in SVQs' on the following page.

You will be asked to prove you are competent by providing evidence which shows:

- you can perform all the specified tasks consistently to the required standard (Performance Criteria)
- you understand why you are doing things (Knowledge and Understanding)
- you can apply the required skills in different ways (Range)

Assessment is flexible and you can be certificated for each Unit you successfully achieve, even if you do not complete the full SVQ. There is no set period of time in which you need to complete a Unit. However, you and your assessor should still set target dates for completing each Unit; otherwise your qualification could go on forever. Be realistic though, as there are many factors such as your previous experience, demands within your workplace and an availability of resources which will affect how quickly you are able to achieve the qualification.

# Who does what in SVQs?

A number of individuals and organisations have parts to play in SVQ assessment. Their roles have been designed to guarantee fair, accurate and consistent assessment.

	Who are they?	What is their role?
Candidates	The person who wants to achieve the SVQ — in this case, you.	Need to show they can perform to National Occupational Standards in order to be awarded an SVQ or Unit(s).
Assessors*	An experienced person in the same area of work as the candidate, eg supervisor.	Judge the evidence of a candidate's performance, knowledge and understanding against the National Occupational Standards.
		Decide whether the candidate has demonstrated competence. Provide guidance and support to the candidate. Assist with planning assessments, giving feedback and recording candidate progress.
Internal verifiers	Individuals appointed by an approved centre to ensure the quality of assessment within the centre.	Advise assessors and maintain the quality of assessment in a centre.
		Systematically sample assessments to confirm the quality and consistency of assessment decisions.
Approved centres	Organisations approved by awarding bodies to co- ordinate assessment	Manage assessment on a day-to- day basis.
	arrangements for SVQs.	Must have effective assessment practices and internal verification procedures.
		Must meet criteria laid down by awarding bodies and be able to provide sufficiently competent assessors and internal verifiers.

	Who are they?	What is their role?
External Verifiers*	Individuals appointed by the awarding body to ensure that standards are being applied uniformly and consistently across all centres offering the SVQ.	Check the quality and consistency of assessments, both within and between centres, by systematic sampling. Make regular visits to centres to
		ensure they still meet the criteria to deliver SVQs.

\* Assessors and internal and External Verifiers are required to have occupational expertise in the SVQs which they are assessing/verifying. They must also have, or be working towards, an appropriate qualification in assessment and verification.

### What is evidence?

To claim competence for an SVQ Unit you need to gather evidence which shows you have met the standards. It is important that your evidence is easily understood so that it can be checked against the standards, by your assessor, your centre and the awarding body.

Evidence can take many forms including:

- direct observation of your performance by your assessor
- products of your work
- authenticated statement witness testimony
- personal statement
- outcomes from questioning
- outcomes from simulation
- case studies
- assignments or projects
- Accreditation of Prior Learning (APL) evidence from the past

It is important that your evidence is:

- valid it relates to the SVQ standard you are trying to prove
- authentic the evidence, or an identified part of it (eg a report) was produced by you
- **consistent** achieved on more than one occasion
- current usually not more than two years old
- sufficient covers all the performance and knowledge requirements laid down in the standards

Your evidence may be collected through a range of sources, such as employment, voluntary work, training programmes and interests/activities which you perform outside your work. It can also be produced in various formats, eg your own reports; testimonies from colleagues, supervisors or members of the public; projects; models; audio tapes, photographs; videos.

When you first begin your SVQ, you and your assessor should identify all the Units and Elements where you can use **integration of assessment**. Further details about integration of assessment can be found on page 10.

#### Demonstrating knowledge, understanding and skills

In order to meet the standards, you may also be required to prove Knowledge and Understanding. Each Unit contains a list summarising the knowledge, understanding and skills a candidate must possess. Evidence of how these have been achieved and applied could be included in the performance evidence as one or all of the following:

- descriptions of why a particular approach was used
- personal reports about the learning process
- reflective reports which include how a theory or principle was applied
- assessment interviews
- assessment tests
- responses to questioning

These should be included in your portfolio.

# How will my assessor check I have the knowledge and understanding listed in the standards?

For some Units, it will be clear to your assessor that you have the required knowledge and understanding from how you carry out your work. This is often referred to as *knowledge and understanding apparent from performance*. There will be other occasions though, when your assessor will be unsure if you know why, for example, it is important to give information to clients in certain situations. This could be because your assessor has not had the opportunity to observe all the Performance Criteria and Range during assessment. In these situations, your assessor may wish to assess your knowledge and understanding by asking you some questions. These questions can be given orally or in writing, but will be recorded in your portfolio as evidence.

Your assessor could also check you have the required level of knowledge and understanding by asking you to produce personal statements or to complete a project or assignment.

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# What if I have previous experience and knowledge and understanding from work and other qualifications?

If you have previous work experience, skills, and knowledge and understanding which you feel is relevant to your SVQ, you should tell your assessor about it. Your assessor may ask you for more proof in the form of letters from previous employers/training providers or details about any courses you have completed.

For example, you may have achieved an HNC in a relevant subject in which case your assessor may feel that you already have some of the knowledge and understanding required for the SVQ.

The process of matching your previous experience and learning is often referred to as the Accreditation of Prior Learning (APL). The purpose of this process is to try and give you some credit towards your SVQ for things you can already do to the national standard. Your assessor judges the evidence available and matches it against the requirements of the SVQ. This means that your assessor should not have to assess you for these things all over again.

However, the success of this process depends on **you** telling **your assessor** what previous work experience or knowledge and understanding you have and how you think it is relevant to your SVQ. The more information you can supply to support your claims, the easier it should be to convince your assessor that you are competent.

#### When can simulation be used?

Throughout your SVQ, the emphasis is on you being able to carry out real work activities so assessment will normally be carried out in the workplace itself. There may be times, however, when it might not be appropriate for you to be assessed while you are working. For example your SVQ might require you to carry out emergency or contingency procedures (for safety or confidentiality reasons) or your job role may not cover all aspects of the qualification. In such instances, when you have no other means of generating evidence, **simulation** might be appropriate.

Simulation is any structured exercise involving a specific task which reproduces reallife situations. Care must be taken though to ensure that the conditions in which you are assessed *exactly* mirror the work environment ie it is a **realistic working environment**.

You and your assessor should check the assessment strategy for your SVQ carefully to find out the Sector Skills Council (SSC's) view of what constitutes a realistic working environment. Some SSC's stipulate the specific elements which are suitable for this approach.

#### Integration of assessment

It is not necessary for you to have each Element assessed separately — doing so could result in assessment which takes too long and places too great a burden on you and your assessor.

There will be instances when you will be able to use one piece of evidence to prove your competence across different Elements or Performance Criteria. You may even find that evidence is relevant for different Units — this is called **integration of assessment**.

When you first begin your SVQ, you and your assessor will spend time looking at the standards, planning how much time you are both able to devote to the qualification and drawing up an action plan.

At this stage, you should identify any activities which relate to more than one Unit or Outcome and arrange for the best way to collect a single piece of evidence which satisfactorily covers all the Performance Criteria.

If you are going to integrate assessments, make sure that the evidence is crossreferenced to the relevant Units. Details of how to cross reference your evidence can be found in Section 2 'How to compile your portfolio'.

# Section 2 — How to compile your portfolio (with worked examples)

# **General information**

A portfolio, like a log book, is a way of recording evidence of your achievements. It is a collection of different items of evidence which indicates that you have the required skills, knowledge and understanding to support your claim to a qualification.

The production of a well organised, clearly labelled portfolio which relates each piece of evidence to the relevant Outcomes and Performance Criteria requires a careful methodical approach. When your assessor looks through your portfolio, they will find the task of making judgements about your competence much easier if the information in it is presented in a logical sequence.

You will need to present your evidence in a format that is easy to read and in which materials can be added or taken away. This section gives suggestions on how to lay out and present your evidence and includes worked examples. There are also forms and matrices which will assist you to chart your progress through the award.

You do not have to lay out your evidence in the way suggested but you may find it helpful to do so. Each portfolio will be different in content but all should include information about you (the candidate), the organisation where you are undertaking your qualification, the assessor and so on.

Assessment plan	You and your assessor
Collect evidence	You and your assessor if observation/questioning is required
Present evidence	You and your assessor
Reference acceptable evidence	Assessor will judge evidence and give you feedback on which evidence meets the standards
Record evidence in Element achievement record	You
Store evidence in portfolio	You

#### **Evidence collection process**

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# Planning your portfolio

Start by carefully reading through the standards and, together with your assessor, decide which Units you might like to work on first. You do not have to do the Units in order. There may be some Units that relate to tasks which you carry out on a regular basis, therefore making it easier to collect evidence right away. Alternatively, there may be activities in other Units which you only undertake now and again, these can be left until the opportunity arises for you to collect evidence.

Before you start looking for different kinds of evidence and deciding if they should be included in your portfolio, you will find it helpful to plan how you will carry out the tasks and how long they are going to take.

The plan is usually referred to as an '**assessment plan**'. It should be produced in discussion with your assessor and will set out the different stages in developing your portfolio. You will probably want to produce a plan for each Unit.

It is unlikely that you will be able to complete all of the Units straightaway and you should therefore think about starting with those Units where you have a lot of experience and in which you work well. You should also remember to identify any opportunities for **integration of assessment**.

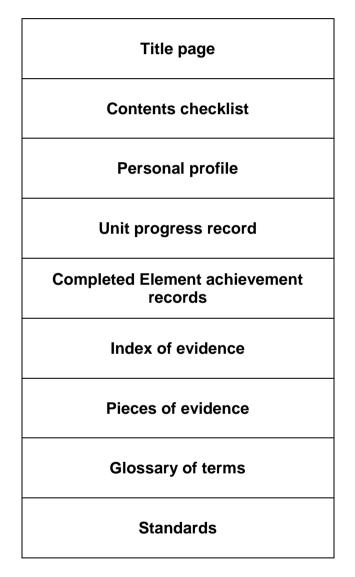
We have provided you with a '**Unit progress record'** — see Example 2. Each time you complete a Unit; your assessor should sign and date the relevant section on the form. At this stage, it might be a good idea to check that all your evidence and recording documents have been completed correctly and can easily be located. You can then circle the reference number of that Unit in the checkboxes at the top of the form so that you can see at a glance what stage you are at in your SVQ.

# Starting your portfolio

Make sure that you clearly label your portfolio (or disk if you are recording your evidence electronically) with your name together with the title and level of the award.

Your portfolio will need a *title page* and a *contents page*. You should also complete a *Personal Profile* which records details about yourself and your job as well as providing information about your employer, training provider or college. Blank samples of these forms are provided in Section 4.

We recommend that you compile your portfolio in the following order:



# **Contents checklist**

You might also find it useful to complete the following checklist as you work your way through your portfolio. This will help you to see if you have included all the relevant items. Once you have completed your portfolio, you will be able to use this checklist again as a contents page, by inserting the relevant page or section numbers in the right hand column.

Section	Completed	Page/Section number
Title page for the portfolio		
Personal profile		
Your own personal details		
A brief CV or career profile		
A description of your job		
Information about your employer/training provider/college		
Unit assessment plans		
Unit progress record		
Completed Element achievement records for each Unit		
Signed by yourself, your assessor and the internal verifier (where relevant)		
Evidence reference numbers included		
Index of evidence (with cross-referencing information completed)		
Evidence (with reference numbers)		
Observation records		
Details of witnesses (witness testimony sheets)		
Personal statements		
Products of performance		

# **Collecting your evidence**

All of the evidence which you collect and present for assessment must be relevant to your SVQ. Your assessor will help you choose which pieces of evidence you should include.

We have provided blank forms in Section 4 of this document, which you can photocopy to help you record and present your evidence. Although we have provided you with sample forms, your centre may have their own recording documents which they would prefer you to use.

Some of these forms, eg **observation records** and the **record of questions and answers** will be completed by your assessor. Other forms (**witness testimonies**) will be used by people other than your assessor to testify that they have observed you doing your job, and there is one for you to complete called a **personal statement**.

Explanations are given below about how and when these forms should be used.

#### **Observation record — Example 5**

The observation record is used by your assessor to record what tasks you have performed and to what standard. There is also a section for your assessor to note which other Units or Outcomes are covered by this evidence ('integration of assessment').

The assessor will discuss with you which Performance Criteria and Range you have successfully achieved and give you feedback. This form should then be given a reference number and included in your portfolio as part of your evidence.

#### Witness testimony — Example 6

There may be occasions when your assessor is not available to observe you carrying out certain aspects of your job. In such instances, it may be appropriate for another person to comment about your performance by completing a statement called a 'witness testimony'.

Witness testimony should only be used as supporting evidence and should:

- be provided by a person, not related to you, who is in a position to make a valid comment about your performance, eg supervisor, line manager or possibly a client/customer
- contain comments which specifically relate your performance to the standards
- be authenticated by the inclusion of the witness's signature, role, address, telephone number and the date

It is unlikely that your assessor would make an assessment decision based on witness testimony alone. They would normally supplement this type of evidence with questioning.

#### Record of questions and candidate's answers — Example 7

This form is used to record any questions which your assessor may ask, to establish whether you have the required level of Knowledge and Understanding associated with each Unit. There is also space on the form for your answers to be noted.

#### Personal statement — Example 4

There will be times when you need to put a piece of your evidence in context for your assessor so that they can decide if it is relevant to your SVQ. You can complete personal statements to help you do this — these can relate either to the pieces of evidence or to each Outcome or Unit.

For example, you may refer to paperwork which is often used in your organisation to help you pass on information to a colleague. It may not be clear to an assessor why you are communicating to your colleague in this way and a brief explanation of the paperwork and why it is relevant to a particular part of your SVQ may be required.

A personal statement might also be used to record your experience of something, such as, how you handled a specific situation. This can be documented in your personal statement and should be a description of what you did, how you did it and why you did it. It will also allow you to include the people who were present and either assisted you or witnessed your actions. This, in turn, might identify who you should approach for 'witness testimony'. In your personal statement you could also refer to product evidence that you have produced (eg reports, notes, completed forms), these can also be included as evidence in your portfolio.

The personal statement can be a piece of evidence in itself and should therefore be included in your portfolio.

#### Presenting your evidence

It is important to present all of your evidence in a clear, consistent and legible manner. Your assessor will then find it much easier to make appropriate judgements about the quality, sufficiency and currency of the materials you are putting forward for consideration.

It is not necessary to produce all of your evidence in typewritten format — some hand-written pieces of evidence, such as notes, will be perfectly acceptable.

There may also be items of evidence which you cannot physically include in your portfolio. This might be for confidentiality reasons or it could be that something which you have produced as part of your day-to-day work is normally kept in a filing cabinet or stored electronically in a PC.

In compiling your portfolio, we suggest that anything you produce as part of your dayto-day work is kept in its normal location, but those pieces of evidence which have been produced specifically for your SVQ, eg witness testimony statements or personal statements, are filed in your portfolio. However, assessors and verifiers should be able to locate and access your evidence at all times. It is, therefore, very important that you clearly reference every item of evidence.

#### **Referencing your evidence**

Your assessor, as well as the internal and External Verifiers, will need to find their way around your portfolio, so you should give each piece of evidence a number.

Remember, that where you have used 'integration of assessment', you need to give details of all the Units and Elements which are linked to a specific piece of evidence. The links should be noted on the pieces of evidence themselves as well as on the index of evidence (cross-referencing).

#### How to complete the Index of evidence — Example 1

You should complete an index of evidence sheet and file it immediately before the actual pieces of evidence in your portfolio.

The index of evidence should be completed by:

- entering the evidence number in the first column
- giving a brief description of each piece of evidence in the second column
- explaining where the evidence can be found in the third column

You must make sure that the information contained in the evidence index is accurate when you give your portfolio to your assessor, particularly in relation to where the evidence can be located.

#### Completing the Element achievement records — Example 3

There is an Element achievement record for every Element within this portfolio. These records have been designed to allow you to record the evidence you have gathered for each Element. Each record has boxes across it which represents the Performance Criteria, Range Statement, Evidence Requirements and Knowledge and Understanding statement, these will differ from Element to Element so it is important to make sure you are using the right one. Whilst collecting your evidence you should use these grids to display the Performance Criteria, Range, Knowledge and Understanding and Evidence Requirement that piece of evidence relates to. In the first box write the evidence index number you have given to that piece of evidence. In the second box give a brief description of the evidence, then tick against the relevant Performance Criteria, Range, Evidence Requirements and Knowledge and Understanding.

#### Worked examples

To give you a clearer picture of how to compile your portfolio, you will find worked examples of the various forms over the next few pages. You should ask your assessor for further advice and support if you are still unsure about how to use the forms and who should complete them.

# Index of evidence — Example 1

SVQ title a	SVQ title and level Using IT at level 3							
Evidence number	Description	of evidence	Included in portfolio (Yes/No) If no, state location	Sampled by the IV (initials and date)				
1	Action plan in requirements	dentifying customer	Yes					
2	Personal sta	tement	Yes					
3	Witness test	mony	Yes					
4	Record of qu	estions and answers	Yes					
5	Log of config errors	uration details and	Yes					
6	Observation	checklist	Yes					
7	Procedure fo	r shutting down system	Yes					
8	Company me	edia storage policy	No. Can be found with General Manager.					

# Unit progress record — Example 2

Qualification	and le	vel Us	Using IT at level 3							
Candidate's r	name	Ar	nne Tho	omas						
To achieve the whole qualification, you must and <b>optional</b> Units.			you com then eas	plete eac ily see w	ce number h Unit. Yo hat stage y our SVQ.	ou can	t <b>ory</b> Units			
Unit checklist — circle the reference number			e numbe					e it.		
Mandatory	206 (	301)(	302)	(303	308					
Optional	305	306	311	312						

#### **Mandatory Units**

SQA Unit number	SSC/SSB Unit number	Title	Assessor	Internal Verifier	Date
206		Ensure your own actions reduce risks to H&S			
	301	Select and enable IT for use	P.Jones		28/4/2000
	302	Maintain the Software Environment	P.Jones		28/4/2000
	303	Develop and maintain the effectiveness of the IT working environment	P.Jones		8/4/2000
	308	Develop your own effectiveness and This section of the form is for assessor to sign each time yo			
Optional (	Jnits	successfully achieve a Unit.			
	305	Design and produce documents using WP software			
	306	Design and produce spreadsheets			
	311	Design and use databases			
	312	Design and produce documents using graphics			

# Element achievement record — Example 3

#### Unit title: Select & enable IT for use

#### Element: 301.1 Select and configure equipment for use

Evidence index no									Range				Knowledge and Understanding					
		а	b	с	d	е	f	g	h	1	2	3	K1	K2	K3	K4	K5	
1	Action Plan	$\checkmark$	$\checkmark$			$\checkmark$				$\checkmark$								
Z	Personal Statement	$\checkmark$	$\checkmark$			$\checkmark$				$\checkmark$								
3	Copy of Legislation			$\checkmark$	$\checkmark$							$\checkmark$						
5	Record of Questions & Answers	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$				$\checkmark$	$\checkmark$	$\checkmark$						
	Log of Configuration Details						~	$\sim$	$\checkmark$		$\checkmark$							
These numbers relate to your Evidence Index and will allow your assessor to find your evidence easily.	Give a brief description of the evidence you are offering for assessment against each Performance Criterion, Range and piece of Knowledge and Understanding.		you box	shou whic	uld tio h rep	k the	e rele ents e	vant b	oxes erfor	ssessm s. There mance nt.	e is a		Candi which and U piece	areas nders	of Kn tandin	owlec g that	lge	
Candidate's	s signature							D	)ate									
Assessor's signature Date																		
Internal ver	ifier's signature							D	)ate									

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# Personal statement — Example 4

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Units, Elements, PC, and Range covered
4/4/00	1	Statement that I know and understand customer requirements. Names of customer and software and hardware requirements in portfolio. Statements that I understand how to set up, equipment, configure software that met customer requirements. Details of equipment and software with dates are listed in portfolio.	1	301.1.a,b,e Range 1

Candidate's signature Anne Thomas

Date 2/4/2011

#### **Observation record — Example 5**

Unit/Element(s)	(301) Select and Enable IT for Use
Candidate's name	Anne Thomas
Evidence index number	8
Date of observation	28/4/2011

Skills/activities observed	PC covered
Saving and storing files	Element 301.3 PC: a-f Range: <b>materials</b> (consumables, removable storage media), <b>regulations</b> (current legislation, manufacturer's instructions, organisational procedures), <b>system</b> (application software, hardware, system software).

Knowledge and understanding apparent from this observation Candidate can save and organise files. She can delete unwanted files

Canaidate can save and organise files. She can delete unwanted files and can shut down system according to organisation's procedures and manufacturer's instructions.

Other Units/Elements to which this evidence may contribute

302.1.b,c Range 1,3

Assessor comments and feedback to candidate

I can confirm the candidate's performance was satisfactory.

Assessor's signature	Peter Jones	Date	28/4/2011
Candidate's signature	Anne Thomas	Date	28/4/2011

#### Witness testimony — Example 6

SVQ title and level	Using IT level 3
Candidate's name	Anne Thomas
Evidence index no	4
Where applicable, evidence number to which this testimony relates	
Element(s)	301.2
Range	1
Date of evidence	8/4/2000
Witness name	lan Cummings
Designation/relationship to candidate	Line manager
Details of testimony	I can attest that I observed Anne Thomas following company and national regulations in the use of software. She understands and has knowledge of these regulations and I observed her following them when selecting and configuring software.

I can confirm the candidate's performance was satisfactory.

Witness's signature Ian Cummings

**Date** 8/4/2011

Witness (please tick the appropriate box):



Holds L and D Unit 9D/9D1, A1/A2 or D32/D33 qualifications

Is familiar with the SVQ standards to which the candidate is working

# Record of questions and candidate's answers — Example 7

Unit	t	301 Select and enable IT for use
Eler	nent(s)	1
Evic	dence index number	5
Circ	umstances of assess	ment
and ínte ínte	d asked about their erviewed on the 21 l	uction scheme IT staff are regularly interviewed knowledge and skills. Anne Thomas was March 2011 and below is a summary of the tes to her knowledge of resources and problem
List	of questions and car	ididate's responses
Q	If a member of staff a procedures would you	sked you for a particular piece of equipment, what I follow?
A	with the rational f line and general m	t a hardware requisition form has been filled out or needing such equipment, countersigned by their anagers. If approved, next step would be to ask the hey need specific training. Pc 301.1.a, b, e and
Q	You discover that a m workstation PC. What	ember of staff has installed a piece of software on their do you do?
A		themselves then this is a serious breach of company rould inform the IT manager. I would then remove .1.c and Range 2, 3.
Asse	essor's signature $~~\mathcal{T}$	Davinder Singh Date 21/3/2011

Candidate's signature Anne Thomas Date 21/3/2011

# Section 3 — The Units and recording documents for your SVQ

#### Unit progress record

Qualification and level	
Candidate's name	

To achieve the whole qualification, you must prove competence in all **2 mandatory** Units, **1 optional** Unit plus an **optional route**.

Please note the table below shows the SSC identification codes listed alongside the corresponding SQA Unit numbers. It is important that the SQA Unit numbers are used in all your recording documentation and when your results are communicated to SQA. SSC identification codes are **not valid** in these instances.

Unit checklist — circle the reference number of each Unit as you complete it.

Mandatory			
Optional			
Optional			
route			

#### Mandatory Units — all Units should be completed

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
FN2J 04	VR641	Conform to General			
		Workplace Health,			
		Safety and Welfare			
FW0J 04	VR642	Conform to Productive			
		Work Practices			

#### Optional Units — candidates must achieve one of the following Units

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY16 04	VR360	Establish Work Area			
		Protection and Safety			
F009 04	VR365	Segregate the Area for			
		Highway Works			

#### **Optional routes for Highways Maintenance**

#### Modular Pavement Construction

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3G 04	VR367	Lay Modular Pavement			
F6Y5 04	VR401	Set Out Secondary Dimensional Work Control			
FN2V 04	VR643	Move, Handle or Store Resources			

#### Laying Kerbs and Channels

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3D 04	VR368	Lay Kerbs and Channels			
F6Y5 04	VR401	Set Out Secondary Dimensional Work Control			
FN2V 04	VR643	Move, Handle or Store Resources			

#### **General Building Operations**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DYG3 04	VR367	Lay Modular Pavements			
DY3D 04	VR368	Lay Kerbs and Channels			
F6Y5 04	VR401	Set Out Secondary Dimensional Work Control			

#### **Drainage Construction**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
F6Y5 04	VR401	Set Out Secondary			
		Dimensional Work			
		Control			
H0WY 04	VR639	Install Drainage			

#### **Excavation and Reinstatement**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3T 04	VR372	Locate and Protect Utilities Apparatus and Sub-structures			
DY18 04	VR373	Excavate Holes and Trenches			
DY9N 04	VR274	Reinstate Excavation and Highway Surfaces			

#### Flexible Pavement Construction

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY38 04	VR375	Lay Flexible Pavement			
F6Y5 04	VR401	Set Out Secondary Dimensional Work Control			
FN2V 04	VR643	Move, Handle or Store Resources			

#### **Structural Concreting**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY1P 04	VR371	Form Concrete Structures			
H0X0 04	VR640	Erect and Strike Proprietary Formwork			
FN2V 04	VR643	Move, Handle or Store Resources			

#### **Non-structural Concreting**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY6X 04	VR 45	Place and Finish Non- specialist Concrete			
FN2V 04	VR643	Move, Handle or Store Resources			

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#### Vehicle Fencing

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
H0X1 04	Fe8	Excavate, Prepare and Form Foundations for Vehicle Restraint Systems			
H0X2 04	Fe9	Place and Fix Vehicle Restraint Systems			

#### **Incident Support Unit Operations**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
H0X3 04	VR536	Prepare Incident Support Unit Vehicles			
H0X4 04	VR537	Respond to and Assist with Road-related Incidents			
H0X5 04	VR538	Install and Remove Emergency Traffic Management			

#### **Optional routes for Roadbuilding**

#### **Bituminous Paving (Machine)**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY34 04	VR376	Operate and Control Operations of Road Plant or Machinery (Bituminous Paving Machine)			

#### **Concrete Paving (Machine)**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY36 04	VR376	Operate and Control Operations of Road Plant or Machinery (Concrete Paving Machine)			

#### Slurry/Microsurfacing (Machine)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
H0X6 04	VR376	Operate and Control Operations of Road Plant or Machinery (Slurry/Microsurfacing Machine)			

#### Slurry/Microsurfacing (Manual)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
H0X7 04	VR383	Apply Specialist Road			
		Surfacing Manually			
		(Slurry/Microsurfacing)			

#### Surface Dressing (Machine)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3C 04	VR376	Operate and Control Operations of Road Plant or Machinery (Surface Dressing Machine)			

#### High Friction Surfacing (Machine)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
H0X8 04	VR376	Operate and Control Operations of Road Plant or Machinery (High Friction Surfacing Machine)			

#### High Friction Surfacing (Manual)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
H0X9 04	VR383	Apply Specialist Road Surfacing Manually (High Friction Surfacing))			

#### Planing (Machine)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3F 04	VR376	Operate and Control			
		Operations of Road			
		Plant or Machinery			
		(Planing Machine)			

#### Road Recycling (Machine)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3J 04	VR376	Operate and Control Operations of Road Plant or Machinery (Road Recycling Machine)			

#### Soil Stabilisation (Machine)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3L 04	VR376	Operate and Control Operations of Road Plant or Machinery (Soil Stabilisation Machine)			

#### Surface Retexturing (Machine)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3P 04	VR376	Operate and Control Operations of Road Plant or Machinery (Surface Retexturing Machine)			

#### Pavement Marking (Machine)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY3V 04	VR376	Operate and Control Operations of Road Plant or Machinery (Pavement Marking Machine)			

#### **Pavement Marking (Manual Operations)**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
H0XA 04	VR 377	Apply and Remove			
		Pavement Markings			
		Manually			

#### Pavement Marking (Road Studs)

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
H0XB 04	VR 378	Install and Remove Permanent Road Studs			

#### **Additional Units**

SQA Unit Number	SSC Unit Number	Title	Assessor	Internal Verifier	Date
DY9P 04	VR172	Reinstate Ground Condition			
DY8Y 04	VR250	Produce Standard Memorial Stones			
DY2A 04	VR366	Install Street Ironwork			
DY9L 04	VR370	Provide Temporary Excavation Support			
DY9N 04	VR374	Reinstate Excavation and Highway Surfaces			
FW1X 04	VR391	Operate Plant or Machinery to Receive and Transport Loads			
F77W 04	VR394	Operate Plant or Machinery to Compact			
DY02 04	VR396	Direct and Guide the Movement of Plant or Machinery (Slinger/ Signaller)			
DX8X 04	VR397	Arrange and Secure Loads			
DY6K 04	VR400	Operate Specialised Powered Tools and Equipment			
F00Y 04	VR402	Slinging and Signalling the Movement of Loads			
FN2V 04	VR643	Move, Handle or Store Resources			

# **Glossary of terms**

Advisor	A person who carries out, either singly or in combination, the functions of advising a candidate, collecting evidence of his or her competence on behalf of the assessor and authenticating the work candidates have undertaken. A mentor might also provide witness testimony.
Assessment	The process of generating and collecting evidence of a candidate's performance and judging that evidence against defined criteria.
Authentication	The process by which an advisor or assessor confirms that an assessment has been undertaken by a candidate and that all regulations governing the assessment have been observed.
Candidate	The person enrolling for an SQA qualification.
Centre	The college, training organisation or workplace where SQA qualifications are delivered and assessed.
Element of competence	Statements which define the products of learning. The statements describe the activities that the candidate needs to perform in order to achieve the Unit. They contain Performance Criteria and sometimes statements on Range and evidence. (see Outcome).
Evidence	Materials the candidate has to provide as proof of his or her competence against specified Performance Criteria.
Evidence Requirements	Specify the evidence that must be gathered to show that the candidate has met the standards laid down in the Performance Criteria.
External Verifier	The person appointed by the SQA who is responsible for the quality assurance of a centre's provision. An External Verifier is often appointed on a subject area basis or for cognate groups of Units.
Instrument of Assessment	A means of generating evidence of the candidate's performance.
Internal verifier	The person appointed from within the centre who ensures that assessors apply the standards uniformly and consistently.
Observation	A means of assessment in which the candidate is observed carrying out tasks that reflect the Performance Criteria given in Outcomes.

Outcome	Statement which defines the products of learning. They describe the activities the candidate has to perform to achieve the Unit, and contain Performance Criteria and sometimes, statements on Range and evidence (see Elements of Competence).
Performance Criteria	Statements which describe the standard to which candidates must perform the activities which are stated in the Outcome.
Portfolio	A compilation of evidence which can form the basis for assessment. The portfolio is commonly used in SVQ awards and in alternative routes to assessment such as APL and credit transfer.
Product evaluation	A means of assessment which enables the quality of a product produced by the candidate, rather than the process of producing it, to be evaluated.
Range/Scope	A statement in the Unit which specifies the different contexts in which the activities described in the Outcome have to be demonstrated. Where they appear, Range/Scope Statements are mandatory.

Units for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5

# **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing, laying, compacting and finishing concrete slabs, footings or bases

# Key words

Compacting; Concrete-slabs; Footings; Reinforcement; Floated; Tamped; Trowelled

# **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

# Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, method statements, risk assessments and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation
- 7 demonstration of work skills to measure, mark out, lay, compact, finish, position and secure
- 8 use and maintain hand tools and ancillary equipment
- 9 lay and finish concrete to given working instructions for at least three of the following
  - 9.1 concrete slabs/bases (footing, oversites or paths)
  - 9.2 form slab edging
  - 9.3 position reinforcement
  - 9.4 form surface finish (tamped, floated, brushed and trowelled)
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

## **Knowledge and Understanding**

You need to know and understand:

# Performance Criteria 1 Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

# Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

# Knowledge and Understanding (cont)

# Performance Criteria 3 Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# **Performance Criteria 4**

## Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

## Performance Criteria 6 Allocated time

K17 what the programme is for the work to be carried out in the estimated, allocated time and why deadlines should be kep

## Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

# Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

# Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

# Information

5 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and regulations governing buildings

# Scope/range relating to Knowledge and Understanding (cont)

# Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

7 operative care of hand tools and ancillary equipment

# Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 transport, lay, compact, cure and protect concrete with tamped, floated, brushed and trowelled finishes
  - 8.2 place fabric reinforcement
  - 8.3 concrete mix ratios (volume and gauge boxes)
  - 8.4 place concrete into formwork and shuttering
  - 8.5 form slab edging
  - 8.6 work with plant and machinery
  - 8.7 use hand tools and ancillary equipment
- 9 team work and communication
- 10 needs of other occupations associated with placing and finishing non-specialist concrete

# Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

## Scope/range relating to Knowledge and Understanding (cont)

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

## **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

# Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 concrete, fabric reinforcement, timber, plywood, proprietary slab edgings and fixings
  - 15.2 hand tools and equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to place and finish non-specialist concrete

# Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	:ope/ra	nge re	ating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10
																	<u> </u>
																	<u> </u>
																	<b></b>
																	<b></b>

								Know	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17

						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
																		<u> </u>
																		<u> </u>

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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# **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 reinstating ground surfaces after completion of work for flags, blocks, black top, cultivated and grassed areas

# Key words

Flags; Blocks; Black-top; Grassed-areas; Landscaping; Form-levels; Compact-sub-base; Seed; Soil

# **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

# Scope/range related to Performance Criteria (cont)

- 1 interpretation of drawings, specifications, schedules and manufacturers' information related to the work to be carried out
- 2 safe use of personal protective equipment (PPE) to carry out the activity, in accordance with legislation and/or organisational requirements
- 3 safe use and storage of materials, tools and equipment
- 4 selection of resources associated with own work
  - 4.1 materials, components and fixings
  - 4.2 tools and equipment
- 5 protection of the work and its surrounding area from damage
- 6 minimise damage and maintain a clean work space
- 7 disposal of waste in accordance with current legislation
- 8 demonstration of work skills to measure, mark out, lay, bed, position, secure and finish
- 9 use and maintain hand tools, portable power tools and ancillary equipment
- 10 reinstate ground conditions to given working instructions for at least two of the following
  - 10.1 flag
  - 10.2 block
  - 10.3 concrete
  - 10.4 black top surfaces
  - 10.5 cultivated and grassed areas
- 11 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

# **Knowledge and Understanding**

You need to know and understand:

# Performance Criteria 1

# Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

# Safe work practices

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why and when **personal protective equipment (PPE)** should be used

# Knowledge and Understanding (cont)

# **Performance Criteria 3**

# Selection of resources

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# **Performance Criteria 4**

# Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- why disposal of waste should be carried out safely and how it is achieved

# Performance Criteria 5

# Meet the contract specification

- how methods of work, to meet the specification, are carried out and problems reported
- how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

# Scope/range relating to Knowledge and Understanding

# **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

# Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries

# Hazards

3 those identified by method of work, manufacturers' technical information, statutory regulations and official guidance

# Information

4 drawings, specifications, schedules and manufacturers' information

# Legislation and official guidance

5 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

# Maintenance

6 operative care of hand tools and/or portable power tools and ancillary equipment

# Scope/range relating to Knowledge and Understanding (cont)

# Methods of work

- 7 application of knowledge for safe work practices, procedures and skills relating to the method/area of work and materials used to:
  - 7.1 place and compact sub-grade and sub-base
  - 7.2 form levels
  - 7.3 reinstate hard landscaping of flag, block, concrete and black top surfaces
  - 7.4 reinstate cultivated and grassed areas
  - 7.5 use hand tools, power tools and equipment
- 8 team work and communication
- 9 needs of other occupations associated with reinstatement of ground conditions

# Personal protective equipment (PPE)

10 occupational use, types, purpose of each type and work situations

# Problems

- 11 those arising from information, resources and methods of work 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

# Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

# Scope/range relating to Knowledge and Understanding (cont)

# **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

# Resources

- 15 materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist:
  - 15.1 flags, blocks, edging, aggregates, cement, black top, top soil, seeds
  - 15.2 hand and/or powered tools and equipment
- 16 methods of calculating quantity and area associated with the method/procedure to reinstate ground conditions

# Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			S	Scope/	range	relatir	ng to F	Perform	nance	Criter	a	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10	11

								Know	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
																		<u> </u>
																		<u> </u>

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	
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# **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 erecting and dismantling access equipment suitable for the work operations

# Key words

Erecting access-platforms; Dismantling access-platforms; Scaffolding; Access-platforms; Ladders; Working-platforms; Step-ladders; Proprietary-towers; Trestle-platforms; Mobile-towers; Protective-screens

# **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

# Scope/range related to Performance Criteria

- 1 interpretation of method statements, risk assessments, specifications and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work

3

- 2.2 safe use of personal protective equipment (PPE)
- 2.3 safe use of access equipment
- 2.4 safe use and storage of materials, tools and equipment
- selection of resources associated with own work
  - 3.1 materials and components
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 demonstration of work skills to move, position/erect, secure, check, dismantle and remove
- 7 use and maintain hand tools and ancillary equipment
- 8 erect, dismantle and store at least two of the following access equipment to given access regulations
  - 8.1 ladders/crawler boards
  - 8.2 stepladders/platform steps
  - 8.3 proprietary towers
  - 8.4 trestle platforms
  - 8.5 mobile scaffold towers
  - 8.6 proprietary staging/podiums
- 9 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

## **Knowledge and Understanding**

You need to know and understand:

# Performance Criteria 1

# Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

# Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **personal protective equipment (PPE)** should be used

# Knowledge and Understanding (cont)

# **Performance Criteria 3**

# Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# **Performance Criteria 4**

# Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# Performance Criteria 5

# Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

# Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

# Scope/range relating to Knowledge and Understanding

#### Emergencies

- 1 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 1.1 fires, spillages, injuries
  - 1.2 emergencies relating to occupational activities

#### Hazards

2 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

#### Information

3 specifications, method statements, risk assessments, current legislation and manufacturers' information

# Legislation and official guidance

4 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

5 operative care of hand tools and ancillary equipment

# Scope/range relating to Knowledge and Understanding (cont)

#### Methods of work

- 6 application of knowledge for safe work practices, procedures and skills relating to the method/area of work and materials used to:
  - 6.1 provide protection to the work area
  - 6.2 establish a base for equipment
  - 6.3 erect proprietary access equipment to manufacturer's instructions suitable for the work
  - 6.4 erect non-proprietary access equipment suitable for the work
  - 6.5 place protective screens and notices
  - 6.6 check/monitor equipment during the period of use
  - 6.7 dismantle and store access equipment
  - 6.8 use tools and equipment
  - 6.9 work at height
  - 6.10 use access equipment
  - team work and communication
- 8 needs of other occupations associated with erecting and dismantling access/working platforms

#### Personal protective equipment (PPE)

9 occupational use, types, purpose of each type and work situations

#### Problems

7

- 10 those arising from information, resources and methods of work
  - 10.1 own authority to rectify
  - 10.2 organisational reporting procedures

# Scope/range relating to Knowledge and Understanding (cont)

## Programme

- 11 types of progress charts, timetables and estimated times
- 12 organisational procedures for reporting circumstances which will affect the work programme

# **Protect work**

13 protect work against damage from general workplace activities, other occupations and adverse weather conditions

# Resources

- 14 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 14.1 ladders/crawler boards
  - 14.2 stepladders/platform steps
  - 14.3 trestles
  - 14.4 proprietary staging/podiums
  - 14.5 proprietary towers
  - 14.6 mobile scaffold towers
  - 14.7 protection equipment and notices
  - 14.8 tools and ancillary equipment
- 15 methods of calculating quantity of equipment required for the method/procedure to erect and dismantle access/working platforms

# Security procedures

16 site, workplace, company and operative

			Per	formar	ce Crit	eria			Sco	pe/rang	e relati	ng to Pe	erforma	nce Crit	teria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9

								Know	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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					5	Scope/	range r	elating	to Kno	owledg	e and l	Jnders	tanding	g			
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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# **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 determining the protection and safety requirements
- 5 preparing, providing for and maintaining the protection and safety of the occupational area of work

# Key words

Barriers; Safety-lighting; Signs; Safety notices

# **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

# Scope/range related to Performance Criteria

- 1 interpretation of drawings, plans, specifications, schedules, risk assessments, method statements, site inspections and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to at least four of the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of access equipment
  - 2.4 safe use and storage of materials, tools and equipment
  - 2.5 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, set out, position, assemble, construct, secure and dismantle
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 install, maintain and remove temporary protection and safety arrangements for the work area to given working instructions, relating to barriers/temporary structures and at least one of the following
  - 9.1 protection and safety notices
  - 9.2 safety lighting
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

## **Knowledge and Understanding**

You need to know and understand:

# Performance Criteria 1

# Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

# Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

# Knowledge and Understanding (cont)

# **Performance Criteria 3**

# Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# **Performance Criteria 4**

# Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

# Performance Criteria 6

# Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

## Scope/range relating to Knowledge and Understanding

# **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

# Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

# Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

# Information

5 drawings, plans, specifications, schedules, risk assessments, method statements, site inspection reports, manufacturers' information and current regulations and official guidance associated with protecting work areas

# Scope/range relating to Knowledge and Understanding (cont)

# Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

# Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 plan for the protection and the safety of the work and surrounding environment
  - 8.2 install, check and maintain the protection and safety equipment
  - 8.3 dismantle and remove protection and safety equipment
  - 8.4 install safety notices
  - 8.5 install lighting systems
  - 8.6 use hand tools, power tools and equipment
  - 8.7 work at height
  - 8.8 use access equipment
- 9 team work and communication
- 10 needs of other occupations associated with establishing work area protection and safety

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## Scope/range relating to Knowledge and Understanding (cont)

#### Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

# Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

# **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

## Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 safety and security barriers
  - 15.2 protection and safety notices
  - 15.3 temporary structures
  - 15.4 signs and lighting
  - 15.5 hand and/or powered tools and equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to establish work area protection

# Security procedures

17 site, workplace, company and operative

	Description of Evidence		Per	forman	nce Crit	eria			Sc	:ope/ra	nge re	ating t	o Perfo	ormand	e Crite	ria	
No		1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10
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								Know	ledge	and Ur	d Understanding K9 K10 K11 K12 K13 K14 K15 K16 K17														
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17							
																		<u> </u>							

						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				16 17											
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17											

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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#### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and segregating the area for highways works

#### Key words

Traffic signs; Lighting; Guards; Traffic-management; Signals; Traffic-lights

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements, site inspections and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, locate, set out, position, assemble and remove
- 8 use and maintain tools and ancillary equipment
- 9 segregate the area for live highways works in compliance with recognised current legislation and official guidance and given working instructions relating to the following
  - 9.1 access and egress to site
  - 9.2 work activity and storage of resources
  - 9.3 signs, lighting and guarding, portable traffic signals for traffic management control
- 10 remove signs, lighting and guarding, portable traffic signals in compliance with recognised current legislation and official guidance
- 11 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

# Performance Criteria 1

## Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

## **Performance Criteria 3**

#### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## **Performance Criteria 4**

## Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

## Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

## Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information, statutory regulations and current legislation, official guidance and Codes of Practice governing traffic management relating to the highways works

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

7 operative care of hand tools and/or portable power tools, ancillary equipment and traffic control equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 plan for site safety, storage of materials and traffic management control around the highways works
  - 8.2 set out signs, traffic lights, guarding for traffic management control
  - 8.3 check and maintain operation of traffic control equipment
  - 8.4 dismantle and remove signs, traffic lights, guarding
  - 8.5 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with segregating the area for highways work

## Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

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#### Scope/range relating to Knowledge and Understanding (cont)

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

#### Protect work

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 signs, lights, guards and portable traffic lights
  - 15.2 pedestrian and vehicular traffic control systems
  - 15.3 tools and ancillary equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure for segregating the area for highways works

#### Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			S	Scope/	range	relatir	ng to F	Perform	nance	Criter	a	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10	11

								Know	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17

						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and installing street ironwork to new and reinstatement situations

## Key words

Access-covers; Gullies; Grates

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, mark out, position, fit, level, align and secure
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 install street ironwork to new and/or reinstatement situations to given working instructions relating to the following
  - 9.1 access covers and frames
  - 9.2 gully grates and frames
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

## Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

## Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

## Performance Criteria 3

## Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## Performance Criteria 4

## Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

## Performance Criteria 5

## Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

#### Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations for street ironwork fixtures

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

#### Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 locate the area/position where the street ironwork is to be installed
  - 8.2 confirm the street ironwork, fixing and bedding requirements
  - 8.3 position, fit, align and secure the street ironwork
  - 8.4 protect ironwork during curing
  - 8.5 use hand tools, power tools and equipment
  - 8.6 use ancillary equipment
- 9 team work and communication
- 10 needs of other occupations associated with the installation of street ironwork

## Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

#### Scope/range relating to Knowledge and Understanding (cont)

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 sand, cement, mortar, patent epoxy resin-based materials
  - 15.2 access covers and frames, gully grates and frames
  - 15.3 hand and/or powered tools and equipment
- 16 methods of calculating quantity and size associated with the method/ procedure to install street ironwork

#### Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	ope/ra	nge re	lating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10

								Know	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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						Scop	e/rang	e relati	ing to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing and laying modular pavement manually or by machine

## Key words

Pavement; Block-paving; Stone-setts; Flags; Lean-mix

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials and components
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, mark out, cut, lay, level, align, compact and finish
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 lay modular pavement manually and/or by machine to given working instructions for at least one of the following
  - 9.1 block paving
  - 9.2 brick paving
  - 9.3 stone/concrete setts
  - 9.4 flags
  - 9.5 natural stone rough cut (riven/cropped)
  - 9.6 natural stone uniformly cut (sawn in dimension)
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

#### Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

#### **Performance Criteria 2**

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

#### Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### **Performance Criteria 4**

#### Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

#### **Performance Criteria 5**

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

### Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations governing the laying of modular pavement

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 confirm the type of block, brick, sett, flag and natural stone modular pavement
  - 8.2 set out the area and prepare ground and foundation for modular pavement construction
  - 8.3 confirm substrate matches given specification
  - 8.4 mark and cut modular paving
  - 8.5 lay modular block, brick, sett, flag and natural stone pavements manually and/or by machine
  - 8.6 lay modular block, brick, sett flag and natural stone pavement, domestic and/or commercial to the required design/pattern, levels and stability
  - 8.7 monitor work against specification(s)
  - 8.8 identify the differences between rigid (bound) and flexible (unbound paving)

#### Scope/range relating to Knowledge and Understanding (cont)

- 8.9 install kerbs, channels, edgings and drainage
- 8.10 lift modular paving for removal, maintenance and repair
- 8.11 maintain and repair modular paving to match existing design functions
- 8.12 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with laying modular pavement

#### Problems

- 11 those arising from information, resources and methods of work 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

## Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

## **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

## Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 sand, graded granular material, lean mix concrete
  - 15.2 blocks, stone setts, bricks, flags, natural stone
  - 15.3 hand and/or powered tools and equipment

## Scope/range relating to Knowledge and Understanding (cont)

16 methods of calculating quantity, length, area and wastage associated with the method/procedure to lay modular pavement

#### Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	ope/ra	nge re	lating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10
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No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

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Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and laying kerbs and/or channels

## Key words

Kerbs; Channels

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials and components
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, mark out, cut, position, level, align, compact and finish
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 lay kerbs and/or channels to given working instructions
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

#### Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

#### **Performance Criteria 2**

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

#### Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### **Performance Criteria 4**

#### Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

## Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations for laying kerbs and channels

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

#### Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 identify different types of kerbs or channels
  - 8.2 set out the area and prepare ground and foundation for laying kerbs or channels
  - 8.3 lay and align kerbs or channels to the required specifications
  - 8.4 mark and cut kerbs and channels
  - 8.5 monitor work against specification
  - 8.6 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with laying kerbs and channels

## Problems

- 11 those arising from information, resources and methods of work 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

#### Scope/range relating to Knowledge and Understanding (cont)

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 sand, cement, aggregates, additives
  - 15.2 kerbs and channels
  - 15.3 hand and/or powered tools and ancillary equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to lay kerbs and channels

## Security procedures

17 site, workplace, company and operative

	Description of Evidence		Per	forman	ce Crit	eria			Scope/range relating to Performance Criteria										
No		1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10		

			Knowledge and Understanding															
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

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Assessor	Date	
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Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and providing temporary excavation support

### Key words

Skeleton; Drag-box; Trench-box; Coffer dam; Diaphragm wall; Secant support; Open and close boarding

### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

## Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of access equipment/working platforms
  - 2.4 safe use and storage of materials, tools and equipment
  - 2.5 specific risks to health

## Scope/range related to Performance Criteria (cont)

- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, mark out, prepare, position, fit, support, fix, secure, dismantle and remove
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 provide and remove temporary excavation support to given working instructions, relating to at least two of the following support frameworks
  - 9.1 skeleton
  - 9.2 open and close boarding
  - 9.3 drag box
  - 9.4 trench box
  - 9.5 coffer dam
  - 9.6 diaphragm wall
  - 9.7 secant support
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

### Knowledge and Understanding

You need to know and understand:

## Performance Criteria 1

## Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

### Performance Criteria 2

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

#### Knowledge and Understanding (cont)

#### Performance Criteria 3 Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## Performance Criteria 4

#### Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

## **Performance Criteria 5**

## Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

## Scope/range relating to Knowledge and Understanding

#### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

#### Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

#### Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

#### Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations governing construction works and support of excavations

### Scope/range relating to Knowledge and Understanding (cont)

#### Legislation and official guidance

- 6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting Maintenance
- 7 operative care of hand tools and/or portable power tools and ancillary equipment

#### Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 assess the excavated area and select suitable temporary support for the excavation
  - 8.2 provide for safe access and egress around the temporary excavation support
  - 8.3 construct/erect/install temporary excavation support
  - 8.4 work with and around plant and machinery
  - 8.5 inspect and maintain the integrity and safety of the temporary support structure
  - 8.6 dismantle and remove the excavation support structure
  - 8.7 use hand tools, power tools and equipment
  - 8.8 work at height and in confined spaces
  - 8.9 use access equipment
- 9 team work and communication
- 10 needs of other occupations associated with providing temporary excavation support

#### Scope/range relating to Knowledge and Understanding (cont)

#### Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 poling boards, walings, struts, wedges, soldiers, steel struts and trench sheets
  - 15.2 proprietary systems
  - 15.3 ancillary fixing devices
  - 15.4 hand and/or powered tools and ancillary equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to provide temporary excavation support

#### Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	:ope/ra	nge re	lating t	o Perfo	ormand	e Crite	eria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10

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No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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						Scope	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and placing structural concrete

#### Key words

Chute; Skip; Pump; Elephant's trunk; Mono-rail; Steel; Levels; Poker; Vibrator

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of access equipment/working platforms
  - 2.4 safe use and storage of materials, tools and equipment
  - 2.5 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, position, place, spread, vibrate, compact and finish
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 place, compact and finish structural concrete in horizontal and vertical formwork to given working instructions relating to at least two of the following placements
  - 9.1 chute
  - 9.2 elephant's trunk
  - 9.3 skip
  - 9.4 pump
  - 9.5 mono-rail
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

### Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

#### **Performance Criteria 2**

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

#### Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### **Performance Criteria 4**

#### Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

#### Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

## Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations governing construction works

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

### Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 assess and confirm suitability of concrete and area for placement
  - 8.2 place concrete by chute, elephant's trunk, overhead skip, pumping
  - 8.3 pour to correct levels and coverage of steel reinforcement
  - 8.4 work with and around plant and machinery
  - 8.5 vibrate, compact, finish and cure the structural concrete
  - 8.6 support consistency testing (slump)
  - 8.7 use hand tools, power tools and equipment
  - 8.8 work at height
  - 8.9 use access equipment
- 9 team work and communication
- 10 needs of other occupations associated with pouring concrete to form structures

#### Scope/range relating to Knowledge and Understanding (cont)

#### Problems

- 11 those arising from information, resources and methods of work 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

### **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

## Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 ready-mix concrete materials
  - 15.2 slump test equipment, skips, poker vibrator, tampers, floats and trowels
  - 15.3 hand and/or powered tools and equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to pour concrete to form structures

## Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	:ope/ra	nge re	lating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10

								Know	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	 Date	
Internal Verifier	 Date	

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### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting instruments, tools and equipment
- 4 identifying, locating and protecting utilities apparatus and sub-structures

#### Key words

Gas; Electric; Fuel; Water; Communication; Sewage; Inspection chambers; Watercourse; Manholes

### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

### Scope/range related to Performance Criteria

- interpretation of drawings, specifications, schedules, risk assessments, method statements, survey information and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 safe use of fire extinguishers, as appropriate to the fire
  - 2.5 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials and components
  - 3.2 tools and equipment
  - 3.3 electronic location instruments
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, locate, mark out, position, protect and secure
- 8 use and maintain hand tools, portable power tools, ancillary equipment and electronic instruments
- 9 locate and protect sub-surface and/or overhead utilities apparatus to given working instructions, relating to gas, fuel, electric, communications, water and sewage
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

### Knowledge and Understanding

You need to know and understand:

## **Performance Criteria 1**

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

### **Performance Criteria 2**

## Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 the types of **fire extinguishers** and how and when they are used
- K6 how **emergencies** should be responded to and who should respond
- K7 the organisational **security procedures** for tools, equipment and personal belongings
- K8 what the accident reporting procedures are and who is responsible for making the report
- K9 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

## **Performance Criteria 3**

### Selection of resources

- K10 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K11 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K12 the organisational procedures to select **resources**, why they have been developed and how they are used
- K13 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## **Performance Criteria 4**

## Minimise the risk of damage

- K14 how to **protect work** from damage and the purpose of protection
- K15 why **disposal of waste** should be carried out safely and how it is achieved

## Performance Criteria 5

#### Meet the contract specification

- K16 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K17 how maintenance of tools and equipment is carried out

## Performance Criteria 6 Allocated time

K18 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

#### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries, damage to utilities apparatus and sub structures
  - 2.2 emergencies relating to occupational activities

### **Fire extinguishers**

3 water, CO2, foam, powder and their uses

## Hazards

4 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 5 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 5.1 collective protective measures
  - 5.2 personal protective equipment (PPE)
  - 5.3 respiratory protective equipment (RPE)
  - 5.4 local exhaust ventilation (LEV)

## Scope/range relating to Knowledge and Understanding (cont)

#### Information

6 drawings, specifications, schedules, risk assessments, method statements, organisational and manufacturers' information and current regulations governing utilities

## Legislation and official guidance

7 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

### Maintenance

8 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 14 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 14.1 ensure electronic equipment is calibrated
  - 14.2 identify utilities apparatus and sub-structures by electronic locations, trial holes and visual
  - 14.3 confirm the type of service (gas, fuel, electric, communication, water, sewage)
  - 14.4 confirm structures (foundations, manholes, inspection chambers, joint/junction boxes)
  - 14.5 confirm any natural environment (tree roots, natural watercourse)
  - 14.6 mark the location of the service apparatus and substructures

### Scope/range relating to Knowledge and Understanding (cont)

- 14.7 provide for the recognition and protection of the service apparatus, sub-structure and the natural environment during operational activities
- 14.8 use hand tools, power tools and equipment
- 14.9 work at height
- 10 team work and communication
- 11 needs of other occupations associated with locating and protecting utilities apparatus and sub-structures

#### Problems

- 12 those arising from information, resources and methods of work 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

#### Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 16 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 16.1 electronic instruments
  - 16.2 marking and protection materials
  - 16.3 hand and/or powered tools and equipment
  - 16.4 ancillary equipment

## Scope/range relating to Knowledge and Understanding (cont)

#### Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	:ope/ra	nge re	ating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10
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								Kno	owledg	je and	Unde	rstand	ding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18

						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 carrying out the excavation of holes and trenches

### Key words

Ironwork; Sub-structures; Grass-areas; Trench-sheeting; Trench support; Modular components; Digging equipment

## **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials and components
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, mark out, excavate and secure
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 excavate holes and trenches in highway location and/or construction site to given working instructions
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

### Knowledge and Understanding

You need to know and understand:

## Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

## Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

## **Performance Criteria 3**

## Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## **Performance Criteria 4**

## Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

## Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

## Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information, current legislation and official guidance governing excavations and support of the excavations

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 identify and confirm the type of surface and sub-surface composition
  - 8.2 remove ironwork, modular components
  - 8.3 excavate ground structures manually
  - 8.4 guide excavating machine to excavate ground structures
  - 8.5 avoid damage to service apparatus and sub-structures
  - 8.6 identify and store excavated and reusable materials
  - 8.7 position, secure and remove excavation supports
  - 8.8 provide for access and egress
  - 8.9 work with plant and machinery
  - 8.10 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with the excavation of holes and trenches

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### Scope/range relating to Knowledge and Understanding (cont)

#### Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

## **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

### Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 digging equipment for the excavation of holes and trenches
  - 15.2 hand and/or powered tools and equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to excavate holes and trenches

## Security procedures

17 site, workplace, company and operative

	Description of Evidence		Per	forman	ce Crit	eria		Scope/range relating to Performance Criter									
No		1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10

No	Description of Evidence							Know	edge a	and Ur	ndersta	anding						
		K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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	Description of Evidence		Scope/range relating to Knowledge and Understanding															
No		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and reinstating excavations and highway surfaces

#### Key words

Flexible-pavement; Sub-base; Dry-lean, Bituminous-surface; Cold-lay; Warm-lay; Hot-lay; Road base; Kerbs; Edge restraints; Street ironwork

### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to backfill, consolidate, lay, compact, position, secure and finish
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 reinstate excavations and highway surfaces to given working instructions relating to at least two of the following
  - 9.1 sub-grades, sub-bases, road-bases
  - 9.2 cold lay bituminous
  - 9.3 warm lay bituminous
  - 9.4 hot lay bituminous
  - 9.5 concrete
  - 9.6 modular
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

## **Performance Criteria 3**

### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## **Performance Criteria 4**

## Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

# Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

# Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

# Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations governing excavations and reinstatement on highways

# Scope/range relating to Knowledge and Understanding (cont)

# Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 confirm the type of ground structure for reinstatement (bituminous, concrete, modular, natural)
  - 8.2 reinstate and compact backfill, sub-grades, sub-bases, road bases, pavement bases for the relevant type of ground structure
  - 8.3 protect service apparatus and sub-structures during reinstatement
  - 8.4 reinstate the relevant type of ground surface, pavement surface, specialist surface treatment, kerbs, edge restraints, street ironwork and pavement markings
  - 8.5 dispose of surplus materials
  - 8.6 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with reinstatement of excavations and highway surfaces

#### Scope/range relating to Knowledge and Understanding (cont)

#### Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

# Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

# Protect work

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

# Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 new and re-usable materials, sub-base, road-base and pavement surface
  - 15.2 cold-lay, warm-lay and hot-lay bituminous materials
  - 15.3 sands, jointing materials
  - 15.4 concrete, blocks and flags
  - 15.5 natural soil based materials
  - 15.6 hand and/or powered tools and equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to reinstate excavation and highway surfaces

# Security procedures

17 site, workplace, company and operative

			Per	forman	nce Crit	eria			Sc	:ope/ra	nge re	ating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10
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								Know	ledge	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
																		<u> </u>

						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

#### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and laying sub-base and bituminous material flexible surfacing

## Key words

Sub-base; Bitumen; Bituminous

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, mark out, lay, spread, roll, compact and finish
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 lay flexible pavement to given working instructions relating to the following
  - 9.1 sub-base construction
  - 9.2 bituminous surface material
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

### Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

#### **Performance Criteria 2**

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

#### Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### **Performance Criteria 4**

#### Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

#### **Performance Criteria 5**

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

### **Disposal of waste**

 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

#### Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

#### Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations governing laying of flexible pavement

### Scope/range relating to Knowledge and Understanding (cont)

### Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

#### Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 prepare the area for laying of flexible pavement
  - 8.2 assess the suitability of flexible pavement materials
  - 8.3 lay, compact and finish sub-base and bituminous surface of the flexible pavement
  - 8.4 work with plant or machinery
  - 8.5 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with laying flexible pavement

#### Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

#### Scope/range relating to Knowledge and Understanding (cont)

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 sub-base and bituminous surface materials, bitumen sealer and emulsion
  - 15.2 hand and/or powered tools and equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to lay flexible pavements

## Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	:ope/ra	nge re	lating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10
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								Know	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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						Scop	e/rang	e relati	ing to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

# UNIT VR376 (DY34 04) Operate and Control Operations of Road Plant or Machinery

#### **Unit Summary**

This standard is about:

- 1 interpreting information for operations of plant or machinery
- 2 adopting safe and healthy working practices
- 3 selecting and/or using materials and equipment and/or accessories for road plant machinery operations
- 4 preparing, operating, controlling and shutdown of plant or machinery operations as operator or as part of a team

#### Key words

Bituminous paving; Concrete paving; Slurry; Microsurfacing; Surface dressing; High friction surfacing; Planing; Road recycling; Soil stabilisation; Surface retexturing; Pavement marking; Highways drainage

# **Operate and Control Operations of Road Plant or Machinery**

#### **Performance Criteria**

You must be able to:

- 1 interpret the given operating information relating to the use of plant or machinery and confirm its relevance
- 2 organise with others the sequence in which the work is to be carried out
- 3 comply with the relevant, current legislation, special legal status documents, official guidance and organisational procedures to maintain safe and healthy work practices
- 4 request resources to sustain plant or machinery operations to complete the programme of work
- 5 select plant or machinery resources for the methods of work and operations to be carried out
- 6 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 7 comply with the given contract information to carry out the work efficiently to the required specification
- 8 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria (cont)

- interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information, related to the plant or machinery operations and the work to be carried out
- 2 organisation of own work
- 3 communication with team members and other associated occupations about the plant or machinery operations and the work to be carried out
- 4 avoidance of risk by complying with the given information relating to the following
  - 4.1 methods of work
  - 4.2 safe use of health and safety control equipment
  - 4.3 safe use and storage of plant or machinery, tools and equipment
  - 4.4 specific risks to health
- 5 follow organisational procedures for the requisition of consumables, materials and other resources
- 6 selection of resources associated with own work related to the plant and machinery operations: tools, ancillary equipment and/or accessories
- 7 protection of the work and its surrounding area from damage
- 8 minimise damage and maintain a clean work space
- 9 disposal of waste in accordance with current legislation
- 10 demonstration of work skills to check, set up, adjust, communicate, operate, control, secure, lay, strip, compact, mark, level and finish
- 11 use and maintain tools, ancillary equipment and/or accessories

# UNIT VR376 Operate and Control Operations of Road Plant or Machinery

#### Scope/range related to Performance Criteria (cont)

- 12 operate, control operations and shut down plant or machinery to given working instructions relating to one of the following areas
  - 12.1 bituminous paving: for at least one of the following screwman (screed operator) paver driver, roller driver, chipping machine driver, loader-compressor driver, sweeper operator, tanker/sprayer operator, geo-synthetic (membrane, mesh), installation, velocity patching, thermal repair
  - 12.2 concrete paving: as operator of the concrete paver, place/spreader, slip form paver, texturing/curing machine
  - 12.3 slurry/microsurfacing: as operator of at least one of the following applicator, tanker, tipper grab, sweeper, roller
  - 12.4 surface dressing: as operator of at least one of the following tanker, chipper, spray bar, tanker and chipper combined, roller, loader, linked tipper, sweeper
  - 12.5 high friction surfacing: as operator of at least one of the following tanker, spray bar, chipper, sweeper
  - 12.6 planing operations: as operator of at least one of the following up to 500 mm without elevator; 500 mm –1 m with elevator; over 1 m with elevator
  - 12.7 road recycling: as operator
  - 12.8 soil stabilisation: as operator
  - 12.9 surface retexturing: as operator for at least one of the following mechanical retexturing, mechanical repair, flailing, high pressure jetting, grinding, sweeper
  - 12.10pavement marking: as steersman/operator for white liner vehicle
  - 12.11 highways drainage: as operator for at least one of the following gully emptier, sweeper

#### Scope/range related to Performance Criteria (cont)

13 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

# **Operate and Control Operations of Road Plant or Machinery**

#### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

## Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

### Performance Criteria 2

#### Organise with others

- K4 communication of ideas between team members
- K5 organisation of **resources** in conjunction with the progress of work
- K6 **skills** required to carry out the work

## **Performance Criteria 3**

#### Safe work practices

- K7 the level of understanding operatives must have of information for relevant, current legislation, Approved Codes of Practice and official guidance and how it is applied
- K8 how **emergencies** should be responded to and who should respond
- K9 the organisational **security procedures** for plant and/or machinery, tools, equipment and personal belongings

#### Knowledge and Understanding (cont)

- K10 what the accident reporting procedures are and who is responsible for making the report
- K11 why, when and how health and safety control equipment should be used

#### **Performance Criteria 4**

#### **Request resources**

K12 the organisational procedures for requisitioning consumables and other **resources** 

## Performance Criteria 5

#### **Selection of resources**

- K13 the characteristics, quality, uses, sustainability, limitations and defects associated with plant **resources** and how defects should be rectified
- K14 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K15 the organisational procedures to select **resources**, why they have been developed and how they are used
- K16 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### Performance Criteria 6

#### Minimise the risk of damage

- K17 how to **protect work** from damage and the purpose of protection
- K18 why **disposal of waste** should be carried out safely and how it is achieved

# Operate and Control Operations of Road Plant or Machinery

#### Knowledge and Understanding (cont)

#### **Performance Criteria 7**

**UNIT VR376** 

#### Meet the contract specification

- K19 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K20 how **maintenance** of plant and/or machinery, tools and equipment is carried out

### **Performance Criteria 8**

#### Allocated time

K21 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

#### Communication

1 discussion, sketches and briefings

#### **Disposal of waste**

2 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 3 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 3.1 fires, spillages, injuries
  - 3.2 emergencies relating to occupational activities

#### Hazards

4 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

#### Health and safety control equipment

- 5 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 5.1 collective protective measures
  - 5.2 personal protective equipment (PPE)
  - 5.3 respiratory protective equipment (RPE)
  - 5.4 local exhaust ventilation (LEV)

# UNIT VR376 Operate and Control Operations of Road Plant or Machinery

#### Scope/range relating to Knowledge and Understanding (cont)

#### Information

6 drawings, specifications, schedules, method statements, risk assessments, organisational and manufacturers' information, regulations and official guidance governing operations of plant or machinery

#### Legislation and official guidance

7 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

8 operative care of tools, plant or machinery and ancillary equipment

#### Methods of work

- 9 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 9.1 identify the work requirements and your occupational role
  - 9.2 identify the type of plant or machinery required
  - 9.3 confirm the area and location of work, the operations, safety and security requirements
  - 9.4 prepare, set up and carry out checks for performance of the plant or machinery
  - 9.5 carry out and control operations according to your role and the required performance of plant or machinery

#### Scope/range relating to Knowledge and Understanding (cont)

#### Methods of work (cont)

- 9.6 stop, shut down operations and secure plant or machinery
- 9.7 use equipment and/or accessories
- 10 team work and communication
- 11 needs of other occupations associated with the operation and control of plant or machinery

#### Problems

- 12 those arising from information, resources and methods of work
- 12.1 own authority to rectify
- 12.2 organisational reporting procedures

#### Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

#### Protect work

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 16 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
- 16.1 consumables, lubricants, fuels
- 16.2 attachments
- 16.3 paving materials (bituminous; concrete; aggregates, resins, membranes, calcined bauxite, catalyst, doping agents, fibres, pigment, resins, primers)

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# UNIT VR376 Operate and Control Operations of Road Plant or Machinery

#### Scope/range relating to Knowledge and Understanding (cont)

#### **Resources (cont)**

- 16.4 recycling materials
- 16.5 pavement marking materials
- 16.6 equipment/accessories
- 17 methods of calculating weight, quantity, length and area associated with the method/procedure to operate and control plant or machinery

#### Security procedures

18 site, workplace, company and operative

### Skills

19 own occupation and occupations related to the work

# **Operate and Control Operations of Road Plant or Machinery**

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No	Description of Evidence	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9	10	11	12	13
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# **Operate and Control Operations of Road Plant or Machinery**

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No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18	K19	K20	K21

# **Operate and Control Operations of Road Plant or Machinery**

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No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for, applying and removing pavement markings manually

## Key words

Studs; Mounted-studs; Thermoplastic

### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, set out, mark, position, prepare, and communicate
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 apply and remove pavement markings manually to given specifications and working instructions for at least one of the following
  - 9.1 permanent markings (thermoplastic applications and/or paint applications)
  - 9.2 temporary markings (temporary preformed applications and temporary surface mounted studs)
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

## Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

## **Performance Criteria 3**

## Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## Performance Criteria 4

## Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

# Performance Criteria 6

## Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

### Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

# Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

# Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

# Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information, official guidance and current regulations governing temporary and permanent markings on pavement surfaces

# Scope/range relating to Knowledge and Understanding (cont)

# Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 establish agreed time frame for pavement marking work
  - 8.2 prepare area, materials and equipment
  - 8.3 apply pavement markings manually
  - 8.4 remove pavement markings
  - 8.5 apply and remove temporary preformed applications
  - 8.6 install and remove temporary surface mounted studs
  - 8.7 communicate and co-ordinate progress
  - 8.8 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with manually applying and removing pavement markings

## Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

#### Scope/range relating to Knowledge and Understanding (cont)

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 thermoplastic materials
  - 15.2 adhesives
  - 15.3 paints
  - 15.4 temporary preformed materials
  - 15.5 temporary surface mounted studs
  - 15.6 hand and/or powered tools and equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to apply pavement markings

#### Security procedures

17 site, workplace, company and operative

No	Description of Evidence		Performance Criteria					Scope/range relating to Performance Criteria									
		1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10

# UNIT VR377 (H0XA 04) Apply and Remove Pavement Markings Manually

								Knowl	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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# UNIT VR377 (H0XA 04) Apply and Remove Pavement Markings Manually

						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for, installing and removing permanent road studs

#### Key words

Milled-studs; Drilled-studs; Surface mounted studs

## **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, set out, mark, position, fit, fix, secure and communicate
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 install and remove permanent road studs to given working instructions relating to at least one of the following
  - 9.1 inset milled stud
  - 9.2 inset drilled stud
  - 9.3 fixed surface mounted studs
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

## Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## **Performance Criteria 2**

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

## **Performance Criteria 3**

#### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## **Performance Criteria 4**

## Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

## Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

# Performance Criteria 6

## Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

## Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations governing permanent markings on pavement surfaces

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 establish agreed time frame for installing or removing permanent road studs
  - 8.2 prepare area, materials and equipment for installing or removing permanent road studs
  - 8.3 install and remove milled, drilled and surface mounted road studs and permanent road studs
  - 8.4 remove permanent road studs
  - 8.5 communicate and co-ordinate progress on the installation of permanent road studs
  - 8.6 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with installing permanent road studs

#### Scope/range relating to Knowledge and Understanding (cont)

#### Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

## Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

## Protect work

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

## Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 road studs
  - 15.2 fixing materials
  - 15.3 hand and/or powered tools and ancillary equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to install permanent road studs

## Security procedures

17 site, workplace, company and operative

			Per	forman	nce Crit	eria			Sc	:ope/ra	nge re	ating t	o Perfo	ormand	e Crite	ria	
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No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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Notes/Comments

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Candidate	Date	
Assessor	 Date	
Internal Verifier	 Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

## UNIT VR383 (H0X7 04) Apply Specialist Road Surfacing Manually

## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and manually applying slurry/microsurfacing and/or high friction

## Key words

Slurry/microsurfacing; High friction surfacing; Epoxy resins; Thermoplastic resins; Bituminous emulsion; Aggregate

## Apply Specialist Road Surfacing Manually

## **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

## Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills (as applicable to the surfacing) to measure, set out, mark, position, dry, clean, mask, prime, mix, spray, heat and decant, spread, roll, cure, inspect and communicate
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 prepare for and manually apply specialist road surfacing using at least one of the following methods to given working instructions
  - 9.1 slurry/microsurfacing
  - 9.2 high friction surfacing (cold applied)
  - 9.3 high friction surfacing (hot applied)
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

## Apply Specialist Road Surfacing Manually

#### **Knowledge and Understanding**

You need to know and understand:

## Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

## Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

## **Performance Criteria 3**

## **Selection of resources**

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## **Performance Criteria 4**

## Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

## Performance Criteria 5

## Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

# UNIT VR383 Apply Specialist Road Surfacing Manually

#### Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations relating to slurry/micro surfacing or high friction

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 establish an agreed time frame for resurfacing
  - 8.2 prepare substrate, to include measuring, setting out, marking out, drying, cleaning and repairing
  - 8.3 prepare equipment as necessary
  - 8.4 level and realign ironwork
  - 8.5 prepare materials, to include storing, handling and mixing
  - 8.6 apply materials to prepared surfaces, to include heating, pouring, screeding and spreading
  - 8.7 remove and dispose of arisings
  - 8.8 communicate and co-ordinate progress on specialist resurfacing
  - 8.9 return infrastructure to operational status
  - 8.10 use hand tools, power tools and equipment
- 9 team work and communication
- 10 needs of other occupations associated with manually applying specialist road surfacing

## UNIT VR383 Apply Specialist Road Surfacing Manually

## Scope/range relating to Knowledge and Understanding (cont)

## Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

## Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

## Protect work

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

## Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 primers, epoxy or thermoplastic resins, bituminous emulsion, catalyst, doping agents, fibres, rubber, pigment
  - 15.2 aggregate, calcined bauxite
  - 15.3 masking tape
  - 15.4 mixer and mixer pot
  - 15.5 heater
  - 15.6 hand and/or powered tools and equipment
- 16 of calculating quantity, length, area and wastage associated with the method/procedure to manually apply specialist road surfacing

## Security procedures

17 site, workplace, company and operative

# Apply Specialist Road Surfacing Manually

			Per	forman	ce Crit	eria			Sc	ope/ra	nge re	lating t	o Perfo	ormand	e Crite	ria	
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# Apply Specialist Road Surfacing Manually

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# Apply Specialist Road Surfacing Manually

						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	 Date	
Internal Verifier	 Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting and/or using materials, components and equipment for plant or machinery operations
- 4 setting up, operating and shutting down plant or machinery to receive and transport bulk material loads

## Key words

Concrete-pumps; Forward tipping dumpers; Agricultural tractors; Tunnelling plant; Dump-trucks; Bowsers

## **Performance Criteria**

You must be able to:

- 1 interpret the given operating information relating to the use of plant or machinery and confirm its relevance
- 2 organise with others the sequence in which the work is to be carried out
- 3 comply with the relevant, current legislation, special legal status documents, official guidance and organisational procedures to maintain safe work practices
- 4 request resources to sustain plant or machinery operations to complete the programme of work
- 5 select plant or machinery resources for the methods of work and operations to be carried out
- 6 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 7 comply with the given contract information to carry out the work efficiently to the required specification
- 8 complete the work within the allocated time, in accordance with the programme of work

## Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, method statements and manufacturers' information related to the plant or machinery operations and the work to be carried out
- 2 organisation of own work
- 3 communication with team members and other associated occupations about the plant or machinery operation and the work to be carried out

## Scope/range related to Performance Criteria (cont)

- 4 avoid hazards by following given safety information, including the use of personal protective equipment (PPE) to carry out the activity in accordance with legislation, Approved Codes of Practice and/or organisational requirements
- 5 safe use and storage of plant or machinery, tools and equipment
- 6 follow organisational procedures for the requisition of consumables, materials and other resources
- 7 selection of resources associated with own work
  - 7.1 tools and ancillary equipment and/or accessories
- 8 protection of the work and its surrounding area from damage
- 9 minimise damage and maintain a clean work space
- 10 disposal of waste in accordance with legislation
- 11 demonstration of work skills to check, adjust, communicate, manoeuvre, position, receive, transport and deposit
- 12 use and maintain hand tools, ancillary equipment and/or accessories.
- 13 operate plant or machinery to receive and transport bulk material loads to given working instructions, relating to one of the following categories of plant or machinery
  - 13.1 concrete pumps
  - 13.2 forward tipping dumpers
  - 13.3 agricultural tractors complete with towed equipment
  - 13.4 tunnelling plant and equipment
  - 13.5 dump trucks
  - 13.6 bowsers
- 14 shut down and secure plant or machinery
- 15 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

## **Knowledge and Understanding**

You need to know and understand:

## Performance Criteria 1

## Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

## Organise with others

- K4 communication of ideas between team members
- K5 organisation of **resources** in conjunction with the progress of work
- K6 the **skills** required to carry out the work

## **Performance Criteria 3**

## Safe work practices

- K7 the level of understanding operatives must have of information for relevant, current legislation, Approved Codes of Practice and official guidance and how it is applied
- K8 how **emergencies** should be responded to and who should respond
- K9 the organisational **security procedures** for plant and/or machinery, tools, equipment and personal belongings

## Knowledge and Understanding (cont)

- K10 what the accident reporting procedures are and who is responsible for making the report
- K11 why and when **personal protective equipment (PPE)** should be used

## Performance Criteria 4

## **Request resources**

K12 the organisational procedures for requisitioning consumables and other **resources** 

## Performance Criteria 5

## Selection of resources

- K13 the characteristics, quality, uses, limitations and defects associated with plant **resources** and how defects should be rectified
- K14 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K15 the organisational procedures to select **resources**, why they have been developed and how they are used
- K16 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## Performance Criteria 6

## Minimise the risk of damage

- K17 how to **protect work** from damage and the purpose of protection
- K18 why **disposal of waste** should be carried out safely and how it is achieved

## Knowledge and Understanding (cont)

#### **Performance Criteria 7**

#### Meet the contract specification

- K19 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K20 how **maintenance** of plant and/or machinery, tools and equipment is carried out

## **Performance Criteria 8**

#### Allocated time

K21 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding (cont)

#### Communication

1 discussions, sketches and briefings

#### **Disposal of waste**

2 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 3 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 3.1 fires, spillages, injuries
  - 3.2 emergencies relating to occupational activities

## Hazards

4 those identified by method of work, risk/COSHH assessments, manufacturers' technical information statutory regulations and official guidance

## Information

5 drawings, specifications, schedules, method statements, manufacturers' information and regulations governing the operation of plant or machinery to receive and transport loads

## Legislation, Approved Codes of Practice and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Scope/range relating to Knowledge and Understanding (cont)

## Maintenance

7 operative care of plant or machinery, hand tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
  - 8.1 identify the characteristics of the plant and machinery appropriate for the receipt and transportation operation
  - 8.2 carry out performance checks to receive and transport loads
  - 8.3 identify characteristics, type and volume of loads to receive and transport
  - 8.4 carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area
  - 8.5 receive, secure and balance loads for transport
  - 8.6 transport and deposit loads
  - 8.7 shut down and secure plant or machinery
  - 8.8 use hand tools, ancillary equipment and accessories
- 9 team work and communication
- 10 needs of other occupations associated with operating plant or machinery for receiving and transporting bulk material loads

## Personal protective equipment (PPE)

11 occupational use, types, purpose of each type and work situations

## Scope/range relating to Knowledge and Understanding (cont)

## Problems

- 12 those arising from information, resources and methods of work 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

## Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

## Protect work

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

## Resources

- materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist:
   16.1 consumables, lubricants, fuels
  - 16.2 attachments and load coverings
  - 16.3 hand tools, ancillary equipment and/or accessories
- 17 methods of calculating weight, quantity, length and area associated with the method/procedure to operate plant or machinery for receiving and transporting bulk material loads

## Security procedures

18 site, workplace, company and operative

## Skills

19 own occupation and occupations related to the work

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Notes/Comments

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## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting and/or using materials, components and equipment for plant or machinery operations
- 4 setting up, operating and shutting down plant or machinery for compaction work

## Key words

Ride-on rollers; Compactors

#### **Performance Criteria**

You must be able to:

- interpret the given operating information relating to the use of 1 plant or machinery and confirm its relevance
- organise with others the sequence in which the work is to be 2 carried out
- comply with the relevant, current legislation, special legal 3 status documents, official guidance and organisational procedures to maintain safe work practices
- request resources to sustain plant or machinery operations to 4 complete the programme of work
- select plant or machinery resources for the methods of work 5 and operations to be carried out
- comply with organisational procedures to minimise the risk of 6 damage to the work and surrounding area
- comply with the given contract information to carry out the 7 work efficiently to the required specification
- complete the work within the allocated time, in accordance 8 with the programme of work

## Scope/range related to Performance Criteria

- interpretation of drawings, specifications, schedules, method 1 statements and manufacturers' information related to the plant or machinerv operations and the work to be carried out
- 2 organisation of own work

#### Scope/range related to Performance Criteria (cont)

- 3 communication with team members and other associated occupations about the plant or machinery operation and the work to be carried out
- avoid hazards by following given safety information, including 4 the use of personal protective equipment (PPE) to carry out the activity in accordance with legislation, Approved Codes of Practice and/or organisational requirements
- safe use and storage of plant or machinery tools and 5 equipment
- follow organisational procedures for the requisition of 6 consumables, materials and other resources
- selection of resources associated with own work 7 7.1 tools and ancillary equipment and/or accessories
  - protection of the work and its surrounding area from damage
- 8
- minimise damage and maintain a clean work space 9
- disposal of waste in accordance with legislation 10
- demonstration of work skills to check, adjust, communicate, 11 manoeuvre, position and compact
- use and maintain hand tools, ancillary equipment and/or 12 accessories.
- operate plant or machinery for compaction to given working 13 instructions, relating to one of the following categories of plant or machinery
  - 13.1 ride on rollers
  - 13.2 compacters
- shut down and secure plant or machinery 14
- completion of own work within the estimated, allocated time to 15 meet the needs of other occupations and/or client

## Knowledge and Understanding

You need to know and understand:

## Performance Criteria 1

## Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

#### Organise with others

- K4 communication of ideas between team members
- K5 organisation of **resources** in conjunction with the progress of work
- K6 the **skills** required to carry out the work

## **Performance Criteria 3**

## Safe work practices

- K7 the level of understanding operatives must have of information for relevant, current legislation, Approved Codes of Practice and official guidance and how it is applied
- K8 how **emergencies** should be responded to and who should respond
- K9 the organisational **security procedures** for plant and/or machinery, tools, equipment and personal belongings

## Knowledge and Understanding (cont)

- K10 what the accident reporting procedures are and who is responsible for making the report
- K11 why and when **personal protective equipment (PPE)** should be used

## **Performance Criteria 4**

## **Request resources**

K12 the organisational procedures for requisitioning consumables and other **resources** 

## Performance Criteria 5

## Selection of resources

- K13 the characteristics, quality, uses, limitations and defects associated with plant **resources** and how defects should be rectified
- K14 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K15 the organisational procedures to select **resources**, why they have been developed and how they are used
- K16 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## Performance Criteria 6

## Minimise the risk of damage

- K17 how to **protect work** from damage and the purpose of protection
- K18 why **disposal of waste** should be carried out safely and how it is achieved

## Knowledge and Understanding (cont)

#### **Performance Criteria 7**

#### Meet the contract specification

- K19 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K20 how **maintenance** of plant and/or machinery, tools and equipment is carried out

## Performance Criteria 8

## Allocated time

K21 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

## Scope/range relating to Knowledge and Understanding

#### Communication

1 discussions, sketches and briefings

## **Disposal of waste**

2 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 3 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 3.1 fires, spillages, injuries
  - 3.2 emergencies relating to occupational activities

## Hazards

4 those identified by method of work, risk/COSHH assessments, manufacturers' technical information statutory regulations and official guidance

## Information

5 drawings, specifications, schedules, method statements, manufacturers' information and regulations governing the operation of plant or machinery for compaction work

## Legislation, Approved Codes of Practice and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Scope/range relating to Knowledge and Understanding (cont)

#### Maintenance

7 operative care of plant or machinery, hand tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
  - 8.1 identify the characteristics of the plant and machinery appropriate to the compaction operation
  - 8.2 carry out performance checks for compaction operations
  - 8.3 identify with the area for the compaction work
  - 8.4 carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area
  - 8.5 check to avoid damage to structures and utilities service apparatus
  - 8.6 complete compaction work
  - 8.7 shut down and secure plant or machinery
  - 8.8 use hand tools, ancillary equipment and accessories
- 9 team work and communication
- 10 needs of other occupations associated with operating plant or machinery for compaction work

## Personal protective equipment (PPE)

11 occupational use, types, purpose of each type and work situations

## Problems

- 12 those arising from information, resources and methods of work
  - 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

## Scope/range relating to Knowledge and Understanding (cont)

## Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

## Protect work

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

## Resources

- 16 materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist
  - 16.1 consumables, lubricants, fuels
  - 16.2 attachments, compaction aids
  - 16.3 hand tools, ancillary equipment and/or accessories
- 17 methods of calculating weight, bearing, pressure, quantity, length and area associated with the method/procedure to operate plant or machinery to carry out compaction work

## Security procedures

18 site, workplace, company and operative

## Skills

19 own occupation and occupations related to the work

			Performance Criteria									Scope/range relating to Performance Criteria													
No	Description of Evidence	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9	10		1		14	15	
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# UNIT VR394 (F77W 04) Operate Plant or Machinery to Compact

					Sc	cope/r	ange	relatir	ng to I	Knowl	edge	and U	nders	standi	ng				
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

#### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components, tools and/or ancillary equipment to direct and guide the movement of loads or the movement and operations of plant or machinery
- 4 preparing for and directing and guiding the movement of loads or the movement and operations of plant or machinery

#### Key words

Signalling; Radio-communication; Directing; Guiding; Hand signals

### **Performance Criteria**

You must be able to:

- 1 interpret the given operating information relating to the use of plant or machinery and confirm its relevance
- 2 organise with others the sequence in which the work is to be carried out
- 3 comply with the relevant, current legislation, special legal status documents, official guidance and organisational procedures to maintain safe work practices
- 4 select plant or machinery resources for the methods of work and operations to be carried out
- 5 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 6 comply with the given contract information to carry out the work efficiently to the required specification
- 7 complete the work within the allocated time, in accordance with the programme of work

# Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, method statements and manufacturers' information related to the plant or machinery operations and the work to be carried out
- 2 organisation of own work
- 3 communication with team members and other associated occupations about the plant or machinery operation and the work to be carried out

### Scope/range related to Performance Criteria (cont)

- 4 avoid hazards by following given safety information, including the use of personal protective equipment (PPE) to carry out the activity in accordance with legislation, Approved Codes of Practice and/or organisational requirements
- 5 safe use and storage of tools and equipment
- 6 selection of resources associated with own work
  - 6.1 hand tools and ancillary equipment
  - 6.2 signalling and communication equipment
- 7 protection of the work and its surrounding area from damage
- 8 minimise damage and maintain a clean work space
- 9 disposal of waste in accordance with legislation
- 10 demonstration of work skills to measure, gauge, estimate, interpret, judge, explain, prepare, command, direct, guide, indicate, inform, instruct, sign, position, move, secure, signal and relay
- 11 use and maintain hand tools, ancillary equipment and signalling and communication equipment
- 12 direct and guide the movement of loads or movement and operations of plant or machinery to given working instructions, relating to the following
  - 12.1 hand signals
  - 12.2 hand signalling equipment
  - 12.3 verbal/electronic communication
- 13 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

# Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

#### Organise with others

- K4 communication of ideas between team members
- K5 organisation of **resources** in conjunction with the progress of work
- K6 the **skills** required to carry out the work

# **Performance Criteria 3**

#### Safe work practices

- K7 the level of understanding operatives must have of information for relevant, current legislation, Approved Codes of Practice and official guidance and how it is applied
- K8 how **emergencies** should be responded to and who should respond
- K9 the organisational **security procedures** for plant and/or machinery, tools, equipment and personal belongings

#### Knowledge and Understanding (cont)

- K10 what the accident reporting procedures are and who is responsible for making the report
- K11 why and when **personal protective equipment (PPE)** should be used

# Performance Criteria 4

#### Selection of resources

- K12 the characteristics, quality, uses, limitations and defects associated with plant **resources** and how defects should be rectified
- K13 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K14 the organisational procedures to select **resources**, why they have been developed and how they are used
- K15 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# Performance Criteria 5

#### Minimise the risk of damage

- K16 how to **protect work** from damage and the purpose of protection
- K17 why **disposal of waste** should be carried out safely and how it is achieved

#### Performance Criteria 6

#### Meet the contract specification

- K18 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K19 how **maintenance** of plant and/or machinery, tools and equipment is carried out

#### Knowledge and Understanding (cont)

#### **Performance Criteria 7**

#### Allocated time

K20 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

#### Communication

1 discussions, sketches, briefings, signalling and radio communication

#### **Disposal of waste**

2 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 3 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 3.1 fires, spillages, injuries
  - 3.2 emergencies relating to occupational activities

#### Hazards

4 those identified by method of work, risk/COSHH assessments, manufacturers' technical information statutory regulations and official guidance

#### Information

5 drawings, specifications, schedules, method statements, manufacturers' information and Codes of Practice for the direction and guidance of plant or machinery

#### Legislation, Approved Codes of Practice and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Scope/range relating to Knowledge and Understanding (cont)

#### Maintenance

7 operative care of hand tools, ancillary equipment, signalling and communication equipment

#### Methods of work

- 8 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
  - 8.1 assess and determine the movement of loads or movement and operations of plant or machinery
  - 8.2 direct and guide the movement of loads or movement and operations of plant or machinery
  - 8.3 signal and communicate following recognised/agreed operational procedures
  - 8.4 use hand tools and ancillary equipment
- 9 team work and communication
- 10 needs of other occupations associated with directing and guiding loads or plant or machinery

# Personal protective equipment (PPE)

11 occupational use, types, purpose of each type and work situations

# Problems

- 12 those arising from information, resources and methods of work 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

# Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

# Scope/range relating to Knowledge and Understanding (cont)

### **Protect work**

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

# Resources

- materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist
   16.1 signalling and communication equipment
   16.2 hand tools and ancillary equipment
- 17 methods of calculating weight/bearing pressures, identifying centre(s) of gravity and quantity, length and area associated with the method/procedure for directing and guiding the movement of loads or plant or machinery

# Security procedures

18 site, workplace, company and operative

# Skills

19 own occupation and occupations related to the work

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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting and/or using materials, components and equipment to arrange and secure loads
- 4 preparing, arranging and securing loads

#### Key words

Slinger; Signaller; Loader/Securer

### **Performance Criteria**

You must be able to:

- 1 interpret the given operating information relating to the use of plant or machinery and confirm its relevance
- 2 comply with the relevant, current legislation, special legal status documents, official guidance and organisational procedures to maintain safe work practices
- 3 select plant or machinery resources for the methods of work and operations to be carried out
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, method statements and manufacturers' information related to the work to be carried out
- 2 avoid hazards by following given safety information, including the use of personal protective equipment (PPE) and access equipment to carry out the activity in accordance with legislation, Approved Codes of Practice and/or organisational requirements
- 3 safe use and storage of tools and equipment
- 4 selection of resources associated with own work
  - 4.1 materials, components and fixings
  - 4.2 tools and equipment
  - 4.3 lifting or tie down accessories
- 5 protection of the work and its surrounding area from damage
- 6 minimise damage and maintain a clean work space
- 7 disposal of waste in accordance with legislation
- 8 demonstration of work skills to measure, gauge, calculate, select, fit, configure, test, balance, adjust, secure, position and remove
- 9 use and maintain hand tools, ancillary equipment, lifting or load restraint accessories
- 10 arrange and secure loads for movement by either slinger/signaller or loader/securer to given working instructions
  - 10.1 Slinger/signaller any three of the following loads: balanced, unbalanced, loose, bundled, containers, drums
  - 10.2 Loader/securer all of the following loads: wheeled machinery, tracked machinery, rolling machinery
- 11 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

# Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation, Approved Codes of Practice and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for plant and/or machinery, tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why and when **personal protective equipment (PPE)** should be used

#### Knowledge and Understanding (cont)

### **Performance Criteria 3**

#### **Selection of resources**

- K9 the characteristics, quality, uses, limitations and defects associated with plant **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# **Performance Criteria 4**

# Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# Performance Criteria 5

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how **maintenance** of plant and/or machinery, tools and equipment is carried out

# Performance Criteria 6

### Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

#### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

### Hazards

3 those identified by method of work, risk/COSHH assessments, manufacturers' technical information statutory regulations and official guidance

#### Information

4 drawings, specifications, schedules, method statements, manufacturers' information and regulations governing the arrangement and security of loads

# Legislation, Approved Codes of Practice and official guidance

5 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

### Scope/range relating to Knowledge and Understanding (cont)

#### Maintenance

6 operative care of hand tools, ancillary equipment and lifting or load restraint accessories

# Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
  - 7.1 identify the characteristics of the plant and machinery and load appropriate to the slinging or securing operation
  - 7.2 determine method for slinging or restraining
  - 7.3 select and use suitable lifting or load restraint accessories
  - 7.4 arrange and secure loads
  - 7.5 confirm balance, stability and correct weight distribution
  - 7.6 remove and store lifting and load restraint accessories on completion of movement
  - 7.7 use hand tools and ancillary equipment
  - 7.8 work at height
- 8 team work and communication
- 9 needs of other occupations associated with arranging and securing loads

# Personal protective equipment (PPE)

10 occupational use, types, purpose of each type and work situations

#### Scope/range relating to Knowledge and Understanding (cont)

#### Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 15 materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist
  - 15.1 lifting or load restraint accessories, steel wire rope, chain, fabric, web hooks, shackles, clamps
  - 15.2 hand tools and ancillary equipment
- 16 methods of calculating weight, bearing, pressure, quantity, length and area associated with the method/procedure for arranging and securing loads

#### Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			S	cope/	range	relatin	g to P	erforn	nance	Criter	a	
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	 Date	
Internal Verifier	 Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

# **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting and preparing specialised powered tools and/or ancillary equipment
- 4 operating specialised powered tools and equipment

#### Key words

Specialised-tools; Powered-tools; Power-units

#### **Performance Criteria**

You must be able to:

- 1 interpret the given operating information relating to the use of plant or machinery and confirm its relevance
- 2 comply with the relevant, current legislation, special legal status documents, official guidance and organisational procedures to maintain safe work practices
- 3 request resources to sustain plant or machinery operations to complete the programme of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 carry out pre-use preparation inspections on powered tools and/or equipment in accordance with given procedures
- 6 operate powered tools and/or equipment in accordance with safe working practices to achieve the work outcome

# Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, risk assessments, method statements, legislation, Codes of Practice, operating instructions and manufacturers' information related to the work to be carried out
- 2 avoid hazards by following given safety information, including the use of personal protective equipment (PPE) to carry out the activity in accordance with legislation, Approved Codes of Practice and/or organisational requirements

#### Scope/range related to Performance Criteria (cont)

- 3 safe use and security of powered tools and equipment
- 4 safe use of fire extinguishers, as appropriate to the fire
- 5 request resources to sustain powered tools and/or equipment associated with own work:
  - 5.1 fuel/power source
  - 5.2 lubricants
  - 5.3 consumables
- 6 protection of the work and its surrounding area from damage
- 7 minimise damage and maintain a clean work space
- 8 disposal of waste in accordance with legislation
- 9 demonstration of work skills to measure, align, assemble, fit, level, position, check, secure, connect and adjust
- 10 use and maintain power units, tools and ancillary equipment
- 11 prepare the power unit tool(s) and/or ancillary equipment to given working instructions
- 12 demonstration of work skills to start, stop, replenish, control and clean
- 13 use and maintain power units, tools and ancillary equipment
- 14 operate and monitor power unit and associated equipment to given working instructions, relating to
  - 14.1 continual running
  - 14.2 closing down
  - 14.3 cleaning
- 15 return powered tools and equipment to a safe operational condition on completion of work
- 16 disassemble power unit, tools and ancillary equipment

#### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

# Interpretation of information

- K1 the operating **information** and legislation appropriate to the powered tools and/or equipment
- K2 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K3 the types of **information**, their source and how they are interpreted
- K4 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

# Safe work practices

- K5 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K6 the types of **fire extinguishers** and how and when they are used
- K7 how **emergencies** should be responded to and who should respond
- K8 the organisational **security procedures** for plant and/or machinery, tools, equipment and personal belongings
- K9 what the accident reporting procedures are and who is responsible for making the report
- K10 why and when **personal protective equipment (PPE)** should be used

# Knowledge and Understanding (cont)

# **Performance Criteria 3**

# **Request resources**

- K11 the organisational procedures for requisitioning consumables and other **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# Performance Criteria 4

# Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# **Performance Criteria 5**

# **Pre-use preparation**

- K15 the **methods of work** for pre-use checks needed before operating powered tools and/or equipment
- K16 the **method of work** preparation required before using powered tools and/or equipment

# Performance Criteria 6

# Use tools and equipment

K17 how **methods of work** are carried out and **problems** reported

### Scope/range relating to Knowledge and Understanding

### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

# **Fire extinguishers**

3 water, CO<sub>2</sub>, foam, powder and their uses

# Hazards

4 those identified by method of work, risk/COSHH assessments, manufacturers' technical information statutory regulations and official guidance

# Information

5 drawings, specifications, risk assessments, method statements, legislation, Codes of Practice, manufacturers' information and operating instructions

# Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

# Scope/range relating to Knowledge and Understanding (cont)

#### Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
  - 7.1 prepare, position and set up for work
  - 7.2 secure accessories and tool attachments
  - 7.3 carry out pre-use checks to manufacturers' and suppliers' information/procedures
  - 7.4 operate, use and control
  - 7.5 monitor and maintain
  - 7.6 close down and secure
  - 7.7 disassemble
  - 7.8 transport and/or store
- 8 team work and communication
- 9 needs of other occupations associated with operating power units, tools and/or equipment

# Personal protective equipment (PPE)

10 occupational use, types, purpose of each type and work situations

# Problems

- 11 those arising from information, resources and methods of work 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

# **Protect work**

12 protect work against damage from general workplace activities, other occupations and adverse weather conditions

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#### Scope/range relating to Knowledge and Understanding (cont)

#### Resources

- 13 materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist
  - 13.1 power source/fuels
  - 13.2 consumables, lubricants

# Security procedures

14 site, workplace, company and operative

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No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10	1	1			15	16

		Knowledge and Understanding																
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17

			Scope/range relating to Knowledge and Understanding													
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting setting out equipment and ancillary resources
- 4 preparing and setting out secondary dimensional control of the work

#### Key words

Setting-out; Line; Level; Depth; Area; Height; Angle

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, method statements, manufacturers' information and reference points related to the work to be carried out
- 2 safe use of personal protective equipment (PPE), and access equipment/working platforms to carry out the activity, in accordance with legislation and/or organisational requirements
- 3 safe use and storage of tools and equipment
- 4 selection of resources associated with own work
  - 4.1 measuring tools and instruments
  - 4.2 marking materials/components
  - 4.3 tools and equipment
- 5 protection of the work and its surrounding area from damage
- 6 minimise damage and maintain a clean work space
- 7 disposal of waste in accordance with legislation
- 8 demonstration of work skills to transfer, transpose, level, measure, mark, position, fix and secure
- 9 use and maintain hand tools, measuring and marking equipment
- 10 set out secondary dimensional control for the work to given working instructions for any three of the following
  - 10.1 line
  - 10.2 level
  - 10.3 depth
  - 10.4 area
  - 10.5 height
  - 10.6 angle
- 11 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why and when **personal protective equipment (PPE)** should be used

# Knowledge and Understanding (cont)

# **Performance Criteria 3**

### Selection of resources

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# **Performance Criteria 4**

# Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# **Performance Criteria 5**

# Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

# Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

### Scope/range relating to Knowledge and Understanding

### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

### Hazards

4 those identified by method of work, manufacturers' technical information, statutory regulations and official guidance

# Information

5 drawings, specifications, schedules, method statements, manufacturers' information, reference points and regulations governing buildings and construction work

# Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

# Maintenance

7 operative care of hand tools, measuring and marking equipment and ancillary equipment

# Scope/range relating to Knowledge and Understanding (cont)

#### Methods of work

- 8 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
  - 8.1 measure and set out secondary dimensional control for the work
  - 8.2 measure, align and level to dimensional control requirements
  - 8.3 transfer and set out line, angles and levels to dimensional control requirements
  - 8.4 use hand tools and measuring and marking equipment
  - 8.5 work at height
  - 8.6 use access equipment
- 9 methods of calculating height, depth, angle, length and area associated with the method/procedure to set out for secondary dimensional work control
- 10 team work and communication
- 11 needs of other occupations associated with setting out secondary dimensional control

# Personal protective equipment (PPE)

12 occupational use, types, purpose of each type and work situations

# Problems

- those arising from information, resources and methods of work13.1 own authority to rectify
  - 13.2 organisational reporting procedures

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#### Scope/range relating to Knowledge and Understanding (cont)

#### Programme

- 14 types of progress charts, timetables and estimated times
- 15 organisational procedures for reporting circumstances which will affect the work programme

#### Protect work

16 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 17 materials, components and equipment relating to types, quantity, quality, and sizes of standard and/or specialist
  - 17.1 measuring tools and instruments
  - 17.2 marking equipment
  - 17.3 level and alignment tools
- 17 methods of calculating quantity of resources associated with the method/procedure to set out for secondary dimensional control

# Security procedures

18 site, workplace, company and operative

			Per	forman	ce Crit	eria		Scope/range relating to Performance Criteria									ia	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10	11
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# UNIT VR401 (F6Y5 04) Set Out Secondary Dimensional Work Control

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No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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# UNIT VR401 (F6Y5 04) Set Out Secondary Dimensional Work Control

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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for and slinging and signalling the movement of loads

## Key words

Radio communication; Lifting equipment

## **Performance Criteria**

You must be able to:

- 1 interpret the given operating information relating to the use of plant or machinery and confirm its relevance
- 2 organise with others the sequence in which the work is to be carried out
- 3 comply with the relevant, current legislation, special legal status documents, official guidance and organisational procedures to maintain safe work practices
- 4 select plant or machinery resources for the methods of work and operations to be carried out
- 5 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 6 comply with the given contract information to carry out the work efficiently to the required specification
- 7 complete the work within the allocated time, in accordance with the programme of work

## Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, method statements and manufacturers' information related to the plant or machinery operations and the work to be carried out
- 2 organisation of own work
- 3 communication with team members and other associated occupations about the plant or machinery operation and the work to be carried out
- 4 avoid hazards by following given safety information, including the use of personal protective equipment (PPE) to carry out the activity in accordance with legislation, Approved Codes of Practice and/or organisational requirements
- 5 safe use and storage of tools and equipment
- 6 selection of resources associated with own work
  - 6.1 attachments, slinging equipment, lifting aids, hand tools and ancillary equipment
  - 6.2 signalling and communication equipment
- 7 protection of the work and its surrounding area from damage
- 8 minimise damage and maintain a clean work space
- 9 disposal of waste in accordance with legislation
- 10 demonstration of work skills to measure, gauge, estimate, fit, fix, test, balance, interpret, judge, explain, prepare, indicate, inform, instruct, sign, position, adjust, configure, move, secure, signal and relay
- 11 use and maintain hand tools, ancillary equipment, slinging equipment and signalling and communication equipment
- 12 slinging and signalling for the lifting and movement of loads by plant or machinery operations to given working instructions
- 13 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

# Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

#### Organise with others

- K4 communication of ideas between team members
- K5 organisation of **resources** in conjunction with the progress of work
- K6 the **skills** required to carry out the work

# **Performance Criteria 3**

#### Safe work practices

- K7 the level of understanding operatives must have of information for relevant, current legislation, Approved Codes of Practice and official guidance and how it is applied
- K8 how **emergencies** should be responded to and who should respond

#### Knowledge and Understanding (cont)

- K9 the organisational **security procedures** for plant and/or machinery, tools, equipment and personal belongings
- K10 what the accident reporting procedures are and who is responsible for making the report
- K11 why and when **personal protective equipment (PPE)** should be used

# Performance Criteria 4

#### Selection of resources

- K12 the characteristics, quality, uses, limitations and defects associated with plant **resources** and how defects should be rectified
- K13 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K14 the organisational procedures to select **resources**, why they have been developed and how they are used
- K15 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# **Performance Criteria 5**

#### Minimise the risk of damage

- K16 how to **protect work** from damage and the purpose of protection
- K17 why **disposal of waste** should be carried out safely and how it is achieved

## Knowledge and Understanding (cont)

#### **Performance Criteria 6**

#### Meet the contract specification

- K18 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K19 how **maintenance** of plant and/or machinery, tools and equipment is carried out

# Performance Criteria 7

#### Allocated time

K20 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

#### Communication

1 discussions, sketches, briefings, signalling and radio communication

#### **Disposal of waste**

2 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 3 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 3.1 fires, spillages, injuries
  - 3.2 emergencies relating to occupational activities

#### Hazards

4 those identified by method of work, risk/COSHH assessments, manufacturers' technical information statutory regulations and official guidance

#### Information

5 drawings, specifications, schedules, method statements, manufacturers' information, approved procedures and Codes of Practice

# Legislation, Approved Codes of Practice and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Scope/range relating to Knowledge and Understanding (cont)

#### Maintenance

7 operative care of hand tools, ancillary equipment, slinging equipment and signalling and communication equipment

# Methods of work

- 8 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
  - 8.1 confirm method of communication
  - 8.2 determine method of slinging
  - 8.3 select and use suitable slinging equipment and lifting accessories
  - 8.4 sling loads securely and balance with correct weight distribution
  - 8.5 signal and communicate following recognised/agreed operational procedures
  - 8.6 position loads safely and securely
  - 8.7 remove and store lifting accessories
  - 8.8 use hand tools and ancillary equipment
- 9 team work and communication
- 10 needs of other occupations associated with slinging and signalling the movement of loads

# Personal protective equipment (PPE)

11 occupational use, types, purpose of each type and work situations

# Problems

- 12 those arising from information, resources and methods of work
  - 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

# Scope/range relating to Knowledge and Understanding (cont)

## Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

# Protect work

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

# Resources

- 16 materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist
  16.1 lifting accessories
  16.2 signalling and communication equipment
  - 16.3 hand tools and ancillary equipment
- 17 methods of calculating weight, bearing pressure, quantity, length and area associated with the method/procedure for slinging and signalling the movement of loads

# Security procedures

18 site, workplace, company and operative

# Skills

19 own occupation and occupations related to the work

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No	Description of Evidence	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	9	10	11	12	13
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No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18	K19	K20
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

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## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing and driving incident support unit (ISU) vehicles

# Key words

ISU; Fitness requirements; Vehicle inspections; Vehicle checks

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

# Scope/range related to Performance Criteria

- 1 interpretation of specifications, risk assessments, inventory/check sheets and manufacturers' information related to the vehicle and the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 safe use of fire extinguishers, as appropriate to the fire
  - 2.5 maintenance of documentation (personal and vehicle)
  - 2.6 specific risks to health

#### Scope/range related to Performance Criteria (cont)

- 3 selection of resources associated with own work
  - 3.1 replenish-able items (consumables)
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to inspect, check, wash, clean, replenish, report
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 prepare incident support unit vehicles to given working instructions relating to the following
  - 9.1 complete pre-use checks e.g. coolant, oil, fuel, tyres, lights, indicators
  - 9.2 complete pre-driving checks, e.g. security (equipment and passengers), vision (mirrors windscreen and windows), driving position
  - 9.3 designated carried equipment checks
  - 9.4 complete motion checks, brakes
  - 9.5 complete after use checks on vehicle and equipment
- 10 report defects and discrepancies
- 11 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

# Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

# Performance Criteria 2

## Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 the types of **fire extinguishers** and how and when they are used
- K6 how **emergencies** should be responded to and who should respond
- K7 the organisational **security procedures** for tools, equipment and personal belongings
- K8 what the accident reporting procedures are and who is responsible for making the report
- K9 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

#### Performance Criteria 3 Selection of resources

- K10 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K11 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K12 the organisational procedures to select **resources**, why they have been developed and how they are used
- K13 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

# Performance Criteria 4

#### Minimise the risk of damage

- K14 how to **protect work** from damage and the purpose of protection
- K15 why **disposal of waste** should be carried out safely and how it is achieved

# Performance Criteria 5

# Meet the contract specification

- K16 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K17 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K18 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

## Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

# **Fire extinguishers**

3 water, CO2, foam, powder and their uses

# Hazards

4 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

# Health and safety control equipment

- 5 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
- 5.1 collective protective measures
- 5.2 personal protective equipment (PPE)
- 5.3 respiratory protective equipment (RPE)
- 5.4 local exhaust ventilation (LEV)

# Scope/range relating to Knowledge and Understanding (cont)

#### Information

6 specifications, schedules, method statements, risk assessments, manufacturers' information, current regulations and official/statutory guidance governing vehicle use on roads, highways and motorways

# Legislation and official guidance

7 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, at height, with tools and equipment, with materials and substances, with movement/storage of materials, by manual handling, by mechanical lifting and when driving vehicles

# Maintenance

8 operative care of hand tools and/or portable power tools, ancillary equipment and vehicles

# Methods of work

- 9 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 9.1 identify and maintain fit for driving levels
  - 9.2 maintain the operational status of incident support vehicles
  - 9.3 maintain the operational status of the vehicles equipment (cones, signs, lighting/lamps, disc cutter, chain saw)
  - 9.4 complete pre-use checks
  - 9.5 complete pre-driving checks
  - 9.6 complete motion checks
  - 9.7 complete after use checks on vehicle and equipment

## Scope/range relating to Knowledge and Understanding (cont)

## Methods of work (cont)

- 9.8 maintain vehicle records (daily log book, patrol sheets, vehicle/drive sheets)
- 9.9 report defects and discrepancies (vehicle defects sheets, equipment check lists)
- 9.10 complete point of work risk assessments
- 9.11 prepare the vehicle in accordance with prevailing conditions (type of road, daytime, night time, traffic volumes, road surface, visibility, weather conditions)
- 9.12 use hand tools, power tools and equipment
- 10 team work and communication
- 11 needs of other occupations associated with preparing incident support vehicles

#### Problems

- 12 those arising from information, resources and methods of work 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

#### Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

# **Protect work**

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

# Scope/range relating to Knowledge and Understanding (cont)

#### Resources

- 16 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 16.1 incident support vehicle and consumables
  - 16.2 designated equipment
  - 16.3 hand and/or powered tools and equipment
  - 16.4 documentation
- 17 methods of calculating quantity and wastage of resources associated with the method/procedure to prepare an incident support vehicle

## Security procedures

18 site, workplace, company and operative

			Per	forman	ce Crit	eria			S	cope/	range	relatir	ig to P	erforn	nance	Criter	a	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10	11
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No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18
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No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	 Date	
Internal Verifier	 Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

## **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 responding to road traffic incidents and hazards

#### Key words

Emergency services; Point of work risk assessment; Road traffic incident; Road incidents; Traffic management teams

## **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

# Scope/range related to Performance Criteria

- 1 interpretation of information related to the nature, extent and location of the incident and use of the information to plan assistance for the incident
- 2 avoidance of risk by complying with the given information relating to at least four of the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of access equipment
  - 2.4 safe use and storage of materials, tools and equipment
  - 2.5 safe use of fire extinguishers, as appropriate to the fire
  - 2.6 flow and movement of traffic
  - 2.7 specific risks to health

# Scope/range related to Performance Criteria (cont)

- 3 selection of resources associated with own work
  - 3.1 materials, components and consumables
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to plan, relay, clear, control, guide and communicate
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 respond to and assist with road-related incidents (routine, major or critical) to given working instructions for at least four of the following
  - 9.1 flooding
  - 9.2 spillage or debris
  - 9.3 infrastructure failure
  - 9.4 adverse weather
  - 9.5 collision without injury
  - 9.6 collision with injury
  - 9.7 collision with fatality
  - 9.8 terrorist activity
- 10 liaise with incident controller and follow instructions ensuring compliance with organisational procedures
- 11 report on the conclusion of the incident in accordance with current legislation and organisational procedures
- 12 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

# Performance Criteria 1

## Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 the types of **fire extinguishers** and how and when they are used
- K6 how **emergencies** should be responded to and who should respond
- K7 the organisational **security procedures** for tools, equipment and personal belongings
- K8 what the accident reporting procedures are and who is responsible for making the report
- K9 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### Selection of resources

- K10 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K11 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K12 the organisational procedures to select **resources**, why they have been developed and how they are used
- K13 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

## **Performance Criteria 4**

## Minimise the risk of damage

- K14 how to **protect work** from damage and the purpose of protection
- K15 why **disposal of waste** should be carried out safely and how it is achieved

# **Performance Criteria 5**

#### Meet the contract specification

- K16 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K17 how maintenance of tools and equipment is carried out

## Performance Criteria 6 Allocated time

K18 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

#### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

# **Fire extinguishers**

3 water, CO2, foam, powder and their uses

# Hazards

4 those identified by risk assessment, point of work risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

# Health and safety control equipment

- 5 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 5.1 collective protective measures
  - 5.2 personal protective equipment (PPE)
  - 5.3 respiratory protective equipment (RPE)
  - 5.4 local exhaust ventilation (LEV)

# Scope/range relating to Knowledge and Understanding (cont)

#### Information

6 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, current regulations and official/statutory guidance governing work and incidents on motorways, high speed dual carriageways and rural and urban roads

# Legislation and official guidance

7 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

8 operative care of hand tools and/or portable power tools and ancillary equipment

# Methods of work

- 9 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 9.1 assess response and assistance required for specific incidents, flooding, spillage, infrastructure failure, adverse weather, collision without injury, collision with injury, collision with fatality and terrorist activity
  - 9.2 complete point of work risk assessments (type of incident, incident duration, traffic speeds/volumes, lighting levels, weather and road geometry)

#### Scope/range relating to Knowledge and Understanding (cont)

#### Methods of work (cont)

- 9.3 liaise with incident controllers (emergency services) and follow instructions ensuring compliance with organisational procedures (visual, oral and electronic)
- 9.4 deal with prevailing conditions, type of road, time of day, traffic volume, road surface, visibility, weather conditions
- 9.5 prioritise activities
- 9.6 adhere to response times
- 9.7 apply the principles of equality and diversity
- 9.8 report on the conclusion of the incident in accordance with current legislation and organisational procedures
- 9.9 use hand tools, power tools and equipment
- 9.10 install and operate lighting equipment
- 9.11 work at height
- 9.12 use access equipment
- 9.13 work with plant or machinery
- 9.14 record details of the incident and complete organisational documentation (site sketch, photographs, incident report forms, emails, accident and emergency report
- 10 team work and communication
- 11 needs of other occupations associated with responding and assisting with road-related incidents

# Problems

- 12 those arising from information, resources and methods of work 12.1 own authority to rectify
  - 12.1 Own authority to rectify
  - 12.2 organisational reporting procedures

## Scope/range relating to Knowledge and Understanding (cont)

#### Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

## Protect work

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 16 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 16.1 traffic lights
  - 16.2 traffic management team
  - 16.3 lifting equipment and accessories
  - 16.4 clean up specialists
  - 16.5 highway repair and maintenance teams
  - 16.6 highways maintenance and repair materials
  - 16.7 hand and/or powered tools and equipment
- 17 methods of calculating quantity, length, area and wastage associated with the method/procedure to respond to and assist with road-related incidents

# Security procedures

18 site, workplace, company and operative

			Per	forman	ce Crit	eria				Scop	e/rang	je rela	ting t	o Per	forma	nce C	riteria	l	
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	Description of Evidence	Knowledge and Understanding																	
No		K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18
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	Description of Evidence		Scope/range relating to Knowledge and Understanding																
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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

#### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 setting up, maintaining and removing emergency traffic management on motorways, high speed dual carriageways or rural and urban roads

#### Key words

High speed roads; Rural and urban roads; Compliant procedures; Traffic incidents; Cones; Lights; Signs; Lamps; Guards; Barriers

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

# Scope/range related to Performance Criteria

- 1 interpretation of instructions, drawings, specifications, schedules, method statements, risk assessments and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use and storage of materials, tools and equipment
  - 2.4 flow and movement of traffic
  - 2.5 completed point of work risk assessments
  - 2.6 specific risks to health

# Scope/range related to Performance Criteria (cont)

- 3 selection of resources associated with own work
  - 3.1 materials and components
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to plan, locate, set out, position, install, maintain and remove
- 8 use and maintain hand tools and ancillary equipment
- 9 install and remove emergency traffic management to given working instructions on motorways, high speed dual carriageways or rural and urban roads
  - 9.1 select and prepare materials, components and equipment
  - 9.2 unload and load traffic management equipment
  - 9.3 co-ordinate communications and procedures for setting up and maintaining the emergency traffic management
  - 9.4 maintain the operational integrity of the emergency traffic management components and equipment while in use
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

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#### Knowledge and Understanding

You need to know and understand:

# Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

## Performance Criteria 2

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

## Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### **Selection of resources**

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### **Performance Criteria 4**

#### Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# **Performance Criteria 5**

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

#### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

#### **Fire extinguishers**

3 water, CO2, foam, powder and their uses

#### Hazards

4 those identified by risk assessment, point of work risk assessment method of work, manufacturers' technical information, statutory regulations and official guidance

#### Health and safety control equipment

- 5 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 5.1 collective protective measures
  - 5.2 personal protective equipment (PPE)
  - 5.3 respiratory protective equipment (RPE)
  - 5.4 local exhaust ventilation (LEV)

## Scope/range relating to Knowledge and Understanding (cont)

#### Information

6 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, current regulations and official guidance governing work on motorways, high speed dual carriageways, rural and urban roads

## Legislation and official guidance

7 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

8 operative care of hand tools and/or portable power tools and ancillary equipment

#### Methods of work

- 9 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 9.1 liaise with incident controllers (police, ambulance, fire, highways agency, local authority)
  - 9.2 apply the principles of incident control including survey, assess, disseminate, casualties, hazards, access, location, emergency services and type (SADCHALET)
  - 9.3 identify a setting down location
  - 9.4 control the flow of traffic

#### Scope/range relating to Knowledge and Understanding (cont)

#### Methods of work (cont)

- 9.5 protect the scene of the incident from contamination, danger or damage by position of the incident support vehicle and controlling traffic flow
- 9.6 deal with displaced and damaged equipment
- 9.7 select and prepare materials, components and equipment
- 9.8 unload and load traffic management equipment
- 9.9 install and remove emergency traffic management systems
- 9.10 co-ordinate communications and procedures for setting up and maintaining the emergency traffic management
- 9.11 maintain the operational integrity of the emergency traffic management components and equipment while in use
- 9.12 apply compliant relief measures, trapped traffic, reverse flow, road closure, diversion, lane restrictions
- 9.13 record and communicate the resolution of the incident and the removal of the emergency traffic management
- 9.14 use hand tools, power tools and equipment
- 9.15 work at height
- 9.16 use access equipment
- 9.17 apply the principle of equality and diversity
- 10 team work and communication
- 11 needs of other occupations associated with installing and removing emergency traffic management

## Scope/range relating to Knowledge and Understanding (cont)

#### Problems

- 12 those arising from information, resources and methods of work 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

#### Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 16 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 16.1 traffic control equipment (cones, signs, lights, lamps, guards and barriers)
  - 16.2 communication equipment
  - 16.3 hand and/or powered tools and equipment
- 17 methods of calculating quantity, length, area and wastage associated with the method/procedure to install and remove emergency traffic management

#### Security procedures

18 site, workplace, company and operative

	Description of Evidence		Per	forman	ce Crit	eria		Scope/range relating to Performance Criteria											
No		1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10		

# UNIT VR538 (H0X5 04) Install and Remove Emergency Traffic Management

								Knowl	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
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# UNIT VR538 (H0X5 04) Install and Remove Emergency Traffic Management

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Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for, installing and testing new and/or replacement drainage

#### Key words

Pipework; Manholes; Inspection chambers; Culverts; Soak-a-ways; Cess pools; Septic tanks; Reed beds; Overflows; Treatment plants; Interceptors

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

## Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements and manufacturers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to at least four of the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of access equipment
  - 2.4 safe use and storage of materials, tools and equipment
  - 2.5 specific risks to health

## Scope/range related to Performance Criteria (cont)

- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation
- 7 demonstration of work skills to measure, mark out, lay, position, fit, level, plumb, align, secure and test
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 install and test new and/or replacement, foul and/or surface water drainage for at least two of the following to given working instructions
- 9.1 pipework (e.g. clay, concrete, metal, or plastic)
  - 9.2 inspection chambers (e.g. brick, concrete, metal or plastic)
  - 9.3 surface water systems (e.g. cells, culverts, high capacity, linear, balancing ponds, interceptors, recycling equipment, soak-a-ways, sustainable urban drainage systems)
  - 9.4 foul water systems (e.g. cess pools, septic tanks, reed beds, treatment plants)
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### **Knowledge and Understanding**

You need to know and understand:

#### Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

#### **Performance Criteria 2**

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

#### Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### **Performance Criteria 4**

#### Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

#### **Performance Criteria 5**

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
- 2.1 fires, spillages, injuries
- 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and regulations governing the installation and construction of drainage systems

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

#### Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 excavate trenches and provide trench support
  - 8.2 confirm ground conditions, site and excavations are suitable for the drainage installation work
  - 8.3 prepare bedding for pipework
  - 8.4 determine levels and gradients
  - 8.5 identify the differences between surface and foul water drainage
  - 8.6 lay, position, level, plumb, align, fit, fix and secure new and replacement drainage systems
  - 8.7 construct structures of a drainage system (storm alleviation, culverts, inspection chambers, lateral drains, overflows, sumps, filter drains, sustainable urban drainage systems)

#### Scope/range relating to Knowledge and Understanding (cont)

#### Methods of work (cont)

- 8.8 assemble pre-cast components (metal, concrete, clay and plastic) of a drainage system structure (inspection chambers, street iron work)
- 8.9 connect and seal new systems to existing systems
- 8.10 conduct smoke, water, ball and close circuit television tests on drainage systems
- 8.11 work with plant and machinery
- 8.12 use hand tools, power tools and equipment
- 8.13 work at height and below ground level
- 8.14 use access equipment
- 9 team work and communication
- 10 needs of other occupations associated with installing drainage

#### **Problems**

- 11 those arising from information, resources and methods of work 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

#### Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

#### **Protect work**

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

### Scope/range relating to Knowledge and Understanding (cont)

#### Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 pipes, fittings and ancillary components
  - 15.2 pre-cast (metal, concrete, clay or plastic) components
  - 15.3 bricks, blocks and sandbags
  - 15.4 granular materials, aggregates, cement, concrete, mortars and sand
  - 15.5 sealant materials (adhesives, compounds, solvents)
  - 15.6 hand and/or powered tools and ancillary equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to install drainage

#### Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	ope/ra	nge re	lating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10

								Knowl	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17

						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	
	Bate	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

#### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 erecting and striking proprietary formwork

### Key words

Tie systems; Prop systems; Walls; Columns; Beams; Soffits; Slabs; Channels; Bases

#### **Performance Criteria**

You must be able to:

- 1 interpret the given information relating to the work and resources to confirm its relevance
- 2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
- 3 select the required quantity and quality of resources for the methods of work
- 4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- 5 comply with the given contract information to carry out the work efficiently to the required specification
- 6 complete the work within the allocated time, in accordance with the programme of work

#### Scope/range related to Performance Criteria

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements, manufacturers' and suppliers' information related to the work to be carried out
- 2 avoidance of risk by complying with the given information relating to at least four of the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of access equipment
  - 2.4 safe use and storage of materials, tools and equipment
  - 2.5 specific risks to health
- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment
- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation
- 7 demonstration of work skills to measure, mark out, align, position, level, plumb, secure, remove and store
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 erect and strike proprietary formwork to given working instructions
- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

#### Knowledge and Understanding

You need to know and understand:

## Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

#### Performance Criteria 2

#### Safe work practices

- K4 the level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how health and safety control equipment should be used

#### Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### Selection of resources

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### **Performance Criteria 4**

#### Minimise the risk of damage

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

## **Performance Criteria 5**

#### Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how maintenance of tools and equipment is carried out

#### Performance Criteria 6 Allocated time

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

## **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

## Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

## Hazards

3 those identified by risk assessment, method of work, manufacturers' and suppliers' technical information, statutory regulations and official guidance

## Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
- 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

## Information

5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' and suppliers' information

## Scope/range relating to Knowledge and Understanding (cont)

## Legislation and official guidance

6 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

## Maintenance

7 operative care of hand tools and/or portable power tools and ancillary equipment

## Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
  - 8.1 erect and strike proprietary formwork for walls, columns, beams, soffits, channels, ground slabs and bases
  - 8.2 attach and remove safe lifting provision
  - 8.3 position, secure and remove prop and tie systems
  - 8.4 apply release agents
  - 8.5 move, clean, stack and store proprietary forms
  - 8.6 work with plant and machinery
  - 8.7 use hand tools, power tools and equipment
  - 8.8 work at height
  - 8.9 use access equipment
- 9 team work and communication
- 10 needs of other occupations associated with erecting and striking proprietary formwork

## Scope/range relating to Knowledge and Understanding (cont)

## Problems

- 11 those arising from information, resources and methods of work
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedure

## Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

## Protect work

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

## Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
  - 15.1 proprietary formwork and associated items
  - 15.2 tie systems
  - 15.3 prop systems
  - 15.4 protective coatings
  - 15.5 fixtures and fittings
  - 15.6 access equipment
  - 15.7 hand and/or powered tools and equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to erect and strike proprietary formwork

## Security procedures

17 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sc	:ope/ra	nge re	lating t	o Perfo	ormand	e Crite	ria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10

								Knowl	edge a	and Ur	ndersta	anding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17
																		<u> </u>
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						Scop	e/rang	e relati	ng to	Knowl	edge a	nd Un	dersta	nding				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
																		<u> </u>
																		<u> </u>

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

#### **Unit Summary**

This standard is about:

- 1 awareness of relevant current statutory requirements and official guidance
- 2 responsibilities, to self and others, relating to workplace health, safety and welfare
- 3 personal behaviour in the workplace
- 4 security in the workplace

#### Key words

Hazards; Safety; Welfare; Regulations; Security; Signs; Control Equipment; PPE; RPE; LEV; Legislation; Risk assessment

#### **Performance Criteria**

You must be able to:

- 1 comply with all workplace health, safety and welfare legislation requirements at all times
- 2 recognise hazards, associated with the workplace, that have not been previously controlled, and report them in accordance with organisational procedures
- 3 accept responsibility for, and comply with, organisational policies and procedures in order to contribute to health, safety and welfare
- 4 comply with and support all organisational security arrangements and approved procedures

#### Scope/range related to Performance Criteria

- 1 avoidance of risk by complying with given information relating to the following
  - 1.1 induction
  - 1.2 briefings
  - 1.3 application of prior training (safe use of health and safety control equipment)
- 2 adherence to statutory requirements and/or safety notices and warning signs displayed in the workplace or on equipment
- 3 hazards created by changing circumstances in the workplace are reported
- 4 show personal behaviour which demonstrates active responsibility for general workplace health, safety and welfare
- 5 comply with organisational policies and procedures relating to the following
  - 5.1 consideration of others
  - 5.2 interpretation of given instructions to maintain safe systems of work
  - 5.3 contributing to discussions (offer and provide feedback)
  - 5.4 maintaining quality working practices
  - 5.5 contributing to the maintenance of workplace welfare facilities
  - 5.6 storage and use of equipment provided to keep people safe
  - 5.7 disposal of waste and/or consumable items
- 6 comply with organisational procedures for maintaining the security of the workplace
  - 6.1 during the working day
  - 6.2 on completion of the day's work
  - 6.3 from unauthorised personnel (other operatives and/or the general public)
  - 6.4 from theft

#### Knowledge and Understanding

You need to know and understand:

#### **Performance Criteria 1**

#### Workplace health, safety and welfare

- K1 what and why health, safety and welfare legislation is relevant to the occupational area
- K2 what health, safety and welfare legislation **notices and warning signs** are relevant to the occupational area and associated equipment
- K3 how to comply with control measures identified by risk assessments and safe systems of work
- K4 why, when and how health and safety control equipment should be used

#### **Performance Criteria 2**

#### **Recognition of hazards**

- K5 the hazards associated with the work environment
- K6 how changing circumstances can create hazards
- K7 the method of **reporting** hazards in the workplace

## **Performance Criteria 3**

#### Organisational policies and procedures

- K8 what the organisational **policies and procedures** are for health, safety and welfare
- K9 how to take active **responsibility** for health, safety and welfare
- K10 how individual actions and behaviour may affect others
- K11 what the types of **fire extinguishers** are and how and when they are used

## Knowledge and Understanding (cont)

# Performance Criteria 4

#### Security arrangements

K12 how security arrangements are implemented in the workplace

#### Scope/range relating to Knowledge and Understanding

#### **Fire extinguishers**

1 water, CO2, foam, powder, vaporising liquid and their uses

#### Hazards

- 2 associated with the occupational area
  - 2.1 resources, workplace, environment, substances, asbestos, equipment, obstructions, storage, services and work activities
  - 2.2 current Health and Safety Executive top ten safety risks
  - 2.3 current Health and Safety Executive top five health risks

#### Health and safety control equipment

- 3 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 3.1 collective protective measures
  - 3.2 personal protective equipment (PPE)
  - 3.3 respiratory protective equipment (RPE)
  - 3.4 local exhaust ventilation (LEV)

#### Notices and warning signs

4 statutory requirements and/or official guidance for the occupation and the work area

#### Scope/range relating to Knowledge and Understanding (cont)

#### **Policies and procedures**

- 5 in accordance with organisational requirements
  - 5.1 dealing with accidents and emergencies associated with the type of work being undertaken and the work environment
  - 5.2 methods of receiving or sourcing information
  - 5.3 reporting
  - 5.4 stopping work
  - 5.5 evacuation
  - 5.6 fire risks and safe exit procedures
  - 5.7 consultation and feedback

#### Reporting

6 organisational recording procedures and statutory requirements

#### Responsibility

- 7 behaviour that affects health, safety and welfare
  - 7.1 recognising when to stop work in the face of serious and imminent danger
  - 7.2 contributing to discussions and providing feedback
  - 7.3 reporting changed circumstances and incidents in the workplace
  - 7.4 adhering to the environmental requirements of the workplace

#### Security

8 organisational procedures relating to the workplace, general public, site personnel and resources

			Performan	ce Criteria	a		Scope/rang	e relating t	o Performa	nce Criteria	a
No	Description of Evidence	1	2	3	4	1	2	3	4	5	6

			Knowledge and Understanding											Scope/range relating to Knowledge and Understanding								
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	1	2	3	4	5	6	7	8	
																					-	

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

### **Unit Summary**

This standard is about:

- 1 productive communication with line management, colleagues and customers
- 2 interpreting information
- 3 planning and carrying out productive work practices
- 4 working with others or as an individual

#### Key words

Communication; Colleagues; Customer; Procedures; Records; Relationships; Zero/low carbons

#### **Performance Criteria**

You must be able to:

- 1 communicate with others
- 2 follow organisational procedures to plan the sequence of work in order to conform to productive work practices and maintain records
- 3 maintain good work relationships

#### Scope/range related to Performance Criteria

- 1 communicate with line management, colleagues or customers to ensure work is carried out productively
- 2 respect the needs of others when communicating
- 3 interpret procedures and use resources to plan the sequence of work, so that it is completed productively
- 4 complete documentation as required by the organisation
- 5 work productively with line management, colleagues, customers or other people
- 6 apply the principles of equality and diversity

#### **Knowledge and Understanding**

You need to know and understand:

#### **Performance Criteria 1**

#### **Communicate with others**

- K1 how to use methods of communication with other workplace personnel and customers
- K2 how to communicate to ensure work is productive

#### **Performance Criteria 2**

#### **Follow procedures**

- K3 how organisational procedures are applied to plan and carry out productive work
- K4 how to maintain documentation in accordance with organisational procedures
- K5 how to contribute to zero/low carbon outcomes in the built environment

#### **Performance Criteria 3**

#### Work relationships

- K6 how to maintain good work relationships
- K7 how to apply the principles of equality and diversity

#### Scope/range relating to Knowledge and Understanding

#### Communication

listening, written, oral, visual and electronic

#### **Documentation**

2 job cards, worksheets, material/resources lists and time sheets

#### Procedures

- 3 use of resources for own and other's work requirements
- 4 allocation of appropriate work to employees
- 5 organisation of work sequence
- 6 reduction of carbon emissions

#### Relationships

- 7 individuals, workplace groups (customer and operative, operative and line management, own occupation and allied occupations)
- 8 show consideration for the needs of individuals by applying the principles of equality and diversity

	Description of Evidence	Per	formance Crit	eria		Scope/range relating to Performance Criteria								
No		1	2	3	1	2	3	4	5	6				

			Knov	vledge	and Un	derstar	nding		Scope/range relating to Knowledge and Understanding							
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	1	2	3	4	5	6	7	8

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

## UNIT VR643 (FN2V 04) Move, Handle or Store Resources

### **Unit Summary**

This standard is about:

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting aids or equipment to move, handle or store occupational resources
- 4 moving, handling and storing occupational resources to maintain useful condition

#### Key words

Storage; Handling; Kinetic lifting, Lifting aids

## UNIT VR643 (FN2V 04) Move, Handle or Store Resources

#### **Performance Criteria**

You must be able to:

- 1 comply with the given information to move, handle or store resources
- 2 comply with the given relevant legislation and official guidance to move, handle or store occupational resources and maintain safe work practices
- 3 select the required quantity and quality of resources for the method of moving, handling or storing occupational resources
- 4 prevent damage to the occupational resources and surrounding environment
- 5 comply with the given occupational resource information to carry out the work efficiently to the required guidance
- 6 complete the work within the allocated time, in accordance with the programme of work

## Scope/range related to Performance Criteria

- 1 interpret given information to move, handle or store occupational resources, and use and store lifting aids and equipment
- 2 avoidance of risk by complying with the given information relating to at least two of the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of lifting aids
  - 2.4 protection of the environment

#### Scope/range related to Performance Criteria (cont)

- 3 selection of resources associated with moving, handling or storing
  - 3.1 lifting and handling aids
  - 3.2 container(s)
  - 3.3 fixing, holding and securing systems
- 4 protect the occupational resources and their surrounding area from damage
- 5 dispose of waste and packaging in accordance with legislation
- 6 maintain a clean work space
- 7 work skills to move, position, store, secure and/or use lifting aids and kinetic lifting techniques
- 8 move, handle or store occupational resources to meet product information and organisational requirements relating to at least three of the following
  - 8.1 sheet material
  - 8.2 loose material
  - 8.3 bagged or wrapped material
  - 8.4 fragile material
  - 8.5 tools and equipment
  - 8.6 components
  - 8.7 liquids
- 9 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or customer

#### Knowledge and Understanding

You need to know and understand:

#### Performance Criteria 1

#### Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources** and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed
- K4 how to obtain information to use and store lifting aids and equipment

#### Performance Criteria 2

#### Safe work practices

- K5 the level of understanding operatives must have of **information** for relevant current **legislation and official guidance** and how it is applied
- K6 the types of **fire extinguishers** and how and when they are used
- K7 how **emergencies** should be responded to and who should respond
- K8 the organisational security procedures for tools, equipment and personal belongings
- K9 what the accident reporting procedures are and who is responsible for making the report
- K10 why, when and how health and safety control equipment should be used

#### Knowledge and Understanding (cont)

#### **Performance Criteria 3**

#### Selection of resources

- K11 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K12 how the **resources** should be handled and how any **problems** associated with the **resources** are reported
- K13 the organisational procedures to select **resources**, why they have been developed and how they are used
- K14 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

#### **Performance Criteria 4**

#### Prevent damage

- K15 how to **protect work** from damage and the purpose of protection
- K16 why **disposal of waste** should be carried out safely and how it is achieved

#### **Performance Criteria 5**

#### Comply with occupational resource information

K17 how **methods of work**, to meet the specification, are carried out and **problems** reported

#### Performance Criteria 6 Allocated time

K18 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

#### Scope/range relating to Knowledge and Understanding

#### **Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

#### Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with:
  - 2.1 fires, spillages, injuries etc
  - 2.2 emergencies relating to occupational activities

#### **Fire extinguishers**

3 water, CO2, foam, powder and their uses

#### Hazards

4 those identified by method of work, manufacturers' technical information, statutory regulations and official guidance

#### Health and safety control equipment

- 5 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
  - 5.1 collective protective measures
  - 5.2 personal protective equipment (PPE)
  - 5.3 respiratory protective equipment (RPE)
  - 5.4 local exhaust ventilation (LEV)

#### Scope/range relating to Knowledge and Understanding (cont)

#### Information

6 technical, product and regulatory: oral, written, graphical presentation

#### Legislation and official guidance

7 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, in confined spaces, below ground level, at height, with tools and equipment, with materials and substances, with movements/storage of materials and by manual handling and mechanical lifting

#### Methods of work

- 8 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used for moving, handling and storing occupational resources
- 9 needs of other occupations associated with the resources

#### Problems

- 10 those arising from information, resources and methods of work 10.1 own authority to rectify
  - 10.2 organisational reporting procedures

#### Programme

- 11 types of progress charts, timetables and estimated times
- 12 organisational procedures for reporting circumstances which will affect the work programme

#### Scope/range relating to Knowledge and Understanding (cont)

#### Protect work

13 against damage from general workplace activities, other occupations and adverse weather conditions

#### Resources

- 14 types, quantity, quality, sizes and sustainability of standard and/or specialist:
  - 14.1 occupational resources
  - 14.2 lifting and handling aids
  - 14.3 containers
  - 14.4 fixing, holding and securing systems

#### Security procedures

15 site, workplace, company and operative

			Per	forman	ce Crit	eria			Sco	pe/rang	je relati	ng to Pe	erforma	nce Crit	teria	
No	Description of Evidence	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9

								Kno	wledg	ge and	l Unde	rstand	ding						
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18

					Sc	ope/rar	nge rela	ting to	Knowle	edge an	d Unde	rstand	ing			
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
																<u> </u>

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

#### **Unit Summary**

This standard describes how to excavate, prepare and form foundations for vehicle restraint systems (VRS). This standard is designed for a VRS installer working on highways.

This standard is about:

- excavating

- preparing
- form foundations

for vehicle restraint systems.

#### Key words

VRS; fence; hole; highways

#### **Performance Criteria**

You must be able to:

- 1 carry out work in accordance with relevant health and safety legislation, risk assessment requirements and company policies
- 2 carry out all work in accordance with instructions and specifications
- 3 select and prepare tools, equipment and resources ready for use
- 4 use recommended working practices to excavate ground to conform with required specifications
- 5 place concrete and compact to form for foundation strength, size, profile and finish
- 6 establish appropriate provision to support the future installation of posts
- 7 carry out work in a manner which causes minimal damage to the surrounding area
- 8 set up signs and barriers to protect people and create a safe working environment
- 9 monitor and maintain signs and protective barriers in good working order within your level of responsibility
- 10 maintain tools, equipment and resources in a clean and serviceable condition throughout work
- 11 dispose of waste and excess materials safely to minimise environmental risk according to legal requirements

#### **Knowledge and Understanding**

You need to know and understand:

- K1 the health and safety requirements associated with excavation work
- K2 the health and safety requirements associated with sign and barrier installation including permits-to-work schemes
- K3 where to obtain instructions on how to carry out your work such as drawings, specifications, schedules, method statements, standard operating procedures (SOPs), manufacturers' guidelines or verbal instructions
- K4 the types of equipment used for excavating post holes and strip trenches
- K5 the procedures to follow when uncharted services or substructures are located
- K6 the procedures to follow if services or substructures are damaged
- K7 how and when temporary supports should be used to support excavations
- K8 the precautions to take when shafts or hidden substructures are located
- K9 the reasons for traffic management when working adjacent to highways and other transport systems
- K10 the types of signs and protective barriers used within the fencing industry
- K11 the storage requirements of signs and protective barriers
- K12 the methods and ratios used for mixing, placing, compacting, finishing and curing concrete
- K13 the methods used for forming pockets in concrete for future fixing

#### Knowledge and Understanding (cont)

- K14 the techniques used for casting-in fixing items
- K15 the legal requirements controlling the disposal of waste and excess materials
- K16 the potential impact of your work on the surrounding area and how to minimise this

						Perfo	rmance C	riteria				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11

			Knowledge and Understanding														
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16

Notes/Comments

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Candidate	Date	
Assessor	Date	
Internal Verifier	Date	

Candidate Guidance and Portfolio for the SVQ2 Construction Operations and Civil Engineering Services (Construction): Highways Maintenance SCQF level 5 and SVQ2 Construction Operations and Civil Engineering Services (Construction): Roadbuilding SCQF level 5 © SQA 2012

#### **Unit Summary**

This standard describes how to excavate, prepare and form foundations for vehicle restraint systems. This standard is designed for a VRS installer working on highways.

This standard covers the following in relation to vehicle restraint systems:

- Place, position and fix posts

- Place and fix components to posts

#### Key words

Fence; post; VRS; install; barriers

#### **Performance Criteria**

You must be able to:

- 1 carry out work in accordance with relevant health and safety legislation, risk assessment requirements and company policies
- 2 obtain components of specified type, material, quality and grade
- 3 select and prepare tools, equipment and resources into a safe condition ready for use
- 4 use recommended working practices to position and fix permanent supports at specified lines, levels and angles
- 5 use recommended working practices to assemble VRS systems to meet specifications
- 6 use recommended working practices to position, tension and securely fix assembled components at specified lines and levels
- 7 maintain the integrity of protective finishes during fixing
- 8 carry out work in a manner which causes minimal damage to the surrounding area
- 9 monitor signs and protective barriers in good working order within your level of responsibility
- 10 maintain tools, equipment and resources in a clean and serviceable condition throughout work
- 11 dispose of waste and excess materials safely to minimise environmental risk according to legal requirements

#### **Knowledge and Understanding**

You need to know and understand:

- K1 the health and safety requirements associated with placing, positioning and fixing VRS systems
- K2 the health and safety requirements associated with sign and barrier installation including permit-to-work schemes
- K3 the reasons for traffic management when working adjacent to highways and other transport systems
- K4 the types of signs and protective barriers used within the fencing industry
- K5 the methods used for assembling fencing and fencing components
- K6 the different types and construction of vehicle safety fencing systems
- K7 the components used in association with vehicle safety fencing including their uses
- K8 the methods used for handling and positioning posts
- K9 the methods used for providing temporary supports and aligning and levelling posts set in concrete
- K10 the reasons for, and methods of, setting posts to allow for tensioning
- K11 the factors that affect the positioning and the method of fixing posts and components
- K12 the types of backfill and methods of consolidation
- K13 the precautions to take to avoid distortion during the tensioning process
- K14 the methods used for fixing fence materials to posts
- K15 the different types of protective finishes

#### Knowledge and Understanding (cont)

- K16 the reasons for and methods of maintaining integrity of protective finishes
- K17 the precautions to take to avoid distortions to fencing/fencing materials
- K18 how to deal with difficulties experienced during work within the relevant levels of responsibility
- K19 the reasons for the use of transitions and how they are installed
- K20 the reasons for the use of a terminal and how they are installed
- K21 the potential impact of your work on the surrounding area and how to minimise this

						Perfo	rmance C	riteria				
No	Description of Evidence	1	2	3	4	5	6	7	8	9	10	11
												ļ
												ļ

			Knowledge and Understanding           K1         K2         K3         K4         K5         K6         K7         K8         K9         K10         K11         K12         K13         K14         K16         K17         K18         K19         K21																			
No	Description of Evidence	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18	K19	K20	K21

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate	Date	
Assessor	 Date	
Internal Verifier	Date	

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# Section 4 — Blank recording forms

This section consists of the blank forms referred to in Section 2 for you to photocopy. You may find these useful when compiling your portfolio.

## Portfolio title page

Your name	
Job title	
Name of employer/ training provider/ college	
Their address	
Telephone number	
SVQ	
Level	
Units submitted for assessment	
Mentor's name	
(Please provide details of mentor's experience)	
Assessor's signature	Date

## Personal profile

Name	
Address	
Postcode	
Fusicode	
Home telephone	
Work telephone	
Job title	

#### **Relevant experience**

Description of	
your current job	
Previous work	
experience	
experience	
Qualifications and	
training	
Volunton	
Voluntary	
work/interests	

# Personal profile (cont)

Name of employer/training provider/college	
Address	
Postcode	
Telephone	
number	
Type of business	
Number of staff	
Structure of	
organisation (include chart or	
diagram if	
available)	

## **Contents checklist**

You might also find it useful to complete the following checklist as you work your way through your portfolio. This will help you to see if you have included all the relevant items. Once you have completed your portfolio, you will be able to use this checklist again as a contents page, by inserting the relevant page or section numbers in the right hand column.

Section	Completed	Page/Section number
Title page for the portfolio		
Personal profile		
Your own personal details		
A brief CV or career profile		
A description of your job		
Information about your employer/training provider/college		
Unit assessment plans		
Unit progress record		
Completed Element achievement records for each Unit		
Signed by yourself, your assessor and the internal verifier (where relevant)		
Evidence reference numbers included		
Index of evidence (with cross- referencing information completed)		
Evidence (with reference numbers)		
Observation records		
Details of witnesses (witness testimony sheets)		
Personal statements		
Products of performance		

### Index of evidence

SVQ title and level	
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Evidence number	Description of evidence	Included in portfolio (Yes/No) If no, state location	Sampled by the IV (initials and date)

### Personal statement

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Units, Elements, PC, and Range covered

Candidate's signature

Date \_\_\_\_\_

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### **Observation record**

Unit/Element(s)	
Candidate's name	
Date of observation	
Evidence index number	

Skills/activities observed	PC and Range covered	

Knowledge and Understanding apparent from this observation

Other Units/Elements to which this evidence may contribute

Assessor comments and feedback to candidate

I can confirm the candidate's performance was satisfactory.

Assessor's signature

Date

### Witness testimony

SVQ title and level	
Candidate's name	
Evidence index no	
Where applicable, evidence number to which this testimony relates	
Element(s)	
Range	
Date of evidence	
Witness name	
Designation/relationship to candidate	
Details of testimony	

I can confirm the candidate's performance was satisfactory.

 Witness signature
 Date

Witness (please tick the appropriate box):

Holds L and D Unit 9D/9D1, A1/A2 or D32/D33 qualifications

Is familiar with the SVQ standards to which the candidate is working

# Record of questions and candidate's answers

Unit	:				
Eler	nent(s)				
Evic	Evidence index number				
Circ	Circumstances of assessment				
l iet	of questions and car	didata's responses			
Q					
A					
Q					
А					
Q					
A					
Q					
•					
A					
0					
Q					
A					
Asse	ssor's signature		Date		
Cand	idate's signature		Date		