

# **LANTRA**

**Core Skills Signposting for:**

**SVQ 2 in  
Land-based Engineering  
at SCQF Level 5**

**and**

**SVQ 3 in  
Land-based Engineering  
at SCQF Level 6**

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## Introduction

To compliment the environmental and land-based sector's suite of National Occupational Standards, the following guidance on how the units can be used by candidates to demonstrate their competence against core skills has been developed.

In analysing both the performance criteria and knowledge and understanding requirements that are needed by candidates to achieve the specific units, perceived opportunities for the development of core skill competencies have been identified. This is particularly relevant to those working towards the SVQ units.

This process of signposting has been based on the concept of a 'standard' or 'typical' portfolio, because of this it is not possible to say that this signposting will provide an exact match for all candidates. Candidates would not be expected to achieve the sign-posted core skill through the identified opportunities alone.

The process employed to complete this document involved looking at each of the units to identify a base line of evidence requirements, in both terms of performance and product evidence. With this base line established, each of the core skills were then matched against these evidence requirements to identify potential coverage and level.

From the process of analysis it has been possible to identify a range of potential coverage of the core skills. This analysis also identifies the levels at which the core skills can be achieved. The achievable level is perceived as being dependent upon the level of the candidate's responsibility and the complexity of the evidence provided.

Where a unit is common across more than one level of the actual SVQ, opportunities have been identified up to the highest perceived level.

The findings are summarised in a matrix format for each of the units, identifying which core skill applies and at which level.

## Communication

<b>Reading and Understanding</b>	
SCQF Level 4	Read, understand and evaluate a straightforward document related to your work.
SCQF Level 5	Read, understand and evaluate a document related to your work which either presents and analyses factual content, or presents a sustained point of view or central argument.
SCQF Level 6	Read, understand and evaluate a complex document related to your work which either: contains a set of facts and an analysis of them, or a sustained argument. It will be a substantial and detailed text with complex sentences, specialist words, and concepts that may be unfamiliar to you. It is likely to have more than one purpose.
<b>Writing</b>	
SCQF Level 4	Produce a document, or related documents, totalling 300 words or more, which conveys several items of information, opinions or ideas.
SCQF Level 5	Produce a document, or related documents, totalling 500 words or more, which conveys several items of information, opinions, ideas or aspects of a subject.
SCQF Level 6	Produce a well-structured document, or a collection of related documents, totalling 700 words or more, which conveys several items of complex information, opinions or ideas.
<b>Speaking and Listening</b>	
SCQF Level 4	Take part in a straightforward discussion with at least one other person, or give a short presentation to one or more people, lasting a minimum of three minutes including time for questions.
SCQF Level 5	Make a substantial contribution to a discussion with at least one other person, or make a presentation to others lasting a minimum of four minutes including time for questions.
SCQF Level 6	Make a substantial contribution to a discussion on a complex topic with at least one other person, or make a presentation to others on a complex topic lasting a minimum of five minutes, including time for questions.

## Numeracy

<b>Using Number</b>	
SCQF Level 4	Carry out a variety of straightforward number tasks related to your work which involve calculations requiring a minimum of two steps.
SCQF Level 5	Apply a wide range of numerical skills to solve work related problems.
SCQF Level 6	Apply a wide range of numerical and statistical skills to solve complex work related problems.
<b>Measuring</b>	
SCQF Level 4	Read and use a straightforward scale either on an instrument such as a ruler or on a graph.
SCQF Level 5	Not required at this level
SCQF Level 6	Not required at this level
<b>Use the graphical format to find out information</b>	
SCQF Level 4	Extract and interpret information from at least one of the following: a table, chart, graph, diagram.
SCQF Level 5	Interpret information from a series of straightforward related graphical forms such as tables, graphs, charts or diagrams.
SCQF Level 6	Extract, analyse and interpret information from complex graphical forms such as qualitative graphs, or graphs where part of the axis has been omitted, histograms, graphs showing relationships or complex variables, graphs requiring interpolation and extrapolation.
<b>Use graphical format to communicate information</b>	
SCQF Level 4	Select an appropriate graphical form and use it to communicate information through at least one of the following: table; chart; graph; diagram.
SCQF Level 5	Select an appropriate graphical form and use it to communicate information through at least one of the following: table, chart, graph, diagram.
SCQF Level 6	Select an appropriate graphical form and use it to communicate information such as a table, line graph, bar chart, pie chart, histogram, diagram, qualitative form.

<b>Information and Communication Technology</b>	
<b>Performing ICT Operations</b>	
SCQF Level 4	Carry out ICT activities related to your work which involve straightforward operations
SCQF Level 5	Carry out ICT activities related to your work including using hardware responsibly and presenting information in an appropriate mode.
SCQF Level 6	Carry out a range ICT activities related to your work including resolving common hardware and software problems and presenting information in an appropriate mode.
<b>Processing Information</b>	
SCQF Level 4	Carry out a range of straightforward ICT activities related to your work which involve application software.
SCQF Level 5	Carry out a range of non-routine ICT activities related to your work which involve application software.
SCQF Level 6	Carry out a range of complex ICT activities related to your work which involve application software, selecting and launching application software, entering, processing and output of data.
<b>Accessing Information</b>	
SCQF Level 4	Use ICT to locate information relevant to your work, locating information in different formats from a range of local or remote data sources, using appropriate search techniques, and selecting relevant information which matches criteria..
SCQF Level 5	Use ICT to locate information relevant to your work locating information in different formats from a range of local or remote data sources, applying a search strategy, evaluating information found against given criteria and evaluating search strategy.
SCQF Level 6	Use ICT to locate information relevant to your work, locating information in different formats from a range of local or remote data sources, applying a complex search strategy, evaluating information found against chosen criteria and evaluating search strategy.
<b>Keeping information safe</b>	
SCQF Level 4	Demonstrate safe practice in using ICT to handle information by recognising security risks and acting accordingly.
SCQF Level 5	Demonstrate safe practice in using ICT to handle information by keeping data secure.
SCQF Level 6	Demonstrate safe practice in using ICT to handle information by keeping data secure, using passwords, using virus protection software, backing up data and maintain a personal file area.

## Problem Solving

<b>Critical Thinking</b>	
SCQF Level 4	Investigate reasons why a straightforward problem related to your work has arisen. The problem will occur in a familiar situation. A number of steps will need to be taken to deal with the problem.
SCQF Level 5	Investigate and analyse why a non-routine problem in your workplace has arisen. The problem is likely to involve either a situation which is unfamiliar to you, or a familiar situation where you need to clarify the relationships between the contributing factors.
SCQF Level 6	Investigate and analyse a complex problem related to your work. The problem is likely to involve a situation which is unfamiliar to you and the analysis of complex or unfamiliar variables.
<b>Planning And Organising</b>	
SCQF Level 4	Plan, organise and carry out a straightforward activity to deal with the problem, working out an action plan, choosing and obtaining the resources you will need and carrying out your action plan.
SCQF Level 5	Plan, organise and carry out an activity to deal with the problem, working out an action plan, choosing and obtaining the resources you will need, and carrying out your action plan.
SCQF Level 6	Plan, organise and carry out your suggested approach, working out an action plan, choosing and obtaining resources and carrying out your action plan.
<b>Reviewing And Evaluating</b>	
SCQF Level 4	Check how well your approach to the problem solving activity worked in practice, identifying the strengths and weaknesses of your problem solving activity, suggesting ways of solving similar problems in the future based on this experience.
SCQF Level 5	Check how well the problem solving activity worked in practice, working out how you will decide whether each stage of your problem solving activity has been successful, gathering evidence to help you decide how well your problem solving activity worked, deciding how effective each stage has been and devising ways of solving similar problems in future.
SCQF Level 6	Check how well the problem solving activity worked in practice, identifying the criteria you will use to decide how effective every aspect of your problem solving activity has been, gathering evidence relevant to chosen criteria, recommending ways of solving similar problems in future.

## Working with Others

<b>Work co-operatively with others</b>	
SCQF Level 4	Work co-operatively with at least one other person to identify the main roles within the activity, what your role is, what tasks you will do and how they relate to others. Carry out your role, adapting your actions and behaviour, asking for and providing information and support.
SCQF Level 5	Work co-operatively with at least one other person to identify the main roles within the activity, what your role is, what tasks you will do and how these relate to others. Organise and carry out your role, pro-actively seek and offer support to and from others.
SCQF Level 6	Work co-operatively with at least one other person to analyse and organise the requirements of your own role and the roles of others. Negotiate working methods, modify your behaviour, and motivate yourself and others to progress towards a common goal.
<b>Reviewing co-operative contribution</b>	
SCQF Level 4	Check how well you and others contributed by deciding on measures you can use to judge how well you co-operated with others, asking for feedback on your contribution making a decision on how well you co-operated with others, and how well the co-operative working arrangements operated overall, setting objectives for how you could improve your own co-operative working skills and future co-operative working arrangements.
SCQF Level 5	Check how well you and others involved contributed to the co-operative working activity, developing criteria to evaluate your own and others contribution, asking for feedback, using your chosen criteria to decide how well you co-operated with others, and how well the co-operative working arrangements operated overall, justifying your decision with supporting evidence, setting objectives for improving your own co-operative working skills and future co-operative working arrangements.
SCQF Level 6	Check how well you and others involved contributed to the co-operative working activity, developing criteria to evaluate your own and others contribution, seeking and considering feedback and advice, using your chosen criteria and feedback to evaluate how well you co-operated and co-operative working arrangements worked overall, using conclusions and reflection to set objectives for improving own co-operative working skills and make recommendations on any future co-operative working arrangements.



## Qualification Structure for SVQ 2 in Land-based Engineering at SCQF Level 5

There are three routes within the SVQ 2 in Land-based Engineering at SCQF level 5 as follows:

Agriculture  
Arboriculture/Forestry  
Ground Care

For all routes each candidate is required to achieve the nine Core Mandatory units, plus four units from Section One.

In addition each candidate on the Agriculture or Arboriculture/Forestry route must achieve three units from Section Two and each candidate on the Ground Care route must achieve two units from Section two.

Note – the candidate can take one unit from Section One as part of the selection for Section Two if not already undertaken in Section One.

There is also one additional unit available for all routes which can be undertaken if required but is not compulsory.

### Core Mandatory units (For all routes complete all)

Unit LANLEO4	Core land-based engineering principles – Mechanical principles
Unit LANLEO5	Core land-based engineering principles – Tools and equipment
Unit LANLEO6	Core land-based engineering principles – Material preparation, shaping and assembling
Unit LANLEO8	Core land-based engineering principles – Servicing and maintenance
Unit LANLEO9	Core land-based engineering principles – Thermal joining processes
Unit LANLEO10	Core land-based engineering principles – Cooling and lubrication
Unit LANLEO22	Service and repair electrical systems on land-based equipment
Unit LANCS4	Establish and maintain working relationships with others
Unit LANCS2	Monitor and maintain health, safety and security

### Section One (For all routes complete 4)

Unit LANLEO12	Service and repair clutches, fluid flywheels and torque convertors on land-based equipment
Unit LANLEO13	Service and repair mechanical transmission on land-based equipment
Unit LANLEO14	Service and repair braking systems on land-based equipment
Unit LANLEO15	Service and repair wheeled and tracked steering systems on land-based equipment
Unit LANLEO16	Service and repair tyres and tracks on land-based equipment

**Section Two (For Agriculture or Arboriculture/Forestry route complete 3. For Ground Care route complete 2. Note – for all routes one unit can be from Section One if not already undertaken)**

Unit LANLEO17	Service and repair land-based cutting and mowing equipment
Unit LANLEO18	Service and repair land-based harvesting and processing equipment
Unit LANLEO19	Service and repair land-based soil preparation, cultivation and plant establishment equipment
Unit LANLEO20	Service and repair land-based transport, handling and storage equipment

**Additional Unit (This unit is not compulsory but can be undertaken if required)**

Unit LANLEO2	Organisational procedures in land-based engineering
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## Core Skills Signposting

Communication									
	Reading and Understanding			Writing			Speaking and Listening		
	SCQ F Leve 14	SCQ F Leve 15	SCQ F Leve 16	SCQ F Leve 14	SCQ F Leve 15	SCQF Level 6	SCQF Level 4	SCQF Level 5	SCQF Level 6
<b>Core mandatory Units</b>									
LANCS2	X						X		
LANCS4	X	X		X	X		X	X	
LANLEO4	X			X					
LANLEO5									
LANLEO6									
LANLEO8	X			X					
LANLEO9									
LANLEO10									
LANLEO22	X								
<b>Optional Units</b>									
LANLEO12	X								
LANLEO13	X								
LANLEO14	X								
LANLEO15	X								
LANLEO16	X								
LANLEO17									
LANLEO18									
LANLEO19									
LANLEO20									
<b>Additional Unit</b>									
LANLEO2	X	X		X	X				

Numeracy										
	Using Number Skills			Measuring	Use the graphical format to find out information			Use graphical format to communicate information		
	SCQF Level 4	SCQF Level 5	SCQF Level 6	SCQF Level 4	SCQF Level 4	SCQF Level 5	SCQF Level 6	SCQF Level 4	SCQF Level 5	SCQF Level 6
<b>Core mandatory Units</b>										
CS2										
CS4	X	X		X	X	X				
LANLEO4	X			X	X					
LANLEO5	X			X						
LANLEO6	X									
LANLEO8	X									
LANLEO9	X				X					
LANLEO10	X									
LANLEO22	X			X	X					
<b>Optional Units</b>										
LANLEO12	X			X	X					
LANLEO13	X			X	X					
LANLEO14	X			X						
LANLEO15	X									
LANLEO16	X									
LANLEO17										
LANLEO18										
LANLEO19										
LANLEO20										
<b>Additional Unit</b>										
LANLEO2					X					

## Information and Communication Technology

	Performing ICT Operations			Processing Information			Accessing Information			Keeping Information Safe		
	SC QF Level 4	SC QF Level 5	SC QF Level 6	SC QF Level 4	SCQF Level 5	SC QF Level 6	SC QF Level 4	SC QF Level 5	SC QF Level 6	SC QF Level 4	SC QF Level 5	SC QF Level 6
<b>Core mandatory Units</b>												
CS2												
CS4												
LANLEO4												
LANLEO5												
LANLEO6												
LANLEO8												
LANLEO9												
LANLEO10												
LANLEO22												
<b>Optional Units</b>												
LANLEO12												
LANLEO13												
LANLEO14												
LANLEO15												
LANLEO16												
LANLEO17												
LANLEO18												
LANLEO19												
LANLEO20												
<b>Additional Unit</b>												
LANLEO2	X	X	X							X	X	X

Problem Solving									
	Critical Thinking			Planning and Organising			Reviewing and Evaluating		
	SCQ F Level 14	SCQ F Level 15	SCQ F Level 16	SCQF Level 4	SCQF Level 5	SCQ F Level 16	SCQF Level 4	SCQ F Level 15	SCQF Level 6
<b>Core mandatory Units</b>									
CS2									
CS4	X	X		X	X		X	X	
LANLEO4									
LANLEO5									
LANLEO6									
LANLEO8									
LANLEO9									
LANLEO10									
LANLEO22	X	X		X			X		
<b>Optional Units</b>									
LANLEO12				X	X				
LANLEO13	X	X		X			X		
LANLEO14				X	X				
LANLEO15				X	X				
LANLEO16				X					
LANLEO17				X	X				
LANLEO18				X	X				
LANLEO19				X	X				
LANLEO20				X	X				
<b>Additional Unit</b>									
LANLEO2	X			X			X		

## Working with Others

	Work co-operatively with others			Reviewing co-operative contribution		
	SCQF Level 4	SCQF Level 5	SCQF Level 6	SCQF Level 4	SCQF Level 5	SCQF Level 6
<b>Core mandatory Units</b>						
CS2						
CS4	X	X		X	X	
LANLEO4						
LANLEO5						
LANLEO6						
LANLEO8						
LANLEO9						
LANLEO10						
LANLEO22						
<b>Optional Units</b>						
LANLEO12	X			X		
LANLEO13	X					
LANLEO14	X					
LANLEO15						
LANLEO16	X	X				
LANLEO17						
LANLEO18						
LANLEO19						
LANLEO20						
<b>Additional Unit</b>						
LANLEO2	X			X		

## Qualification Structure for SVQ in Land-based Engineering at SCQF

### Level 6

There are three routes within the SVQ in Land-based Engineering at SCQF level 6 as follows:

Agriculture  
Arboriculture/Forestry  
Ground Care

For all routes each candidate is required to achieve the eight Core Mandatory units, plus two units from Section One and three units from Section Two.

Note – the candidate can take one unit from Section One as part of the selection for Section Two if not already undertaken in Section One.

#### Core Mandatory units (For all routes complete all)

Unit LANLEO1	Recognise and reduce hazards in the land-based engineering work area
Unit LANLEO2	Organisational procedures in land-based engineering
Unit CFA BAA625	Agree how to manage and improve own performance in a business environment
Unit LANLEO3	Customer care in land-based engineering
Unit LANLEO7	Core land-based engineering principles – Calculations
Unit LANLEO11	Service and repair engines on land-based equipment
Unit LANLEO24	Service and repair hydraulic systems and components on land-based equipment
Unit LANLEO30	Inspect and test land-based equipment

#### Section One (For all routes complete 2)

Unit LANLEO23	Service and repair electronic control and monitoring systems on land-based equipment
Unit LANLEO26	Service and repair powershift, hydrostatic, CVT transmissions on land-based equipment
Unit LANLEO29	Monitor the handover and installation of land-based equipment

#### Section Two (For all routes complete 3, one of which can be from Section One if not already undertaken)

Unit LANLEO21	Service and repair suspension systems on land-based equipment
Unit LANLEO25	Service and repair pneumatic systems and components on land-based equipment
Unit LANLEO27	Refrigerant handling
Unit LANLEO28	Service and repair land-based air-conditioning/refrigeration equipment



## Core Skills Signposting

Communication									
	Reading And Understanding			Writing			Speaking and Listening		
	SCQF Level 4	SCQF Level 5	SCQF Level 6	SCQF Level 4	SCQF Level 5	SCQF Level 6	SCQF Level 4	SCQF Level 5	SCQF Level 6
<b>Core Mandatory Units</b>									
CFABAA625	X						X		
LANLEO1	X	X		X	X				
LANLEO2	X	X		X	X				
LANLEO3	X								
LANLEO7	X			X					
LANLEO11	X			X					
LANLEO24	X								
LANLEO30	X			X					
<b>Optional Units</b>									
LANLEO23									
LANLEO26	X								
LANLEO29									
LANLEO21	X								
LANLEO25	X								
LANLEO27	X								
LANLEO28	X	X							

## Numeracy

	Using Number Skills			Measuring	Use the graphical format to find out information			Use graphical format to communicate information		
	SC QF Level 4	SC QF Level 5	SC QF Level 6		SCQF Level 4	SCQF Level 5	SCQF Level 6	SCQF Level 4	SCQF Level 5	SCQF Level 6
<b>Core Mandatory Units</b>										
CFABAA625										
LANLEO1										
LANLEO2					X					
LANLEO3										
LANLEO7	X	X		X	X			X		
LANLEO11	X			X	X					
LANLEO24	X	X		X	X	X				
LANLEO30	X			X	X					
<b>Optional Units</b>										
LANLEO23										
LANLEO26										
LANLEO29										
LANLEO21	X				X					
LANLEO25	X			X	X					
LANLEO27										
LANLEO28	X			X	X					

## Information and Communication Technology

	Performing ICT Operations			Processing Information			Accessing Information			Keeping Information Safe		
	SC QF Level 4	SCQF Level 5	SC QF Level 6	SCQF Level 4	SC QF Level 5	SC QF Level 6	SC QF Level 4	SC QF Level 5	SC QF Level 6	SC QF Level 4	SC QF Level 5	SC QF Level 6
<b>Core Mandatory Units</b>												
CFABAA625												
LANLEO1												
LANLEO2	X	X	X							X	X	X
LANLEO3												
LANLEO7	X	X		X						X		
LANLEO11												
LANLEO24												
LANLEO30	X	X	X	X								
<b>Optional Units</b>												
LANLEO23	X	X	X									
LANLEO26												
LANLEO29												
LANLEO21												
LANLEO25												
LANLEO27												
LANLEO28												

Problem Solving									
	Critical Thinking			Planning and Organising			Reviewing and Evaluating		
	SCQ F Leve 14	SCQF Level 5	SCQ F Leve 16	SCQF Level 4	SCQ F Leve 15	SCQ F Leve 16	SCQ F Leve 14	SCQF Level 5	SCQF Level 6
<b>Core Mandatory Units</b>									
CFABAA625		X			X				
LANLEO1	X			X			X		
LANLEO2	X			X			X		
LANLEO3	X			X			X		
LANLEO7									
LANLEO11	X			X					
LANLEO24				X	X				
LANLEO30					X	X			
<b>Optional Units</b>									
LANLEO23				X					
LANLEO26	X	X		X			X		
LANLEO29									
LANLEO21	X			X			X		
LANLEO25	X	X		X	X		X		
LANLEO27									
LANLEO28					X	X			

## Working with Others

	Work co-operatively with others			Providing co-operative contribution		
	SCQF Level 4	SCQF Level 5	SCQF Level 6	SCQF Level 4	SCQF Level 5	SCQF Level 6
<b>Core Mandatory Units</b>						
CFABAA625		X		X		
LANLEO1	X			X		
LANLEO2	X			X		
LANLEO3	X	X		X		
LANLEO7						
LANLEO11						
LANLEO24						
LANLEO30						
<b>Optional Units</b>						
LANLEO23						
LANLEO26	X			X		
LANLEO29	X	X		X		
LANLEO21	X	X				
LANLEO25	X			X		
LANLEO27						
LANLEO28	X			X		

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