

Level 2 NVQ Diploma in Construction Operations and Civil Engineering Services - Roadbuilding (Construction)

Qualification Specification

Contents

	Page
Introduction	3
Qualification profile	3
Qualification Structure	4
Centre requirements	8
Support for candidates	8
Links to National Standards / NOS mapping	8
Assessment	9
Internal quality assurance	9
Adjustments to assessment	10
Results enquiries and appeals	10
Certification	10
Learning outcomes and assessment criteria	11

Introduction

The ProQual Level 2 NVQ Diploma in Construction Operations and Civil Engineering Services - Roadbuilding (Construction) qualification provides a nationally recognised qualification for those working in the construction and the built environment sector, who

. It is designed to assess occupational competence in the workplace where candidates are required to demonstrate skills and knowledge to a level required in the construction industry.

The awarding body for this qualification is ProQual Awarding Body (www.proqualab.com) and the regulatory body is the Office of Qualifications and Examinations Regulation (Ofqual); It is also endorsed by the sector body for construction - CITB.

The qualification has been accredited onto the Regulated Qualifications Framework (RQF) and is published on Ofqual's Register of Qualifications.

Qualification Profile Level 2 NVQ Diploma in Construction Operations and Civil Engineering Services - Roadbuilding (Construction)

ProQual Level 2 NVQ Diploma in Construction Operations

and Civil Engineering Services - Roadbuilding

(Construction)

Ofqual qualification number 603/0733/X

Level 2

Total Qualification Time 290 hours (2200 GLH)

Pass or fail

Assessment Internally assessed and verified by centre staff

External quality assurance by ProQual verifiers

Qualification start date 8/11/16

Qualification end date

Qualification title

Entry Requirements

There are no formal entry requirements for this qualification.

Centres should carry out an **initial assessment** of candidate skills and knowledge to identify any gaps and help plan the assessment.

Qualification Structure

To achieve the qualification candidates must complete 4 units:

- two Mandatory units for all Pathways
- one Optional unit for all Pathways
- one Mandatory unit from one Pathway

Mandatory units for all Pathways:

Mandatory Units for all Pathways – complete both units		
Unit Ref.	Title	Level
M/508/6537	Conforming to general health, safety and welfare in the workplace	1
T/508/6538	Conforming to productive working practices in the workplace	2

Optional units for all Pathways:

Optional Units for all Pathways – ONE unit		
Unit Ref.	Title	Level
T/503/9560	Establishing work area protection and safety in the workplace	2
K/503/9622	Segregating the area for highways works in the workplace	2

Pathways – one unit from one Pathway

Pathway 1:	Bituminous Paving - Machine
Pathway 2:	Concrete Paving - Machine
Pathway 3:	Slurry/Micro Surfacing - Machine
Pathway 4:	Slurry/Micro Surfacing - Manual
Pathway 5:	Surface Dressing - Machine
Pathway 6:	High Friction Surfacing - Machine
Pathway 7:	High Friction Surfacing - Manual
Pathway 8:	Planing - Machine
Pathway 9:	Road Recycling - Machine
Pathway 10:	Soil Stabilisation - Machine
Pathway 11:	Surface Retexturing - Machine
Pathway 12:	Pavement Marking - Machine
Pathway 13	Pavement Marking - Manual operations
Pathway 14:	Pavement Marking - Road Studs

Pathway 1: Bituminous Paving - Machine

Mandatory Unit for Pathway 1		
Unit Ref.	Title	Level
T/506/5088	Preparing, operating and controlling operations of road	2
1/300/3000	plant or machinery in the workplace	

Pathway 2: Concrete Paving - Machine

Mandatory Unit for Pathway 2		
Unit Ref.	Title	Level
T/506/5088	Preparing, operating and controlling operations of road	2
1/300/3088	plant or machinery in the workplace	

Pathway 3: Slurry/Micro Surfacing - Machine

Mandatory Unit for Pathway 3		
Unit Ref.	Title	Level
T/506/5088	Preparing, operating and controlling operations of road plant or machinery in the workplace	2

Pathway 4: Slurry/Micro Surfacing - Manual

Mandatory Unit for Pathway 4		
Unit Ref.	Title	Level
H/504/6567	Manually applying specialist road surfacing in the	2
11/307/030/	workplace	

Pathway 5: Surface Dressing – Machine

Mandatory Unit for Pathway 5		
Unit Ref.	Title	Level
T/506/5088	Preparing, operating and controlling operations of road	2
1/300/3088	plant or machinery in the workplace	

Pathway 6: High Friction Surfacing – Machine

Mandatory Unit for Pathway 6		
Unit Ref.	Title	Level
T/506/5088	Preparing, operating and controlling operations of road plant or machinery in the workplace	2

Pathway 7: High Friction Surfacing – Manual

Mandatory Unit for Pathway 7		
Unit Ref.	Title	Level
H/504/6567	Manually applying specialist road surfacing in the workplace	2

Pathway 8: Planing - Machine

Mandatory Unit for Pathway 7		
Unit Ref.	Title	Level
T/506/5088	Preparing, operating and controlling operations of road	2
1/300/3088	plant or machinery in the workplace	

Pathway 9: Road Recycling - Machine

Mandatory Unit for Pathway 9					
Unit Ref.	nit Ref. Title Level				
T/506/5088	Preparing, operating and controlling operations of road plant or machinery in the workplace	2			

Pathway 10: Soil Stabilisation – Machine

Mandatory Unit for Pathway 10							
Unit Ref.	Title	Level					
T/506/5088	Preparing, operating and controlling operations of road	2					
	plant or machinery in the workplace						

Pathway 11: Surface Retexturing – Machine

Mandatory Unit for Pathway 11						
Unit Ref.	Title	Level				
T/506/5088	Preparing, operating and controlling operations of road	2				
1/300/3088	plant or machinery in the workplace					

Pathway 12: Pavement Marking – Machine

Mandatory Unit for Pathway 12						
Unit Ref.	Title Level					
T/506/5088	Preparing, operating and controlling operations of road 2 plant or machinery in the workplace					

Pathway 13: Pavement Marking – Manual

Mandatory Unit for Pathway 13							
Unit Ref.	Title Level						
M/503/9394	Applying and removing pavement markings manually in the workplace	2					

Pathway 14: Pavement Marking – Road Studs

Mandatory Unit for Pathway 14						
Unit Ref.	Title Level					
T/503/9395	Installing and removing permanent road studs in the workplace	2				

Centre Requirements

Centres must be approved to offer this qualification. If your centre is not approved please complete and submit form **ProQual Additional Qualification Approval Application**.

Staff

Staff delivering this qualification must be appropriately qualified and/or occupationally competent.

Assessors/Internal Quality Assurance

Assessors for each unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Assessors and internal quality assurance verifiers for competence-based units or qualifications will normally need to hold appropriate assessor or internal quality assurance qualifications.

Support for Candidates

Materials produced by centres to support candidates should:

- enable them to track their achievements as they progress through the learning outcomes and assessment criteria;
- provide information on where ProQual's policies and procedures can be viewed;
- provide a means of enabling Internal and External Quality Assurance staff to authenticate evidence

Links to National Standards / NOS mapping

National Occupational Standards (NOS) are owned by a Sector Skills Council or Standard Setting Body and they describe the skills, knowledge and understanding needed to undertake a particular task or job at different levels of competence.

The structure and units of this qualification are based on NOS for the construction sector developed by CITB.

Assessment

This qualification is competence-based, candidates must demonstrate the level of competence described in the units. Assessment is the process of measuring a candidate's skill, knowledge and understanding against the standards set in the qualification.

The qualifications must be assessed in a work environment and in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment, and it must be internally assessed by an appropriately experienced and qualified assessor.

Each candidate is required to produce a portfolio of evidence which demonstrates their achievement of all of the learning outcomes and assessment criteria for each unit.

Evidence can include:

- observation report by assessor
- assignments/projects/reports
- professional discussion
- witness testimony
- candidate product
- worksheets
- record of oral and written questioning
- Recognition of Prior Learning

Learning outcomes set out what a candidate is expected to know, understand or be able to do.

Assessment criteria specify the standard a candidate must meet to show the learning outcome has been achieved.

Learning outcomes and assessment criteria can be found from page 11.

Internal Quality Assurance

An internal quality assurance verifier confirms that assessment decisions made in centres are made by competent and qualified assessors, that they are the result of sound and fair assessment practice and that they are recorded accurately and appropriately.

Adjustments to Assessment

Adjustments to standard assessment arrangements are made on the individual needs of candidates. ProQual's Reasonable Adjustments Policy and Special Consideration Policy sets out the steps to follow when implementing reasonable adjustments and special considerations and the service that ProQual provides for some of these arrangements.

Centres should contact ProQual for further information or queries about the contents of the policy.

Results Enquiries and Appeals

All enquiries relating to assessment or other decisions should be dealt with by centres, with reference to ProQual's Enquiries and Appeals Procedures.

Certification

Candidates who achieve the requirements for this qualification will be awarded:

- A certificate listing all units achieved, and
- A certificate giving the full qualification title -

ProQual Level 2 NVQ Diploma in Construction Operations and Civil Engineering Services - Roadbuilding (Construction)

Claiming certificates

Centres may claim certificates for candidates who have been registered with ProQual and who have successfully achieved the qualification. All certificates will be issued to the centre for successful candidates.

Unit certificates

If a candidate does not achieve all of the units required for a qualification, the centre may claim a unit certificate for the candidate which will list all of the units achieved.

Replacement certificates

If a replacement certificate is required a request must be made to ProQual in writing. Replacement certificates are labelled as such and are only provided when the claim has been authenticated. Refer to the Fee Schedule for details of charges for replacement certificates.

Learning Outcomes and Assessment Criteria

Unit M/508/6537 Conforming to General Health, Safety and Welfare in the Workplace

Lea will	rning Outcome - The learner :	Asses	sment Criterion - The learner can:
1	Comply with all workplace health, safety and welfare legislation requirements.	1.1	Comply with information from workplace inductions and any health, safety and welfare briefings attended relevant to the occupational area.
		1.2	Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements.
		1.3	Comply with statutory requirements, safety notices and warning notices displayed within the workplace and/or on equipment.
		1.4	State why and when health and safety control equipment, identified by the principles of protection, should be used relating to types, purpose and limitations of each type, the work situation, occupational use and the general work environment, in relation to: - collective protective measures - personal protective equipment (PPE) - respiratory protective equipment (RPE) - local exhaust ventilation (LEV).
		1.5	State how the health and safety control equipment relevant to the work should be used in accordance with the given instructions.
		1.6	State which types of health, safety and welfare legislation, notices and warning signs are relevant to the occupational area and associated equipment.
		1.7	State why health, safety and welfare legislation, notices and warning signs are relevant to the occupational area.
		1.8	State how to comply with control measures that have been identified by risk assessments and safe systems of work.

Learning Outcome - The learner Assessment Criterion - The learner can: will: 2 Recognise hazards associated 2.1 Report any hazards created by changing with the workplace that have circumstances within the workplace in not been previously controlled accordance with organisational procedures. and report them in accordance 2.2 List typical hazards associated with the work with organisational procedures. environment and occupational area in relation to resources, substances, asbestos, equipment, obstructions, storage, services and work activities. 2.3 List the current Health and Safety Executive top ten safety risks. 2.4 List the current Health and Safety Executive top five health risks. 2.5 State how changing circumstances within the workplace could cause hazards. 2.6 State the methods used for reporting changed circumstances, hazards and incidents in the workplace. 3 Comply with organisational 3.1 Interpret and comply with given instructions to policies and procedures to maintain safe systems of work and quality contribute to health, safety and working practices. welfare. 3.2 Contribute to discussions by offering/providing feedback relating to health, safety and welfare. 3.3 Contribute to the maintenance of workplace welfare facilities in accordance with workplace welfare procedures. 3.4 Safely store health and safety control equipment in accordance with given instructions. 3.5 Dispose of waste and/or consumable items in accordance with legislation. 3.6 State the organisational policies and procedures for health, safety and welfare, in relation to: dealing with accidents and emergencies associated with the work and environment methods of receiving or sourcing information reporting stopping work evacuation fire risks and safe exit procedures consultation and feedback. 3.7 State the appropriate types of fire extinguishers

relevant to the work.

Lea will	rning Outcome - The learner :	Asses	ssment Criterion - The learner can:
		3.8	State how and when the different types of fire extinguishers are used in accordance with legislation and official guidance.
4	Work responsibly to contribute to workplace health, safety and welfare whilst carrying out work	4.1	Demonstrate behaviour which shows personal responsibility for general workplace health, safety and welfare.
	in the relevant occupational area.	4.2	State how personal behaviour demonstrates responsibility for general workplace health, safety and welfare, in relation to: — recognising when to stop work in the face of serious and imminent danger to self and/or others — contributing to discussions and providing feedback — reporting changed circumstances and incidents in the workplace — complying with the environmental requirements of the workplace.
		4.3	Give examples of how the behaviour and actions of individuals could affect others within the workplace.
5	Comply with and support all organisational security arrangements and approved procedures.	5.1	Provide appropriate support for security arrangements in accordance with approved procedures: - during the working day - on completion of the day's work - for unauthorised personnel (other operatives and the general public) - for theft.
		5.2	State how security arrangements are implemented in relation to the workplace, the general public, site personnel and resources.

Unit T/508/6538 Conforming to Productive Working Practices in the Workplace

Learning Outcome - The learner will:		Asses	Assessment Criterion - The learner can:		
1	Communicate with others to establish productive work practices.	1.1	Communicate in an appropriate manner with line management, colleagues and/or customers to ensure that work is carried out productively.		
		1.2	Describe the different methods of communicating with line management, colleagues and customers.		
		1.3	Describe how to use different methods of communication to ensure that the work carried out is productive.		
2	Follow organisational procedures to plan the sequence of work.	2.1	Interpret relevant information from organisational procedures in order to plan the sequence of work.		
		2.2	Plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed productively.		
		2.3	Describe how organisational procedures are applied to ensure work is planned and carried out productively, in relation to: - using resources for own and other's work requirements - allocating appropriate work to employees - organising the work sequence - reducing carbon emissions.		
		2.4	Describe how to contribute to zero/low carbon work outcomes within the built environment.		
3	Maintain relevant records in accordance with the	3.1	Complete relevant documentation according to the occupation as required by the organisation.		
	organisational procedures.	3.2	Describe how to complete and maintain documentation in accordance with organisational procedures, in relation to: – job cards – worksheets – material/resource lists – time sheets.		
		3.3	Explain the reasons for ensuring documentation is completed clearly and within given timescales.		
4	Maintain good working relationships when conforming to productive working practices.	4.1	Carry out work productively, to the agreed specification, in conjunction with line management, colleagues, customers and/or other relevant people involved in the work to maintain good working relationships.		

- 4.2 Apply the principles of equality and diversity and respect the needs of individuals when communicating and working with others.
- 4.3 Describe how to maintain good working relationships, in relation to:
 - individuals
 - customer and operative
 - operative and line management
 - own and other occupations.
- 4.4 Describe why it is important to work effectively with line management, colleagues and customers.
- 4.5 Describe how working relationships could have an effect on productive working.
- 4.6 Describe how to apply principles of equality and diversity when communicating and working with others.

Unit T/503/9560 Establishing Work Area Protection and Safety in the Workplace

Learning Outcome - The learner will:		Asses	sment Criterion - The learner can:
1	Interpret the given information relating to the work and resources when establishing work area protection and safety.	1.1	Interpret and extract relevant information from drawings, plans, risk assessments, method statements, specifications, schedules, site inspections and manufacturers' information.
	procession and surecy.	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
		1.4	Describe different types of information, their source and how they are interpreted in relation to: — drawings, plans, risk assessments, method statements, specifications, schedules, site inspection reports, manufacturers' information, regulations and official guidance associated with protecting work
2	Know how to comply with relevant legislation and official guidance when establishing work area protection and safety.	2.1	Describe their 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.
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.
3	Maintain safe and healthy working practices when establishing work area protection and safety.	3.1	Use health and safety control equipment and access equipment safely to carry out the activity in accordance with current legislation and organisational requirements when establishing work area protection and safety.

Assessment Criterion - The learner can:

- 3.2 Comply with information relating to specific risks to health when establishing work area protection and safety.
- Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to establishing work area protection and safety, and the types, purpose and limitations of each type, the work situation and general

work environment, in relation to:

- collective protective measures
- personal protective equipment (PPE)
- respiratory protective equipment (RPE)
- local exhaust ventilation (LEV).
- 3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.
- 3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
- Select the required quantity and quality of resources for the methods of work to establish work area protection and safety.
- 4.1 Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.
- 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:
 - safety and security barriers
 - protection and safety notices
 - temporary structures
 - signs and lighting
 - hand and/or powered tools and equipment.
- 4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.
- Explain why the organisational procedures have been developed and how they are used for the selection of required resources.

Learning Outcome - The learner will:		Assessment Criterion - The learner can:	
		4.5	Describe any potential hazards associated with the resources and methods of work.
		4.6	Describe how to calculate quantity, length and area associated with the method/procedure to establish work area protection and safety.
5	Minimise the risk of damage to the work and surrounding area when	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	establishing work area protection and safety.	5.2	Minimise damage and maintain a clean work space.
		5.3	Dispose of waste in accordance with current legislation.
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.
6	Complete the work within the allocated time when establishing work area protection and safety.	6.1	Demonstrate completion of the work within the allocated time.
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to:
			 types of progress charts, timetables and estimated times
			 organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to	7.1	Demonstrate the following work skills when establishing work area protection and safety:
	establish work area protection and safety to the required specification.		 measuring, setting out, positioning, assembling, constructing, securing and dismantling.
		7.2	Install, maintain and remove temporary protection and safety arrangements for the work area, to given working instructions, relating to barriers/temporary structures and one of the following:

- protection and safety notices
- safety lighting.
- 7.3 Safely use materials, hand tools, portable power tools and ancillary equipment.
- 7.4 Safely store the materials, tools and equipment used when establishing work area protection and safety.
- 7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - plan for the protection and the safety of the work and surrounding environment
 - install, check and maintain the protection and safety equipment
 - dismantle and remove protection and safety equipment
 - install safety notices
 - install lighting systems
 - use hand tools, power tools and equipment
 - work at height
 - use access equipment.
- 7.6 Describe the needs of other occupations and how to effectively communicate within a team when establishing work area protection and safety.
- 7.7 Describe how to maintain the tools and equipment used when establishing work area protection and safety.

Unit K/503/9622 Segregating the Area for Highways Works in the Workplace

Learning Outcome - The learner will:		Assessment Criterion - The learner can:	
1	Interpret the given information relating to the work and resources when segregating the area for highways works.	1.1	Interpret and extract relevant information from drawings, risk assessments, method statements, specifications, schedules, site inspections and manufacturers' information.
	nignways works.	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
		1.4	Describe different types of information, their source and how they are interpreted in relation to:
			 drawings, specifications, risk assessments, method statements, schedules, manufacturers' information, statutory regulations, current legislation, official guidance and Codes of Practice governing traffic management relating to the highways works.
2	Know how to comply with relevant legislation and official guidance when segregating the area for highways works.	2.1	Describe their 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.
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.
3	Maintain safe and healthy working practices when segregating the area for highways works.	3.1	Use health and safety control equipment safely to carry out the activity in accordance with current legislation and organisational requirements when segregating the area for highways works.
		3.2	Comply with information relating to specific risks to health when segregating the area for highways works.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection,

Assessment Criterion - The learner can:

should be used, relating to segregating the area for highways works, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:

- collective protective measures
- personal protective equipment (PPE)
- respiratory protective equipment (RPE)
- local exhaust ventilation (LEV).
- 3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.
- 3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, traffic incidents and other task-related hazards.
- Select the required quantity and quality of resources for the methods of work to segregate the area for highways works.
- 4.1 Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.
- 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:
 - signs, lights, guards and portable traffic lights
 - pedestrian and vehicular traffic control systems
 - tools and ancillary equipment.
- 4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.
- 4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
- 4.5 Describe any potential hazards associated with the resources and methods of work.
- 4.6 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to segregate the area for highways works.

Learning Outcome - The learner will:		Assessment Criterion - The learner can:		
5	Minimise the risk of damage to the work and surrounding area when segregating the area for highways works.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.	
		5.2	Minimise damage and maintain a clean work space.	
		5.3	Dispose of waste in accordance with current legislation.	
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.	
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.	
t s	Complete the work within the allocated time when segregating the area for highways works.	6.1	Demonstrate completion of the work within the allocated time.	
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: - types of progress charts, timetables and estimated times - organisational procedures for reporting	
			circumstances which will affect the work programme.	
7	Comply with the given contract information to segregating the area for highways works to the required specification.	7.1	Demonstrate the following work skills when segregating the area for highways works: — measuring, locating, setting out, positioning, assembling and removing.	
		7.2	Segregate the area for live highways works in compliance with recognised current legislation and official guidance and given working instructions, relating to the following: - access and egress to site - work activity and storage of resources - signs, lighting and guarding, portable traffic signals for traffic management control.	

- 7.3 Remove signs, lighting and guarding, portable traffic signals in compliance with recognised current legislation and official guidance.
- 7.4 Safely use materials, tools and ancillary equipment.
- 7.5 Safely store the materials, tools and equipment used when segregating the area for highways works.
- 7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - plan for site safety, storage of materials and traffic management control around the highways works
 - set out signs, traffic lights, guarding for traffic management control
 - check and maintain operation of traffic control equipment
 - dismantle and remove signs, traffic lights, guarding
 - use hand tools, power tools and equipment.
- 7.7 Describe the needs of other occupations and how to effectively communicate within a team when segregating the area for highways works.
- 7.8 Describe how to maintain the hand tools and/or portable power tools, ancillary equipment and traffic control equipment used when segregating the area for highways works.

Unit T/506/5088

Preparing, operating and controlling operations of road plant or machinery in the workplace

Learning Outcome - The		A	sment Criterion - The learner can:
learner will:		Asses	sment Criterion - The learner can:
1	Interpret the given information relating to the work and resources when preparing, operating and controlling road plant or machinery.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, risk assessments, method statements and manufacturers' information.
		1.2	Comply with information and/or instructions derived from risk/COSHH assessments and method statements.
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
		1.4	Describe different types of information, their source and how they are interpreted in relation to:
			 drawings, specifications, schedules, method statements, risk assessments, organisational and manufacturers' information and current regulations and official guidance governing operations of plant or machinery.
sequence in which th preparing, operating controlling road plan	Organise with others the sequence in which the	2.1	Organise the work according to given information or instructions.
	controlling road plant or machinery are to be carried	2.2	Communicate with team members and other associated occupations about the plant or machinery operations and the work to be carried out.
		2.3	Describe how to communicate ideas between team members.
3	Know how to comply with relevant legislation and official guidance when preparing, operating and controlling road plant or machinery.	3.1	Describe their responsibilities regarding potential accidents health hazards and the environment, whilst working: – in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials
		3.2	and by manual handling and mechanical lifting. Describe the organisational security procedures for plant and/or machinery, tools, equipment and

Assessment Criterion - The learner can:

personal belongings in relation to site, workplace, company and operative.

- 3.3 Explain what the accident reporting procedures are and who is responsible for making reports.
- Maintain safe and healthy working practices when preparing, operating and controlling road plant or machinery.
- 4.1 Use health and safety control equipment safely to carry out the activity in accordance with current legislation and organisational requirements when preparing, operating and controlling road plant or machinery.
- 4.2 Comply with information relating to specific risks to health when preparing, operating and controlling road plant or machinery.
- 4.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to preparing, operating and controlling road plant or machinery, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:
 - collective protective measures
 - personal protective equipment (PPE)
 - respiratory protective equipment (RPE)
 - local exhaust ventilation (LEV).
- 4.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.
- 4.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.
- Request and select the required quantity and quality of resources when preparing, operating and controlling road plant or machinery.
- 5.1 Request and select resources associated with own work in relation to tools, ancillary equipment and/or accessories.
- 5.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources, and how they should be used correctly, in relation to:
 - consumables, lubricants, fuels
 - attachments

- paving materials (bituminous; concrete; aggregates, resins, membranes, calcined bauxite, catalyst, doping agents, fibres, pigment, resins, primers)
- recycling materials
- pavement marking materials
- equipment/accessories.
- 5.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.
- 5.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
- 5.5 Describe any potential hazards associated with the resources and methods of work.
- 5.6 Describe how to calculate weight, quantity, length and area associated with the method/procedure to prepare, operate and control road plant or machinery.
- 6 Minimise the risk of damage to the work and surrounding area when preparing, operating and controlling road plant or machinery.
- 6.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures
- 6.2 Minimise damage and maintain a clean work space.
- 6.3 Dispose of waste in accordance with current legislation.
- 6.4 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
- 6.5 Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.

	ning Outcome - The ner will:	Assess	sment Criterion - The learner can:
7	Complete the work within the allocated time when preparing, operating and controlling road plant or machinery.	7.1	Demonstrate completion of the work within the allocated time.
		7.2	Shut down and secure the plant.
		7.3	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: – types of progress charts, timetables and estimated times – organisational procedures for reporting
			circumstances which will affect the work programme.
Comply with the given contract information to form and/or maintain roads by preparing, operating and controlling road plant or machinery to the required specification.	8.1	Demonstrate the following work skills when preparing, operating and controlling road plant or machinery:	
	controlling road plant or machinery to the required		 checking, setting up, adjusting, communicating, operating, controlling, securing, laying, stripping, compacting, marking, levelling and finishing.
		8.2	Prepare, operate, control operations and shut down road plant or machinery to given working instructions relating to one of the following areas:
			 Bituminous paving: for 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, spray injection patching, thermal repair
			 Concrete paving: as operator of one of the following – concrete paver, placer/spreader, slip form paver, texturing/curing machine
			 Slurry/microsurfacing: as operator of one of the following – applicator, tanker, tipper grab, sweeper, roller
		8.3	Prepare, operate, control operations and shut down road plant or machinery to given working instructions relating to one of the following areas:
			 Surface dressing: as operator of one of the following – tanker, chipper, spray bar, tanker and chipper combined, roller, loader, linked tipper, sweeper
			 High friction surfacing: as operator of one of the following – tanker, spray bar, chipper, sweeper

- Planing operations: as operator of one of the following – up to 500 mm without elevator; 500 mm
- -1 m with elevator; over 1 m with elevator
- Road recycling: as operator
- Soil stabilisation: as operator
- Prepare, operate, control operations and shut down road plant or machinery to given working instructions relating to one of the following areas:
 - Surface retexturing: as operator for one of the following – mechanical retexturing, mechanical repair, flailing, high pressure jetting, grinding, sweeper
 - Pavement marking: as steersman/operator for white liner vehicle
 - Highways drainage: as operator for one of the following – gully emptier, sweeper.
- 8.5 Safely use plant or machinery, tools, ancillary equipment and/or accessories.
- 8.6 Safely store the plant or machinery, tools and equipment and/or accessories used when preparing, operating and controlling road plant or machinery.
- 8.7 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - identify the work requirements and your occupational role
 - identify the type of plant or machinery required
 - confirm the area and location of work, the operations, safety and security requirements
 - prepare, set up and carry out checks for performance of the plant or machinery
 - carry out and control operations according to your role and the required performance of plant or machinery
 - stop, shut down operations and secure plant or machinery
 - use equipment and/or accessories.
- 8.8 Describe the needs of other occupations and how to effectively communicate within a team when preparing, operating and controlling road plant or machinery.

Assessment Criterion - The learner can:

8.9 Describe how to maintain the plant or machinery and tools and equipment used when preparing, operating and controlling road plant or machinery.

Unit H/504/6567 Manually Applying Specialist Road Surfacing in the Workplace

Learning Outcome - The learner will:		Assessment Criterion - The learner can:		
1	Interpret the given information relating to the work and resources when manually applying specialist road surfacing.	1.1	Interpret and extract relevant information from drawings, risk assessments, method statements, specifications, schedules and manufacturers' information.	
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.	
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.	
		1.4	Describe different types of information, their source and how they are interpreted in relation to:	
			 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and current regulations relating to slurry/microsurfacing or high friction. 	
2	Know how to comply with relevant legislation and official guidance when manually applying specialist road surfacing.	2.1	Describe their 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.	
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.	
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.	
3	Maintain safe and healthy working practices when manually applying specialist road surfacing.	3.1	Use health and safety control equipment safely to carry out the activity in accordance with current legislation and organisational requirements when manually applying specialist road surfacing.	
		3.2	Comply with information relating to specific risks to health when manually applying specialist road surfacing.	
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection,	

Assessment Criterion - The learner can:

should be used, relating to manually applying specialist road surfacing, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:

- collective protective measures
- personal protective equipment (PPE)
- respiratory protective equipment (RPE)
- local exhaust ventilation (LEV).
- 3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.
- 3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
- Select the required quantity and quality of resources for the methods of work to manually apply specialist road surfacing.
- 4.1 Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.
- 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:
 - primers, epoxy or thermoplastic resins,
 bituminous emulsion, catalyst, doping agents, fibres,
 rubber, pigment
 - aggregate, calcined bauxite
 - masking tape
 - mixer and mixer pot
 - heater
 hand and/or powered tools and equipment.
- 4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.
- 4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
- 4.5 Describe any potential hazards associated with the resources and methods of work.

Learning Outcome - The learner will:		Assessment Criterion - The learner can:		
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to manually apply specialist road surfacing.	
d s n	Minimise the risk of damage to the work and surrounding area when	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.	
	manually applying specialist road surfacing.	5.2	Minimise damage and maintain a clean work space.	
		5.3	Dispose of waste in accordance with current legislation.	
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.	
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.	
6 Complete the work within the allocated time when manually applying specialist road surfacing.	6.1	Demonstrate completion of the work within the allocated time.		
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to:	
			 types of progress charts, timetables and estimated times 	
			 organisational procedures for reporting circumstances which will affect the work programme. 	
7	Comply with the given contract information to manually apply specialist road surfacing to the required specification.	7.1	Demonstrate the following work skills (as applicable to the surfacing) when manually applying specialist road surfacing:	
			 measuring, setting out, marking, positioning, drying, cleaning, masking, priming, mixing, spraying, heating and decanting, spreading, rolling, curing, inspecting and communicating. 	
		7.2	Prepare for and manually apply specialist road surfacing to given working instructions, using one of the following methods:	
			slurry/microsurfacing	
			 high friction surfacing (cold applied) 	

- high friction surfacing (hot applied)
- surface dressing.
- 7.3 Safely use materials, hand tools, portable power tools and ancillary equipment.
- 7.4 Safely store the materials, tools and equipment used when manually applying specialist road surfacing.
- 7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - establish an agreed time frame for resurfacing
 - prepare substrate, to include measuring, setting out, marking out, drying, cleaning and repairing
 - prepare equipment as necessary
 - level and realign ironwork
 - prepare materials, to include storing, handling and mixing.
- 7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - apply materials to prepared surfaces, to include heating, pouring, screeding and spreading
 - remove and dispose of arisings
 - communicate and co-ordinate progress on specialist resurfacing
 - return infrastructure to operational status
 use hand tools, power tools and equipment.
- 7.7 Describe the needs of other occupations and how to effectively communicate within a team when manually applying specialist road surfacing.
- 7.8 Describe how to maintain the tools and equipment used to manually apply specialist road surfacing.

Unit M/503/9394 Applying and Removing Pavement Markings Manually in the Workplace

Learning Outcome - The learner will:		Assessment Criterion - The learner can:	
Interpret the given information relating to the work and resources when applying and removing pavement markings manually.	information relating to the work and resources when applying and removing	1.1	Interpret and extract relevant information from drawings, risk assessment, method statements, specifications, schedules and manufacturers' information.
	-	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
		1.4	Describe different types of information, their source and how they are interpreted in relation to:
		 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information, official guidance and regulations governing temporary and permanent markings on pavement surfaces. 	
2	Know how to comply with relevant legislation and official guidance when applying and removing pavement markings manually.	2.1	Describe their 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.
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.
3	Maintain safe and healthy working practices when applying and removing pavement markings manually.	3.1	Use health and safety control equipment safely to carry out the activity in accordance with current legislation and organisational requirements when applying and removing pavement markings manually.
		3.2	Comply with information relating to specific risks to health when applying and removing pavement markings manually.

- Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to applying and removing pavement markings manually, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:
 - collective protective measures
 - personal protective equipment (PPE)
 - respiratory protective equipment (RPE)
 - local exhaust ventilation (LEV).
- 3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.
- Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
- Select the required quantity and quality of resources for the methods of work to apply and remove pavement markings manually.
- 4.1 Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.
- 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:
 - thermoplastic materials
 - adhesives
 - paints
 - temporary preformed materials
 - temporary surface mounted studs
 - hand and/or powered tools and equipment.
- 4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.
- 4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
- 4.5 Describe any potential hazards associated with the resources and methods of work.

Learning Outcome - The learner will:		Asses	Assessment Criterion - The learner can:	
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to apply and remove pavement markings manually.	
dama surro	Minimise the risk of damage to the work and surrounding area when applying and removing	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.	
	pavement markings manually.	5.2	Minimise damage and maintain a clean work space.	
		5.3	Dispose of waste in accordance with current legislation.	
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.	
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.	
6	Complete the work within the allocated time when applying and removing	6.1	Demonstrate completion of the work within the allocated time.	
	pavement markings manually.	6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: - types of progress charts, timetables and estimated times - organisational procedures for reporting circumstances which will affect the work programme.	
7	Comply with the given contract information to apply and remove pavement markings manually to the required specification.	7.1	Demonstrate the following work skills when applying and removing pavement markings manually: — measuring, setting out, marking, positioning, preparing, and communicating.	
		7.2	Apply and remove pavement markings manually to given specifications and working instructions, for one of the following:	
			 permanent markings (thermoplastic applications and/or paint applications) 	
			temporary markings (temporary preformed applications and temporary surface mounted studs).	

- 7.3 Safely use materials, hand tools, portable power tools and ancillary equipment.
- 7.4 Safely store materials, tools and equipment used when applying and removing pavement markings manually.
- 7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - establish agreed time frame for pavement marking work
 - prepare area, materials and equipment
 - apply pavement markings manually
 - remove pavement markings
 - apply and remove temporary preformed applications
 - install and remove temporary surface mounted studs
 - communicate and co-ordinate progress
 - use hand tools, power tools and ancillary equipment.
- 7.6 Describe the needs of other occupations and how to effectively communicate within a team when applying and removing pavement markings manually.
- 7.7 Describe how to maintain the tools and equipment used when applying and removing pavement markings manually.

Unit T/503/9395 Installing and Removing Permanent Road Studs in the Workplace

Learning Outcome - The learner will:		Assessment Criterion - The learner can:		
inform the wo when i removi	Interpret the given information relating to the work and resources when installing and	1.1	Interpret and extract relevant information from drawings, risk assessments, method statements, specifications, schedules and manufacturers' information.	
	removing permanent road studs.	1.2	Comply with information and/or instructions derived from risk assessments and method statements.	
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.	
		1.4	Describe different types of information, their source and how they are interpreted in relation to:	
			 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and regulations governing permanent markings on pavement surfaces. 	
2	Know how to comply with relevant legislation and official guidance when installing and removing permanent road studs.	2.1	Describe their 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. 	
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.	
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.	
3	Maintain safe and healthy working practices when installing and removing permanent road studs.	3.1	Use health and safety control equipment safely to carry out the activity in accordance with current legislation and organisational requirements when installing and removing permanent road studs.	
		3.2	Comply with information relating to specific risks to health when installing and removing permanent road studs.	
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection,	

Assessment Criterion - The learner can:

should be used, relating to installing and removing permanent road studs, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:

- collective protective measures
- personal protective equipment (PPE)
- respiratory protective equipment (RPE)
- local exhaust ventilation (LEV).
- Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.
- 3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
- 4 Select the required quantity and quality of resources for the methods of work to install and remove permanent road studs.
- 4.1 Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.
- 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:
 - road studs
 - fixing materials
 - hand and/or powered tools and ancillary equipment.
- 4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.
- 4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
- 4.5 Describe any potential hazards associated with the resources and methods of work.
- 4.6 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to install and remove permanent road studs.

Learning Outcome - The learner will:		Assessment Criterion - The learner can:		
5	Minimise the risk of damage to the work and surrounding area when installing and removing permanent road studs.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.	
		5.2	Minimise damage and maintain a clean work space.	
		5.3	Dispose of waste in accordance with current legislation.	
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.	
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.	
\ \ r	Complete the work within the allocated time when installing and removing permanent road studs.	6.1	Demonstrate completion of the work within the allocated time.	
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to:	
			 types of progress charts, timetables and estimated times 	
			 organisational procedures for reporting circumstances which will affect the work programme. 	
7	Comply with the given contract information to install and remove permanent road studs to the required specification.	7.1	Demonstrate the following work skills when installing and removing permanent road studs:	
			 measuring, setting out, marking, positioning, fitting, fixing, securing and communicating. 	
		7.2	Install and remove permanent road studs to given working instructions, relating to one of the following: - inset milled stud - inset drilled stud	
			 fixed surface mounted studs. 	
		7.3	Safely use materials, hand tools, portable power tools and ancillary equipment.	

- 7.4 Safely store the materials, tools and equipment used when installing and removing permanent road studs.
- 7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - establish agreed time frame for installing or removing permanent road studs
 - prepare area, materials and equipment for installing or removing permanent road studs
 - install and remove milled, drilled and surface mounted road studs and permanent road studs
 - remove permanent road studs
 - communicate and co-ordinate progress on the installation of permanent road studs
 - use hand tools, power tools and equipment.
- 7.6 Describe the needs of other occupations and how to effectively communicate within a team when installing and removing permanent road studs.
- 7.7 Describe how to maintain the tools and equipment used when installing and removing permanent road studs.



ProQual Awarding Body ProQual House Annie Med Lane South Cave HU15 2HG

Tel: 01430 423822

www.proqualab.com

enquiries@proqualab.com