

Unit Specification for Regulated Qualifications

Unit title	Operating and Controlling Operations of Road Plant, Machinery or Equipment for Laying Flexible and Semi-Flexible Paving Materials in the Workplace
Unit Level	2
Credit	49
Guided Learning Hours	173
SQA Unit code	HX0A 68
Regulator Unit code	Y/616/4304
Publication date	November 2017
Unit owner and reference	CITB 772 v1
Version	1

Title:	Operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials in the workplace	
Level:	2	
Value for TQT:	490	
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>	
1 Interpret the given information relating to operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information related to the plant, machinery or equipment operations and the work to be carried out.
	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: <ul style="list-style-type: none"> – drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, verbal, written and graphical instructions, current regulations and official guidance governing the operation of road plant, machinery and accessories for laying flexible and semi-flexible paving materials.
2 Organise with others the sequence of operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials to be carried out.	2.1	Organise the work according to given information or instructions.
	2.2	Describe how to communicate ideas between team members using discussions, sketches, electronic information and briefings.
	2.3	Organise and communicate with team members and other associated occupations.
	2.4	Describe how to organise resources prior to and during operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials
3 Know how to comply with relevant legislation and official guidance when operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials.	3.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: <ul style="list-style-type: none"> – in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials and by manual handling and mechanical lifting.

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3 continued	3.2	Describe the organisational security procedures for tools, equipment and 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.
	3.4	Describe the types of fire extinguishers available when operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials and describe how and when they are used.
4 Maintain safe and healthy working practices when operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials.	4.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials
	4.2	Demonstrate compliance with given information and relevant legislation when operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials in relation to the following: <ul style="list-style-type: none"> – safe use, storage and handling of plant, machinery, equipment and tools – safe use, storage and handling of materials – specific risks to health.
	4.3	Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> – collective protective measures – personal protective equipment (PPE) – respiratory protective equipment (RPE)
	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.

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<p>5 Request and select the required quantity and quality of resources to operate and control operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials.</p>	5.1 Request and select consumables, materials and other resources associated with operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials 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, relating to: <ul style="list-style-type: none"> – consumables, lubricants and fuels – attachments – flexible paving materials – hand tools, ancillary equipment and accessories. 	
	5.3 Describe how to confirm that the resources and materials conform to the specification.	
	5.4 Describe how the resources should be used correctly and how problems associated with the resources are reported.	
	5.5 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.	
	5.6 Describe any potential hazards associated with the resources and methods of work including those identified by the control of substances hazardous to health assessments (COSHH).	
	5.7 Describe how to identify weight, bearing pressure, pressure, quantity, length and area associated with the method and procedure to operate plant, machinery or equipment for laying flexible and semi-flexible paving materials.	
<p>6 Minimise the risk of damage to the work and surrounding area when operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials.</p>	6.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.	
	6.2 Maintain a clear and tidy 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.	

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7 Complete the work within the allocated time when operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials.	<p>7.1 Demonstrate completion of the work within the allocated time.</p> <p>7.2 Describe the purpose of the work programme and describe why deadlines should be kept in relation to:</p> <ul style="list-style-type: none"> – types of productivity targets and time scales – how times are estimated – organisational procedures for reporting circumstances which will affect the work programme. 	
8 Comply with the given contract information to operate and control operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials.to the required specification.	<p>8.1 Demonstrate the following work skills when operating and controlling operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials</p> <ul style="list-style-type: none"> – checking, setting up, adjusting, communicating, operating, controlling, securing, laying, compacting, marking, levelling and finishing. <p>8.2 Use and maintain hand tools, ancillary equipment and/or accessories.</p> <p>8.3 Prepare, operate or control operations of plant, machinery or equipment for at least one of the following to given working instructions</p> <ul style="list-style-type: none"> – paver screedman (screed operator) maintaining line and level – paver (tracked or wheeled) operator maintaining consistency of surface materials, line and direction – roller operator ensuring compaction, transverse and longitudinal evenness – chipping machine operator maintaining speed and distribution – loader compressor or 180 degree excavator operator maintaining supply of materials and/or preparing surfaces – spray tanker operator maintaining speed, line, direction and distribution – geosynthetic (membrane or steel mesh) installation equipment operator maintaining uniformity, line, direction, overlap and adhesion – spray injection operator ensuring compaction and finish <p>8.4 Shut down and secure plant, machinery or equipment.</p>	

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8 continued	<p>8.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> – identify installation requirements – conform to agreed specifications – confirm the area and location of work, the operations, safety and security requirements including temporary traffic management and immediate area protection – identify the characteristics of flexible paving materials e.g. hot rolled asphalt, stone mastic asphalt, mastic asphalt, asphalt concrete mixtures and geosynthetic material – identify the characteristics of semi-flexible paving materials e.g. cement bound granular material (CGBM) and roller compacted concrete (RCC) – prepare and install mesh reinforcement membrane – prepare, set up and carry out pre-start and running checks of the plant, machinery and accessories – confirm and monitor temperature and workability of flexible and semi-flexible paving materials throughout the process – recognise the causes of poor performance and factors that will affect the finished product – carry out and control operations according to your role and the required performance of plant, machinery or equipment – adjust the work in relation to prevailing weather conditions – work around street furniture and ironwork – recognise sampling, testing and quality control processes – recognise, monitor and control processes e.g. treatment and preparation of joints, line, level, thickness, compaction and finishes – recognise the duties of the paver screwman, paver operator, roller operator, chipping machine operator, loader compressor operator, 180 degree machine operator, spray tanker operator, geosynthetic installation equipment operator and spray injection operator to ensure cohesive operations – return infrastructure to operational status – recognise and determine when specialist skills and knowledge are required and report accordingly – shut down and secure plant, machinery or equipment – use hand tools, ancillary equipment and accessories. <p>8.6 Describe the needs of other occupations and how to effectively communicate within a team when operating plant, machinery or equipment for laying flexible and semi-flexible paving materials</p>	

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8 continued	8.7 Describe how to maintain the plant or machinery, tools equipment and/or accessories used to operate plant, machinery or equipment for laying flexible and semi-flexible paving materials.	

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Additional information about this unit	
Assessment Guidance	<p>This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.</p> <p>Assessors for this 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.</p> <p>Workplace evidence of skills cannot be simulated.</p> <p>This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.</p>
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	163