

Recommended Qualification Structure for Road Building and Maintenance (Construction) Level 2

This structure has been recommended by employers and stakeholders from the above occupational area for organisations to form the basis of academic capability and competence outcomes. Qualifications with a competence outcome at the above level must have units derived from the following National Occupational Standards (NOS) and consist of the mandatory/optional groups as stated for the individual option route.

MANDATORY (all option routes)

VR641 v2 Conform to general workplace health, safety and welfare

VR642 v1 Conform to productive work practices

Manual Road Building Option Routes:

Slurry Surfacing (manual) Option Route (Total 3)

Mandatory

VR383 v5 Apply specialist pavement surfacing materials manually

High Friction Surfacing (manual) Option Route (Total 3)

Mandatory

VR383 v5 Apply specialist pavement surfacing materials manually

Crack and Joint Repair (manual) Option Route (Total 3)

Mandatory

VR383 v5 Apply specialist pavement surfacing materials manually

Thermal Repair (manual) Option Route (Total 3)

Mandatory

VR383 v5 Apply specialist pavement surfacing materials manually

Flexible Pavement Construction (manual) Option Route (Total 5)

Mandatory

VR375 v3 Lay flexible pavement materials

VR401 v2 Set out secondary dimensional control work

Plus one other from the Manual Road Building option list below

Resin Bonded or Resin Bound Surface Construction Option Route (Total 3)

VR383 v5 Apply specialist pavement surfacing materials manually

Continued

Modular Pavement Construction Option Route (Total 5)

Mandatory

VR367 v3 Lay modular pavement

VR400 v2 Operate powered units, tools or pedestrian plant, machinery or equipment

VR401 v2 Set out secondary dimensional work control

Laying Kerbs and Channels Option Route (Total 5)

Mandatory

VR368 v3 Lay preformed kerbs and channels

VR401 v2 Set out secondary dimensional work control

Plus one other from the Manual Road Building option list below

Pavement Marking (manual) Option Route (Total 3)

Mandatory

VR377 v4 Apply and remove pavement markings manually

Excavation and Reinstatement Option Route (Total 5)

Mandatory

VR373 v4 Form and finish excavations manually

VR374 v4 Reinstatement trenches in paved surfaces

Plus one other from the Manual Road Building option list below

Excavation Option Route (Total 4)

Mandatory

VR373 v4 Form and finish excavations manually

Plus one other from the Manual Road Building option list below

Reinstatement Option Route (Total 4)

Mandatory

VR374 v4 Reinstatement trenches in paved surfaces

Plus one other from the Manual Road Building option list below

Locate and Excavate Utilities Option Route (Total 5)

Mandatory

VR372 v4 Identify and mark the location of utilities apparatus and sub-structures

VR782 v1 Locate and excavate to expose buried utility services

Plus one other from the Manual Road Building option list below

Street Ironwork Option Route (Total 4)

Mandatory

VR366 v3 Install street ironwork (metal, plastic, concrete and composite materials)

**Plus one other from the Manual Road Building option list below
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Manual Road Building Option List

- VR45 v3 Place and finish non-specialist concrete
- VR360 v4 Install, maintain and remove work area protection and safety equipment
- VR361 v3 Cut, drill and shape construction related materials
- VR363 v3 Prepare and mix construction related materials
- VR365 v4 Segregate the area for the highways works
- VR366 v3 Install street ironwork (metal, plastic, concrete and composite materials)
- VR370 v4 Install, maintain and remove temporary excavation support
- VR372 v4 Identify and mark the location of utilities apparatus and sub-structures
- VR374 v4 Reinstate trenches in paved surfaces
- VR391 v2 Operate plant or machinery to receive and transport loads
- VR394 v2 Operate plant or machinery to compact
- VR396 v2 Direct and guide the movement of vehicles, plant or machinery
- VR400 v2 Operate powered units, tools or pedestrian plant, machinery or equipment
- VR401 v2 Set out secondary dimensional work control
- VR402 v2 Slinging and signalling the movement of suspended loads
- VR639 v3 Install drainage
- VR643 v1 Move, handle and store resources
- VR760 v1 Control, direct and guide the operation of plant or machinery
- VR782 v1 Locate and excavate to expose buried utility services

Road Maintenance Option Routes:

Maintenance Response Team Operations Option Route (Total 5)

Mandatory

- VR536 v4 Prepare maintenance response teams' vehicles
- VR537 v3 Respond to and assist with road-related incidents
- VR538 v4 Install and remove emergency temporary traffic management

Vehicle Fencing Option Route (Total 4)

Mandatory

- *Fe8 Excavate, prepare and form foundations for vehicle restraint systems
- *Fe9 Place and fix vehicle restraint systems

**Imported from Lantra fencing suite of NOS*

Pavement Marking (Road Studs) Option Route (Total 3)

Mandatory

- VR378 v3 Install and remove permanent road studs

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Road Building and Maintenance Plant Option Routes:

Flexible Paving (machine) Option Route (Total 3)

Mandatory

VR772 v1 Operate and control operations of road plant, machinery or equipment for laying flexible and semi-flexible paving materials

Rigid Paving (machine) Option Route (Total 3)

Mandatory

VR773 v1 Operate and control operations of road plant, machinery or equipment for laying rigid paving

Slurry Micro-surfacing (machine) Option Route (Total 3)

Mandatory

VR774 v1 Operate and control operations of road plant, machinery or equipment for laying slurry micro-surfacing

Surface Dressing (machine) Option Route (Total 3)

Mandatory

VR775 v1 Operate and control operations of road plant, machinery or equipment for laying surface dressing

High Friction Surfacing (machine) Option Route (Total 3)

Mandatory

VR776 v1 Operate and control operations of road plant, machinery or equipment for laying high friction surfacing

Planing (machine) Option Route (Total 3)

Mandatory

VR777 v1 Operate and control operations of road plant, machinery or equipment for planing or milling operations

Road Recycling (machine) Option Route (Total 3)

Mandatory

VR778 v1 Operate and control operations of specialist road plant, machinery or equipment for in-situ structural road recycling operations

Soil Stabilisation (machine) Option Route (Total 3)

Mandatory

VR779 v1 Operate and control operations of road plant, machinery or equipment for soil stabilisation

Surface Retexturing (machine) Option Route (Total 3)

Mandatory

VR780 v1 Operate and control operations of road plant, machinery or equipment for surface re-texturing

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Pavement Marking (machine) Option Route (Total 3)

Mandatory

VR781 v1 Operate and control operations of road plant, machinery or equipment for pavement marking

Road Sweeping Option Route (Total 3)

Mandatory

VR761 v2 Operate plant or machinery to sweep, clean or clear

Unit endorsements for Road Building and Maintenance Level 2

Where industry requests; qualifications can be endorsed to show an option route and the type of resources and/or activities that relate to the unit. Listed below are the endorsements that can apply for units derived from the following NOS.

NOS	Endorsement
VR45	Three of the following: Concrete slabs/bases Form slab edging Position reinforcement Form surface finish
VR360	Own area of work (i.e. Manual road building) Plus one of the following: Flexible pavement construction Modular pavement construction Laying kerbs and channels Excavation and reinstatement Locate and excavate utilities Street ironwork
VR365	Own area of work (i.e. Manual road building)
VR366	One of the following: New Reinstatement
VR367	Own area of work (i.e. Manual road building) Plus two of the following: Block paving Brick paving Stone and/or concrete setts Flags Natural stone rough cut Natural stone uniformly cut
VR370	Own area of work (i.e. Manual road building) Plus one of the following: Proprietary system Open and closed support system Piling systems Bespoke support system
VR372	Own area of work (i.e. Manual road building)
VR373	Own area of work (i.e. Manual road building)
VR374	Own area of work (i.e. Manual road building) Plus one of the following: Bituminous materials Sealants and emulsions Concrete Modular structures
VR377	Own area of work (i.e. Manual road building) Plus one of the following Permanent markings Temporary markings

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NOS	Endorsement
VR378	Own area of work (i.e. Manual road building) Plus two of the following: Inset milled stud Inset drilled stud Fixed surface mounted studs Stud maintenance
VR383	Own area of work (i.e. Manual road building) One of the following: Slurry surfacing High friction (cold applied) High friction (hot applied) Resin bonded or Resin bound Thermal patch repair Crack and joint repair
VR391	One of the following: Forward tipping dumper wheeled Forward tipping dumper tracked
VR394	Ride on roller
VR396	Movement guide marshaller Loader/securer
VR400	One of the following: Generators Pumps Pedestrian operated plant or machines Mixers Compressors Self-powered tools
VR401	Three of the following: Line Level Depth Area Height Angle
VR402	Slinger Signaller 'Occupation specific' only (own area of work:-i.e. Manual road building)
VR538	One of the following: High speed roads Rural and urban roads
VR639	Own area of work (i.e. Manual road building) Plus one of the following: Inspection chamber Surface water system Foul water system
VR760	Operations guide banksman Plus: Manual road building

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NOS	Endorsement
VR761	One of the following: Road sweeper Pavement sweeper Self-propelled sweeper Pedestrian controlled sweeper Gully cleaner Gully sucker Pedestrian controlled cleaner
VR772	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Paver screwman Paver Roller Chipping machine Loader compressor 180 degree Excavator Spray tanker Geosynthetic installation equipment Spray injection
VR773	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Feed machine Paver screwman Paver Finishing beam or float Reinforcement placement equipment Spray Texturing and/or curing machine Horizontal travel slip form machine operator
VR774	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Applicator steersman Applicator Slurry supply tanker Tipper grab Roller
VR775	Own area of work (i.e. Road building and maintenance Plant) Plus one of the following: Spray tanker Self-propelled chipping machine Tailboard chipping machine Combined spray tanker and chipping machine Spray bar Tipper grab Loading shovel Roller

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NOS	Endorsement
VR776	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Heating pot Tanker Spray bar Chipper machine
VR777	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Wheeled planing and/or milling machine up to 1 metre Tracked planing and/or milling machine up to 1.5 metre Tracked planing and/or milling machine over 1.5 metre
VR778	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Pulveriser, recycling machine Combination in-situ recycling machine Bulk binder spreader machine Tanker truck Motor grader Roller
VR779	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Combination soil stabilisation machine Mixer machine Bulk binder spreader machine Tilling machine Self-propelled water bowser Towed water bowser Roller
VR780	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Bush hammering machine Grooving machine Flailing machine High pressure jetting machine Shot blasting machine Planning or milling machine Grinding machine
VR781	Own area of work (i.e. Road building and maintenance plant) Plus one of the following: Applicator steersman Applicator Feeder vehicle

Note: Where industry requests an Awarding Organisation to further endorse a unit, the Awarding Organisation must first seek approval from the Standards Setting Body to ensure the endorsement is appropriate to the unit.