

### Roadworks Construction Hand : Grade III National Learning Path

#### Course Content :

- CRM 1B1 : Use and maintain hand tools
- CRM 1B2 : Use pneumatic excavation and compaction tools
- CRM 1B3 : Operate a light weight roller and plate vibrator
- CRM 1B4 : Operate a hand operated binder sprayer
- CRM 1C1 : Excavate, backfill and compact a trench
- CRM 1C3 : Install subsoil drains including geotextile fabrics
- CRM 1D1 : Reinstate base course/surfacing due to potholes & excavations
- CRM 1D2 : Undertake minor chip/spray & pre-mix surfacing operations

**Entry Assumptions :** NQF Level 1 / Open

**Duration :** 15 Days

### Roadworks Construction Hand : Grade II National Learning Path

#### Course Content :

- CRM 3F1 : Read and interpret written instructions
- CRM 3F2 : Read & interpret minor work drawings & material schedules
- CRM 3G1 : Install & transfer peg levels using spirit level/straight edge
- CRM 3G2 : Set out elementary works for level and alignment
- CRM 3G3 : Check levels of inverts of excavation
- CRM 3H1 : Set out a subsoil drain from a drawing
- CRM 3H2 : Set out a "V" drain from a drawing

**Entry Assumptions :** Roadworks Constructionhand Grade III & ability to read sketches. Evaluations may be arranged

**Duration :** 20 Days

### Roadworks Construction Hand : Grade I National Learning Path

#### Course Content :

- CRM 4K1 : Maintain construction site safety & health procedures
- CRM 4K2 : Order and receive materials
- CRM 4K3 : Determine function & application of earthmoving plant
- CRM 4M1 : Organize surfacing operations
- CRM 4M2 : Organize minor excavating/ backfilling operations
- CRM 4M3 : Organise compaction operations
- CRM 4M4 : Organise minor construction, roadworks, precast concrete operation

**Entry Assumptions :** Roadworks Constructionhand Grade III & ability to read sketches. Evaluations may be arranged

**Duration :** 20 Days

### Roadworks Construction hand : National Standards Test

#### Course Content :

##### Section 1

##### Setting out of Road Bellmouth

- Preparation
- Practical Work
- Final Inspection
- Tolerances

##### Section 2

##### Excavation Control

- Preparation
- Practical Work
- Final Inspection
- Tolerances

##### Section 3

##### Kerblaying

- Preparation
- Practical Work
- Final Inspection
- Tolerances

##### Section 4 The written test

**Entry Assumptions :** Roadworks Construction hand Grade I

**Duration :** 4 Days

### Pedestrian Rollers & Small Compaction Techniques

#### Course Content :

CRM 5P3 : Explain compaction

- Explain the principles of compaction
- Select the compactor to suit the project
- Plan the compaction of crusher run for a base course operation

CRM 1B3 : Operate a light weight roller & plate vibrator

- Recognise operating components and safety procedures
- Prepare & start machine
- Operate machine

CRM 1C1 : Excavate, backfill and compact a trench

- Apply the practical application of trench excavation
- Demonstrate procedure of backfilling & trench compaction

**Entry Assumptions :** NQF Level 1 (Able to read a tape measure)

**Duration :** 5 Days

### Recognise & Apply Alternative Methods of Soil Erosion Protection

#### Course Content :

- : Recognise typical causes of soil erosion
- : Recognise and apply basic methods of slope protection
- : Recognise the purpose of open drains

**Target Population :** Adults, Physically fit, able to work from verbal instructions and as part of a work team under supervision.

**Entry Assumptions :** NQF Level 1 (ABET level 2)

**Duration :** 20 Days

### Road Traffic Management

#### Course Content :

- Design :** *Identify the planning process for designing the traffic layouts at a roadworks site*
- Planning stage
  - When work is in progress
  - Before work starts
  - When work is complete
- Signage :** *Identify & Interpret the use of different types of temporary signs used at roadworks*
- Regulatory signs
  - Temporary warning signs
  - Warning signs
- Management :** *Implement & control a standardised approach to traffic management*
- Flagmen
  - Robots
  - Stop - go signs
- Traffic Control Methods :** *Identify & apply traffic control methods*
- Advance warning area
  - Stabilising area
  - Termination area
  - Transition area
  - Work area

**Entry Assumptions :** NQF Level 1 (ABET level 3)

**Duration :** 5 Days

### Road Traffic Management : Guard Rail & Sign Board Erection

#### Course Content :

- Road Traffic Management :** *Identify & interpret the use of different types of temporary signs used at road works sites*
- Regulatory signs
  - Temporary warning signs
  - Warning signs
- Guard Rails / Crash Barriers :** *Identify crash barrier components*
- Crash barrier
  - Bullnose, concave & convex sections
  - Guard rail & flared end fixture
- Preparation work*
- Setting out
  - Fixing vertical & horizontal alignment crash barriers
  - Fitting guard rail, flared end fixture & bull nose
- Maintenance / Sign Boards*
- Erection of permanent sign boards
  - Vertical & horizontal alignment
  - Fixing struts

**Entry Assumptions :** NQF Level 1 (ABET level 3)

**Duration :** 5 Days

### Bituminous Pavement Repairs General repairs & patching

#### Course Content :

##### General Repairs

Task One	:	Traffic accomodation
Task Two	:	Pothole repairs
Task Three	:	Edgebraking repairs
Task Four	:	Cracksealing
Task Five	:	Operating small plant

##### Patching

Task One	:	Marking out and excavating
Task Two	:	Dealing with wet conditions
Task Three	:	Backfilling - granular
Task Four	:	Backfilling - asphalt
Task Five	:	Backfilling - slurry macadam

**Target Population :** Men with little or no experience in general repairs and patching. Not younger than 16 years.

**Entry Assumptions :** NQF Level 1 (ABET level 2)

**Duration :** 10 Days

### Construction of a Gravel Road Surface (CRM5Q1)

#### Course Content :

**Setting out :** Set out width  
Set out alignment  
Install & transfer levels

**Implementation :** Excavate raw Materials  
Position bulk earthworks  
Layer formation  
Compaction

**Target Population :** Adults, Physically fit, able to work from verbal instructions and as part of a work team under supervision.

**Entry Assumptions :** NQF Level 1 (ABET level 3)

**Duration :** 10 Days