

**Field      Agriculture, Forestry and Fisheries, and Engineering and Technology**

**Review of *Rural Contracting, Infrastructure Works, and Water Industry* unit standards**

<b>Subfield</b>	<b>Domain</b>	<b>ID</b>
Rural Contracting	Agricultural Contracting	6255
Infrastructure Works	Bitumen Surfacing Construction	13519, 22277
	Civil Plant Operation	17309-17317, 19675, 20625, 22275, 22278, 22279, 23637, 26169, 28725, 29028
	Generic Infrastructure Works	6476, 26784, 27329, 28715
	Infrastructure Civil Works	11312, 20477, 25831
	Infrastructure Works Equipment	6465, 6470, 13520, 22276, 26717, 26718, 27500, 28726
	Infrastructure Works Health, Safety, and Environment	20869, 27201
	Infrastructure Works Utilities	28723
Water Industry	Water Reticulation	19209, 19211, 19213-19215, 22097, 22098, 22100, 22111, 22114, 24922, 24923, 27330

The Connexis Infrastructure ITO has completed the review of the unit standards listed above.

**Date new versions published**

**September 2018**

**Planned review date**

**December 2023**

**Summary**

These unit standards were reviewed as part of a comprehensive review of qualifications, programmes, and unit standards relating to the Civil sector of the infrastructure industry. The standards were reviewed in groups according to the programmes for which they are intended.

The review took place between March 2017 and July 2018, and involved Working Groups representing the Civil Works, Pipelines, Bitumen Surfacing, Forestry Earthworks, and Piling and Deep Foundations sectors of the industry. Working Group meetings were held in June, September, and October 2017 and in February 2018, and drafts were circulated among the working group and a wider industry consultation group as well as being made available for comment on the Connexis website between March and July 2018.

**Main changes**

- Groups of standards containing similar or transferable skills were consolidated into single unit standards to reduce repetition in assessment and recognise the scope of applicable contexts.
- Standards covering similar topics, but developed at different times, were reviewed for consistency with each other and current industry need.
- Standards with inappropriate levels or credits were updated to reflect current industry requirements
- Titles of unit standards, changed for consistency within the batch
- Guidance, outcomes, and performance criteria were updated to align with current industry requirements
- Five new standards were developed to address fundamental skills required by the Civil sector.

**Category C and D unit standards will expire at the end of December 2021**

The last date for assessment of superseded versions of Category B unit standards is December 2021

**Impact on existing organisations with consent to assess**

Current consent for			Consent extended to		
Nature of consent	Classification or ID	Level	Nature of consent	Classification or ID	Level
Subfield	Infrastructure Works	3	Standard	13519	4
Subfield	Infrastructure Works	3-8	Standards	31451, 31452	3
Domain	Infrastructure Civil Works	3-5	Standard	31451	3
Domain	Infrastructure Works Equipment	3-5	Standard	31448	3
Standard	6470	2	Standard	31448	3
Standard	11312	3	Standard	31451	3
Standards	17311	3	Standard	31455	3
	17312				
	17313				
Standards	20477	3	Standard	31445	3
	25831				
Standards	26717	2	Standard	31448	3
	26718				
Standards	27500	3	Standard	31448	3
	29028				

**Detailed list of unit standards – classification, title, level, and credits**

All changes are in **bold**. Standards that are recommended as alternatives are in *italics*.

Key to review category	
<b>A</b>	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
<b>B</b>	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
<b>C</b>	Major changes that necessitate the registration of a replacement standard with a new ID
<b>D</b>	Standard will expire and not be replaced

Engineering and Technology > Rural Contracting > Agricultural Contracting

ID	Title	Level	Credit	Review Category
6255	Drive a wheel tractor towing a heavy load	3	6	B

Engineering and Technology > Infrastructure Works > Bitumen Surfacing Construction

ID	Title	Level	Credit	Review Category
13519	Operate an asphalt paving machine	3 4	20	B
<b>31453</b>	<b>Demonstrate knowledge of and carry out bitumen surface construction site operations</b>	<b>3</b>	<b>10</b>	<b>New</b>

Engineering and Technology > Infrastructure Works > Civil Plant Operation

ID	Title	Level	Credit	Review Category
17309	Operate a wheeled loader on infrastructure works sites	3	20	B
17310	Operate a hydraulic excavator on infrastructure works sites	3	20	B
17311	Operate a motor grader for earthworks	3	20	C
17312	Operate a motor grader for road maintenance	3	30	C
17313	Operate a motor grader for road construction	3	30	C
<b>31455</b>	<b>Operate a motor grader on infrastructure works sites</b>	<b>3</b>	<b>20</b>	
17314	Operate a motor scraper on infrastructure works sites	3	20	B
17315	Operate a self-propelled roller on infrastructure works sites	3	20	B
17316	Operate a bulldozer on infrastructure works sites	3	20	B
17317	Operate an articulated dump truck on infrastructure works sites	3	20	B
20625	Operate a rigid dump truck for bulk earthmoving <b>Operate a rigid dump truck on infrastructure works sites</b>	3	15 <b>20</b>	B
22275	Operate a roadsweeper on infrastructure works sites	3	10 <b>6</b>	B
22279	Operate a skid steer on infrastructure works sites	3	10	B
23637	Operate a telehandler <b>Operate a telehandler on infrastructure works sites</b>	3	20	B
26169	Operate a self-propelled, bladed compactor on infrastructure work sites <b>Operate a self-propelled, bladed compactor on infrastructure works sites</b>	3	20 <b>15</b>	B
28725	Operate a hydro-excavator on an infrastructure works site <b>Operate a hydro-excavator on infrastructure works sites</b>	3	20 <b>8</b>	B

Engineering and Technology > Infrastructure Works > Generic Infrastructure Works

ID	Title	Level	Credit	Review Category
6476	Read and interpret infrastructure works plans <b>Interpret and use plans to locate features on infrastructure works sites</b>	3	3	B
26784	Maintain daily records for an infrastructure works site	3	5	B
27329	Demonstrate knowledge of and apply quality assurance practices to own work area in an infrastructure works operation	3	4 <b>5</b>	B
28715	Load, secure, and transport infrastructure works materials, small plant, and equipment	3	2	B
<b>31446</b>	<b>Demonstrate knowledge of materials used for infrastructure works</b>	<b>3</b>	<b>3</b>	<b>New</b>
<b>31457</b>	<b>Work around existing services for infrastructure works</b>	<b>3</b>	<b>5</b>	<b>New</b>

Engineering and Technology > Infrastructure Works > Infrastructure Civil Works

ID	Title	Level	Credit	Review Category
20477	Demonstrate knowledge of soil properties for earthworks	3	3	C
25831	Describe road construction materials and their compaction	3	3	C
<b>31445</b>	<b>Demonstrate knowledge of soils and aggregates, and compaction, for infrastructure works</b>	<b>3</b>	<b>6</b>	
<b>31447</b>	<b>Demonstrate knowledge of and carry out civil works site operations</b>	<b>3</b>	<b>14</b>	<b>New</b>

Engineering and Technology > Infrastructure Works > Infrastructure Works Equipment

ID	Title	Level	Credit	Review Category
6465	Operate a power-driven rotary broom on infrastructure works sites	3	6	B
13520	Operate a truck-mounted roller-spreader on chipsealing works <b>Operate a truck-mounted roller-spreader on infrastructure works sites</b>	3	12 <b>6</b>	B
20628	Operate a water cart for bulk earthmoving <b>Operate a water cart on infrastructure works sites</b>	3	10 <b>6</b>	B
22276	Operate a suction cleaning vehicle on infrastructure works sites	3	6	B
28726	Operate a water-jet unit for infrastructure works <b>Operate a water-jet unit on infrastructure works sites</b>	3	10	B

Engineering and Technology > Infrastructure Works > Infrastructure Works Health, Safety, and Environment

ID	Title	Level	Credit	Review Category
20869	Demonstrate knowledge of notifiable works and permits in the civil infrastructure industry <b>Demonstrate knowledge of notifiable works and work permits typical of infrastructure works sites</b>	3	3	B
27201	Mitigate environmental damage caused by a contamination incident	3	3	B

Engineering and Technology > Infrastructure Works > Infrastructure Works Utilities

ID	Title	Level	Credit	Review Category
<b>31454</b>	<b>Carry out work operations for pipeline construction</b>	<b>3</b>	<b>20</b>	<b>New</b>

Engineering and Technology > Water Industry > Water Reticulation

ID	Title	Level	Credit	Review Category
19209	Demonstrate knowledge of water reticulation systems cleaning and disinfection	3	5	C
19211	Describe water supply mains materials and fittings, and causes and prevention of pipe failure	3	6	C
22097	Demonstrate knowledge of rehabilitation and replacement of existing water pipe lines	3	3	C
22100	Demonstrate knowledge of leak detection and leak detection programmes	3	4	C
24922	Demonstrate knowledge of water supply and reticulation systems	3	10	C
27330	Install a thrust, anti-scour or anchor block for water reticulation	3	4	C
<b>31449</b>	<b>Carry out maintenance operations on drinking-water networks</b>	<b>3</b>	<b>20</b>	
19213	Demonstrate knowledge of blockage clearance and wastewater system maintenance	2	3	C
19214	Carry out wastewater pipe unblocking and access chamber maintenance	3	4	C
19215	Describe wastewater systems and materials, and causes and prevention of pipe failure	3	6	C
22098	Demonstrate knowledge of rehabilitation and replacement of existing wastewater pipe lines	3	3	C
22111	Demonstrate knowledge of sewer cleaning, blockage removal, overflow management and clean-up	3	3	C
<b>31450</b>	<b>Carry out maintenance operations on wastewater networks</b>	<b>3</b>	<b>20</b>	

Engineering and Technology > Infrastructure Works

ID	Domain	Title	Level	Credit	Review Category
22277	Bitumen Surfacing Construction	Operate a road mill in civil construction	3	20	C
22278	Civil Plant Operation	Operate a reclaimer stabiliser on infrastructure works sites	3	20	C
<b>31456</b>	<b>Civil Plant Operation</b>	<b>Operate a road mill or reclaimer stabiliser on infrastructure works sites</b>	<b>3</b>	<b>20</b>	C

ID	Domain	Title	Level	Credit	Review Category
6470	Infrastructure Works Equipment	Use a handheld pavement breaker	2	4	C
19675	Civil Plant Operation	Describe and operate a road saw	3	4	C
26717	Infrastructure Works Equipment	Use a generator on an infrastructure works site	2	1	C
26718	Infrastructure Works Equipment	Use a compressor on an infrastructure works site	2	1	C
27500	Infrastructure Works Equipment	Operate compaction equipment for infrastructure works	3	4	C
29028	Civil Plant Operation	Demonstrate knowledge of and operate a handheld saw for infrastructure works activities	3	6	C
<b>31448</b>	<b>Civil Plant Operation</b>	<b>Operate and maintain small plant for infrastructure works</b>	<b>3</b>	<b>10</b>	

#### Engineering and Technology

ID	Subfield	Domain	Title	Level	Credit	Review Category
11312	Infrastructure Works	Infrastructure Civil Works	Maintain piped stormwater drainage systems in road reserve	3	5	C
22114	Water Industry	Water Reticulation	Demonstrate knowledge of stormwater systems and their maintenance, management and treatment options	4	5	C
24923	Water Industry	Water Reticulation	Demonstrate knowledge of stormwater and drainage systems and their components	3	6	C
<b>31451</b>	<b>Water Industry</b>	<b>Water Reticulation</b>	<b>Carry out maintenance operations on stormwater networks</b>	<b>3</b>	<b>20</b>	
28723	Infrastructure Works	Infrastructure Works Utilities	Clean and maintain a pump station	3	5	D
<b>31452</b>	<b>Water Industry</b>	<b>Water Reticulation</b>	<b>Carry out maintenance operations on complex water reticulation assets</b>	<b>3</b>	<b>20</b>	