

Field Agriculture, Forestry and Fisheries

Review of *Forestry* unit standards

Subfield	Domain	ID
Forestry	Forest Establishment	1232, 1234, 1236, 1237, 1238, 6966
Forestry	Forest Foundation Skills	17769, 22994, 22995, 22997, 22999, 23000, 23001
Forestry	Forest Harvesting Operations	1262, 1267, 1268, 1269, 6920, 6921, 17764, 17771, 19722, 19761, 19762, 19763, 19764, 24578, 25754, 27633, 27634, 27636
Forestry	Forest Health Surveillance	5695, 5696, 5697, 5870, 5871, 5873, 5874, 18615, 22131, 22894, 22895
Forestry	Forest Inventory	1125, 1129, 1130
Forestry	Forest Landing Operations	16842, 17759
Forestry	Forest Mechanised Harvesting	6943, 6944, 6945, 24584
Forestry	Forest Mensuration	1222, 6955, 6956, 6957, 6958, 6959, 6960, 17762, 17768, 17770, 20584
Forestry	Forest Operations	43, 1221, 6916, 6965, 17772, 23411, 24574, 24575, 24579, 25788, 25804
Forestry	Forest Operations Advanced	1142, 1224, 6964, 17773, 24571, 24576, 24577, 27570, 28559
Forestry	Forest Operations Management	1123, 1225, 6963, 19954, 24573, 24582, 24583, 25746, 25747, 25752, 26799, 26800, 27569
Forestry	Forest Silvicultural Operations	23097, 25753
Forestry	Forestry - Breaking Out	6939, 27635
Forestry	Forestry Business Management	1124, 4282, 4287, 4289, 4290, 4293, 4294, 4295, 4296, 4297, 4298, 4299, 4300, 25748, 25749, 25751
Forestry	Forestry Knowledge	1126, 1127, 1135, 1137, 1145, 1146, 1227, 14666, 14667, 27963
Forestry	Machine Operations - Forestry	6927, 17758, 24568, 24589, 24590

Forestry	Tree Felling	17756, 19765, 24580, 24585, 25952
-----------------	--------------	-----------------------------------

Competenz has completed the review of the unit standards listed above.

Date new versions published

10 December 2015

Planned review date

December 2020

Summary

The standards were reviewed to align with the recently registered New Zealand Certificates in Forestry and to meet Competenz's ongoing unit standard review schedule. The review was carried out in consultation with the forestry industry technical experts and identified several issues relating to the clarity of assessment requirements and consistency of terms in line with the new qualifications. Gaps in the coverage of required skills and knowledge and some minor duplication were also identified. Several credit and level allocations were found to be inconsistent with framework requirements and these were adjusted. The changes were endorsed by industry technical groups.

Main changes

- Changes were made to outcome statements, evidence requirements, and range statements to clarify assessment requirements, ensure alignment with current industry requirements, and to correct grammatical errors.
- Explanatory notes and evidence requirements were updated to remove specific reference to the industry publications – Approved Code of Practice (ACOP), and Best Practice Guidelines (BPG), and replace with the term 'accepted industry practice'.
- References to standard operating procedures, company procedures, and enterprise procedures were replaced with a standard term – worksite procedures and a definition.
- Standards 1232, 1267, 19954, 1238, 24589, 17773, 19765, 24580, 4287, 4290, 4295, 4297, 4299, 4300, and 5874 were designated as expiring.
- Some changes were made to level and credit allocations to better reflect workplace situations, complexity, and learning and assessment times.
- Some recommended pre-requisite standards were considered to be unnecessary or restrictive and these were removed.
- References to Ministry of Agriculture and Forestry (MAF) were updated to Ministry of Primary Industries (MPI).

Category D unit standards will expire at the end of December 2017

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	Forestry	3 and 4	Standard	4298	5
Domain	Forest Foundation Skills	2	Standard	22994	3
Domain	Forestry Business Management	3 and 4	Standard	4298	5
Domain	Machine Operations - Forestry	3	Standard	24590	4

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

All changes are in **bold**.

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

Agriculture > Forestry > Forest Establishment

ID	Title	Level	Credit	Review Category
1232	Demonstrate knowledge of forest planting site preparation	2	4	D
1234	Plant plantation trees	3	8	B
1236	DKO releasing plantation trees and the use of agrichemicals	3	4	B
1237	Release plantation trees using agrichemicals	3	10	B
1238	Release plantation trees using hand-tools	3	5	D
6966	Apply environmental management to mechanised land preparation operations	4	10	B

Agriculture > Forestry > Forest Foundation Skills

ID	Title	Level	Credit	Review Category
17769	Demonstrate knowledge of general health, safety, and environmental requirements in forestry	2	5	B
22994	Demonstrate knowledge of factors that affect the performance of forestry workers	2 3	10	B
22995	Demonstrate knowledge of employment in a forestry operation	2	5	B
22997	Demonstrate knowledge of principles of commercial forestry	2	5	B

ID	Title	Level	Credit	Review Category
22999	Demonstrate knowledge of principles of commercial forestry Demonstrate forestry foundation skills under supervision for landing operations	2	10	B
23000	Demonstrate forestry foundation skills under supervision for plantation forest establishment	2	10	B
23001	Demonstrate forestry foundation skills under supervision for breaking out for plantation forestry"	2	10	B

Agriculture > Forestry > Forest Harvesting Operations

ID	Title	Level	Credit	Review Category
1262	Position, secure and raise an integral tower on a cable yarder	4	10	B
1267	Demonstrate knowledge of cable harvesting systems	4	10	D
1268	Prepare ropes, rigging, and equipment for cable harvesting operations	4	15	B
1269	Plan, prepare for, and carry out lineshifts in a cable harvesting operation Plan, prepare for, and carry out line shifts in a cable harvesting operation	4	15	B
6920	Demonstrate knowledge of cable harvesting operations	3	8 10	B
6921	Extract stems using a cable yarder	4	18	B
17764	Plan and rig an elevated support system for a cable harvesting operation	4	15	B
17771	Carry out lineshifts in a cable harvesting operation using a mobile tailhold machine Carry out line shifts in a cable harvesting operation using mobile tail-holds	4	15	B
19722	Inspect forest cable yarder and associated components	5	20	B
19761	Demonstrate knowledge of helicopter logging	3	6	B
19762	Prepare logs for extraction by helicopter	4	6	B
19763	Measure, mark, and record log details for helicopter extraction	4	8	B
19764	Manage a helicopter forest harvesting operation	5	10	B
24578	Plan and manage a cable yarder downtower operation and plan the relocation of the cable yarder Plan and manage a cable yarder down-tower operation and plan the relocation of a cable yarder	4	8	B
25754	Demonstrate knowledge of harvesting operations in commercial forestry Demonstrate knowledge of forest harvesting operations	5	8	B

ID	Title	Level	Credit	Review Category
27633	Position, secure, and plan the relocation of the swing yarder Position, secure, and plan the relocation of a swing yarder	4	18	B
27634	Demonstrate knowledge of cable harvesting systems Demonstrate knowledge of cable harvesting equipment and systems	4	5	B
27636	Extract stems using a swing yarder	4	18	B

Agriculture > Forestry > Forest Health Surveillance

ID	Title	Level	Credit	Review Category
5695	Describe the characteristics and management of forest insects	5	8	B
5696	Describe the characteristics and management of forest pathogens	5	8	B
5697	Describe the characteristics and management of abiotic disorders affecting forest and tree health	5	6	B
5870	Demonstrate knowledge of forest health protection principles	4	5	B
5871	Assess forest health from the air	4	4	B
5873	Assess forest health in forest nurseries	4	4	B
5874	Assess forest health in native forests	5	6	D
18615	Demonstrate the use of the Global Positioning System in forestry operations	5	5	B
22131	Demonstrate an awareness of tree health in New Zealand forest plantations	3	5	B
22894	Carry out high risk site surveillance in the urban forest environment	5	10	B
22895	Assess the health of forest plantations from the ground	5	10	B

Agriculture > Forestry > Forest Inventory

ID	Title	Level	Credit	Review Category
1125	Plan and implement forest inventories to obtain information for forest management	5	6	B
1129	Use stand growth models to forecast growth and yield in commercial forestry	6	5	B
1130	Demonstrate knowledge of the principles of forest valuation	5	3	B

Agriculture > Forestry > Forest Landing operations

ID	Title	Level	Credit	Review Category
16842	Mark logs using a computer aided log making system	4	10	B

ID	Title	Level	Credit	Review Category
17759	Audit value recovery from stems using computer aided log making systems	5	20	B

Agriculture > Forestry > Forest Mechanised Harvesting

ID	Title	Level	Credit	Review Category
6943	Delimb tree lengths using a mechanised delimber	4	10	B
6944	Make logs using a mechanised processing machine	4	18	B
6945	Fell trees using a mechanised harvesting machine	4	20	B
24584	Demonstrate use of a computerised system for controlling harvester functions in a forestry operation	4	5	B

Agriculture > Forestry > Forest Mensuration

ID	Title	Level	Credit	Review Category
1222	Establish and measure sample plots for forest operations	4 3	6	B
6955	Carry out forest pre-harvest inventory sampling	4	10	B
6956	Carry out waste assessment in cutover forest	4	5	B
6957	Scale logs using a domestic scaling method	4	10	B
6958	Scale export logs using an export scaling method	4	10	B
6959	Calculate log scaling volume	5	6	B
6960	Prepare job prescriptions for forest operations	4	6	B
17762	Collect and interpret forest inventory data	5	10	B
17768	Establish and measure permanent sample plots for forest management and research	4	5	B
17770	Demonstrate knowledge of log grades and log scaling methods	3	4 5	B
20584	Carry out pre-harvest inventory	5	10	B

Agriculture > Forestry > Forest Operations

ID	Title	Level	Credit	Review Category
43	Maintain a chainsaw	3	10	B
1221	Explain and interpret job prescriptions for forestry operations	3	5	B
6916	Demonstrate knowledge of the rules relating to chainsaw use	2	5	B
6965	Apply environmental management to forest roading and earthworks	4	12	B
17772	Demonstrate knowledge of environmental requirements in forestry operations	3	5	B
23411	Operate a chainsaw and carry out basic chainsaw maintenance in a commercial forestry situation	3	12	B

ID	Title	Level	Credit	Review Category
24574	Demonstrate knowledge of, and contribute to, worksite health and safety for commercial forestry operations	3	5	B
24575	Demonstrate knowledge of factors that affect the quality of commercial forestry operations	3	5	B
24579	Demonstrate knowledge of incident response in plantation forests	3	5	B
25788	Demonstrate knowledge of, implement, and audit temporary traffic control on private forest roads	3	5	B
25804	Navigate in a plantation forest	3	5	B

Agriculture > Forestry > Forest Operations Advanced

ID	Title	Level	Credit	Review Category
1142	Demonstrate knowledge of log distribution in New Zealand for commercial forestry operations	4 3	5	B
1224	Use prescription maps for forestry operations	3	5	B
6964	Apply environmental management to harvesting trees	4	10	B
17773	Apply environmental management to harvesting trees in a low environmental risk situation	4	6	D
24571	Demonstrate knowledge of internal and external customer needs within a commercial forestry operation	4	5	B
24576	Supervise a crew in a commercial forest operation	4	8 10	B
24577	Demonstrate knowledge of health and safety management in a commercial forestry operation	4	10	B
27570	Demonstrate knowledge of and manage quality control in a silvicultural forest operation Carry out quality control in a forestry silviculture operation	4	10	B
28559	Plan for and undertake safe behaviour observations in a forestry operation	4	10	B

Agriculture > Forestry > Forest Operations Management

ID	Title	Level	Credit	Review Category
1123	Use maps and aerial photographs to establish a plot for commercial forestry	4	4	B
1225	Calculate production targets for forestry operations	5	5	B
6963	Plan forestry operations to meet environmental requirements	5	12	B
19954	Calculate cable harvesting payload	5	6	D
24573	Plan for, manage, and perform quality control on a production thinning operation	5	15	B

ID	Title	Level	Credit	Review Category
24582	Plan for, manage, and perform quality control on a ground based motor manual clear fell harvesting operation	5	15	B
24583	Plan for, manage, and perform quality control on a mechanised harvesting clear fell operation	5	15	B
25746	Prepare, conduct, and report process analysis in a forestry operation	5	8	B
25747	Plan for and monitor production and quality of a forestry operation	5	6	B
25752	DKO harvest planning and evaluate harvesting plan	5	8	B
26799	Plan for, manage, and perform quality control on a cable harvesting operation	5	15	B
26800	Plan for, manage, and perform quality control on an establishment or a silvicultural operation Plan for, manage, and perform control quality on, an establishment or silviculture operation	5	15	B
27569	Demonstrate knowledge of and calculate the daily costs and production targets in forestry operations	4	10	B

Agriculture > Forestry > Forest Silvicultural Operations

ID	Title	Level	Credit	Review Category
23097	Rescue an injured or disabled person from tree	4	8	B
25753	DKO and plan forestry operations	5	8	B

Agriculture > Forestry > Forestry - Breaking - Out

ID	Title	Level	Credit	Review Category
6939	Break out for ground based forest harvesting operations	3	10	B
27635	Carry out spotter's duties for a cable harvesting grapple operation	4	12	B

Agriculture > Forestry > Forestry Business Management

ID	Title	Level	Credit	Review Category
1124	Use maths and statistics functions and procedures in commercial forestry	5	6	B
4282	Demonstrate knowledge of management systems for forestry operations	5	4	B
4287	Determine employment arrangements for forestry personnel	5	7	D
4289	Prepare a business plan for a forestry business	6	6	B
4290	Manage workforce development in a forestry operation	6	6	D
4293	Determine forestry operations equipment requirements	6	3	B
4294	Calculate costs of forestry operations	5	6	B

ID	Title	Level	Credit	Review Category
4295	Determine financial requirements and resourcing options for a forestry business	4	3	D
4296	Identify commercial protection requirements for a forestry business	5	2	B
4297	Prepare a tender for forestry operations	6	3	D
4298	Research key elements of the forest industry and analyse opportunities for forest optimisation Research key elements of the forest industry and identify opportunities for forest optimisation	3 5	4	B
4299	Determine key issues in employment in forestry	5	2	D
4300	Demonstrate knowledge of key issues in forestry production management	5	2	D
25748	Research and report on a forestry business improvement initiative	6	12	B
25749	DKO and analyse forest supply chains	5	10	B
25751	DKO tools to collect and manage data	4	4	B

Agriculture > Forestry > Forestry Knowledge

ID	Title	Level	Credit	Review Category
1126	Demonstrate knowledge of botany for commercial forestry	4	4	B
1127	Demonstrate knowledge of wood science for commercial forestry	4	4	B
1135	Demonstrate knowledge of nutrient management for commercial forestry	5	4	B
1137	Demonstrate knowledge of forestry and its role as a land use	6	5	B
1145	Demonstrate knowledge of environmental legislation affecting commercial forestry	5	5	B
1146	Demonstrate knowledge of health and safety legislation affecting commercial forestry	5	5	B
1227	Demonstrate knowledge of plantation forest harvesting	2	3 5	B
14666	Demonstrate knowledge of earth science for commercial forestry	4	4	B
14667	Demonstrate knowledge of forest ecology	4	4	B
27963	Demonstrate foundation knowledge of plantation forest establishment and silvicultural operations	2	5	B

Agriculture > Forestry > Machine Operations - Forestry

ID	Title	Level	Credit	Review Category
6927	Operate a vehicle mounted hydraulic loader in a commercial forestry environment	3	10	B

ID	Title	Level	Credit	Review Category
17758	Plan and form an extraction track in a forestry operation	4	6	B
24568	Demonstrate knowledge of, and undertake, basic repairs and maintenance on a forest industry machine Demonstrate knowledge of, and undertake, basic repairs and maintenance on a forestry industry machine	3	10	B
24589	Demonstrate knowledge of machine recovery in commercial forestry operations	3	5	D
24590	Operate a self-levelling machine in a forestry situation Operate a self-levelling machine in a forestry operation	3 4	10 5	B

Agriculture > Forestry > Tree Felling

ID	Title	Level	Credit	Review Category
17756	Assess and manage individual hazardous trees	4	15	B
19765	Assess and deal with individual windthrown trees in a forest plantation	4	8	D
24580	Demonstrate knowledge of the role and responsibility of the tree felling observer	2	3	D
24585	Use tree jacks to fell trees	4	10	B
25952	Thin plantation trees for extraction	3	10	B