Title	Calculate costs of forestry operations		
Level	5	Credits	6

Purpose	People credited with this unit standard are able to: describe the nature of forestry operation costs; calculate the cost components of a forestry operation; and describe the procedures for developing a unit rate from element costings.

Classification	Forestry > Forestry Business Management

Available grade	Achieved

Guidance Information

1   Case studies may be used as the basis for this unit standard.

2   References
Forest Industry Contractors Association. *FICA Silvicultural Costing Model*, available at http://fica.org.nz/.
Future Forests Research. *Business Management for Logging* (2nd edition) (2009), available at https://fgr.nz/documents/business-management-logging-2nd-addition-2009/.

Outcomes and performance criteria

Outcome 1

Describe the nature of forestry operation costs.

Performance criteria

1.1   Basic terminology in forestry operation costing is defined in accordance with Industry Best Practice.

   Range   fixed cost, variable cost, capital cost, depreciation, return on investment, work day rate, profit, job cost, unit rate.

1.2   Calculation of fixed costs is described in accordance with Industry Best Practice.

   Range   depreciation, interest, insurance, overheads.

1.3   Calculation of variable costs is described in accordance with Industry Best Practice.

           Range   labour, fuel, lubricants, tyres, machine repair and maintenance, consumable equipment.

Outcome 2

Calculate the cost components of a forestry operation.

Range   two of – land preparation, pruning, thinning to waste, production thinning, harvesting.

Performance criteria

2.1   Sources of information on costs are identified.

           Range   labour, machinery and vehicles, operating supplies and equipment, administration.

2.2   Costs of capital equipment are defined and calculated in accordance with Industry Best Practice.

           Range   machinery, personnel transport.

2.3   Costs of labour are defined and calculated in accordance with Industry Best Practice.

           Range   wages, allowances, overtime, production bonuses, holiday pay, levies.

2.4   Costs of operating supplies are defined and calculated in accordance with Industry Best Practice.

           Range   equipment, tools, consumable supplies.

2.5   Costs of overheads are defined and calculated in accordance with Industry Best Practice.

           Range   office and administration costs, business insurance, fees and charges, training costs.

Outcome 3

Describe the procedures for developing a unit rate from element costings.

Performance criteria

3.1   Procedures required to calculate a work day rate from element costings in accordance with Industry Best Practice are described.

3.2   Factors involved in calculation of profit are described and an allowance for profit is applied to derive the job cost, in accordance with Industry Best Practice.

        Range   management costs, supervision costs, estimated value of risk.

3.3   Procedures to calculate a unit rate from the job cost and projected job production rate are described in accordance with Industry Best Practice.

3.4   The sensitivity of changes in inputs to the final unit rate is described.

        Range   changes in hours worked per day, changes in wages cost.

Planned review date	31 December 2028

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	7 August 1995	31 December 2017
Review	2	27 May 1998	31 December 2017
Review	3	27 May 2002	31 December 2017
Review	4	16 October 2009	31 December 2017
Review	5	10 December 2015	N/A
Rollover and Revision	6	28 May 2020	N/A
Rollover	7	26 April 2024	N/A

Consent and Moderation Requirements (CMR) reference	0173

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.