
WOOD MANUFACTURING
Plan plant and building layout for wood
manufacturing operations

level:	6
credit:	25
planned review date:	September 2005
sub-field:	Wood Processing Technology
purpose:	People credited with this unit standard are able to: define production parameters for a specified wood manufacturing department; analyse plant requirements and lay out to produce the specified wood product mix; provide for ancillary facilities and systems in the wood manufacturing plant lay out plan; and present a building layout plan for a specified wood manufacturing department.
entry information:	Recommended: Unit 20267, <i>Relate operations management principles to wood manufacturing operations</i> , or demonstrate equivalent knowledge and skills.
accreditation option:	Evaluation of documentation and visit by NZQA and industry.
moderation option:	A centrally established and directed national moderation system has been set up by Forest Industries Training.
special notes:	Definitions <i>Wood manufacturing department</i> refers to discrete groups of activities within the manufacturing of wood products and may include, sawmilling, drying, preservation, machining, finger jointing and laminating, veneer, plywood and laminated veneer lumber manufacture. <i>By-product</i> refers to bark, saw dust, sanding dust, and shavings. <i>Legislation</i> refers to the Health and Safety in Employment Act 1992, Resource Management Act 1991, Employment Relations Act 2000, Building Act 1991, and their subsequent amendments or replacements.

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Elements and Performance Criteria

element 1

Define production parameters for a specified wood manufacturing department.

performance criteria

- 1.1 Definition identifies an integrated product mix for a wood manufacturing department.
- 1.2 Definition translates finished product volumes into raw material volume requirements and by-product outputs from a wood manufacturing plant.
- 1.3 Definition identifies wood processing stages required to convert raw materials into specified wood product mix.

element 2

Analyse plant requirements and lay out to produce the specified wood product mix.

performance criteria

- 2.1 Analysis identifies the manufacturing capability required for individual machine centres for producing the specified wood product mix.
- 2.2 Analysis of potential wood manufacturing layout options identifies logical materials flows and best option machine layout.

Range: best option layout includes - flexibility, linear processes, product movement optimisation.
- 2.3 Analysis matches wood manufacturing plant capacity with wood processing requirements to minimise bottlenecks and optimise work flows.
- 2.4 Final plan shows logistical requirements for wood product storage and flow into, through and out of the various wood manufacturing stages.

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element 3

Provide for ancillary facilities and systems in the wood manufacturing plant lay out plan.

performance criteria

- 3.1 Layout plan shows placement of ancillary facilities to service production requirements, and provide support to administration, technical and management functions in the wood manufacturing operation.
- Range: ancillary facilities may include but are not limited to - offices, toilets, lunch rooms, meeting rooms, computer server room.
- 3.2 Layout plan shows placement of by-product transportation systems to service production requirements in the wood manufacturing operation.
- Range: transportation systems may include but are not limited to - belt and chain conveyers, pneumatic conveying systems.
- 3.3 Lay out plan shows how placement of ancillary facilities and by product conveying systems incorporates flexibility and future expansion in wood processing capacity.

element 4

Present a building plan for a specified wood manufacturing department.

performance criteria

- 4.1 Plan incorporates provision of services to meet production, flexibility, functionality, and future expansion requirements in the wood manufacturing department.
- Range: services include - power, water, gas, steam, heat, pneumatic and hydraulic systems.

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- 4.2 Plan incorporates provision for movement of wood product materials into, through and out of the building, and takes account of materials movement methods.
- Range: materials movement methods may include - log loader, truck, forklift, over head gantry, side loader, mechanical conveying systems.
- 4.3 Plan identifies dimensions of the building and its placement on the wood manufacturing site.
- Range: placement must relate to roading, boundaries, supplies of power, waste water, water, communication services, and site topography.
- 4.4 Plan incorporates compliance with legislation that pertains to the building, and wood manufacturing operations.

Comments on this unit standard

Please contact Competenz at info@competenz.org.nz if you wish to suggest changes to the content of this unit standard.

Please Note

Providers must be accredited by the Qualifications Authority or a delegated inter-institutional body before they can register credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for providers wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

This unit standard is covered by AMAP 0173 which can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.