



Australian Government

FWPHAR4203 Design log landings and snig tracks

Release: 1

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Modification History

Release	Comment
1	Replaces equivalent unit FPIHAR4203B Design log landings and snig tracks, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to design, plan and coordinate the development of log landings and snig tracks in a forest or farm forest setting and to provide support for their construction.

The unit applies to job roles including Harvesting Supervisor, Harvesting Team Leader, Farm Forestry Supervisor, Forestry Supervisor, Forestry Operations Supervisor, Propagation and Stand Health Supervisor and Tree Farm Supervisor.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Harvesting and Haulage

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Plan landing and recovery requirements	1.1 Analyse workplace health and safety (WHS) and regulatory requirements, standards and codes of practice for the design, construction and operation of landings and snig tracks.

ELEMENTS <i>Elements describe the essential outcomes.</i>	PERFORMANCE CRITERIA <i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
	1.2 Obtain and assess information on logging methods, topography and environmental management considerations for site. 1.3 Identify landing location and construction requirements from harvest plan and inspect site to assess factors affecting operations. 1.4 Identify timeframe for use of site and likely weather conditions. 1.5 Calculate and document log extraction methods and storage requirements for landings, roads, tracks, equipment placement, falling and recovery rates and delivery schedules.
2. Design landing and snig tracks	2.1 Calculate specific landing site size and level to meet operational requirements, optimise construction time and minimise environmental damage. 2.2 Plan number and location of snig tracks to optimise track clearing and construction time, log handling capacity and minimise environmental damage. 2.3 Locate track and road entry points to landing in line with harvest plan, log handling procedures, vehicle and equipment access, turning and loading space requirements. 2.4 Design landing and track to provide for available equipment and access for construction. 2.5 Plan and document restoration of land on completion of operations. 2.6 Document landing design and track locations in line with regulation. 2.7 Record design and development process and report to appropriate personnel.
3. Coordinate landing and track development	3.1 Communicate landing and snig track design and construction plan to site personnel to enable preparation. 3.2 Develop operational procedures for tracks and landings with site personnel. 3.3 Provide technical assistance to site personnel for construction of landing and tracks. 3.4 Monitor construction of landing and tracks; review and modify design to account for unexpected ground, water, vegetation or other environmental conditions.

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	- identify boundaries and topographical measurements on maps and plans and calculate spatial requirements for landings and snig tracks - complete complex calculations involving rates of extraction, height, length, weight, vehicle turning and loading space to determine size and capacity of snig tracks.
Oral communication skills to:	- provide clear and unambiguous information about design plans to site personnel - ask open and closed probe questions and actively listen to clarify: - issues arriving during construction - site personnel understanding of plans and modifications - use language and concepts appropriate to individual social and cultural differences.
Reading skills to:	- interpret complex and unfamiliar: - regulatory and environmental information affecting designs - harvest plans - topographic maps.
Writing skills to:	- document detailed and accurate designs for landings and snig tracks - develop and document operational procedures using language easily understood by construction and site personnel - complete detailed and accurate reports on the design and implementation process.
Initiative and enterprise skills to:	initiate and determine the most time and cost effective plan for construction.
Planning and organising skills to:	design, plan and coordinate landing and snig track development.
Problem-solving skills to:	identify environmental issues during construction and implement appropriate modifications to designs.
Teamwork skills to:	work as part of a team to develop plans, procedures and provide technical assistance to other team members during construction phase.
Technology skills to:	use computers and software programs for documenting designs for landings and snig tracks.

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Range of Conditions

Not Applicable

Unit Mapping Information

FPIHAR4203B Design log landings and snig tracks

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPHAR4203 Design log landings and snig tracks

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1	Replaces equivalent unit FPIHAR4203B Design log landings and snig tracks, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format. Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including 'Required Skills and Knowledge, Evidence Guide and Range Statement.

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- designing log landings and snig tracks in line with regulatory requirements, the work order and within prescribed organisational tolerances
- planning the layout of the landing and snig tracks in line with site conditions
- coordinating the development of the landing and snig tracks
- design and coordinate the development of these types of snig tracks:
 - emergency escape routes
 - equipment access tracks
 - hauling tracks
 - vehicular tracks

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- content and application of applicable commonwealth, state, territory or local government regulations for the design, construction and operation of landings and snig tracks
- cable log recovery operations and log extraction methods
- key features of these varying environmental conditions and effects on the design and construction of landings and snig tracks:

- fallen trees
- general forest lean
- ground growth
- ground hazards and obstacles
- ground slope
- density of trees
- wet and adverse weather conditions
- environmental protection practices for forest and forest farm settings:
 - minimising temporary, short-term, long-term and permanent damage to natural vegetation and landscape
 - soil and water protection
 - returning the environment to its original or near to original condition on completion of operations
- purpose, features and operational requirements of these types of snig tracks:
 - emergency escape routes
 - equipment access tracks
 - hauling tracks
 - vehicular tracks
- purpose, features and operational requirements of:
 - landings
 - vehicles and equipment used on landings and snig tracks
- processes for:
 - designing and coordinating the development of landings and snig tracks
 - determining the most time and cost effective plan for construction
- typical industry chain of command for communication of information, instruction and technical advice
- organisational standards, policies and procedures for the design, construction and operation of landings and snig tracks:
 - workplace health and safety specific to the use of landings and snig tracks
 - environmental protection
 - documenting designs for landings and snig tracks
 - recording and reporting the design and implementation process.

Assessment Conditions

The following resources must be made available:

- computers and software programs used for documenting designs for landings and snig tracks
- applicable commonwealth, state, territory or local government regulations for the design, construction and operation of landings and snig tracks
- harvest plan for the site

- topographic maps for the site
- template design plans for landings and snig tracks
- template reports for recording the design and implementation process
- organisational standards, policies and procedures for the design, construction and operation of landings and snig tracks.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

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