

**Modification history**

| Release   | Comments  |
|-----------|---|
| Release 1 | This version released with FWP Forest and Wood Products Training Package Version 6.0. |

| FWPFGM3XXX               | Construct and maintain forest roads and tracks  |
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| <b>Application</b>       | <p>This unit of competency describes the skills and knowledge required to plan, construct and maintain roads and tracks in a forest environment. It includes monitoring road or track conditions and coordinating maintenance work.</p> <p>The unit applies to bulldozer operators, forestry technicians, harvesting technicians and mobile equipment operators.</p> <p>All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.</p> <p>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p> |
| <b>Prerequisite Unit</b> | Nil   |
| <b>Unit Sector</b>       | Forest Growing and Management<br>Harvesting and Haulage   |

| Elements   | Performance Criteria  |
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| <i>Elements describe the essential outcomes.</i> | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>  |
| 1. Prepare for work                              | 1.1 Review work order or instruction to determine job requirements, and where required, seek clarification from appropriate personnel<br>1.2 Review workplace health and safety procedures, including the use of personal protective equipment and safe manual handling techniques<br>1.3 Identify, assess and take actions to mitigate risks and hazards associated with road and track construction operations<br>1.4 Identify workplace environmental protection procedures for biodiversity protection operations, minimising and disposing of waste material, cleaning tools and equipment, and minimising impact of road and track construction operations on environmental assets<br>1.5 Identify and report existing and potential environmental risks and hazards to relevant personnel<br>1.6 Consult and maintain communication with team members and other appropriate personnel to ensure that work is coordinated effectively with others in the workplace<br>1.7 Obtain tools and equipment needed for the work and check for correct operation and safety |
| 2. Plan road or track                            | 2.1 Obtain topographical map of area and assess details in relation to environmental management considerations<br>2.2 Plan road or track including drainage and entry points that provide vehicle and equipment access, turning and loading space<br>2.3 Prepare forest road or track construction plan that includes timelines, resources and equipment according to workplace procedures  |

| <b>Elements</b>                                  | <b>Performance Criteria</b>   |
|--|---|
| <i>Elements describe the essential outcomes.</i> | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>  |
| 3. Construct road or track                       | 3.1 Establish line of road and remove obstacles according to plans<br>3.2 Establish and maintain communication with others to ensure safe work<br>3.3 Remove soil to establish base that has suitable width, slope and stability<br>3.4 Construct water crossing points and drains and install fish ladders if required according to environmental requirements, workplace procedures and engineering designs<br>3.5 Prepare and construct intersection points to provide suitable entry and exit levels and control water flow<br>3.6 Place pipes or culverts and backfill and compact and armour outlets as required consistent with predicted water volume<br>3.7 Transfer, spread and compact base and surface material to meet planned road or track design<br>3.8 Control and manoeuvre equipment to compact road material and stabilise adjacent soil during construction<br>3.9 Prepare road or track surface suitable for moving logs, and for the manoeuvre and traction of equipment |
| 4. Maintain road or track                        | 4.1 Monitor condition of road or track to identify specific damage likely to lead to safety or environmental issues and report to appropriate personnel<br>4.2 Redesign and remake areas of consistent damage with assistance from appropriate personnel<br>4.3 Plan and carry out maintenance with minimal disruption to other work activities<br>4.4 Record and report construction operations and maintenance according to workplace procedures  |

| <b>Foundation Skills</b>   |   |
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| <i>This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.</i> |   |
| <b>Skill</b>   | <b>Description</b>  |
| Reading  | <ul style="list-style-type: none"> <li>Read and interpret workplace documentation including work instructions, job sheets and operational plans</li> </ul>                    |
| Writing  | <ul style="list-style-type: none"> <li>Complete construction and maintenance plan and routine written reports on work activities</li> </ul>                                   |
| Oral communication   | <ul style="list-style-type: none"> <li>Select and use appropriate spoken communication strategies with work colleagues and other personnel on site</li> </ul>                 |
| Numeracy   | <ul style="list-style-type: none"> <li>Complete routine calculations to determine volume of road construction materials to construct and maintain tracks and roads</li> </ul> |

| <b>Unit Mapping Information</b>                              |  |                 |                           |
|--|--|-----------------|---------------------------|
| <b>Code and title current version</b>                        | <b>Code and title previous version</b>                       | <b>Comments</b> | <b>Equivalence status</b> |
| FWPFGM3XXX<br>Construct and maintain forest roads and tracks | FWPFGM3209<br>Construct and maintain forest roads and tracks |                 |                           |

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| <b>Links</b> | Companion Volumes, including Implementation Guides, are available at VETNet:<br><a href="https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a> |
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| <b>TITLE</b>  | <b>Assessment requirements for FWPFGM3XXX Construct and maintain forest roads and tracks</b> |
| <b>Performance Evidence</b>   |  |
| <p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has:</p> <ul style="list-style-type: none"> <li>• planned and constructed one forest road or track according to workplace tolerances in an operational forest on one occasion following a work order or instruction that is consistent with workplace policy and procedures and current workplace health and safety legislation, regulations and related industry standards and codes of practice applicable to forest road and track construction operations.</li> <li>• planned, carried out and reported on maintenance of one forest road or track according to workplace tolerances in an operational forest on one occasion following a work order or instruction that is consistent with workplace policy and procedures and current workplace health and safety legislation, regulations and related industry standards and codes of practice applicable to forest road and track construction operations.</li> </ul> |  |

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| <b>Knowledge Evidence</b>   |  |
| <p>An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:</p> <ul style="list-style-type: none"> <li>• legislation, regulations, standards, codes of practice and established safe practices for constructing and maintaining forest roads and tracks, including: <ul style="list-style-type: none"> <li>• data relating to road requirements and restrictions</li> <li>• maximum road loads</li> <li>• likely weather conditions</li> <li>• expected timeframes</li> <li>• survey locations and requirements</li> <li>• water courses</li> <li>• location of log landings</li> <li>• road entry points</li> <li>• crossing or entry points for other roads and tracks</li> <li>• budget</li> </ul> </li> <li>• environmental protection requirements relating to: <ul style="list-style-type: none"> <li>• roadside conditions and climate</li> <li>• habitat trees</li> <li>• ground growth</li> <li>• canopy</li> <li>• general forest lean</li> <li>• wind speed and direction</li> <li>• fallen trees</li> <li>• density of trees</li> <li>• ground slope</li> <li>• soil and water protection</li> <li>• ground hazards</li> <li>• obstacles</li> </ul> </li> <li>• environmental values to be protected including aquatic ecosystems</li> <li>• workplace procedures, checks and routine maintenance to be carried out on construction equipment</li> <li>• road construction methods</li> <li>• risks and hazards associated with forest road and track construction</li> <li>• logging and harvesting operations</li> <li>• road transport equipment requirements and capabilities in forest operations</li> <li>• ground water behaviour</li> <li>• workplace health and safety requirements, fire protocols and emergency evacuation procedures.</li> </ul> |  |

| <b>Assessment Conditions</b>  |  |
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| <p>Assessment of the skills in this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions skills must be demonstrated in a workplace location or an environment that accurately represents workplace conditions</li> <li>• resources, equipment and materials:                             <ul style="list-style-type: none"> <li>• tools and equipment required for forest road and track construction operations</li> <li>• an operational forest</li> <li>• personal protective equipment</li> <li>• communication system</li> </ul> </li> <li>• specifications                             <ul style="list-style-type: none"> <li>• access to work order or instruction detailing forest road and track construction operations to be carried out by operator</li> <li>• access to workplace policies and procedures which cover current workplace health and safety regulations and related industry standards and codes of practice applicable to forest road and track construction operations</li> <li>• access to workplace policies and procedures which cover off on current Environment Protection Acts, regulations and related industry standards and codes of practice applicable to forest road and track construction operations</li> <li>• access to workplace safety and environmental protection plans</li> <li>• access to site emergency procedure</li> <li>• access to workplace standard operating procedures or operator manuals for equipment used in forest road and track construction operations.</li> </ul> </li> </ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p> |  |

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