

<b>Training Package</b>	<b>Conservation and Land Management (RTD02), Amenity Horticulture (RTF03) and Rural Production (RTE03)</b>	<b>HSC Requirements and Advice</b>
<b>Title</b>	<b>Install, maintain and repair fencing</b>	
<b>Unit code</b> <b>RTC2209A</b>	This competency standard covers the functions required to carry out safe and effective conventional fencing work. Conventional fencing refers to post and wire/wire netting under tension, and can be used for animal control or as a deterrent for people and vehicles. It requires a working knowledge of the uses and structure of a range of fences and fencing materials, equipment and tools. It requires an awareness of workplace safety and environmental practices associated with maintenance activities. The work functions in this standard are likely to be carried out under routine supervision within enterprise guidelines.	<b>HSC Indicative Hours</b>  <b>15</b>

**Evidence Guide**

**What evidence is required to demonstrate competence for this standard as a whole?**

Competence in this standard requires evidence of the ability to select the correct tools and equipment and apply appropriate methods to carry out routine maintenance to conventional fences. It also requires the ability to apply task instruction, complete work requirements in an efficient and timely manner, identify re-usable materials, and minimise impacts to the environment. The skills and knowledge required must be **transferable** to a different work environment. For example, this could include different fencing types, environments and industry settings.

<b>What specific knowledge is needed to achieve the performance criteria?</b>	<b>What specific skills are needed to achieve the performance criteria?</b>	<b>Are there other competency standards that could be assessed with this one?</b>	<b>Assessment guide</b>	<b>HSC Requirements and Advice</b>
<p>Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:</p> <ul style="list-style-type: none"> <li>• uses and structures of a range of conventional fence types</li> <li>• uses and types of fencing tools and materials</li> <li>• fencing wire, knots, tensions, capabilities and limitations</li> <li>• strainer assembly, gate types and construction</li> <li>• common fencing hazards and safety precautions</li> <li>• OHS legislative requirements and codes of practice including hazard and risk assessment</li> </ul>	<p>To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complimentary skills are required. These include the ability to:</p> <ul style="list-style-type: none"> <li>• demonstrate safe working practices</li> <li>• minimise environmental impact</li> <li>• interpret and apply task instruction</li> <li>• complete work efficiently within timeframes</li> <li>• maintain physical fitness</li> <li>• read and interpret work plans</li> <li>• communicate with work team and supervisor</li> <li>• calculate and measure fencing wire requirements.</li> </ul>	<p>This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.</p>	<p>There is essential information about <b>assessing this competency standard for consistent performance and where and how it may be assessed</b>, in the Assessment Guidelines for this Training Package. All users of these competency standards must have <b>access</b> to both the <b>Assessment Guidelines</b> and the relevant <b>Sector Booklet</b>.</p>	<p><b>Key Terms and Concepts</b></p> <ul style="list-style-type: none"> <li>• clearing and tidying</li> <li>• conventional fencing</li> <li>• enterprise requirements</li> <li>• erection, maintenance and repair of fencing</li> <li>• fencing tools and materials</li> <li>• hazards</li> <li>• manufacturer’s specification</li> <li>• occupational health and safety (OHS)</li> <li>• personal protective equipment (PPE)</li> <li>• reporting</li> <li>• reusable materials</li> <li>• risk assessment</li> <li>• safe work practices</li> <li>• Standard Operating Procedures (SOP)</li> <li>• work plan.</li> </ul>

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relevant to the work function • relevant codes of practice with regard to protection of the environment.				

Element	Performance Criteria	Range of Variables	HSC Requirements and Advice
1 Prepare for fencing work	1.1 <b>Tools and materials</b> appropriate to meet job requirements are selected and checked against the <b>work plan</b> .	<p>The Range of Variables explains the context within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.</p> <p>For more information on contexts, environment and variables for training and assessment refer to the Sector Booklet.</p> <p>What <b>tools and materials</b> might be used?</p> <p>Tools may include post driver, posthole borer, crowbar, wire strainers and fencing pliers. Materials may include fencing wire which may vary - plain, barbed, ringlock and netting.</p> <p>What information may be included in a <b>work plan</b>?</p> <p>This may include designated work tasks, tools and materials for use, procedures for pre-start and safety checks of tools, timeframe for work completion, supervisor's instructions and reporting requirements.</p> <p>What may be involved in routine <b>pre-operational checks</b> of tools?</p> <p>This may include routine safety and pre-start checks, and preparatory procedures including cleaning, lubricating, hand sharpening, tightening, basic repairs and adjustments.</p> <p>What <b>enterprise requirements</b> may be applicable to this standard?</p> <p>Standard Operating Procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets (MSDSs), work notes and plans, product labels, manufacturers specifications, operators' manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and supervisors oral or written instructions.</p>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Purpose of fences including:</p> <ul style="list-style-type: none"> <li>• restricting livestock movement</li> <li>• boundary identification</li> <li>• specific area identification.</li> </ul> <p>Knowledge of the range of tools and materials available and their function, including:</p> <ul style="list-style-type: none"> <li>• post-hole borer</li> <li>• post-hole shovel</li> <li>• star picket driver</li> <li>• wire strainers</li> <li>• fencing pliers</li> <li>• wire cutters</li> <li>• shovel</li> <li>• crowbar/rammer</li> <li>• drill</li> <li>• spirit level</li> <li>• strainer posts</li> <li>• droppers</li> <li>• star pickets.</li> </ul> <p>Types of fencing wire including:</p> <ul style="list-style-type: none"> <li>• plain</li> <li>• barbed</li> <li>• ring lock</li> <li>• netting</li> <li>• hinge joint.</li> </ul> <p>Information provided in a work plan including:</p> <ul style="list-style-type: none"> <li>• designated work tasks</li> <li>• tools and materials for use</li> <li>• procedures for pre-start and safety checks of tools</li> <li>• timeframe for work completion</li> <li>• supervisor's instructions</li> <li>• reporting procedures and requirements.</li> </ul>
	1.2 Faulty or unsafe tools are identified and segregated for repair or replacement according to <b>enterprise requirements</b> .		

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	<p>1.3 <b>Hazards</b> in the workplace are assessed and minimised according to <b>OHS</b> and enterprise requirements.</p>	<p>What <b>hazards</b> may be relevant to this standard?</p> <p>This may include exposure to hazardous noise, treated timbers, wire breaking, manual handling, trip points, dust solar radiation and adverse weather conditions. It may also include electricity associated with powered tools.</p> <p>What <b>OHS</b> requirements may be applicable to this standard?</p> <p>Safe systems and procedures for:</p> <ul style="list-style-type: none"> <li>• the use of fencing tools and materials</li> <li>• the operation of vehicles</li> <li>• hazard and risk control</li> <li>• lifting, carrying and handling techniques</li> <li>• manual handling especially when handling posts, coils of wire and using tools</li> <li>• the use, maintenance and storage of personal protective equipment</li> <li>• outdoor work including protection from solar radiation</li> <li>• protection from dusts</li> <li>• administering first aid.</li> </ul>	<p><b>Learning experiences for the HSC must address:</b></p> <p>An awareness of potential hazards in the workplace including:</p> <ul style="list-style-type: none"> <li>• exposure to hazardous noise</li> <li>• dust</li> <li>• solar radiation</li> <li>• adverse weather conditions</li> <li>• electrical hazards</li> <li>• uneven terrain</li> <li>• treated timber</li> <li>• breaking wire</li> <li>• manual handling</li> <li>• trip points</li> <li>• exposed moving machinery parts</li> <li>• pinch points on tools and machinery.</li> </ul> <p>A basic understanding of risk assessment:</p> <ul style="list-style-type: none"> <li>• identify hazards</li> <li>• assess associated risks</li> <li>• strategies to control/eliminate risks.</li> </ul> <p>An awareness of appropriate occupational health and safety (OHS) strategies including:</p> <ul style="list-style-type: none"> <li>• select, use and maintain appropriate personal protective equipment (PPE)</li> <li>• sufficient drinking water</li> <li>• basic first aid training</li> <li>• access to first aid kits</li> <li>• safe work practices and procedures</li> <li>• access to appropriate communication devices</li> <li>• emergency plan</li> <li>• safety signs</li> <li>• environmental policies.</li> </ul>
	<p>1.4 Transport of fencing materials and equipment (including safety equipment) is arranged and placed according to work plan.</p>	<p>What information may be included in a <b>work plan</b>?</p> <p>This may include designated work tasks, tools and materials for use, procedures for pre-start and safety checks of tools, timeframe for work completion, supervisor’s instructions and reporting requirements.</p>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Transportation considerations including:</p> <ul style="list-style-type: none"> <li>• type and quantity of each material needed for the task</li> <li>• tools required to perform the task</li> <li>• sufficient fuel for transport vehicles and motorised equipment</li> <li>• communication devices</li> <li>• securing the load.</li> </ul>

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2 Carry out fence installation, repair and maintenance	2.1 Suitable <b>personal protective equipment</b> is selected, used, maintained and stored according to OHS and workplace procedures.	<p>What <b>personal protective equipment</b> may be relevant to this standard?</p> <p>This may include boots, overalls, gloves, eye protection, hearing protection and sun protection.</p>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Selection, use, maintenance and storage of PPE appropriate to work task.</p> <p>A range of PPE including:</p> <ul style="list-style-type: none"> <li>• footwear</li> <li>• head protection – hard hat, sun hat and helmet</li> <li>• gloves</li> <li>• overalls</li> <li>• face mask</li> <li>• hearing protection</li> <li>• eye protection – goggles, safety glasses and face guard</li> <li>• sunscreen</li> <li>• waterproof clothing.</li> </ul> <p>Importance of correct fitting PPE.</p> <p>Maintenance of PPE according to manufacturer’s instructions and enterprise Standard Operating Procedures (SOP):</p> <ul style="list-style-type: none"> <li>• cleaning and decontamination</li> <li>• correct storage</li> <li>• regular checks for damage</li> <li>• repair/replacement of worn, malfunctioning or damaged equipment/parts</li> <li>• disposal of single-use equipment.</li> </ul>
	2.2 Fence is installed, maintained or repaired according to manufacturers guidelines, OHS and enterprise requirements.	<p>What <b>enterprise requirements</b> may be applicable to this standard?</p> <p>Standard Operating Procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets (MSDSs), work notes and plans, product labels, manufacturers specifications, operators’ manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and supervisors oral or written instructions.</p> <p>What <b>OHS</b> requirements may be applicable to this standard?</p> <p>Safe systems and procedures for:</p> <ul style="list-style-type: none"> <li>• the use of fencing tools and materials</li> </ul>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Source of guidelines/requirements for erection, maintenance and repair of fencing including:</p> <ul style="list-style-type: none"> <li>• SOP</li> <li>• work notes and plans</li> <li>• manufacturer’s specifications</li> <li>• operator’s manuals</li> <li>• enterprise policies and procedures</li> <li>• supervisor’s oral or written instructions.</li> </ul> <p>Understanding safe work practices for:</p> <ul style="list-style-type: none"> <li>• the use of fencing tools and materials</li> <li>• the operation of vehicles</li> <li>• hazard and risk control</li> <li>• manual handling including lifting and handling</li> </ul>

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		<ul style="list-style-type: none"> <li>• the operation of vehicles</li> <li>• hazard and risk control</li> <li>• lifting, carrying and handling techniques</li> <li>• manual handling especially when handling posts, coils of wire and using tools</li> <li>• the use, maintenance and storage of personal protective equipment</li> <li>• outdoor work including protection from solar radiation</li> <li>• protection from dusts</li> <li>• administering first aid.</li> </ul>	<ul style="list-style-type: none"> <li>• use and maintenance of PPE</li> <li>• outdoor work</li> <li>• administering first aid.</li> </ul>
	<p>2.3 Gates are attached and appropriately positioned for correct operation and function according to work plan.</p>	<p>What information may be included in a <b>work plan</b>?</p> <p>This may include designated work tasks, tools and materials for use, procedures for pre-start and safety checks of tools, timeframe for work completion, supervisor’s instructions and reporting requirements.</p>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Correct mounting of gates including:</p> <ul style="list-style-type: none"> <li>• alignment with mounting post</li> <li>• free swing</li> <li>• alignment for securing.</li> </ul>
	<p>2.4 Dismantling operations are carried out as required with a focus on minimising unnecessary damage and recovering all <b>re-useable materials</b>.</p>	<p>What <b>re-useable materials</b> may be recovered?</p> <p>This may include wire, hinges, supports, gates, netting and posts.</p>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Reuseable materials including:</p> <ul style="list-style-type: none"> <li>• wire</li> <li>• hinges</li> <li>• braces</li> <li>• posts</li> <li>• in-line tensioners.</li> </ul>
	<p>2.5 <b>Repair</b> requirements are identified and carried out according to work plan procedures.</p>	<p>What <b>repairs</b> may be carried out?</p> <p>This may include replacing posts, rejoining and restraining wires, gate hinges, gate chains and gates, other repairs to gates.</p> <p>What information may be included in a <b>work plan</b>?</p> <p>This may include designated work tasks, tools and materials for use, procedures for pre-start and safety checks of tools, timeframe for work completion, supervisor’s instructions and reporting requirements.</p>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Repairs including:</p> <ul style="list-style-type: none"> <li>• restraining</li> <li>• wire replacement</li> <li>• rejoining broken wire/s</li> <li>• post replacement</li> <li>• adjusting of gate/s</li> <li>• gate hinges</li> <li>• gate chains</li> <li>• increasing number of wires.</li> </ul> <p>Identification of required repairs through:</p> <ul style="list-style-type: none"> <li>• visual observation</li> </ul>

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			<ul style="list-style-type: none"> <li>reports by external parties</li> <li>scheduled fence inspection.</li> </ul>
	<p>2.6 <b>Replacement posts</b> are installed to appropriate level and secured through soil replacement and ramming.</p>	<p>What requirements may be considered when <b>replacing posts</b>?</p> <p>Replacements posts need to be consistent with existing fence, height and type.</p>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Installation and securing of posts including:</p> <ul style="list-style-type: none"> <li>positioning and depth of post-hole</li> <li>setting post at correct height and alignment</li> <li>progressive soil replacement and ramming to ensure post security</li> <li>maintaining alignment</li> <li>backfilling and ramming of soil to ensure ground level is maintained.</li> </ul> <p>Replacement of posts including:</p> <ul style="list-style-type: none"> <li>safe use of fencing tools and materials</li> <li>hazard and risk control</li> <li>correct manual handling techniques, including lifting and carrying</li> <li>use of PPE.</li> </ul>
	<p>2.7 Wire is strung, mounted and fixed according to requirements of work plan or supervisor's instructions.</p>	<p>What information may be included in a <b>work plan</b>?</p> <p>This may include designated work tasks, tools and materials for use, procedures for pre-start and safety checks of tools, timeframe for work completion, supervisor's instructions and reporting requirements.</p>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Methods for stringing, mounting and affixing wire:</p> <ul style="list-style-type: none"> <li>type of knot including: <ul style="list-style-type: none"> <li>double loop</li> <li>bullwire</li> <li>figure of eight</li> <li>pin and loop</li> </ul> </li> <li>joining devices including: <ul style="list-style-type: none"> <li>wire vice</li> <li>gripples</li> </ul> </li> <li>types of wire-to-post fixing including: <ul style="list-style-type: none"> <li>wire tie</li> <li>staples.</li> </ul> </li> </ul>
	<p>2.8 All work is carried out safely according to OHS and enterprise requirements.</p>	<p>What <b>enterprise requirements</b> may be applicable to this standard?</p> <p>Standard Operating Procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets (MSDSs), work notes and plans, product labels, manufacturers specifications, operators' manuals, enterprise policies and procedures (including waste disposal, recycling</p>	

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		<p>and re-use guidelines), and supervisors oral or written instructions.</p> <p>What <b>OHS</b> requirements may be applicable to this standard?</p> <p>Safe systems and procedures for:</p> <ul style="list-style-type: none"> <li>• the use of fencing tools and materials</li> <li>• the operation of vehicles</li> <li>• hazard and risk control</li> <li>• lifting, carrying and handling techniques</li> <li>• manual handling especially when handling posts, coils of wire and using tools</li> <li>• the use, maintenance and storage of personal protective equipment</li> <li>• outdoor work including protection from solar radiation</li> <li>• protection from dusts</li> <li>• administering first aid.</li> </ul>	
3	Complete fencing work	<p>3.1 Post holes are firmly filled to remove potential hazards and minimise environmental impact.</p> <p>3.2 Work site is <b>cleared and tidied</b> and all non-reusable materials are disposed of in an environmentally responsible manner.</p> <p>3.3 Tools and re-usable materials are transported safely from the work site, cleaned and stored according to enterprise and manufacturers recommendations.</p>	<p>What may be involved in <b>clearing and tidying</b> a work site?</p> <p>This may involve replacing soil, and clearing, removal and safe disposal of non-reusable materials.</p> <p>What <b>re-useable materials</b> may be recovered?</p> <p>This may include wire, hinges, supports, gates, netting and posts.</p> <p>What <b>enterprise requirements</b> may be applicable to this standard?</p> <p>Standard Operating Procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets (MSDSs), work notes and plans, product labels, manufacturers specifications,</p> <p><b>Learning experiences for the HSC must address:</b></p> <p>Procedures for minimisation of impact on the environment including:</p> <ul style="list-style-type: none"> <li>• replacing disturbed or removed soil</li> <li>• removal and safe disposal of non-reusable materials in a responsible manner</li> <li>• safe storage of reuseable materials.</li> </ul>

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	3.4 Further identified work or repair requirements are reported according to enterprise requirements.	operators' manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and supervisors oral or written instructions.	

### What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where

0 = not required      1 = perform the process      2 = perform and administer the process      3 = perform, administer and design the process

1. How can <b>communication of ideas and information (1)</b> be applied?	Information with regard to the operation of tools and application methods may be discussed with the supervisor.
2. How can <b>information be collected, analysed and organised (1)</b> ?	Information with regard to the performance of tools and any identified faults may be reported to the supervisor for repair and organised by records.
3. How are <b>activities planned and organised (1)</b> ?	Activities involving filling in post holes may be planned and coordinated with repair activities to minimise potential hazards and environmental impact.
4. How can <b>team work (1)</b> be applied?	In the application of methods and procedures to complete scheduled fencing tasks within timeframes.
5. How can the use of <b>mathematical ideas and techniques (1)</b> be applied?	Basic mathematical techniques may be applied in the calculation and measurement of fencing wire and other materials to complete tasks.
6. How can <b>problem-solving skills (1)</b> be applied?	Faulty tools or malfunctions may be reported for repair, and arrangements made for replacement in order to minimise disruption to repair and maintenance schedules.
7. How can the <b>use of technology (1)</b> be applied?	Technology may be used to communicate and calculate information with regard to fencing requirements.