

PIL102A Support resource conservation practices

This unit covers the process of supporting resource conservation practices in permaculture systems under supervision. It requires the ability to prepare materials, tools and equipment for resource conservation, undertake conservation activities, store and stockpile materials, and clean up on completion of work. Supporting conservation work requires knowledge of permaculture resources, conservation practices and techniques, and tools and equipment used in resource conservation.

Element		Performance Criteria	
1	Prepare materials, tools and equipment for resource conservation	1.1	The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.
		1.2	Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.
		1.3	Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.
		1.4	Suitable personal protective equipment (PPE) is selected and checked prior to use.
		1.5	Conservation support is provided according to OHS requirements and according to workplace information .
		1.6	OHS hazards are identified and reported to the supervisor.
2	Undertake resource conservation practices as directed	2.1	Instructions and directions provided by supervisor are followed and clarification sought when necessary.
		2.2	Resource conservation work is undertaken in a safe and environmentally appropriate manner according to work site guidelines and the three principles of resource conservation.
		2.3	Interactions with other staff and clients are carried out in a positive and professional manner.
		2.4	Policy and procedures in relation to workplace handling and disposal of materials is observed.
		2.5	Problems or difficulties in completing work to required standards or timelines are reported to

			supervisor.
3	Store and stockpile materials	3.1	Plant debris and waste material produced during conservation activities are stored in a designated area according to supervisor's instructions.
		3.2	Plant debris and waste materials are prepared and processed in an appropriate and safe manner according to supervisor's instructions.
		3.3	Surplus materials are stockpiled for removal according to supervisor's instructions.
		3.4	A clean and safe work site is maintained while completing conservation activities.
4	Clean up on completion of resource conservation work	4.1	Plants and materials are stored in a designated area according to supervisor's instructions.
		4.2	Tools and equipment are cleaned, maintained and stored according to manufacturers specifications and supervisor's instructions.
		4.3	Work outcomes are reported to the supervisor.

Range of Variables

The Range of Variables defines the different contexts, work environments and parameters governing the performance of this competency standard. The variables chosen in training and assessment will need to reflect local industry and regional contexts.

What may be included under resource conservation ?	Resource conservation can include activities related to sustainable food production, energy-efficient buildings, waste water treatment, recycling, solar and wind power, composting toilets, solar greenhouses, energy efficient housing, and solar food cooking and drying, water collection, management, and re-use systems, rain catchment, constructed wetlands, aquaponics, solar aquatic ponds, revegetation, planting programs, direct seeding operations, assisted natural regeneration, protection of remnant vegetation, seeds collecting and propagation.
What instructions may be relevant to this standard?	Instructions may include Standard Operating Procedures (SOPs), specifications, work notes, Material Safety Data Sheets (MSDSs), manufacturers instructions, or verbal directions from manager, supervisor, or senior field operators.
What tools and equipment may be required for conservation work?	Tools and equipment may include secateurs, spades, shovels, rakes, spray equipment, and hand or mechanical augers.

What workplace information might be required for this standard?	Workplace information may include procedures for disposing of waste materials, work instructions or verbal instructions from the supervisor.
What OHS hazards may be associated with nursery support?	Hazards may include heavy materials and equipment, slippery or uneven surfaces, moving machinery and vehicles, snake, spider and insect bites, solar radiation and dust.
What are the three principles of resource conservation?	<ol style="list-style-type: none"> 1. Reduce resource consumption in home and garden 2. Reuse (repair) items rather than throw them away 3. Recycle not garbage
What are the personal protective clothing and equipment requirements associated with nursery support?	Personal protective clothing and equipment may include steel capped boots/shoes, overalls, gloves, sun hat, sunscreen lotion, safety goggles, face mask and ear protectors.

Evidence Guide

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

Competence in supporting resource conservation work requires evidence that work completed meets the needs of the supervisor and/or landholder and is undertaken according to enterprise guidelines and industry best practice. The skills and knowledge required to supporting resource conservation work must be **transferable** to a range of work environments and contexts. For example, this could include different resource conservation activities, properties, environments, climates and approaches to conservation.

What specific knowledge is needed to achieve the performance criteria?

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 unit are listed below:

- Basic permaculture principals and practices
- Tools and equipment used in resource conservation work.
- Basic principles of resource conservation including
 - reduce, reuse and recycle
 - minimal impact living
 - sustainable food production
 - energy-efficiency
 - water treatment, collection and re-use

- solar and wind power
- composting toilets and mulching
- revegetation
- built environment
- community and social interaction and support.
- Techniques used in resource conservation relevant to this level
- Making connections between everyday living and sustainable use of land

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills are:

- Prepare materials, tools and equipment for conservation work.
- Undertake resource conservation work as directed.
- Store and stockpile materials.
- Clean up on completion of conservation work.

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 and 3 = perform, administer and design the process.

1. How can communication of ideas and information (1) be applied?	Ideas and information about the job, tasks and problems should be discussed with other members in the work team and the supervisor.
2. How can information be collected, analysed and organised (1) ?	Workplace and supervisors instructions should be located, interpreted and applied with further clarification sought as necessary.
3. How are activities planned and organised (1) ?	Discussions with the supervisor and other team members may be required in order to complete tasks efficiently, in a logical sequence, and in a timely manner.
4. How can team work (1) be applied?	Good communication and co-operation with other staff in completing conservation tasks.
5. How can the use of	Skills in counting, tallying and estimation are required

mathematical ideas and techniques (1) be applied?	when handling plants or other materials.
6. How can problem-solving skills (1) be applied?	Problems will require corrective action or consultation with supervisor.
7. How can the use of technology (1) be applied?	Technology may be applied in the use of tools, equipment and communication systems.

Are there other competency standards that could be assessed with this one?

This competency standard can be assessed on its own or in combination with other competencies relevant to the job function.

For information about assessing this competency standard for consistent performance and where and how it may be assessed, refer to the **Permaculture International Ltd Course Documentation**.
