



Australian Government

Department of Education, Employment and Workplace Relations

RTC2012A Plant trees and shrubs

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This competency standard covers the manual planting of trees, shrubs and other containerised and bare-rooted plants, and related tasks such as site preparation and pre-planting treatments. It applies to planting activities in parks and gardens, domestic and commercial landscapes, sporting facilities, planting of windbreaks and shelter belts, programmed environmental maintenance, rehabilitation of natural areas, and the reversal of environmental degradation. Work is usually done under routine supervision and with intermittent checking. Competency is demonstrated by the application of knowledge and skills to a range of planting tasks and roles usually within established enterprise guidelines.

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Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Prepare for planting operations	<p>1.1 Planting plan/instructions are obtained and confirmed with supervisor.</p> <p>1.2 OHS hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.3 The environmental implications associated with the planting program are identified and the likely outcomes assessed and reported to the supervisor.</p> <p>1.4 Tools and equipment are selected that are appropriate to the task being undertaken.</p> <p>1.5 Suitable personal protective equipment (PPE) is selected, used, maintained and stored according to best practice.</p>
2 Prepare planting site	<p>2.1 Tools and equipment for planting are used and maintained according to enterprise work procedures.</p> <p>2.2 Site is marked out according to planting plan and/or enterprise work procedures.</p> <p>2.3 Competing plants are controlled according to supervisor's instructions.</p> <p>2.4 Soil is modified where necessary according to the requirements of the trees to be planted and supervisor's instructions.</p> <p>2.5 Planting holes are excavated according to the needs of the plant and enterprise guidelines.</p>
3 Prepare trees and shrubs for planting	<p>3.1 Trees and shrubs are watered prior to planting to ensure entire root ball is damp.</p> <p>3.2 Trees and shrubs are removed from containers without damage or dehydration.</p>

- 3.3 Examine plant and root ball and assess suitability for purpose and reject if unsuitable.
- 3.4 **Root treatments** are applied according to supervisor's instructions.
- 4 Install trees, shrubs and/or other plants
 - 4.1 Plants are placed in hole according to enterprise guidelines.
 - 4.2 Planting hole is back-filled and soil consolidated.
 - 4.3 Plants are watered in where required to eliminate air pockets.
- 5 Complete planting operations
 - 5.1 **Post planting treatment** is applied according to the requirements of the species and supervisor's instructions.
 - 5.2 Tools and equipment are cleaned, maintained and stored according to enterprise and OHS requirements.
 - 5.3 **Waste** is collected and disposed of or recycled to minimise damage to the external environment.
 - 5.4 **Records** of planting operations are maintained in the appropriate format.

Required Skills and Knowledge

Not applicable.

Evidence Guide

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

Competence in planting trees and shrubs requires evidence that a person can prepare a planting site according to a planting plan, excavate a planting hole, prepare trees and shrubs for planting, install trees and shrubs, and apply post-planting treatments according to species requirements. The skills and knowledge required to plant trees and shrubs must be **transferable** to a different work environment. For example, this could include different species for planting, locations, and times of the year.

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 competency standard are listed below:

Chemical use, toxicity and mode of action of chemicals used.

Awareness of the impact of planting activities on the surrounding environment.

Planting techniques relating to specific species.

Factors affecting the timing and method of tree or shrub planting.

Initial establishment needs of juvenile plants.

Soil amelioration techniques.

Principles relating to the application of mulches and fertilisers.

Basic plant structure and the physical and nutritional requirements of plants.

OHS legislative requirements and Codes of Practice.

Manual handling techniques.

The effect of adverse outdoor climatic conditions (e.g., rain, hail, or very high ultraviolet radiation), which may prevent or impede planting trees and shrubs.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

Interpret work procedures including planting plans and site map.

Communicate with team members and supervisor.

Participate in teams and contribute to team objective.

Calibrate tools and equipment.

Measure distance.

Calculate area, planting and seeding rates, volumes and treatment application rate.

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 relating to planting activities and problems encountered should be discussed with other members of the work team and the supervisor.
2. How can **information be collected, analysed and organised (1)**? Enterprise work procedures and planting plan should be consulted, interpreted and applied to coordinate revegetation activities with further clarification sought from the supervisor where necessary.
3. How are **activities planned and organised (1)**? Equipment, materials and work procedures for planting activities will need to be arranged before and between work periods, and there will be some responsibility for coordinating work with others.
4. How can **team work (1)** be applied? Planting trees and shrubs may involve working with other members of a team to complete the planting program within given timelines.
5. How can the use of **mathematical ideas and techniques (1)** be applied? Measuring distance, calculating areas, calibrating tools and equipment, estimating quantities of materials, measuring treatment volumes and rates, and the depth and volume of planting holes will require mathematical application.
6. How can **problem-solving skills (1)** be applied? Problems relating to planting techniques, processes, the planting area, workplace safety, tools and equipment, environmental issues and other team members may arise when planting trees and shrubs.
7. How can the **use of technology (1)** be applied? Technology may be applied in the preparation, use and maintenance of horticultural tools and equipment.

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

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

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to both the **Assessment Guidelines** and the relevant **Sector Booklet**.

Range Statement

Range of Variables

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in particular training and assessment requirements may depend on the work situations available

What **OHS hazards** may be associated with the planting of trees and shrubs?

Hazards may include, solar radiation, dust, noise, air and soil-borne microorganisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, holes, slippery and uneven surfaces, and spider and insect bites.

What **environmental implications** may be associated with planting trees and shrubs?

Environmental implications associated with the planting program may be beneficial to the external environment (particularly in regard to planting of windbreaks and shelter belts, programmed environmental maintenance, and the reversal of environmental degradation), when the trees and shrubs planted are consistent with the needs of the flora and fauna indigenous to the geographic region. However, work activities undertaken may have immediate detrimental effects on the surrounding environment, including misuse of chemicals, contamination of ground water or stormwater from excess run-off, levels of noise, dust, and inappropriate waste disposal.

What **tools and equipment** may be used to complete tree and shrub planting works?

Tools and equipment may include secateurs, knives, spades, forks, trowels, rakes, hoes, spray equipment, augers, buckets, brooms, wheelbarrows, hoses and hose fittings, ancillary equipment such as stabilising materials, weed mats, stakes, tree guards.

What **PPE** may be required to carry out tree planting works?

PPE may include hat, boots, overalls, gloves, goggles, respirator or facemask, face guard, hearing protection and sunscreen lotion.

What **enterprise work procedures** are appropriate for this standard?

These may include supervisors instructions and orders, planting plans and specifications, client's instructions, sketches, work schedules, manufacturers guidelines, company Standard Operating Procedures (SOP), Material Safety Data Sheets

	(MSDSs), waste disposal, recycling and re-use guidelines, and OHS procedures.
How might competing plants be controlled to reduce competition?	Competing plants may be controlled by the application of herbicide to weeds by spray, wick, cut and paint or injection, hand grubbing of seedlings, trimming or removal of whole plants or seed heads.
How might soil be modified to make it suitable for the planting program?	Soil modifications may include tilling, deep ripping, addition of nutrition/fertiliser or other organic compounds, conditioning additives to effect a change in the water holding capacity of the soil, soil structure, soil texture, and pH, such as gypsum, sand, lime, dolomite, chemicals, mulches.
What specifications may apply to the excavation of planting holes?	Specifications for planting holes may include dimensions to match plant size and root depth, gouging sides of planting hole to remove glazing of sidewalls.
What trees and shrubs may be relevant to this standard?	Trees and shrubs may include container grown, tube grown or bare rooted plants across a range of species and growth habits (e.g., groundcovers, climbers, bulbs, annuals, grasses, lilies, etc.) that do not require mechanised lifting devices.
What root treatments may be required prior to planting?	Root treatment may include trimming diseased or damaged roots, cutting off lower section of root ball, separating bound roots, teasing out roots to fit planting hole, removing excess potting media, dips (fungicides, bacterial, hormone).
What post-planting treatments may be required to maintain plant health and quality?	Post-planting treatments may include weed and disease control, mulching, fertilising, watering, pruning (formative pruning, removal of damaged or dead materials, canopy reduction, thinning, lifting), securing (tying, staking, bracing, anchoring, guying) and installation of tree guards and protective materials.
What waste material may be relevant to this standard?	Waste material may include unused work material, plant debris, litter and broken components. Plant-based material may be mulched or

composted, plastic, metal, paper-based materials may be recycled, re-used, returned to the manufacturer or disposed of according to enterprise work procedures.

What **records** may be relevant to this standard?

Records may include number and type of plants and materials used in the planting program, injury and dangerous occurrence reports, treatments and/or amendments applied, chemical use, date, problems encountered.

For more information on contexts, environment and variables for training and assessment, refer to the Sector Booklet.

Unit Sector(s)

Not applicable.