RTC2012A

Unit Descriptor

Unit Sector

Plant trees and shrubs

Plant trees and shrubs

No sector assigned

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

KEY COMPETENCIES

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.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Ideas and information relating to planting activities and problems encountered should be discussed with other members of the work team and the supervisor	1
Collecting analysing and organising information	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	1
Planning and organising activities	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	1
Working with others and in teams	Planting trees and shrubs may involve working with other members of a team to complete the planting program within given timelines	1
Using mathematical ideas and techniques	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	1
Solving 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	1
Using technology	May be applied in the preparation, use and maintenance of horticultural tools and equipment	1

RANGE STATEMENT

Occupational Health and Safety hazards	may include
	• solar radiation, dust, noise, air and soil-borne micro organisms • chemicals and hazardous substances • sharp hand tools and equipment, manual handling • holes, slippery and uneven surfaces • spider and insect bites
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 for excess run-off, levels of noise, dust, and inappropriate waste disposal

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

Personal Protective Equipment	may include
	• hat • boots • overalls • gloves • goggles • respirator or facemask • face guard • hearing protection • sunscreen lotion
Enterprise work procedures	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 • Occupational Health and Safety procedures
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

Soil modification	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

Specification for planting holes	may include
	• dimensions to match plant size and root depth, gouging sides of planting hole to remove glazing of sidewalls

Trees and shrubs	may include

- container growth
- tube grown or bare rooted plants across a range of species and growth habits, eg, groundcovers, climbers, bulbs, annuals, grasses, lilies, etc, that do not require mechanised lifting devices

Root treatments	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)

Post-planting treatments	may include

- weed and disease control
- mulching
- fertilising
- watering
- pruning, eg, formative pruning, removal of damaged or dead materials, canopy reduction, thinning, lifting
- securing, eg, tying, staking, bracing, anchoring, guying
- installation of tree guards and protective materials

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

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

The sport and recreation industry	covers • industry sectors of community recreation, fitness, outdoor recreation and sport • significant roles played by activity organisations, industry peak bodies, professional organisations • large volunteer base • high turnover of volunteers • high levels of part time and casual employment • irregular working hours • relatively few professional positions • workforce employed mostly in operational positions • mainly small business or self-employed personnel • slow to take up technology • over 2/3 of the sport and recreation industry have no formal/recognised qualifications • significant reliance upon industry credentials and involvement in the activity itself

EVIDENCE GUIDE

Critical aspects of evidence to be considered	• Assessment must confirm sufficient knowledge in planting trees and shrubs
	• Assessment of performance should be over a period of time covering all categories from the Range Statements applicable to the learner's work environment
	• In particular, assessment must confirm the ability to
	  • prepare a planting site according to a planting plan
	  • excavate a planting hole
	  • prepare trees and shrubs for planting
	  • install trees and shrubs
	  • apply post-planting treatments according to species requirements
	  • transfer the skills and knowledge required to plant trees and shrubs to a different work environment, eg, This could include different species for planting, locations, and times of the year

Interdependent assessment of units	• This unit must be assessed after attainment of competency in the following unit(s)
	  • Nil
	• This unit must be assessed in conjunction with the following unit(s)
	  • Nil
	• For the purpose of integrated assessment, this unit may be assessed in conjunction with the following unit(s)
	  • Nil

Required knowledge and skills	• Required knowledge
	• 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
	• Occupational Health and Safety legislative requirements and Code of Practice
	• Manual handling techniques
	• The effect of adverse outdoor climatic conditions, eg, rain, hail, or very high ultraviolet radiation, which may prevent or impede planting trees and shrubs
	• Required skills
	• 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
Resource implications	• Physical resources - assessment of this competency requires access to
	• appropriate documentation and resources normally used in the workplace
	• tools and equipment
	• personal protective equipment
	• trees and shrubs
	• Human resources - assessment of this competency will require human resources consistent with those outlined in the Assessment Guidelines. That is, assessors (or persons within the assessment team) should
	• be competent in this unit
	• be current in their knowledge and understanding of the industry through provision of evidence of professional activity in the relevant area
	• have attained the National Competency Standards for Assessment: BSZ401A, BSZ402A and BSZ403A
Consistency in performance	• Competence in this unit must be assessed over a period of time in order to ensure consistency of performance over the Range Statements and contexts applicable to the work environment

Context for assessment	• This unit of competency must be assessed in the context of a sport or recreation activity. For valid and reliable assessment the sport or recreation activity should closely replicate the work environment. The environment should be safe with the hazards, circumstances and equipment likely to be encountered in a real workplace
	• Assessment of this unit of competence will usually include observation of processes and procedures, oral and/or written questioning on required knowledge and skills and consideration of required attitudes
	• Where performance is not directly observed and/or is required to be demonstrated over a "period of time" and/or in a "number of locations", any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons
Essential Assessment Information	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 the **Assessment Guidelines** . Further advice may also be sought from the relevant **sector booklet** .