



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **RTF5008A Plan the establishment of sports turf playing surfaces**

**Release: 1**

## **RTF5008A Plan the establishment of sports turf playing surfaces**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This competency standard covers the process of planning the establishment of sports turf playing surfaces and the development of a relevant design for the site, specifications and work procedures. Planning will require consideration of client needs, site factors, plant selection and plant requirements, establishment and maintenance procedures, OHS hazards and environmental impacts.

Work is likely to be under limited supervision, with checking related to overall progress by senior managers. Responsibility for the work of others and team co-ordination may be required. Planning is usually performed within policy guidelines and procedures where discretion and judgement are required in the selection of technology, work organisation and the achievement of outcomes within time and budgetary constraints.

### **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

<b>Element</b>	<b>Performance Criteria</b>
1 Carry out preliminary planning activities for turf establishment	<ul style="list-style-type: none"><li>1.1 Client preferences and requirements for the sports turf playing surface are understood and confirmed.</li><li>1.2 The site is assessed for biophysical factors, services and site modifications.</li><li>1.3 Research is conducted into turf plant species and cultivars, legal attributes and local by-laws and restrictions that may affect the plan for turf establishment.</li><li>1.4 Environmental implications of the planned turf establishment works are identified and, if necessary, reported to relevant personnel for further research.</li><li>1.5 A concept plan that reflects client preferences and requirements, and takes into account site factors and any identified environmental requirements is developed and presented to the client for discussion and approval.</li></ul>
2 Determine requirements of turf establishment works	<ul style="list-style-type: none"><li>2.1 Plants that are appropriate to the site and consistent with the agreed concept plan are identified and the required quantity calculated, costed and availability confirmed with the supplier.</li><li>2.2 Turf establishment procedures consistent with the agreed concept plan are selected according to the characteristics of available plant materials, site factors, the resources and equipment available and the environmental factors affecting the success of the turf establishment works.</li><li>2.3 Design of the soil profile to support the playing surface takes into account the turf use, soil characteristics and other site and local environmental factors, and includes irrigation and drainage systems that accord with enterprise irrigation and drainage plans.</li><li>2.4 Management of juvenile turf is provided for according to client requirements, site capabilities</li></ul>

- and enterprise standards and encourages optimal growth.
- 2.5 Resources, tools, equipment and machinery required for the construction of soil profiles, planting and ongoing maintenance of the sports turf playing surface are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.
  - 2.6 OHS hazards associated with the turf establishment works are identified, risks assessed and controls developed according to enterprise guidelines, costed and documented in the plan.
  - 2.7 Staged implementation and development are outlined where appropriate, with access for future works provided for according to client, enterprise and site requirements.
  - 2.8 Timelines for preparations, construction of soil profiles, planting and maintenance are determined taking into account the needs of the turf species and cultivars, the softscape and hardscape components, site conditions and any other planning requirements.
- 3 Prepare and document the turf establishment plan and specifications
    - 3.1 Detailed plan, specifications and quotation are prepared based on horticultural conventions and the requirements of the turf establishment work and presented to the client for acceptance.
    - 3.2 Scaled site plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.
    - 3.3 Detailed on-site procedures and schedules required for the establishment of the sports turf playing surface and its ongoing maintenance are developed and documented.

## Required Skills and Knowledge

Not applicable.

## Evidence Guide

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

Competence in planning the establishment of sports turf playing surfaces requires evidence that a person can assess site factors, select suitable plant species, determine resources and equipment for constructing soil profiles, planting and maintenance, and prepare plans, specifications, quotations and associated documents.

The skills and knowledge required to plan turf establishment works must be **transferable** to a different work environment. For example, this could include different turf species, playing surfaces and enterprise procedures and policies.

### 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:

the principles and practices of establishing and maintaining a range of sports turf playing surfaces in relation to client needs, and the standards required for the intended use of the surface

construction procedures, plant selection and cultural practices for sports turf playing surfaces

legislation and regulations relating to sports turf sites and turf establishment works

site evaluation techniques including analysis of the condition of soils, plants and the site for turf establishment activities

growth habits and cultural requirements of specific turf plant species and cultivars under a range of soil and environmental conditions

maintenance requirements and practices for specific turf plant species and cultivars prior to and after initial establishment

surveying principles and techniques

the role of project briefs and client consultation processes in planning turf establishment works.

**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:

- communicate and negotiate orally and in writing with the client, staff, managers, suppliers, contractors and consultants
- research and evaluate information
- record all relevant information
- calculate the cost and spatial and logistical requirements of components of the turf establishment works
- document plans, specifications and turf establishment work procedures, and write reports for staff, managers, clients and contractors
- comply with legislative requirements.

## 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 (3)** be applied?

Results of the analysis of the site and selection of plants and hardscape components should be communicated with the client orally and in writing. There is likely to be negotiation between the developer of the turf establishment plan and the client to achieve objectives.

2. How can **information be collected, analysed and organised (3)**?

Some information will need to be researched and/or obtained from test results. Information addressing the specific requirements of the turf establishment works should be analysed, and outcomes discussed with the client and other members of the work team. Information should be organised and presented as a site plan, documented plans, quotation, written work procedures and timeline chart, and schedules for turf establishment activities.

3. How are **activities planned and organised (3)**?

The planning process should proceed in an orderly and efficient manner. Timely and appropriate information needs to be available for decision-making. The plan for turf establishment works should reflect the activities required to implement the works.

4. How can **team work (3)** be applied?

Planning the establishment of sports turf playing surfaces may involve working with other members of a team to achieve the desired outcomes.

5. How can the use of **mathematical ideas and techniques (3)** be applied?

Mathematical concepts will be required to measure quantities, distances, depth, and calculate areas, resources, costs, ratios, scales, planting and application rates.

6. How can **problem-solving skills (3)** be applied?

Problems relating to the requirements of the client, nature of the turf establishment site,

availability of resources and equipment, costs and environmental issues may arise during planning of the turf establishment works.

7. How can the **use of technology (3)** be applied?

Technology will be required to record, store and communicate ideas and information. It will also be used to research relevant information, obtain and analyse data from site evaluation tests, and to produce the turf establishment plan.

**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.

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**.



## 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

Who may be referred to as a **client**?

Clients may include the enterprise's management or a private individual, company, community group, government agency, or a combination of these entities.

What **preferences and requirements** may clients have?

These may include the purpose or intended use of the sports turf playing surface, preferred turf plant species and cultivars, plant characteristics, growth habits and cultural requirements, maintenance services for the turf playing surface, budget limitations, and timelines for implementation of the turf establishment works.

What **sports turf playing surfaces** may apply to this standard?

Sports turf playing surfaces may include golf course surfaces, bowling greens, cricket pitches, tennis courts, other high performance surfaces and multi-purpose sports grounds.

What **biophysical factors** of the site may you need to assess?

Biophysical factors may include rainfall, humidity, wind, sunlight intensity, mean temperatures, season length, soil types, structure and profiles, nutrient toxicities and deficiencies, the aspect of the site, slope, natural and artificial watercourses, other water supplies and quality, outcrops and existing plant species.

What **services** on the site may need to be located?

Services may include water supply, gas, power (electricity), telecommunications, irrigation, stormwater and drainage.

What **site modifications** may influence the turf establishment plan?

Modifications may include human intervention such as the placement or removal of buildings, structures, features, plants and landscaping attributes, and natural events such as wildfire, flooding and drought.

What resources may be used for **research**?

Resources may include team members, senior managers, industry consultants, own

	knowledge, specific industry, technical and research literature, supplier specifications, catalogues, local historical performance data and industry best practice guidelines.
What <b>legal attributes</b> of the site may influence the turf establishment plan?	These may include conservation of the historical, cultural or heritage values of the site and particular features, the nature of ownership, covenants and easements.
What <b>local by-laws and restrictions</b> may affect the turf establishment plan?	These may include prohibited plant species, restricted plant species, land-use restrictions, legal processes, and requirements for site development and work activities.
What <b>environmental implications</b> may be associated with the planned turf establishment works?	<p>Improved weed control, drainage, irrigation and soil structure resulting from turf establishment works may benefit the surrounding environment through minimisation of weed distribution, water logging, water and applied chemical run-off, and more effective water application and use by targeted plant areas.</p> <p>Detrimental impacts may include nuisance level noise and emissions associated with large-scale earthworks, hardscape installation and planting activities that may be required components of the turf establishment works.</p>
What <b>turf establishment procedures</b> may apply to this standard?	<p>Turf establishment procedures involving softscape features of the sports turf playing surface may include construction of soil profiles, soil treatments, preparation of soil surfaces for planting, planting methods, management of juvenile turf and the assessment of readiness of the turf for use.</p> <p>Turf establishment procedures involving hardscape features of the sports turf playing surface may include installation of irrigation and/or drainage systems, the protection of plants by fencing, and controlling pedestrian and vehicular traffic through the erection of signs and barriers.</p>
What <b>resources</b> may be required for the turf establishment works?	Physical resources may include soil and plant testing consumables, rootzone, irrigation and drainage materials, soil additives such as gypsum, lime or zeolite, artificial fibre,

organic matter, mineral fertiliser, turf grids, lock sand and fibre turf, fencing materials, weed, pest and disease control materials, irrigation and drainage system components, and excavation and construction materials.

Human resources may include paid labour, contractors, suppliers and consultants.

What **tools, equipment and machinery** may be required for the turf establishment works?

Tools, equipment and machinery may include soil testing equipment, surveying equipment, hand tools, trailed, 3-point linkage and motorised machinery for excavation, soil treatment, planting, and turf maintenance operations.

What **OHS hazards** may be identified as part of the plan for the establishment of sports turf playing surfaces?

Hazards may include disturbance or interruption of services, solar radiation, dust, noise, soil-, air- and water-borne micro-organisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, moving vehicles, machinery and machinery parts, slippery and uneven surfaces, and flying and falling objects.

What **controls** may be introduced to minimise the risk of OHS hazards?

Controls should be introduced according to enterprise OHS policies and procedures, and may include identifying hazards; assessing and reporting risks; cleaning, maintaining and storing tools, equipment and machinery; appropriate use of personal protective equipment including sun protection; safe operation of tools, equipment and machinery; safe handling, use and storage of chemicals and hazardous substances; correct manual handling; appropriate use of safety equipment such as signage and protective barriers; basic first aid available on site; personal hygiene, and reporting problems to managers.

What specifications for **staged implementation** may apply to this standard?

These may include gradual establishment of turf surfaces in a sporting complex, planting during different times, and provision of access for future works.

What may be included in a **quotation** at this standard?

The quotation when estimating the cost of the turf establishment works may include a

bill of quantities, and costs of labour, equipment and machinery, and professional and sub-contracted services.

The bill of quantities may include unit costs, sub-contractor estimates, quantity calculations, brief specification of materials, contingency items, prime cost items, and development and/or consolidation works.

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

## **Unit Sector(s)**

Not applicable.