

<b>Title</b>	<b>Demonstrate basic construction skills in a park area</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	<p>This unit standard has been designed to cover the essential construction, maintenance and practical skills required to work under indirect supervision as a ranger, volunteer or contractor in public and private parks and reserves.</p> <p>People credited with this unit standard are able to: identify the requirements of a simple construction plan for a specific project in a park area; construct a simple structure in a park area in accordance with a construction plan; demonstrate basic track construction skills; and repair fencing in a park area.</p>
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<b>Classification</b>	Recreation and Sport > Parks and Reserves
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<b>Available grade</b>	Achieved
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## Guidance Information

- All workplace practices must meet codes of practice and documented site safety procedures for personal, product, and worksite safety. In the event that documented site safety procedures are not available, work practices must conform to the requirements of the Health and Safety in Employment Act 1992; and may include other legislation relevant to the specific activity, for example, the Building Act 2004, Conservation Act 1987, Reserves Act 1977, and Resource Management Act 1991.
- Definitions**

A *park area* is publicly accessible land under the management of local government, the Department of Conservation, or a Trust. It may include land protected for scenic, scientific, recreational, historic, or cultural reasons; such as reserves, regional or national parks, protected private land, wildlife areas, marine mammal sanctuaries, conservation areas, or land held under the Local Government Act 2002.

*Industry and organisational standards* may include standards for assurance of – material and product quality, completion of work, procedures for monitoring achievement of standards, post-completion maintenance. They may also include SNZ HB 8630:2004 *Tracks and outdoor visitor structures*, available from: Standards New Zealand, <http://www.standards.co.nz>.

*Organisational requirements* include the documented policies, procedures, and methodologies of the organisation for which the work is being done. They include requirements documented in organisation and site health and safety plans, quality assurance documents, and contract work programmes.

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## Outcomes and performance criteria

### Outcome 1

Identify the requirements of a simple construction plan for a specific project in a park area.

#### Performance criteria

1.1 The elements of the plan are identified and interpreted.

Range site, location, aspect, gradients, scale, specifications, materials required, measurements.

1.2 The plan is used to locate features on site.

Range may include – elevations, landmarks, fixed features.

### Outcome 2

Construct a simple structure in a park area in accordance with a construction plan.

Range two of the following – stile, steps, boardwalk, box drain, seats, picnic table, signage.

#### Performance criteria

2.1 The risks involved with using treated timber are explained.

Range handling, dust, treatment concentration, disposal of waste.

2.2 Profiles, where required, are set out square, to required levels and dimensions.

Range boxing, excavation, corner profiles.

2.3 Boxing, edging, and reinforcing are positioned and erected to organisational standards.

Range selection of reinforcing steel, finished height of boxing, strength of edge required, edge gradients and peg placement.

2.4 The principles of concrete mix design are described in accordance with industry and organisational standards.

Range water, cement, aggregates (coarse and fine), admixtures.

2.5 Concrete is mixed and poured to organisational requirements.

Range ratio used, mixing time, compaction, curing, finishing (float).

- 2.6 Construction methods and techniques are demonstrated to produce the standard of work required by the plan and organisational requirements.
- Range selection of material and fixings, measuring, cutting, placing, joining, finishing.
- 2.7 Hand tools and portable power tools are selected and used to achieve the outcome without damage to tools and materials, or injury and danger to the operator and others.
- Range may include – portable power saw, electric drill, handsaw, spirit level, square, drill bits, chalk line, wood chisel, screwdriver, nail punch, chainsaw, hammer, sledge hammer, hacksaw, automatic laser level, power post-hole borer, timber auger, string line, straight edge, adjustable spanner, smoothing plane, router, nail gun, concrete mixer, portable generator.
- 2.8 Tools and equipment are maintained in working condition and stored after use.
- Range may include – clean, sharp, adjusted to manufacturer's recommendations, lubricated, undamaged, charged.
- 2.9 A tidy work area is maintained in accordance with organisational requirements to maximise safety and minimise damage to the environment and materials.

### **Outcome 3**

Demonstrate basic track construction skills.

#### **Performance criteria**

- 3.1 Cut and fill technique is demonstrated to construct a formed track, and the techniques used are described in terms of the range.
- Range track classification minimal requirements (standards), top side cut, bottom side fill, conservation of excess material, retaining bottom edge, angle of batter, maximum angle of gradient, selection of water diversion points, cut-off boards, culverts and drains, excavation of duff layer.
- 3.2 A formed track is constructed, or maintenance construction is carried out, to minimise the velocity of surface water with camber construction, drainage channels, and culverts designed to prevent scouring.
- 3.3 The use of stabilised and un-stabilised aggregates and the reasons for their use are explained.
- Range particle size, sub-grade, base course, top course, method of compaction.

- 3.4 Hand tools and portable power tools are selected and used to achieve the outcome without damage to tools and materials, or injury and danger to the operator and others.

Range may include – shovel, steel bar, pick, power barrow, plate compactor, rake, portable power saw, electric drill, handsaw, spirit level, square, drill bits, wood chisel, nail punch, chainsaw, hammer, axe, mattock, grubber, sledge hammer, hacksaw, abney level, string line, portable generator.

#### Outcome 4

Repair fencing in a park area.

#### Performance criteria

- 4.1 Safe procedures when handling and working with fence wire are demonstrated.
- Range coiled wire, wire under tension, high tensile wire, mild steel wire.
- 4.2 Permanent strainers, where required, are used to repair the fence in accordance with manufacturer's instructions.
- 4.3 Knots are tied in the wire that do not loosen or come apart.
- Range one of – figure 8, reef, tex brown.
- 4.4 Battens, where present, are straightened and refastened safely.
- 4.5 Strainer posts are selected that are the correct size, they are placed at the correct depth, rammed, and a wood foot is established to secure the fence.
- 4.6 Fastenings are selected and used to repair the fence.
- 4.7 Hand and portable power tools are selected and used to achieve the outcome without damage to tools and materials, or injury and danger to the operator and others.
- Range may include – hammer, fencing pliers, staple puller, batten brace, chisel, timber auger.
- 4.8 All fencing repair is carried out in accordance with organisational requirements.

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**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	26 May 2004	31 December 2023
Rollover and Revision	2	12 February 2010	31 December 2023
Review	3	9 December 2010	31 December 2023
Review	4	27 October 2022	31 December 2023

**Consent and Moderation Requirements (CMR) reference**

0099

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.