



CULTIVATE
HORTICULTURAL SOCIETY OF NSW
FACT SHEET 2
GARDENING WITH RAISED BEDS

What is a Raised Garden Bed?

Raised beds are garden structures are like very large containers without bottoms. They usually form a permanent element in the garden. Because they contain such large volumes of soil, raised beds can be used to grow a wider variety of deeper rooted plants, ranging from perennials, to shrubs & even trees. Additionally, raised beds dry less quickly than containers. The beauty of a raised bed is that instead of plants being at ground level, they are brought up to within easy reach, increasing opportunities for gardening.

- Raised beds are found in gardens everywhere because they are pleasing & ornamental in themselves.
- Raised beds are a wonderful way to break up space in any garden.
- Raised beds provide focal points in design, & can be used to give privacy, shelter & shade.
- For urban dwellers with tiny courtyards, raised beds may be the only way to garden at all.
- Raised beds provide a fantastic solution to sloping garden sites, and sites with poor or shallow soil. Raised beds allow particular plants (e.g. trailing plants) to be shown to advantage.

Location of the raised bed:

There are several factors to consider when deciding where to locate a raised bed.

- Ensure that the raised bed has access to water.
- Ensure the raised bed can be safely accessed. Paths and abutting ground surfaces should be smooth, non-slip, provide good traction, and be non-reflective. Be sure to provide sufficient space to access the bed.
- Ensure ramps should be appropriately shallow; provide handrails where needed.
- Consider positioning the raised bed near other living & working areas.

- Provide seating nearby (or incorporate recessed seating in the raised bed design), or position the raised bed near pergola posts which can be leaned against.
- Decide whether privacy is desirable when positioning the raised bed e.g. locate the raised bed away from main thoroughfares if appropriate. In other situations, locate the raised bed near seating to encourage social interaction.
- Consider whether you would like the raised bed to be visible from indoors, & locate the bed with this in mind.
- Ensure that gardeners who work at the raised bed can be shaded from summer sun, & sheltered from wind.

Design of the raised bed

The shape, height & location of the raised bed will depend upon several factors.

- Who & how many people will use the raised bed?
- What types of plants will be grown? (e.g. ornamentals, fruit & vegetables)
Raised beds can be almost any shape or height. Decide which is most suitable for the gardeners' needs and abilities and the site's characteristics.
- Design the raised bed height according to the needs of the user:
- Will gardening be done from a seated or standing position and by a gardener facing the bed, or sideways to it?
- Incorporate several heights in the raised bed, to cater for different needs and to show a tiered effect of plants.
- Raised beds can be built into sloping ground & be accessible from one side.
- Alternatively, raised beds can be free-standing & accessible from both sides. As a guide to raised bed dimensions:
- 450mm height is suitable for low wall for sitting
- 600-650mm is a good height for occasional rests & for people gardening from a wheel-chair
- 700mm is a medium height, accessible from a wheelchair
- 850 mm height (a tall raised bed or planter box height) is ideal for gardeners who have difficulty bending. The width of the raised bed also depends on the gardener's abilities. Always ensure that all parts of the bed are within easy reach, taking available tools into account. Some people are more comfortable working at relatively low beds, sitting down, or in a wheel chair. Others prefer to work at elbow level, standing or leaning against the bed. All gardening in the raised bed should be possible without straining to reach up or down. A raised bed that is accessible from both sides can be twice the width of a bed accessible from one side only.
- 600-750mm width is suitable for a raised bed accessible on only one side.

- 1200mm width if the raised bed is free standing & accessible from both sides.

Design features:

- Raised beds can be almost any shape, not only rectangles or squares. For example, raised beds can be curved, L, U or T shaped providing beautiful solutions to delineating different spaces in a garden.
- A recessed seat can be incorporated into the wall of the raised bed.
- A wide stretch of wall coping can be included in the raised bed design for leaning against comfortably.
- Other design considerations include handrails.
- The actual width of raised bed wall & coping is also important - the narrower the edge, the closer you can get to soil & plants.

Construction:

Raised beds rest on the ground (e.g. a gap is left in the paving to allow construction of the bed, so that the base of the bed can drain directly into the ground). In some cases a raised bed will be constructed directly on top of a paved surface. In that case it is necessary to incorporate weep holes in the bed walls, to allow drainage of water.

Raised beds can be built from a variety of materials, including treated timber (ensure non-toxic), stone, concrete, brick, and modular brick units. Modular raised bed kits are also available. Seek professional advice about appropriate materials & construction methods, but also ensure the construction material you choose is aesthetically safe, pleasing, & that it is in harmony with surrounds. Raised beds that need to be moved (e.g. in winter) should be small & light enough to carry, fitted with handles, or is on wheels or castors. Like very large containers, raised beds can be very heavy when filled with soil and may be inappropriate for roof gardens, decks or balconies.

Soil for raised beds:

Raised beds should be filled with a good quality soil. Soil depth in the raised bed depends on raised bed height & plant requirements. Mix moisture crystals in the soil to retain soil moisture. Cover exposed soil surface with mulch (e.g. leaf litter), &/or grow groundcover plants.

Plants for raised beds:

Many plants are suitable for raised beds (small ornamental trees, shrubs, vegetable, fruiting plants, herbs, grasses, trailing plants). The main limiting factor is soil depth required for the plant root system. Choose plants whose needs sun/shade, soil depth & moisture requirements, match that provided by the raised bed. The walls of high raised beds can be beautifully softened with trailing plants.

Table Planters:

One disadvantage of conventional raised beds is that they lack space underneath for the knees & feet of gardeners. It is possible to build raised beds with sides that slope outwards from the base, allowing foot space. An alternative is the table planter, really a type of raised bed. This consists of a shallow soil-filled tray supported on legs. The advantage of the table planter is that it provides leg clearance for gardeners using wheelchairs. The table height can be customised. The soil depth should be a minimum of 120 mm.

Select plants suitable for the soil depth and sun/shade conditions. Plants that prefer well-drained soil, tolerating low soil moisture are an excellent choice. Trailing plants look wonderful cascading over the edge of the planter. Since the shallow container dries out quickly in full sun, mulch the soil and add water crystals to the soil to minimise dehydration. Frequent watering or a drip watering system is required.

The width of the table should not exceed what can be reached. A free standing table accessible on both sides should be no wider than about 1200mm. If the table is accessible on one side only, then its width should not exceed around 600mm.

References

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Design Recommendations. New York: Wiley, 1999.

Dean, E. Esther Dean's Gardening Book: Growing without Digging. Sydney: Harper & Row, 1977.

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Rothert, G. The Enabling Garden: Creating Barrier-Free Gardens. G. Dallas: Taylor Publishing Co, 1994.

Snape, D. The Australian Garden. Melbourne: Bloomings Books, 2002.

Taylor, J. Planning Your Garden for Retirement. Lothian: Port Melbourne, 1990.

Resources:

Organisations & Associations:

- Cultivate - Horticultural Therapy Society of NSW
Teloopa Centre
250 Blaxland Road
Ryde NSW 2112 phone: (02) 9448 6392

- Victorian Horticultural Therapy Association
<http://www.greenweb.com.au>

- Thrive
The Geoffrey Udall Centre
Beech Hill
Reading England
RG7 2AT

<http://www.thrive.org.uk>

An excellent resource. Provides publications, journal.

- Chicago Botanic Garden
Horticultural Therapy Services
1000 Lake Cook Road Glencoe
Illinois 60022

<http://www.chicagobotanic.org/therapy>

- The American Horticultural Therapy Association
909 York Street
Denver Colorado 80206-3799

<http://www.ahta.org>

- People-Plant Council
Department of Horticulture
Virginia Polytechnic Institute
Blacksburg, Virginia 24061

<http://www.hort.vt.edu/HUMAN/PPC.html>

(Newsletter, research bibliography, publications, conferences).

- The Independent Living Centre NSW

<http://www.ilcnsw.asn.au>

- The Occupational Therapy Board of Australia
<http://www.ahpra.gov.au/occupational-therapy.aspx>

Related Links:

Use Internet search engines with the key words: enabling garden, healing garden, accessible garden, horticultural therapy, and barrier-free gardening, etc., to identify links to many different resources related to gardening for people with disabilities. Some interesting & helpful sites are listed below.

- Australian Society for Growing Native Plants.
<http://asgap.org.au>
- Garden Forever
(Many wonderful links for gardeners with disabilities, arthritis, allergies).

<http://www.gardenforever.com>
- Gardening for Good
Great sites with suggestions for gardeners.

<http://www.carryongardening.org.uk>
- Horticultural Therapy and Therapeutic Recreation Information
www.horticulturaltherapy.info
- Guelph Enabling Garden
www.enablinggarden.org
- The Center for Inclusive Design and Environmental Access (IDEA).
his Centre conducts research, education and design projects on universal design and environmental access.
<http://idea.ap.buffalo.edu//home/index.asp>
- The National Center on Physical Activity and Disability
<http://www.ncpad.org/>