



Raised Bed
Design Ideas
for
Community
Gardens

by
John Knowles
and the
Hellesdon Horticultural Association

INRODUCTION

Raised garden beds can be dated back to medieval times when farmers would use walls made of woven limbs and branches – wattle fences – to keep their gardens contained. Fast forward to the 18th century when Parisian gardeners would use horse manure to grow vegetables to sell at the market.

Add the idea of no-dig gardening evangelised by Charles Dowding and others with its credo of leaving soil largely undisturbed to maintain and increase soil fertility and you have perhaps eased the strenuous demands of traditional soil management and planting for both commercial and amateur gardeners.

Instead of being dug in, the no-dig gardener allows plants, fungi and soil organisms to break down and incorporate the organic matter into the soil. In doing so, the soil structure is not disrupted by being dug over. Likewise worms and other organisms are not disturbed, therefore the soil's ecosystem remains intact and, it is said, flourishes.

This technique is seen as a godsend for families and most elderly and disabled gardeners especially when the undisturbed soil is encompassed in raised beds.

TYPES OF RAISED BED

There are countless structural styles and materials for raised beds with their different properties, benefits and means of use for planting and garden management.

In this short research study we look at some of the advantages of raised non-dig beds.

For some the best raised beds do not require framing or supports. They are best made using faux 'rail sleepers' of treated (UC3) softwood (2.4m x 200mm x 100mm). They can have a lifespan of 8 - 10 years. They can enable ease of construction without extensive cutting and by using hex-headed corrosion resistant sleeper screws to complete them especially if, for example, used in creating the following sizes of bed:

Small bed: 1.2m wide x 2m long x 600mm high
Larger bed: 1.2m wide x 3m long x 600mm high

It is also worth noting that providing the width is no greater than 1.22 metres (4 feet) - the width that allows an easy full-length arms stretch from each side of the bed to reach the whole of the planting area - then a raised bed can be as long as an existing plot (minus pathway widths).

Using faux sleepers of 200mm width means that if the raised beds are at a 60cms height they will support all growers if they wish to sit on the bed edge while gardening with the benefit of a place to lay down garden implements for easy reach while working and allow compost/mulching containers to rest near at hand.



Small raised bed using faux sleepers creating a height of some 40cms and probably slightly under 2 x 3 metres

For families the extra benefit is that children - including those in prams and strollers and wheelchair users will be at a height where they can access the soil, view and be active growers. A similar bed can be produced using thinner planks

Small 'T' section bed approx. 25cms high and 1.5 x 2.00 metres



with one placed on top to form a 'T' section. Not as strong as a 'sleeper' bed but offers a place to sit etc. as previously described and the wood can be cheaper but greater skill is needed to assemble the bed. If economy is the dominant factor then a simple oblong of planks some 20cms high provides a raised bed of sorts without any of the advantages of the



Small medium-sized plain plank bed approx. 20cms high and 2.50 x 3.00 metres

previously described beds.

At RHS Bridgewater you can see a variety of raised beds some of which are circular or octagonal. They are often small and enable even the most physically-challenged grower to access the beds at arms length. The one shown below is complex and expensive to purchase and challenging to make. A simpler version can be produced like that shown in the second



Circular raised bed some 2.0 metres across



photograph.

The balance between designing a raised bed with maximum growing area and ease of access can be critical. Some answers have been designed as multi-sided beds with 8 sides or more (six-sided shapes tend to restrict the amount of growing area too much).

Shaped beds that follow or are contiguous with pathways can also allow for a 2m metre raised bed to fit economically around a corner offering good



Shaped, cut-out and apron raised beds

access to a larger amount of growing area.

If made from mixed types of wood thickness they can also provide a 'seating' side opposite a thinner soil holding side (as shown above).

These clearly involve more construction and may be considered unnecessary for a regular shaped growing area such as an allotment.

Raised beds are not limited to being made of wood. Composite materials need less maintenance and corrugated metal can be more durable and both are



Circular raised bed of corrugated steel some 2.0 metres across

readily available at a cost (see images overleaf). A cut-out space in the side of a raised bed can provide access in a raised bed that is greater than 2 metres wide and odd-shaped beds made to fit existing pathways and structures.

One benefit is that a plank can be placed across the cut-out to form a temporary planting preparation table to support tools, planting trays and other items



It may be that one or more of the side of a raised bed can be used to support vertical planting structures without impinging on the ability to use the bed. The image below left shows a raised bed for herbs where one side has been used to mount vertical growing racks for strawberries. Both the bed and the racks have self-watering systems to reduce the need



Raised bed for herbs with vertical growing racks for strawberry plants.

for access to the bed.

The development of the no-dig approach to bed preparation for planting and growing, premises the idea that the less soil disturbance creates better opportunities for effective growth. By leaving the natural web-like elements in the soil and allowing the natural process of organic decay of the surface layer into the body of the topsoil assisted by the action of insect life and earthworms provides all of the maintenance and structure needed for successful growth.

Charles Dowding recommends adding some two inches of compost onto the soil after every growing cycle. Home-produced compost if possible made from green waste (garden waste and domestic vegetable waste) and brown waste (brown paper and non-shiny or unglazed paper and cardboard). The compost, he says, is best developed in roofed open bins that encourage airflow but limit rainfall. The compost needs to be turned over during its maturing life and spread as soon as it is dark and crumbly.

Bought compost can work as well but no bought compost sacks ever seem to be the same even if the same brand, so experimentation and trial and error from one growing cycle to another is advised.

COMMUNITY AS A WHOLE

The philosophy of a community garden is clearly based on people working together as growers, developing physical and mental well-being through social interaction while sharing their varying levels of growing experience and knowledge.

Successful Community Gardens are built on the generosity of its members to share every aspect of gardening knowledge and skill giving meaning to working together for the benefit of individual members and the Garden community as a whole.

MANAGEMENT AND CHALLENGES

The project will need to be properly organised with a friendly, open, transparent structure and management, where rules (not too many of them please) are upheld by mutual respect and where people are identified for reference and structures are expressed in everyday language and understood by everyone involved. To be successful a Community Garden must be well-managed and is best organised by a small group focused on a sound, agreed understanding of how they should organise and support this community activity.

It will need daily visits and activity from at least one member in turn of the management team and regular informal get-togethers with all members to exchange ideas and raise concerns. Moving the project forward is best achieved in an informal atmosphere of friendship and concern for each other

A hut that can be used to store basic equipment and allow members to brew refreshment should also act as a meeting point - even if it is too small to enable everyone to be inside.

Regular social events don't have to be extravagant they can consist of a small group chatting over a cuppa as well as a full-blown BBQ.

As with all community activity people need to feel involved and welcome from day one. Everyone's contribution needs to be valued respected. The etiquette, respect and friendship that is developed over time will always mark the success of a community venture.

Happy growing

Dowding recommends simple un-bordered beds for those who are able to manage them. He starts on grassy and weedy ground by laying cardboard from used cardboard boxes straight on to the soil and covering them with 2 to 4 inches of compost. The card keeps the light off the grass and weeds and the two together eventually become green compost with only a few resourceful weeds likely to beat the barrier to the light.

He is happy to plant direct into this new soil/card canvas and has demonstrated success time and again with this method. He also disputes the byword of the agricultural revolution of the 18th century, 'crop rotation' and has successfully grown the same crops on the same beds year after year including potatoes.

PATHWAYS AND ACCESS

Space between raised beds is critical if access is to be provided for wheelchair and stroller users for the disabled and families with young children. The minimum width recommended for access through internal corridors is 91.5 cm but 1metre would provide a better width especially for non-standard or specialised wheelchairs and buggies. The options for pathway surfaces in order of effectiveness are:

- Porous Ground Paving Grid that comes in sections nominally 473mm x 473mm x 40mm its is usually between £13 and £14 per section and will need shingle infill or compacted turf
- Permeable plastic grass pavers can provide a porous surface for pathways. Permeable plastic grass pavers are interlocking cellular paving grids which allow rainwater to infiltrate freely through into the sub-grade or designed sub-base, to attenuate surface water run-off. Prices various
- Concrete pavers or Permeable Driveway Paving Grid. Prices variable
- Hard core covered with thick weed blanket £25 to £27 for 40 square metres

The use of bark, wood chippings, gravel or shingle on their own (non-resin bonded) are not recommended as they are difficult to compact into a hard surface and will tend to spread during use including moving from the centre of a pathway to the edges creating furrows in the pathway.

Powered and manual wheelchairs will not operate satisfactorily on loose gravel or shingle.