

Accessible Garden design

Introduction

It is important to start by deciding what is really wanted from the garden. For instance, do you want something low-maintenance, something to look at, sit in, or something a wheelchair user can add to and maintain. Once you have decided this, the main influences on design are space and cost. Any of the suggestions in this booklet can be scaled up or down to meet your budget. With regard to space, the important thing is that the pathways are well-placed and wide enough for the wheelchair user to get around unaided if s/he chooses.

Make sure that there is level access to the garden, from a door in the house.

Pathways/paving

Dimensions

All pathways should be at least 800mm wide, so that a wheelchair user can use the path comfortably, without danger of sliding off and into the beds/earth. If there is enough room for the path to be 1000mm wide, this is preferred.

For people with Guide dogs, or crutches, a wider path is better.

At the end or junction of the path, there should be a paved area which allows for the wheelchair user to turn in a circle and go back the way s/he came. The turning circle should be 1200mm diameter as an absolute minimum (this allows for a kind of 3-point turn), a better, much less demanding turning circle would be 1500mm in diameter.

Aim to make the paths as level as possible – the gradient should never be greater than 1:12 (ie for every 1.2 metres, the path has risen no more than 10 cm). An ideal rise is 1:20, which requires very little effort from wheelchair users and others, as it is almost level.

Sloped pathways will create more problems in the rain, so if the pathway has a slope, make sure you have an adequate drainage system for it.

In designing the path, you should be careful to avoid sharp turns and right-angles, and make sure the path will lead to all of the planting/resting areas, so that the wheelchair users has full access to all of his/her garden.

Materials

If someone with visual impairment, or ambulant disabilities (eg someone with a walking stick) is also going to use the garden, it is a good idea to provide a raised edge to all the pathways in a contrasting colour.

The path should be made out materials that are solid, even, and fairly smooth, but allowing traction, so that a wheelchair can move safely over

the surface when it is wet.

The pathways can be made out of any of the following surfaces:

Concrete/cement on hardcore

This can be expensive, but you can put down a nice solid, grippable surface, that dries quickly. The surface should be slightly roughened (with a brush) before it sets, to improve traction.

Think about adding a colour to it, as light coloured surfaces provide quite a lot of glare in bright sunlight.

Porous concrete will allow for good drainage, and prevent moss/algae buildup, but is more expensive.

Wood decking

This offers a nice smooth surface, but may not be so suitable for the English climate, as it can become very slippery when wet.

Tarmac

Not very attractive, but very practical and easy to maintain. It does get very hot in the sun, so any rest area in the garden should be made out of a different material.

Brick

This is expensive, but when done properly (i.e. level, *not* like cobblestones), it is an excellent surface, it looks good, is smooth, drains well, and has plenty of traction.

Concrete slabs/paving stones

As long as these are laid properly (ie flat and even), they make an ideal surface – good traction, good drainage, choice of colours, nice and level etc Avoid the more expensive slabs with uneven “rustic” surfaces – they are hard to wheel over, and create problems for ambulant disabled and visually impaired people.

Surfaces to avoid

For wheelchair users, chippings, gravel, bark, cobbles or anything uneven and yielding make very poor surfaces that are difficult to use. Also, in England turf is a poor surface unless reserved for a resting/sitting area, but even then, it will be unusable for a wheelchair user in spring/autumn/winter or any time it rains.

Slabbing

Brick path

Planting

There are all sorts of containers available in shops or to make, that allow the wheelchair user to reach or their plants for watering, weeding, and replanting. Some of these can be used to great effect in a wheelchair friendly garden. Also you need to ensure that your planting schemes, layout, beds etc allow the wheelchair user or other disabled person, complete access to every part of their garden.

Below are some ways of making the plants accessible to a wheelchair user.

1 Raised beds

This is probably the best way of providing a permanent place for plants which is totally accessible to the wheelchair user. As well as making the plants reachable for planting and maintenance, it also puts them closer to the eye-level of the wheelchair user, so that more joy can be derived from scented and blooming plants.

The raised beds should be designed on the needs of each individual gardener. For a wheelchair user, if the beds can only be reached from one side (because there is a pathway on one side only) the bed should be no wider than 2/3 of the arm reach of that person, *from their wheelchair*. Similarly, the height of the bed should be a comfortable height for the wheelchair user.

It is best to measure your design against the individual, but for guidance: A raised bed should be up to 750mm wide if reachable from one side, and 1500mm if reachable from (ie paved on) both sides.

If the wheelchair user is not going to do any planting, but is able to use long-handled tools for weeding etc, the bed can be a little wider.

Height from the floor, again depends on the individual, but as a guide, they should be no less than 500mm, and no higher than 700mm.

The paving should go right up to the base of the bed, so the wheelchair user can easily reach all parts of the bed, and plant, move and maintain beds. A higher bed (around 900mm) may be more suitable for people with back pain, amputees etc.

Materials

The raised beds are essentially big boxes filled with some kind of drainage material (i.e. hardcore, gravel, crushed rock, broken pots, polystyrene etc) and earth. Obviously, the more topsoil you use, the better, but if you have to buy it in, this will be expensive.

The raised beds can be made from anything as long as the material is non-toxic (i.e. no creosote), stable, and strong enough for the soil they must hold. Possibilities, depending on budget and aesthetics, are brick, stone,

wood, slabs, recycled large glass bottles, and concrete. The narrower the material to do the job, the easier it will be for the wheelchair-using gardener. Anything with wide walls will obviously reduce the reachable width of the bed for the gardener in a wheelchair.

Raised beds are suitable for a wide variety of planting – flowers, veg, herbs, even some dwarf fruit trees, if you use M27 rootstock.

2 Planting tables

Planting tables are just narrow tables at an accessible height containing pots or planting boxes. Again the important thing is reach. They are also good for the wheelchair-using gardener to work upon: repotting, seeding etc. They should be no higher than 1000mm, and no wider than 750mm (if reachable by a path on one side) or 1500mm (if reachable by a path on both sides). Also they should have leg space of 700mm, so the wheelchair user can get their wheelchair underneath.

3 Vertical gardens

Wall gardens can be good for wheelchair users. You can attach shelving or half-pots to outdoors if you have a brick wall or a sturdy fence. These pots/shelves should be attached to the wall at a height 500-800mm from the ground, so that the wheelchair user can easily reach and tend to her/his plants. This is good for bedding and climbing plants, herbs and some small vegetables like tomato plants.

If you want to spend money or are good at DIY, a vertical garden can be put on a hinge joint so it can be pulled out from the wall to tend.

4 Boxes and pots and tubs

Boxes and pots are ideal for large paved areas. They enable you to create a feature (using architectural plants) or grow a wide variety of plants (depending on the size of the pot, this can include trees). Again the important thing is that they are reachable, and that they are in an area where there is enough paving for the wheelchair user to get around the pots/tubs, allowing for any overhang created by the plant.

For people with ambulant disabilities the tubs and boxes should be at waist height from standing, as floor level will not work.

If they must be placed on the floor, they should contain low maintenance plants, like Peris, so that not being able to reach down does not present a problem.

Other issues

Sitting area – the garden should contain an area that is secluded and shaded, with enough space for both the wheelchair user and others to sit and enjoy the garden.

Watering – attention should be given as to how the garden is to be irrigated. Obviously the wheelchair user is not going to be able to carry a standard watering can while wheeling herself along, and a small watering can is not practical where there is a lot of planting. Hoses, while easier to manoeuvre, will create difficulties and obstructions on the path. Ideally, a soaker hose, or some other irrigation system (like a spigot) for most of the garden is the best solution. Where budget prevents this, it is best to use a mixture of methods: water wands, conveniently placed water barrels, and, short hoses closer to the house.

Tools – For a wheelchair user, the tools may have to be more ergonomic and have greater reach than for others. You should therefore consider buying a set of long-handled tools, including weed pullers, pruners, and trowel. The tools should be constructed of a lightweight material like fibreglass, so that they are strong and easy to use. They should also have good gripping handles

Storage – there should be an accessible storage area close to the door, for tools, gardening gloves etc.