# DONALD MCLINTOCK : SUNHILL ALLOTMENT

## Don't "Dig for Victory" If you have a bad back!

## <u>INTRODUCTION</u> The evolution of my "no dig" <sup>#1</sup> raised beds

When I first arrived in Devon from Scotland as a young man, I was amazed by having to mow the lawn in January, delighted to see daffodils flowering in February, seduced by sowing seeds in March. But I was also agonised by an aching back after digging my own first garden.

Roll on 40 years, retirement looming, and I was getting near the top of the waiting list for an allotment in Exeter. And by now I had a history of three slipped discs...... so I decided that I would be designing a "No Dig" allotment plot from the outset.

There are lots of good books and magazine articles about the pros and cons of no dig gardening #2 A lot of allotmenteers use the wonderful internet for sources of info and advice.#3

The principals and practice of "no dig" gardening are as follows:

- You only apply compost or manure to the surface as mulches and let the worms dig it in for you
- You do not disturb the natural ecosystem of bacteria and particularly fungi living in the ground that feeds your crops.
- You don't ever walk on the soil so there is no compaction and the roots benefit from better aeration and drainage as well.
- As a result, you can space your crops much closer together and this means yields are just as good or better than traditional open ground growing.
- The balance of underground insects and bugs is also more neutral

### Slugging it out

The guru of no dig gardening is Charles Dowding and he does not bother with sides to his no dig beds, suggesting he gets less slugs because there is nowhere for them to hide during the day. I think that is a very good option and I have done that in the past.

However, the main reason for me having raised beds was to reduce strain on my spine so I decided I wanted my beds to be as high as I could make them. That is why I chose to use scaffolding planks for the sides.



So, I use both "Nemaslug" and ferrous sulphate slug pellets on the beds containing slug susceptible plants. I cover the soil for long term crops like sweet corn, purple sprouting broccoli, leeks, courgettes and squashes with woven membrane and burn a hole for each plant individually. (You have to apply Nemaslug a week or so before laying the membrane).

Clearly a pet hedgehog would be useful. Remember a lot of the larger slugs and snails you see are actually eating the little ones that eat your plants

#### What to make the beds from

I decided I wanted to have beds that would last a long time in view of the work that was going into creating them, so the sides were being built of old scaffolding planks painted on both sides with Creocote and the insides lined with heavy duty house-building damp proof polythene. I hammered angle irons into the ground for supports, both at the corners and at the joins in the planks. [photo] – I paid full price for these to be cut at a steel stockholder at Highfield industrial estate

opposite Crealy fun park, on the A3052, the same estate as Coastal Compost.



I was fortunate to have a volunteer to creocote the planks for me, so they were ready to slot into the angle irons. At some corners I formed 45degree joints but other I just used coach bolts to butt fasten the short ends to the long sides.

UPDATE 2021 – I have barked my shins several times on the corner angle irons and therefore I have started to switch to using long coach-bolts to connect the corners of all the beds. I shall use the redundant angle irons to brace the mid points of the longer side of the beds

I have used various widths of builders DPM<sup>#6</sup> to line the inside of the beds. In practice you need one that is at least 5cm wider than the height of your bed sides from the level of the path. That means you can tack down the DPM over the top of the boards to stop soil slipping out between them. Another allotment neighbour uses sacrificial strips of wooden batten to secure the ploythene to the top of the scaffold boards

If you have access to non-rotting plastic material like solid topped plastic pallets, then your technique would be different, but the principals of the raised beds remain the same.

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## PLANNING

Laying out the position of your beds (see photo of plan above), I used paper and pencil initially.

You need to think about several factors before you start marking out your beds

- What is the access to your site, especially if importing bulk compost?
- Where is the sunlight and is it shaded at any time?
- Should you orient your beds east to west, or north to south (mine were on a 45-degree angle running from east to south west and on a north east facing slope so they do warm up quicker in the early morning sun)
- Will you run your beds across or up and down a slope?
  - Building across a slop creates terraces that require higher sides downhill and/or more back



bending uphill.

- In raised beds you will often plant in blocks or in short rows across the beds
- My beds run down the hill, but I plant across the beds, so I do not suffer from erosion and I can use the slope to allow water to spread down the bed gently
- whether you want fixed composting bins or to move them around the beds?
- is there a shed or a greenhouse?
  - if not, where will you put them to utilise sunlight most effectively? (I moved my shed to the north corner of my plot in order to build a greenhouse on its sunny side).



- should the ends of your beds and internal paths face an existing main allotment path?
  - $\circ \quad$  this will give you easier access to bring in compost
  - $\circ$  you also gain the width of the path for more plants
- How long will your beds be?
  - Long beds give more room for plants but involve more walking from one side to the other
  - A single 13ft scaffold plank is about the right length, also means you get 3 beds from 8 planks
    =156 sq ft
  - 9 ft is the next best size because that gives you a single bed from two planks (4 beds from 8 planks) = 138 sq ft

- $\circ$  That's a difference of 18 sq feet for the same number of planks
- what could you grow in 18 sq feet of deep no dig soil?
- How wide should your beds and paths be? (see below)
- What will you build your raised sides with? (see below)

## EXECUTING THE PLAN

I took over my plot on April 1st, 2017

I was very fortunate that our local site manager had helpfully dug over half of my new plot during the time it had no tenant.

The rest I covered in flattened cardboard boxes from moving to our new house and covered them with Coastal Compost soil improver. I poked holes through the cardboard and tossed in seed potatoes, knowing that when I came to dig them out, I would be killing two birds with one stone #4

You are going to dig out the paths and turn the topsoil over onto where the bed is going be raised First, I marked out the beds with canes and then string.

Initially my beds were going to be 4ft across and the paths 40cm wide. (too narrow)

SOMEONE HAS TO DIG, BUT ONLY ONCE.... if you do your planning properly.

You can make the frame of your beds before digging to act as a template as in my neighbour's plot.





I dug down until I reached the stony subsoil layer on my plot. That was a full spit depth of my spade. I also had a shovel to scoop up the loosened soil. I did need a mattock or fork to loosen up the area under the cardboard as I was digging up the potatoes.

After a while you have a ridge of dugout topsoil where the bed is going to be.

If your soil is very stony it is a clever time-saving trick to rake along either side of the ridge of the piled-up soil and watch the stones tumble down into where the paths are going to be.

I soon realised the paths needed to be wider.... wide enough to get my barrow of mulch up & down and around corners without tripping over my own feet. I have had to widen my paths.

I strongly suggest you experiment for yourself (with your barrow and your boots) but 50cm or 60 cm is the minimum.

Exeter city council requires paths BETWEEN plots to be a minimum of 60cm wide and maintained.

A wheelchair or "sitting walker" friendly plot would need wider paths still.

Wider paths mean higher beds!

This will be more important if your plot has shallow soil.

If your paths are wider you have more soil to pile on your beds so they can be higher (deeper soil).

I am now converting my beds gradually to 60cm wide paths that are two planks high, but I think three high would be heaven, although might need more reinforcing at the corners.

If you do decide to build beds that are higher, then they can also be wider, but, unless you have very long arms, 3'6" to 4ft (110cm – 120 cm) is about right - the crucial thing is for you to check that anyone tending your raised beds can easily reach across half the width of the beds without standing on the soil (not even with a plank underfoot).

Raking again once the boards are in place brings further small stones to fall down the edge of the bed, inside the boards which improves drainage and reduces rot if using wood.

At present I have 2 beds that are 2 scaffolding planks high (450cm / 17") and these are very comfortable to use. The rest of the earlier beds are a bit of a compromise being the height of the width of one plank and a bit of building site damp-proof membrane tucked below.

The compromise arose because I could not source enough used scaffolding planks at first. Later on, I were able to buy new planks wholesale through a neighbour in the building trade.

I am temporarily using part of a Covid isolated neighbour plots this year - no planks.



## WHAT ABOUT THE SURFACE OF THE PATHS

My Paths are surfaced with woven membrane which is tucked up in behind the planks [photo] and means there are no weeds or strimming to do. However, it does look a bit industrial. [photo].

The most quick and successful way to cut and trim woven plastic without fraying is to use a "turbo jet" lighter, available on the internet. One with two burners is quicker and an angled head is more ergonomic. Wear one glove on your non lighter hand in case the membrane starts to burn you have to douse a small fire. Other people use bark or leave the path to grow back as grass but I really don't want to weed or strim though. A neighbour has just recently got some Astroturf for his "sit-ootery" so I might cover the paths with that.

#### The Currant situation

I have one very long 10m x 1.5m, (30ft x 5ft) fixed fruit cage bed at the top of the plot. In the shade of a 5ft high woven fence at the bottom of a neighbour's garden. The high fruit is on the uphill side and the bushes can be picked on the downhill side from the lower path.

You could use the wooden frame of the bed to attach wooden netting cage uprights (or vice versa) but mine are aluminium and slot down into the soil beside the boards



I have had success with growing black currants and red currants & five varieties of blueberries (with Ericaceous compost). We had mixed results from about 35 raspberry canes, some transferred from my own and neighbours' allotments. The autumn fruiting raspberries were brilliant.

## The Long and Long of it

So, I have six main beds which are 7.3M long x 1.2m wide (24ft x 4 ft) [see plan] which allow a fairly flexible crop rotation.

I grow a lot of onion and leeks, and purple sprouting broccoli was very successful, still picking last year's in April this year. I do firm the soil with a tamper around the PSB but I am planning to use canes this year.

At the public path end of of the beds there are flowers or fixed crops like strawberries, rhubarb and asparagus and artichokes.



I have two or three mobile composting crates made from the pallets that my patio slabs arrived in. These move around each year or even during the season. The bottoms are made of chicken wire so the goodness leaching out goes straight on the beds. I am never too far from the the active heap.

I could have used an open bottom bell composter in the same way. The key is to move it around the beds.





#### PROTECTING THE CROPS

I have lots of hoops for butterfly and Enviromesh netting, and fleece and 2 aluminium cold frames and a cheap plastic one.



### **REFLECTIONS ON SIZE OF BEDS**

Making each bed the length of only one long scaffolding plank would have been more practical re building (see neighbour's plot above), but it would have needed another 4 planks overall (@£13 each in 2018 - 8 planks if double height). I would have lost 6x110x50 = almost 4 sq metres of growing space as well.

I was fortunate enough to be able to afford the new planks and angle iron and membrane at full prices because I was still working full time. But clearly compromises and making do and recycling are an integral part of keeping an allotment so don't feel I am holding up a blueprint you have to follow.

What I'm trying to say is that..... what suits my bad back on my soil in our microclimate might not suit someone else, but you are welcome to take any of what I have found helpful and see if it also works for you.

#### SUMMING UP THE PROJECT

I am very pleased with the good yields I get with close spacing. Insects and other pests damage are easier to prevent. No digging is lovely. I have not had any serious soil borne diseases with my crop rotation. I plan to convert all the beds to the full height of 2 planks as the soil level rises with compost imports.



Donald McLintock Sunhill Allotment

#### Foot notes

<sup>#1</sup> No dig actually means not tilling the soil – you still have to dig out crops and transfer mulch to and from barrows

- <sup>#2.</sup> Home Gardener's No-Dig Raised Bed Gardens Paperback 1 May 2016. A& G Bridgewater
- <sup>#3</sup> Charles Dowding https://charlesdowding.co.uk
- <sup>#4</sup> No birds were injured by stones in the making of this allotment
- #5 Sitting area

Standard scaffolding planks are not treated with wood preservative. Thickness: 38mm (1.50 inches). Width: 225mm (8.86 inches). Length available: 8ft. (11.7Kg), 10ft (14.5Kg), 13ft. (19Kg)

If you use 13ft planks you may well need to put in a mid length upright to stop bowing out