Four Seasons Allotment Heysham Consultation Dr Rod Everett
Based on 1 hour visit on 1st Feb 2024 with Joanne Ainscough

This land has a freely draining slightly acid loamy soil overlying a broken sandstone base. Its underlying Geology shown on British Geological Society map is considered as superficial Deposits. Till, Devensian - Diamicton. Sedimentary superficial deposit formed between 116 and 11.8 thousand years ago during the Quaternary period.

It is a North West facing slope surrounded on all sides by mature trees.

It has a fall from near the entrance gate of around 1.2 metres.

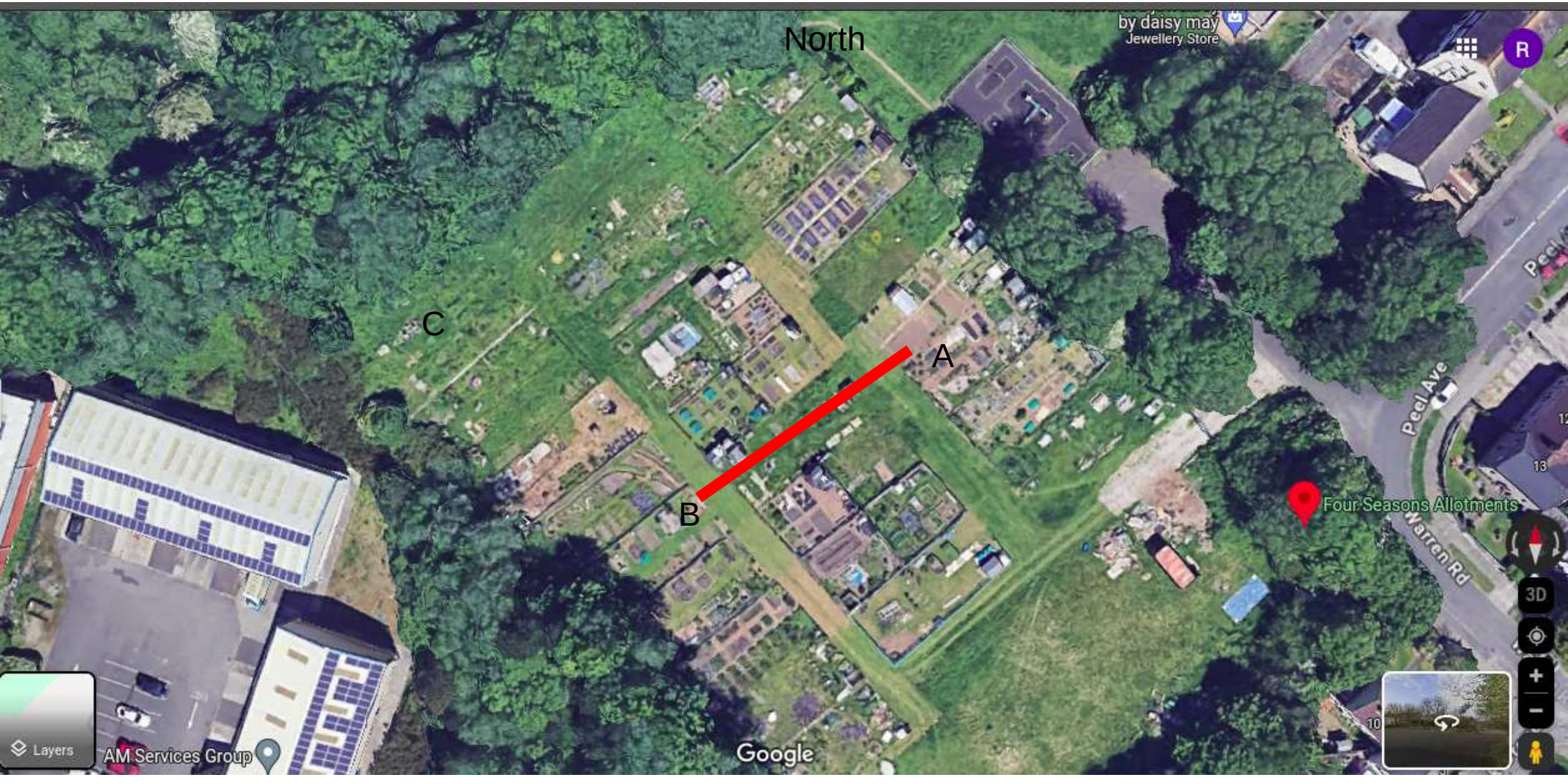
At the time of my visit the lower NW section of the allotment area was mainly flooded with water standing in any ditches or ground depressions making it nearly impossible to use as a growing area.
There were 2 raised mounds in this area that were not suffering from the flooding.

Two photos of the waterlogged abandoned allotments to the NW end of Four seasons allotment

The main flow of water into this area appears to be arising near the old sunflower stalks Point A on the later map between the green water butt and the small greenhouse.

Soil pits around the site showed similar soil structure and underlying broken sandstone

Point A looks like the area where the main water influx is arising
The land to the SE of the red line is fairly dry.
The land to the NW of this line was waterlogged.
Area C is a possible area for wildlife pond



Proposed Action

My first suggestion is that you dig a small pond near point A.
This would be around 3 ft deep and 9ft diameter. I expect that somewhere here you will find a spring or similar where the main water flow is coming into the site.

If this is correct then I suggest that you dig a channel to fit a 114mm gutter length going in a SW direction across the adjacent allotments going as far as the next ride down between the allotments near point B. This gutter length would be around 4in below the soil surface. This gutter will move water from the expected spring site down to B. It will also catch any surface flow moving down the slope towards the NW.

Where this ends I suggest that you use a 160mm un-permeable corrugated land drain To take this water on a meandering journey in the buried pipe down to somewhere near point C

This water can then flow into a wildlife pond. This would be of a similar size to the pond at A

Care would be needed at this point to ensure that any pond overflow did not cause a problem to the neighbouring land to the West. This can only be assessed when the water flow in extreme rainfall flow is established. (This could be as high as 60mm/24 hours.)

Once the whole is functioning well and you know exactly where the flow is entering the land and into the pond A. It is likely that the pond at A will dry out at times as the underlying sandstone will allow it to infiltrate. Later you might decide to add a clay or similar lining to help It hold water in the summer.

Second Action
The 2 areas of mounded soil which were not water logged suggests a gardening technique that was called German Mound but is now often referred to as Hugel Beds.

The system I used with success is based on digging out a bed around 9 in deep. (around 3 ft wide – so you can reach all the bed without walking on it.)
Carefully keeping the turf separate from the upper soil. And a further separation of the lower 3 inches of soil.

Fill this trench to around 5 in deep with small chopped up branches in lengths of around 4in long and up to 1in diameter. Cover this with the upturned turf grass side down. Then cover with the Lower 3in of separated soil.
Then cover the whole surface with at least 4 inches of leaves.
Then you can additionally dig the path way soil from between beds and add it to the Mound.

You could then fill the pathway with broadleaf woodchip.

These beds drain well and while the brushwood breaks down add a small bit of heat to the base of the bed.

Planting is best done into a full layer of around 1in of compost covering the whole surface
Or into a line of compost on the upper surface or a small compost filled groove.

See article for a larger version of this www.permaculture.co.uk/articles/the-many-Benefits-of-hugelkultur/
www.almanac.com/what-hugelkultur-ultimate-raised-bed

Larger Hugel beds might be good in the West side where they would make a good base for both soft fruit and fruit trees.

With the existing flooding situation I would only suggest planting apples and pears on a raised bed. They don't like wet roots.

Overall for the whole W – NW side of the allotments I suggest that once established the Garden beds are never walked on and kept covered at all times either with growing vegetables or green manures. This is to minimise any compaction.

These suggestions are based on my one hour visit and my current knowledge.
I cannot guarantee that they will all be successful.

Best wishes with this project Rod Everett

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