Stantyway Farm, Clinton Devon Estates

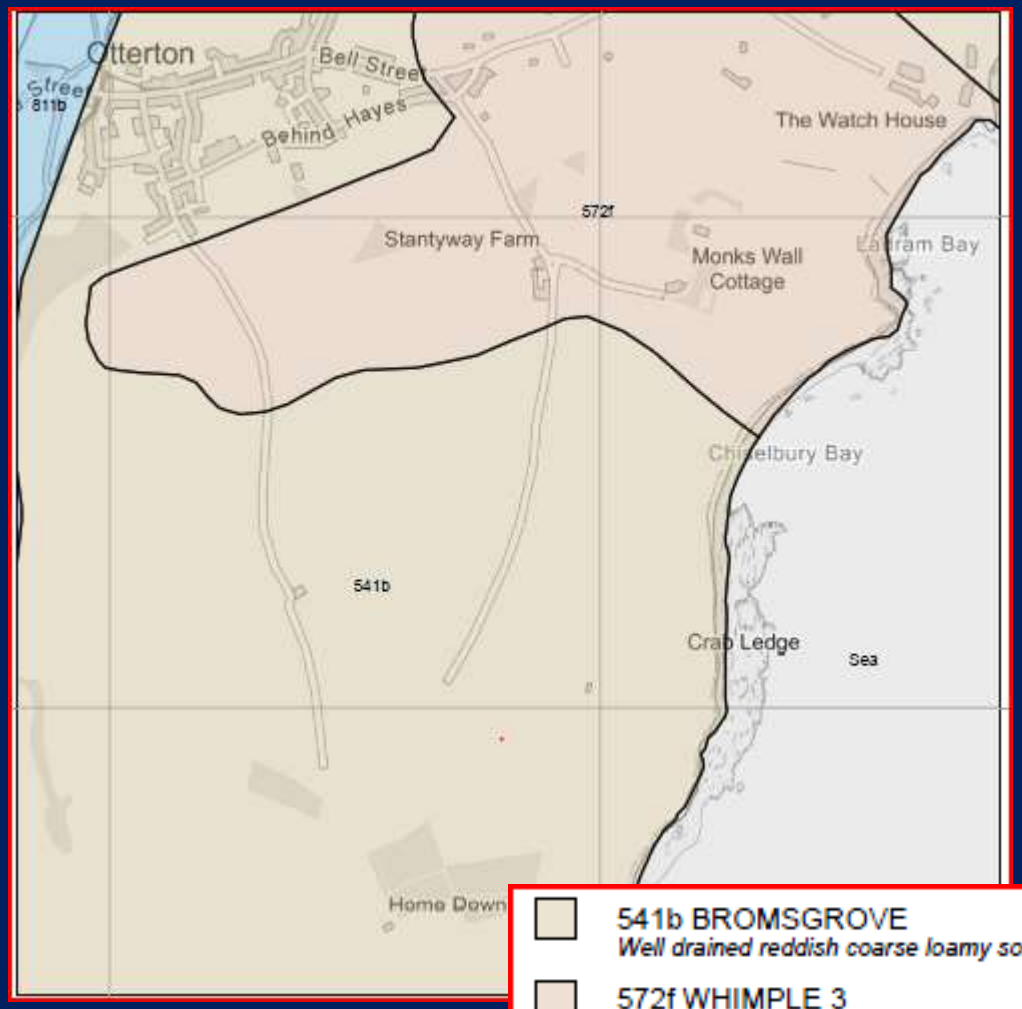
Catchment Communities Conference

Sam Walker

Farm facts

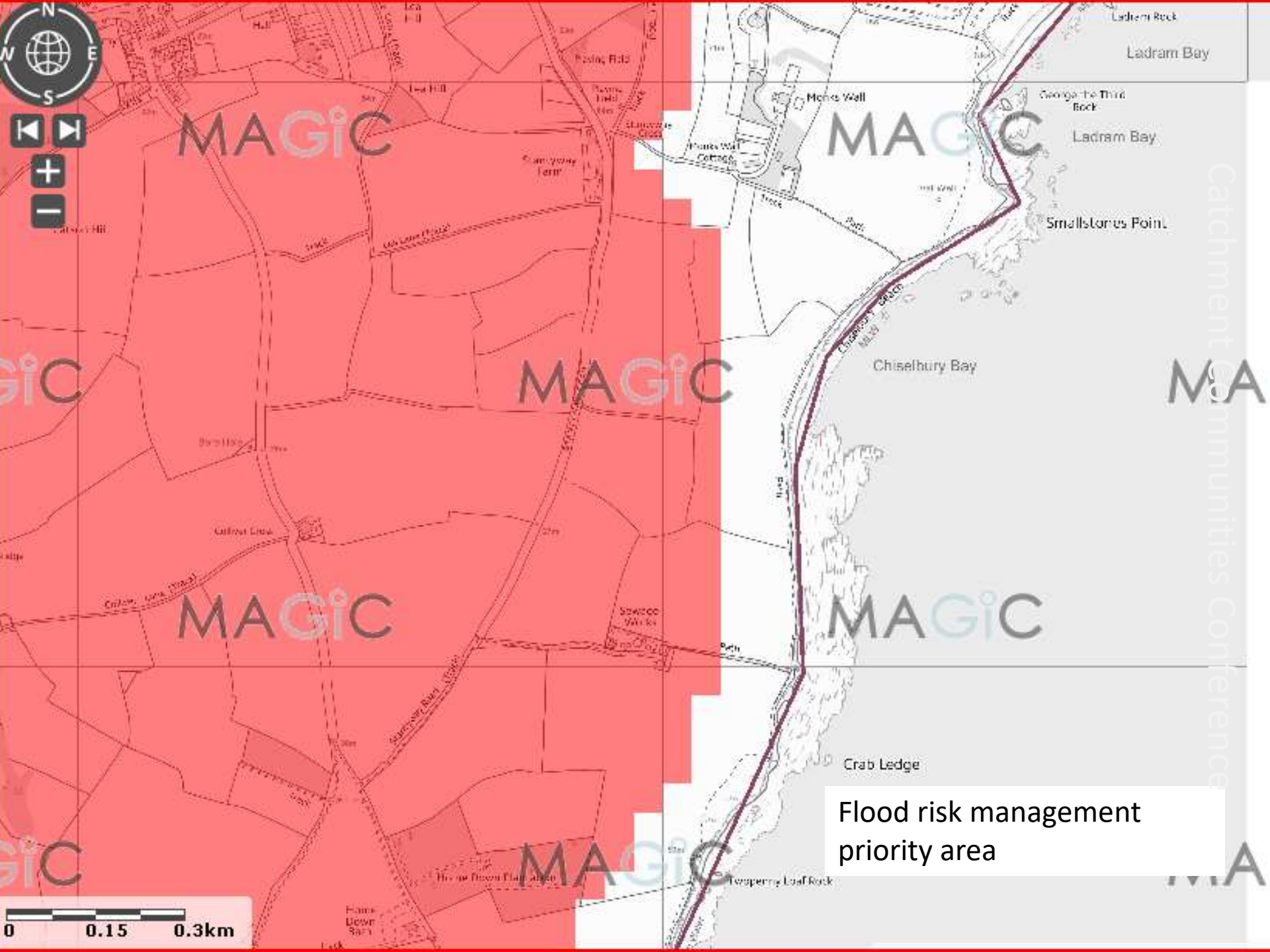
- 265 acres mainly arable
- Organic
- Easternmost breeding site of cirl buntings in UK with higher tier stewardship scheme
- Ring fenced
- Loamy stony soils over sandstone with excellent potential to grow most crops

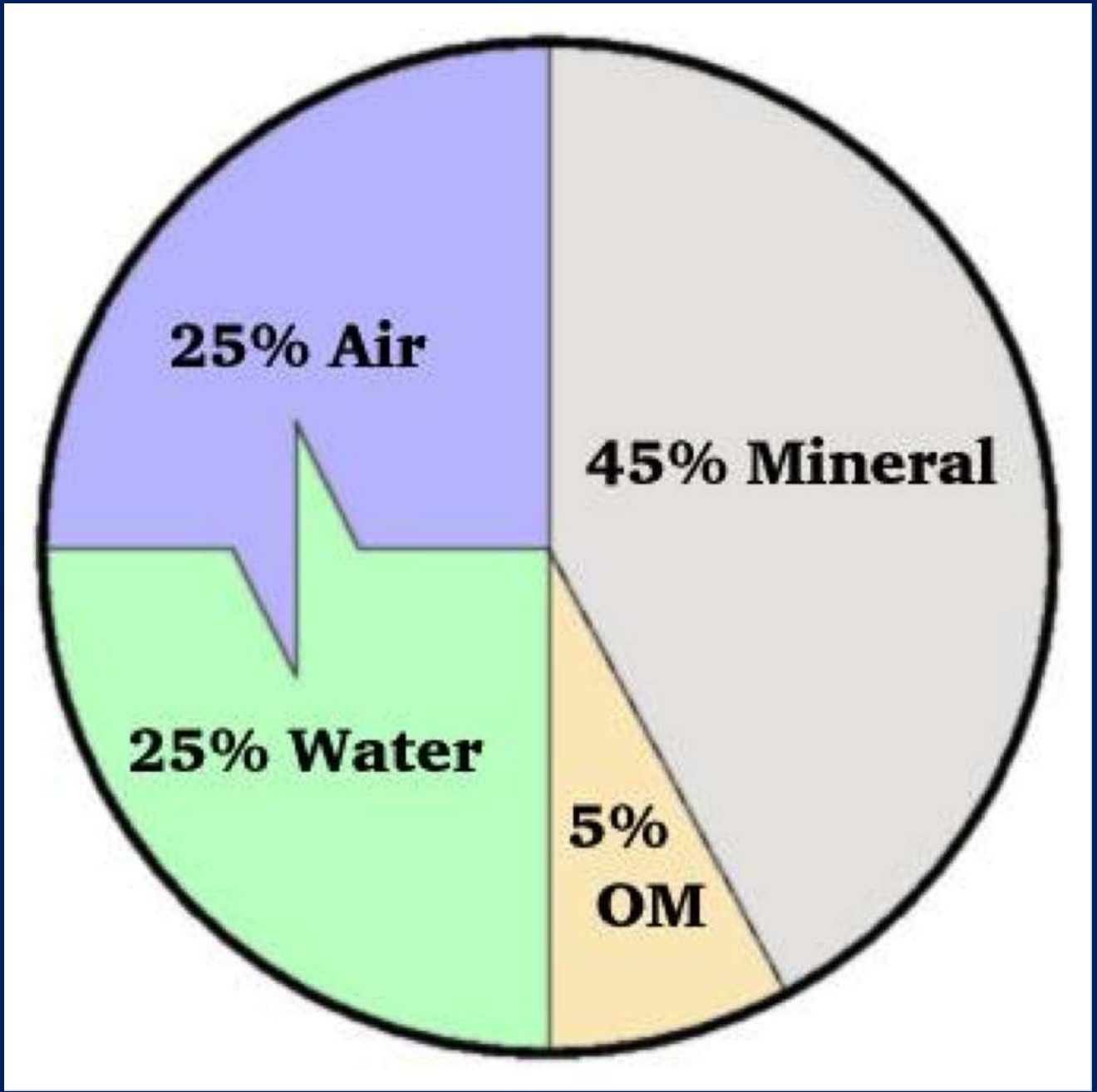
Soils of Stantyway Farm



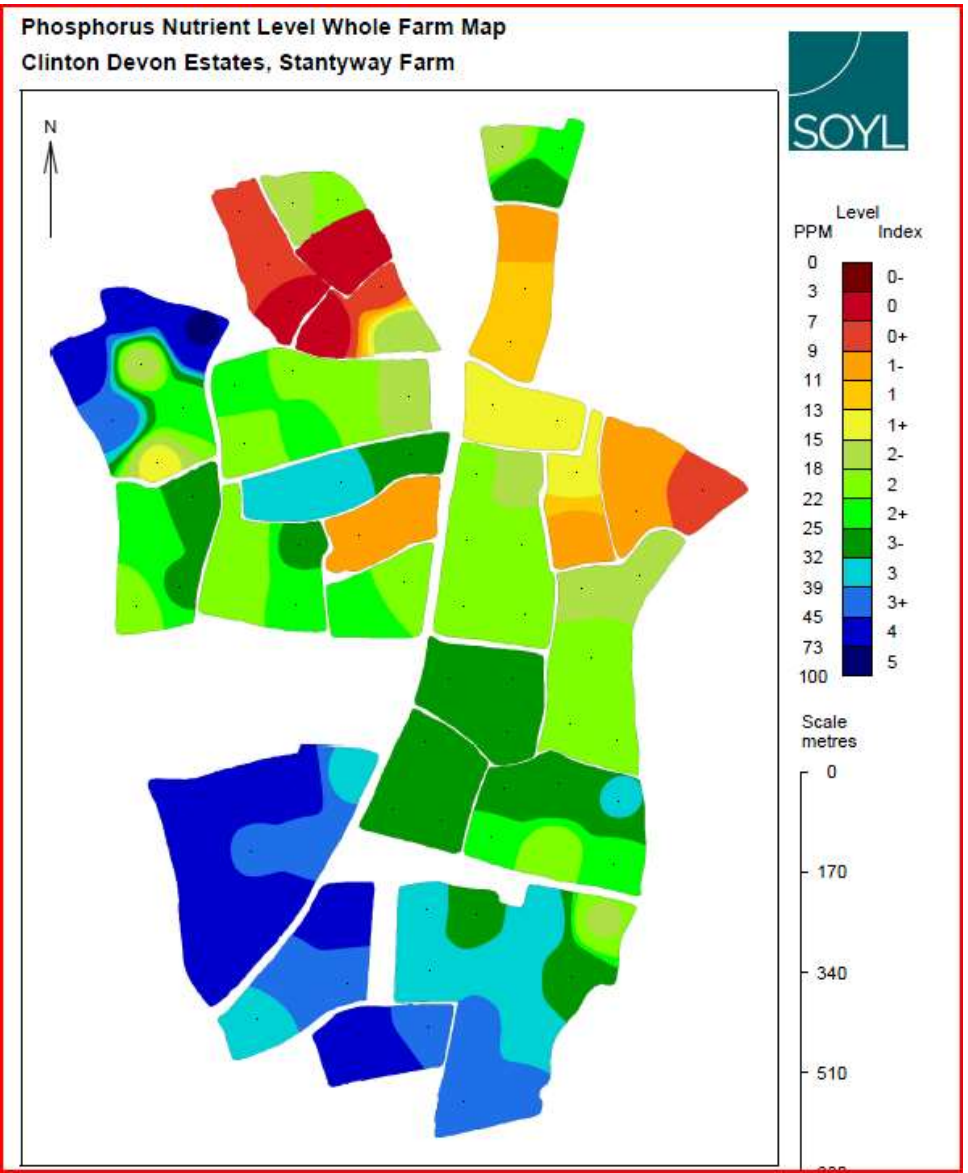
541b BROMSGROVE
Well drained reddish coarse loamy soils mainly over soft sandstone but deep in places.

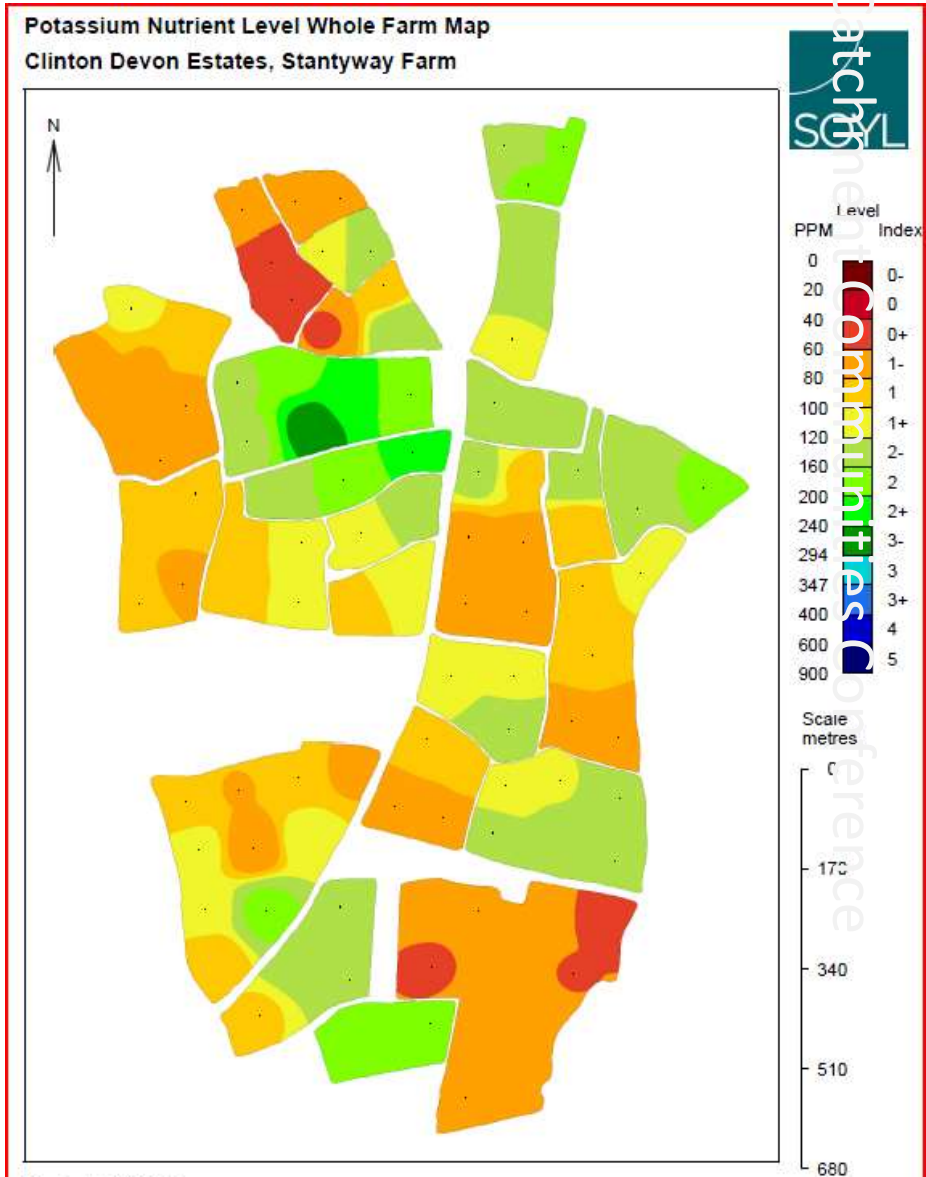
572f WHIMPLE 3
Reddish fine loamy or fine silty over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.


Ladram Bay
Monks Wall
Ladram Bay
Smallstones Point
Chiselbury Bay
Crab Ledge
Flood risk management priority area
0
0.15
0.3km


25% Air
45% Mineral
25% Water
5%
OM

Mineral content





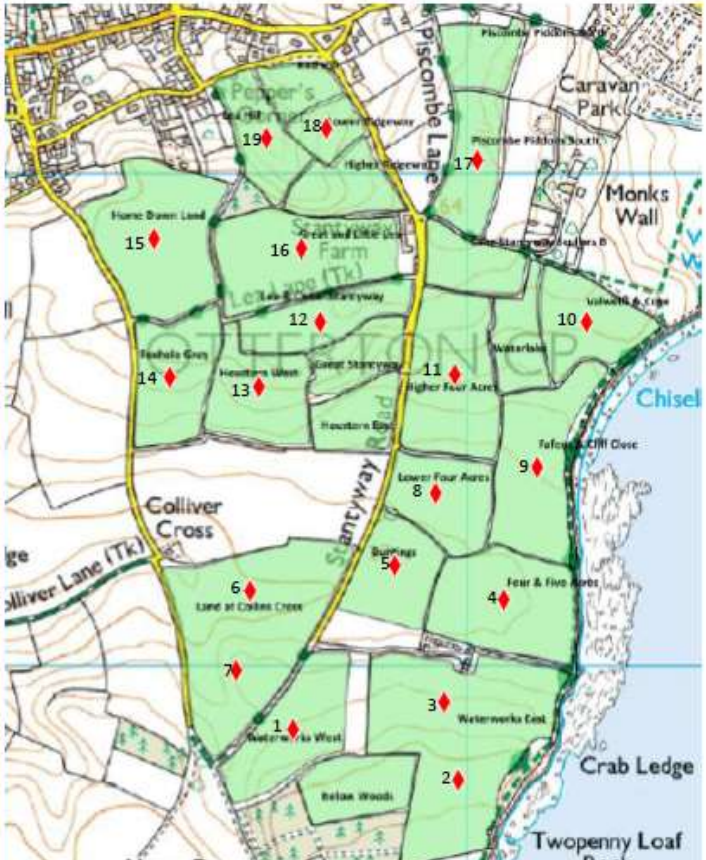
Air and water – soil pores

Soil Structure

Good soil structure is vital to maintain the health of the soil and optimise yields. Well structured soil allows the free movement of air and water through fissures (or cracks) between the structural units. Pores within the units also allow the movement of air and water. A soil with poor soil structure has a high risk of generating runoff. The risk of runoff is greatest when poor soil structure is near the soil surface

Map of pit locations for structure assessment

Pit Locations



Pit location 11

Soil Structure Score = 3 Adequate Structure

- Quite porous aggregates, most greater than 1cm
- Larger aggregates particularly in the top 5cm firmer and less porous
- Reasonably good rooting

Topsoil: sandy loam, slightly stony
Subsoil: sandy loam
Drainage: moderately good

Pit location 12

Soil Structure Score = 2- Good Structure

- Quite porous aggregates, 50% greater than 1cm
- Aggregates easy to break
- Reasonably good rooting
- Homogenous down to 30cm depth

Topsoil: medium loam, stony
Subsoil: very stony below 40cm
Drainage: good

Pit location 13

Soil Structure Score = 3 Adequate Structure

- Quite porous aggregates, most greater than 1cm
- Larger aggregates firmer and less porous
- Only a few roots remain from the previous crop
- Homogenous down to 30cm depth

Topsoil: sandy loam, stony
Subsoil: moderately stony below 50cm
Drainage: moderately good

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4.4 tonnes per square metre

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2.4 tonnes per square metre

8 tonnes per square metre – if tyre pressures reduced in field

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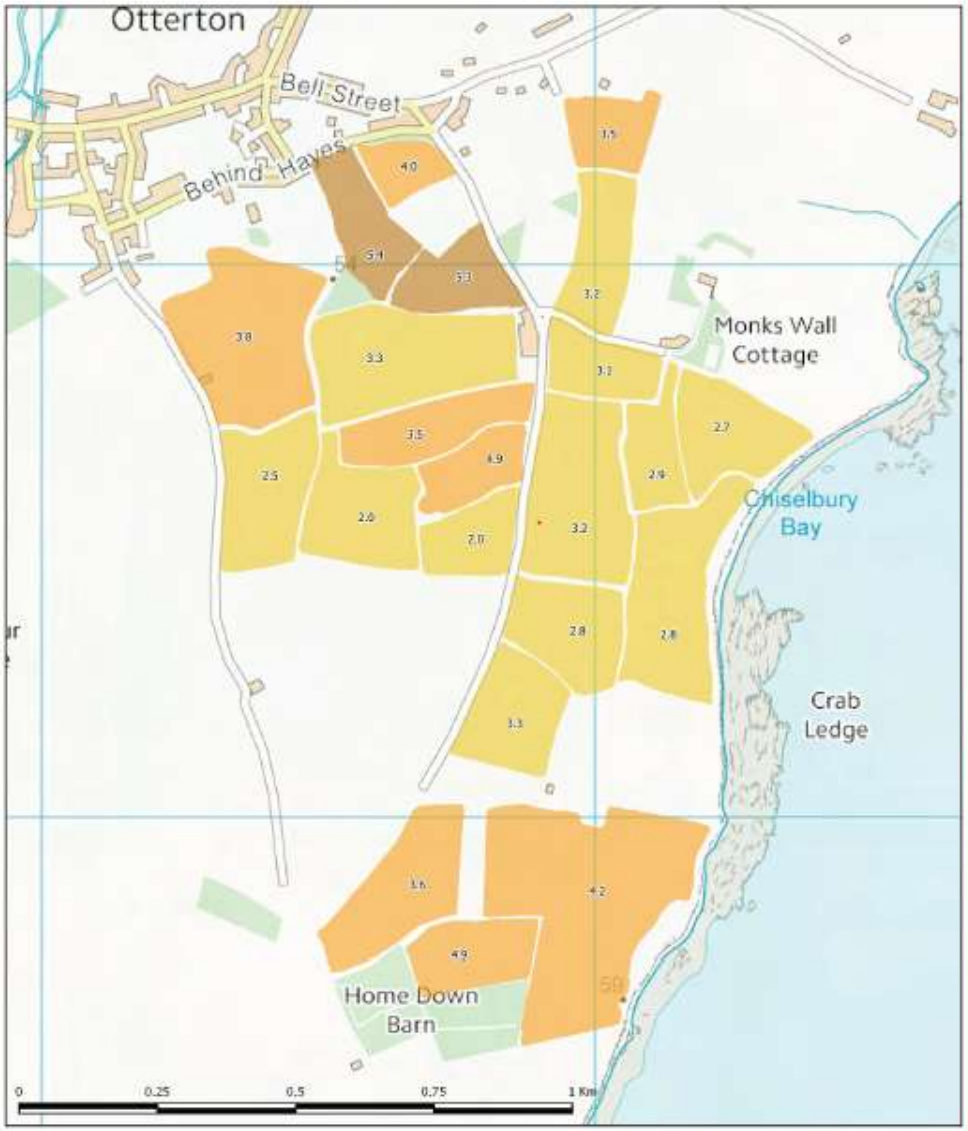
Stantyway Farm - Organic Matter



Clinton Devon Estates	LOI % w/w				Scale: 1:9,000
Stantyway Farm	0.2	Very Low	5.1	Normal +	N
Sampled: 26/09/2017	1.49	Very Low	7.0	Normal +	
	1.5	Low	7.1	High	
	3.4	Low	11.9	High	
	3.5	Normal -	12	Very High	
	5.0	Normal -	25	Very High	

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Organic matter

- Soil at the farm is commonly known to go very hard, organic matter is relatively low
- Aiming to vary the depths at which roots are working and the nutrients they consume with a broader crop rotation
- Once the OM improves, the soil will host more fauna, particularly worms, and pore space, structure and water retention will improve massively. Fungi and bacteria will increase and further improve the cycle

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Best means of building soil OM in this situation

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And once I've built up the OM...