**Clay illuviation provides a long-term sink for C sequestration in subsoils.**

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## Supplementary Information

### Figure SI1. Soil aggregate structure diagram

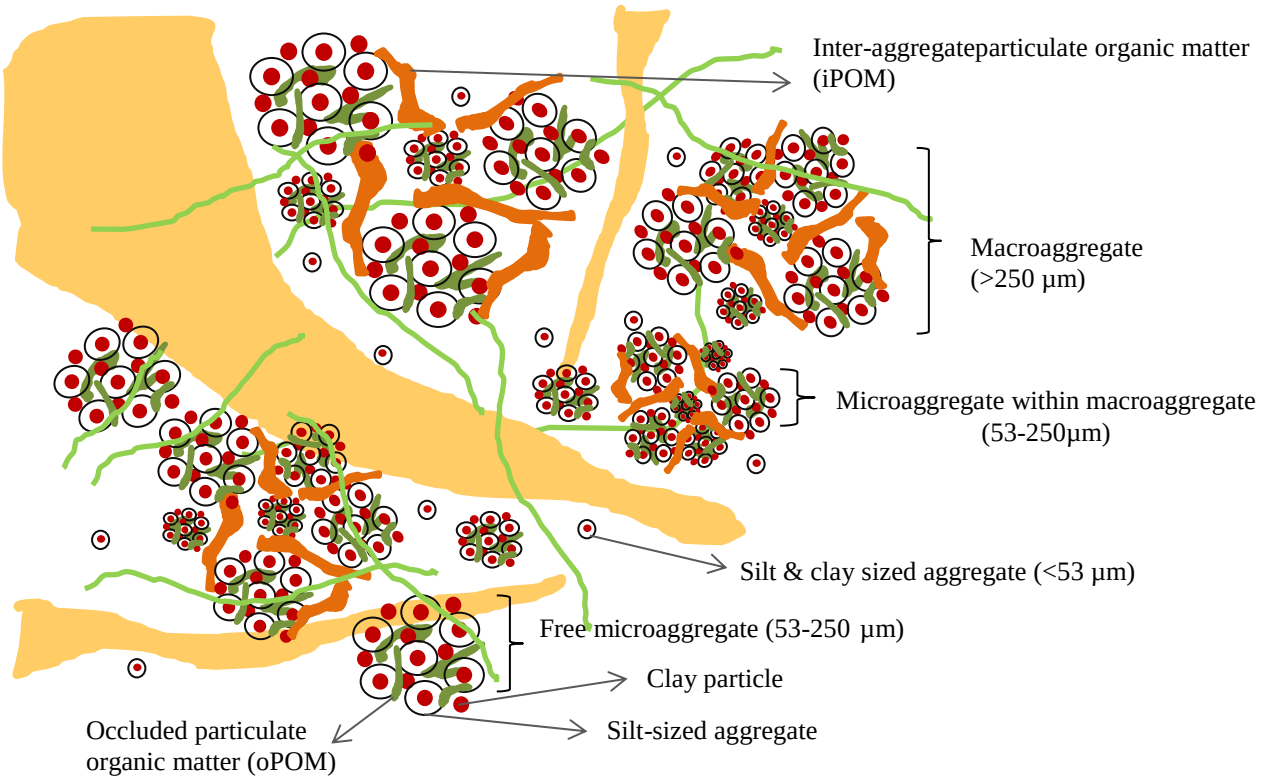
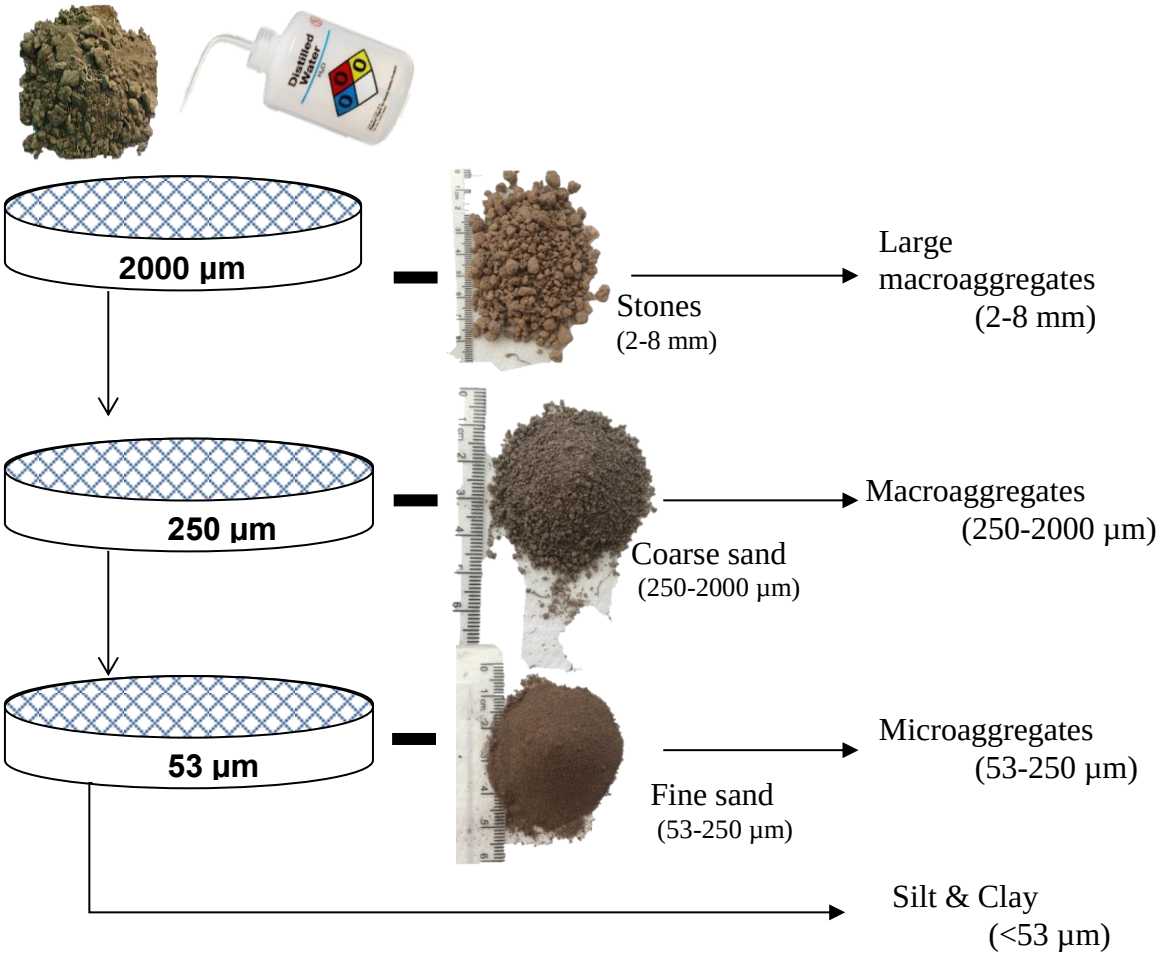


**Table SI1. Description of soil subgroups distribution and characteristics in Ireland.**

| Soil Type | WRB Correlation | Diagnostic Description | Coverage of grassland land area (ha) | Indicative SOC to 1 m depth ($t \cdot ha^{-1}$) |
|---|---|---|---|---|
| Typical Brown Earth (TBE) | HaplicCambisol | Well drained soils. | 761,944 ha | 126.96 +/- 33.5 |
| Humic Brown Earth (HBE) | HumicCambisol | Well drained soils with a humose topsoil. | 43,139 ha | 124.43 +/- 30.9 |
| Stagnic Brown Earth (SBE) | StagnicCambisol | Moderately drained soils with a slowly permeable sub-surface horizon. | 107,101 ha | 121.98 +/- 37.5 |
| Typical Luvisol (TLu) | HaplicLuvisol | Moderately drained soils due to clay illuviation, reducing permeability in the sub-surface horizon | 448,446 ha | 170.31+/- 113.8 |
| StagnicLuvisol (SLu) | StagnicLuvisol | Imperfectly drained soils due to clay illuviation and gleying below 40 cm, as a result of a slowly permeable sub-surface horizon. | 140,864 ha | 108.89 +/- 22.0 |
| Typical Surface-water Gley (TSWG) | HaplicStagnosol | Poorly drained soils, with gleying within 40 cm, as a result of a slowly permeable sub-surface horizon. | 311,201 ha | 128.21 +/- 52.1 |

This information was synthesised from the Irish Soil Information System database and maps [41,45].

**Figure SI2**




Method for aggregate fractionation adapted from Cambardella and Elliott, 1993

**Table SI2. Soil chemical and physical properties of each sample. Note: End depth 999 indicates that the pit was not deep enough to arrive at the end of the last horizon. Source: Massey et al., 2014** [42]

| Profile Number | Horizon | Soil type | Start depth | End depth | Base Saturation (%) | Cation Exchange Capacity (cmol $kg^{-1}$) | N (%) | C (%) | Corg (%) | pH | Sand 200-005mm % w/w | Silt 0002 - 005mm % w/w | Clay <0002mm % w/w | Textural Class | Bulk density g/cm3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC042 | 1 | TBE | 0 | 25 | 94 | 20.33 | 0.50 | 5.07 | 3.80 | 6.83 | 32 | 36 | 32 | Clay Loam | 0.83 |
| RC042 | 2 | TBE | 25 | 70 | 96 | 6.53 | 0.16 | 1.52 | 0.79 | 7.04 | 57 | 32 | 11 | Sandy Loam | 1.09* |
| RC043 | 1 | TBE | 0 | 20 | 85 | 14.29 | 0.50 | 5.08 | 3.94 | 5.93 | 44 | 28 | 28 | Clay Loam | 0.79 |
| RC043 | 2 | TBE | 20 | 26 | 84 | 10.79 | 0.29 | 3.14 | 2.01 | 6.09 | 40 | 38 | 22 | Loam | 1.12* |
| RC043 | 3 | TBE | 26 | 58 | 85 | 4.30 | 0.10 | 1.10 | 0.58 | 6.31 | 53 | 32 | 15 | Sandy Loam | 1.24* |
| RC043 | 4 | TBE | 58 | 70 | 76 | 3.54 | 0.06 | 0.72 | 0.34 | 6.42 | 62 | 29 | 9 | Sandy Loam | 1.37* |
| RC043 | 5 | TBE | 70 | 90 | 77 | 2.75 | 0.01 | 0.25 | 0.12 | 6.41 | 70 | 23 | 7 | Sandy Loam | 1.48* |
| RC056 | 1 | TBE | 0 | 30 | 87 | 13.70 | 0.35 | 3.75 | 2.74 | 6.16 | 61 | 22 | 17 | Sandy Loam | 0.86 |
| RC056 | 2 | TBE | 30 | 75 | 83 | 7.19 | 0.25 | 2.86 | 2.04 | 6.15 | 61 | 22 | 17 | Sandy Loam | 1.12* |
| RC056 | 3 | TBE | 75 | 999 | 100 | 0.63 | 0.08 | 0.84 | 0.42 | 6.15 | 73 | 18 | 9 | Sandy Loam | 1.23* |
| RC060 | 1 | SLU | 0 | 30 | 90 | 13.78 | 0.22 | 2.13 | 1.71 | 6.34 | 40 | 35 | 25 | Loam | 1.30 |
| RC060 | 2 | SLU | 30 | 60 | 92 | 16.01 | 0.07 | 0.49 | 0.36 | 7.58 | 28 | 36 | 36 | Clay Loam | 1.52 |
| RC060 | 3 | SLU | 60 | 80 | 100 | 21.65 | 0.06 | 0.47 | 0.29 | 7.95 | 19 | 42 | 39 | silty Clay Loam | 1.59 |
| RC067 | 1 | TBE | 20 | 35 |  | 17.65 | 0.34 | 3.81 | 3.35 | 7.09 | 44 | 35 | 21 | Sandy Loam | 1.01* |
| RC067 | 2 | TBE | 0 | 20 |  | 12.51 | 0.20 | 2.69 | 2.37 | 7.23 | 56 | 22 | 22 | Loam | 1.12* |
| RC067 | 3 | TBE | 95 | 999 |  | 15.08 | 0.18 | 3.07 | 2.64 | 7.24 | 66 | 19 | 15 | Clay Loam | 0.42* |
| RC070 | 1 | HBE | 0 | 9 | 97 | 35.50 | 0.88 | 9.63 | 8.98 | 6.24 | 28 | 38 | 34 | Clay Loam | 0.68* |
| RC070 | 2 | HBE | 9 | 25 | 99 | 24.35 | 0.45 | 4.63 | 3.63 | 6.63 | 38 | 33 | 29 | Clay Loam | 1.03* |
| RC070 | 3 | HBE | 25 | 55 |  | 8.73 | 0.11 | 1.06 | 0.52 | 6.37 | 51 | 34 | 15 | Loam | 1.25* |
| RC070 | 4 | HBE | 55 | 999 |  | 4.67 | 0.21 | 0.53 | 0.28 | 6.28 | 63 | 28 | 9 | Sandy Loam | 1.34* |
| RC076 | 1 | SBE | 0 | 27 | 100 | 19.54 | 0.56 | 4.85 | 4.35 | 6.43 | 14 | 50 | 36 | Silty Clay Loam | 0.94* |
| RC076 | 2 | SBE | 27 | 47 | 94 | 12.86 | 0.24 | 2.38 | 1.75 | 6.64 | 12 | 52 | 36 | Silty Clay Loam | 0.52* |
| RC076 | 3 | SBE | 47 | 63 | 100 | 9.89 | 0.16 | 1.55 | 0.84 | 6.52 | 20 | 55 | 25 | Silt Loam | 0.84* |
| RC091 | 1 | TLU | 0 | 11 | 86 | 12.50 | 0.45 | 4.28 | 3.82 | 5.28 | 47 | 26 | 27 | Silty Clay Loam | 1.04 |
| RC091 | 2 | TLU | 11 | 23 |  | 10.61 | 0.21 | 1.79 | 1.55 | 5.95 | 55 | 23 | 22 | Silty Clay Loam | 1.19 |
| RC091 | 3 | TLU | 23 | 40 |  | 7.44 | 0.08 | 0.62 | 0.49 | 6.48 | 48 | 25 | 27 | Sandy Clay Loam | 1.50 |
| RC091 | 4 | TLU | 40 | 60 | 98 | 9.13 | 0.06 | 0.44 | 0.35 | 6.85 | 43 | 28 | 29 | Clay Loam | 1.49 |
| RC092 | 1 | TBE | 0 | 12 | 90 | 12.18 | 0.52 | 4.81 | 4.08 | 5.11 | 26 | 36 | 38 | Clay Loam | 0.90 |
| RC092 | 2 | TBE | 12 | 30 | 94 | 11.27 | 0.33 | 2.90 | 2.27 | 5.47 | 26 | 39 | 35 | Clay Loam | 1.17* |
| RC092 | 3 | TBE | 30 | 60 | 86 | 7.53 | 0.18 | 1.61 | 0.85 | 5.90 | 37 | 35 | 28 | Clay Loam | 1.23* |
| RC092 | 4 | TBE | 60 | 85 | 91 | 6.95 | 0.13 | 0.90 | 0.58 | 6.04 | 49 | 26 | 25 | Sandy Clay Loam | 1.23* |
| RC096 | 1 | TSWG | 0 | 13 | 100 | 10.70 | 0.34 | 3.45 | 2.91 | 5.70 | 27 | 41 | 32 | Clay Loam | 0.97 |

| Profile Number | Horizon | Soil type | Start depth | End depth | Base Saturation (%) | Cation Exchange Capacity (cmol $kg^{-1}$) | N (%) | C (%) | Corg (%) | pH | Sand 200-005mm % w/w | Silt 0002 - 005mm % w/w | Clay <0002mm % w/w | Textural Class | Bulk density g/cm3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC096 | 2 | TSWG | 13 | 30 | 31 | 5.85 | 0.13 | 1.05 | 0.67 | 5.08 | 32 | 42 | 26 | Loam | 1.19 |
| RC096 | 3 | TSWG | 30 | 70 | 37 | 5.69 | 0.09 | 0.35 | 0.25 | 5.11 | 19 | 46 | 35 | Silty Clay Loam | 1.2* |
| RC096 | 4 | TSWG | 70 | 90 | 42 | 3.67 | 0.07 | 0.28 | 0.20 | 5.12 | 30 | 41 | 29 | Clay Loam | 0.11* |
| RC096 | 5 | TSWG | 90 | 999 | 44 | 4.51 | 0.08 | 0.27 | 0.19 | 5.06 | 14 | 64 | 22 | Silt Loam | 1.41* |
| RC098 | 1 | HBE | 0 | 15 | 79 | 11.04 | 0.58 | 7.43 | 6.53 | 5.29 | 32 | 37 | 31 | Clay Loam | 0.78 |
| RC098 | 2 | HBE | 15 | 25 | 76 | 6.84 | 0.26 | 3.29 | 2.62 | 5.24 | 35 | 40 | 25 | Loam | 1.07* |
| RC098 | 3 | HBE | 25 | 45 | 55 | 3.95 | 0.11 | 1.03 | 0.55 | 5.35 | 36 | 42 | 22 | Loam | 1.3* |
| RC098 | 4 | HBE | 45 | 90 | 66 | 3.08 | 0.10 | 0.53 | 0.30 | 5.43 | 42 | 36 | 22 | Loam | 1.32* |
| RC100 | 1 | SLU | 0 | 25 | 100 | 10.14 | 0.22 | 2.65 | 2.10 | 6.36 | 50 | 31 | 19 | Loam | 1.23 |
| RC100 | 2 | SLU | 25 | 60 | 100 | 6.38 | 0.10 | 0.87 | 0.57 | 6.61 | 43 | 36 | 21 | Loam | 1.47 |
| RC100 | 3 | SLU | 60 | 999 | 55 | 13.12 | 0.06 | 0.31 | 0.23 | 6.60 | 6 | 51 | 43 | Silty Clay | 1.47 |
| RC105 | 1 | HBE | 0 | 26 |  | 17.97 | 0.44 | 7.26 | 6.64 | 5.98 | 44 | 37 | 19 | Loam | 0.86 |
| RC105 | 2 | HBE | 26 | 38 |  | 13.23 | 0.18 | 4.45 | 4.01 | 6.30 | 47 | 38 | 15 | Loam | 0.96* |
| RC105 | 3 | HBE | 38 | 999 | 92 | 4.46 | 0.06 | 0.78 | 0.52 | 6.09 | 60 | 32 | 8 | Sandy Loam | 1.17* |
| RC107 | 1 | SBE | 0 | 20 |  | 11.03 | 0.31 | 2.95 | 2.33 | 6.11 | 41 | 35 | 24 | Loam | 1.12 |
| RC107 | 2 | SBE | 20 | 35 | 86 | 8.12 | 0.19 | 1.97 | 1.40 | 5.57 | 37 | 39 | 24 | Loam | 1.11 |
| RC107 | 3 | SBE | 35 | 60 | 94 | 5.83 | 0.08 | 1.11 | 0.54 | 6.01 | 48 | 38 | 14 | Loam | 0.83 |
| RC107 | 4 | SBE | 60 | 90 | 60 | 3.69 | 0.11 | 1.69 | 0.82 | 5.92 | 49 | 41 | 10 | Loam | 0.99 |
| RC107 | 5 | SBE | 90 | 120 |  | 1.11 | 0.03 | 0.21 | 0.13 | 6.14 | 50 | 32 | 18 | Loam | 1.47* |
| RC119 | 1 | SBE | 0 | 15 | 82 | 17.38 | 0.52 | 4.88 | 4.33 | 6.06 | 46 | 33 | 21 | Loam | 0.99 |
| RC119 | 2 | SBE | 15 | 40 | 71 | 9.26 | 0.21 | 2.04 | 1.98 | 6.16 | 47 | 36 | 17 | Loam | 1.11 |
| RC119 | 3 | SBE | 40 | 55 | 58 | 7.87 | 0.14 | 1.46 | 0.79 | 6.33 | 43 | 39 | 18 | Loam | 1.32* |
| RC119 | 4 | SBE | 55 | 85 |  | 1.20 | 0.04 | 0.40 | 0.23 | 6.51 | 54 | 33 | 13 | Sandy Loam | 1.42 |
| RC119 | 5 | SBE | 85 | 120 | 59 | 2.69 | 0.03 | 0.16 | 0.10 | 6.73 | 59 | 28 | 13 | Sandy Loam | 1.53 |
| RC123 | 1 | TLU | 0 | 15 | 89 | 15.12 | 0.31 | 2.85 | 2.44 | 6.96 | 32 | 43 | 25 | Loam | 1.11 |
| RC123 | 2 | TLU | 15 | 35 | 88 | 14.59 | 0.31 | 2.85 | 2.65 | 6.88 | 29 | 40 | 31 | Clay Loam | 1.03 |
| RC123 | 3 | TLU | 35 | 65 | 76 | 9.30 | 0.14 | 1.32 | 1.01 | 7.04 | 28 | 46 | 26 | Loam | 1.12 |
| RC123 | 4 | TLU | 65 | 75 | 78 | 3.15 | 0.05 | 0.43 | 0.30 | 7.29 | 39 | 47 | 14 | Loam | 1.32* |
| RC123 | 5 | TLU | 75 | 110 | 74 | 3.75 | 0.05 | 0.28 | 0.17 | 7.40 | 38 | 33 | 29 | Clay Loam | 1.43* |
| RC129 | 1 | HBE | 0 | 25 | 94 | 16.34 | 0.42 | 5.60 | 4.93 | 5.66 | 38 | 38 | 24 | Loam | 0.81 |
| RC129 | 2 | HBE | 25 | 58 | 100 | 6.07 | 0.11 | 1.37 | 0.91 | 6.15 | 43 | 36 | 21 | Loam | 1.10 |
| RC129 | 3 | HBE | 58 | 85 | 100 | 3.40 | 0.06 | 0.76 | 0.44 | 6.07 | 51 | 31 | 18 | Loam | 1.31* |
| RC139 | 1 | TSWG | 0 | 23 | 99 | 2.55 | 0.18 | 1.98 | 1.50 | 5.18 | 62 | 29 | 9 | Sandy Loam | 1.27 |

| Profile Number | Horizon | Soil type | Start depth | End depth | Base Saturation (%) | Cation Exchange Capacity (cmol $kg^{-1}$) | N (%) | C (%) | Corg (%) | pH | Sand 200-005mm % w/w | Silt 0002 - 005mm % w/w | Clay <0002mm % w/w | Textural Class | Bulk density g/cm3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC139 | 2 | TSWG | 23 | 45 | | 0.79 | 0.02 | 0.21 | 0.16 | 6.60 | 56 | 36 | 8 | Sandy Loam | 1.76 |
| RC139 | 3 | TSWG | 45 | 120 | | 2.00 | 0.02 | 0.16 | 0.12 | 7.07 | 47 | 43 | 10 | Loam | 1.48* |
| RC142 | 1 | SLU | | 23 | | 10.41 | 0.24 | 3.30 | 2.49 | 6.21 | 69 | 24 | 7 | Sandy Loam | 0.97 |
| RC142 | 2 | SLU | | 50 | 79 | 4.21 | 0.07 | 0.93 | 0.42 | 6.07 | 55 | 34 | 11 | Sandy Loam | 1.16* |
| RC142 | 3 | SLU | | 90 | | 1.30 | 0.02 | 0.31 | 0.14 | 6.07 | 62 | 32 | 6 | Sandy Loam | 1.68* |
| RC143 | 1 | TBE | 0 | 20 | 81 | 6.51 | 0.26 | 2.81 | 2.30 | 5.68 | 56 | 33 | 11 | Sandy Loam | 1.02 |
| RC143 | 2 | TBE | 20 | 35 | 74 | 5.59 | 0.14 | 1.55 | 0.90 | 6.23 | 54 | 33 | 13 | Sandy Loam | 1.15 |
| RC143 | 3 | TBE | 35 | 60 | 55 | 3.72 | 0.11 | 1.16 | 0.49 | 5.85 | 58 | 34 | 8 | Sandy Loam | 1.06* |
| RC143 | 4 | TBE | 60 | 80 | 53 | 1.56 | 0.02 | 0.31 | 0.15 | 6.06 | 58 | 36 | 6 | Sandy Loam | 1.45* |
| RC143 | 5 | TBE | 80 | 100 | 99 | 0.94 | 0.01 | 0.20 | 0.11 | 6.05 | 49 | 43 | 8 | Loam | 1.5* |
| RC154 | 1 | TBE | 0 | 55 | 75 | 6.64 | 0.20 | 1.86 | 1.24 | 6.00 | 72 | 17 | 11 | Sandy Loam | 1.20 |
| RC154 | 2 | TBE | 55 | 95 | 88 | 2.91 | 0.04 | 0.36 | 0.22 | 6.55 | 74 | 16 | 10 | Sandy Loam | 1.35 |
| RC154 | 3 | TBE | 95 | 125 | | 7.09 | 0.04 | 0.59 | 0.39 | 7.14 | 77 | 17 | 6 | Loamy Sand | 1.16 |
| RC172 | 1 | TLU | 0 | 22 | 100 | 8.90 | 0.09 | 2.68 | 2.02 | 6.32 | 34 | 41 | 25 | Loam | 1.10 |
| RC172 | 2 | TLU | 22 | 35 | 84 | 4.56 | 0.08 | 0.83 | 0.38 | 6.23 | 32 | 46 | 22 | Loam | 1.14 |
| RC172 | 3 | TLU | 35 | 60 | 94 | 3.74 | 0.08 | 0.48 | 0.24 | 6.33 | 27 | 46 | 27 | Clay Loam | 1.33 |
| RC172 | 4 | TLU | 60 | 85 | 99 | 3.65 | 0.08 | 0.37 | 0.19 | 6.35 | 66 | 21 | 13 | Sandy Loam | 1.34 |
| RC172 | 5 | TLU | 85 | 100 | 100 | 3.25 | 0.37 | 0.18 | 0.10 | 6.30 | 35 | 42 | 23 | Loam | 1.6* |
| RC173 | 1 | SBE | 0 | 28 | 78 | 8.87 | 0.16 | 3.38 | 2.70 | 5.36 | 29 | 37 | 34 | Clay Loam | 1.11 |
| RC173 | 2 | SBE | 28 | 45 | 96 | 6.97 | 0.16 | 1.10 | 0.89 | 5.98 | 31 | 41 | 28 | Clay Loam | 1.13* |
| RC173 | 3 | SBE | 45 | 65 | 96 | 4.51 | 0.15 | 1.23 | 0.73 | 5.95 | 53 | 23 | 24 | Sandy Clay Loam | 1.36* |
| RC173 | 4 | SBE | 65 | 70 | 94 | 5.34 | 0.13 | 0.61 | 0.31 | 5.92 | 25 | 46 | 29 | Clay Loam | 1.59* |
| RC182 | 1 | SBE | 0 | 15 | 91 | 13.66 | 0.54 | 6.16 | 5.23 | 5.61 | 44 | 26 | 30 | Clay loam | 0.74 |
| RC182 | 2 | SBE | 15 | 25 | | 7.60 | 0.31 | 3.57 | 2.57 | 5.90 | 47 | 28 | 25 | Loam | 0.89 |
| RC182 | 3 | SBE | 25 | 42 | | 2.23 | 0.15 | 1.67 | 0.72 | 5.97 | 55 | 30 | 15 | Sandy loam | 0.94 |
| RC182 | 4 | SBE | 42 | 75 | 96 | 1.40 | 0.03 | 0.25 | 0.10 | 6.19 | 63 | 26 | 11 | Sandy loam | 1.49* |
| RC184 | 1 | TSWG | 0 | 12 | 95 | 10.89 | 0.62 | 6.74 | 5.48 | 5.52 | 41 | 26 | 33 | Clay loam | 0.86 |
| RC184 | 2 | TSWG | 12 | 30 | 83 | 7.74 | 0.40 | 4.06 | 3.01 | 5.71 | 39 | 31 | 30 | clay loam | 1.01 |
| RC184 | 3 | TSWG | 30 | 49 | 97 | 3.56 | 0.10 | 0.87 | 0.57 | 5.90 | 52 | 26 | 22 | Sandy Clay Loam | 1.17 |
| RC184 | 4 | TSWG | 49 | 104 | 57 | 9.81 | 0.05 | 0.21 | 0.14 | 5.61 | 46 | 24 | 30 | Sandy Clay Loam | 1.66 |
| RC186 | 1 | TSWG | 0 | 22 | 96 | 8.64 | 0.46 | 5.28 | 4.10 | 5.60 | 39 | 28 | 33 | clay loam | 0.96 |
| RC186 | 2 | TSWG | 22 | 50 | 92 | 5.22 | 0.09 | 0.95 | 0.86 | 5.96 | 35 | 38 | 27 | Clay Loam/Loam | 1.49 |
| RC186 | 3 | TSWG | 50 | 95 | | 3.40 | 0.05 | 0.26 | 0.12 | 5.71 | 46 | 31 | 23 | Loam | 1.42 |

| Profile Number | Horizon | Soil type | Start depth | End depth | Base Saturation (%) | Cation Exchange Capacity (cmol $kg^{-1}$) | N (%) | C (%) | Corg (%) | pH | Sand 200-005mm % w/w | Silt 0002 - 005mm % w/w | Clay <0002mm % w/w | Textural Class | Bulk density g/cm3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC186 | 4 | TSWG | 95 | 135 | 87 | 12.24 | 0.07 | 0.15 | 0.11 | 6.42 | 44 | 28 | 28 | Clay Loam | 1.57 |
| RC187 | 1 | HBE | 0 | 21 | 100 | 19.05 | 0.64 | 6.67 | 6.12 | 6.44 | 58 | 26 | 16 | Sandy Loam | 0.63 |
| RC187 | 2 | HBE | 21 | 32 | 100 | 6.07 | 0.15 | 1.53 | 0.92 | 6.44 | 27 | 64 | 9 | Sandy Loam | 0.58* |
| RC189 | 1 | SBE | 0 | 22 | 73 | 14.80 | 0.49 | 5.92 | 4.23 | 5.33 | 56 | 23 | 21 | Sandy Clay Loam | 0.78 |
| RC189 | 2 | SBE | 22 | 37 | 85 | 9.92 | 0.27 | 3.20 | 2.62 | 5.44 | 58 | 24 | 18 | Sandy Loam | 1.07* |
| RC189 | 3 | SBE | 37 | 65 |  | 5.80 | 0.06 | 0.43 | 0.26 | 5.86 | 75 | 14 | 11 | Sandy Loam | 1.35* |
| RC215 | 1 | TSWG | 0 | 30 | 77 | 4.91 | 0.19 | 2.21 | 1.78 | 5.29 | 68 | 22 | 10 | Sandy Loam | 1.41 |
| RC215 | 2 | TSWG | 30 | 48 |  | 3.54 | 0.12 | 0.87 | 0.66 | 6.02 | 59 | 26 | 15 | Sandy Loam | 1.52 |
| RC215 | 3 | TSWG | 48 | 90 |  | 2.01 | 0.06 | 0.67 | 0.32 | 5.96 | 56 | 28 | 16 | Sandy Loam | 1.49 |
| RC215 | 4 | TSWG | 90 | 115 |  | 0.89 | 0.02 | 0.16 | 0.07 | 5.99 | 75 | 14 | 11 | Sandy Loam | 1.73 |
| RC220 | 1 | HBE | 0 | 23 | 92 | 15.36 | 0.63 | 7.63 | 6.40 | 5.51 | 35 | 30 | 35 | Clay Loam | 0.75 |
| RC220 | 2 | HBE | 23 | 45 | 93 | 6.72 | 0.21 | 2.44 | 1.15 | 5.65 | 35 | 43 | 22 | Loam | 0.83 |
| RC220 | 3 | HBE | 45 | 75 | 100 | 1.01 | 0.07 | 0.42 | 0.21 | 6.00 | 47 | 34 | 19 | Loam | 1.19 |
| RC224 | 1 | TSWG | 48 | 125 | 74 | 6.51 | 0.60 | 6.20 | 5.31 | 5.16 | 20 | 40 | 40 | Clay/Silty | 1.48 |
| RC224 | 2 | TSWG | 33 | 48 | 78 | 4.35 | 0.28 | 2.40 | 1.93 | 5.42 | 18 | 45 | 37 | Silty Clay Loam | 0.86 |
| RC224 | 3 | TSWG | 0 | 10 | 44 | 5.98 | 0.16 | 0.98 | 0.61 | 5.52 | 29 | 42 | 29 | Clay Loam | 0.99 |
| RC224 | 4 | TSWG | 10 | 33 | 47 | 4.19 | 0.08 | 0.27 | 0.16 | 5.59 | 46 | 36 | 18 | Loam | 0.09* |

Figure SI3. Map of sites location through the Republic of Ireland. The map was created in ArcGIS v.10.2 (ESRI Inc., Redwoods, USA) and used to create the studied points map representation.(https://www.arcgis.com)