**Supplementary material.**

Soil particle size, spectral colour, pH, soil C, soil N, Loss on ignition and elemental data.

Table S1 Soil particle size, means and standard deviations, n=5.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | **Sand** |  |
|  |  | **Clay** |  | **Silt** |  | **Total** |  | **VF** |  | **MF** |  | **M** |  | **C** |  |
| **Milton Keynes** | **Grass** | **5.16** | 0.3 | **64.3** | 1.0 | **30.45** | 1.0 | **7.73** | 0.6 | **8.49** | 0.9 | **11.2** | 1.7 | **2.97** | 1.3 |
|  | **Flower****Bed** | **5.85** | 0.5 | **64.0** | 2.7 | **30.10** | 3.1 | **8.15** | 0.4 | **8.52** | 0.6 | **11.8** | 1.8 | **1.63** | 0.4 |
|  | **Wood** | **4.97** | 0.3 | **70.3** | 1.2 | **24.68** | 1.3 | **7.38** | 0.2 | **8.15** | 0.4 | **8.40** | 0.8 | **0.75** | 0.2 |
| **Aberdeen** | **Grass** | **1.90** | 0.3 | **39.7** | 2.3 | **58.36** | 2.5 | **9.02** | 0.7 | **13.0** | 0.4 | **24.2** | 2.6 | **12.0** | 1.3 |
|  | **Flower****Bed** | **3.48** | 0.3 | **47.7** | 1.8 | **48.82** | 1.8 | **7.58** | 0.2 | **10.2** | 0.5 | **20.0** | 1.6 | **10.9** | 1.8 |
|  | **Wood** | **1.29** | 0.2 | **43.5** | 2.5 | **55.12** | 2.6 | **11.7** | 0.9 | **13.0** | 0.8 | **16.5** | 0.1 | **13.8** | 1.9 |
|  | **Gard** | **4.48** | 0.4 | **49.1** | 4.6 | **46.40** | 4.7 | **7.91** | 0.6 | **10.1** | 0.5 | **16.4** | 1.7 | **11.9** | 4.2 |
|  | **Scrub** | **2.52** | 0.3 | **47.5** | 5.7 | **49.94** | 5.9 | **8.93** | 1.0 | **12.1** | 0.6 | **22.1** | 5.7 | **6.74** | 1.6 |
|  | **RSL** | **1.95** | 0.3 | **25.8** | 2.9 | **72.17** | 3.1 | **6.83** | 0.7 | **12.5** | 1.2 | **30.9** | 2.6 | **21.7** | 3.4 |

Table S2 Soil spectral colour, mean and standard deviation, n=5.

|  |  |  |  |
| --- | --- | --- | --- |
| **City** |  | Soil Spectal Colour | Soil Munsell Colour  |
|  | **Land use** | **L** | **a\*** | **b\*** |  |
| **Milton Keynes** | **Grass** | **44.5** | 1.4 | **5.4** | 0.3 | **17.6** | 0.9 |  |
|  | **Flower Bed** | **43.5** | 1.5 | **4.4** | 0.2 | **15.5** | 0.8 |  |
|  | **Wood** | **45.1** | 1.5 | **4.8** | 0.1 | **16.1** | 0.6 |  |
| **Aberdeen** | **Grass** | **39.1** | 1.7 | **4.3** | 0.3 | **12.5** | 1.0 |  |
|  | **Flower Bed** | **39.8** | 1.7 | **4.9** | 0.3 | **14.1** | 1.0 |  |
|  | **Wood** | **28.0** | 1.8 | **4.8** | 0.4 | **10.0** | 0.9 |  |
|  | **Gard** | **40.6** | 2.2 | **4.9** | 0.6 | **14.4** | 1.5 |  |
|  | **Scrub** | **39.3** | 2.0 | **4.6** | 0.2 | **12.9** | 0.6 |  |
|  | **RSL** | **43.9** | 2.5 | **3.8** | 0.4 | **13.0** | 0.3 |  |

Table S3 Soil pH, mean and standard deviation, n=5.

|  |  |  |
| --- | --- | --- |
| **City** |  | **Soil pH** |
|  | **Land use** | **H2O** | **CaCl2** |
| **Milton Keynes** | **Grass** | **6.42** | 0.14 | **6.14** | 0.21 |
|  | **Flower Bed** | **6.95** | 0.14 | **6.78** | 0.17 |
|  | **Wood** | **5.57** | 0.11 | **5.23** | 0.12 |
| **Aberdeen** | **Grass** | **5.28** | 0.27 | **4.73** | 0.34 |
|  | **Flower****Bed** | **5.57** | 0.15 | **4.83** | 0.17 |
|  | **Wood** | **4.21** | 0.14 | **3.55** | 0.15 |
|  | **Gard** | **5.93** | 0.18 | **5.42** | 0.21 |
|  | **Scrub** | **5.53** | 0.21 | **5.06** | 0.31 |
|  | **RSL** | **6.96** | 0.23 | **6.52** | 0.22 |

Table S4 Soil C and N and Loss on ignition, mean and standard deviation, n=5.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **City** | **Land use** | **C** | **N** | **C/N** | **LOI** |
| **Milton Keynes** | **Grass** | **4.44** | 0.41 | **0.42** | 0.04 | **10.52** | 0.13 | **12.22** | 1.27 |
|  | **Flower Bed** | **5.11** | 0.45 | **0.42** | 0.04 | **12.27** | 0.28 | **13.09** | 0.85 |
|  | **Wood** | **7.24** | 0.64 | **0.58** | 0.04 | **12.46** | 0.28 | **16.85** | 1.21 |
| **Aberdeen** | **Grass** | **7.68** | 2.12 | **0.55** | 0.13 | **13.60** | 0.67 | **13.48** | 3.31 |
|  | **Flower Bed** | **6.36** | 0.76 | **0.40** | 0.06 | **16.20** | 1.06 | **10.03** | 0.94 |
|  | **Wood** | **29.49** | 4.58 | **1.53** | 0.21 | **19.10** | 1.08 | **50.96** | 10.65 |
|  | **Gard** | **6.54** | 1.05 | **0.40** | 0.04 | **16.28** | 1.06 | **9.82** | 0.92 |
|  | **Scrub** | **6.70** | 1.01 | **0.45** | 0.07 | **15.20** | 1.16 | **12.60** | 1.56 |
|  | **RSL** | **2.17** | 0.35 | **0.08** | 0.02 | **34.25** | 9.38 | **3.65** | 0.57 |

Table S5 Soil macro nutrients, means and standard deviation, n=5.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **City** | **Land use** | **Ca** | **K** | **Mg** | **P** |
| **Milton Keynes** | **Grass** | **4142.8** | 619.6 | **227.3** | 51.3 | **204.6** | 31.6 | **33.9** | 17.7 |
|  | **Flower Bed** | **10801.5** | 2337.6 | **426.3** | 25.5 | **474.3** | 111.4 | **294.1** | 122.0 |
|  | **Wood** | **4007.6** | 303.2 | **283.3** | 42.1 | **273.9** | 28.7 | **9.7** | 1.3 |
| **Aberdeen** | **Grass** | **937.5** | 254.7 | **227.8** | 18.1 | **126.6** | 33.2 | **48.6** | 12.7 |
|  | **Flower Bed** | **1311.4** | 171.5 | **375.9** | 48.3 | **182.0** | 14.5 | **112.3** | 17.3 |
|  | **Wood** | **1438.8** | 281.6 | **381.5** | 70.4 | **447.4** | 96.2 | **68.2** | 20.6 |
|  | **Gard** | **2773.9** | 662.6 | **188.8** | 32.0 | **149.2** | 9.1 | **247.9** | 104.4 |
|  | **Scrub** | **1693.7** | 478.8 | **227.7** | 37.6 | **153.6** | 32.3 | **43.6** | 8.5 |
|  | **RSL** | **2058.0** | 733.0 | **99.8** | 12.9 | **133.2** | 48.2 | **65.6** | 20.7 |

Table S6 Soil macro nutrients, means and standard deviation, n=5.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **City** | **Land use** | **Ba** | **Cd**  | **Co** | **Cr**  | **Cu**  |
| **Milton Keynes** | **Grass** | **112.8** | 9.7 | **0.31** | 0.04 | **9.77** | 1.02 | **46.2** | 5.3 | **16.4** | 0.8 |
|  | **Flower Bed** | **111.9** | 24.1 | **0.41** | 0.02 | **10.47** | 0.81 | **46.3** | 3.3 | **22.4** | 1.9 |
|  | **Wood** | **117.5** | 3.9 | **0.28** | 0.02 | **8.38** | 0.65 | **48.1** | 1.6 | **16.0** | 0.9 |
| **Aberdeen** | **Grass** | **126.4** | 32.1 | **0.17** | 0.03 | **5.83** | 0.64 | **27.8** | 1.1 | **21.2** | 4.0 |
|  | **Flower Bed** | **118.6** | 9.2 | **0.18** | 0.02 | **6.65** | 1.09 | **29.3** | 3.4 | **26.1** | 1.4 |
|  | **Wood** | **1152.7** | 1200.1 | **0.38** | 0.15 | **4.13** | 0.85 | **34.7** | 11.6 | **29.8** | 12.5 |
|  | **Gard** | **227.3** | 131.9 | **0.27** | 0.07 | **6.77** | 0.98 | **28.2** | 1.7 | **24.1** | 5.0 |
|  | **Scrub** | **275.4** | 171.3 | **0.18** | 0.03 | **5.42** | 0.64 | **30.6** | 3.9 | **23.1** | 6.0 |
|  | **RSL** | **98.9** | 13.7 | **0.05** | 0.02 | **5.06** | 0.46 | **36.8** | 7.0 | **14.5** | 2.1 |

Table S7 Soil macro nutrients, means and standard deviation, n=5.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **City** | **Land use** | **Fe** | **Mn** | **Mo** | **Ni**  |
| **Milton Keynes** | **Grass** | **32474** | 2157 | **336.0** | 12.9 | **0.48** | 0.06 | **28.7** | 2.7 |
|  | **Flower Bed** | **33637** | 1527 | **448.5** | 33.3 | **0.77** | 0.09 | **32.7** | 3.8 |
|  | **Wood** | **30156** | 922 | **275.8** | 45.4 | **0.34** | 0.04 | **27.4** | 2.2 |
| **Aberdeen** | **Grass** | **16496** | 1641 | **262.6** | 51.6 | **0.57** | 0.24 | **12.8** | 0.7 |
|  | **Flower****Bed** | **20590** | 1965 | **352.3** | 68.0 | **0.69** | 0.17 | **14.5** | 2.2 |
|  | **Wood** | **13064** | 2339 | **130.7** | 34.7 | **1.69** | 1.01 | **16.8** | 4.2 |
|  | **Gard** | **19298** | 1004 | **262.8** | 32.3 | **0.67** | 0.24 | **13.3** | 1.6 |
|  | **Scrub** | **17124** | 1075 | **269.3** | 36.8 | **0.32** | 0.19 | **13.3** | 1.6 |
|  | **RSL** | **15850** | 772 | **220.3** | 17.7 | **0.11** | 0.02 | **13.3** | 2.7 |

Table S8 Soil macro nutrients, means and standard deviation, n=5.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **City** | **Land use** | **Pb**  | **Sr** | **Ti** | **Zn**  |
| **Milton Keynes** | **Grass** | **30.8** | 5.2 | **41.0** | 6.9 | **157.0** | 25.8 | **87.5** | 9.1 |
|  | **Flower Bed** | **26.5** | 1.6 | **55.6** | 6.3 | **160.9** | 8.4 | **100.4** | 4.9 |
|  | **Wood** | **51.8** | 4.5 | **40.8** | 2.4 | **99.8** | 9.2 | **101.5** | 3.4 |
| **Aberdeen** | **Grass** | **73.1** | 27.5 | **20.2** | 2.2 | **594.7** | 99.5 | **55.5** | 9.1 |
|  | **Flower****Bed** | **89.8** | 23.4 | **23.3** | 4.1 | **780.4** | 109.5 | **72.5** | 6.7 |
|  | **Wood** | **183.4** | 103.9 | **44.3** | 27.2 | **418.1** | 55.5 | **109.9** | 61.5 |
|  | **Gard** | **145.2** | 95.4 | **27.0** | 3.6 | **592.5** | 125.2 | **110.4** | 34.0 |
|  | **Scrub** | **62.8** | 19.3 | **28.1** | 4.1 | **628.0** | 72.4 | **78.7** | 23.6 |
|  | **RSL** | **19.7** | 6.8 | **23.9** | 3.8 | **350.2** | 41.7 | **50.4** | 6.5 |