

Supplementary material 3 Full results of the Linear Mixed Model

Model summary

```
## Linear mixed-effects model fit by REML
## Data: df1
##      AIC      BIC    logLik
## 215.4278 247.8336 -95.7139
##
## Random effects:
## Formula: ~1 | id
##      (Intercept)  Residual
## StdDev:    0.1860747 0.4221321
##
## Fixed effects: Value ~ Group + Reference + habitat + OM + Pb + Mg
##
##              Value Std.Error DF   t-value p-value
## (Intercept)    2.3191801 0.20722247 97  11.191740  0.0000
## Groupfungi      0.5854516 0.09439161 97   6.202369  0.0000
## Groupplant      0.8862939 0.09439161 97   9.389541  0.0000
## Referencemeadow -1.0854861 0.07707043 97 -14.084340  0.0000
## habitatpark     -0.3286527 0.25990164 13  -1.264527  0.2282
## habitatresidential -0.7685465 0.22605390 13  -3.399837  0.0047
## habitatroadside -0.2081140 0.19616563 13  -1.060909  0.3080
## OM              -0.0185422 0.03038123 13  -0.610318  0.5522
## Pb              0.0007328 0.00102739 13   0.713296  0.4883
## Mg              0.0003032 0.00017072 13   1.776046  0.0991
## Correlation:
##              (Intr) Grpfng Grppln Rfrncm hbttpr hbttrs hbtttrd OM
## Groupfungi    -0.228
## Groupplant    -0.228  0.500
## Referencemeadow -0.186  0.000  0.000
## habitatpark   -0.400  0.000  0.000  0.000
## habitatresidential -0.315  0.000  0.000  0.000  0.748
## habitatroadside -0.432  0.000  0.000  0.000  0.697  0.688
## OM            -0.091  0.000  0.000  0.000 -0.722 -0.644 -0.505
## Pb            -0.511  0.000  0.000  0.000  0.631  0.540  0.494 -0.512
## Mg            -0.570  0.000  0.000  0.000  0.257  0.020  0.113 -0.133
##              Pb
## Groupfungi
## Groupplant
## Referencemeadow
## habitatpark
## habitatresidential
## habitatroadside
## OM
## Pb
## Mg              0.330
##
```

```
## Standardized Within-Group Residuals:
##      Min      Q1      Med      Q3      Max
## -1.86073862 -0.68614071 -0.07693604  0.55511957  2.71868760
##
## Number of Observations: 120
## Number of Groups: 20
```

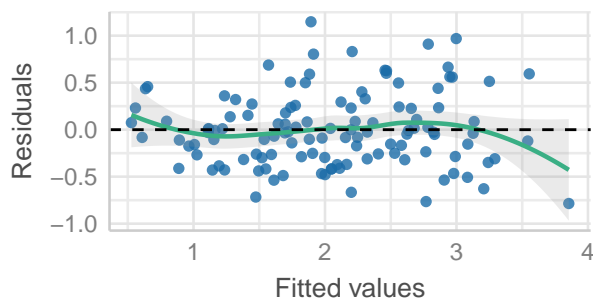
ANOVA table

##	numDF	denDF	F-value	p-value
## (Intercept)	1	97	1309.9838	<.0001
## Group	2	97	45.5970	<.0001
## Reference	1	97	198.3686	<.0001
## habitat	3	13	9.5723	0.0013
## OM	1	13	0.1277	0.7266
## Pb	1	13	0.0181	0.8950
## Mg	1	13	3.1543	0.0991

Diagnostic plots

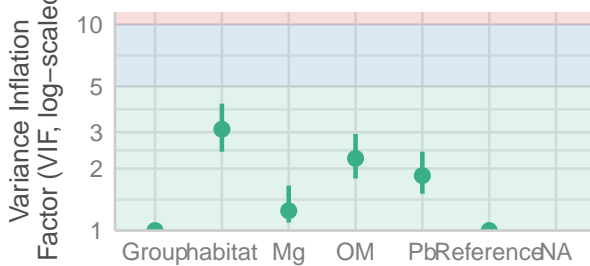
Linearity

Reference line should be flat and horizontal



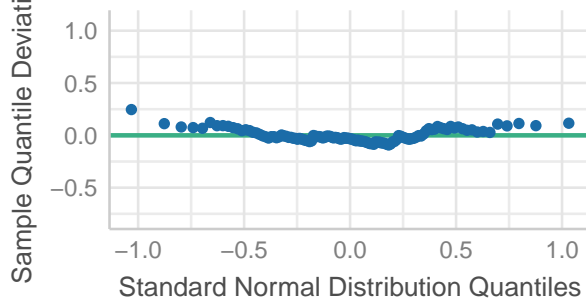
Collinearity

High collinearity (VIF) may inflate parameter uncertainty



Normality of Residuals

Points should fall along the line



Normality of Residuals

Distribution should be close to the normal curve

