**Supplementary Information**

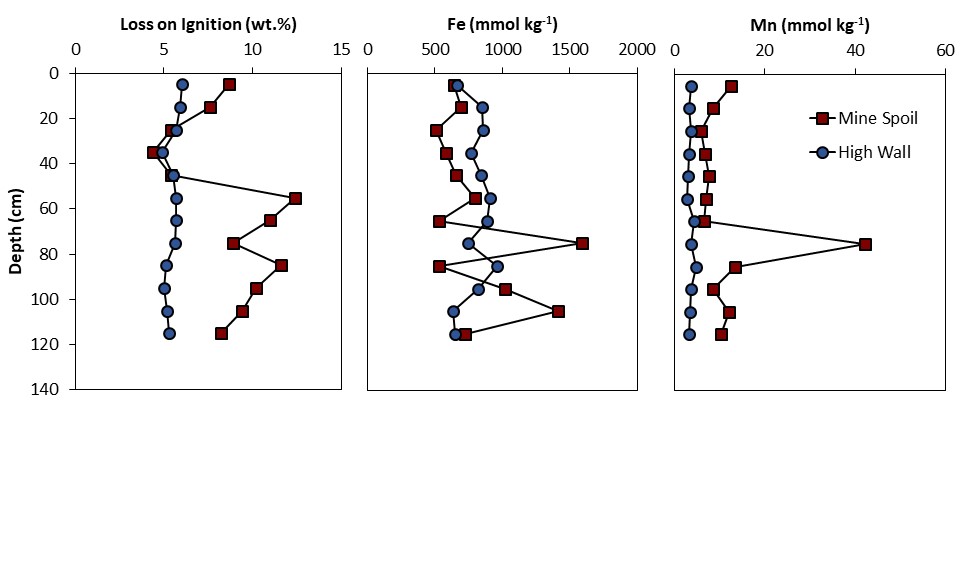


Figure S1. Loss-on-ignition at 550 °C and total soil concentrations of Fe and Mn are shown for soil cores obtained from coal mine spoil (red squares) and undisturbed high wall (blue circles) sites in the HR25 catchment within 0.5 mi of the BY1 site described in this study. Similar to core HR25-BY1, the soil core obtained from mine spoil shows subsurface accumulation of organic matter, Fe, and Mn that is not observed in the undisturbed high wall site.