

Responses to reviewer comments- accepted subject to technical corrections:

We sincerely thank both the reviewer and the associate editor for their time and effort in re-evaluating the manuscript, and we are delighted that it has been accepted following minor revisions. In response to these suggestions, we have made the following changes to the manuscript. Line numbers correspond to those in the uploaded complete manuscript file:

Reviewer's comment: *Line 928: 'botanical changes' should be replaced by 'local ecosystem changes' or something similar. Drainage may have impacted the entire peatland ecosystem.*

Author's response: We agree with the suggestion and in response have changed the section of the text; it now reads (L861): "...drainage, may have also played a role in driving local environmental changes at the site"

Reviewer's comment: *Lines 662-665: The sentence does not make sense. Rephrase it, please.*

Author's response: We thank the reviewer for pointing out that these sentences were not well-joined and in their current form did not make sense. We have modified the text to clarify our meaning (L642 – 647): "Most contemporary research on peatland recovery has been conducted on historically drained, mined, or agricultural sites (Roderfeld, 1993; Graf *et al.*, 2008; Wagner *et al.*, 2008; Paal *et al.*, 2010). In contrast to these studies, an advantage of our palaeoecological approach is that it provides a unique pre-disturbance context for understanding the effects of atmospheric pollution upon this site".

Additional changes not requested: I noticed some of the numbers from an x-axis on Figure 10 (CONISS plot on Testate amoeba diagram) were removed during editing, these have been returned.