

	Line	Comment	Address
1		The TDR wording can become excessive for scientists or the public unfamiliar with this approach, so please also keep in mind the need to communicate clearly and concisely with simpler and non-repetitive language, depending on the audience.	L627 – Thank you for this suggestion. Where possible excess language (E.g. Mode 1 knowledge production replaced with Western scientific knowledge production in line XX) has been omitted In the section discussing the themes present in the transdisciplinary research literature (L56+), the TDR acronym has been removed from the bullet points to reduce repetition
2	593-4,626	Generalisation of Western Science as narrow	Line 626 modified to reflect that this is often, but not always the case. Line 593 in its original form uses the terminology ‘usually’ and ‘often’ indicating that there are other ways that Western Science can operate
3		Expansion of sampling for the future of this study, point to the future	This has been addressed at the end of Section 4 (L517).
4		One field of study used – could more be found or study expanded to other locations	Addressed with point 3 (L 517). More sites within the bay were looked at in less detail, and while some inference may be drawn from this, to prevent what is already a long ms becoming even longer these findings are not discussed.
5		Reference/control soil sampling – uncultivated/natural soil with similar comparable geomorphic and pedogenic settings, if these are available. This would help to test the anthropogenic soil change and phytolith and isotope signatures inferred by the authors. The lack of reference soils outside of the field systems for comparison raises questions about the validity of some of the current interpretations, and renders them more speculative. Also, scientific-based comparisons among raised mound fields of different age or settings, or different kinds of Māori traditional field systems would add information that would benefit the scientific scope	This is an interesting thought and an approach that I have come across in the local literature. In relation to some of the later comments (greywacke and soil temperature, soil fertility), I can see that this would be a useful avenue for further research.

		and interpretations overall. A more quantitative use of control natural soils, and expanded sample design for fields and their soils, would support the need for more empirical studies rightly called for by the authors	
6		While the current findings are interesting and compelling, they also should be considered more preliminary in my view because of the minimal sampling and lack of control natural areas for comparison.	As for point 3 - in L 517
7		The phytolith data about sweet potato (kūmara) is convincing, but it seems like some of the conclusions are less certain than currently conveyed, especially those regarding the soils and their management (e.g., L529-30, 538-9, 553-4, 658-9). I think some of the conclusions should be less bold and more toned down, and future work needed to test initial findings based on few samples should be acknowledged more.	These have been addressed, acknowledging the opportunity to look into this further
8		Addition of a table of Māori terms	This has been added to the end of the manuscript
9		State more explicitly in the Methodology section (e.g., first paragraph of Section 3.2 starting with L275, and maybe around L306 and beginning of Findings L314) that you were sampling an inferred traditional earthen raised mound field system. A little more than just stating features as “mounds” or “earth rows” would be clearer to readers.	Thank you for this suggestion, this change has been made.
10		Questions about Tables 1 and 2, and Figure 5, and need to give more information: Soil morphology and horizon designations (some symbols and terms in the New Zealand system may not be familiar to all readers): color (all moist colors? What are the 2nd colors given in	Thank you for highlighting this <ul style="list-style-type: none"> <li>- Morphology and horizon designation definitions have been provided</li> <li>- Moist colour has been defined in the column label</li> <li>- Colour in parentheses identified as mottle colour</li> </ul>

		<p>parentheses?); texture (explain the abbreviations, especially “Z”); structure (is polyhedral same as granular or ?); Size (state in column label or caption that this is coarse fragment size; does % abundance mean volume %?); horizon designations in Tables and Fig. 5: does A/B mean same as AB or discrete A and B parts within the horizon?); meaning of (f) and (g) in parentheses for Bw? In Tables, add a column with the specific depth intervals for each horizon.</p>	<ul style="list-style-type: none"> <li>- Texture abbreviations are provided in the table caption</li> <li>- Structure definitions provided</li> <li>- Coarse fragment size, % abundance is clarified in the table</li> <li>- Depth interval column added</li> </ul>
11		<p>For Figure 5, state the scale units (e.g., numbers are 10 cm intervals). Also, I am not seeing the arrows for “beach gravel additions” stated in the Figure 5 caption. You indicate an “Ap2” in the Figure 5b caption, but that’s not shown in the photo – did you mean “2Ap”?</p>	<ul style="list-style-type: none"> <li>- Scale unit added (10 cm intervals)</li> <li>- Arrows added</li> <li>- Ap2 in caption corrected to 2Ap</li> </ul>
12		<p>Regarding the landslide: is this a natural landslide or is there possible anthropogenic influence from the agriculture – e.g., could the field construction and use have induced the landslide? Is this landslide an isolated case, or are these landslides common. Need more context here, and this also shows the need to sample more fields.</p>	<p>Further discussion is provided. These landslides are common, particularly after storm events, where the poorly structured, unstable Pallic Soils slip. This occurs in both areas with dense vegetation coverage, as well as open areas that have been cleared of their original forest cover</p>
13		<p>Again, all of these analyses (soil chemistry, stable isotopes, charcoal/ash, gravels) and interpretations regarding soil modification would benefit from comparison with some kind of baseline data from control (nonagricultural soils that match the agricultural soils in natural pedogenesis and ecological and geomorphic setting), if they are available.</p>	<p>See response to comment 5</p>
14		<p>With Mn for example, you indicate increases in inferred modified</p>	<p>The figure now shows pit 1 also. Pit 2 shows the differences particularly clearly due to the burying slowing the</p>

		<p>horizons but just for Pit 2 (what about Pit 1?).</p> <p>Incorporating more fields for soils analyses, and comparison with surface horizons etc. in natural soils, could help better characterize Mn distribution, variability, and test whether Mn is diagnostic of amendment inputs.</p>	<p>original modified horizon's development, while development has continued in the modified horizons in pit 1, as reflected in Figure 5.</p> <p>As you state, a more intensive study across the area would provide further understanding and characterisation.</p>
15		<p>The greywacke gravel input inference in relation to IK seems valid, but greater sample size and comparison with similar natural horizons in control soils could allow you to be more definitive and certain that this gravel could only be from deliberate input for management (e.g., are you certain that the geologic occurrence and distribution of greywacke isn't more complex?).</p>	<p>It is not possible for the greywacke to have been emplaced in this location by any natural means. There are no streams/creeks in the immediate vicinity of the field that could have carried them here, even in flood events, with the parent material that would have been transported if they were present being basalt anyway. The aspect of the slope and its elevation above sea level would prohibit this from being a tsunami deposit, with other tsunami indicators being absent.</p> <p>Looking at this field specifically, augering occurred across the slope, both on and between rows, with an absence of gravels present between the earthen rows. This detail has been added at line 338</p>
16		<p>Monitoring natural control soils along with the agricultural soils could also allow you to test and quantify drainage and soil warming benefits of gravel inputs.</p>	<p>Monitoring temperature of natural soils alongside modified soils would be an interesting study to undertake at multiple different sites (across Aotearoa New Zealand) where this type of management practice has been applied. This is something to look to for future research.</p>
17		<p>L404 – explain a bit more about manure. Are you saying that use of manure is totally prohibited by Māori?</p>	<p>Traditionally, manures were not used to prevent illness. Some accidental/incidental incorporation of guano may have occurred, but would not have been deliberately added. It is likely that the other site nearby (Morris) the 'natural' fertility of these soils by the penguins was utilised, but further additions as seen</p>

			<p>in other cultures (as discussed in the suggested references), would not have occurred.</p> <p>This section has been ammended for clarity</p>
18		L621: define FLN in this ms. (Food-Landscape Network)	Full version written
19		Why isn't "ethnopedology" mentioned in the text (only indirectly in one reference). Topics covered in this ms. seem closely related to the subdiscipline of ethnopedology, and seems like it should be mentioned if not highlighted	This is a good point, thank you for highlighting it. This has been included in lines 107 and 187
20		Suggested references	<p>Thank you for these suggestions, we have included some of these.</p> <p>While the others focused on different indicators than what we have looked at, they would be useful in a more comprehensive, and wide spread study, as discussed previously.</p>