

## ***Interactive comment on “Physical soil quality indicators for monitoring British soils” by Ron Corstanje et al.***

**Anonymous Referee #1**

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Solid Earth Discuss., doi:10.5194/se-2016-153, 2016 Manuscript under review for journal Solid Earth: PHYSICAL SOIL QUALITY INDICATORS FOR MONITORING BRITISH SOILS

The manuscript deals with the selection of physical soil indicators suitable for monitoring activities in England. The subject is topical and interesting also beyond the UK, but it has been not treated properly. Main drawbacks are: i) the section dealing with soil sealing is somehow and attachment to that dealing with soil qualities. It should have been treated in a separate paper, possibly. On the other hand, the first part, related to soil qualities, could be expanded ii) the text is difficult to follow because of a) too many relevant supplementary materials, b) literature difficult to find (a major methodological issue is addressed to Rickson et al.,2012), c) same concepts expressed in different ways iii) the authors probably assume that the manuscript focuses on soil qualities re-

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lated to the topsoil of agricultural lands, however, soil depth is also mentioned. On the other hand, physical properties of the underlying soil horizons are not mentioned. iv) I am not sure that block sized 5 or 10 km<sup>2</sup> approximate management units of field size, this point should be clarified v) Results should be separated from discussion

Other pitfalls are: 1. pag 2: In the introduction, the role of soil as a cultural heritage has not been treated. Actually, although soil is often considered as container of archaeological findings, its other not monetary values, e.g., among others, convener of information about events occurred during historical and geological times, should be much more acknowledged. Nevertheless, there are several publications on this issue, and even databases, which could be mentioned. 2. pag 3: indicators of soil quality are also required to assess the effectiveness of restoration strategies, some recent papers on solid earth well illustrated this issue 3. pag 4: the relationship between application of sensor technology and indicators could be better treated, since it is on cutting edge and treated by several authors 4. pages 8 and 9: calling same things with different names, i.e., Category and Criteria, functions and factors, creates some confusion in the reader 5. lines 219-238: this section should be expanded, providing for details and examples 6. line 252: what do you mean with power analysis? 7. line 313: in fig 3 it is very difficult to detect the stated differences in sample size. May be using one graph only? 8. table 3: specify Sv

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