Review of: "Effective use of Waste Materials: A Case Study of Utilization of Fly Ash in Flexible Pavement Structures"

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Potential competing interests: No potential competing interests to declare.

The title of the work is inconsistent with the content. The work is a bibliographical review and not a case study. In the chapter on fly ash properties, it is not clear what the origin of the ash is in order to talk about its respective composition.

1. Modify the abstract.
2. Remove the classes and properties of a fly ash powder heading and make one para.
3. Remove the heading/ application of fly ash. Write in paragraph only.
4. The caption of Fig. 1 is not visible.
5. What is the thickness of the surface, base, and subgrade layer?
6. Cementitious properties of fly ash are not compared with cement.
7. Please refer the manuscript below for your reference and cite in the book chapter.

https://doi.org/10.1007/s11665-021-05647-x

https://doi.org/10.1007/s11270-023-06143-9

https://doi.org/10.1007/978-3-031-20443-2_11

https://doi.org/10.1007/s12633-022-02116-5

https://doi.org/10.1016/j.matpr.2022.08.321

https://doi.org/10.33263/BRIAC116.1450614519

1. What are the key mechanical properties (e.g., strength, stiffness, fatigue resistance) of the fly ash-based pavement structures compared to traditional pavement materials? How do these properties contribute to the overall performance and durability of the pavement?
2. In what ways does the utilization of fly ash impact the environmental sustainability of pavement structures?
3. Can you discuss any challenges or limitations encountered during the implementation of fly ash in pavement construction?
4. What are the findings regarding the long-term performance and durability of fly ash-based pavement structures?
5. In the following paragraph: Wahab et al. [38] investigated the effects of chemically treated fly ash in asphalt concrete……The authors didn't give any information about the chemically treated fly ash, what are the

chemicals used, and the treatment procedure.

6. Also, characterization of raw materials and fly ash-based flexible pavement structures is required for better understanding of readers.