



Investigation of the utilisation of Reclaimed Asphalt Pavement (RAP) or other recycled materials in the context of the sustainability of flexible pavements

Scientific Responsible
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The present PhD dissertation refers to the investigation of the properties of the Reclaimed Asphalt Pavement (RAP) as an unbound material for the construction of base or sub-base layers of road pavements, aiming to the full or partial replacement of Virgin Aggregates (VA). In this context, after a thorough literature review about previous similar studies, laboratory-based procedures will be carried out and pure RAP and RAP-VA blends, as well as upon pure VA blends, as reference samples for the evaluation of the laboratory results will be tested. Most importantly, new constitutive models will be developed to simulate the particular mechanical behavior of the materials under study. As a final task, a Life Cycle Assessment (LCA) study will be carried out to evaluate the environmental footprint of sustainability perspectives of the studied material. It is assumed that important knowledge will be gained to define the future where materials with a high content of RAP can be reused in road infrastructure.