

Deflection Measurements on the National Road Network of Norway using RAPTOR

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ABSTRACT: During the years 2021-2023, the Norwegian Public Road Administration (NPRA) conducted TSDD measurements on the whole national road network. A short presentation of the project, results, and ideas on how to utilize the data in pavement maintenance planning will be given.

The equipment used is “RAPTOR” from Ramböll with an additional GPR mounted to measure total asphalt thicknesses. The raw data from RAPTOR is then used to model FWD-equivalent deflections. Deliveries and further calculations of pavement strength parameters are done according to Norwegian standards for FWD measurements. Therefore the work has also included several comparison measurements between RAPTOR and FWD on different structures and at different temperatures. This is to get a better understanding of the results from Raptor knowing that the two equipments have different measuring principles. This is crucial when using the results from RAPTOR in maintenance planning.