

Hertfordshire Skid Resistance Strategy

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Hertfordshire County Council (HCC) is recognised in the UK as an innovative highway authority that seeks to continually improve the manner in which it manages the highway network and appropriately prioritises spending of maintenance budgets. The paper describes the authors' involvement in developing a Skid Resistance Strategy (the Strategy) for HCC and using spatial analysis to apply the Strategy criteria to the Hertfordshire highway network. The Strategy was developed from skid resistance best practice in the UK, New Zealand, and Australia. While the Strategy includes detailed technical content, it is written to be accessible for all users (including policymakers) within the Council. Applying the Strategy to the network involved developing a set of automated spatial models in Geographic Information Systems (GIS) to leverage the relationships between spatial and non-spatial inputs through various geometrical, spatial, and tabulated relationships, queries, criteria, and constraints. Data limitations required additional steps to be taken in the GIS models to account for and/or mitigate the limitations. Developing an appropriate order of operations required a robust GIS analysis approach, collaboration with engineers, and a sound understanding of relevant GIS tools. The outputs demonstrate that even with data limitations a robust Skid Resistance Strategy can be applied to a local road network.

The primary objective of the paper is to share with road controlling authorities the approach that can be taken for developing and applying a skid resistance strategy for a local road network. The paper describes preparation of the Hertfordshire (UK) Skid Resistance Strategy and the use of automated spatial models to identify intervention levels for various site categories. It also describes how the approach better equips the Council to identify and prioritise those sections of highway requiring skid resistance maintenance in a manner that optimises spending of their maintenance budget.