This study applies micro-level transport survey data to assess the significance of Bikeability variables on the probability of cycling in trips to or from residential and workplace locations. The data and analysis were prepared to include measures at different spatial scales, including measures of density/accessibility and infrastructure provision for network distances from up to 1 km to up to 5 km from the origin of a trip, as well as the regional position of the city. The probability of cycling is affected by urban structure variables at the local, urban and regional scale. The local scale, which includes the positive effects from population density and cycling infrastructures, is the most important in influencing cycling, but there are substantial additional contributions from access to retail and train stations within a range of 3–4 km, as well as from the relative size of the city within the region. The effect of the regional scale most likely reflects the reliance upon motorized modes to connect to distant important nodes. Factors at the local, urban and regional scales may pull cycling in opposite directions and thus all need to be considered to adequately assess the possibilities for promoting cycling in an urban area or neighbourhood.