EFFECTS OF RECLAIMED ASPHALT AND WARM MIX ASPHALT ON THE AVAILABILITY OF THE ROAD NETWORK

J.C. Nicholls & M. Wayman
TRL Limited, Wokingham, United Kingdom

K. Mollenhauer
Universität Kassel, Kassel, Germany

A. Varveri
Technische Universität Delft, Delft, Netherlands

C. McNally & A. Tabakovic
University College Dublin, Dublin, Ireland

S. King & S. Cassidy
Lagan Asphalt, Dublin, Ireland

ABSTRACT
This report reviews the EARN project, which was undertaken under CEDR Call2012 in order to investigate the effects of using reclaimed asphalt (RA) and/or lower temperature asphalt on the road network. The work consisted of a review of existing data on service lifetime and availability of road materials and structures, a site trial to evaluate varying proportions of RA, experimental evaluation of moisture damage and ageing in asphalt mixtures and development of an impact assessment model. The site trial involved four different mixtures containing varying proportions of RA and warm mix additive and was monitored for international roughness index, mean profile depth, corrected SCRIM Coefficient, indirect stiffness modulus, water sensitivity and indirect tensile strength, the latter with and without artificial ageing. The monitoring was extended to 40 months with two extensions to the project, when monitoring of the binder mechanical and other properties were also made.