

PROJECT PROFILE

Title	The use of reclaimed asphalt in asphalt mixtures
Contractor	Roadstone Wood Ltd
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TII Mentor	Geraldine Walsh
Start date	Mar-11
End date	Jun-11
Status	Complete
Type of project	TII Research Project
Project reference	TII04250/RFPRAP

Description	<p>The objective of this project was to review national and international best practice, research papers and initiatives in the use of reclaimed asphalt in hot mix Asphalt materials. A literature review was performed on current reclaimed asphalt additions and technologies. A focus was placed on the effects on performance of different levels of reclaimed asphalt additions to asphalt mixtures. Methods that have been used to evaluate these asphalt mixtures were reviewed. Current practices and specifications in other countries were also examined. The need for additional research into reclaimed asphalt additions to TII specified base and binder course mixtures was evaluated.</p> <p>The TII 900 series allowed the addition of reclaimed asphalt subject to additional testing requirements. The objective of this research was to establish maximum limits of reclaimed asphalt addition that can be specified without compromising material quality and performance and without the need for additional testing. Reclaimed asphalt additions of up to 25% are now common in Europe and America without additional testing requirements being applied.</p>	
Objectives	<p>The main focus was on levels of reclaimed asphalt addition, to base and binder course materials, that do not adversely affect material performance. This information was then used to determine any additional research work that may be needed for Irish applications. A level of testing that can be incorporated into the TII specification can then be selected based on the information gathered. Asphalt is a 100% recyclable material. Major advances have been made in the United States and across Europe in the addition of reclaimed asphalt to hot mix materials. This project researched the effects of adding reclaimed asphalt to base and binder course materials.</p>	
Benefits	<p>The benefits of this research include increased use of recycled aggregates in Ireland, reduction in CO₂ emissions in asphalt production, reduction in the use of virgin aggregates and bitumen, and reduction in material to landfill.</p>	
Outputs	<p>Requirements in the TII Specification can be reviewed and revised to allow the use of determined percentage of reclaimed asphalt without the need for additional testing. This will be supported by targeted research work and production and laying trials.</p>	