

SWAMP

Storm Water prevention -Methods to Predict damage from the water stream in and near road pavements in lowland areas

a research project of the
cross-border funded joint research programme
"ENR SRO3 -Road Owners Getting to Grips with Climate Change"

1) Introduction

Road Owners Getting to Grips with Climate Change" is a trans-national joint research programme that was initiated by "ERA-NET ROAD – Coordination and Implementation of Road Research in Europe" (ENR), a Coordination Action in the 6th Framework Programme of the EC. The funding partners of this cross-border funded Joint Research Programme are the National Road Administrations (NRA) of Austria, Denmark, Finland, Germany, Ireland, Netherlands, Norway, Poland, Sweden and United Kingdom.

2) Project Description

The project deals with drainage and drainage systems on or near road network in lowland areas e.g. The Netherlands, Sweden, Denmark, Germany and UK. The result of the project is guidelines on two levels: primarily on the overall level with purpose of finding places on the existing network which should obtain high priority in order to get best use of limited financial resources. Secondly guidelines on a more detailed level when preliminary studies and decisions should be taken, and when necessary initiatives should be undertaken on the chosen places to avoid or limit consequences of flooding.

Two reports (Guidelines) are the result of the project and will be published on websites of the Danish Road Directorate (DRD, DRI) and Swedish National Road and Transport Research Institute (VTI) and the ENR website.

The results will be presented at conferences in Europe. The preliminary results from the project work will be prepared in papers for TRA 2010 in Brussels, Vejforum 2010 in Denmark and Transport forum 2011 in Linköping.

Besides this activity, articles will be prepared for international journals and in the partner's countries to disseminate to local road owners and on the ENR website.

3) Expected Results

Deliverables from the project

Part 1 Guidelines for development of a model for blue spot identification This part of the project gives the road owners a description and a guideline to collect relevant digital data from various suppliers of data and authorities. The guidelines are usable immediately for further work to design models. The result is not the end-product of a finished computer model to be installed.

Guidance points out the most important elements to identify blue spots for an existing drainage system (also for a planned road in the design phase). Results are based on knowledge and experiments in lowlands areas in Danish and Swedish Road Administrations. The results will be assessed for possible uses in similar areas in UK and Germany, etc.

Part 2 Guidelines for reducing vulnerability to flooding in local places

Support for road owners when inspecting the condition and maintenance of the drainage system, as well as proposals for improvements, extensions and renovation. Road owners will be able to check the condition and maintenance of the drainage system.

The guidelines have primarily focus on the physical resistances which hinder the water to flow away from road pavements and the near areas and to be stored in ditches, retention ponds, low areas, and running to the recipient.

Existing knowledge from European literature Road owners and others may benefit of the result of literature review of the subjects dealt with in the project.

Part 1 and 2 includes definitions of some used terms which are not commonly used.

4) Project Facts

Duration: 01 October 2008 – 31 May 2010

Budget: EUR 231.000,-

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