



LIFE Project Number  
**LIFE02 ENV/FIN/000329**

**PROGRESS REPORT No. 4**  
**Covering the project activities from 1.4.2004 to 30.9.2004**

Reporting Date  
**7.10.2004**

LIFE PROJECT NAME  
**Kukkia Circlet:**

**Environmentally friendly systems to renovate secondary roads**

Data Project

Project location	Finland / Pirkanmaa	
Project start date:	1.12.2001	
Project end date:	31.12.2004	Extension date: -
Total Project duration (in months)	37 months	Extension months: -
Total budget	1.253.630 €	
EC contribution:	626.815 €	
(%) of total costs	50 %	
(%) of eligible costs	50 %	

Data Beneficiary

Name Beneficiary	Finnish Road Enterprise / West Finland Area
Contact person	Ms Hannele Kulmala (since 1.3.2004)
Postal address	Åkerlundinkatu 5B, P.O.Box 382, FIN-33101 Tampere
Visit address	Åkerlundinkatu 5B, P.O.Box 382, FIN-33101 Tampere
Telephone	358 (204) 444250 + direct n° 358 (204) 444313
Fax:	358 (204) 444248
E-mail	<a href="mailto:hannele.kulmala@tieliikelaitos.fi">hannele.kulmala@tieliikelaitos.fi</a>
Website	<a href="http://www.tieliikelaitos.fi/5_4.asp">http://www.tieliikelaitos.fi/5_4.asp</a>

# List of Contents

<b>LIST OF CONTENTS</b>	<b>2</b>
<b>EXECUTIVE SUMMARY</b>	<b>3</b>
<b>1. PROJECT MANAGEMENT</b>	<b>4</b>
<b>1. TECHNICAL DEVELOPMENT</b>	<b>5</b>
TASKS 1: MATERIAL TESTS	5
TASKS 2: PILOT 2002 PLANNING AND TASK 3: PILOT 2002 CONSTRUCTION	5
TASKS 4: PILOT 2003 PLANNING	5
TASK 5: PILOT 2003 CONSTRUCTION	5
TASK 6: IMPACT ASSESSMENT	5
<b>3. PROBLEMS ENCOUNTERED</b>	<b>6</b>
<b>4. DISSEMINATION</b>	<b>6</b>
<b>5. ENVISIONED PROGRESS UP TO 31.12.2004 (NEXT 4+ MONTHS)</b>	<b>7</b>
TASK 6: IMPACT ASSESSMENT	7
TASK 7: DISSEMINATION	8
TASK 8: MANAGEMENT AND REPORTING	8
<b>6. FINANCIAL ISSUES</b>	<b>9</b>
<b>7. PLANNED PROGRESS UNTIL 31<sup>ST</sup> DECEMBER 2004</b>	<b>10</b>
<b>LIST OF ANNEXES</b>	<b>10</b>

## Executive Summary

The project, Kukkia Circler, has been progressing as planned for the most part. This fourth Progress Report will cover the period from 1<sup>st</sup> April 2004 to 30<sup>th</sup> September 2004, a period of follow-up of the pilots, dissemination and the preparing for the final reporting of the project.

During the reporting period,

- further follow-up tests have been conducted on Pilot 2002 and Pilot 2003 test sections (to complete the results given in the interim follow-up report of April 2004),
- the independent evaluators for the project have been chosen and have started their work in September 2004,
- the Steering Group has had two meetings (2<sup>nd</sup> April 2004 and 21<sup>st</sup> September 2004),
- a monitoring team of the LIFE unit, Ms I Madalinska and Mr M Oliver as well as Mr P Hänninen visited us in Luopioinen on 28<sup>th</sup> September,
- the project website has been updated,
- the video has been finalised (the final copies as dvd- presentation), and
- the dissemination event at the workshop has taken place in June 2004; and the report written and published at project's website.
- The Guide is a handwritten draft in Finnish, and will be finalised during the autumn 2004.

The project deliverables until the end of September 2004 are available at project **website** (see: [http://www.tieliikelaitos.fi/5\\_4.asp](http://www.tieliikelaitos.fi/5_4.asp)).

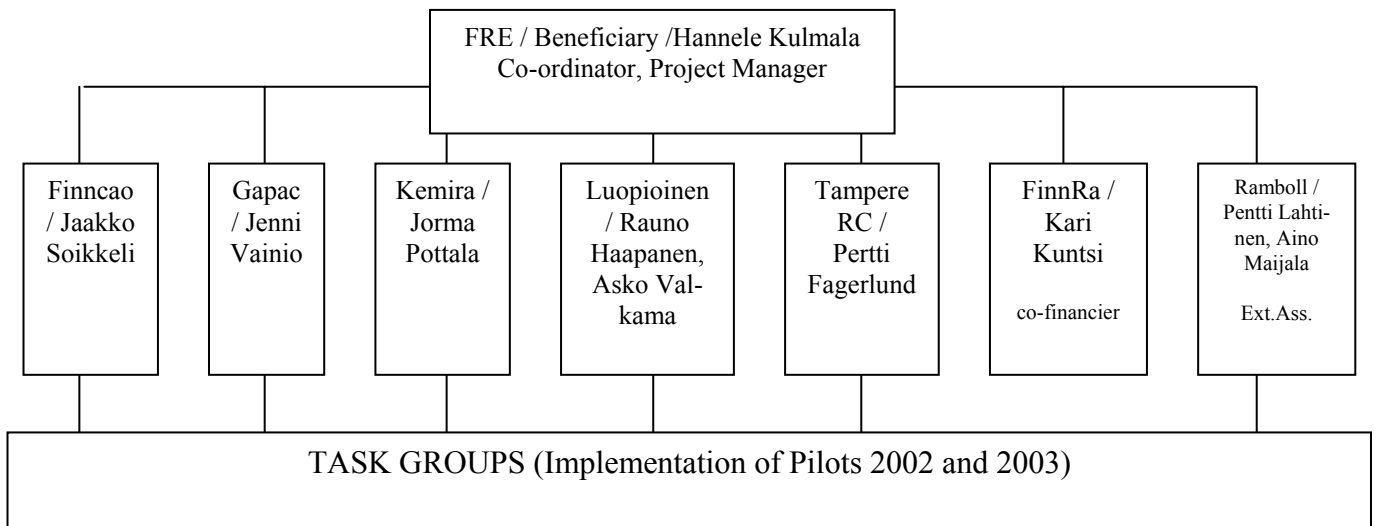
The **costs** of the project, incurred from the 1<sup>st</sup> December 2001 until 30<sup>th</sup> September 2004, are roughly 1.123.048 Euro (about 90 per cent of the budgeted 1 253 630 Euro).

Tampere 7<sup>th</sup> October 2004

Hannele Kulmala  
Co-ordinator, Project Manager

# 1. Project management

The project management system has not been changed (see the scheme below). Senior representatives (like project contact persons) of the beneficiary and the partners, and the external assistant, Ramboll are the members of the Steering Group (SG).



SG has had two meetings during the reporting period: on 2<sup>nd</sup> April 2004 and on 21<sup>st</sup> September 2004. The memoranda of the meetings (in Finnish) are available to the SG on the project website. The September-meeting was the last official meeting of SG, and participated also by the external independent evaluators of the project.

The evaluators represent different types of end-users of the project results:

- Mr Tuomo Kallionpää of the Finnish Road Administrator (Finnra): Finnra is having the main responsibility for the road network in the state of Finland, and is interested in the construction with recycled industrial by-products provided those are technically and economically competitive and environmentally safe alternatives.
- Mr Pauli Kolisoja of the Tampere University of Technology (TUT): The research and educational activities of the construction department of TUT affect very strongly the knowledge and attitudes of the engineers and other technical management of the construction industry. The project will provide TUT additional information and know-how of alternative methods and materials for road construction – and the demonstration sites of the pilots are quite close to the university for visits. The students of TUT are both from Finland and from different European states which provides a good opportunity to transfer knowledge and disseminate information of the project in Europe.
- Mr Jouko Saarela of the Environment Centre of Finland (SYKE): SYKE is the main channel for the acceptance of the use of industrial by-products for different types of soil construction and for the preparing of legislation that supports the recycling. For SYKE and the environmental authorities in general the main interests with respect to the project results are in having technically and environmentally sound recycling of industrial by-products in construction.

During the reporting period, the project deliverables have been added with

- the interim follow-up report in April 2004
- the Progress Report III including descriptions of the pilot 2003 construction
- the video as dvd- presentation, and
- the workshop presentations in June 2004
- a handwritten draft of the Guide in Finnish, that will be finalised during the autumn 2004.

The written material (except the Guide) is available at project web-sites.

## **1. Technical Development**

### ***Tasks 1: Material tests***

The Task 1 has been finished and reported in the Progress Report 2 (October 2003).

### ***Tasks 2: Pilot 2002 Planning and Task 3: Pilot 2002 Construction***

Tasks 2 and 3 have been finished and reported in the Interim Report (March 2003)

### ***Tasks 4: Pilot 2003 Planning***

Task 4 has been finished and reported in the Progress Report 2 (October 2003).

### ***Task 5: Pilot 2003 Construction***

Task 5 has been finished and reported in the Progress Report 3 (April 2004). However, in the summer 2004 the safety lanes were finished with pavement and painted “vibrator” lines in order to make clear separation of the safety lane and the driveway.

### ***Task 6: Impact Assessment***

The follow-up of Pilots 2002 and 2003 has been carried out as follows during the reporting period (see also the table in connection of section 5):

- Visual quality checks of the pilot constructions (in the spring, during the summer and in the autumn)
- Falling weight measurements for the bearing capacity (in June 2004)
- Sampling of the structures and starting the testing for the strength (in September 2004)
- Environmental water and soil samples for the analysis and comparison with results of previous years (sampling in August 2004)

Results of the visual quality checks and bearing capacity have been orally and with graphs reported to the SG on 21<sup>st</sup> September, and will be included in the final follow-up report, i.e. the Impact As-

assessment report. The visual quality of the constructions is from good to excellent in comparison with reference sites. The bearing capacity results are very promising with respect to the results of reference sites. However, the project period is too short to show the real and expected benefits of the pilot structures.

The project conducted a survey of the local users' opinions about the new types of light-traffic paths of Pilot 2003. The survey results have been published in Finnish at the project web-sites. Like expected, the light-traffic paths are considered to give additional safety and more convenient walking and cycling possibilities for the local inhabitants. Also the safety lane is an improvement though considered too narrow (a wider lane was impossible). The main criticism was on the safety lanes. The unpaved lanes were found too soft and not usable during the wintertime. Also the maintenance of the safety lanes during winter was neglected which was a cause of a lot of negative opinions. The improvement was taking place during 2004: In the summer the safety lanes were paved, and the vibrating lines will effectively separate the driveway from the safety-lane for pedestrians and cyclists.

### **3. Problems encountered**

The management of the project's cost budget has been the major problems of the project. So far, however, the problems have not caused need for major project modifications. The high share of external assistance because of the construction stages of the project will be levelled out during the final project period.

Like stated above in section 2, the safety lanes were paved and the vibrating lines were painted to separate the driveway from the safety-lane. However, the maintenance contracts that cover the safety lanes are not in the power of the project team. The project team (the beneficiary and partners) only wishes that the municipality of Luopioinen and the Finnra will find a workable solution for the winter maintenance.

### **4. Dissemination**

The preparations of the papers and other presentations for the workshop in June were finished and the video was finished as DVDs. The first 100 pieces of DVD have already been given to the partners to be given to their interested stakeholders, and to the willing participants of the workshop in June. The DVD is actually a technical description to show and describe the processes and methods implemented in the pilots. Thus, the DVD is more a part of the Guide than a separate marketing tool of the project.

The summary of the workshop is as follows (the workshop report like published at the project web-pages):

The original objective for the workshop in the project plan (October 2001 / May 2002) was as follows: "Workshop will be arranged in Tampere in June 2004. The workshop programme will include presentations of the project and its results, but also a draft version of the Guide and the video films. Visits at the pilot sites will be arranged in connection of the workshop. The invitations will be spread through the existing contact network in December 2003."

The workshop was not implemented quite as planned. In fact, the project management was given the fortunate opportunity to have the project workshop in connection of the “7<sup>th</sup> International Symposium on Environmental Geotechnology and Global Sustainable Development” in Espoo, Finland in June 8-10, 2004. The organisers were the International Society of Environmental Geotechnology, the Finnish Environmental Institute and the Helsinki University of Technology. The planning committee included Dr. Pentti Lahtinen, director of Ramboll Finland Oy (former SCC Viatek Oy) – the principal advisor and consultant of Kukkia Circelet - and Mr. Jaakko Soikkeli, MD of Finncao Oy, one of the project partners. It was also realistic to assume, that two similar types conferences or workshops could not obtain enough interested participants during the summer 2004 in Finland. For these reasons, the Steering Group decided to participate the Symposium with Kukkia Circelet presentations instead of arranging a separate workshop (Steering Group meeting 9<sup>th</sup> December 2003).

The call of the ISEG Symposium was spread widely in Europe and other where in the world, including also the project interest groups (contact network in Europe). Information about the symposium was given in the project’s web pages as well. The invitations of the symposium organisers were directed at “researchers, policy-makers and design-engineers from academia, industry and government agencies”, which covers quite well the target audience for the Kukkia Circelet project. The European (EU) participants of the symposium came from the UK, Italy, Greece, France, the Netherlands, Estonia, Slovakia and Slovenia (many participants were also from Russia and the U.S.A.).

During the planning period, there were plans to have a special and separate session involving the Kukkia Circelet project presentations. However, the symposium organisers obtained surprisingly many interesting papers for presentation, and had to make new arrangements to fit all into the three-day programme. In the final programme of the symposium the Kukkia Circelet presentation was under the special session for “Sustainable development policies for the geo-environment” on 8<sup>th</sup> June 2004. The presentation was given by Seppo Kolkka, the ex-leader of the project. Additionally, one of the keynote lectures, “Case-histories of Geo-environmental Projects (By-products and stabilisation)” presented by Dr. Pentti Lahtinen, included also a description of the project.

Kukkia Circelet presentation included a paper and a oral presentation with slides of the project<sup>1</sup>, and the presentation of the video/dvd that was finalised at the end of May 2004. The video/dvd was not possible to show for the audience, but the dvd were available and given to the interested participants during the symposium. According to Dr Lahtinen (who participated each day of the symposium) the interest for the project and its results was high and the project was discussed in depth with many participants during the symposium.

## **5. Envisioned progress up to 31.12.2004 (next 4+ months)**

### ***Task 6: Impact Assessment***

The final report of the Impact Assessment will be finalised during 2004, including the economic, environmental and technical assessment of the project results. The assessments will be made with respect to the potential and expected life-cycle of the pilot structures in comparison with some conventional alternatives. Also, the assessment will include aspects like the transferability of the project results widely in Europe. The assessment will also include the statements and other comments of the external independent evaluators.

The follow-up tests will be finished and give the final quantitative aspects for the project assessment.

---

<sup>1</sup> the paper and slide presentations are available at the project web sites

Some of the follow-up studies at the project sites will continue also after the end of the project period. The follow-up programme below of the project period has been finished, only the results are pending (30<sup>th</sup> September 2004):

PILOT 2003	Method	Responsible	Year / quarter															
			03				04				05 after project							
			1	2	3	4	1	2	3	4	1	2	3	4				
Quality check	visual	FRE,		E		x		x						x				
Bearing capacity	falling weight	FRE				x		x						?				
Studies of structures	Testing of drilled samples	FRE				x				x								
Water samples	Analysis of inorganics	Ramboll			E					x					x			
Soil samples				E					x					x				
PILOT 2002	Method	Responsible	Year / quarter															
			02				03				04				05 after project			
			4	1	2	3	4	1	2	3	4	1	2	3	4			
Quality check	visual	FRE	x		x						x				x			
Bearing capacity	falling weight	FRE					x		x					?				
Studies of structures	Testing of drilled samples	FRE					x				x							
Water samples	Analysis of inorganics	Ramboll				x					x				x			
Soil samples					x					x				x				

E = reference before Pilot construction

### **Task 7: Dissemination**

The Guide has been planned to be an electronic file, available at the project website, and it will be based on the experience and results during the implementation and follow-up of Pilot 2002 and Pilot 2003. A handmade draft of the Guide has been prepared in Finnish, but the final version will be available at the beginning of 2005.

The presentation of the project and its results will continue by the project participants during their participation in workshops and meetings in Europe. However, there are available no specific programmes of the partners.

### **Task 8: Management and reporting**

Apart from the Impact Assessment report and the Guide during the last project period, the SG will together prepare for the Commission the Final Report of the project as well as the Final Financial Report and the Layman's report. The project will end 31<sup>st</sup> December 2004, and the reporting will be finished latest at the end of March 2005.



## 6. Financial issues

Cost category	Total cost according to the Commission's decision* [€]	Costs incurred from the start date to 30.9.2004 [€]	% budget
1. Personnel	305.834	240.600	78
2. Travel	17.750	18.836	106
3. External assistance	415.903	401.407	97
4. Durables: total <u>non-depreciated</u> cost	-	-	-
- <i>Infrastructure sub-tot.</i>	-	-	-
- <i>Equipment sub-tot.</i>	-	-	-
- <i>Prototypes sub-tot.</i>	-	-	-
5. Consumables	417.903	384.997	92
6. Other costs	63.000	55.777	89
7. Overheads	33.797	21.431	63
<b>SUM TOTAL</b>	<b>1.253.630</b>	<b>1.123.048</b>	90

The project has met 90 % of the total budgeted costs on 30<sup>th</sup> September 2004. The final targeted total costs of the project will be approximately like budgeted, and include the costs of finishing the Task 6 (Impact Assessment) and the reporting until 31<sup>st</sup> December 2004.

## 7. Planned progress until 31<sup>st</sup> December 2004

Following table describes the planned progress of the project until 31<sup>st</sup> December 2004

LIFE02 ENV/FIN/329		Kukkia Circlet															
Tasks		2001				2002				2003				2004			
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T
Overall schedule of Progress reporting	Base				S			X			X		X		X		X
	Actual				S			X			X		X		X		X
1. Material tests	Base				XX	XX	XX	XX									
	Actual				XX	XX	XX	XX	XX	XX							
2. Pilot 2002 Planning	Base				XX	XX	XX	X									
	Actual				XX	XX	XX	X									
3. Pilot 2002 Construction	Base						X	XX	X								
	Actual						X	XX	XX	XX							
4. Pilot 2003 Planning	Base							X	XX	XX	XX	XX					
	Actual							X	XX	XX	XX	XX					
5. Pilot 2003 Construction	Base										X	XX					
	Actual										X	XX			XX	X	
6. Impact Assessment	Base								XX	XX	XX	XX	XX	XX	XX	XX	XX
	Actual								XX	XX	XX	XX	XX	XX	XX	XX	XX
7. Dissemination	Base							XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
	Actual							XX	XX	XX	XX	XX	XX	XX	XX	XX	Xx

X = actual performance  
x = planned performance

### List of Annexes

-