





## Publishable Final Activity Report

### Publishable Executive Summary

Noise from traffic as environmental nuisance is afflicting a growing percentage of the European population. Improved noise abatement is necessary for open country and urban settlements. Noise is the cause of mental depression and physical exhaustion of people. It is one of the biggest hazards to the human sanity in towns and country and may lead to irreversible social damages including depression, aggression and urban devastation.

The European Parliament and Council has established new standards of tolerance versus traffic noise: e.g. for housing areas:

Day 55 dB(A)

Night 45 dB(A)

The new European standards require action plans on national basis until 2007 including noise protection plans covering the whole country. Action and new standard plans will have to be implemented not later than 2012. Article 154-156 EGV represent the basis for international actions along TEN routes.

To meet elevated environmental standards local authorities, politicians and planners provide more and higher noise barriers. Eventually noise abatement tunnels will be necessary. Innovative noise abatement design is a challenge to town planning, road planning and relevant industry and engineers. As the acoustic performance of noise barriers is generally poor today, essential improvements of the shielding performance quality of design is urgently needed.

CALMA-TEC Lärmschutzsysteme GmbH from Mödling Austria suggested a project "CALM TRACKS & CALM ROUTES" within the 6<sup>th</sup> framework of CRAFT.

Noise abatement barriers along railway tracks and motorways are essential elements of environmental protection.

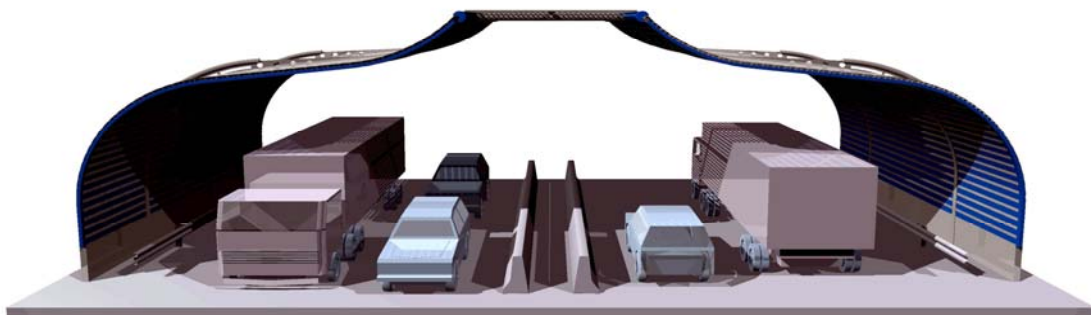


However there are different actions and policies necessary to fight traffic noise:

1. Avoid noise
2. Abate noise:



- a) Active options tire profiles, whispering roads, silent engines, silent trains and cars.
- b) Organization of traffic: No traffic at night and on Sundays, speed limits, modal split
- c) Passive precautions on buildings i.e. walls, windows, absorptive facades
- d) Active / passive precautions along traffic routes
  - Earth dams
  - Noise protection walls \*)
  - Noise protection tunnels (or semi tunnels) \*)
  -



**CALMA-TEC** was leader of the whole project, both in the sense as coordinator and as mentor and technical designer of the development of noise barriers with improved performance.



Frau Ursula Brunbauer architec, was project manager and coordinated , supervised all partners, negotiated contracts and was accounting the financement.

Austrian born Architect Wolfgang Brunbauer, owner of CALMA-TEC, has developed a new high efficiency noise barrier (patented as LÄRMSPOILER®) within the last 10 years through research, empirical testing and prototype studies.

Basic point of departure of the CRAFT project was LÄRMSPOILER® as it has proved substantial better noise shielding performance compared to traditional products. A prototype of 2 m height realized for the Deutsche Bahn AG in Bavaria shows a performance of 4,5 dB(A) better than calculated traditional noise barrier of the same height.

The outstanding result of the CRAFT study now submitted is threefold:

- a) a new highspeed approved Noise protection system , vakid to 300km/h named **HG-C Lärmspoiler**
- b) a light weight barrier system of two layer corrugated aluminium sheets, named **LB-C Lärmspoiler**
- c) a new defractin device to be mounted on top of barriers, rendering better shielding effects called **PIN-Spoiler**

The most innovative element of the LÄRMSPOILER® is the special design of the refraction edge, the design and use of special shapes and materials. Another outstanding quality of Lärmspoiler® is the durability, static and dynamic performance for high speed train air shocks (5 million of 300 km/h).



New designs have been developed and prototypes have been implemented and tested with promising results in the course of the CRAFT project. Scientific research and evidence was carried out concerning absorptive performance and relevant material properties, noise recording and psycho-acoustic evaluation, vibrations and dynamic behaviour and fatigue.

The general objective was to collect more scientific evidence, proceed with testing, develop further prototypes and make progress with new non health hazardous absorbers in order to



compete successfully on the European and world market and to challenge noise abatement policies.

**CALMA-TEC Lärmschutzsysteme GmbH**, is a young company from Mödling, Austria, founded and owned by two architects Mr. and Mrs. Brunbauer.

**CORDES + Partner, consultant engineers from Ottobrunn**, Munich, Germany has already cooperated with CALMA-TEC in the field of designing high-speed barriers for the German ICE train.

CORDES & Partner Beratende Ingenieure GmbH have contributed enormous calculations, analyzing the behaviour of a noise barrier under the air shocks of high-speed train passing. This was done in correspondence with the technical department of Deutsche Bahn. The result is reflected in the latest Standards of DB published Non.1<sup>st</sup> 2007.

**As a result the HG-C system of CALMA-TEC was approved by DB and licenced for all railway tracks up to 300km/h.**

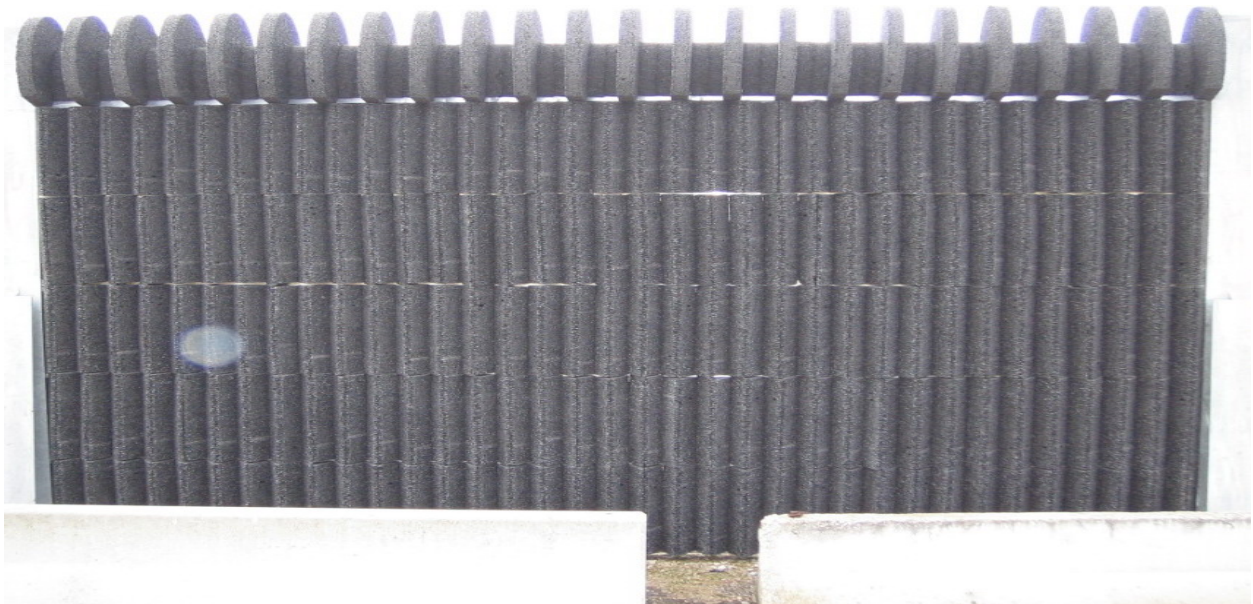
**OY MIZAR AB from Uusikaupunki, Finland** was a promising choice concerning production and designing corrugated steel panels, welding and engineering.

Unfortunately this company went bankrupt and no contribution came from this side. CALMA-TEC stepped in and overtook their part of the work.

The original idea was to develop a lightweight panel with high rigidity and good noise shielding performance. First attempts to solve this problem with thin steel plates failed when rigidity test led to the collapse of the corrugated designs.

Thin steelplates are not allowed due to the present standard. It may be questioned whether new technology of steel plating and zink-coating may allow the use of thin steel plates.

**A ZIG ZAG prototype** of thin aluminium plates and two constructive layers was developed, tested and proved valid. Testing of noise penetration, noise absorption, windload, fire resistance were successful. Various connection technologies were tested and evaluated: Rivets, screws, welding, glueing and clinching.



**Noise absorption technology was similar the HG-C construction.** A product was developed to market and named LB-C Lärmspoiler. It has outstanding good absorptive qualities, zero reflection, very light weight and very robust construction. Due to the reduction of material and intelligent logistic and production a competitive price may be achieved when produced on industrial scale.

**CELLOFOAM GmbH Biberach, Germany** with their particular experience in foam-designs and ability in tailoring and manufacturing noise abatement outfits for the car-industry have contributed absorption material for numerous tests.

A series of tests has been done in cooperation with Cellofoam. However flat mats of absorptive material did not reach the standards as set by DB.

Another attempt was made after consulting with the Partner ÖAW. Wolfgang Brunbauer designed wedges and blocks, which were to be inserted into the CALMA-TEC profiles.

Absorptive material was cut to blocks and wedges and then inserted into the HG-C rails or ZIG-ZAG profiles. After agonizing disappointment until the new arrangement proved very effective acoustic results: **best absorption and no noise reflection. A new phenomenon which was later tested and studied with AIDICO and the help of Gandia University, of Valencia.**

**ISOLITH GmbH from Strasswalchen, Austria** a small, but innovative company offering interesting combination of absorptive panels for building industry and noise barriers.

As research and development partners the following institutes joined the team:

**A.I.D.I.C.O. from Valencia, Spain** is one of the two great Spanish testing institute for material chemistry, physics and building technology. The role of AIDICO was to consult on suitable absorptive material through testing of intrinsic properties and analyse and/or develop new materials, which are or might be applicable in noise barriers. New materials



must be feasible and not health hazardous. Our special interest is to check possibilities, effects and feasibility of nanoporosity in the cellular structure of absorbers.

**UGENT, University of Gent, Belgium** with particular knowledge in textiles which can be applicable and efficient in the absorption performance of noise barriers.

A particular part of the research and development project is called "FRIENDLY NOISE": Friendly noise suggests that noise mitigation does not mean to reduce sound pressure only. Noise as conceived and sensed by human beings is evaluated individually. For to evaluate noise barrier from psycho-acoustic perception two leading international groups supplied ample results.

**ISF-OEAW Acoustic Research Institute within the Österreichische Akademie der Wissenschaften, Vienna, Austria** collecting sound data and developing a mesh model to insert and test new barrier designs in real time soundscapes.

**SU, the Psycho-Acoustic Institute of the University of Stockholm, Sweden** provided theory of Psycho-Acoustics, evaluation of soundscapes and testing results with noise recordings and individual evaluations of annoyance, eventually providing an ideal soundscape.

The project partners cooperated very well, supplied required data, testing results, calculations beyond expectations on very high scientific level.

The first half period of the project was entirely dedicated to intense studies and attempts to collect data and achieve testing results which should later serve in evaluating new designs. In the second part of the project designs were drafted, elements constructed and revised, models built, prototypes produced and pilot barriers on tracks and roads installed and tested.

Three general meetings were held at Mödling, Austria, and through individual exchanges between parties the research project following results were presented:

Within **workpackage 1: Psycho Acoustic Assessment, Friendly Noise.**

- **Binaural sound recordings** and analysis and collection of real railway noise and motorway noise signals. Further use of signals for digital testing of designs. Recommendation for the acoustic design of barriers and absorptive material. Annoyance can be reduced substantially, but noise levels on main routes are very, very high.



- **Psycho-acoustic evaluation** of existing and new built barrier designs in different by blind tests. Compared with traditional barriers the 1.2-m lower Lärmspoiler provides a better visual environment and reduces noise annoyance equally well as a 4.6-m conventional barrier .

Within **workpackage 2: Digital Simulation of noise pattern and masking.**

- **Sound recordings and data base of real railway noise and motorway noise.** Signals were later used in laboratory testing of models and digital simulations of designs, heights and shapes of different barriers. Little or low gain of RMS-level reduction can be obtained by applying the psychoacoustical masking model for broadband train sounds. Similar results are to be expected for broadband road noise. In average the masking effect ranges from 0.65 to 1.72 dB.
- **A mesh model** was developed to analyse and evaluate noise shielding performance via calculations with real sound recording data.
- **The mitigation in insertion loss** of the curved noise barrier compared with a straight noisebarrier becomes smaller than the distance of the source is increasing. For a source distance of 5 m the curved noise barriers are about as good as a 4 m height straight noise barrier. An inclined noise barrier without a curvature at the top is not giving an improvement in the insertion loss. A reflecting breast leads to a smaller absolute value of the insertion loss.
- **Acoustic Testing of built barriers** in un-echo room, reverberation room and on site. Results varied from 6,4 to 12,1 dB noise mitigation.
- **Digital simulations of shielding effects** of new barrier designs, different heights and shapes favoured the decision between design options.

Within **workpackage 3: Dynamic & Static Calculations & Testing.**

- **High-speed train vibration effects on barriers analysed and visualized.** When applied to new designs, modifications in details were necessary. Damages and Collapses of noise barriers along high speed train tracks are due to underestimating or neglecting the dynamic forces at a frequency of 3,3 Hertz.
- **On site testing of high speed noise barrier.** New developed CALMA-TEC HG-C system proved valid for installation on 300 km/h railway tracks. CALMA-TEC HG-C system's own frequency of 8,5 Hertz is well away from 3,3 Hertz Frequency. Heavy construction ( concrete barriers have low frequency around 1,5 Hertz)



- **Laboratory fatigue testing** of dynamic behaviour of high-speed construction elements: HG-C profile stood up to 6 mio. load changes.
- **Calculations of dynamic performance** were carried out on the basis of the load diagram achieved from recordings. Digital simulation had to comprise the whole system including bedding, fundamentals, columns and absorptive panels. Elements of construction repeatedly had to be re-dimensioned.
- **Doggy-bone**, the fixing elastic joint to keep the panels in the supporting column was developed.
- **Performance chart** of the CALMA-TEC HG-C system for different velocities and subconstruction requirements was developed. It is a vital tool for any further application and calculation of barriers. This led to a **General Approbation of the system by Deutsche Bahn**.
- **Calculation of static performance** of ZIG ZAG light weight system was done parallel to testing. Different profiles, single layer and double layer of corrugated steel and aluminium constructions were analysed.
- **Jointing of double layer** corrugated sheets was digitally simulated and revised.

Within **workpackage 4: New Noise Abatement Technologies**

- **Macro scale**
  - **Different noise barriers tested.** Traditional models of wood, perforated aluminium, plexiglass, and new extruded aluminium HG-C elements and light weight ZIG-ZAG panels were tested : insertion loss, noise absorption, and noise reflection.
  - **New developed Q-Cell absorber**, specially shaped wedges of polyethylene Quash material in C-profiles proved superior in absorption and ideal in noise reflection. While traditional barriers show 30%-40% noise reflection barriers with Q-Cell wedge absorbers have nearly zero reflection. Tests were simultaneously carried out un reverberation and un-echo room.
  - **Accellerated aging test** of Q-Cell wedges of Quash material was carried out proving a 50 year stability and constant acoustic performance.
- **Microscale**
  - **Search absorptive material**, woven or extruded materials in the view of applicability, water resistance, fire-resistance, UV-stability, tensile modulus, aging



performance, push-resistance, acoustic performance. A healthy, not-lung-affective, light weight, self-supporting material was sought.

- **Study of innovative materials** in long series of laboratory tests and scientific analysis. Cellofoam´s Quash remained the preferred option.
- **UV-stability analysis** was carried out through scientific research and light penetration measurements.
- **Nano scale**
- **Scientific research and expertise** on various material options with insertion of nano materials in order to improve the acoustic performance. Essential is the integration of nano particles into the absorptive material to prevent damage due to UV-radiation.

#### Within **Workpackage 5**:

- **Documentation of state of the art** and critical appraisal of noise barriers designs on international basis.
- **New designs of opaque and transparent noise barriers were developed** and installed including development of new profile designs. Starting from the experiences of the Brannenburg type Lärmspoiler new designs were developed and discussed. From flexible TT-profiles to finally HG-C-Lärmspoiler
- **High-speed train noise barrier HG-C Lärmspoiler® was developed**, in cooperation with technical departments of Deutsche Bahn. The experiences of collapsed noise barriers along the high speed ICEIII-track Frankfurt to Köln was important.
- As “cheap” alternative a **light weight barrier of thin metal sheet** was developed and tested.
- **Fatigue test of constructive aluminium elements** of the HG-C Lärmspoiler® successfully effectuated. With the fatigue test and the dynamic performance we are ahead of all competitors in this range. The acoustic performance is yet not complying with the requirements. We want to underline our refusal to switch back to conservative fibric solutions ( mineral wool) as we are convinced that those are health hazards.
- **Accelerated aging and climatic performance** of various materials tested.
- **Testing series of HG-C profiles with different absorbers** inserted. Testing results of the cellular absorber was not entirely successful. Further testing are scheduled, new materials will be introduced , modifications of profiles will be necessary.



- **Testing of acoustic performance** of multiple alternative absorptive materials, foams, textiles, nanofibers and cellular structures.
- **Acoustic performance tests of cellular absorbers** in various configurations.
- **Prototypes built to study design and technical details.**
- **A breakthrough was achieved** in material technology, eventually with nanotechnology in the absorber structure
- **Zero reflection of noise barrier has been developed, tested and proved.** This is certainly a great innovation to all future barriers.

Wolfgang Brunbauer  
11.7.2008





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## **Section 1 Project objectives and major achievements during the reporting period**

**Objectives of the Proposal and the contract are**

to achieve Essential improvements of the

SHIELDING PERFORMANCE (A.1.),  
ACOUSTIC QUALITY and PSYCHO ACOUSTIC PERFORMANCE (A.2.) and  
INNOVATIVE DESIGN (A.3.)  
of noise barriers

Detailed we have set up the following points which mostly are connected to success criteria:

- Acoustic quality and psychoacoustic performance (DoW 2.1, page 4)
- Simulation tools (DoW 2.2, page 4)
- Shielding performance (DoW 2.3, page 5)
- Price reduction (DoW 2.4, page 5)
- Absorptive materials for noise barriers (DoW 2.5, page 5)
- Constructions for heavy duty along high speed train tracks (DoW 2.6, page 6)
- Reduced height and design quality for noise abatement constructions (DoW 2.7, page 6)



### 7.10.2.1 Objectives: Shielding performance – reduced height

The objective of the work program is to develop systems, which provide shielding effects superior to the standards (ÖAL, Schall 03).

This objective was to be achieved by Design and Development of new Innovative Noise Barriers, by evaluating different designs, constructions, shapes & materials allocated in workpackages:

WP 5 - Design & development (related and based on work and results of WP 1 – WP4) and WP 6 – test of prototypes and evaluate.

To reach the goal CALMA has been working continuously to develop and improve designs, shapes, materials.

To verify shielding performance various mocks (models) have been prepared by CALMA (see WP 6, Deliverable 6.1), transported to UNI KEMPTEN (= University of Applied Sciences Kempten) and tested by UNI KEMPTEN in the anechoic laboratory of the university (WP 6, Deliverable 6.3).

CALMA further has initiated test to fulfil requirements of existing regulations as RIL and ZTV LSW88 (WP 6 Deliverable 6.2), testing process, results and evaluation (WP 6 Deliverable 6.3) by Prof. Rupp of University of Applied Sciences Kempten.

To valuate **shielding performance** we have set up success criteria as follows:

- 1,0 to 2,0 dB      satisfactory
- 2,0 to 3,0 dB      very good
- 3,0 to 4,0 dB      excellent
- 4,0 to 5,0 dB      brilliant
- 5,0 to 6,0 dB      premium

To valuate **reduced height** we have set up success criteria as follows:

- minus 1,0 meter      good
- minus 2,0 meter      very good
- minus 3,0 meters      excellent

#### Shielding effect - achievement valuated by Uni Kempten

To face success criteria with results of tests, Prof. Rupp presentation cited as follows (See Del. 7.8. B / Summary 2) :

“The measured values are referenced to a set of measured data without any noise barrier, thus providing the field of noise reduction behind the barrier. The field of noise reduction was subsequently integrated over the area of measurement and for each barrier one meaningful number, the insertion loss in dB(A) was calculated to describe the shielding efficiency of the barrier for the 2 noise types (RAIL and ROAD).



Most barriers showed insertion losses in the range of **6 to 7 dB(A)** with the exception of the Brannenburg barrier with an insertion loss of more than 12 dB(A).

Also the distribution of the noise reduction behind the barriers differ widely, so that a deeper investigation of such potentials may be of interest.

A clear difference of the shielding effect, subjectively identified by listening behind the Brannenburg barrier for Rail and for ROAD noise is not reflected in the measured numbers of insertion loss."

### Shielding effect - achievement valuated by OEAW

To face success criteria with results of simulations, Summary 2 of Dr. Waubke and H. Kreuzer presentation (Appendix) cite as follows:

- "A1, Brannenburg and S1 profiles yield good results,
- results depend on the distance of the sound source from the barrier,
- only comparison of profiles."

The "Appendix: Results" from De. 2.7 mentions:

"Distance 2,5 m: We restrict ourselves to the comparison with 3m straight noise barriers. As it can be seen in the next few figures the curved profiles A1 and S1 have even better overall performance than the 4m straight barrier...."

"Distance 5 m: Compared with the 2,5 m case there is not much difference in the results, still the A1 and S1 profiles yield the best results."

"Distance 10 m: The most striking difference in this case is probably the fact that the performance for curved profiles A1 and S1 is behind the performance of the 4m straight wall, but still they are the best of all 3m profiles....."

The objective of the work program to **develop systems, which provide shielding effects superior to the standards** (ÖAL, Schall 03) can be considered achieved.



### 7.10.2.1.2 Objectives: Acoustic quality and psycho-acoustic performance

#### Objective:

*The objective is to define and eventually integrate noise shielding effect and soundscape quality in common evaluating practice for noise barriers. At present most common criteria for the choice of the barrier type are low cost and traffic safety. **This project shall provoke sensitiveness of decision makers concerning the perceived effect, by humans, of the traffic noise mitigation and resulting soundscape quality behind the barrier.***

The project wants to achieve this objective by psychoacoustic evaluation of soundscape quality and **development of noise abatement walls with high acoustic and perceptual shielding effects (friendly noise).**

Perceptual quality criteria will be established and defined with regard to empirical reference sounds on a metric master scale. A labelling system for perceptual quality due to noise mitigation by various types of barriers and resulting soundscape behind these barriers will be developed.

The labels of perceived soundscape quality on a metric scale would for example be: Intolerable, Bad, Neutral, Soothing, Pleasant, Reviving. The three last mentioned labels would together define traffic noise to be friendly due to mitigation by barrier.

This objective will mainly be addressed by work package 1 "Psycho- Acoustic Assessment", by psychoacoustic evaluation of mitigation effect of different types of barrier and potential improvements of soundscapes.

#### Achievement (cited SU)

- Noise mitigation efficiency of the Lärmspoiler and other noise barriers with regard to health effects

To test the efficiency of noise mitigation technologies in terms of health improvements is a new idea. By tradition, efficiency tests have been restricted to sound-level measurements (dB change). Recently, the EC Noise Expert Network proposes that noise mitigation efficiency best is estimated for various scenarios (EC WG HSEA, 2005), involving joint remedial actions. The reason is that the effect of one action against noise (e.g., erect a noise barrier) is not independent of other conditions. For *roadside* barriers, important exposure conditions are number of lanes, type of vehicles, traffic composition, speeds, and geographical topography. All these will affect the insertion loss accomplished at various frequencies of the spectrum. Moreover, **traffic is a moving sound source or a "line source"**. **This is why noise barriers cannot be tested similarly to a wall's insulation in a building-acoustics laboratory.** Thus far, only three in situ-tests of annoyance have been published openly, all on conventional roadside barriers (wood). In Nilsson and Berglund (2005), residents' *indoor* annoyance was reduced to acceptable levels. However, the *outdoor*



annoyance, which was very high before the barrier, was still very high after its erection. The barrier's 7 dB sound-level reduction of road traffic noise did not bring down the annoyance to acceptable levels (exposures still 70 dB  $L_{DEN}$  in gardens!). At comparable height, the Lärmspoiler's potential for sound-level reduction is improved by (a) outward-bent design (increases area), (b) new types of absorbants, and (c) visual impression. The latter may contribute positively and interactively for better soundscapes (Carles, Lopez-Barrio & de Lucio, 1999; Viollon, Lavandier & Drake, 2002). The current test series on roadside barriers will be completed in August 2006.

For railway barriers, we have not found any annoyance tests in the open literature. However, in our test series of the Lärmspoiler and conventional barriers we have confirmed that type of train, velocity and distance to track are all important determinants of train-noise annoyance (cf. Botteldooren et al., 2005). The fact that barrier sites are unique to a particular track, and the types of train (and velocities) are also linked to the track, it follows that the train noise will be very specific to the track. This incapacitates good equal-term comparisons of train noise annoyance for different barriers. Psychoacoustic test series of the noise annoyance in soundscapes behind the Lärmspoiler and conventional barriers show that the reductions in annoyance approximately adhere to the same psychoacoustic function for the two types of barrier, however, the annoyance is lower behind the Lärmspoiler because of lower sound levels and low relative proportion of low-frequency noise. The high contribution to annoyance of low frequency noise is a well-known scientific fact (Berglund, Hassmén & Job, 1996).

### Soundscape quality – friendly noise

Research work from Stockholm University so far, brought some usable indications on the performance of noise barriers of different designs regarding subjective perception, several recommendations were given. **Thus the approach to the objective is good, but not yet final.**

Remaining to the objective is to adopt a model experiment for perception tests as standard way of testing "friendly noise" hypothesis in the future.



### 7.10.2.1.3. Objective: Simulation Tools

#### Objective:

*The objective is to develop simulation tools to visualize and evaluate noise abatement of walls and devices.*

*Success: simulation tools as developed within the project should be operable for planning & marketing activities*

*Achievement of this objective is provided in workpackage 2, "Digital Simulation".*

#### Achievement (cited OEAW):

In order to achieve progress in noise abatement or mitigation quality of innovative barriers in relation to the traditional noise barrier practice it is necessary to collect original sound data. Traffic noise is a moving say linear sound source and can not be regarded as a stable punctual sound source as in building elements testing. Furthermore the insertion loss of a noise barrier in the urban or rural landscape is of minor importance compared with the shielding effect of the whole barrier.

It is the portion of noise which will "jump" over the barrier which is of major importance. Therefore the "refraction edge" is a vital issue and subject of the research.

First object was to collect original valid noise data from motorway and railtrack.

The signals later were used to digital evaluation of noise barrier designs and refraction edge designs .

To evaluate new noise barrier designs in digital models, WP 2 developed a sound barrier mesh model. This digital model was calibrated with the noise signals recorded before and behind the real noise barriers in situ.

Once calibrated different designs of noise barriers with different shapes and absorptive materials even can be digitally evaluated by using "real" original noise.

#### Simulation tools for visualization noise abatements

Austrian Academy of science has made visual Simulations and animations that give very useful impressions on sound abatement.

The objective to develop simulation tools to visualize (and evaluate noise abatement) of walls and devices operable for planning & marketing activities though has remained a dream (**not achieved**), due to enormous complexity, expenditure and(cost) effort for such tool.



#### 7.10.2.1.4. Objective: Price Reduction

##### Objective:

The objective is to reduce cost of high quality noise abatement systems through:

- intelligent production
- innovative construction and materials
- reduction of foundations (bigger span)
- reduction of maintenance
- reduction of life cycle cost

Success scale: noise abatement solutions with feasible market prices (whole system built in) on industrial productive basis

- for roads 100 EUR/m<sup>2</sup> approx. equivalent height
- for high speed rail tracks approx. 200 EUR/m<sup>2</sup> equivalent height

##### Achievement:

Prices of noise barriers are decreasing as the public becomes aware of the need and the administration is reacting to it by putting up more and more noise barriers. Without expertise the railway and motorway authorities follow the rigid standards. The more noise the higher the wall. Public critics on the this practice increased during last year.

Due to the tender prescription and practice in the EU bidding ends up with the cheapest product. Functional tendering might be an option when innovative solution are wanted.

##### Life cycle cost

Life cycle cost often is ignored even purposely excluded. A study made in charge of ASFINAG, Austrian Motorway authority, proved that the high price CALMA-TEC **Lärmspoiler has a better life cycle performance than any other product including cheap** wood barriers, due to longlife and heavy duty material employed, ex-changeable absorbers and waste disposal costs. Within WP 3 Prof Kosteas from TU Munich proved in testing that the CALMA-TEC HG-C elements stand 5 million high speed train air shocks, equal to a lifetime of 50 years. Within WP4 made ageing tests the absorptive material used in new CALMA – TEC designs has results equal to 50 years and more.

##### Reflection behaviour

CALMA-TEC / AIDICO – GANDIA run tests on different prototypes, measuring reflection behaviour. Results for the CALM-TEC products showed almost no reflection (3-5%), compared with products made of wood, concrete or cassettes with reflections (30-50%) Authorities that have to deal with noise protection will more and more care on the reflection subject as annoyance by reflection is of increasing conscience.

##### Hight reduction with special top part

The below showing picture illustrates that growing noise barrier walls create progressive cost while the gain of shielding performance is decreasing with the height. Foundations and supporting studs become more and more expensive.



As the graphic shows the ideal height of a barrier is around 2m and 3m above ground.



CALMA-TEC has tested elements for placing on the top of existing (or new) barriers (called "Lärmspoiler"), light and effective, saving new foundations and columns.

The objective is to reduce cost of high quality noise abatement systems through:

- intelligent production
- innovative construction and materials
- reduction of foundations (bigger span)
- reduction of maintenance
- reduction of life cycle cost

Success scale: noise abatement solutions with feasible market prices (whole system built in) on industrial productive basis

- for roads 100 EUR/m<sup>2</sup> approx. equivalent height
- for high speed rail tracks approx. 200 EUR/m<sup>2</sup> equivalent height

The newly designed, prototypes built and tested CALMA-TEC constructions are achieving **above objectives**, though price has to be seen more differentiated.

**100 Euro per m<sup>2</sup> equivalent to height is achieved** by the CALMA-TEC "Lärmspoiler"

High speed rail tracks development has not been focussed on refraction edge and shape - therefore height reduction is not to be considered here. Taking in consideration that there so far do not exist other products with equivalent qualities and certificates, the price is competitive even being 300-400 EUR/m<sup>2</sup>.



### 7.10.2.1.5.Objective: New absorptive Materials for noise barriers

#### Objective:

The objective is to assess new absorptive materials & technologies, which are

- not lung affective
- non hazardous to health
- feasible to market prices
- available for production (now and mid term)
- recyclable
- fire resistance according to the standards (e.g. B1)
- comply with particular requirements (water repellent, UV-stable, resistant against different weather conditions like rain, snow, freezing, dust, sun)
- with a constant acoustic performance under all seasonal and climatic conditions

Success scale is to satisfy as much as possible of above mentioned qualities

Workpackage 4 "New Noise Abatement Technologies" is mainly occupied with this task.

#### Achievement:

When CALMA-TEC was strongly trying to develop a high-speed railtrack noise barrier priority was given to the improvement of the absorptive qualities of new and non health hazardous absorptive material. With Cellofoam (Quash material) and CALMA-TEC a series of tests were performed and progress made without satisfactory success versus elevated standards RIL 2000 of DB (Deutsche Bahn). Further tests in various shaped constructions lead to adequate results.

Considering the general objective of the project, one of the most important goals is the application of noise abatement technologies in noise barriers. There are three specific targets for the accomplishment the purpose and there are the following:

- a) interference design,
- b) new absorption materials and
- c) nanotechnology to influence the acoustic behaviour.

Related with the state-of-art in noise abatement technologies, it is analysed the influence of these 3 effects in the general acoustic behaviour. These effects affect to the absorption, shielding and scattering effect in a different way. So that, it was selected three different regions in order to evaluate the behaviour for several absorptive materials.

The state-of-art was analysed in the technical annex I (Del.5.1), considering the different commercial solutions to minimise the noise produced in the routes and tracks. Following the Annex I, we considered the starting point of the project the commercial barriers as a follows:

- Concrete walls (decorated with graffities or other esthetical solution)
- Light concrete walls.



- Green walls, using the vegetation.
- Transparent walls (glass, fibreglass,...)
- Combined walls (using traditional and innovative materials to achieve good performance and reducing the costs)
- Multifunctional walls (combining the shielding effect and the solar energy production)
- Tunnels or semi-tunnels (used in specific zones to minimise the noise)
- Top-edge barriers for the interference effect (octagonal "cumblera" as Japan solution)

Having gained sufficient test results and certificates by applying the new material in the right with the project's **work the objective to satisfy as much of the following qualities has been achieved:**

*new absorptive applicable material & technology, which is*

- *not lung affective*
- *non hazardous to health*
- *feasible to market prices*
- *available for production (now and mid term)*
- *recyclable*
- *fire resistance according to the standards (e.g. B1)*
- *comply with particular requirements (water repellent, UV-stable, resistant against different weather conditions like rain, snow, freezing, dust, sun)*
- *with a constant acoustic performance under all seasonal and climatic conditions*



### 7.10.2.1.6 Objective: Construction for heavy duty along high speed train tracks

#### Objective:

*The objective is to develop light and solid constructions for heavy duty along high-speed train tracks (profile of request: 5 Mio shocks, 50 years life time) and to assess noise abatement walls as integrated vibrating system*

*The objective is successful if requested systems can be provided and be proved.*

*Workpackage 3 "Static and Dynamic Calculations" was dedicated to this task as well as WP 5 Design and construction.*

#### Achievement:

The failure of some 80 noise barriers along the newly opened high-speed train track from Köln to Frankfurt/Main caused DB (= DEUTSCHE BAHN) officials to enquire at CALMA-TEC and ask for solutions and alternatives.

Based on a prototype which was designed and installed in 1998 at Brannenburg we developed with our CRAFT-partner Cordes & partner from Ottobrunn/Munich a light weight but heavy duty construction which proved valid for the requested performance.

Endurance tests at the TU Munich proved the standing performance against 5 million air shocks of a ICE train passing at the speed of 300km/h equal to 50 years.

To develop the HG-C Lärmspoiler for high-speed train the dynamic behaviour of noise barriers was studied and digitally simulated. Dynamic loads were measured and fed into the model. We realized that noise barriers are an integrated vibrating system and must be designed accordingly from the bottom of the foundations to the top. The failure of the DB noise barriers was basically caused by the fact that the vibrations induced by the passing trains are identical with the resonant frequency of the whole barrier.

CALMA-TEC with assistance of CORDES & Partner developed the HG-C Lärmspoiler barrier. DB was highly interested, CALMA – TEC built a pilot aside a high speed track of DB at Werschau, Germany and DB measured dynamic behaviour and resistance of the pilot.

**The work is successful as requested systems could be provided and proved.**





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## **7.10.2.2. Section 2 Workpackage progress of the period**

### **7.10.2.2.1 Workpackage 1 PSYCHO - ACOUSTIC**

#### **WP1 objectives**

WP1 has three main objectives

1. To assess psychoacoustic effects of noise shielding barriers along traffic routes and railway tracks (soundscape perception re mitigation efficiency).
2. To define optimized soundscapes (friendly noise) behind noise barriers along traffic routes and railway tracks.
3. To measure and define friendly noise behind innovative barrier (Lärmspoiler).

#### **List of deliverables**

D 1.2 "Report on psycho acoustic results regarding soundscape perception, mitigation efficiency, and transform effects for existing sample of noise barriers with special reference to traffic noise"

D 1.3 "Draft design of ideal soundscape"

D 1.4 "Suggest technical methods to design friendly noise (ideal transform for optimized soundscapes behind barriers)"

D 1.5 "Report on the (friendly noise) efficiency of new innovative noise barriers (Lärmspoiler)"

#### **List of milestones**

M 1.1 "Report on relations between measured noise efficiency and psychoacoustic perception"

M 1.2 "Draft definition of friendly noise as ideal or optimized soundscape behind noise barriers along traffic routes and railway tracks"

M 1.3 "Recommendations on design characteristics and technical method based on perceptually elevated noise transfer functions of barriers"

#### **Progress towards objectives**

Deliverables have been completed, analysis and evaluation have been made.

The following presentation of work shows results that are seem to be the optimum producible in this project's scale.

For the project goal it was of the interest to implement psychoacoustic result in design decisions.

The conclusion is that the project was too small to achieve really good usable results for design use.

Progress and result of the period 1 is content of Midterm report (Del. 7.6) and of period 2 it is content of report of RP2 (Del. 7.9).



## 7.10.2.2.2 Workpackage 2 DIGITAL SIMULATION

### WP1 objectives

Sound data analysis and comparison of virtual and real sound barriers. The collection of sound data annotations, metadata as well as numerical simulation and the statistic analysis combined with psychoacoustics proved a reusable database and reliable tools for future development.

### Deliverables:

#### RP1

D 2.1 Traffic Noise Recording Plan

D 2.2 Sound Data Storage, Retrieval and Spectrographic Description

D 2.3 Descriptive Statistics

D 2.4 Calculation of Basic Functions & Clustering

D 2.5 Sound Barrier Mesh Models

#### RP2

D 2.6 Simulation Transfer Functions & clustering

D 2.7 Visualization

D 2.8 Psychoacoustic irrelevance

D 2.9 Modulation effects

### Milestones

M 1 Collection data base & state of the art

M 2 Research and development

M 3 Research & development exchange conclusion

### Progress towards objectives

All deliverables have been submitted.

Digital simulation was of great importance to give direction for selection where to go in prototype design work. To achieve usable results that can be used in regulations of health standards or regulation tools, the project was too small.

Conclusion is, that the objective to visualize noise abatement of walls was well achieved in this work (Del.2.7), the idea to make them operable for broad use (planning & marketing activities) can not be foreseen.

Progress and result of the period 1 is content of Midterm (Del.7.6) report and of period 2 it is content of report of RP2 (Del. 7.9).



### 7.10.2.2.3. Workpackage 3 DYNAMIC & STATIC CALCULATION

#### Objectives and timing / Progress / Description of Deviations

The description of the loads on the noise barrier at high speed ways at the train became treated in the deliverable 3.1. The theoretic examination of the dynamic behaviour of the noise barrier was represented in the report 3.2. The fatigue strength behaviour of the building materials should be described for all used building-materials in the deliverable 3.3. To this experimental examinations and dynamic tests at the TU Munich are required for the aluminium profiles.

After the knowledge of the first positive results in the tests the further examinations were continued. The calculations were carried out on the basis of the checked material behaviour. The results of these examinations are the basis of dynamic calculations for different values of wall properties. In deliverable 3.4 the results are listed on. And also the qualitative discussion of the test wall near Frankfurt was included.

In the deliverable 3.5 the conclusion was made. Here all the results of the dynamic calculations and of the experimental results of the test are summarized in a special form which was wished by the authorities of the DEUTSCHE BAHN.

The delay in the elaboration of the deliverables 3.4 and 3.5 was caused by the necessary time consuming calculations for the different properties and for the coordination of the calculation structure.

#### List of deliverables

No.	Name	foreseen submission date	corrected submission date	reale subm. date
RP1				
3.1	Load Diagram of High Speed Trains	Feb 2006		13.03.2006
3.2	Dynamic Behaviour of Noise Barriers	Feb 2006		31.03.2006
RP2				
3.3	Fatigue Strength Behaviour	Feb 2006		26.07.2007
3.3	Structur Analytical Examination of the Noise Barriere	Apr 2006	Feb 2007	26.07.2007
3.5	Final Evaluation and Structural Conclusion	Nov 2006	Mar 2007	26.07.2007



## 7.10.2.2.4. Workpackage 4 NEW NOISE ABATEMENT TECHNOLOGIES

### Workpackage objectives

Introduction and application of new noise abatement technologies in noise barriers

- a) Interference design
- b) New non hazardous and weather resistant) absorption materials.
- c) Nanotechnology to influence the acoustic behaviour of inner surfaces

Objectives added during RP2 (see also amendment of Dow Annex 1 update DoW):

Research concerning reflection of noise barriers according to market demand.

Prove of durability of absorptive material used in the HG-C barrier type

Testing various material and configurations in small scale in advance testing 1:1 (to prepare tests and measurements of new designs for the HG-C barrier to reach absorption requirement of regulations in the range between 1000 to 2000 Hertz).

Prove expected non – reflective performance of the HG-C barrier type, additional test in anechoic chamber and in reverberation room

### Deliverables:

All Deliverables have been submitted

Task	Objectives	Start month	End month	Progress RP1	Progress RP2
4.1	To develop new noise absorbing materials designs on macro, micro and nano levels	1	12	60%	100%
4.2	To asses the mechanical and durability performance of the new materials designs.	2	10	90%	100%
4.3	To asses Normal Acoustic, Impedance, absorption, flow air resistance, insulation performance of new materials designs. To define a Macro-scale simulation of the absorptive material in order to evaluate the optimal design.	10	18	70%	100%
4.4	Cost-benefit analysis	10	13	40%	100%

### Progress towards objectives

AIDICO´s work gave substantial contribution to Design and development work As showed in Activity report Section 2 – Objective: New absorptive materials – the goal has been met satisfactorily.

Progress and result of the period 1 is content of Midterm (Del.7.6) report and of period 2 it is content of report of RP2 (Del. 7.9).



## 7.10.2.2.5 Workpackage 5 DESIGN & DEVELOPMENT

### Objectives

Develop innovative light weight noise barrier prototypes with substantially improved and elevated noise shielding and masking performance.

Design and construct heavy duty barriers to meet static/dynamic requirements and aesthetic expectations of modern urbanism and landscaping.

### Deliverables

#### RP1

Del 5.1 Listing of the state of the art of. Innov. Noise barrier technology

Del 5.2 Matrix evaluation of design drafts

#### RP 2

Del 5.3 Selection of designs and elaboration of specification

Del 5.4 Revision of designs and elaboration of specification

### Progress towards objectives

Progress and result of the period 1 is content of Midterm (Del.7.6) report and of period 2 it is content of report of RP2 (Del. 7.9).

#### RP 1

State of the art.

#### RP 2

Matrix Evaluation of new and innovative design

Design and construct heavy duty barriers

Design and construct light weight construction

Defraction device – PIN spoiler



## 7.10.2.2.6. Workpackage 6 TESTING PROTOTYPE

### Workpackage objectives

Manufacturing of prototypes and mock up models for testing and demonstration purpose. Laboratory testing for noise insulation and shielding effect of models and prototypes to verify or to falsify theoretical expectations.

Superior performance of absorption (ref. to technical standards) and shielding effect.

Medium size pilot projects with semi – industrial production of barrier elements,

Series of field tests in order to assess effects on urban environments and landscapes.

### Deliverables:

RP 2:

D 6.1 Mock prototypes

D 6.2 Laboratory test results

D 6.3 Shielding effect tests result and evaluation

D 6.4 Pilot production of barrier elements and implementation on sites

All deliverables have been submitted.

Two of them very late / together with RP2 and final report.

This deviation was due to concentration of CALM-TEC resources on work and less on reporting. CALMA –TEC is a new and small innovative company, carried by 2 persons only. To surviving takes a big effort that has bond a lot of energy, this is another reason for late reporting.

### Progress toward objectives

#### Prototypes built:

Many prototypes / models have been built during the development process:

#### **High speed construction – HG-C**

Progression from HG-T shape to HG – C shape, models for both,

Absorption material for HG types shape in different shapes (Block, Keil) and measures

All tests that have been run were important for continuing work and decisions that had to be made.

“Doggy bone” shaped rubber element for connection

#### **Light weight construction - ZIG ZAG**

Progression from one layer metal sheet, various shapes to two layer construction various forms

#### **Defraction device – PIN spoiler**

Evolution with different shapes and materials

Laboratory tests:

Regulations require proofs of: noise absorption, sound insulation, stone throw resistance, fire resistance, ageing/corrosion, Static and dynamic performance (load, wind,)

Deliverable 6.4 lists laboratory tests that have been made using above listed prototypes. Additionally to tests concerning absorption in WP4 and in material technology WP3

Shielding effect tests

See next item, 7.10.2.2.6 Uni KEMPTEN

Pilot production and implementation on sites

Implementation of a pilot (HG-C construction) mounted and tested at a high speed train track in Werschau / Deutsche Bahn (see Del. 6.4)

CALMA-TEC has made big efforts to get the chance to build medium size pilot projects for either road or rail, without success during project duration. Authorities are very slow in decision, very slow in accepting new products, and do not want to spend money on pilot projects.

Only by now (July 2008) Austrian road company has decided to built and test LB-C and PIN.



### 7.10.2.2.7 Workpackage 6 TESTING PROTOTYPE – UNI KEMPTEN

Within WP 6 there work from University Kempten was make different tests and following deliverables:

RP2

D 6.3 Shielding effect tests result and evaluation

D 6.6 Calculation and test result of ZIG ZAG barrier type

Both deliverables were submitted.

#### Progress towards objectives

Both testing work was to give input to the design and development work of CALMA-Work.

Result was satisfactory and useable in shielding effect tests results.

Calculation and test of ZIG ZAG barrier type was little useable.

This was not fault of testing work. Originally should have been performed by MIZAR's experts. By their drop out, it was an attempt to implement these tests by an existing partner.

Progress and result of the period 1 is content of Midterm (Del.7.6) report and of period 2 it is content of report of RP2 (Del. 7.9).

**7.10.2.2.8. List of Deliverables, Table 1**

Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Estimated indicative person-months	Used indicative person-months	Lead contractor
		<b>WP Nr. 1 PSYCHO-ACOUSTIC</b>			<b>18</b>	<b>18</b>	<b>SU</b>
1.1	Study design including pilot testing result	WP Nr. 1	Nov. 2005	05.12.2005	3,6	4	SU
1.2.	Report on psycho acoustic results	WP Nr. 1	Feb. 2006	29.03.2006	3,6	3,8	SU
1.3.	Draft design of ideal soundscape	WP Nr. 1	Apr. 2006	08.11.2006	3,6	3,4	SU
1.4	Suggest technical methods to design friendly noise	WP Nr. 1	Aug. 2006	12.12.2006	3,6	3,4	SU
1.5.	Reort on the efficy of new innovative noise barriers	WP Nr. 1	Oct. 2006	25.07.2007	3,6	3,4	SU
		<b>WP Nr. 2 DIGITAL SIMULATION</b>			<b>38,6</b>	<b>42</b>	<b>ISF-OEAW</b>
2.1.	Traffic noise recording plan	WP Nr. 2	July 2005	16.12.2005	4,78	0,63	ISF-OEAW
2.2.	Sound data storage	WP Nr. 2	Nov. 2005	03.03.2006	4,78	11,80	ISF-OEAW
2.3.	Descriptive statistics	WP Nr. 2	Nov. 2005	15.05.2006	1,78	2,29	ISF-OEAW
2.4.	Calculation of basic functions	WP Nr. 2	Feb. 2006	24.05.2006	1,78	1,65	ISF-OEAW
2.5.	Sound barrier mesh Models	WP Nr. 2	Feb. 2006	28.03.2006	6,97	8,26	ISF-OEAW
2.6.	Simulation, Transfer Functions& clustering	WP Nr. 2	Sept. 2006	08.11.2006	7,77	8,17	ISF-OEAW
2.7.	Visualization	WP Nr. 2	Sept. 2006	10.10.2007	2,41	4,4	ISF-OEAW
2.8.	Psychoacoustic irrelevance	WP Nr. 2	Feb. 2007	26.07.2007	2,23	2,4	ISF-OEAW
2.9.	Modulation effects	WP Nr. 2	Feb. 2007	26.07.2007	2,23	2,4	ISF-OEAW



Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Estimated indicative person-months	Used indicative person-months	Lead contractor
2.10	Subjective preference tests	WP Nr. 2	Feb. 2007	26.07.2007	2,23		ISF-OEAW
2.11	Final report	WP Nr. 2	Apr. 2007	26.07.2007	1,66		ISF-OEAW
		<b>WP Nr.3 DYNAMIC &amp; STATIC CALCULATION</b>			<b>9,3</b>	<b>9,3</b>	<b>CORDES</b>
3.1.	Load diagrams of high speed trains	WP Nr. 3	Feb. 2006	09.05.2006	1,8	1,8	CORDES
3.2.	Visualization of dynamic behaviour	WP Nr. 3	Feb. 2006	09.05.2006	1,8	1,8	CORDES
3.3.	Specification of fatigue strength behaviour	WP Nr. 3	Feb. 2006	26.07.2007	1,5	1,5	CORDES
3.4.	Structural design and specification of construction elements	WP Nr. 3	April 2006	26.07.2007	2,2	2,2	CORDES
3.5.	Verification of the static-dynamic behaviour	WP Nr. 3	Nov. 2006	26.07.2007	2	2	CORDES
		<b>WP Nr.4 NEW NOISE ABATEMENT TECHNOLOGY</b>			<b>23</b>	<b>24</b>	<b>AIDICO</b>
4.1.	Develop new noise absorbing materials	WP Nr. 4	May 2006	30.01.2007	12	12	AIDICO UGENT
4.2.	Mechanical and durability performance of new absorptive materials	WP Nr. 4	Feb. 2006	24.05.2006	5	6	AIDICO UGENT
4.3.	Assessment Normal acoustic impedance	WP Nr. 4	Nov. 2006	27.07.2007	5	5	AIDICO
4.4.	Cost-benefit analysis of new noise abatement technologies	WP Nr. 4	Nov. 2006	27.07.2007	0,5	0,5	AIDICO UGENT



Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Estimated indicative person-months	Used indicative person-months	Lead contractor
		<b>WP Nr 5 DESIGN &amp; DEVELOPMENT</b>			<b>22</b>	<b>11,9</b>	<b>CALMA / MIZAR</b>
5.1	Listing of the state of the art of innov. Noise barrier technol.	WP Nr. 5	Nov. 2005	17.07.2006	5,3	3,9	CALMA / MIZAR
5.2	Matrix evaluation of design drafts	WP Nr. 5	Feb. 2006	17.07.2006	4,5	3,6	CALMA/ MIZAR
5.3	Selection of designs and elaboration of specifications	WP Nr. 5	Nov. 2006	14.07.2008	3,8	2,7	CALMA / MIZAR
5.4	Revision of designs and elaboration of specifications	WP Nr. 5	Mar. 2007	29.05.2007	1,5	1,2	CALMA / MIZAR
		<b>WP Nr. 6 TESTING PROTOTYPE</b>			<b>22,3</b>	<b>40,1</b>	<b>CALMA / MIZAR / KEMPTEN</b>
6.1.	Mock prototypes	WP Nr. 6	Nov. 2006	27.04.2007		4,7	CALMA / MIZAR
6.2.	Laboratory test results	WP Nr. 6	Nov. 2006	01.06.2007		11,7	CALMA / MIZAR
6.3.	Shielding effect tests result and evaluation	WP Nr. 6	Nov. 2006	31.01.2007		2,3 / 8	CALMA /UNI KEMPTEN
6.4.	Pilot production of barrier elements and implementation	WP Nr. 6	Nov. 2006	14.01.2008		4,0	CALMA / MIZAR
6.5.	Evaluation of results of experiments	WP Nr. 6	Nov. 2006	14.01.2008		1,3	CALMA / MIZAR
6.6.	Calculation and tests on ZIG ZAG barriers	WP Nr. 6	April 2007	31.07.2007		6	UNI KEMPTEN



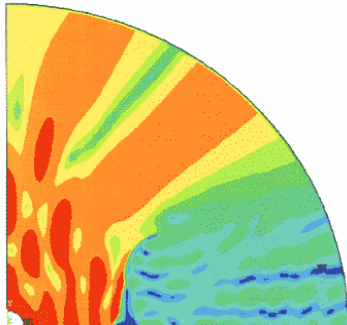
Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Estimated indicative person-months	Used indicative person-months	Lead contractor
		<b>WP Nr 7 PROJECT MANAGEMENT</b>			<b>4,8</b>	<b>9,9</b>	<b>CALMA</b>
7.1.	Coordinated organisation tools (Manual)	WP Nr. 7	Juni 2005	04.11.2005	1	1,2	CALMA
7.2.	Plan for using & dissemination o knowl. outline	WP Nr. 7	Oct. 2006	09.05.2006	0,5	0,3	CALMA
7.3.	Project Web site	WP Nr. 7	Oct. 2005	06.02.2006	0,2	0,3	CALMA
7.4.	Project Presentation	WP Nr. 7	Oct. 2006	30.11.2005	0,4	0,3	CALMA
7.5.	Milestone 1 Coordination event & report	WP Nr. 7	Nov. 2006	05.04.2006	0,4	0,9	CALMA
7.6.	Milestone 2 Coordination event & report	WP Nr. 7	May 2006	23.06.2007	0,4	2,7	CALMA
7.7.	Plan for using & dissemination o knowl. 1. version	WP Nr. 7	May 2006	23.06.2007	0,5	0,2	CALMA
7.8.	Milestone 3 coordination event & report	WP Nr. 7	Nov. 2006	01.06.2007	0,5	2,6	CALMA
7.9.	RP2 periodic report	WP Nr. 7	Apr. 2007	14.07.2008	0,4	0,4	CALMA
7.10	Final project report	WP Nr. 7	Apr. 2007	14.07.2008	0,5	1,0	CALMA

**7.10.2.2.9. List of Milestones**

Milestone no.	Milestone name	Workpackage no.	Date due	Actual/Forecast delivery date	Lead contractor
Milestone Nr. 1	Collection data base & state of the art	WP Nr. 1 - 6	30.09.2005	13. 12.2005	CALMA/Management
Milestone Nr. 2	Research & Development	WP Nr. 1 - 6	31.03.2006	27.04.2006	CALMA/Management
Milestone Nr. 3	Research & Development, exchange conclusion	WP Nr. 1 - 6	13.19.2006	13.02.2007	CALMA/Management
Milestone 1.1	Report on relations between noise eff & psychoac. Perception	WP Nr. 1	Nov. 2005	Aug..2008	STOCKHOLM UNIVERSITY
Milestone 1.2	Draft Definition of friendly noise	WP Nr. 1	April 2006	Nov.2006	STOCKHOLM UNIVERSITY
Milestone 1.3	Recommendations on design	WP Nr. 1	Oct. 2006	Nov. 2006	STOCKHOLM UNIVERSITY
Milestone 2.1	Acquisition of noise data	WP Nr. 2	Oct. 2005	May 2006	ISF - OEAW
Milestone 2.2.	Sound barrier geometry, Mesh Models	WP Nr. 2	Feb 2006	March 2006	ISF - OEAW
Milestone 2.3	Simulation, Transfer functions, Clustering	WP Nr. 2	Sept. 2006	Okt. 2006	ISF - OEAW
Milestone 3.1	Construction Study & Behaviour Research	WP Nr. 3	Feb. 2006	May 2006	CORDES
Milestone 3.2	Dimensioning & Calculations	WP Nr. 3	April/Mai 2006	July 2007	CORDES
Milestone 4.1	Catalogue of absorber properties and application in noise barriers	WP Nr. 4	May 2006	Jan. 2007	AIDICO
Milestone 4.2	Visualization of interference effects of new noise barriers	WP Nr. 4	Feb. 2006	May 2006	AIDICO
Milestone 4.3	Assessment of nanotechnological option in noise abatement	WP Nr. 4	Nov. 2006	July 2007	AIDICO



Milestone no.	Milestone name	Workpackage no.	Date due	Actual/Forecast delivery date	Lead contractor
Milestone 4.4	Cost analysis of new noise abatement technologies	WP Nr. 4	Nov. 2006	July 2007	AIDICO
Milestone 5.1	State of the art of innovative noise barrier technology	WP Nr. 5	Oct. 2005	July 2006	CALMA /
Milestone 5.2	Evaluation matrix of design drafts and specifications.	WP Nr. 5	Oct. 2005	July 2006	CALMA
Milestone 5.3	Revised design drafts of selected prototypes	WP Nr. 5	Oct. 2006	Aug. 2007	CALMA
Milestone 5.4	Final designs and specifications of noise barrier prototypes	WP Nr. 5	Oct. 2006	June. 2007	CALMA
Milestone 6.1	Laboratory testing result of 6.1	WP Nr. 6	Dec. 2005	April 2007	CALMA
Milestone 6.2	Laboratory testing result of 6.3	WP Nr. 6	Oct. 2006	Jan 2007	CALMA
Milestone 6.3	Pilot projects in different environments identified	WP Nr. 6	Dec. 2006	June 2007	CALMA



# CALM-TRACKS & ROUTES

EU – Project CRAFT  
Contract No: COOP – CT – 2005 - 017609  
6 FP - 2003 - SME - 1

## Deliverable No: 7.10 Final Report

### Final activity report

#### Section 3 Consortium Management

Period covered from: 2004-04-20  
To: 2007-08-20

Date of preparation:  
2008-07-10

Start date of project: 20.04.2006

Duration: 28 months

Project coordinator name: Ursula Brunbauer

Project coordinator organisation name: CALMA-TEC Lärmschutzsysteme GmbH



## Section 3 Consortium Management

### 7.10.2.3. Consortium Management Tasks and their achievement

#### Operational structures, responsibilities

Structure and responsibilities of the project are defined in the Consortium Agreement, which was signed and sent to the Commission at project start.

#### Problems occurred

##### Partner Oy MIZAR bankrupt

The coordinator has first noticed that communication with partner **Oy Mizar Ab** from Finland (phone and mail) was impossible. After sending registered mail, in the begin of December we have got the information that the company has been declared bankrupt by Court at the begin of November.

In the same decision the Court has appointed Mr. Hannu Ylönen attorney-at-law as the estate's administrator, writing as follows:

*" Being declared bankrupt generally means according to Finnish Bankruptcy Act that all assets of the company are subjected to the administrator's control. Also concerning the contractual relations the estate becomes the contractual party instead of the Company. Therefore it can be said that the estate is the contracting party in the project as from the 2<sup>nd</sup> of November.*

*Our common concern at the moment is the future of the said project at least on Oy Mizar Ab's part. Right now the estate's administrator is trying to find a possible buyer for the Company's business operations. There are several Finnish companies that have shown their genuine interest towards the business operations of Oy Mizar Ab. The negotiations are in an active phase right now.*

*Despite of the current situation of Oy Mizar Ab we wish to inform you that it is in our interest to continue with the project. If the administrator succeeds to close the deal with some of the candidates we strongly believe that the buyer also wishes to participate in the project and continue to work with you.*

*At the moment both the representatives of the company, Mr. Maaranen and Mr. Liski, and the estate's administrator are asking you to wait for the clarification of the current situation. The selling of the business operations should be closed within following weeks.*



After having informed EC – officers and having their consent the steering committee of the project decided to wait until midterm for clarification of the situation and to continue together with the buyer of the company.

The company had been bought, but CALMA- TEC did not succeed in contacting the buyer nor ever had any chance to get declaration of use of the prepayed money.

There was a big interest of the consortium in the special welding technology MIZAR provides. In combining both MIZAR´s and CALMA – TEC´s technology layed the vision of a innovative, excellent performing and cheap product.

As there was no positive result – the consortium decided about shifting work to other partners and to follow an alternative working program to develop a leight weight and cheap product.

### **Contractors:**

Contractors contribution was very satisfying in fulfilling work and tasks, preparing deliverables and participation of meetings.

Contribution for the RP2 and final reporting was more difficult to receive and partly there was none, though audit certificates and Form C´s were delivered completely.

### **Coordination Activities**

Communication between partners and coordinator was currently practiced, 3 meetings, (including mid term meeting at the end of first period) were held.

#### Kick off meting: 26. of April 2005

At the kick off meeting the Consortium agreement was completed.

Representatives for Steering committee SME Committee and RTD Committee have been designed and representation rules were decided. With regard to a simple organisation of the project it has become agreed among the participants that Steering Committee Representatives are also SME/RTD representatives.

A Project Manual (Del 7.1.) was produced by the coordinator and distributed to all partners.

#### Interim Meeting , 12. to 13. December 2005

Objective of the meeting was to report on work done so far and to show first results to exchange and discuss new knowledge and problems, to line out and prepare following work planned, to give attention to the consortium for what has to be prepared, in particular for the plan for using and dissemination of knowledge (Del.7.2.)



### Mid Term Meeting, 26. to 27. April 2006

Objective of this meeting is to exchange information of each participants work done in period one (Month 1-12), to discuss results and experience and its consequence for design and development of innovative barriers and the project as a whole.

### Interim Meeting, 12.-13. February 2007

Objective of this meeting was

- to exchange information of each participants work, to discuss and decide what has to be done during remaining period of the project and
- to face results gathered by work and confront results with project objectives

At this time there were still a lot of unsolved problems within development. Development of light weight constructions, originally planned in collaboration CALMA/MIZAR was not yet advanced.

To bring work and results to a usable goal, the consortium decided to apply for prolongation, which has been made with DoW Annex I Update.

## **Milestones & Contingency, Deviation & Corrective Actions**

Due and actual dates see Section 2, List of Milestones

### **Deviations & Corrective actions**

#### WP1 Psycho – Acoustic:

Data material was not as complete as wanted, bad weather hindered measuring. Analysis and evaluation has been made. No corrective actions.

#### WP2 Digital Simulation:

Result is of great interest, more usable criteria than expected. No corrective actions.

#### WP3 Dynamic & Static Calculations:

No correction in planned work for dynamic calculation on the HG-C development.

Though essential calculations on the light weight product that was to be developed was obstructed by the loss of the MIZA competence. In consequence calculations had to be substituted by testing (AIDCO/GANDIA, UNIV. KEMPTEN).

#### WP 4 Absorption material:

Work and result were absolutely essential for progress of development prototypes. As mentioned above requirement on AIDICO's work was enlarged due to the MIZAR recovery.



WP 5 Design and Development:

At begin of the project focus lay on refraction edge and its shape, looking for best efficiency. During the project development process another focus showed up:

- use and shape of the absorptive material in different implementations
- consequence of dynamic load standards from German Railway.

Consequence affected WP6 – prototypes and testing

WP 6 Build and test prototypes

Test results that did not meet requirement at the beginning of the project, MIZAR drop out, new dynamic load standards, new upcoming aspects (reflection behaviour) caused more prototypes built than provided and more tests inevitable.

Consequence was prolongation of the project, more tests necessary made by AIDICO/GANDIA, UNI KEMPTEN. However results achieved of great value.

WP 7 Project Management

We tried, but it was difficult to replace MIZAR by another contractor. As their technique is based on a newly patented production knowledge, it was impossible to find a company with the same ability. Another contractor was considered, but no one was found.

Late submission of deliverables and reports:

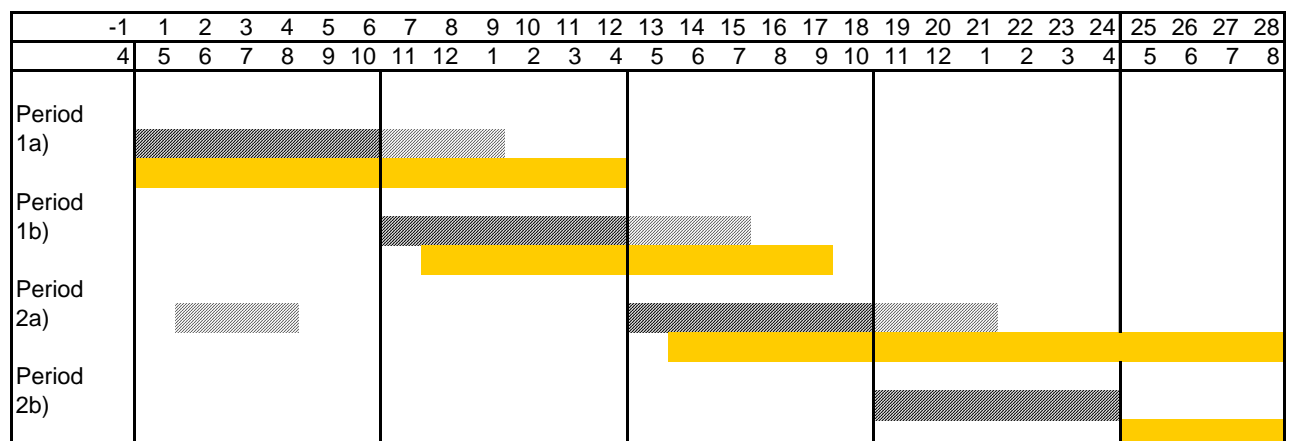
A lot of valuable work has been followed with concentration, to report it in the required way, was frequently constrained by operative requirements of the company.

CALMA-TEC with its new and innovative product developed, has evoked blockades of business competitors which were to be survived for the small and young SME.

Some month of sickness of the project coordinator has delayed additionally.

Consequence on time of deviations occurred

1st line            Month of the project  
2nd line            Month of the year





Period 1a) collection of data base, state of the art

Period 1b) Research and development

Period 21) Research and development, build and test new prototypes

Period 2b Identify pilot projects and prepare implementation

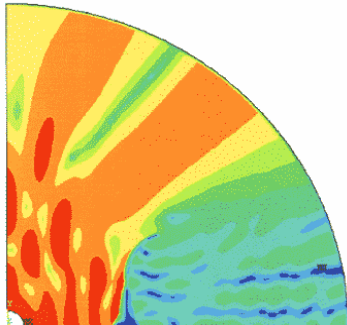
This barchart shows in simplyfied way the consequence of deviations and their corrective.

#### Consequence on cost of deviations occurred

MIZAR budget has been used by those contractors which have overtaken work for development of light weight constructions, CALMA-TEC, AIDICO, CELLOFOAM, UNI KEMPTEN. Those are the constructors that have deviations of cost and manwork to budget. (see also in Management report Section 1/ Summary note in deviations from cost & person month.

A big part of MIZAR's budget was allocated in cost for use of their welding machine. Shifted budget was consumed by manwork, thus the number of Manminth of the whole project increased.





# CALM-TRACKS & ROUTES

EU – Project CRAFT  
Contract No: COOP – CT – 2005 - 017609  
6 FP - 2003 - SME - 1

## Deliverable No: 7.10 Final Report

### Final activity report

#### Section 4 Other Issues

Period covered from: 2004-04-20  
To: 2007-08-20

Date of preparation:  
2008-07-10

Start date of project: 20.04.2006

Duration: 28 months

Project coordinator name: Ursula Brunbauer

Project coordinator organisation name: CALMA-TEC Lärmschutzsysteme GmbH



## 7.10.2.4 Section 4 Other Issues

### **Co-operative Research projects**

#### Contribution of the SME's, of the RTD performers and of other enterprises and endusers:

There are no contributions of enterprises and end-users in this project.

It is of vital importance to integrate end users in different European countries (Deutsche Bahn, ASFINAG, Swedish railway company, and other) for pilot projects. Resources budgeted for the CALM TRACKS project are not sufficient to finance pilot projects as such.

#### Benefits of the work of the RTD performers to SME's:

It is obvious that RTD performers work was of great interest and impact for design and development in this project:

#### PSYCHO ACOUSTIC - RTD partner Stockholm University:

Work on psycho acoustic is of great interest and can give great impact to the subject "noise protection". In general there is some research done on psychoacoustics, but in case of this project there was the experiment to implement psychoacoustic results in design decisions.

The conclusion is that the project was too small to achieve really good usable results.

It would be worth to continue with research in that subject on a wider plan.

#### DIGITAL SIMULATION – RTD partner Austrian Academy of science

Digital simulation was of great importance to give direction for selection where to go in prototype design work. To achieve usable results that can be used in regulations of health standards or regulation tools, the project was too small.

It would be worth to continue with work on this subject, especially to develop practicable planning tools.

#### NEW ABSORPTIVE MATERIALS – RTD Partner AIDICO (GANDIA), UGENT

Research work from AIDICO concerning absorptive material - efficiency and ageing tests - was of highest importance for the development of a new generation noise protection barriers.

Cooperation partners UNIVERSITY of GANDIA, were important because of their equipment (reverberation room etc.)

University of GHENT had some contribution on the research of existing materials and qualities.



BUILD AND TEST PROTOTYPES – RTD Partner University of Kempten

Testing of different prototypes brought highly important results, specially on the reflection behaviour. The influence and importance of reflection behaviour of noise protection barriers is of growing importance. Thus these results are of use for marketing.

Balance of work/resources between RTD performers and SMEs is:

**45,8 % SME – 54,2 % RDT**

It is of vital importance to integrate end users in different European countries (Deutsche Bahn, ASFINAG, Swedish railway company, and other) for pilot projects. Resources budgeted for the CALM TRACKS project are not sufficient to finance pilot projects as such.

CALMA- TEC is a young company with limited resources. The Cooperative research project CALM TRACKS & ROUTES has given a big impact on product – development.

To generate biggest efficiency for the money spent by the EC for research contribution, support of SME partner in market entry etc. would be of great worth.





## Plan for using and disseminating the knowledge

### Content

This plan is to show activities undertaken in relation to the use or dissemination of project results

**Section 1 – Exploitable knowledge and its use**

**Section 2 - Dissemination of knowledge**

**Section 3 – Publishable results**

### Section 1 - Exploitable knowledge and its Use

#### Overview table

This table presents possible actual and future exploitable results (objectives, visions,), defined by contractors, having a potential for

- industrial or commercial application in research activities
- or for developing, creating or marketing a product or process
- or for creating or providing a service.

Exploitable Knowledge (description)	Exploitable product(s) or measure(s)	Sector(s) of application	Timetable for commercial use	Patents or other IPR protection	Owner & Other Partner(s) involved
Foam processing	New acoustic abatement and /thermal isolation foamed products	Construction: Buildings and anti-noise elements	2007 - 2012	Patent of product and process: Formulation and implementation process for new foams	AIDICO
Pneumatic waste Based material production process	New pneumatic waste material	Construction: Buildings and anti-noise elements	2007 - 2012	Patent of product and process: Formulation and implementation pneumatic wasted based materials	AIDICO
Nanomaterials (zeolite, nanosilicia, nanoclays) application to produce foam materials	New acoustic isolation products	Construction: Buildings and anti-noise elements	2007 – 2012	Patent of product and process: Formulation and implementation process for new foams	AIDICO



Exploitable Knowledge (description)	Exploitable product(s) or measure(s)	Sector(s) of application	Timetable for commercial use	Patents or other IPR protection	Owner & Other Partner(s) involved
Static and Dynamic behaviour of high speed train walls, Design and construction	High speed train noise barriers CALMA-TEC HG-C barrier	Railway companies, in various countries	From 2008	Patent for high speed train noise barrier CALMA-TEC HG-C	CALMA – TEC /Inv. CORDES /Inv. AIDICO /Inv. CELLO
Calculation and welding technology for aluminium panels	New noise barrier types	All ranges of noise protection request, mainly in traffic	2006	Patent of noise barrier construction	CALMA <del>MIZAR (dropped out)</del>
Design, construction and calculation for Light weight noise protection walls	Light weight noise barriers CALMA-TEC LB-C	All ranges of noise protection request, mainly in traffic	From 2008	Patent of noise barrier construction CALMA-TEC LB-C	CALMA
Design and Construction (connection technology) for Defraction edge	Light weight Device to place on the top of barriers CALMA-TEC PIN spoiler	All noise protection request, mainly in traffic	From 2008	Patent of noise barrier construction CALMA-TEC PIN	CALMA / inv.UNI KEMPTEN / inv.AIDICO
Simulations of Shielding effect at different noise barriers solution	High performing noise barriers, with high focus on design and good integration in landscape	Railway and autoroute suppliers in various countries	Future – Many more resources required to develop for commercial use	Licensed software for noise behaviour simulation as planning tool	OEAW / inv. CALMA - TEC
Noise mitigation efficiency of barriers	Noise protection planning Know How	All ranges of noise protection request, mainly in traffic	Future	Know-how for planning on urban scale, consulting, further research	CALMA, CORDES, MIZAR, AIDICO, OEAW, SU
Model for perception tests of noise barriers	Planing /Testing tool	All ranges of noise protection request, mainly in traffic	Future	Standard way of testing “friendly noise”	SU / CALMA

**IPR intellectual property rights patents**

IPR regulation according to Consortium agreement:

*“The knowledge arising from work in this project will be allocated to its belonging WP and shared between the SME partners of the project under different proportions according to the ratio of contribution described hereafter:”*

**WP1 – no patent or licence**

*Cons. Agreement: “The knowledge arising from work carried out in this WP will be allocated to all SME partners of this project, concerning their contribution of SME eligible cost to the SME subtotal budget for innovation related activities.”*

The objective to apply and obtain a licence for software or planning tools coming out of the “friendly noise” idea, has not become reality, projects resources were too small to achieve these visions.

**WP2 – no patent or licence**

*Cons. Agreement: “Any software arising from work carried out or developed under the project or applied by OEAW under the project will remain absolute and exclusive property of OEAW. Any result of specific calculations performed under the project will become knowledge arising from work carried out in W2 and allocates to all SME partners of this project.”*

The objective to develop software or planning tools coming out from the simulation idea idea, has not become reality, a huge amount of data is required for this, projects resources were too small to achieve these visions.

**WP3 - has lead to patent application for**

High speed train noise barrier **CALMA-TEC HG-C** patent (WP3,WP5,WP6)

*Cons. Agreement: “The knowledge arising from work carried out in this WP will be allocated to all SME partners of this WP, depending on the realised work.*

CALMA-TEC – HG-C patent: CORDES did not want to share the patent, its contribution to this development is regulated by a cooperation contract between CALMA-TEC and CORDES.

**WP4- no patent or licence**

*Cons. Agreement: “The knowledge arising from work carried out in this WP will be allocated to all SME partners of this Wpand AIDICO, concerning their contribution of SME eligible costs and AIDICO’s eligible cost to the SME subtotal budget plus AIDICO’s subtotal budget for RTD or innovation related activities.*

**WP5 and WP6 - have lead to patent application for**

Light weight noise barrier **CALMA-TEC LB-C** patent (WP5, WP6)

Defraction device **CALMA-TEC PIN Spoiler** patent (WP5, WP6)

*Cons. Agreement: “The knowledge arising from work carried out in this WP will be allocated to all SME partners of this WP, depending on the realised work.*

No other partners involved.

Planned collaboration for development with MIZAR has not happened because of the bankruptcy of MIZAR.

CELLOFOAM contributed material and some unsuccessful testing. No significant share at the development of the constructions.

ISOLITH contributed material but without successful result.

**Success of reaching patentable constructions like above listed lies in the fact that CALMA – TEC, and CORDES, have invested far more resources than could have been claimed within the project.**



## Exploitation of the result

Exploitation of the above listed patented products are going to be commercially exploited and marketed by

**CALMA-TEC Lärmschutzsysteme GmbH**

Mödling, Austria

**Subject of business:**

production of light-weight, high performance noise-protection systems

## **Products**



CALMA-TEC is concentrating on the following product lines:

- 1.) **HG-C** (high-speed C profile elements): application especially for high-speed trains up to 300 km/h
- 2.) **LB-C (ZIG-ZAG)** (light-weight aluminium profile): application especially for express- and motorways
- 3.) **PIN** (comb shaped top-part absorber): a noise spoiler as possible defraction edge device on top of barriers for any noise protection unit to increase overall absorption performance
- 4.) **MADE-TO-MEASURE**: noise protection systems made to measure profiting from architectural, urban planning and noise protection systems product development know-how.

## **Clients**

**Development:** by 2007/2008 the development of the CALMA-TEC noise barriers is concluded. Products are ready for series production. Further development of noise protection systems is in plan (e.g. photovoltaic etc.)

**Final clients:** Railways: German *DB*, Italian *FS*, Spanish *ADIF* and other European railway companies

Express- and motorways: Austrian *ASFINAG*, German *DEGES*, European express- and motorway contractors and operators

In many cases the installation of noise-protection walls is carried out by a general contractor.

Also industries and other final buyers where noise abatement is an issue are potential clients.

## **USP**

- **Economy:** extraordinary life-cycle performance (higher efficiency than low-cost walls), long durability and low maintenance cost.
- **Zero reflection:** No pendulum reflection between vehicle and noise barrier and no noise molestation for residents on the opposite side.
- **New absorbing elements** made of non-respirable (fine-particle-free) and recyclable material with highest noise-absorption value.
- **Light-construction:** Made of a aluminium module system it is comparatively light-weight and easy to set up and to maintain.
- **Fit for high-speed train-tracks (300km/h):** durability for dynamic loads for over 50 years guaranteed in fatigue-tests.
- **Lower construction height (aprox. 5m less) and equal acoustic quality** due to the soft-bent edge; Free sight for railway passengers and drivers.



## Market

Research on the EU market situation has worked out below figures.  
9-10 billion EUR market potential next ten years (2008-2018).

Quality of information differs very much from one country to the other. Datas used below are based on publications for Austria, Germany, Switzerland, internet and other informations for the Netherlands, Italy, Spain and other EU countries.

CALMA-TEC products are state of the art and have already set new standards for noise protection.

**Present goal is to implement CALM-TEC's top-quality products on an international level, aiming for a 5% market share within the next 8 years:**

Thus an annual turnover of 45 Million EUR can be aspired.

Annual budgets Noise protection walls (date 2007)			survey market potential actions for noise protection (2007 - 2017)		
Nation	Autobahn Mio.EUR /Jahr	Bahn/ Mio. EUR /Jahr	Nation	Mio EUR / 10 Jahre	Surce
A	50	30	A	0,5 Mrd.Strasse 0,3 Mrd. Bahn	Internet UIC Bericht
D	100	80	D	1,5 Mrd. Straße 0,8 Mrd. Bahn	Hochrechnung Hochrechnung
CH	75	70	CH	2,5 Mrd.Strasse 1,2 Mrd Bahn	Schätzung genehmigt d. BR
I	50	70	I	0,5 Mrd. Straße 1,8 Mrd. Bahn	Schätzung UIC Bericht
ESP	20	100	ESP	2,6 Mrd. (3% v. 87 Mrd)	EU – Prognose high – speed
NL	nicht bekannt	100	NL	0,6 Mrd.	ProRail
<b>Summe Mio EUR</b>	<b>295</b>	<b>450</b>	<b>Summe Mrd. EUR</b>	<b>12,3</b>	
<b>Other countris Mio EUR</b>	10% (Schätzung) von Summe Mio □	<b>74,5</b>	<b>Other countries Mrd. EUR</b>	10%	<b>1,23</b>
<b>Total Mio €</b>		<b>820</b>	<b>Total Mrd. EUR</b>		<b>13,53</b>
<b>Noise protection wall net (= without columns and foundation)</b>	66%	<b>541</b>	<b>Noise protection wall net (= without columns and foundation)</b>	66%	<b>8,93</b>
<b>Calma Tec share Mio EUR</b>	<b>5%</b>	<b>27</b>	<b>Calma Tec share in Mio €</b>	<b>5%</b>	<b>0,45 Billion.€</b>

## Competition and price

Competition:

Existing noise protection walls are made from concrete, aluminium panels or wood. Low prices (ca. 100 EUR/m<sup>2</sup>) have been established.



### Qualities:

During the last 50 years there has not been any substantial technical development in this field. The work of the CALM TRACKS project and CALMA-TEC's work has been at the begin of a paradigm shift. Qualities like reflection, lower construction height and life cycle performance are getting more and more attention.

### Price:

#### LB-C Elements:

Though price is about double than the price that is usual now (100EUR/m<sup>2</sup> : 200EUR/m<sup>2</sup>), high durability of CALMA-TEC products is 3 to 4 times higher. Thus the price that can be compared is 33% to 25% (100 EUR/m<sup>2</sup> : 66 - 50 EUR/m<sup>2</sup>).

#### PIN Elements:

There are few comparable product on the market, price is similar, PIN quality and durability is much higher.

#### HG-C Elelemts:

Presently CALM-TEC is the only competitor with a product approval by the *Deutsche Bahn* Authority for high speed trains (300km/h). This is an international benchmark and safeguards solid competitiveness.

### Marketing:

CALMA-TEC has made big efforts to get attention from road and train authorities in Austria, Germany and Spain.

It is a difficult process to convince decision making authorities to use new and innovative products: inactivity and phlegm, existing connections, and fear of risk making pilot projects stand against openness for innovation.

By now the situation is changing:

- functioning and certificated high speed train solutions are needed, HG-C product is the first answer to this need .
- a solution to increase impact, without the need to build new foundations and columns is also needed, PIN product is an answer.
- Problems with reflection get increasing awareness from neighbouring population and authorities.



## Section 2 – Dissemination of knowledge

The following table shows all information and input from partners collected by project management.

Overview table

Planned/actual Dates	Type	Type	Countries adressed		Partner responsible /involved
Acoustic absorption versus durability test for D2600, PETs, Isolith material	Scientific publication	Industry (Construction material suppliers)	Over the world	Scientific community	AIDICO, UGENT, CALMA-TEC
Simulation of Sound field of barrier designs and materials	Scientific publictn. – Contribution to Tecniacoustica Congress 2006	Research Industry (Construction Governments)	Over the world	Scientific community	AIDICO, UPV
Simulation of Sound field of the barriers for designs and materials	Scientific publication	Research Industry (Construction Governments)	Over the world	Scientific community	AIDICO, UPV OEAW
Acoustic, mechanical and durability effect of nanoporous additives into foam materials	Scientific publication	Research Industry (Construction Governments)	Over the world	Scientific community	AIDICO, UGENT
Noise mitigation efficiency of barriers: annoyance-.based psychoacoustic tests	Scientific publication and acoustic conference paper	Acoustics and Psychoacoustics	Worldwide	Scientific community Local and National authorities	SU
Noise mitigation efficiency of barriers: Tests based on perceived soundscape quality	Scientific publication and acoustic conference paper	Acoustics and Psychoacoustics, Urban planning	Worldwide	Scientific community Local and National authorities	SU
What characterizes good soundscapes behind barriers?	Scientific publication and acoustic conference paper	Acoustics and Psychoacoustics, Urban planning	Worldwide	Scientific community Local and National authorities	SU
Mitigation psychoacoustics	Scientific publication and acoustic conference paper	Acoustics and Psychoacoustics	Worldwide	Scientific community European community	SU



Planned/actual Dates	Type	Type	Countries addressed		Partner responsible /involved
Perceptual efficiency of road traffic noise barriers	Scientific publication – Contribution to Inter-noise Congress 2007	Acoustics and Psychoacoustics	Worldwide	Scientific community European community	SU
Soundscape psychopics in place	Scientific publication – Contribution to Inter-noise Congress 2007	Acoustics and Psychoacoustics	Worldwide	Scientific community European community	SU
Feb. 2006	Publication,	Journal “Arch+Ing Konstruktiv”	Austria	Architects, Engineers, Urban planning	CALMA
July 2006	Lecture, Abstract submitted, Conference paper ISCV13-Vienna	International Congress on sound and vibration	Worldwide	Scientific community	CALMA OEAW
August 2006	Publication “Best Practice – Success Stories”	Publication of Österreichische Forschungsförderungs-Gesellschaft	Austria	Austrian research community	CALMA
August 2006	Publication	Booklet on S35 by ASFINAG	Austria	Local public community	CALMA
April 2007	Publication: “Research Success”	Der Standard – Austrian newspaper	Austria	Austrian public community	CALMA
Dcember 2007	Publication: journal - Auto-Touring: „Pro & Contra Lärmschutzwände“	ÖAMTC - Austrian Automobile und Touringclub	Austria	Austrian public community	CALMA
Mai 2007	Publication: „activity report 6.EU-RP research, development & demonstration	Publication of Österreichische Forschungsförderungs-Gesellschaft	Austria	Austrian research community	CALMA



## Section 3 - Publishable results

### Innovative Noise Barrier Provides “Friendly Noise”

By means of innovative noise barriers, unpleasant noise spectrums should be transformed into “pleasant” noise, while at the same time significantly enhancing shielding performance.

Noise is one of the most wide-spread hazards for human health, as it can cause depression and physical exhaustion. It is an environmental burden that affects an increasing portion of people living in Europe. Improved noise protection is, therefore, a continuously growing challenge in urban planning and street construction, both in the countryside and in densely populated areas. The project "Calm Tracks & Routes" aimed to abate disturbing traffic noise by means of innovative noise barriers and transform unpleasant sound into “pleasant” noise (good vibrations). Its targets are to foster the well-being and acceptance of traffic noise by the affected people, and to achieve a significantly improved shielding performance, acoustic quality and psycho-acoustic performance, combined with an innovative noise barrier design in terms of shape, material and presentation.

### New Materials, Shapes and Surfaces

In order to reach the aforementioned targets, the project focused on the development of shape, construction and materials that improve the shielding effect of noise barriers. For this purpose, the acoustic properties of noise barriers, and also those inherent inside the barriers, are explored in theoretical and practical applications. Furthermore, the noise abatement performance of different shape, material and size is investigated regarding absorption and/or modulation of the sound through interference. Moreover, the project partners also examined new materials and surfaces regarding their noise-absorptive or interference behaviour with the purpose of developing new, non-fibrous absorber materials and verifying their noise abatement efficiency. This also involved the use of nanotechnology. As these new noise absorber materials are not respirable, their utilisation is preferred for health reasons.

### Design and Durability are Key

The visual aspect of noise barriers is also of major importance. They should be attractive in design, allow discrete integration into the landscape, while granting a largely unobstructed view of the surroundings. Top priority is also given to the high durability of noise barriers, including long product life, weathering and shock resistance, crash performance and reflection behaviour.

### Competent Partners from all across Europe

The project, which run from April 2005 to April 2007, is funded within the framework of CRAFT (providing technological assistance for SMEs) of the 6<sup>th</sup> Research Framework Programme of the EU. Contributors to the project are ten organisations from Austria, Belgium, Germany, Finland, Sweden and Spain, coordinated by CALMA-TEC Lärmschutzsysteme in Mödling, near Vienna.

**Exploitable results are noise barrier constructions, applied for patents, prepared for commercial exploitation. Market entry and serial production by:**

**CALMA-TEC Lärmschutzsysteme GmbH**  
Mödling, Austria, [www.calma-tec.com](http://www.calma-tec.com)

CALMA-TEC is concentrating on the following product lines:

**HG-C** (rail solutions)  
**LB-C** (road solutions)  
**PIN** (defraction aid)  
**M2M** (Made to measure)



## HG-C RAIL SOLUTIONS



Highly sustainable and constantly durable noise protection system for railway tracks at all speeds.

### HG-C FACTS:

- constant durability: fit for extreme static and dynamic force exposure
- reflection free
- easy to build
- sustainable and recyclable product
- top design
- protected by patents

### To be used:

- noise protection on railway tracks for all speed ranges (from 0 to over 300 km per hour)
- high static and dynamic force exposure (i.e. ICE, AVE, TGV, cargo trains with special width)
- special constructions

### Design and Technology

HG-C brings top design and high-tech together. The outcome is a product with multiple advantages like high noise protection performance, durability and reflection freedom.

### Noise Protection and Zero Reflection

A CALMA-TEC HG-C noise barrier works two ways: it blocks the noise and absorbs it with its open absorber parts. This two-fold effect is a novelty on the noise protection market. Experts confirm that reflection free materials will be the demanded standard. Residents on both sides of noise sources will benefit from the highest possible acoustic and visual comfort.

### Constant Durability

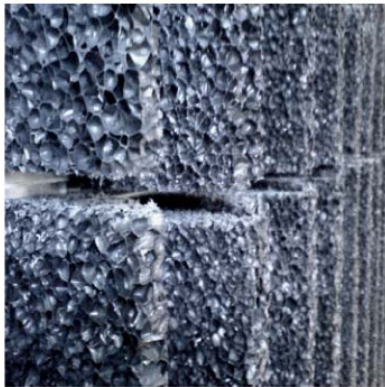
CALMA-TEC HG-C is a „constantly durable“ system, meaning that this noise barrier system withstands 100 million changing-airpressure (corresponding the bypass of a ICE III train) charges without fatigue. To reach that amount of load charges it takes 50 years of trains passing through every 15 minutes (/24h per day/ 365 days a year).

This means that this product is built to protect us and following generations. If the walls – despite expectations – should be taken away all materials can be sold and recycled to a 100%.

July 2008



## LB-C ROAD SOLUTIONS



Lightweight C-shaped and nicely designed noise barrier on motorways:

### LB-C FACTS:

- lightweight construction
- reflection free
- excellent life-cycle cost
- convenient to build up, integrate and rebuilt
- top design and colour composition
- protected by patents

### To be used:

- sustainable solutions for road traffic
- substitution element for sanitation of noise protection barriers
- industrial noise problems

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LB-C is THE barrier-system for sustainable noise-protection solutions on motorways.

### Design and Technology

A smart technology, appealing design and high-class noise-protection abilities are the attributes that make LB-C THE top-product on motorways. The demand for lightweight, visually appealing and highly effective barrier-systems is increasing. LB-C is a solution.

### Noise Protection and Zero Reflection

CALMA-TEC LB-C is a reflection-free (=no echo) product which means that the noise is being absorbed by the barrier. Up until today inconvenient noise reflection and/or noise-deviation has frequently occurred when new barriers were built. Residents on both ways of noise sources will benefit from the highest possible acoustic and visual comfort.

### Life-cycle costs

LB-C is guaranteed to keep its protection performance for 30 years or longer. There are no costs of rebuilding or renovating barriers within this time. LB-C's life cycle costs are lower than those of competitive products. At the end even an economical profit by reselling its parts (aluminium and absorbent material) can be achieved. All components used are to a 100% recyclable.

July 2008



## PIN NOISE DEFRACTION AID



PIN Noise Defraction Aid top-annex increases the – reflection free – noise protection performance at a low construction height.

### PIN FACTS:

- 30% increase in noise-protection
- 100% compatible with all barrier systems
- no reconstruction of existing walls
- easy to mount
- top design
- protected by patent

### To be used:

- top-annex for new or existing walls to increase noise protection performance at a low(er) construction height
- design-element for noise protection systems

Strain of noise and requirements for protection are constantly increasing. Noise barrier systems have to be increased in height or effectiveness to guarantee protection. Pulling up higher walls is often not appreciated, and many times not allowed either due to the static situation and the dynamic charge-exposure. PIN Noise Defraction Aid is the ideal solution to this situation.

### Noise Protection Performance

PIN Noise Defraction Aid top-annex increases (at an element-height of only 30 to 50 cm) the noise protection performance corresponding 1 to 1.5m extra wall. That means PIN increase the overall performance by approximately 30% (calculated as following: 3m noise barrier + PIN = performance of 4 to 4.5 m barrier → plus 30%). Benefits are high: lower construction height, no need of rebuilding existing walls or foundations, higher over all noise performance.

### Application and Setup

The setup is simple and can be carried out easily by mounting the PIN element on the regular steel joists. The element is connected with the noise-barrier system below in a noise impermeable way. PIN can be set up on all kinds of barriers.

### Sustainability & Design

As all other CALMA-TEC products PIN is a sustainable product with maximum durability. Its materials are 100% fit for recycling. Further PIN's oval and comb shaped form represents (apart from the noise performance) a very valuable design element in the interplay of noise barrier, traffic-stretch and landscape.

July 2008



## M2M MADE TO MEASURE



Individually adapted and highly innovative noise protection solutions.

### M2M FACTS:

- bent-edge for lower construction height (spoiler effect)
- project oriented adaption of existing products
- top design
- noise-protection know how
- use of existing patents

### To be used:

- integrated photovoltaic and tunnel-shape barriers
- noise-protection solutions with special design demands
- solution for complex technical noise problems in urban and industrial areas
- visionary work and projects: „noise protection 2050“

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CALMA-TEC „Made to Measure“-products are a range of highly effective patented solutions to noise problems.

We solve complex problems and are able to build curved barriers with lower construction heights, tunnel-shaped closing of noise sources or a barrier system as an energy producer using integrated photovoltaic.

### Design

Experience and vision in architecture guarantee our customers the ideal solution according to the technical and creative necessities of the situation.

### Patent Solutions

One of our many patents enables us for example to build a lower wall while maintaining the same noise protection level of a higher wall. (2,88m bent CALMA-TEC barrier typ M2M Brannenburg correspond 4m high straight barrier). This and many other solutions can be offered „made to measure“.

### Know-How

We have gained enormous great experience and knowledge to reach expertise in the field of noise protection throughout our business operations and intensive innovation and research labour. This enables us to find the right solution in every case.

July 2008





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## **Section 1 Justification of major cost items and resources**

### **Justification of major cost items and resources**

#### **7.10.3.1.1. CALMA – TEC**

Workpackage 5 : DESIGN & DEVELOPMENT      76% from budget

Workpackage 6: TESTING PROTOTYPE              223 % in relation to budget

Significant changes of cost items and use of resources have been caused by additional work in the program:

- Develop, build prototypes, test and measure noise protection qualities after failure in the result of the first version of the construction. Building prototypes for in situ measuring at a track of Deutsche Bahn in North Germany.
- Develop, build prototypes, test and measure different construction versions of the spoiler
- Develop, build prototypes, test and measure of different types of light weight construction

Workpackage 7: PROJECT MANAGEMENT      261% from budget

MM Budget was used at 90% almost during RP1, during RP 2 use of working hours arrived at 170% from budget,

Work for coordination was most exceeding post, travel cost were less than budget.

Cost for project management is limited, therefore a significant part of achieved working hours is not claimed by the project management of CALMA-TEC.

#### **OVERALL TIME SHEET**

The following overall time sheet shows work hours for the period, based on monthly time sheets of all working persons

Following Abbreviations are used for persons/roles:

- UB      Ursula Brunbauer, project coordinator
- WB      Wolfgang Brunbauer, leader WP 5 and 6, senior technician,
- PB      Pia Plank, Assistant
- MV      Maggy Verfaillie, Assistant
- TE      Thomas Eichinger, Technician
- JF      Josef Feichter, technician
- BE      Birgit Eschner Assistant



OVERALL TIME SHEET		WP Soll Mon	WP ist Mon	WP soll h	WP ist h	%	UB	PB	MV	WB	TE	JF	BE
<b>WP 5</b>	<b>WP 5 DESIGN &amp; DEVELOPM.</b>	15	9,2	2.533	1.923,0	76%	UB:Ges	PB	MV	WB:Ges	TE:Ges	JF	BE
5.1	Listing of the state of the art	5,3	3,9	887	654,0	74%	0,0	0,0	15,0	67,0	572,0	0,0	0,0
5.2	Matrix evaluation of design drafts	4,5	3,6	760	609,0	80%	0,0	0,0	5,5	238,5	365,0	0,0	0,0
5.3	Selection of designs	3,8	2,7	633	461,0	73%	46,0	0,0	0,0	123,0	292,0	0,0	0,0
5.4	Revision of designs	1,5	1,2	253	199,0	79%	0,0	0,0	0,0	64,0	135,0	0,0	0,0
<b>WP 6</b>	<b>TESTING PROTOTYPE</b>	10,8	24,1	1.824	4.071,0	223%	UB:Ges	PB	MV	WB:Ges	TE:Ges	JF	BE
6.1	Mock prototypes	2,7	4,7	456	800,0	175%	44,0	0,0	0,0	237,0	519,0	0,0	0,0
6.2	Laboratory test result 2005	1,6	1,7	274	292,0	107%	20,0	0,0	0,0	139,0	133,0	0,0	0,0
	Laboratory test result 2006-2007	1,6	10,0	274	1.685,0	616%	141,0	0,0	0,0	470,0	450,0	624,0	0,0
6.3	Shielding effect test	1,1	2,3	182	396,0	217%	41,0	0,0	0,0	74,0	281,0	0,0	0,0
6.4	Pilot production	2,7	4,0	456	680,0	149%	63,0	0,0	0,0	149,0	468,0	0,0	0,0
6.5	Evaluation of results	1,1	1,3	182	218,0	120%	0,0	0,0	0,0	95,0	123,0	0,0	0,0
	<b>SUMME Stunden / Mon</b>		<b>33,3</b>	<b>4.357</b>	<b>5.994</b>	<b>138%</b>	<b>355,0</b>	<b>0,0</b>	<b>20,5</b>	<b>1.656,5</b>	<b>3.338,0</b>	<b>624,0</b>	<b>0,0</b>
	Stunden x Stundensatz						14.999	0	277	69.987	99.472	26.364	0
<b>WP 7</b>	<b>PROJECT MANAGEMENT</b>	4,8	12,5	811	2.113	261%	UB:Ges	PB	MV	WB:Ges	TE	JF	BE
	budgeted for Del. 7.1 - 7.5	2,5		422									
7.0	Coordination (04/05 -04/2006)		1,2		208,0		139,5	12,5	56,0	0,0	0,0	0,0	0,0
	Coordination (05-12/2006)		1,2		204,0		204,0	0,0	0,0	0,0	0,0	0,0	0,0
7.1	Project Manual (4.11.05)	1,0	1,2	169	208,5	123%	50,5	158,0	0,0	0,0	0,0	0,0	0,0
7.2	Plan f. using & diss outline	0,5	0,3	84	56,5	67%	29,5	24,0	3,0	0,0	0,0	0,0	0,0
7.3	Project Web site (30.11.05)	0,2	0,3	34	48,5	144%	6,5	26,0	16,0	0,0	0,0	0,0	0,0
7.4	Proj Presentaiton (30.11.05)	0,4	0,3	68	59,0	87%	8,0	51,0	0,0	0,0	0,0	0,0	0,0
7.5	Milest.1 Event(12-13.12/2005)	0,4	0,9	68	146,0	216%	65,0	28,0	53,0	0,0	0,0	0,0	0,0
7.6	Milest. 2 Event (26-27.04.06)				53,0		53,0	0,0	0,0	0,0	0,0	0,0	0,0
7.6	Milest. 2 (=Midt.) Rep.20.4.-06/06	0,4	2,4	68	413,0	611%	413,0	0,0	0,0	0,0	0,0	0,0	0,0
7.7	7.6 Annex 1Plan f. Using & Diss,	0,5	0,2	84	42,0	50%	42,0	0,0	0,0	0,0	0,0	0,0	0,0
7.8	Milest. 3 Event & Rep 01-02/07	0,5	2,6	84	442,0	523%	130,0	0,0	0,0	0,0	0,0	0,0	312,0
7.9	Plan f. using & Final Version	0,4	0,0	68	0,0	0%	0,0	0,0	0,0	0,0	0,0	0,0	0,0
7.10	Final Project Report	0,5	1,4	84	232,0	275%	119,0	0,0	0,0	0,0	0,0	0,0	113,0
	<b>SUMME Stunden/ Mon</b>		<b>12,5</b>	<b>811</b>	<b>2.113</b>	<b>261%</b>	<b>1.260,0</b>	<b>299,5</b>	<b>128,0</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>425,0</b>
	Stunden x Stundensatz						53.235	4.399	1.727	0	0	0	12.750
			<b>45,8</b>				<b>68.234</b>	<b>4.399</b>	<b>2.003</b>	<b>69.987</b>	<b>99.472</b>	<b>26.364</b>	<b>12.750</b>



CALMA				Budget	Ist Mid Term Report 12 Mon.	Ist bis Dez.2006	Ist bis 20. August 2007	
<b>SME</b>	<b>CALMA</b>	<b>41,40 eligible cost</b>		<b>402.919,00</b>	<b>128.460</b>	<b>349.255</b>	<b>514.425</b>	
<b>Nr.</b>	<b>WP</b>	<b>FC Model</b>	<b>contribution</b>	<b>223.856,00</b>	<b>75.758</b>	<b>202.583</b>	<b>278.398</b>	
		MMER	div.month				<b>42.371</b>	
<b>1. Personal and Overhead</b>								
<b>Techn. Personal</b>								
TE/1		TE (04/05 b.04/06)			31.886,00	31.886,00	31.886,00	
TE/2		TE (04/06 b.12/06)				43.895,40	43.895,40	
TE/3		TE (01/07 b.08/07)					23.691,00	
UB/1		UB (04/05 b.12/05)			845,00	845,00	845,00	
UB/2		UB (01/06 b.04/06)				14.153,75	14.153,75	
UB/3		UB (04/06 b.12/06)					15.041,00	
UB/4		UB (01/07 b.08/07)					10.520,25	
1.-6.	Techn.		16,8	24	129.125	32.731	90.780,15	140.032,40
WB/1	1.-6.	WB (04/05 b.04/06)			8.999,25	8.999,25	8.999,25	
WB/2		WB (01/06 b.04/06)			9.780,88	9.780,88	9.780,88	
WB/3		WB (04/06 b.12/06)				40.433,30	40.433,30	
WB/4		WB (01/07 b.08/07)					10.773,75	
1.-6.	Techn.Man.		7,2	24	94.751	18.780	59.213,43	69.987,18
1.-6.	MV				276,55	276,55	276,55	
SE/1		2005 SE				4.158,75	4.158,75	
SE/2		2007 SE Jänner is Juli 2007					11.655,07	
AM/1		2006 AM				1.095,00	1.095,00	
AM/2		AM				735,00	735,00	
BE/1		2006 BE Nov.				1.200,00	1.200,00	
BE/2		BE Dez.				960,00	960,00	
BE/3		2007 BE Jänner					1.380,00	
BE/4		BE Februar					1.710,00	
BE/5		BE März					1.440,00	
BE/6		BE April					1.110,00	
BE/7		BE Mai, Juni, Juli					4.950,00	
1.-6.	Ass.		4,80	24	24.987	276,55	8.148,75	30.670,37
JF/1		JF				12.886,25	12.886,25	
JF/2		Re. 08 07				13.477,75	13.477,75	
1.-6.	Dissemin.Man.		3	24	13.500	0,00	26.364,00	26.364,00
<b>Summe Techn. Personal</b>					<b>262.362</b>	<b>51.787,68</b>	<b>184.506,33</b>	<b>267.053,95</b>
<b>Project Management Personal</b>								
7.		Project Man. Personal	4,8	24	35.093			
		PB			4.399,02	4.399,02	4.399,02	
		MV			1.686,17	1.726,64	1.726,64	
UB/5		UB (04/05 b.12/05)			10.478,00	10.478,00	10.478,00	
UB/6		UB (01/06 b.04/06)			2.154,75	2.154,75	2.154,75	
UB/3		UB (04/06 b.12/06)				30.082,00	15.041,00	
<b>Summe Proj. Man. Personal</b>					<b>35.093</b>	<b>16.563,19</b>	<b>48.840,41</b>	<b>33.799,41</b>
<b>Overhead Cost</b>								
7.		Overhead		24	28.074			
		Allgem. Kosten 04 bis 12/2005			14.302,67	9.292,46	9.292,46	
1.-7.		Allgem. Kosten bis 04/2006			4.981,85			
		Allgem. Kosten 01-12/2006				34.378,93	34.378,93	
		Allgem. Kosten 2007					35.278,27	
<b>Summe Overhead</b>					<b>28.074</b>	<b>19.284,52</b>	<b>34.378,93</b>	<b>78.949,67</b>
Summe Personal					180.849	68.350,87	233.346,74	300.853,35
Overheads					144.680	19.284,52	34.378,93	78.949,67
<b>Summe Personal &amp; Overhead</b>					<b>325.529</b>	<b>87.635,39</b>	<b>267.725,67</b>	<b>379.803,02</b>
<b>Summe Equipment</b>					<b>2.069</b>	<b>1.301,26</b>	<b>4.736,28</b>	<b>2.306,52</b>
<b>3. Summe Travel</b>								
					11.421	2.466,75	9.832,55	12.298,32
<b>4. Summe Consumables/Material</b>								
					30.000	10.566,37	37.616,59	89.173,22
<b>4.2. Summe Consumables PM</b>								
					4.800	792,98	1.371,30	1.371,30
<b>Summe Subcontracting</b>								
					22.200	19.997,50	22.272,50	22.272,50
<b>Summe Audit</b>								
					1.300	0,00	0,00	1.500,00
<b>Summe Web presence</b>								
					0	5.700,00	5.700,00	5.700,00



## Justification of major cost items and resources

### 7.10.3.1.2. CORDES + Partner

#### 1. Personnel Costs for research (staff)

##### 1.1 Personnel Charges (Hours)

Deliverable	Mr.Vehling	Dr.Fischer	Mr.Lämmer*)	Dr.Plenker	Total hours
3.1	15,65	127,61	21,76	187,12	= 352,14
3.2	25,75	180,48	138,82	121,88	= 449,93
3.3	47,60	167,77	48,45	110,36	= 374,18
3.4	55,00	212,00	132,00*)	128,50	= 527,50
3.5	44,50	149,00	118,05*)	77,49	= 389,04
Up to 28.07.2007	188,50	836,68	459,08	625,35	= 2.109,79

From 1<sup>st</sup> of May 2006 Mr. Reichgruber is substituting Mr. Lämmer.

##### 1.2 Total Costs (Euro)

Deliverables	Personnel costs	Overhead Costs	Total costs
3.1	12.135,68	8.556,87	20.692,55
3.2	16.487,98	11.331,01	27.818,99
3.3	14.595,07	9.076,67	23.671,74
3.4	19.342,77	12.029,25	31.372,02
3.5	14.613,62	9.088,21	23.701,83
Up to 28.07.2007	77.175,11	50.082,02	127.257,13

##### 1.3 Comparison of Costs and Budget

Deliverable	Budget	Budget MM	Costs	Charge MM
3.1	21.798,00	1,8	20.692,55	1,74
3.2	21.798,00	1,8	27.818,99	2,22
3.3	18.165,00	1,5	23.671,74	1,97
3.4	26.400,00	2,2	31372,02	2,61
3.5	24.000,00	2,0	23.701,83	1,98
Up to 28.07.2007	112.623,00	9,3	127.257,13	10,52

#### 2. Previous costs for software

Value	Budget	Costs (Euro)
Software Dynamic	2.500,00	1.916,36
Software Translation		56,91
Total		1.973,27



### 3. Travelling expenses

<u>Value</u>	<u>Budget</u>	<u>Costs (Euro)</u>	
Travel	4.000,00	Fi 2005/04	75,50
		Ve 2005/04	520,60
		Fi 2005/12	724,45
		Fi 2006/04	559,60
		Fi 2006/12	297,53
		Fi 2007/02	663,40
		Fi 2007/05	1.128,40
up to 27.07.2007			3.969,48

### 4. Subcontracting

Fatigue Tests at the TU München	8.000,00	
Report by Prof. Kosteas	3.800,00	
<u>Calculations Mr. Lämmer</u>	<u>1.932,00</u>	
Totally up today	13.732,00	< 20.000,00 total Budget

### 5. Audit Certificate

FIDICON CONSULT AG, München	3.500,00 Euro
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## **Justification of major cost items and resources**

### **7.10.3.1.3 MIZAR**

MIZAR has been declared bankrupted during the first period of the project.



## Justification of major cost items and resources

### 7.10.3.1.4 CELLOFOAM



Cellofoam GmbH Co. KG

**1. Berichtsperiode von April 05 - April 06****Personnel + Overhead**

Month	Justification	Category	P+OH
Apr. 05	Consortium Agreement	Managing Director Sales	1.451,01
Apr. 05	Kick-Off-Meeting	Managing Director Sales	3.957,30
May 05	Consortium Agreement	Managing Director Sales	838,24
Jun. 05	Consortium Agreement	Managing Director Sales	765,45
Jul. 05	Acoustic Measurements	Managing Director Sales	2.374,38
Aug. 05	Acoustic Measurements	F & E Ingenieur	4.874,90
Jul. 05	Measurements	Sales Assistance	1.062,69
Aug. 05	Bearbeitung Contract	Sales Assistance	659,55
Sep. 05	Acoustic Measurements	Managing Director Sales	1.319,10
Sep. 05	Acoustic Measurements	F & E Ingenieur	237,80
Oct. 05	Acoustic Measurements	Managing Director Sales	1.319,10
Oct. 05	Acoustic Measurements	F & E Ingenieur	1.545,70
Dec. 05	Jahresend-Meeting	Managing Director Sales	3.825,39
Feb. 06	Summary	Sales Assistance	287,21
			<b>24.518 €</b>

**Travel**

Month	Justification	Category	Costs
Apr. 05	Kick-off-Meeting	Managing Director Sales	786,50
Apr. 05	Kick-off-Meeting	F & E Ingenieur	786,50
Jul. 05	Acoustic Measurements	Managing Director Sales	208,20
Jul. 05	Acoustic Measurements	F & E Ingenieur	208,20
Oct. 05	Acoustic Measurements	Managing Director Sales	115,59
Dec. 05	Jahresend-Meeting	Managing Director Sales	471,85
			<b>2.577 €</b>

**Material / Treatment**

Month	Justification	Category	Costs
May 05	Acoustic Measurements	MFPA Leipzig	774,82
Jun. 05	Acoustic Measurements	MPA Dresden	1.291,33
Jul. 05	Acoustic Measurements	Freudenberg	6.209,85
Jul. 05	Acoustic Measurements	Aidico, Spanien	187,23
Sep. 05	Acoustic Measurements	Aidico, Spanien	187,23
Sep. 05	Acoustic Measurements	Freudenberg	1.833,94
Oct. 05	Acoustic Measurements	Freudenberg	2.417,44
			<b>12.902 €</b>

**Consumables**

Month	Justification	Category	Costs
May 05	Transport	MFPA Leipzig, Calma-Tec	108,79
Jun. 05	Transport	MPA Dresden	87,41
Jul. 05	Transport	Aidico, Spanien	16,24
Sep. 05	Transport	Aidico, Spanien	16,24
Oct. 05	Transport	Freudenberg	58,53
			<b>287 €</b>

Kostenaufstell. Calma-Tec

05.04.2007



Cellofoam GmbH Co. KG

**2. Berichtsperiode von Mai 06 - Dez 06****Justification of major cost items and resources****Personnel + Overhead**

<u>Month</u>	<u>Justification</u>	<u>Category</u>	<u>P+OH</u>
May 06	Mid-Term-Report	Buchhaltung	465,90
May 06	Mid-Term-Report	Managing Director Sales	527,64
May 06	Documentation project costs	Managing Director Sales	65,96
Jun. 06	Mid-Term-Report	Managing Director Sales	1.055,28
Jun. 06	Mid-Term-Report, Appendix	Managing Director Sales	263,82
Jun. 06	Documentation project costs	Managing Director Sales	65,96
Jul. 06	CRAFT, 2. Teilbetrag	Buchhaltung	77,65
Jul. 06	Deliverables	Managing Director Sales	263,82
Jul. 06	Project	Managing Director Sales	131,91
Jul. 06	Presentation	Sales Assistance	65,96
Jul. 06	Acoustic Measurements	Managing Director Sales	527,64
Jul. 06	Documentation project costs	Managing Director Sales	65,96
Aug. 06	Project	Managing Director Sales	131,91
Aug. 06	Acoustic Measurements	Managing Director Sales	263,82
Aug. 06	Acoustic Measurements	Managing Director Sales	131,91
Aug. 06	Mid-Term-Report	Managing Director Sales	197,87
Aug. 06	Documentation project costs	Managing Director Sales	65,96
Sep. 06	Documentation project costs	Managing Director Sales	65,96
Oct. 06	Review Report	Managing Director Sales	131,91
Oct. 06	Project	Managing Director Sales	131,91
Oct. 06	Documentation project costs	Managing Director Sales	65,96
Nov. 06	Deliverables	Managing Director Sales	131,91
Nov. 06	Documentation project costs	Managing Director Sales	65,96
Dec. 06	Project	Managing Director Sales	131,91
Dec. 06	Documentation project costs	Managing Director Sales	65,96
			<b>5.160 €</b>

**Travel**

<u>Month</u>	<u>Justification</u>	<u>Category</u>	<u>Costs</u>
			<b>0 €</b>

**Material / Treatment**

<u>Month</u>	<u>Justification</u>	<u>Category</u>	<u>Costs</u>
Aug. 06	Acoustic Measurements	MPA Dresden	2.957,20
Aug. 06	Acoustic Measurements	Aidico, Spanien	137,00
			<b>3.094 €</b>

Kostenaufstell. Calma-Tec

09.02.2007



Cellofoam GmbH Co. KG

**Consumables**

<b>Month</b>	<b>Justification</b>	<b>Category</b>	<b>Costs</b>
Aug. 06	Transport	MPA Dresden	293,93
Aug. 06	Transport	Aidico, Spanien	425,42
			<b>719 €</b>



Cellofoam GmbH Co. KG

**3. Berichtsperiode von Jan 07 - Feb 07****Justification of major cost items and resources****Personnel + Overhead**

<u>Month</u>	<u>Justification</u>	<u>Category</u>	<u>P+OH</u>
Jan. 07	Documentation project costs	Managing Director Sales	65,96
Feb. 07	Deliverables	Managing Director Sales	65,96
Feb. 07	Deliverables List	Managing Director Sales	65,96
Feb. 07	Cost Budget Follow up	Managing Director Sales	65,96
Feb. 07	Meeting Wien	Managing Director Sales	1.978,65
Feb. 07	Documentation project costs	Managing Director Sales	65,96
			<b>2.308 €</b>

**Travel**

<u>Month</u>	<u>Justification</u>	<u>Category</u>	<u>Costs</u>
Feb. 07	Meeting Wien	Managing Director Sales	605,42
			<b>605 €</b>

**Material / Treatment**

<u>Month</u>	<u>Justification</u>	<u>Category</u>	<u>Costs</u>
			<b>0 €</b>

**Consumables**

<u>Month</u>	<u>Justification</u>	<u>Category</u>	<u>Costs</u>
			<b>0 €</b>



Cellofoam GmbH Co. KG

**4. Berichtsperiode von März 07 - August 07****Justification of major cost items and resources****Personnel + Overhead**

<b>Month</b>	<b>Justification</b>	<b>Category</b>	<b>P+OH</b>
Mrz. 07	Documentation project costs	Managing Director Sales	65,96
Apr. 07	Documentation project costs	Managing Director Sales	65,96
May 07	Project	Managing Director Sales	329,78
May 07	Documentation project costs	Managing Director Sales	131,91
Jun. 07	Meeting Frankfurt	Managing Director Sales	3.957,30
Jun. 07	Meeting Frankfurt	Managing Director Sales	3.957,30
Jun. 07	Documentation project costs	Managing Director Sales	131,91
Jun. 07	Nachbearbeitung Meeting Frankf	Managing Director Sales	395,73
Jul. 07	Documentation project costs	Managing Director Sales	65,96
Aug. 07	Documentation project costs	Managing Director Sales	65,96
			<b>9.168</b>

**Travel**

<b>Month</b>	<b>Justification</b>	<b>Category</b>	<b>Costs</b>
Jun. 07	Meeting Frankfurt	Managing Director Sales	810,20
			<b>810 €</b>

**Material / Treatment**

<b>Month</b>	<b>Justification</b>	<b>Category</b>	<b>Costs</b>
			<b>0 €</b>

**Consumables**

<b>Month</b>	<b>Justification</b>	<b>Category</b>	<b>Costs</b>
			<b>0 €</b>



## Justification of major cost items and resources

### 7.10.3.1.5. ISOLITH

Name	Category	Number of person-hours	Hourly Personal rate	Personal Amount	Overheads	Justification	
<b>Zeitraum 1</b>							
Josef Hattinger	Technical Assistance	32	55	1.760	1.056	Consortium Agreement	Apr.05
Manfred Hattinger	Head of company	8	70	560	336	Consortium Agreement	Apr.05
Josef Hattinger	Technical Assistance	13	55	715	429	Kick-off-Meeting	Apr.05
Manfred Hattinger	Head of company	13	70	910	546	Kick-off-Meeting	Apr.05
Josef Hattinger	Technical Assistance	24	55	1.320	792	Meeting I	Dez.05
Manfred Hattinger	Head of company	12	70	840	504	Meeting I	Dez.05
Josef Hattinger	Technical Assistance	13	55	715	429	Meeting with Calma-Tec	Jän.06
Manfred Hattinger	Head of company	13	70	910	546	Meeting with Calma-Tec	Jän.06
Josef Hattinger	Technical Assistance	23	55	1.265	759	Meeting with Calma-Tec	Apr.06
Manfred Hattinger	Head of company	23	70	1.610	966	Meeting with Calma-Tec	Apr.06
Josef Hattinger	Technical Assistance	6	55	330	198	Report	Dez.05
				10.935	6.561		17.496

<b>Zeitraum 2</b>							
Josef Hattinger	Technical Assistance	15	55	825	495	Meeting with Calma-Tec	Okt.06
Josef Hattinger	Technical Assistance	15	55	825	495	Meeting with Calma-Tec	Mär.07
Josef Hattinger	Technical Assistance	7	55	385	231	Report	Aug.07
				2.035	1.221		3.256

Name	Destination	Dates	Purpose of Travel & for wich WP/Task	Amount
<b>Zeitraum 1</b>				
Manfred/Josef Hattinger	Vienna - Austria	25.Apr.05	Consortium Agreement	288
Manfred/Josef Hattinger	Vienna - Austria	12.Dez.05	Meeting I	575
Manfred/Josef Hattinger	Vienna - Austria	18.Jän.06	Meeting with Calma-Tec	288
Manfred/Josef Hattinger	Vienna - Austria	20.Apr.06	Meeting with Calma-Tec	575
				1.726
<b>Material &amp; Transport</b>				
BAB Schallabsorberplatte	Dresden - Germany	08.Jun.05	reverberation chamber DB	1.152
BAB Schallabsorberplatte	Vienna - Austria	18.Jul.05	Calma-Tec	464
BAB Schallabsorberplatte	Valencia - Spain	22.Feb.06	Aidico; multiple tests	540
				2.156
<b>Audit</b>				
<b>Zeitraum 2</b>				
Manfred/Josef Hattinger	Vienna - Austria	02.Okt.06	Meeting with Calma-Tec	288
		03.Okt.06	Meeting with Calma-Tec	
Manfred/Josef Hattinger	Vienna - Austria	13.Dez.06	Meeting with Calma-Tec	
Manfred/Josef Hattinger	Vienna - Austria	12.Mär.07	Meeting with Calma-Tec	288
Manfred/Josef Hattinger	Vienna - Austria	15.Jun.07	Meeting with Calma-Tec	
Josef Hattinger	Vienna - Austria	03.Aug.07	Meeting with Calma-Tec	
				576
<b>Material &amp; Transport</b>				
BAB Schallabsorberplatte	Vienna - Austria	25.Jän.07	Calma-Tec	1.895
BAB Schallabsorberplatte	Vienna - Austria	15.Jun.07	Calma-Tec	
				1.895
<b>Audit</b>				
				800



## **Justification of major cost items and resources**

### **7.10.3.1.6. ISF OEAW**



### Projektabrechnung ÖAW EU-Projektprüfung

Projekt: **Calm Tracks & Routes**  
Projektperiode: **2 (Endabrechnung)**

#### 1. Projektdaten

EU-Projekt Nr.	COOP-CT-2005-017609
EUP Nr. ÖAW	EUP0101
Projekttitel	Innovation of noise barriers:improved noise abatement for motorways and railway tracks
Institut	Institut für Schallforschung
Projektverantwortlicher	Waubke, Doz. Holger
EU-Programm	CRAFT (Cooperation Research Action for Technology)
Instrument	Specific Action: Cooperative Research Projects
Gesamtlaufzeit	20.04.2005 - 19.04.2007 24 Monate

#### 2. Kostenmodell ÖAW:

FC (Fullcost)

Vollkosten (total eligible costs) :

€ 348.899,40

max. EU- Förderung:

€ 176.449,70

gültiger Overheadsatz für Berechnung der indirekten Kosten:

82,76%

#### 3. Abrechnung

von: **20.04.2006** bis: **19.04.2007** Monate: **12**

Kostenart	direkte Kosten	Indir. Kosten	Mwst. gesamt	davon Mwst	öst.	EU-Förderung	max. EU- Förderrate/Activ- ity %
<b>direkte Personalkosten</b>							
wissenschaftliche Mitarbeiter	94.009,34	77.802,13	x	x		85.905,74	50%
<b>sonst. direkte Projektkosten</b>	<b>Netto</b>						
Auditkosten	4.000,00	keine	800,00		800,00	4.000,00	100%
<b>Summe</b>	<b>98.009,34</b>	<b>77.802,13</b>	<b>800,00</b>	<b>800,00</b>		<b>89.905,74</b>	

Erstattungsfähige Gesamtkosten (dir.+indir.costs) **175.811,47**beantragte EU- Förderung **89.905,74**

\*) Grundsätzlich sind II. Buchführungsgrundsätze der ÖAW nur PK wiss. MA Oh-fähig (Ausnahme wenn II. EU- Vertrag die Flat Rate auch für die Abrechnung der indirekten Kosten anzuwenden ist; ggf. bei CA und SSA möglich)

geprüft durch Verwaltungsstelle für Auslandsbeziehungen der ÖAW am 25.6.07

*Verena Paulovic*  
Mag. Verena Paulovics

*B. Plunger*  
Mag. Bernhard Plunger

Anlagen zur Projektabrechnung-Übersicht	Zusätzliche Unterlagen
Personalkostenberechnung	x Overhead-Satz x Time-Sheets x bei Parallelarbeit in anderen EU-Projekten auch diese Time-Sheets x Ausdruck Personalkosten Le Salaire x Ausdruck Lohnkonten
Sonstige Kosten (wissenschaftlicher Bedarf)	x Kopien Belege



**Personalkosten**

EU- Projekt: Calm Tracks & Routes  
 Projektperiode: 20.04.2006 - 19.04.2007

**Personalkosten**

Name des Wissenschaftlers:	Waubke Hölzer	Blitzke Peter	Becker Timo	Chen Zhenzheng	Hirner Alexander	Kramer Felix	Majdak Piotr	Noll Anton
Kostenstelle:	22700	22700	22700	22700	22700	22700	22700	22700
Abrechnungsperiode in Monaten:	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
Beschäftigungszeitraum innerhalb Abrechnungsperiode in Monaten:	12,00	12,00	12,00	12,00	3,63	9,53	8,00	12,00
Gesamtbeschäftigungsstunden in %:	100%	50% / 100%	100%	100%	50%	100%	100%	100%
Gesamtbeschäftigungsstunden in Stunden:	1680	1540	1680	1680	254	558	1260	1680
Gesamt Personalkosten für Beschäftigungszeitraum aus "Lo":	75.237,39 €	50.434,54 €	52.253,50 €	61.278,00 €	6.067,31 €	12.123,01 €	33.739,69 €	63.403,86 €
Stundensatz:	44,78	32,75	31,10	36,48	23,88	23,85	26,78	37,74
geplante Arbeitsstunden laut Zeitaufzeichnung:	134	248	344	735	256	608	466	268
Projektpersonalkosten f. Abrechnungsperiode:	6.001,08	8.121,80	10.693,53	26.845,60	6.067,31	12.123,01	13.281,66	10.859,23
plüßiger Overheadrate für Forschungsanmeldung in %:	82,76%	82,76%	82,76%	82,76%	82,76%	82,76%	82,76%	82,76%
Overheadindirekte Kosten:	4.956,49	6.721,71	8.854,93	22.217,42	5.021,31	10.033,00	10.991,90	8.954,38

\*) Mai und Juni 2006 war die Anstellung von Dr. Blitzke von 100% auf 50% reduziert

Für die Mitarbeiter Hirner und Kramer übersüßigt der errechnete Betrag die tatsächlichen Personalkosten lt. Lohnkonto:

Gesamte Personalkosten	12.123,01
Stundensatz x	6.067,31
planmäßige	7.067,78
Arbeitsstunden	-1.000,47
	14.503,72
	-2.380,71

Es können daher nicht alle für das Projekt geplannten Stunden abgerechnet werden.

Personalkosten Summe	94.009,34
Overhead Summe	77.802,13
PK + OH	171.811,47

\*\*\*\*) Di Majdak war von 01.10. - 31.12.2006 in Karenz

Personalzeiten als "Le Sablier"	Waubke Hölzer	Blitzke Peter	Becker Timo	Chen Zhenzheng	Hirner Alexander	Kramer Felix	Majdak Piotr	Noll Anton
Arbeitsstage April 06 = 18	30,516,14	54.275,51	55.848,26	65.570,25	0,057,31	12.123,01	38.972,14	67.800,09
Arbeitsstage April 07 = 19	5.354,04	3.794,03	3.933,70	4.341,92	-	-	2.960,45	4.599,68
Summe 13 Monate	3.293,09	2.316,94	2.196,48	2.693,40	-	-	1.927,50	2.756,04
abschl. April 06 - 11/18	5.485,72	4.142,07	3.895,74	4.448,33	-	-	3.813,43	4.614,81
Apr.07	2.021,05	1.526,03	1.435,27	1.538,86	-	-	1.404,86	1.700,19
Summe 12 Monate: 20.4.06-19.4.07	75.237,39	50.434,54	52.253,50	61.278,00	6.067,31	12.123,01	33.739,69	63.403,86
Arbeitsstunden								
Apr.06	96,00	96,00	96,00	96,00	96,00	96,00	96,00	96,00
Mai.06	180,00	180,00	180,00	180,00	180,00	180,00	180,00	180,00
Jun.06	180,00	180,00	180,00	180,00	180,00	180,00	180,00	180,00
Jul.06	180,00	180,00	180,00	180,00	180,00	180,00	180,00	180,00
Aug.06	176,00	176,00	176,00	176,00	176,00	176,00	176,00	176,00
Sep.06	8,00	8,00	8,00	8,00	8,00	8,00	8,00	8,00
Ok.06								
Nov.06	32,00	32,00	32,00	32,00	32,00	32,00	32,00	32,00
Dec.06	9,00	9,00	9,00	9,00	9,00	9,00	9,00	9,00
Jan.07	9,00	9,00	9,00	9,00	9,00	9,00	9,00	9,00
Feb.07	88,00	88,00	88,00	88,00	88,00	88,00	88,00	88,00
Mär.07	134,00	134,00	134,00	134,00	134,00	134,00	134,00	134,00
Apr.07	134,00	134,00	134,00	134,00	134,00	134,00	134,00	134,00
Summe	134,00	248,00	344,00	735,00	256,00	608,00	466,00	268,00



**Sonstige Kosten**

EU- Projekt:  
Projektperiode:

Calm Tracks & Routes  
20.04.2006 - 19.04.2007

Kostenstelle	Bezeichnung	Buchungsdat.	Beleg Nr.	Brutto €	Mwst %	Mwstbetrag €	Netto €	davon ö Mwst	Fremdwähr- ungsbetrag	Umrechnungs- kurs
22700	Wirtschaftsprüfung Honorarnote (Audit)	05.03.2007	2146	2.400,00 €	20,00%	400,00 €	2.000,00 €	400,00 €		
22700	Wirtschaftsprüfung Honorarnote (Audit)	21.06.2007	7828/07	2.400,00 €	20,00%	400,00 €	2.000,00 €	400,00 €		
<b>Summe</b>				<b>4.800,00 €</b>		<b>800,00 €</b>	<b>4.000,00 €</b>	<b>800,00 €</b>		

**[ÖAW] EU-Overhead**

Datum: 21.12.2006

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Schallforschung

	EU-Overhead-S 2003	EU-Overhead-S 2004	EU-Overhead-S 2005
<b>Verwaltungskostenbeitrag</b>	<b>31.099,48</b>	<b>31.203,14</b>	<b>32.228,95</b>
54300 Sonstiger wissenschaftlicher Bedarf	4.496,25	1.345,61	
56100 Wissenschaftliche Geräte (unter Euro 400,-)	621,16	2.548,82	1.548,86
56110 Bauteile wissenschaftliche Geräte	2.171,75	6.174,52	1.325,04
56120 Elektronischer Bedarf (unter Euro 400,-)	114,08	216,33	276,89
56130 Maschinelle Ausstattung (unter Euro 400,-)			706,39
56140 Werkzeuge (unter Euro 400,-)	273,40	375,91	387,39
56200 Software (unter Euro 400,-)	772,30	530,51	721,49
56300 Verbrauchsmaterial	926,19	1.358,41	1.076,50
56400 Einrichtungsgegenstände (unter Euro 400,-)	1.399,11	1.145,34	1.322,71
56410 Bürogeräte (unter Euro 400,-)	9,99	97,99	
56420 EDV - Zubehör inkl. Verbrauchsmaterial	6.324,60	8.666,01	8.521,29
56500 Reinigungsmaterial	131,74	167,10	216,65
56510 Arbeitskleidung		7,00	
57100 Stromkosten	2.971,21	8.033,26	6.935,42
57200 Gaskosten	881,29	835,20	2.137,10
58100 Klassische Werkverträge	12.065,40	39.260,84	3.620,00
58200 Freie Dienstverträge	17.804,92	30.114,35	66.112,92
58210 Freie Dienstverträge - DGA Soz.Vers.	3.062,36	5.111,82	11.169,43
58700 Druckkosten		2.481,31	1.402,44
<b>Materialaufwand und sonstige Leistungen</b>	<b>54.025,75</b>	<b>108.470,33</b>	<b>107.480,52</b>
61200 Technisches Personal - Bruttogehalt	23.287,91	24.678,77	23.266,11
61210 Technisches Personal - Dienstgeberbeitrag SV	5.071,18	5.374,74	5.078,70
61211 Technisches Personal - MVK-Beiträge		61,71	26,61
61220 Technisches Personal - FLAG	1.047,96	1.110,52	1.047,00
61230 Technisches Personal - Dienstgeberabgabe (U - B	46,80	51,12	43,92
61240 Technisches Personal - Vorsorge Abfertigung	810,97	835,02	861,51
61300 Admin. Personal - Bruttogehalt	1.778,23	21.733,60	22.577,39
61310 Admin. Personal - Dienstgeberbeitrag SV	383,73	4.899,54	4.928,58
61311 Admin. Personal - MVK-Beiträge		166,26	345,46
61320 Admin. Personal - FLAG	80,02	978,04	1.015,96
61330 Admin. Personal - Dienstgeberabgabe (U - Bahn)	2,88	37,44	37,44
61340 Admin. Personal - Vorsorge Abfertigung	7,11	86,92	90,30
61400 Reinigungspersonal - Bruttogehalt	7.325,18	7.578,20	7.752,48
61410 Reinigungspersonal - Dienstgeberbeitrag SV	1.580,70	1.650,48	1.692,24
61420 Reinigungspersonal - FLAG	329,61	341,04	348,88
61430 Reinigungspersonal - Dienstgeberabgabe (U - Bah	18,72	18,72	18,72
61440 Reinigungspersonal - Vorsorge Abfertigung	303,18	315,76	323,16
61450 Grundbeitrag Pensionskasse		56,84	58,10
<b>Nichtwissenschaftliches Personal</b>	<b>42.074,18</b>	<b>69.974,72</b>	<b>69.512,56</b>
70100 AfA Immaterielle Vermögensgegenstände	7.667,07	7.571,91	4.433,00
70200 AfA Bebaute Grundstücke etc.	13.326,38	13.912,00	14.049,47
70400 AfA Wissenschaftliche Geräte etc.	9.170,88	7.435,18	5.440,26
70500 AfA Maschinelle Ausstattung	402,00	402,00	1.272,40
70600 AfA Betriebs- und Geschäftsausstattung	20.134,08	28.166,85	31.315,61
71200 Sonstige öffentliche Gebühren und Abgaben		46,00	
72100 Instandhaltung Gebäude	335,04		1.046,95
72220 Instandhaltung maschinelle Ausstattung	431,04		793,39
72310 Instandhaltung wissenschaftliche Geräte		42,79	22,36
72340 Instandhaltung EDV - Anlagen		267,00	267,00
72360 Wartungsverträge Software			2.800,50
72500 Reinigung durch Dritte	2.401,02	3.418,31	1.012,78
72600 Sonstige Instandhaltungen	182,76		
72800 Betriebskosten Fahrzeuge		130,98	37,45
73100 Reisekosten	20.373,90	15.740,34	16.050,37

**[ÖAW] EU-Overhead**

Datum: 21.12.2006

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Schallforschung**

	EU-Overhead-S 2003	EU-Overhead-S 2004	EU-Overhead-S 2005
73200 Taxi	149,00	278,00	155,40
73300 Teilnahme an wissenschaftlichen Veranstaltungen	4.827,90	930,63	2.410,66
73400 Transporte durch Dritte	230,28	2.998,80	13,80
73810 Telephonkosten	857,57	736,94	1.077,60
73820 Porti	376,56	444,64	752,87
73840 Sonstige Postkosten	47,70	9,28	65,41
74100 Mieten für Räume	17.700,60	17.436,37	18.173,16
74300 Mieten für Büro - und Kopiergeräte	985,61	1.067,88	266,97
74500 Mieten für Fahrzeuge		714,38	10,50
74600 Sonstige Mieten			156,00
76010 Papier - und Drucksorten	509,77		205,13
76020 Bürobedarf	1.470,74	1.226,85	1.328,90
76030 Photokopierkosten (ohne Gerätemiete)	691,18	587,32	840,71
76050 Buchbindekosten	27,55	283,45	237,20
76090 Repräsentationsaufwand	336,01	37,61	158,63
76201 Bücher - Zeitschriften	1.730,17	2.364,34	2.333,48
76500 Einladung wissenschaftliche Gäste	677,87	2.952,79	288,40
77100 Gebäudeversicherung	168,41	170,51	179,78
77900 Bankspesen	57,31	11,00	15,11
77950 Kursdifferenzen Aufwand	-21,67	29,66	
<b>Betriebsaufwand</b>	<b>105.246,73</b>	<b>109.413,81</b>	<b>107.211,25</b>
<b>Summe</b>	<b>232.446,14</b>	<b>319.062,00</b>	<b>316.433,28</b>
61100 Wissenschaftler - Brutto Gehalt	292.290,64	286.197,61	290.593,70
61110 Wissenschaftler - Dienstgeberbeitrag SV	60.283,43	56.014,49	58.942,01
61111 Wissenschaftler - MVK-Beiträge		142,02	578,32
61120 Wissenschaftler - FLAG	13.187,54	10.534,09	10.826,41
61130 Wissenschaftler - Dienstgeberabgabe (U - Bahn)	238,32	199,44	207,38
61140 Wissenschaftler - Vorsorge Abfertigung	12.083,86	11.163,29	10.621,52
61150 Grundbeitrag Pensionskasse		892,00	882,90
61151 Zusatzbeitrag Pensionskasse		892,00	882,90
69100 Wissenschaftler - Brutto Gehalt	5.214,02	7.162,93	6.762,58
69110 Wissenschaftler - Dienstgeberbeitrag SV	1.125,26	1.560,17	1.468,19
69120 Wissenschaftler - FLAG	234,68	322,33	304,28
69130 Wissenschaftler - Dienstgeberabgabe (U - Bahn)	6,18	8,32	8,32
69140 Wissenschaftler - Vorsorge		298,46	280,28
<b>Wissenschaftliches Personal</b>	<b>384.663,93</b>	<b>375.387,15</b>	<b>382.358,79</b>
<b>Overheadsatz in %</b>	<b>60,43</b>	<b>85,00</b>	<b>82,76</b>



**Justification of major cost and resources**  
**7.10.3.1.7. STOCKHOLM UNIVERSITY**

No detailed information received.



## Justification of major cost and resources

### 7.10.3.1.8. AIDICO



PERSONNEL						
Name	Category*	Number of person-hours	Hourly Personnel rate	Personnel Amount	Overheads**	Justification
Maria José López Tendaro	R&D Coordinator group NDT coordinator Technician Staff AIDIICO	532	25	16.213,6		T4.1, 4.2, 4.4: Coordinator: nanotechnol. Task 4.3: Responsible of task. Task 4.2, 4.3: Acoustic performance Management
José Vicente Fuente Ramirez		133	17	3736,2		
Juan Vicente Sabater González		266	13	4050,8		
Maria Isabel Marco Herrera		133	13	776,41		
		Total		23280	18.512	

\* e.g. Senior/Junior Researcher, Technician, e.t.c.

\*\* The overhead column will be filled only by FC contractors

TRAVEL AND SUBSISTENCE

Name <sup>2</sup>	Destination (City, Country)	Dates	Purpose of Travel & for which WP/Task	Amount
MJ López & JV Sabater	Vienna, Austria	05/02/2007	20 <sup>th</sup> Month meeting of the Project	2008,82
MJ López	Nuremberg	11/09/2007	Network Nano-technology Congress EUROMAT : Coordination with U. Ghent	908,76
JV Fuente/W. Brunbauer	Valencia-Madrid	24/07/2007	Meeting with ADIF personnel in the diffusion of Noise Barriers	346,58
W. Brunbauer	Madrid-Palma	24/07/2007	Backtrip to Vienna	
JV Sabater	Gandia (Valencia-SPA)	17/04/2007	Subsistence in the test plan in Gandia (unlecho-room (subcontracting facilities)	225,10
JV Sabater	Aguilar de Campoo (SPA)	27/07/2007	Knowledge acquisition in the noise protection field	63,80
JV Fuente	Valencia	18/07/2007	Subsistence in visit of coordinator	212,00
JV Sabater	Madrid	19/02/2007	Travel to visit the acousticcamera equipment to use in the project	21,95
JV Fuente	Gandia (Valencia-SPA)	18/04/2007	Subsistence in the test plan in Gandia (unlecho-room (subcontracting facilities)	35,00
MJ Lopez & JV Sabater	Vienna, Austria	13/02/2007	Expenses 20 <sup>th</sup> Month meeting	128,2
JV Fuente	Valladolid-SPA	28/05/2007	Meeting in U. Valladolid-CARTIF : visit to see facilities in the acoustic foam providers.	495,62
Total				4300,1 €

EQUIPMENT/CONSUMABLES/OTHER SPECIFIC COSTS		
Description	Category type*** (Equipment, consumable or other)	Purpose
Universidad Politécnica de Valencia (Grupo de Dispositivos Ópticos y Acústicos)	External Consultancy	T.4...3
		16,166.00
		16,166 €

\*\*\* in the case of consumables you should group the different items in major categories of consumables (e.g. agents, computing, consumables, etc.).

\*\*\*\* in the case of equipment you should charge only the amount allocated to the project.



Table 6: Budget vs. actual Costs

<b>Cost Budget Follow-up Table</b>											
*) total budget figures - not EC funding											
<b>Contract N°:</b>		<b>COOP-2005-017619</b>		<b>Acronym: CALM TRACKS&amp;ROUTES</b>				<b>Date:</b>		<b>20-5-06</b>	
PARTI-CIPANTS	TYPE of EXPENDITURE (as defined by participants)	BUDGET	ACTUAL COSTS (EUR)					Pct. spent	Remaining Budget (EUR)		
			Period 1	Period 2	Period 3	Period 4	Total	Total			
			a1	b1	c1	d1	e1	a1+b1+c1+d1/e		e-e1	
<b>Part. 8:AIDICO</b>	<b>Total Person-month</b>						<b>0</b>	<b>0%</b>	<b>0</b>		
	Personnel costs	<b>87120</b>	63840	23280			<b>87120</b>	100%	<b>0</b>		
	Overheads	<b>66392</b>	47880	18512			<b>66392</b>	100%	<b>0</b>		
	Consumables	<b>12750</b>	12750				<b>12750</b>	100%	<b>0</b>		
	Travel	<b>12247</b>	7947	4300			<b>12247</b>	100%	<b>0</b>		
	Other costs ('the rest')	<b>24399</b>	6233	18166			<b>24399</b>	100%	<b>0</b>		
	<b>Total Costs</b>	<b>202908</b>	<b>138650</b>	<b>64258</b>	<b>0</b>	<b>0</b>	<b>202908</b>	<b>100%</b>	<b>0</b>		
<b>Part. 2</b>	<b>Total Person-month</b>						<b>0</b>	<b>0%</b>	<b>0</b>		
	Personnel costs										
	Overheads										
	Equipment										
	Consumables										
	Travel										
	Other costs ('the rest')										
	<b>Total Costs</b>										
<b>Part. 3.....</b>	<b>Total Person-month</b>						<b>0</b>	<b>0%</b>	<b>0</b>		
	Personnel costs						<b>0</b>	0%	<b>0</b>		
	Major cost item 'x'						<b>0</b>	0%	<b>0</b>		
	Major cost item 'y'						<b>0</b>	0%	<b>0</b>		
	Other costs ('the rest')						<b>0</b>	0%	<b>0</b>		
	<b>Total Costs</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0%</b>	<b>0</b>		
<b>Part.8</b>	<b>Total Person-month</b>						<b>0</b>	<b>0%</b>	<b>0</b>		
	Personnel costs						<b>0</b>	0%	<b>0</b>		
	Major cost item 'x'						<b>0</b>	0%	<b>0</b>		
	Major cost item 'y'						<b>0</b>	0%	<b>0</b>		
	Other costs ('the rest')						<b>0</b>	0%	<b>0</b>		
	<b>Total Costs</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0%</b>	<b>0</b>		
<b>TOTAL</b>	<b>Total Person-month</b>						<b>0</b>	<b>0%</b>	<b>0</b>		
	Personnel costs						<b>0</b>	0%	<b>0</b>		
	Major cost item 'x'						<b>0</b>	0%	<b>0</b>		



## **Justification of major cost and resources**

### **7.10.3.1.9 UNIVERSITY OF GHENT**

No detailed Information received.



## Justification of major cost and resources

### 7.10.3.1.10 UNI KEMPTEN

UNI KEMPTEN's work is part of  
Workpackage 6: TESTING PROTOTYPE

Deliverable: 6.3 Shielding effect tests result and evaluation

This work of UNI KEMPTEN was planned and accomplished in period two of the project.

During reporting period 2 new requirement of testing work came and was accorded BETWEEN CALMA-TEC and UNI KEMPTN.

Its result is content of

Deliverable 6.6 Calculation and tests on ZIG-ZAG barriers.

Besides Form C cost statement we have not received detailed information on use of cost and resources



### 7.10.3.1.11 COST BUDGET FOLLOW-UP - Table 3

Cost Budget Follow-up Table									
*) total budget figures - not EC funding									
Period 2 : 21.4.2006 - 20.08.2007									
Contract N°: 017609		Acronym: Calm-Tracks & Routes				Date: 10.11.2006			
PARTI-CIPANTS	TYPE of EXPENDITURE (as defined by participants)	BUDGET e	ACTUAL COSTS (EUR)				Pct. spent Total	Deviation to Budget (EUR) e-e1	
			Period 1 Report a1	Period 1 Actual b1	Period 2 c1	Period 4 d1			Total e1
<b>Part. 1 CALMA</b>	<b>Total Person-month</b>	<b>33,6</b>	<b>44,5</b>	<b>14,5</b>	<b>34,3</b>		<b>48,8</b>	<b>145%</b>	<b>15,2</b>
	Personnel costs	180.849,44	<del>70.505,60</del>	70.505,60	230.347,76		300.853,36	166%	120.003,92
	Overheads	144.679,56	<del>19.284,52</del>	19.284,52	59.665,05		78.949,57	55%	-65.729,99
	Consumables	30.000,00	<del>10.687,96</del>	10.687,96	78.485,26		89.173,22	297%	59.173,22
	Consumables Proj. Man	4.800,00	<del>792,98</del>	792,98	578,32		1.371,30	29%	-3.428,70
	Equipment	2.069,00	<del>1.301,26</del>	1.301,26	1.005,25		2.306,51	111%	237,51
	Travel	11.421,00	<del>2.466,75</del>	2.466,75	9.831,57		12.298,32	108%	877,32
	Subcontr. Measuring	22.200,00	<del>19.997,50</del>	19.997,50	2.275,00		22.272,50	100%	72,50
	Web presence	5.600,00	<del>5.700,00</del>	5.700,00			5.700,00	102%	100,00
	Other costs ('the rest') Audit	1.300,00	<del>0,00</del>	0,00	1.500,00		1.500,00	115%	200,00
	<b>Total Costs</b>	<b>402.919,00</b>	<b>430.736,57</b>	<b>130.736,57</b>	<b>383.688,21</b>	<b>0</b>	<b>514.424,78</b>	<b>128%</b>	<b>111.505,78</b>
<b>Part. 2 CORDES</b>	<b>Total Person-month</b>	<b>9,3</b>	<b>5,4</b>	<b>5,4</b>	<b>3,9</b>		<b>9,3</b>	<b>100%</b>	<b>0,0</b>
	Personnel costs	65.861,40	<del>38.128,55</del>	38.128,55	39.046,56		77.175,11	117%	11.313,71
	Overheads	46.761,60	<del>26.884,44</del>	26.884,44	23.197,58		50.082,02	107%	3.320,42
	Software	2.500,00	<del>1.100,00</del>	1.100,00	873,27		1.973,27	79%	-526,73
	Travel	4.000,00	<del>1.973,65</del>	1.973,65	1.995,83		3.969,48	99%	-30,52
	Subcontracting	20.000,00	<del>0,00</del>	0,00	13.732,00		13.732,00	69%	-6.268,00
	Other costs ('the rest')	1.300,00	<del>3.500,00</del>		3.500,00		3.500,00	269%	2.200,00
	<b>Total Costs</b>	<b>140.423,00</b>	<b>68.086,64</b>	<b>68.086,64</b>	<b>82.345,24</b>	<b>0</b>	<b>150.431,88</b>	<b>107%</b>	<b>10.008,88</b>
<b>Part. 3 MIZAR</b>	<b>Total Person-month</b>	<b>9,5</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>		<b>0,00</b>	<b>0%</b>	<b>-9,5</b>
	Personnel costs incl.	111.150,00					0,00	0%	-111.150,00
	Overheads						0,00	0%	0,00
	Material	29.800,00					0,00	0%	-29.800,00
	Laser Mashine time	67.200,00					0,00	0%	-67.200,00
	Travel	12.000,00					0,00	0%	-12.000,00
	Subcontract Test	16.366,00					0,00	0%	-16.366,00
	Other costs ('the rest') Audit	1.600,00					0,00	0%	-1.600,00
	<b>Total Costs</b>	<b>238.116,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0</b>	<b>0,00</b>	<b>0%</b>	<b>-238.116,00</b>
<b>P. 4 CELLOFOAM</b>	<b>Total Person-month</b>	<b>2,0</b>	<b>4,0</b>	<b>2,0</b>	<b>1,0</b>		<b>3,0</b>	<b>150%</b>	<b>1,0</b>
	Personnel costs incl.	17.000,00	<del>24.518,00</del>	24.518,00	16.637,92		41.155,92	242%	24.155,92
	Overheads						0,00	0%	0,00
	Consumables	2.400,00	<del>287,00</del>	287,00	719,00		1.006,00	42%	-1.394,00
	Travels	9.000,00	<del>2.577,00</del>	2.577,00	1.415,62		3.992,62	44%	-5.007,38
	Material & Transport	10.500,00	<del>12.902,00</del>	12.902,00	3.084,00		15.996,00	152%	5.496,00
	Other costs ('the rest') Audit	1.300,00	<del>0,00</del>	0,00	803,25		803,25	62%	-496,75
	<b>Total Costs</b>	<b>40.200,00</b>	<b>40.283,00</b>	<b>40.284,00</b>	<b>22.669,79</b>	<b>0,00</b>	<b>62.953,79</b>	<b>157%</b>	<b>22.753,79</b>
<b>Part. 5 ISOLITH</b>	<b>Total Person-month</b>	<b>2,0</b>	<b>4,0</b>	<b>1,5</b>	<b>0,5</b>		<b>2,0</b>	<b>100%</b>	<b>0,0</b>
	Personnel costs	10.350,00	<del>10.935,00</del>	10.935,00	2.035,00		12.970,00	125%	2.620,00
	Overheads	6.210,00	<del>6.561,00</del>	6.561,00	1.221,00		7.782,00	125%	1.572,00
	Consumables	2.200,00					0,00	0%	-2.200,00
	Travels	4.528,00	<del>1.726,00</del>	1.726,00	576,00		2.302,00	51%	-2.226,00
	Material & Transport	2.000,00	<del>2.156,00</del>	2.156,00	1.895,00		4.051,00	203%	2.051,00
	Other costs ('the rest') /Audit	1.000,00			800,00		800,00	80%	-200,00
	<b>Total Costs</b>	<b>26.268,00</b>	<b>24.378,00</b>	<b>21.378,00</b>	<b>6.527,00</b>	<b>0</b>	<b>27.905,00</b>	<b>106%</b>	<b>1.617,00</b>



Part 1 / 2



Cost Budget Follow-up Table									
*) total budget figures - not EC funding									
Period 2 : 21.4.2006 - 20.08.2007									
Contract N°: 017609		Acronym: Calm-Tracks & Routes				Date: 10.11.2006			
PARTI-CIPANTS	TYPE of EXPENDITURE (as defined by participants)	BUDGET e	ACTUAL COSTS (EUR)				Pct. spent Total	Deviation to Budget (EUR) e-e1	
			Period 1 Report a1	Period 1 Actual b1	Period 2 c1	Period 4 d1			Total e1
<b>Part.6 OEAW</b>	<b>Total Person-month</b>	<b>38,6</b>	<b>25,2</b>	<b>25,2</b>	<b>16,8</b>		<b>42,0</b>	<b>108%</b>	<b>3,4</b>
	Personnel costs	202.881,76	122.726,99	117.988,64	94.009,34		211.997,98	104%	9.116,22
	Overheads	142.017,24	86.008,49	97.647,40	77.802,13		175.449,53	124%	33.432,29
	Major cost item 'y'						0,00	0%	0,00
	Other costs ('the rest')	4.000,00			4.000,00		4.000,00	100%	0,00
	<b>Total Costs</b>	<b>348.899,00</b>	<b>208.634,97</b>	<b>215.636,04</b>	<b>175.811,47</b>	<b>0</b>	<b>391.447,51</b>	<b>112%</b>	<b>42.548,51</b>
<b>Part.7 SU</b>	<b>Total Person-month</b>	<b>19,0</b>	<b>9,0</b>	<b>9,0</b>	<b>10,0</b>		<b>19,0</b>	<b>100%</b>	<b>0,0</b>
	Personnel costs (Direct cost)	136.000,00	81.305,00	81.305,00	76.591,00		167.896,00	123%	31.896,00
	Overheads	33.811,00	18.261,00	18.261,00	15.318,00		33.579,00	99%	-232,00
	Consumables	25.055,00					0,00	0%	-25.055,00
	Travels	8.000,00					0,00	0%	-8.000,00
	Other costs ('the rest')	3.000,00			2.754,00		2.754,00	92%	-246,00
	<b>Total Costs</b>	<b>205.866,00</b>	<b>109.566,00</b>	<b>109.566,00</b>	<b>94.663,00</b>	<b>0</b>	<b>204.229,00</b>	<b>99%</b>	<b>-1.637,00</b>
<b>Part.8 AIDICO</b>	<b>Total Person-month</b>	<b>23,0</b>	<b>18,0</b>	<b>18,0</b>	<b>6,0</b>		<b>24,0</b>	<b>104%</b>	<b>1,0</b>
	Personnel costs	76.608,00	63.840,00	63.840,00	23.280,00		87.120,00	114%	10.512,00
	Overheads	57.456,00	47.880,00	47.880,00	18.512,00		66.392,00	116%	8.936,00
	Consumables	12.000,00	10.750,00	10.750,00			10.750,00	90%	-1.250,00
	Travels	13.000,00	7.947,00	7.947,00	4.300,00		12.247,00	94%	-753,00
	Subcontract	9.000,00	7.334,00	7.334,00	16.166,00		23.500,00	261%	14.500,00
	Other costs ('the rest')	4.000,00			2.000,00		2.000,00	50%	-2.000,00
	<b>Total Costs</b>	<b>172.064,00</b>	<b>137.751,00</b>	<b>137.751,00</b>	<b>64.258,00</b>	<b>0</b>	<b>202.009,00</b>	<b>117%</b>	<b>29.945,00</b>
<b>Part.9 UGENT</b>	<b>Total Person-month</b>	<b>3,5</b>	<b>2,0</b>	<b>2,0</b>	<b>1,50</b>		<b>3,50</b>	<b>100%</b>	<b>0,0</b>
	Personnel costs	19.145,00	9.557,96	9.557,96	6.318,01		15.875,97	83%	-3.269,03
	Overheads	6.270,00	2.151,00	2.151,00	4.029,10		6.180,10	98%	-89,90
	Working	8.205,00	277,04	277,04	11.894,64		12.171,68	148%	3.966,68
	Travels	4.000,00	920,97	920,97	1.912,45		2.833,42	71%	-1.166,58
	Other costs ('the rest')	900,00			800,00		800,00	89%	-100,00
	<b>Total Costs</b>	<b>38.520,00</b>	<b>12.906,97</b>	<b>12.906,97</b>	<b>24.954,20</b>	<b>0</b>	<b>37.861,17</b>	<b>98%</b>	<b>-658,83</b>
<b>P. 10 UKEMPTEN</b>	<b>Total Person-month</b>	<b>8,0</b>	<b>0,0</b>	<b>0,0</b>	<b>14,0</b>		<b>14,0</b>	<b>175%</b>	<b>6,0</b>
	Personnel costs	21.648,00	1.842,08	1.842,08	38.812,95		40.655,03	188%	19.007,03
	Overheads	7.330,00	1.854,53	1.854,53	7.852,58		9.707,11	132%	2.377,11
	Consumables	10.000,00					0,00	0%	-10.000,00
	Travels	5.000,00					0,00	0%	-5.000,00
	Other costs ('the rest')	1.200,00	7.430,53	7.430,53	450,00		7.880,53	657%	6.680,53
	<b>Total Costs</b>	<b>45.178,00</b>	<b>11.127,14</b>	<b>11.127,14</b>	<b>47.115,53</b>	<b>0</b>	<b>58.242,67</b>	<b>129%</b>	<b>13.064,67</b>
<b>TOTAL</b>	<b>Total Person-month</b>	<b>148,5</b>	<b>76,4</b>	<b>77,6</b>	<b>88,0</b>		<b>165,6</b>	<b>112%</b>	
	Personnel costs	841.493,61	428.260,69	428.820,83	527.078,54		955.699,37	114%	114.205,76
	Overheads	444.535,39	220.523,89	220.523,89	207.597,44		428.121,33	96%	-16.414,06
	Consumables, work, Material	208.729,00	40.254,24	40.254,24	98.544,74		138.798,98	66%	-69.930,02
	Travels	70.949,00	17.611,37	17.611,37	20.031,47		37.642,84	53%	-33.306,16
	Subcontracting	73.166,00	33.031,50	33.031,50	32.173,00		65.204,50	89%	-7.961,50
	Other costs ('the rest')	19.600,00	7.430,53	7.430,53	16.607,25		24.037,78	123%	4.437,78
	<b>Total Costs</b>	<b>1.658.473,00</b>	<b>747.472,36</b>	<b>747.472,36</b>	<b>902.032,44</b>	<b>0</b>	<b>1.649.504,80</b>	<b>99%</b>	<b>-8.968,20</b>



7.10.3.1.12 PERSON - MONTH STATUS TABLE - Table 4

Person - Month Status Table																
Contract No : COOP - CT - 2005 - 017609		Partner - Person - month per Workpackage											AC - own staff			
Acronym: CALM TRACKS & ROUTES		TOTALS	CALMA	CORDES	MIZAR	CELLOFOAM	ISOLITH	ISF-O EAW	SU	AIDICO	UGENT	UNI KEMPTEN	AC TOTALS	SU	UGENT	UNI KEMPTEN
Period 1+2 : M1 - M28																
Workpackage 1: PSYCHO - ACOUSTIC	Actual WP total	18,5	0,5						18,0				4,0	4,0		
	Planned WP total	17,5	0,5						17,0				4,0			
Workpackage 2: DIGITAL SIMULATION	Actual WP total	42,5	0,5					42,0					0,0			
	Planned WP total	39,1	0,5					38,6					0,0			
Workpackage 3: DYNAMIC & STATIC CALCULATION	Actual WP total	10,3	1,0	9,3	0,0								0,0			
	Planned WP total	10,8	1,0	9,3	0,5								0,0			
Workpackage 4: NEW NOISE ABATEMENT TECHNOLOGY	Actual WP total	30,0	1,0		0,0	0,5	1,0			24,0	3,5		0,0			
	Planned WP total	30,0	1,0		0,5	1,0	1,0			23,0	3,5		0,0		0,0	
Workpackage 5: DESIGN & DEVELOPMENT	Actual WP total	13,4	11,9		0,0	0,5	1,0						0,0			
	Planned WP total	22,0	15,0		5,0	1,0	1,0						0,0			
Workpackage 6: TESTING PROTOTYPE	Actual WP total	40,1	24,1		0,0	2,0						14,0	0,0			
	Planned WP total	23,3	10,8		3,5	1,0						8,0	0,0			
Workpackage 7: PROJEKT MANAGEMENT	Actual WP total	13,5	12,5						1,0				0,0			
	Planned WP total	5,8	4,8						1,0				0,0			
Total Project Person- month	Actual WP total	<b>168,3</b>	<b>51,5</b>	<b>9,3</b>	<b>0,0</b>	<b>3,0</b>	<b>2,0</b>	<b>42,0</b>	<b>19,0</b>	<b>24,0</b>	<b>3,5</b>	<b>14,0</b>	4,0	4,0	0,0	0,0
	Planned WP total	148,5	33,6	9,3	9,5	3,0	2,0	38,6	18,0	23,0	3,5	8,0	4,0	0,0	0,0	0,0



### 7.10.3.1.13 Summary note in deviations from cost and person month

The most significant deviation is that there were no cost have been declared by the company MIZAR because of their bankruptcy.

Work of MIZAR has been overtaken by other partners: CALMA-TEC, CORDES, CELLOFOAM, OEAW, AIDICO.

The part of MIZAR was to develop and test a light weight noise barrier from metal plate. Their budget included several hours use of their laser machine. By their absence in the project this laser machine was no more available , this change causes the reduction of cost for "Consumables, work, material" (difference - 69.930,- Euro). On the other hand expences for personel increased + 144.205 Euro)

Changes of the work program in consequence of the MIZAR absence have been discussed and decided in the consortium.

Deviaton in percent:

CALMA – TEC	+ 28 %
CORDES	+ 7 %
CELLOFOAM	+ 57 %
OEAW	+ 12 %
AIDICO	+ 17 %
UNI KEMPTEN	+ 29 %
MIZAR	- 100 %



Deviation from cost and person month							
Contract No.: COOP-CT-2005-017609		Acronym: CALM TRACKS & ROUTES				20.08.2008	
PARTICIPANTS	TYPE OF EXPENDITURE	BUDGET	ACTUAL COSTS (Euro)			Pct. Spent	Deviation to Budget (Euro)
			Period 1	Period 2	Total	Total	
<b>CALMA</b>	<b>Total Person-month</b>	33,6	14,5	34,3	48,8	145%	
	Total Cost	402.919	130.737	383.688	514.425	128%	111.506
	Total Contribution	224.856	77.974	200.424	278.398	124%	53.542
<b>CORDES</b>	<b>Total Person-month</b>	9,3	5,4	3,9	9,3	100%	
	Total Cost	140.423	68.087	82.345	150.432	107%	10.009
	Total Contribution	70.862	34.043	42.923	76.966	109%	6.105
<b>MIZAR</b>	<b>Total Person-month</b>	9,5					
	Total Cost	238.116	0	0	0	0	-238.116
	Total Contribution	119.858	0	0	0	0	-119.858
<b>CELLOFOAM</b>	<b>Total Person-month</b>	3,0	1,0	2,0	3,0	100%	
	Total Cost	40.200	40.283	22.670	62.953	157%	22.753
	Total Contribution	20.750	20.142	11.737	31.878	154%	11.128
<b>ISOLITH</b>	<b>Total Person-month</b>	2,0	1,0	1,0	2,0	100%	
	Total Cost	26.288	21.378	6.527	27.905	106%	1.617
	Total Contribution	13.644	10.689	3.664	14.353	105%	709
<b>ISF - OEAW</b>	<b>Total Person-month</b>	38,6	24,6	17,4	42,0	109%	
	Total Cost	348.899	215.636	175.811	391.448	112%	42.548
	Total Contribution	176.450	107.818	89.906	197.724	112%	21.274
<b>STOCKH.UNIV.</b>	<b>Total Person-month</b>	18,0	9,0	10,0	19,0	106%	
	Total Cost	205.866	109.566	94.663	204.229	109.566	-1.637
	Total Contribution	205.866	109.566	94.663	204.229	109.566	-1.637
<b>AIDICO</b>	<b>Total Person-month</b>	23,0	18,0	6,0	24,0	104%	
	Total Cost	172.064	137.751	64.258	202.009	117%	29.945
	Total Contribution	88.032	69.876	33.129	103.005	117%	14.973
<b>UGENT</b>	<b>Total Person-month</b>	3,5	2,0	1,5	3,5	100%	
	Total Cost	38.520	12.907	24.954	37.861	98%	-659
	Total Contribution	38.520	12.907	24.954	37.861	98%	-659
<b>UNI KEMPTEN</b>	<b>Total Person-month</b>	8,0	0,0	14,0	14,0	175%	
	Total Cost	45.178	11.127	47.116	58.243	129%	13.065
	Total Contribution	45.178	11.127	47.116	58.243	129%	13.065
<b>Total</b>	<b>Total Person-month</b>	148,50	75,6	90,1	165,60	111,5%	
	Total Cost	1.658.474	747.472	902.033	1.649.504	99,5%	-8.970
	Total Contribution	1.004.015	454.141	548.515	1.002.656	99,9%	-1.359





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## Section 2

Audit Certificate

Form C Financial statement per activity for the contractual reporting period

7.10.3.2.1. CALMA – TEC



**AUDIT CERTIFICATE**  
**Calm Tracks & Routes**

Innovation of noise barriers; improved noise abatement for motorways and railway tracks

Addressed to:

CALMA – TEC Lärmschutzsysteme GmbH  
2340 Mödling, Bahnstraße 4/311  
AUSTRIA

Steirer, Mika & Comp. Wirtschaftstreuhand GmbH, established in 1010 Wien, Franz-Josefs Kai 53, Austria, represented for signature of this audit certificate by MMag. Petra Egger, auditor, hereby certify that:

- we have conducted an audit relating to some information declared in your Financial Statement(s) per Activity attached to this audit certificate and presented to the Commission of the European Communities under contract No 017609, CALM TRACKS & ROUTES – Innovation of noise barriers: improved noise abatement for motorways and railway tracks for the period from 20.04.2005 to 20.08.2007.
- We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above-referenced contract and its annexes.

The above mentioned Financial Statement per Activity was examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- the amount of the total eligible costs 514.425,- Euro (Fivehundredfourteenousandfourhundredtwentyfive) declared in the Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:
  - ✓ They are actual and answers to your economic environment,
  - ✓ They are determined in accordance with your usual accounting principles,
  - ✓ They have been incurred during the periods covered by the Financial Statement(s) per Activity concerned by this audit certificate,
  - ✓ [they also include the eligible costs incurred in drawing up the final reports referred to in Article II.7.4 of this contract, which may be incurred up to 45 calendar days after the end of the project;]
  - ✓ They are recorded in your accounts at the date of the establishment of this audit certificate,
  - ✓ They are exclusive of any non-eligible costs which are, as established in the second paragraph of article II.19 of your above mentioned contract with the Commission of the European Communities;



- ❖ Any identifiable indirect taxes, including VAT or duties.
  - ❖ Interest owed;
  - ❖ Provisions for possible future losses or charges;
  - ❖ exchange losses;
  - ❖ costs declared, incurred or reimbursed in respect of another Community project;
  - ❖ return on capital;
  - ❖ debt and debt service charges;
  - ❖ excessive or reckless expenditure;
  - ❖ any cost which does not meet the conditions established in Article II.19.1. of your contract with the Commission of the European Communities.
- ✓ They are represented according to the following cost reporting model "full costs" you are eligible to use according to article II.22 of your above mentioned contract with the Commission of the European Communities;
- As such, they are also exclusive of any additional direct eligible costs covered by contributions from third parties defined in indents a) and b) of Article II.23 of your contract with the Commission of the European Communities.
- as declared in the Box 4 of the attached Financial Statement per Activity, the total amount of interests yielded by the Commission of the European Communities for the periods covered by this Financial Statement per Activity is equal to 1.721,- Euro (onethousandandsevenhundredtwentyone);
  - accounting procedures used in the recording of your eligible costs and receipts respect the accounting rules of the State in which you are established as well as permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract above mentioned and the overall statement of accounts relating to your overall business activity;
  - our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;
  - as declared in the Box 6 of the attached Financial Statement(s) per Activity, you have paid for this audit certificate a price equal to 1.800,- Euro (onethousandandeighthundred), in which VAT is equal to 300,-Euro (threehundred)

27.2.08

**STEIRER - MIKA & COMP.**  
Wirtschaftsprüfungsgesellschaft m. b. H.  
Wirtschaftsprüfungs- und Steuerberatungsgesellschaft  
1010 Wien - Franz-Josef-Kai 53 - Tel. 535 50 25



**Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs**  
*(to be completed by each contractor)*

Type of Instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	CALM TRACKS & ROUTES	Contract n°	COOP-CT-2005-017609
Contractors's legal name	CALMA - TEC Lärmschutzsysteme GMBH		
Legal Type	GMBH		
Contact Person	Ursula BRUNBAUER	Telephone	0043-2236-864100
Teletcopy		E-mail	<a href="mailto:ursula.brunbauer@calma-tec.com">ursula.brunbauer@calma-tec.com</a>
Cost model used (AC/FC or FCF)	FC	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	Real
Period from	20.04.2005	TO	20.08.2007

**1- Resources (Third party(ies)).**

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)	NO
<i>If Yes, please provide the following information</i>	
Third Party 1 (Y1) Legal name	Cost model used
Third Party 2 (Y2) Legal name	Cost model used
Third Party 3 (Y3) Legal name	Cost model used
Third Party 4 (Y4) Legal name	Cost model used
<i>If necessary add another Form C</i>	

**2- Declaration of eligible costs (in €)**

*Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.*

*If you are a contractor using the additional cost model (AC):*

*- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;*

*do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs*

*The costs declared should distinguish between direct and indirect costs*

*If necessary, adjustments to previous period(s) may be included where appropriate*



	Type of Activity										Total (F) = (A)+(B)+(C)+(D)+(E)	
	Research and Technological Development / Innovation (A)		Demonstration (B)		Training (C)		Management of the Consortium (D)		Other Specific Activities (E)			
	Contractor	Third Party (ies)	Contractor	Third Party (ies)	Contractor	Third Party (ies)	Contractor	Third Party (ies)	Contractor	Third Party (ies)		
Direct costs	393.104						42.371				435.475	
Of which subcontracting	22.273						7.200				29.473	
Indirect costs	78.950										78.950	
Adjustments to previous period(s)												
<b>Total costs</b>	<b>472.054</b>						<b>42.371</b>				<b>514.425</b>	

**3- Declaration of receipts (in €)**

*If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.*

	Type of Activity										Total (F') = (A')+(B')+(C')+(D') +(E')	
	Research and Technological Development / Innovation (A')		Demonstration (B')		Training (C')		Management of the Consortium (D')		Other Specific Activities (E')			
	Contractor	Third Party (ies)	Contractor	Third Party (ies)	Contractor	Third Party (ies)	Contractor	Third Party (ies)	Contractor	Third Party (ies)		
<b>Total receipts</b>											0	0

**4- Declaration of interest generated by the pre-financing (in €)**

*To be completed only by the coordinator.*

*Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)*

*If yes, please indicate the amount (in €)*

1.721,02



<b>5- Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution requested is equal to ( amount in €)	278.398,00

<b>6- Audit certificates</b>	
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)	YES
If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)	NO
If No, what are the periods covered by this(those) audit certificate(s) ?	From -to
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?	

Audit certificate of the contractor (X)	
Legal name of the audit firm	Steirer Mika & Comp. Cost of the certificate 1.500,00
Audit certificate(s) of the third party(ies) (Ys) (if necessary)	
Y1 : Legal name of the audit firm	Cost of the certificate
Y2 : Legal name of the audit firm	Cost of the certificate
Y3 : Legal name of the audit firm	Cost of the certificate
Y4 : Legal name of the audit firm	Cost of the certificate
If necessary add another Form C. Total (Z) = (X) + (Ys)	
Reminders: The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement	

<b>7- Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.	
Contractor	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party(ies) (if necessary)	
Third Party 1 (Y1)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 2 (Y2)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 3 (Y3)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 4 (Y4)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	



- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
---	--

If necessary add another Form C.

**8- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;

incorporated in the above Statement ;

- the above information declared is complete and true ;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	<b>WOLFGANG BRUNBAUER</b>	<b>URSULA BRUNBAUER</b>
	Date	Date
	<b>27.12.2007</b>	<b>27.12.2007</b>
	Signature	Signature

**CALMA-TEC**  
 LARMSCHUTZSYSTEME GMBH  
 A-2340 Modling Bahnstrasse 4 / 3 / 311  
 Tel.: +43 (0) 2236-864100; FAX DW-25  
 Email: office@calma-tec.com



## Section 2

Audit Certificate

Form C Financial statement per activity for the contractual reporting period

7.10.3.2.2. CORDES + Partner



## AUDIT CERTIFICATE

**Calm Tracks & Routes**

Innovation of noise barriers; improved noise abatement  
for motorways and railway tracks

Addressed to:

Cordes + Partner Beratende Ingenieure GmbH  
Jägerweg 10, D 85521 Ottobrunn

We Fidicon Consult AG, established in Götzstrasse 11, 80809 München Germany represented for signature of this audit certificate by Wirtschaftsprüfer Pischel (qualified auditor), hereby certify that:

- we have conducted an audit relating to some information declared in your Financial Statement per Activity attached to this audit certificate and presented to the Commission of the European Communities under contract No 017609, CALM TRACKS & ROUTES – Innovation of noise barriers: improved noise abatement for motorways and railway tracks for the period from 20.04.2005 to 20.08.2007.
- We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above-referenced contract and its annexes.

The above mentioned Financial Statement per Activity was examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- the amount of the total eligible costs Euro 150.432 (onehundredfiftythousand and fourhundredthirtytwo) you declared in the Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:



- They are actual and answer to your economic environment,
- They are determined in accordance with your generally accepted accounting principles,
- They have been incurred during the periods covered by the Financial Statement per Activity concerned by this audit certificate,  
They also include the eligible costs incurred in drawing up the final reports referred to in Article II.7.4 of this contract, which may be incurred up to 45 calendar days after the end of the project;
- They are recorded in your accounts at the date of the establishment of this audit certificate,
- They are exclusive of any non-eligible costs which are, as established in the second paragraph of article II. 19 of your above mentioned contract with the Commission of the European Communities;
  - Any identifiable indirect taxes, including VAT or duties,
  - Interest owed;
  - Provisions for possible future losses or charges;
  - exchange losses;
  - costs declared, incurred or reimbursed in respect of another Community project;
  - return on capital;
  - debt and debt service charges;
  - excessive or reckless expenditure;
  - any cost which does not meet the conditions established in Article II.19.1. of your contract with the Commission of the European Communities.
- They are represented according to the following cost reporting model "full costs" you are eligible to use according to article II.22 of your above mentioned contract with the Commission of the European Communities;
- As such, they are also exclusive of any additional direct eligible costs covered by contributions from third parties defined in indents a) and b) of Article II.23 of your contract with the Commission of the European Communities.



- As declared in the Box 3 of the attached Financial Statement per Activity, the total amount of receipts for the periods covered by this Financial Statement per Activity is equal to Euro 0;
- As declared in the Box 4 of the attached Financial Statement per Activity, the total amount of interests yielded by the Commission of the European Communities for the periods covered by this Financial Statement per Activity is equal to Euro 0;
- accounting procedures used in the recording of your eligible costs and receipts respect the accounting rules of Germany as well as permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract above mentioned and the overall statement of accounts relating to your overall business activity;
- our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;
- as declared in the Box 6 of the attached Financial Statement per Activity, you have paid for this audit certificate a price equal to Euro 3,500 (three thousand and five hundred); plus VAT in equal to Euro 665 (six hundred and sixty five);

München (Munich), 30. November 2007

Fidicon Consult Unternehmensberatung AG  
Wirtschaftsprüfungsgesellschaft  
Pischel  
Wirtschaftsprüfer





**Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs**  
*(to be completed by each contractor)*

Type of instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	CALM TRACKS & ROUTES	Contract n°	COOP-CT-2005-017809
Contractor's legal name	Cordes + Partner - Beratende Ingenieure GmbH		
Legal Type	GmbH		
Contact Person	Friedrich Vehling	Telephone	0049-0189-608082-0
Telecopy	0049-0189-608082-10	E-mail	office@cordes-partner.de
Cost model used (AC/FC or FCF)	FC	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	Real
Period from	20.04.2005	TO	20.08.2007

<b>1- Resources (Third party(ies))</b>	
Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)	No
<i>If Yes, please provide the following information</i>	
Third Party 1 (Y1) - Legal name	Cost model used
Third Party 2 (Y2) - Legal name	Cost model used
Third Party 3 (Y3) - Legal name	Cost model used
Third Party 4 (Y4) - Legal name	Cost model used
<b>If necessary add another Form C</b>	

**2- Declaration of eligible costs (in €)**

Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.

If you are a contractor using the additional cost model (AC):

- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;

do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.

If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs

The costs declared should distinguish between direct and indirect costs

If necessary, adjustments to previous period(s) may be included where appropriate



	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A)		(B)		(C)		(D)		(E)	(F) = (A)+(B)+(C)+(D)+(E)		
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	96.850						3.500				100.350	
Of which subcontracting	13.732						3.500				17.232	
Indirect costs	50.082										50.082	
Adjustments to previous period(s)												
<b>Total costs</b>	<b>146.932</b>						<b>3.500</b>				<b>150.432</b>	

**3- Declaration of receipts (in €)**

*If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.*

	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A')		(B')		(C')		(D')		(E')	(F') = (A')+(B')+(C')+(D')+(E')		
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
<b>Total receipts</b>											0	

**4- Declaration of interest generated by the pre-financing (in €)**



*To be completed only by the coordinator.*

Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)	
If yes, please indicate the amount (in €)	

**5- Request of FP6 Financial Contribution (in €)**

For this period, the FP6 Community financial contribution resuested is equal to ( amount in €)	<b>76.966,00</b>
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**6- Audit certificates**

According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)

If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)

If No, what are the periods covered by this(those) audit certificate(s) ?

What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?

Audit certificate of the contractor (X)		
Legal name of the audit firm:	<b>FIDICON CONSULT AG</b>	Cost of the certificate <b>3.500</b>
Audit certificate(s) of the third party(ies) (Ys) (if necessary)		
Y1 : Legal name of the audit firm		Cost of the certificate
Y2 : Legal name of the audit firm		Cost of the certificate
Y3 : Legal name of the audit firm		Cost of the certificate
Y4 : Legal name of the audit firm		Cost of the certificate
<b>If necessary add another Form C.</b>		<b>Total (Z) = (X) + (Ys) 3.500</b>
<i>Reminders: The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement</i>		

**7- Conversion rates**

Costs incurred in currencies other than EURO shall be reported in EURO.

Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.

Contractor	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party(ies) (if necessary)	
Third Party 1 (Y1)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 2 (Y2)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 3 (Y3)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	



- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 4 (Y4)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	

If necessary add another Form C.

**8- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;
- the necessary adjustments, especially to costs reported in previous Financial Statement(s) per Activity, have been
- the above information declared is complete and true ;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	<b>Dr.-Ing. Frank Fischer</b>	<b>Friedrich Vehling</b>
	x	Date
	<b>26.11.2007</b>	<b>26.11.2007</b>
	Signature	Signature



## Section 2

Audit Certificate

Form C Financial statement per activity for the contractual reporting period

MIZAR

NO DOCUMENT



## Section 2

### Audit Certificate

Form C Financial statement per activity for the contractual reporting period

#### 7.10.3.2.4. CELLOFOAM



**AUDIT CERTIFICATE**  
**Calm Tracks & Routes**

Innovation of noise barriers: improved noise abatement for motorways and railway tracks

Addressed to:

Cellofoam GmbH & Co. KG  
Freiburger Straße 44  
88400 Biberach  
- Germany -

We AuditTax Schön & Partner, Wirtschaftsprüfungsgesellschaft - Steuerberatungsgesellschaft established in Rollinstraße 61-63, 88400 Biberach, Germany represented for signature of this audit certificate by Karen Schön, Wirtschaftsprüferin, hereby certify that:

- we have conducted an audit relating to some information declared in your Financial Statement(s) per Activity attached to this audit certificate and presented to the Commission of the European Communities under contract No 017609, CALM TRACKS & ROUTES – Innovation of noise barriers: improved noise abatement for motorways and railway tracks for the period from 20.04.2005 to 20.08.2007.
- We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above-referenced contract and its annexes.

The above mentioned Financial Statement per Activity was examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- the amount of the total eligible costs EUR 62.952.79 (sixty-two thousand, nine hundred fifty-two euros and seventy-nine cents) you declared in the Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:
  - ✓ They are actual and answers to your economic environment,
  - ✓ They are determined in accordance with your usual accounting principles,
  - ✓ They have been incurred during the periods covered by the Financial Statement(s) per Activity concerned by this audit certificate, [they also include the eligible costs incurred in drawing up the final reports referred to in Article II.7.4 of this contract, which may be incurred up to 45 calendar days after the end of the project;]



- ✓ They are recorded in your accounts at the date of the establishment of this audit certificate,
- ✓ They are exclusive of any non-eligible costs which are, as established in the second paragraph of article II.19 of your above mentioned contract with the Commission of the European Communities;
  - ❖ Any identifiable indirect taxes, including VAT or duties,
  - ❖ Interest owed;
  - ❖ Provisions for possible future losses or charges;
  - ❖ exchange losses;
  - ❖ costs declared, incurred or reimbursed in respect of another Community project;
  - ❖ return on capital;
  - ❖ debt and debt service charges;
  - ❖ excessive or reckless expenditure;
  - ❖ any cost which does not meet the conditions established in Article II.19.1. of your contract with the Commission of the European Communities.
- ✓ They are represented according to the following cost reporting model "full costs" you are eligible to use according to article II.22 of your above mentioned contract with the Commission of the European Communities;
- ✓ [As such, they are also exclusive of any additional direct eligible costs covered by contributions from third parties defined in indents a) and b) of Article II.23 of your contract with the Commission of the European Communities].
  - as declared in the Box 3 of the attached Financial Statement(s) per Activity, the total amount of receipts for the periods covered by this Financial Statement per Activity is equal to EUR 0.00 (zero);
  - as declared in the Box 4 of the attached Financial Statement per Activity, the total amount of interests yielded by the Commission of the European Communities for the periods covered by this Financial Statement per Activity is equal to EUR 0.00 (zero);
- accounting procedures used in the recording of your eligible costs and receipts respect the accounting rules of the State in which you are established as well as permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract above mentioned and the overall statement of accounts relating to your overall business activity;



- our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;

[Relevant information establishing this qualification are attached to this audit certificate;]

- as declared in the Box 6 of the attached Financial Statement(s) per Activity, you have paid for this audit certificate a price equal to EUR 803.25 (eight hundred three euros and twenty-five cents); in which VAT is equal to EUR 128.25 (one hundred twenty-eight euros and twenty-five cents);

Biberach, January 31, 2008



AuditTax Schön & Partner  
Wirtschaftsprüfungsgesellschaft  
Steuerberatungsgesellschaft

  
Karen Schön  
Wirtschaftsprüferin



**Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs**  
(to be completed by each contractor)

Type of Instrument:	Specific Research Project for SMEs	Type of Action (if necessary):	Cooperative Research (CRAFT)
Project Title (or Acronym):	CALM TRACKS & ROUTES	Contract n°:	COOP-CT-2006-017689
Contractor's legal name:	CELLOFOAM GmbH & Co. KG		
Legal Type:	GmbH & Co. KG		
Contact Person:	Jürgen Grimmeßen	Telephone:	0049 / 7351 / 573-27
Telecopy:	0049 / 7351 / 573-17	E-mail:	sales@cellofoam.de
Cost model used (AC/FC or FCF):	FC	Indirect costs (Real or flat rate of 23% of Direct cost except subcontracting):	Real
Period from:	20.04.2005	TO:	20.08.2007

**1- Resources (Third party(ies))**

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)

If Yes, please provide the following information:

Third Party 1 (Y1) - Legal name		Cost model used	
Third Party 2 (Y2) - Legal name		Cost model used	
Third Party 3 (Y3) - Legal name		Cost model used	
Third Party 4 (Y4) - Legal name		Cost model used	

If necessary add another Form C

**2- Declaration of eligible costs (In €)**

Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.

If you are a contractor using the additional cost model (AC):

- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;
- do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.

If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs.

The costs declared should distinguish between direct and indirect costs

If necessary, adjustments to previous period(s) may be included where appropriate



	Type of Activity										Total	
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		(F) = (A)+(B)+(C)+(D)+(E)	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	35555,91						803,25				36359,16	
Of which subcontracting	0										0	
Indirect costs	26593,63										26593,63	
Adjustments to previous period(s)												
<b>Total costs</b>	<b>62149,54</b>						<b>803,25</b>				<b>62952,79</b>	

**3- Declaration of receipts (in €)**

If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.  
 If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.

	Type of Activity										Total	
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		(F) = (A)+(B)+(C)+(D)+(E)+(H)	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
<b>Total receipts</b>												

**4- Declaration of interest generated by the pre-financing (in €)**

To be completed only by the coordinator.

Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / NO)

If yes, please indicate the amount (in €)



<b>5- Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution requested is equal to ( amount in €)	31.878,02

<b>6- Audit certificates</b>	
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)	YES
If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)	YES
If No, what are the periods covered by this(those) audit certificate(s) ?	
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?	

Audit certificate of the contractor (X)	
Legal name of the audit firm	Auditax Schön & Partner
Cost of the certificate	803,25 Euro (VAT included)
Audit certificate(s) of the third party(ies) (Ye) (if necessary)	
Y1: Legal name of the audit firm	Cost of the certificate
Y2: Legal name of the audit firm	Cost of the certificate
Y3: Legal name of the audit firm	Cost of the certificate
Y4: Legal name of the audit firm	Cost of the certificate
If necessary add another Form C.	
Total: (Z) = (X) + (Ye)	
Reminders: The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement	

<b>7- Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.	
<b>Contractor</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party(ies) (if necessary)</b>	
<b>Third Party 1 (Y1)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 2 (Y2)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 3 (Y3)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 4 (Y4)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	



- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
--	--

If necessary add another Form C.

<p><b>8- Contractor's Certificate</b></p> <p>We certify that:</p> <ul style="list-style-type: none"> <li>- the costs declared above are directly related to the resources used to reach the objectives of the project ;</li> <li>- the receipts declared above are directly related to the resources used to reach the objectives of the project ;</li> <li>- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;</li> <li>- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;</li> <li>- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;</li> </ul> <p>Incorporated in the above Statement ;</p> <ul style="list-style-type: none"> <li>- the above information declared is complete and true ;</li> <li>- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.</li> </ul>		
Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	<b>Jürgen GRIMMEISSEN</b>	<b>Jörg RÖLLINGHOFF</b>
	Date	Date
	<b>28.01.2008</b>	<b>28.01.2008</b>
	Signature	Signature



## Section 2

Audit Certificate

Form C Financial statement per activity for the contractual reporting period

7.10.3.2.5. ISOLITH



## AUDIT SALZBURG

**AUDIT SALZBURG Wirtschafts-**  
**prüfungsgesellschaft m.b.H.**  
**Wirtschaftsprüfungsgesellschaft**

Mildenburggasse 6  
A-5020 Salzburg

Tel.: [43] (662) 63 9 71-0  
Fax: [43] (662) 62 45 45  
E-Mail: office@audit-salzburg.at

Landesgericht Salzburg  
Firmenbuch FN 61340g  
DVR-Nr: 0079929  
UID-Nr.: ATU 33849306

### **AUDIT CERTIFICATE** **Calm Tracks & Routes**

Innovation of noise barriers; improved noise abatement for motorways and railway tracks

Addressed to:

ISOLITH M. Hattfinger GmbH  
Roidwalchen 25  
5204 Straßwalchen  
Österreich

We Audit Wirtschaftsprüfung GmbH established 5020 Salzburg, Österreich represented for signature of this audit certificate by Mag. Gunther Bauer, hereby certify that:

- we have conducted an audit relating to some information declared in your Financial Statement per Activity attached to this audit certificate and presented to the Commission of the European Communities under contract No. 017609, CALM TRACKS & ROUTES – Innovation of noise barriers: improved noise abatement for motorways and railway tracks for the period from 20.04.2005 to 20.08.2007.
- We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above-referenced contract and its annexes.

The above mentioned Financial Statement per Activity was examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- the amount of the total eligible costs 27.905 EUR (twenty seven thousand nine hundred and five euro) you declared in the Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:

**Geschäftsführer:** Dkfm. F. Bauer, StB • Mag. G. Bauer, WP • Mag. R. Firberböck, StB • Mag. P. Josephu, WP • U. Lanckmayer, StB  
Dr. W. Mayr, WP • Dr. A. Navara, WP • Dr. S. Navara-Steidl, WP



- ✓ They are actual and answers to your economic environment,
- ✓ They are determined in accordance with your usual accounting principles,
- ✓ They have been incurred during the periods covered by the Financial Statement(s) per Activity concerned by this audit certificate,  
[they also include the eligible costs incurred in drawing up the final reports referred to in Article II.7.4 of this contract, which may be incurred up to 45 calendar days after the end of the project;]
- ✓ They are recorded in your accounts at the date of the establishment of this audit certificate,
- ✓ They are exclusive of any non-eligible costs which are, as established in the second paragraph of article II.19 of your above mentioned contract with the Commission of the European Communities;
  - ❖ Any identifiable indirect taxes, including VAT or duties,
  - ❖ Interest owed;
  - ❖ Provisions for possible future losses or charges;
  - ❖ exchange losses;
  - ❖ costs declared, incurred or reimbursed in respect of another Community project;
  - ❖ return on capital;
  - ❖ debt and debt service charges;
  - ❖ excessive or reckless expenditure;
  - ❖ any cost which does not meet the conditions established in Article II.19.1. of your contract with the Commission of the European Communities.
- ✓ They are represented according to the following cost reporting model "full costs" you are eligible to use according to article II.22 of your above mentioned contract with the Commission of the European Communities;
- ✓ [As such, they are also exclusive of any additional direct eligible costs covered by contributions from third parties defined in indents a) and b) of Article II.23 of your contract with the Commission of the European Communities].
- as declared in the Box 3 of the attached Financial Statement per Activity, the total amount of receipts for the periods covered by this Financial Statement per Activity is equal to 0 EUR (zero euro);



- [as declared in the Box 4 of the attached Financial Statement per Activity, the total amount of interests yielded by the Commission of the European Communities for the periods covered by this Financial Statement per Activity is equal to 0 EUR (zero euro);
  
- accounting procedures used in the recording of your eligible costs and receipts respect the accounting rules of the State in which you are established as well as permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract above mentioned and the overall statement of accounts relating to your overall business activity;
  
- our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;
  
- as declared in the Box 6 of the attached Financial Statement(s) per Activity, you have paid for this audit certificate a price equal to 960 euro (nine hundred and sixty euro); in which VAT is equal to 160 euro (one hundred and sixty euro).

**AUDIT SALZBURG**  
WIRTSCHAFTSPRÜFUNGSGESELLSCHAFT M.B.H.  
Wirtschaftsprüfungs- und Steuerberatungsgesellschaft  
A-5020 SALZBURG, MILDBENBURGGASSE 6

Salzburg February 27, 2008



**Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs**  
*(to be completed by each contractor)*

Type of Instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	CALM TRACKS & ROUTES	Contract n°	COOP-CT-2005-017609
Contractors's legal name	ISOLITH M. Hattinger GmbH		
Legal Type	GMBH		
Contact Person	Josef Hattinger	Telephone	
Telecopy		E-mail	
Cost model used (AC/FC or FCF)	FC	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	Real
Period from:	20.04.2005	TO	20.08.2007

**1- Resources (Third party(ies))**

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)

If Yes, please provide the following information

Third Party 1 (Y1) Legal name		Cost model used	FC
Third Party 2 (Y2) Legal name		Cost model used	
Third Party 3 (Y3) Legal name		Cost model used	
Third Party 4 (Y4) Legal name		Cost model used	

If necessary add another Form C

**2- Declaration of eligible costs (in €)**

Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.

If you are a contractor using the additional cost model (AC):

- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;
- do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.

If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs

The costs declared should distinguish between direct and indirect costs

If necessary, adjustments to previous period(s) may be included where appropriate

**AUDIT SALZBURG**  
WIRTSCHAFTSPRÜFUNGSBEZELLSCHAFT M.B.H.  
Wirtschaftsprüfungs- und Steuerberatungsgesellschaft  
A-5020 SALZBURG, WILDENBURGGASSE 6



	Type of Activity										Total	
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		(F) = (A)+(B)+(C)+(D)+(E)	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	19.323						800				20.123	
Of which subcontracting	0						800				800	
Indirect costs	7.782										7.782	
Adjustments to previous period(s)												
<b>Total costs</b>	<b>27.105</b>						<b>800</b>				<b>27.905</b>	

**3- Declaration of receipts (in €)**

*If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23 c of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.*

	Type of Activity										Total	
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		(F') = (A')+(B')+(C')+(D')+(E')	
	(A')	(B')	(C')	(D')	(E')	(F')	(G')	(H')	(I')	(J')	(K')	(L')
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
<b>Total receipts</b>												

**4- Declaration of interest generated by the pre-financing (in €)**

*To be completed only by the coordinator.*

*Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)*

*If yes, please indicate the amount (in €)*

**AUDIT SALZBURG**  
 WIRTSCHAFTSPRÜFUNGSGESELLSCHAFT M.B.H.  
 Wirtschaftsprüfungs- und Steuerberatungsgesellschaft  
 A-5020 SALZBURG, TENNENBURG GASSE 6



<b>5- Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution requested is equal to ( amount in €)	14.352,50

<b>6- Audit certificates</b>	
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)	YES
If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)	YES
If No, what are the periods covered by this(those) audit certificate(s) ?	From -to
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?	

Audit certificate of the contractor (X)	
Legal name of the audit firm	Flachgau Treuhand GmbH
Cost of the certificate	800 Euro
Audit certificate(s) of the third party(ies) (Ys) (if necessary)	
Y1 : Legal name of the audit firm	Cost of the certificate
Y2 : Legal name of the audit firm	Cost of the certificate
Y3 : Legal name of the audit firm	Cost of the certificate
Y4 : Legal name of the audit firm	Cost of the certificate
<b>If necessary add another Form C.</b>	
Total (Z) = (X) + (Ys)	
Reminders: The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement	

<b>7- Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.	
Contractor	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party(ies) (if necessary)	
Third Party 1 (Y1)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 2 (Y2)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 3 (Y3)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 4 (Y4)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	

**AUDIT SALZBURG**  
 WIRTSCHAFTSPRÜFUNGSGESELLSCHAFT M.B.H.  
 Wirtschaftsprüfungs- und Steuerberatungsgesellschaft  
 A-5020 SALZBURG, MILDENBURGASSE 6



- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
---	--

If necessary add another Form C.

<b>8- Contractor's Certificate</b>		
We certify that:		
- the costs declared above are directly related to the resources used to reach the objectives of the project ;		
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;		
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;		
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;		
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ; incorporated in the above Statement ;		
- the above information declared is complete and true ;		
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.		
<b>Contractor's Stamp</b>	<b>Name of the Person responsible for the work</b>	<b>Name of the duly authorised Financial Officer</b>
	<b>Josef Hattinger</b>	<b>Manfred Hattinger</b>
	Date	Date
	Signature	Signature

**AUDIT SALZBURG**  
 WIRTSCHAFTSPRÜFUNGSGESELLSCHAFT M.B.H.  
 Wirtschaftsprüfungs- und Steuerberatungsgesellschaft  
 A-5020 SALZBURG, DENDENBURG GASSE 6



## Section 2

Audit Certificate

Form C Financial statement per activity for the contractual reporting period

7.10.3.2.6. ISF OEAW



MOORE STEPHENS AUSTRIA WirtschaftsprüfungsgmbH

1

### Audit Certificate

**Addressed to**

Austrian Academy of Sciences, Dr. Ignaz Seipel-Platz 2, A-1010 Wien

We MOORE STEPHENS AUSTRIA WirtschaftsprüfungsgmbH, established in Stelzhamerstraße 12, 4021 Linz, Austria represented for signature of this audit certificate by Dr. Reinhard Schwarz, auditor, hereby certify that:

We have conducted an audit relating to the cost declared in the Financial Statement per Activity of Austrian Academy of Sciences, hereinafter referred to as contractor, to which this audit certificate is attached and which is to be presented to the Commission of the European Communities under contract "Innovation of noise barriers: improved noise abatement for motorways and railway tracks", CALM TRACKS AND ROUTES, COOP-CT-2005-017609, for the following period covered by the EC contract April 20<sup>th</sup> 2005 to April 19<sup>th</sup> 2006.

We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above-referenced contract and its annexes.

The above mentioned Financial Statement per Activity was examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- The amount of the total eligible costs EUR 215,636.04, two hundred and fifteen thousand six hundred and thirty-six point four euro declared in the Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:
  - they are actual and reflect the contractor's economic environment;
  - they are determined in accordance with the contractors usual accounting principles;
  - they have been incurred during the periods covered by the Financial Statement per Activity concerned by this audit certificate;
  - they are recorded in the accounts of the contractor at the date of the establishment of this audit certificate<sup>1</sup>;

<sup>1</sup> Article II.19.1.d)



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MOORE STEPHENS AUSTRIA WirtschaftsprüfungsgmbH

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2

- they are exclusive of any non-eligible costs which are, as established in the second paragraph of article II.19 of your above mentioned contract with the Commission of the European Communities:
  - any identifiable indirect taxes, including VAT or duties;
  - interest owed;
  - provisions for possible future losses or charges;
  - exchange losses;
  - costs declared, incurred or reimbursed in respect of another Community project;
  - return on capital;
  - debt and debt service charges;
  - excessive or reckless expenditure;
  - any cost which does not meet the conditions established in Article II.19.1. of your contract with the Commission of the European Communities;
  - Communities;
  
- they have been claimed according to the following cost reporting model “full costs” the contractor is eligible to use according to article II.22 of your above mentioned contract with the Commission of the European Communities;
  
- they are represented according to the following basis for the conversion rate used of EURO:
  - the rate applicable on the first day of the month following the end of reporting period
  
- as declared in the Box 3 of the attached Financial Statement per Activity, the amount of receipts for the periods covered by this Financial Statement per Activity is equal to EUR 0.00, zero euro;

The proof of the payment has been verified by documents of the accounting department within the national accounting rules. The insight of original accountings has been taken by sample survey.

VAT, which is not identifiable on invoices is not extracted from eligible costs and so is included.

4112706/6p/audit certificate 06/1-862826540977460-1



MOORE STEPHENS AUSTRIA WirtschaftsprüfungsgmbH

3

Accounting procedures used in the recording of eligible costs and receipts respect the accounting rules of the State in which the contractor is established and permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract above mentioned and the overall statement of accounts relating to the contractor's overall business activity.

Our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;

The ratio of the indirect costs to total costs was derived from the costs of the year 2005 (figures of 2006 were not yet available).

As declared in the Box 6 of the attached Financial Statement per Activity, the contractor has to pay for this audit certificate a price equal to EUR 2,000.00, two thousand euro additionally VAT of 20%, which is equal to EUR 400.00, four hundred euro in the next period.

We confirm the amount of the total eligible costs EUR 215,636.04, two hundred and fifteen thousand six hundred and thirty-six point four euro of "Innovation of noise barriers: improved noise abatement for motorways and railway tracks", CALM TRACKS AND ROUTES, COOP-CT-2005-017609 the contractor declared in the Box 2 of the attached Financial Statement per Activity.

Linz, February 1<sup>st</sup> 2007

MOORE STEPHENS AUSTRIA  
WirtschaftsprüfungsgmbH  
4021 Linz, Stelzhamerstraße 12  
FN 50259 k

  
Mag. Dr. Reinhard Schwarz  
beideter Wirtschaftsprüfer  
und Steuerberater

  
Mag. Dr. Udo Schwarz  
beideter Wirtschaftsprüfer  
und Steuerberater

4112706mp/audit certificate 06/1-862826540977460-1



**Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs**  
*(to be completed by each contractor)*

Type of Instrument	<b>Specific Research Project for SMEs</b>	Type of Action (if necessary)	<b>Cooperative Research (CRAFT)</b>
Project Title (or Acronym)	<b>Calm-Tracks &amp; Routes</b>	Contract n°	<b>017609</b>
Contractor's legal name	<b>Austrian Academy of Sciences</b>		
Legal Type	<b>Non Commercial</b>		
Contact Person	<b>Dr. Holger Waubke</b>	Telephone	<b>+43-1-4277-29507</b>
Telecopy	<b>+43-1-4277-9295</b>	E-mail	<b>holger.waubke@oeaw.ac.at</b>
Cost model used (AC/FC or FCF)	<b>FC</b>	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	<b>82,76%</b>
Period from	<b>20/04/2005</b>	TO	<b>19/04/2006</b>

**1- Resources (Third party(ies))**

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)	<b>No</b>
<i>If Yes, please provide the following information:</i>	
Third Party 1 (Y1) Legal name	Cost model used
Third Party 2 (Y2) Legal name	Cost model used
Third Party 3 (Y3) Legal name	Cost model used
Third Party 4 (Y4) Legal name	Cost model used
<b>If necessary add another Form C</b>	

**2- Declaration of eligible costs (In €)**

*Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.*

*If you are a contractor using the additional cost model (AC):*

*- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;*

*do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs*

*The costs declared should distinguish between direct and indirect costs*

*If necessary, adjustments to previous period(s) may be included where appropriate*



	Type of Activity										Total	
	Research and Technological Development / Innovation (A)		Demonstration (B)		Training (C)		Management of the Consortium (D)		Other Specific Activities (E)		(F) = (A)+(B)+(C)+(D)+(E)	
	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties
Direct costs	117.968,64											
Of which subcontracting												
Indirect costs	97.647,40											
Adjustments to previous periods												
<b>Total costs</b>	<b>215.636,04</b>											<b>215.636,04</b>

**3- Declaration of receipts (in €)**

*If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.*

	Type of Activity										Total	
	Research and Technological Development / Innovation (A)		Demonstration (B)		Training (C)		Management of the Consortium (D)		Other Specific Activities (E)		(F) = (A)+(B)+(C)+(D)+(E)+(E)	
	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties
Total receipts												

**4- Declaration of interest generated by the pre-financing (in €)**

*To be completed only by the coordinator.*

*Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)*

*If yes, please indicate the amount (in €)*



<b>5- Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution requested is equal to ( amount in €)	107818,02
<b>6- Audit certificates</b>	
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)	Yes
If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)	Yes
If No, what are the periods covered by this(those) audit certificate(s) ?	1 from 03 to 12
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?	
<b>Audit certificate of the contractor (X)</b>	
Legal name of the audit firm:	Moore Stephens Austria WirtschaftsprüfungsgmbH
Cost of the certificate	2000
<b>Audit certificate(s) of the third party(ies) (Yes) (if necessary)</b>	
Y1 : Legal name of the audit firm	Cost of the certificate
Y2 : Legal name of the audit firm	Cost of the certificate
Y3 : Legal name of the audit firm	Cost of the certificate
Y4 : Legal name of the audit firm	Cost of the certificate
<b>If necessary add another Form C.</b>	<b>Total (Z) = (X) + (Yes)</b>
<b>Reminders:</b>	
The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement	
<b>7- Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.	
<b>Contractor</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	
Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party(ies) (if necessary)</b>	
<b>Third Party 1 (Y1)</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	
Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 2 (Y2)</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	
Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 3 (Y3)</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	
Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 4 (Y4)</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	



Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
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If necessary add another Form C.

**B- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;
- the above Statement ;
- the above information declared is complete and true ;

there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised represent

Contractor's Stamp	Name of the Person responsible for the work	Name of the duty authorised Financial Officer
	<b>Doz. Dr. Holger Waubke</b>	<b>Prof. Dr. Herwig Friesinger</b>
	Date	Date
	31/11/2007	31/11/2007
	Signature	Signature
	<i>Holger Waubke</i>	



MOORE STEPHENS Wirtschaftsprüfung GmbH

1

### Audit Certificate

**Addressed to**

Österreichische Akademie der Wissenschaften, Dr. Ignaz Seipel-Platz 2, A-1010 Wien

We MOORE STEPHENS Wirtschaftsprüfung GmbH, established in Stelzhamerstraße 12, 4021 Linz, Austria represented for signature of this audit certificate by Dr. Reinhard Schwarz, auditor, hereby certify that:

We have conducted an audit relating to the cost declared in the Financial Statement per Activity of Österreichische Akademie der Wissenschaften hereinafter referred to as contractor, to which this audit certificate is attached and which is to be presented to the Commission of the European Communities under contract "Innovation of noise barriers: improved noise abatement for motorways and railway tracks", Calm Tracks and Routes, COOP-CT-2005-017609, for the following period covered by the EC contract April 20<sup>th</sup> 2006 to April 19<sup>th</sup> 2007.

We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above-referenced contract and its annexes.

The above mentioned Financial Statement per Activity was examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- The amount of the total eligible costs EUR 175,811.47, one hundred and seventy-five thousand eight hundred and eleven point forty-seven euro declared in the Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:
  - they are actual and reflect the contractor's economic environment;
  - they are determined in accordance with the contractors usual accounting principles;
  - they have been incurred during the periods covered by the Financial Statement per Activity concerned by this audit certificate; they also include the eligible costs incurred in drawing up the final reports referred to in Article II.7.4 of this contract, which may be incurred up to 45 calendar days after the end of the project;

4112706rp/Audit Certificate 07/1-483859514984617-2



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MOORE STEPHENS Wirtschaftsprüfung GmbH

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2

- they are recorded in the accounts of the contractor at the date of the establishment of this audit certificate<sup>1</sup>, with the exception of the invoice for the audit certificate; this invoice is recorded in the accounts with June 21<sup>st</sup> 2007 due to a relocation of the institute;
  
- they are exclusive of any non-eligible costs which are, as established in the second paragraph of article II.19 of your above mentioned contract with the Commission of the European Communities:
  - any identifiable indirect taxes, including VAT or duties;
  - interest owed;
  - provisions for possible future losses or charges;
  - exchange losses;
  - costs declared, incurred or reimbursed in respect of another Community project;
  - return on capital;
  - debt and debt service charges;
  - excessive or reckless expenditure;
  - any cost which does not meet the conditions established in Article II.19.1. of your contract with the Commission of the European Communities;
  
- they have been claimed according to the following cost reporting model “full costs” the contractor is eligible to use according to article II.22 of your above mentioned contract with the Commission of the European Communities;
  
- they are represented according to the following basis for the conversion rate used of EURO:
  - the rate applicable on the first day of the month following the end of reporting period
  
- as declared in the Box 3 of the attached Financial Statement per Activity, the amount of receipts for the periods covered by this Financial Statement per Activity is equal to EUR 0.00, zero euro;

The proof of the payment has been verified by documents of the accounting department within the national accounting rules. The insight of original accountings has been taken by sample survey.

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<sup>1</sup> Article II.19.1.d)



MOORE STEPHENS Wirtschaftsprüfung GmbH

3

VAT, which is not identifiable on invoices is not extracted from eligible costs and so is included.

Accounting procedures used in the recording of eligible costs and receipts respect the accounting rules of the State in which the contractor is established and permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract above mentioned and the overall statement of accounts relating to the contractor's overall business activity.

Our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;

The ratio of the indirect costs to total costs was derived from the costs of the year 2005 (figures of 2006 were not yet available).

As declared in the Box 6 of the attached Financial Statement per Activity, the contractor has paid for this audit certificate a price equal to EUR 2,000.00, two thousand euro additionally VAT of 20%, which is equal to EUR 400.00, four hundred euro. Due to a relocation of the institute the invoice dated May 29<sup>th</sup> 2007 could not be paid before June 25<sup>th</sup> 2007.

We confirm the amount of the total eligible costs EUR 175,811.47, one hundred and seventy-five thousand eight hundred and eleven point forty-seven euro of "Innovation of noise barriers: improved noise abatement for motorways and railway tracks", Calm Tracks and Routes, COOP-CT-2005-017609 the contractor declared in the Box 2 of the attached Financial Statement per Activity.

Linz, July 4<sup>th</sup> 2007

MOORE STEPHENS  
Wirtschaftsprüfung GmbH  
4021 Linz, Stelzhamerstraße 12  
FN 50259 k

Mag. Dr. Reinhard Schwarz  
beeideter Wirtschaftsprüfer  
und Steuerberater

Mag. Dr. Udo Schwarz  
beeideter Wirtschaftsprüfer  
und Steuerberater

411270/6rpf/Audit Certificate 07/1-483859514984617-2



Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs			
(to be completed by each contractor)			
Type of Instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	Calm-Tracks & Routes	Contract n°	017609
Contractor's legal name	Austrian Academy of Sciences		
Legal Type	Non Commercial		
Contact Person	Dr. Holger Waubke	Telephone	+43-1-4277-28507
Copy	+43-1-4277-9295	Email	holger.waubke@oeaw.ac.at
Cost model used (AC/FC or FCF)	FC	Indirect costs (Fixed or flat rate of 20% of Direct cost except subcontracting)	82.75%
Period from	20/04/2006	To	19/04/2007
<b>1- Resources (Third party(ies))</b>			
Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)			No
<i>If Yes, please provide the following information</i>			
Third Party 1 (Y1) - Legal name		Cost model used	
Third Party 2 (Y2) - Legal name		Cost model used	
Third Party 3 (Y3) - Legal name		Cost model used	
Third Party 4 (Y4) - Legal name		Cost model used	
<b>If necessary add another Form C</b>			
<b>2- Declaration of eligible costs (in €)</b>			
Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.			
<i>If you are a contractor using the additional cost model (AC):</i>			
Indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;			
Do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.			
<i>If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs</i>			
The costs declared should distinguish between direct and indirect costs			
<i>If necessary, adjustments to previous period(s) may be included where appropriate</i>			



	Type of Activity											
	Research and Technological Development / Innovation (A)		Demonstration (B)		Training (C)		Management of the Consortium (D)		Other Specific Activities (E)		Total (F) = (A)+(B)+(C)+(D)+(E)	
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	84.009,34						4.000,00				88.009,34	
of which subcontracting							4.000,00				4.000,00	
Indirect costs	77.802,13										77.802,13	
adjustments to previous period(s)												
<b>total costs</b>	<b>171.811,47</b>						<b>4.000,00</b>				<b>175.811,47</b>	

**Declaration of receipts (in €)**

If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.

If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.

	Type of Activity											
	Research and Technological Development / Innovation (A)		Demonstration (B)		Training (C)		Management of the Consortium (D)		Other Specific Activities (E)		Total (F) = (A)+(B)+(C)+(D)+(E)+(E)	
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
total receipts												

**Declaration of interest generated by the pre-financing (in €)**

to be completed only by the coordinator.

Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)

If yes, please indicate the amount (in €)



<b>Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution requested is equal to ( amount in €)	89905,74
<b>Audit certificates</b>	
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third Party(ies)) delivered by independent auditor(s)? (Yes / No)	Yes
Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)	Yes
No, what are the periods covered by this(those) audit certificate(s) ?	From - to
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?	
<b>Audit certificate of the contractor (X)</b>	
Legal name of the audit firm:	Moore Stephens-Wirtschaftsprüfung GmbH
Cost of the certificate	2.000,00
<b>Audit certificate(s) of the third party(ies) (Ys) (if necessary):</b>	
1. Legal name of the audit firm	Cost of the certificate
2. Legal name of the audit firm	Cost of the certificate
3. Legal name of the audit firm	Cost of the certificate
4. Legal name of the audit firm	Cost of the certificate
<b>necessary add another Form C.</b>	Total (Z) = (X) + (Ys)
Reminders: The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement	
<b>Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.	
<b>Contractor</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	No
Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	Yes
<b>Third Party(ies) (if necessary)</b>	
<b>Third Party 1 (Y1)</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	
Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 2 (Y2)</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	
Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 3 (Y3)</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	
Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 4 (Y4)</b>	
Conversion rate of the date of incurred actual costs? (YES / NO)	



Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)

If necessary add another Form C.

**- Contractor's Certificate**

I do certify that:

the costs declared above are directly related to the resources used to reach the objectives of the project ;

the receipts declared above are directly related to the resources used to reach the objectives of the project ;

the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;


the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;

the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;

the above Statement ;

the above information declared is complete and true ;

there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives

Contractor's	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	<b>Doz. Dr. Holger Waubke</b>	<b>Prof. Dr. Herwig Friesinger</b>
	Date	Date
		27/06/2007
	Signature	Signature

*Holger Waubke*

*[Handwritten signature]*



## Section 2

### Audit Certificate

Form C Financial statement per activity for the contractual reporting period

#### 7.10.3.2.7. STOCKHOLM UNIVERSITY



Psykologiska Institutionen  
Gösta Ekman's laboratorium  
Stockholms universitet  
106 91 Stockholm  
Sweden

#### Audit Certificate

We Ernst & Young AB, established in Uppsala, Sweden represented for signature of this audit certificate by Jonas Svensson, Certified Public Accountant, hereby certify that:

- we have conducted an audit relating to the cost declared in the Financial Statements per Activity of *Stockholms Universitet* hereinafter referred to as contractor, to which this audit certificate is attached, and which is to be presented to the Commission of the European Communities under contract *INNOVATION OF NOISE BARRIERS: IMPROVED NOISE, ABATEMENT FOR MOTORWAYS AND RAILWAY TRACKS, CALM TRACKS AND ROUTES, No COOP-CT-2005-017609*, for the following periods *26/04/2005 to 30/04/2006 and 01/05/2006 to 28/07/2007*.
- We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above referenced contract and its annexes.

The above mentioned Financial Statements per Activity were examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- o the amount of the total eligible costs *109 566 Euro, (One Hundred and Nine Thousand Five Hundred and Sixty Six Euro) and 94 663 Euro (Ninety Four Thousand Six Hundred and Sixty Three Euro)*, declared in Box 2 of the attached Financial Statements per Activity is complying with the following cumulative conditions:
  - they are actual and reflect the contractor's economic environment;
  - they are determined in accordance with the contractor's accounting principles;
  - they have been incurred during the periods covered by the Financial Statements per Activity concerned by this audit certificate;  
they also include the eligible costs incurred in drawing up the final reports referred to in Article II.7.4 of this contract, which may be incurred up to 45 calendar days after the end of the project;
  - they are recorded in the accounts of the contractor at the date of the establishment of this audit certificate;
  - they are exclusive of any non-eligible costs identified below which are established in the second paragraph of article II.19 of the above mentioned contract with the Commission of the European Communities:
    - any identifiable indirect taxes, including VAT or duties;



- interest owed;
  - provisions for possible future losses or charges;
  - exchange losses;
  - costs declared, incurred or reimbursed in respect of another Community project;
  - return on capital;
  - debt and debt service charges;
  - excessive or reckless expenditure;
  - any cost which does not meet the conditions established in Article II.19.1. of your contract with the Commission of the European Communities.
- they have been claimed according to the following cost reporting model AC which the contractor is eligible to use according to article II.22 of the above mentioned contract with the Commission of the European Communities;  
As such, they are also exclusive of any additional direct eligible costs covered by contributions from third parties defined in indents a) and b) of Article II.23 of the contract with the Commission of the European Communities.
- they are claimed according to the following basis for the conversion rate used of EURO:
    - the rate applicable on the first day of the month following the end of reporting period
  - as declared in the Box 3 of the attached Financial Statements per Activity, the total amount of receipts for the periods covered by those Statements per Activity is equal to 0 Euro, (zero Euro);
  - accounting procedures used in the recording of eligible costs and receipts respect the accounting rules of the State in which the contractor is established and permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract and the overall statement of accounts relating to the contractor's overall business activity;
  - our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;
  - as declared in the Box 6 of the attached Financial Statements per Activity, the contractor paid for this audit certificate a price equal to 3 442 Euro, (Three Thousand Four Hundred and Forty Two Euro) in which VAT is equal to 688 Euro, (Six Hundred and Eighty Eight Euro).

Uppsala 27 18 /2007  
Ernst & Young AB

  
Jonas Svensson  
Certified Public Accountant



**Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs**  
(to be completed by each contractor)

Type of instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	CALM TRACKS & ROUTES	Contract n°	COOP-CT-2005-017609
Contractors's legal name	Stockholm University		
Legal Type	HES		
Contact Person	Birgitta Berglund	Telephone	468163857
Telecopy	468165522	E-mail	birgitta.berglund@ki.se
Cost model used (AC/FC or FCF)	AC	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	Flat rate of 20% of Direct Costs
Period from	2005-04-20	TO	2006-04-30

**1- Resources (Third party(ies))**

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No) NO

If Yes, please provide the following information

Third Party 1 (Y1) Legal name		Cost model used	
Third Party 2 (Y2) Legal name		Cost model used	
Third Party 3 (Y3) Legal name		Cost model used	
Third Party 4 (Y4) Legal name		Cost model used	

If necessary add another Form C

**2- Declaration of eligible costs (in €)**

Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.

If you are a contractor using the additional cost model (AC):

- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;

do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.

If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs  
The costs declared should distinguish between direct and indirect costs  
If necessary, adjustments to previous period(s) may be included where appropriate



	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A)		(B)		(C)		(D)		(E)	(F) = (A)+(B)+(C)+(D)+(E)		
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	91305										91305	
Of which subcontracting												
Indirect costs	18261										18261	
Adjustments to previous period(s)												
<b>Total costs</b>	<b>109566</b>										<b>109566</b>	

**3- Declaration of receipts (in €)**

*If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.*

	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A')		(B')		(C')		(D')		(E')	(F') = (A')+(B')+(C')+(D')+(E')		
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
<b>Total receipts</b>												



<b>4- Declaration of interest generated by the pre-financing (in €)</b>	
<i>To be completed only by the coordinator.</i>	
Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)	
If yes, please indicate the amount (in €)	

<b>5- Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution requested is equal to ( amount in € )	109566

<b>6- Audit certificates</b>	
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)	NO
If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)	
If No, what are the periods covered by this(those) audit certificate(s) ?	From -to
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?	

Audit certificate of the contractor (X)	
Legal name of the audit firm	Cost of the certificate
Audit certificate(s) of the third party(ies) (Ys) (if necessary)	
Y1 : Legal name of the audit firm	Cost of the certificate
Y2 : Legal name of the audit firm	Cost of the certificate
Y3 : Legal name of the audit firm	Cost of the certificate
Y4 : Legal name of the audit firm	Cost of the certificate
If necessary add another Form C.	Total (Z) = (X) + (Ys)

**Reminders:**  
 The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement

<b>7- Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.	
<b>Contractor</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	NO
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	YES
<b>Third Party(ies) (if necessary)</b>	
<b>Third Party 1 (Y1)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 2 (Y2)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 3 (Y3)</b>	




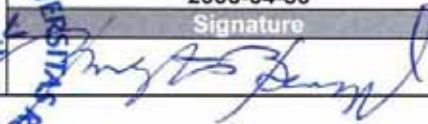

- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 4 (Y4)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	

If necessary add another Form C.

**8- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;
- the above Statement ;
- the above information declared is complete and true ;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	<b>Birgitta Berglund</b>	<b>Britth Sandin</b>
	Date	Date
	<b>2006-04-30</b>	<b>2006-04-30</b>
	Signature	Signature
		



Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs			
(to be completed by each contractor)			
Type of Instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	CALM TRACKS & ROUTES	Contract n°	COOP-CT-2005-017609
Contractor's legal name	Stockholm University		
Legal type	HES		
Contact Person	Birgitta Berglund	telephone	468183857
Telephone	468185522	E-mail	birgitta.berglund@ki.se
Cost model used (AC/FED or FCF)	AC	Indirect costs (Flat or flat rate of 20% of Direct Cost except subcontracting)	Flat rate of 20% of Direct Costs
Period from	2006-05-01	To	2007-07-28

1- Resources (Third party(ies))	
Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)	NO
If Yes, please provide the following information	
Third Party 1 (Y1) - Legal name	Cost model used
Third Party 2 (Y2) - Legal name	Cost model used
Third Party 3 (Y3) - Legal name	Cost model used
Third Party 4 (Y4) - Legal name	Cost model used
If necessary add another Form C	

2- Declaration of eligible costs (in €)
Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.
If you are a contractor using the additional cost model (AC):
- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;
do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.
If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs
The costs declared should distinguish between direct and indirect costs
If necessary, adjustments to previous period(s) may be included where appropriate



	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A)		(B)		(C)		(D)		(E)	(F) = (A)+(B)+(C)+(D)+(E)		
	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties
Direct costs	76531						2754				79345	
Of which subcontracting							2754				2754	
Indirect costs	15318										15318	
Adjustments to previous periods												
<b>Total costs</b>	<b>91849</b>						<b>2754</b>				<b>94603</b>	

**3- Declaration of receipts (in €)**

*If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.*

	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A)		(B)		(C)		(D)		(E)	(F) = (A)+(B)+(C)+(D)+(E)+(F)		
	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties	Contractor	Third Parties
<b>Total receipts</b>											0	



<b>4- Declaration of interest generated by the pre-financing (in €)</b>	
<i>To be completed only by the coordinator.</i>	
<i>Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)</i>	
<i>If yes, please indicate the amount (in €)</i>	

<b>5- Request of FP6 Financial Contribution (in €)</b>	
<i>For this period, the FP6 Community financial contribution requested is equal to ( amount in €)</i>	94663

<b>6- Audit certificates</b>			
<i>According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)</i>			YES
<i>If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)</i>			NO
<i>If No, what are the periods covered by this(those) audit certificate(s) ?</i>	<i>From -to-</i>	20050420	20070728
<i>What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?</i>			

<b>Audit certificate of the contractor (X)</b>			
<i>Legal name of the audit firm</i>	Ernst & Young AB	<i>Cost of the certificate</i>	2754
<b>Audit certificate(s) of the third party(ies) (Ys) (if necessary)</b>			
<i>Y1 - Legal name of the audit firm</i>		<i>Cost of the certificate</i>	
<i>Y2 - Legal name of the audit firm</i>		<i>Cost of the certificate</i>	
<i>Y3 - Legal name of the audit firm</i>		<i>Cost of the certificate</i>	
<i>Y4 - Legal name of the audit firm</i>		<i>Cost of the certificate</i>	
<i>If necessary add another Form C.</i>			<b>Total (Z) = (X) + (Ys)</b>
			2754
<i>Reminders:</i>			
<i>The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required certificate (s) is (are) attached to this Financial Statement</i>			

<b>7- Conversion rates</b>	
<i>Costs incurred in currencies other than EURO shall be reported in EURO.</i>	
<i>Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.</i>	
<b>Contractor</b>	
<i>- Conversion rate of the date of incurred actual costs? (YES / NO)</i>	NO
<i>- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)</i>	YES
<b>Third Party(ies) (if necessary)</b>	
<b>Third Party 1 (Y1)</b>	
<i>- Conversion rate of the date of incurred actual costs? (YES / NO)</i>	
<i>- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)</i>	
<b>Third Party 2 (Y2)</b>	
<i>- Conversion rate of the date of incurred actual costs? (YES / NO)</i>	
<i>- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)</i>	
<b>Third Party 3 (Y3)</b>	




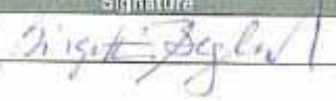
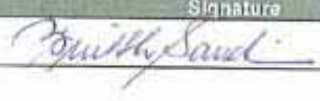
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 4 (Y4)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	

If necessary add another Form C.

**8- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;
- the above information declared is complete and true ;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	<b>Birgitta Berglund</b>	<b>Britth Sandin</b>
	Date	Date
	<b>2007-08-22</b>	<b>2007-08-22</b>
	Signature	Signature
		



## Section 2

Audit Certificate

Form C Financial statement per activity for the contractual reporting period

7.10.3.2.8. AIDICO



Addressed to

**ASOCIACION DE INDUSTRIAS DE LA CONSTRUCCION (AIDICO)**

**Benjamin Franklin, n° 17,**

**46980 Valencia (SPAIN)**

We **B.P.G. AUDITORES, S.L.**, established in Avda. Maisonave, 27 1° Alicante (SPAIN) represented for signature of this audit certificate by Antonio Pociello García (Auditor), hereby certify that:

- we have conducted an audit relating to some information declared in your Financial Statement per Activity attached to this audit certificate and presented to the Commission of the European Communities under contract "**Innovation of noise barriers: Improved noise abatement for motorways and railway tracks (CALM TRACKS AND ROUTES) COOP-CT-2005 No 017609**" for the period **April 20th 2005 to April 19th 2006**.
- we confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above-referenced contract and its annexes.

The above mentioned Financial Statement per Activity was examined and all test of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- the amount of the total eligible costs **137.751,00 € (ONE HUNDRED AND THIRTY SEVEN THOUSAND, SEVEN HUNDRED AND FIFTY ONE EUROS)** you declared in the Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:



- ✓ they are actual and answers to your economic environment;
  - ✓ they are determined in accordance with your usual accounting principles;
  - ✓ they have been incurred during the periods covered by the Financial Statement per Activity concerned by this audit certificate;
  - ✓ they are recorded in your accounts at the date of the establishment of this audit certificate;
  - ✓ they are exclusive of any non-eligible costs which are, as established in the second paragraph of article II.19 of your above mentioned contract with the Commission of the European Communities;
  - ✓ they are represented according to the following cost reporting model "FC" you are eligible to use according to article II.22 of your above mentioned contract with the Commission of the European Communities;
- as declared in the Box 3 of the attached Financial Statement per Activity, the total amount of receipts for the periods covered by this Financial Statement per Activity is equal to **0,00 €**.
  - accounting procedures used in the recording of your eligible costs and receipts respect the accounting rules of the State in which you are established as well as permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by EC contract above mentioned and overall statement of accounts relating to your overall business activity;



- our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article 11.26 of the contract;
- as declared in the Box 6 of the attached Financial Statement per Activity, you have paid for this audit certificate a price equal to 2.320 € (TWO THOUSAND THREE HUNDRED AND TWENTY EUROS in which VAT is equal to 320 € (THREE HUNDRED AND TWENTY EUROS)

Alicante, May 17th 2006

BPG AUDITORES, S.L.

**BPG**  
AUDITORES, S.L.  
Avda. Missonare, 27 - 5º - C.P. 03003 ALICANTE  
Tel. 965 22 83 86 - Fax: 965 13 09 96

Antonio Pociello García.



### Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs

(to be completed by each contractor)

Type of Instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	CALM TRACKS&ROUTES	Contract n°	COOP-2005-017609
Contractors's legal name	ASOCIACION DE INVESTIGACIÓN DE LAS INDUSTRIAS DE LA CONSTRUCCIÓN		
Legal Type	Non-Profit		
Contact Person	RAMON CONGOST VALLES	Telephone	34961318278
Telecopy		E-mail	<a href="mailto:ramon.congost@aidico.es">ramon.congost@aidico.es</a>
Cost model used (AC/FC or FCF)	FC	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	Real Indirect Cost
Period from	20.04.2005	TO	19.04.2006

#### 1- Resources (Third party(ies))

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)	No
If Yes, please provide the following information	
Third Party 1 (Y1) Legal name	Cost model used
Third Party 2 (Y2) Legal name	Cost model used
Third Party 3 (Y3) Legal name	Cost model used
Third Party 4 (Y4) Legal name	Cost model used
If necessary add another Form C	

#### 2- Declaration of eligible costs (in €)

Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.

If you are a contractor using the additional cost model (AC):

- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;

do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.

If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs

The costs declared should distinguish between direct and indirect costs

If necessary, adjustments to previous period(s) may be included where appropriate



	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A)	(B)	(C)	(D)	(E)	(F) = (A)+(B)+(C)+(D)+(E)						
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	87871,0	0,0					2000,0	0,0			89871,0	0,0
Of which subcontracting	5334,0	0,0					2000,0	0,0			7334,0	0,0
Indirect costs	47880,0	0,0					0,0	0,0			47880,0	0,0
Adjustments to previous period(s)	0,0	0,0					0,0	0,0			0,0	0,0
<b>Total costs</b>	<b>135751</b>						<b>2000</b>				<b>137751</b>	<b>0,0</b>

**3- Declaration of receipts (in €)**

If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.  
 If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.

	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A')	(B')	(C')	(D')	(E')	(F') = (A')+(B')+(C')+(D')+(E')						
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
<b>Total receipts</b>												

**4- Declaration of interest generated by the pre-financing (in €)**

To be completed only by the coordinator.  
 Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)  
 If yes, please indicate the amount (in €)



<b>5- Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution resuested is equal to ( amount in €)	69.875,50

<b>6- Audit certificates</b>			
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)			Yes
If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)			No
If No, what are the periods covered by this(those) audit certificate(s) ?	Period 1	From -to	20.04.2005 19.04.2006
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ? 2000 €			

Audit certificate of the contractor (8)			
Legal name of the audit firm	BPG Auditores, SL	Cost of the certificate	2000
Audit certificate(s) of the third party(ies) (Ys) (if necessary)			
Y1 : Legal name of the audit firm		Cost of the certificate	
Y2 : Legal name of the audit firm		Cost of the certificate	
Y3 : Legal name of the audit firm		Cost of the certificate	
Y4 : Legal name of the audit firm		Cost of the certificate	
If necessary add another Form C.		Total (Z) = (X) + (Ys)	2000
Reminders: The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium".The required audit certificate (s) is (are) attached to this Financial Statement			

<b>7- Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.	
Contractor	
- Conversion rate of the date of incurred actual costs? (YES / NO)	No
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	No
Third Party(ies) (if necessary)	
Third Party 1 (Y1)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 2 (Y2)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 3 (Y3)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 4 (Y4)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	



- Conversion rate of the first day of the first month following the period covered by this Financial Statement?  
(YES/NO)

If necessary add another Form C:

**8- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;
- incorporated in the above Statement ;
- the above information declared is complete and true ;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	<b>María José López Tendero</b>	<b>Ramón Congost Vallés</b>
	Date	Date
	<b>17/05/2006</b>	<b>17/05/2006</b>
	Signature	Signature



ADDRESSED TO ASOCIACIÓN DE INVESTIGACIÓN  
DE INDUSTRIAS DE LA CONSTRUCCIÓN ( A I D I C O )

Benjamin Franklin, nº 17,  
46980 Valencia (SPAIN)

We BPG AUDITORES, S.L., established in Avda. Maisonnave, 27 1º Alicante (SPAIN) represented for signature of this audit certificate by Antonio Pociello García, hereby certify that:

- we have conducted an audit relating to the cost declared in the Financial Statements per Activity of ASOCIACIÓN DE INVESTIGACIÓN DE INDUSTRIAS DE LA CONSTRUCCIÓN (AIDICO) hereinafter referred to as contractor, to which this audit certificate is attached, and which is to be presented to the Commission of the European Communities under contract number 017609 "Innovation of noise barriers: improved noise abatement for motorways and railway tracks" (*CALM TRACKS & ROUTES*) for the following period covered by the EC contract; From 20/04/2006 to 20/08/2007 .
- We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above referenced contract and its annexes.
- The above mentioned Financial Statements per Activity were examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:
  - the amount of the total eligible costs 64.258,00 € (Sixty four thousand two hundred and fifty eight euros) declared in Box 2 of the attached Financial Statements per Activity is complying with the following cumulative conditions:
    - they are actual and reflect the contractor's economic environment;
    - they are determined in accordance with the contractor's accounting principles;



- they have been incurred during the periods covered by the Financial Statements per Activity concerned by this audit certificate;
- they are recorded in the accounts of the contractor at the date of the establishment of this audit certificate;
- they are exclusive of any non-eligible costs identified below which are established in the second paragraph of article II.19 of the above mentioned contract with the Commission of the European Communities:
  - ❖ any identifiable indirect taxes, including VAT or duties;
  - ❖ interest owed;
  - ❖ provisions for possible future losses or charges;
  - ❖ exchange losses;
  - ❖ costs declared, incurred or reimbursed in respect of another Community project;
  - ❖ return on capital;
  - ❖ debt and debt service charges;
  - ❖ excessive or reckless expenditure;
  - ❖ any cost which does not meet the conditions established in Article II.19.1. of your contract with the Commission of the European Communities.
- they have been claimed according to the following cost reporting model FC which the contractor is eligible to use according to article II.22 of the above mentioned contract with the Commission of the European Communities;
  - as declared in the Box 3 of the attached Financial Statements per Activity, the total amount of receipts for the periods covered by those Financial Statements per Activity is equal to 0 € ;
  - as declared in the Box 4 of the attached Financial Statements per Activity, the total amount of interest yielded by the pre-financing received from the Commission of the European Communities for the periods covered by those Financial Statements per Activity is equal to 0 €.



- accounting procedures used in the recording of eligible costs and receipts respect the accounting rules of the State in which the contractor is established and permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract and the overall statement of accounts relating to the contractor's overall business activity;
- our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;
- as declared in the Box 6 of the attached Financial Statements per Activity, the contractor paid for this audit certificate a price equal to 2.000 € (two thousand euros) in which VAT is equal to 320,00 € (Three hundred and twenty euros).

Alicante, the 4<sup>th</sup> February 2.008

BPG AUDITORES, S.L.  
Nº ROAC S0588



Antonio Pociello Garcia



Form C - Model of Financial Statement per Activity (to be filled by each contractor)			
Type of instrument Project Title (or Acronym)	Integrated Project <small>(number of main activities reported shall correspond to contractor and other types)</small>	Type of Action (if necessary) Contract n°	017609
Contractor's Legal Name	ASOCIACION DE INVESTIGACION DE LAS INDUSTRIAS DE LA CONSTRUCCION		
Legal Type	Non-profit		
Contact Person	RAMON CONGOST VALLES	Telephone	+34961318278
Telecopy		E-mail	ramon.congost@aidico.es
Cost model used (AC/FC or FCF)	FC	Indirect costs(Real or Flat Rate of 20% of Direct costs, except subcontracting)	
Period from	20/04/2006	To	20/09/2007
<b>1- Resources (Third parties)</b>			
Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)			
If Yes, please provide the following information			No
Third Party 1 (Y1) Legal Name		Cost model used	
Third Party 2 (Y2) Legal Name		Cost model used	
Third Party 3 (Y3) Legal Name		Cost model used	
Third Party 4 (Y4) Legal Name		Cost model used	
Third Party 5 (Y5) Legal Name		Cost model used	
<b>2- Declaration of eligible costs (in -)</b>			
Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.			
If you are a contractor using the additional cost model (AC):			
- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;			
- do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b. of the contract.			
If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs.			
The costs declared should distinguish between direct and indirect costs.			
If necessary, adjustments to previous period(s) may be included where appropriate.			
			Type of Activity

12  
13  
14



	Research and Technological Development / Innovation (A)	Demonstration (B)	Training (C)	Management of the Consortium (D)	Other Specific Activities (E)	Total (F) = (A)+(B)+(C)+(D)+(E)
Direct costs	43746,00			2000,00		45746,00
Of which subcontracting	16166,00			2000,00		18166,00
Indirect costs	18512,00					18512,00
Adjustments to previous period(s)						0,00
Total costs	62258,00	0,00	0,00	2000,00	0,00	64258,00

**3- Declaration of receipts (in €)**  
 If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.  
 If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.  
 If a receipt is not allocated to an activity

Type of Activity						Total (F) = (A)+(B)+(C)+(D)+(E)
Research and Technological Development / Innovation (A)	Demonstration (B)	Training (C)	Management of the Consortium (D)	Other Specific Activities (E)		
Contractor	Contractor	Contractor	Contractor	Contractor	Contractor	0,00
Third Party(ies)	Third Party(ies)	Third Party(ies)	Third Party(ies)	Third Party(ies)	Third Party(ies)	0,00
						0,00
Total receipts						0,00

RE-AUDITOR



<p><b>4-Declaration of interest generated by the pre-financing (in €)</b>  <b>To be completed only by the coordinator.</b>          Did the pre-financing (advance) you received by the Commission for this period earn interests? (Yes / No)          If yes, please mention the amount (in €)</p>		No	
<p><b>5-Request of FP6 Financial contribution (in €)</b>          For this period, the FP6 Community financial contribution requested is equal to (amount in €)</p>		33129,00	
<p><b>6- Audit certificates</b>          According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)</p>			Yes
<p>If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)</p>		No	
<p>If No, what is the periodicity covered by this(those) audit certificate(s)?</p>		20.08.2007	
<p>What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s)?</p>		20.04.2006	
<p>Legal name of the audit firm</p>		From - To	
<p>BPG Auditores, SL</p>		Audit certificate of the contractor (X)	
<p>Cost of the certificate</p>		2000,00	
<p><b>Audit certificate(s) of the third party(ies) (Ys) (if necessary)</b></p>			
<p>Y1: Legal name of the audit firm</p>			
<p>Y2: Legal name of the audit firm</p>			
<p>Y3: Legal name of the audit firm</p>			
<p>Y4: Legal name of the audit firm</p>			
<p>Y5: Legal name of the audit firm</p>			
<p>Cost of the certificate</p>			
<p>Cost of the certificate</p>			
<p>Cost of the certificate</p>			
<p>Cost of the certificate</p>			
<p>Cost of the certificate</p>			
<p>Total (Z) = (X) + (Ys)</p>		2000,00	
<p><b>Reminders:</b>          The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium".          The required audit certificate(s) to be attached to this Financial Statement.</p>			
<p><b>7-Conversion rates</b>  <b>Costs incurred in currencies other than EURO shall be reported in EURO.</b>  <b>Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.</b></p>			
<p>Contractor</p>		Yes	
<p>Third Party(ies) (if necessary)</p>		No	
<p>Third Party 1 (Y1)</p>		Yes	
<p>Third Party 2 (Y2)</p>		No	

EL AUDITOR



Third Party 2 (Y2)	
- Conversion rate of the Date of incurred actual costs?	Yes
- Conversion rate of the first day of the first month following the period covered by this Financial Statement?	No
Third Party 3 (Y3)	
- Conversion rate of the Date of incurred actual costs?	Yes
- Conversion rate of the first day of the first month following the period covered by this Financial Statement?	No
Third Party 4 (Y4)	
- Conversion rate of the Date of incurred actual costs?	Yes
- Conversion rate of the first day of the first month following the period covered by this Financial Statement?	No
Third Party 5 (Y5)	
- Conversion rate of the Date of incurred actual costs?	Yes
- Conversion rate of the first day of the first month following the period covered by this Financial Statement?	No

**8- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project;
- the receipts declared above are directly related to the resources used to reach the objectives of the project;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract;
- the necessary adjustments, especially to costs reported in previous Financial Statement(s) per Activity, have been incorporated in the above Statement;
- the above information declared is complete and true;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in

Contractor's Stamp	
Name of the Person responsible of the work	María José López Tintero
Date	27/11/2007
Signature	
Name of the duly authorised Financial Officer	Ramón Compost Valliés
Date	27/11/2007
Signature	

EL AUDITOR  
OFICINA



## Section 2

Audit Certificate

Form C Financial statement per activity for the contractual reporting period

7.10.3.2.9. UNIVERSITY OF GHENT



Ernst & Young  
Bedrijfsrevisoren  
Reviseurs d'Entreprises  
Moutstraat 54  
B-9000 Gent

Tel : +32 (0)9 242 51 11  
Fax : +32 (0)9 242 51 51

**REPORT ON THE OVERALL COSTS CHARGED BY THE ASSOCIATED  
CONTRACTOR UNIVERSITEIT GENT  
REPRESENTED BY Prof. Paul VAN CAUWENBERGE, RECTOR  
WITH REGARD TO THE EC-CONTRACT N° 017609-Calm Tracks and Routes**

Adressed to:

Universiteit Gent  
Represented by Prof. Paul Van Cauwenberge  
Sint-Pietersnieuwstraat 25  
9000 Gent  
BELGIUM

We, Ernst & Young Bedrijfsrevisoren BCV, established in Moutstraat 54, 9000 Ghent, Belgium, represented for signature of this audit certificate by Rosita Van Maele, Partner, hereby certify that:

- We have conducted an audit relating to some information declared in your Financial Statement per Activity attached to this audit certificate and presented to the Commission of the European Communities under contract N° 017609, Calm Tracks and routes – Innovation of noise barriers: improved noise abatement for motorways and railway tracks for the period from 01/04/2005 to 31/03/2007.
- We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above referenced contract and its annexes.

The above mentioned Financial Statement per Activity was examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- the amount of the total eligible costs 37.861,36 euro (thirty seven thousand eight hundred and sixty one euro and thirty six cents) you declared in the Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:
  - they are actual and answers to your economic environment;
  - they are determined in accordance with your usual accounting principles;
  - they have been incurred during the period covered by the Financial Statement per Activity concerned by this audit certificate;
  - they are recorded in your accounts at the date of the establishment of this audit certificate



▪ Regelmatig vennootschap die de rechtsvorm van een coöperatieve vennootschap met beperkte aansprakelijkheid heeft aangenomen  
Société civile ayant opté pour la forme d'une société coopérative à responsabilité limitée  
RPR Brussel - RPA Bruxelles : B.T.W. - TVA, BE 0446.114.711  
Bank - Fortis - Banque : 210.0903900.09




- they are exclusive of any non-eligible costs which are, as established in the second paragraph or article II.19. of your above mentioned contract with the Commission of the European Communities:
  - ✓ any identifiable indirect taxes, including VAT or duties;
  - ✓ interest owed;
  - ✓ provisions for possible future losses or charges;
  - ✓ exchange losses;
  - ✓ costs declared, incurred or reimbursed in respect of another Community project;
  - ✓ costs related to return on capital;
  - ✓ debt and debt service charges;
  - ✓ excessive or reckless expenditure;
  - ✓ any cost which does not meet the conditions established in Article II.19.1 of your contract with the Commission of the European Communities.
- they are represented according to the additional cost reporting model AC you are eligible to use according to article II.22. of your above mentioned contract with the Commission of the European Communities,
- As such, they are also exclusive of any additional direct eligible costs covered by contributions from third parties defined in indents a) and b) of Article II.23 of your contract with the Commission of the European Communities.
  - as declared in the Box 3 of the attached Financial Statement per Activity, the total amount of receipts for the periods covered by this Financial Statement per Activity is equal to 0 euro (zero euro);
  - as declared in the Box 4 of the attached Financial Statement per Activity, the total amount of interests yielded by the pre-financing you received by the Commission of the European Communities for the periods covered by this Financial Statement per Activity is equal to 0 euro (zero euro).
- accounting procedures used in the recording of your eligible costs and receipts respect the accounting rules of the State in which you are established as well as permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract above mentioned and the overall statement of accounts relating to your overall business activity;



- our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract;
- as declared in the Box 6 of the attached Financial Statement per Activity, you will be invoiced for this audit certificate a price equal to 800 (eight hundred euro) in which VAT is equal to 0 euro (zero euro).

May 21, 2007

Ernst & Young Reviseurs d'Entreprises  
Represented by

  
Rosita Van Maele,  
Partner.



### Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs

(to be completed by each contractor)

Type of Instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	CALM TRACKS&ROUTES	Contract n°	COOP-CT-2005-017609
Contractors's legal name	UNIVERSITEIT GENT - VAKGROEP TEXTIELKUNDE		
Legal Type	OTHER		
Contact Person	LIEVA VAN LANGENHOVE	Telephone	3292645419
Telecopy	3292645846	E-mail	martine.vandenabeele@ugent.be
Cost model used (AC/FC or FCF)	AC	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	flat rate of 20% of direct costs except subcontracting
Period from	1/04/2005	TO	31/03/2005

#### 1- Resources (Third party(ies))

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)	NO
If Yes, please provide the following information	
Third Party 1 (Y1) Legal name	Cost model used
Third Party 2 (Y2) Legal name	Cost model used
Third Party 3 (Y3) Legal name	Cost model used
Third Party 4 (Y4) Legal name	Cost model used
If necessary add another Form C	

#### 2- Declaration of eligible costs (in €)

Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.

If you are a contractor using the additional cost model (AC):

- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;

do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.

If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs

The costs declared should distinguish between direct and indirect costs

If necessary, adjustments to previous period(s) may be included where appropriate



	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A)	(B)	(C)	(D)	(E)	(F) = (A)+(B)+(C)+(D)+(E)						
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	10755,97										10755,97	
Of which subcontracting												
Indirect costs	2151,19										2151,19	
Adjustments to previous period(s)												
<b>Total costs</b>	<b>12907,16</b>										<b>12907,16</b>	

**3- Declaration of receipts (in €)**

If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.  
 If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.

	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A')	(B')	(C')	(D')	(E')	(F') = (A')+(B')+(C')+(D')+(E')						
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
<b>Total receipts</b>												

**4- Declaration of interest generated by the pre-financing (in €)**

To be completed only by the coordinator.

Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No) **NO**

If yes, please indicate the amount (in €)



<b>5- Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution requested is equal to ( amount in €)	12907,16

<b>6- Audit certificates</b>	
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)	NO
If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)	
If No, what are the periods covered by this(those) audit certificate(s) ?	From -to
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?	

<b>Audit certificate of the contractor (X)</b>	
Legal name of the audit firm	Cost of the certificate
<b>Audit certificate(s) of the third party(ies) (Ys) (if necessary)</b>	
Y1 : Legal name of the audit firm	Cost of the certificate
Y2 : Legal name of the audit firm	Cost of the certificate
Y3 : Legal name of the audit firm	Cost of the certificate
Y4 : Legal name of the audit firm	Cost of the certificate
If necessary add another Form C.	Total (Z) = (X) + (Ys)
Reminders: The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement	

<b>7- Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts	
<b>Contractor</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party(ies) (if necessary)</b>	
<b>Third Party 1 (Y1)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 2 (Y2)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 3 (Y3)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
<b>Third Party 4 (Y4)</b>	
- Conversion rate of the date of incurred actual costs? (YES / NO)	




- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
---	--

If necessary add another Form C.

**8- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ; incorporated in the above Statement ;
- the above information declared is complete and true ;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	PROF. DR. LIEVA VAN LANGENHOVE	Geert Van der Gucht
	Date	Date
	20/04/2006	5/5/06
	Signature	Signature

*[Handwritten signature of Prof. Dr. Lieva Van Langenhove]*

*[Handwritten signature of Geert Van der Gucht]*  
and Dierckx Francis

*alhoort voor 12507,16*



**Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs**  
*(to be completed by each contractor)*

Type of Instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	CALM TRACKS&ROUTES	Contract n°	COOP-CT-2005-017609
Contractors's legal name	UNIVERSITEIT GENT - VAKGROEP TEXTIELKUNDE		
Legal Type	OTHER		
Contact Person	LIEVA VAN LANGENHOVE	Telephone	3292645419
Teletcopy	3292645846	E-mail	marline.vandenaabbeels@ugent.be
Cost model used (AC/FC or FCF)	AC	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	flat rate of 20% of direct costs except subcontracting
Period from	1/04/2006	TO	31/03/2007

**1- Resources (Third party(ies))**

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No)	<b>NO</b>
<i>If Yes, please provide the following information</i>	
Third Party 1 (Y1) Legal name	Cost model used
Third Party 2 (Y2) Legal name	Cost model used
Third Party 3 (Y3) Legal name	Cost model used
Third Party 4 (Y4) Legal name	Cost model used
If necessary add another Form C	

**2- Declaration of eligible costs (in €)**

*Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.*

*If you are a contractor using the additional cost model (AC):*

*- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;*

*do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs*

*The costs declared should distinguish between direct and indirect costs*

*If necessary, adjustments to previous period(s) may be included where appropriate*

**Ernst & Young**  
Bedrijfsrevisoren  
For identification purposes only



	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A)		(B)		(C)		(D)		(E)	(F) = (A)+(B)+(C)+(D)+(E)		
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	20945,52										20945,52	
Of which subcontracting	800,00										800,00	
Indirect costs	4029,10										4029,10	
Adjustments to previous period(s)	-20,42										-20,42	
<b>Total costs</b>	<b>24954,20</b>										<b>24954,20</b>	

**3- Declaration of receipts (in €)**

*If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.*

	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A')		(B')		(C')		(D')		(E')	(F') = (A')+(B')+(C')+(D')+(E')		
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
<b>Total receipts</b>												

**4- Declaration of interest generated by the pre-financing (in €)**

*To be completed only by the coordinator.*

*Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)* **NO**

*If yes, please indicate the amount (in €)*

**Ernst & Young**  
Bedrijfsrevisoren  
For identification purposes only



<b>5- Request of FP6 Financial Contribution (in €)</b>	
For this period, the FP6 Community financial contribution requested is equal to ( amount in €)	24954,20

<b>6- Audit certificates</b>	
According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies)) delivered by independent auditor(s)? (Yes / No)	YES
If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)	NO
If No, what are the periods covered by this(those) audit certificate(s) ?	2 From -to FROM 01/04/2005 TO 31/03/2006 FROM 01/04/2006 TO 31/03/2007
What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?	

Audit certificate of the contractor (X)	
Legal name of the audit firm	ERNST&YOUNG
Cost of the certificate	800,00 €
Audit certificate(s) of the third party(ies) (Ys) (if necessary)	
Y1 : Legal name of the audit firm	Cost of the certificate
Y2 : Legal name of the audit firm	Cost of the certificate
Y3 : Legal name of the audit firm	Cost of the certificate
Y4 : Legal name of the audit firm	Cost of the certificate
If necessary add another Form C.	
Total (Z) = (X) + (Ys)	
Reminders: The cost of an audit certificate is included in the costs declared under the activity "Management of the Consortium". The required audit certificate (s) is (are) attached to this Financial Statement	

<b>7- Conversion rates</b>	
Costs incurred in currencies other than EURO shall be reported in EURO.	
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.	
Contractor	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party(ies) (if necessary)	
Third Party 1 (Y1)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 2 (Y2)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 3 (Y3)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 4 (Y4)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	

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Bedrijfsrevisoren  
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- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
---	--

If necessary add another Form C.

**B- Contractor's Certificate**


We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;

incorporated in the above Statement ;

- the above information declared is complete and true ;

There is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	PROF. DR. LIEVA VAN LANGENHOVE	Geert Van de Sucht
	Date	Date
	19/04/2007	30.5.07
	Signature	Signature

**Ernst & Young**  
 Bedrijfsrevisoren  
 For identification purposes only



## Section 2

Audit Certificate

Form C Financial statement per activity for the contractual reporting period

7.6.3.2.10. UNI KEMPTEN



Commission of the European Communities

Dr. Peter Küffner WP  
 Dr. Thomas Küffner WP  
 Neustadt 530  
 84028 Landshut  
 T 0871.9222-0  
 F 0871.9222-599  
 zentr@dr-kueffner.de  
 www.dr-kueffner.de

Datum Landshut, 05.12.2007  
 Verantwortlich Dr. Peter Küffner  
 E-Mail peter.kueffner@dr-kueffner.de  
 Telefon 0871.9222.101

**Audit certificate**

Addressed to Hochschule Kempten  
 University of Applied Sciences  
 Bahnhofstraße 61  
 87435 Kempten (Allgäu)

As auditor, established in Neustadt 530, 84028 Landshut, I certify that:

- We have conducted an audit relating to some information declared in the Financial Statement per Activity attached to this audit certificate and presented to the Commission of the European Communities under contract (EC-contract reference: Calm-Tracks & Routes, Contract Nr. 17609) for the following period(s) (15.06.2005 – 30.09.2007) by the contractor (University of Applied Sciences Kempten) to whom Dr. Peter Küffner has provided resources on the basis of a prior agreement as established in Annex I of this contract.
- We confirm that our audit was carried out in accordance with generally accepted auditing standards respecting ethical rules and on the basis of the relevant provisions of the above-referenced contract and its annexes.

The above-mentioned Financial Statement per Activity was examined and all tests of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our audit:

- The amount of total eligible costs 48.535,56 (fourtyeightthousandfivehundredthirtyfivedotfiftysix) declared in Box 2 of the attached Financial Statement per Activity is complying with the following cumulative conditions:
  - They are actual and reflects the third party's economic environment;
  - They are determined in accordance with the third party's accounting principles;
  - They have been incurred during the periods covered by the Financial Statement per Activity concerned by this audit certificate;

Erfahrung und Service seit über 35 Jahren.

Dr. Peter Küffner  
 Wirtschaftsprüfer  
 peter.kueffner@dr-kueffner.de  
 T 0871.9222-101

Dr. Thomas Küffner  
 Wirtschaftsprüfer  
 thomas.kueffner@dr-kueffner.de  
 T 0871.9222-102

Bescheinigung der Wirtschaftsprüferkammer  
 über die Teilnahme am System der Qualitäts-  
 kontrolle nach § 5a Absatz 4 Satz 2 Wirtschaftsprüferverordnung



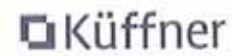
- (They also include the eligible costs incurred in drawing up the final reports referred to in Article II.7.4 of this contract, which may be incurred up to 45 calendar days after the end of the project;)
- They are recorded in accounts of the third party at the date of the establishment of this audit certificate;
- They are exclusive of any non-eligible costs identified below which are established in the second paragraph of article II.19 of the above mentioned contract with the Commission of the European Communities:
  - any identifiable indirect taxes, including VAT or duties;
  - interest owed;
  - provisions for possible future losses or charges;
  - exchange losses;
  - costs declared, incurred or reimbursed in respect of another Community project;
  - return on capital;
  - debt and dept service charges;
  - excessive or reckless expenditure;
  - any cost which does not meet the conditions established in Article II.19.1 of the above contract with the Commission of the European Communities.
- They have been claimed according to the following cost reporting model AC which the third party is eligible to use according to article II.22 of the above mentioned contract with the Commission of the European Communities:

As such, they are also exclusive of any additional direct eligible costs covered by contributions from third parties defined in indents a) and b) of Article II.23 of the contract with the Commission of the European Communities.
- (They have been claimed according to the following cost reporting model AC which the third party is eligible to use in the specific activities aiming to provide transnational access according to article III.13 of the above mentioned contract with the Commission of the European Communities;

As such, they are also exclusive of any additional direct eligible costs covered by contributions from third parties defined in indents a) and b) of Article II.23 of the contract with the Commission of the European Communities.
- As declared in the Box 3 of the attached Financial Statement per Activity, the total amount of receipts<sup>1</sup> for the periods covered by this Financial Statement per Activity is equal to 58.242,67 € (fiftyeightthousandtwohundredfourtytwodotsixtyseven).
- Accounting procedures used in the recording of your eligible costs and receipts respect the accounting rules of the State in which the third party is established as well as permit the direct reconciliation between the costs and receipts incurred for the implementation of the project covered by the EC contract above mentioned and the overall statement of accounts relating to the third party's overall business activity;
- Our company is qualified to deliver this audit certificate in full compliance with the second and third paragraphs of article II.26 of the contract.

(Relevant information establishing this qualification are attached to this audit certificate).

<sup>1</sup> As defined in article II.23 of the Annex II (General conditions) of the FP6 model contract (except for actions to promote human resources and mobility)



- As declared in the Box 6 of the attached Financial Statement per Activity, the Hochschule Kempten paid for this audit certificate a price equal to 535,50 € (fivehundredthirtyfivedotfifty) in which VAT is equal to 85,50 € (eightyfivedotfifty)<sup>2</sup>.

A second original of this audit certificate is also sent to the attention of Hochschule Kempten, University of applied sciences, Bahnhofstraße 61, 87435 Kempten (Allgäu).

Dr. Peter Küffner  
Wirtschaftsprüfer

enclosure:  
Form C



<sup>2</sup> To be inserted only for the first audit certificate provided for this contract.



Form C - Model of Financial Statement per Activity for a Specific Cooperative Research Project for SMEs			
(to be completed by each contractor)			
Type of instrument	Specific Research Project for SMEs	Type of Action (if necessary)	Cooperative Research (CRAFT)
Project Title (or Acronym)	Calm Tracks and Routes	Contract n°	17609
Contractor's legal name	University of Applied Sciences Kempten		
Legal Type			
Contact Person	A. Rupp	Telephone	490312523101
Telecopy	493312523305	E-mail	andreas.rupp@fh-kempten.de
Cost model used (AC/FC or FCF)	AC	Indirect costs (Real or flat rate of 20% of Direct cost except subcontracting)	20%
Period from:	16.06.2006	To	16.06.2007

**1- Resources (Third party(ies)).**

Are there any resources made available on the basis of a prior agreement with third parties identified in Annex I of the contract? (Yes / No) No

If Yes, please provide the following information

Third Party 1 (Y1) - Legal name	Cost model used
Third Party 2 (Y2) - Legal name	Cost model used
Third Party 3 (Y3) - Legal name	Cost model used
Third Party 4 (Y4) - Legal name	Cost model used

If necessary add another Form C

**2- Declaration of eligible costs (in €)**

Please complete only the activity covered by the relevant instrument (and type of action) indicated above and as mentioned in Article II.25 and/or in Annexes I and III of the contract.

If you are a contractor using the additional cost model (AC):

- indicate only your additional eligible costs, except for Management of the Consortium Activity for which you may indicate your full eligible costs;

do not declare eligible direct additional costs specifically covered by contributions from third parties as mentioned in Articles II.20 and II.23.a and b of the contract.

If you are a contractor using a full cost model (FC/FCF), indicate your full eligible costs.

The costs declared should distinguish between direct and indirect costs.

If necessary, adjustments to previous period(s) may be included where appropriate.

	Type of Activity											
	Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
	(A)	(B)	(C)	(D)	(E)	(F) = (A)+(B)+(C)+(D)+(E)						
	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)	Contractor	Third Party(ies)
Direct costs	48.085,56 €						450,00 €				48.535,56 €	



Of which subcontracting									
Indirect costs	9.617,11 €					90,00 €			9.707,11 €
Adjustments to previous period(s)									
Total costs	57.702,67 €					540,00 €			58.242,67 €

**3- Declaration of receipts (in €)**

*If you are a contractor using the additional cost model (AC), indicate only receipts covered by Article II.23.c of the contract.*

*If you are a contractor using a full cost model (FC/FCF), indicate receipts covered by Article II.23 of the contract.*

		Type of Activity											
		Research and Technological Development / Innovation		Demonstration		Training		Management of the Consortium		Other Specific Activities		Total	
		(A)	(B)	(C)	(D)	(E)	(F) = (A)+(B)+(C)+(D)+(E)						
		Contractor		Third Parties		Contractor		Third Parties		Contractor		Third Parties	
		(A1)	(A2)	(B1)	(B2)	(C1)	(C2)	(D1)	(D2)	(E1)	(E2)	(F1)	(F2)
Total receipts												58.242,67 €	

**4- Declaration of interest generated by the pre-financing (in €)**

*To be completed only by the coordinator.*

*Did the pre-financing (advance) you received by the Commission for this period earn interest? (Yes / No)*

*If yes, please indicate the amount (in €)*

**5- Request of FP6 Financial Contribution (in €)**

*For this period, the FP6 Community financial contribution requested is equal to ( amount in €)*

58.242,67 €

**6- Audit certificates**

*According to the contract, does this Financial Statement need an audit certificate (or several in case of Third party(ies) delivered by independent auditor(s))? (Yes / No)*

YES

*If Yes, does this(those) audit certificate(s) cover only this Financial Statement per Activity? (Yes / No)*

NO

*If No, what are the periods covered by this(those) audit certificate(s) ?*

June 2005

From 2006

Sept. 2007

*What is the total cost of this(those) audit certificate(s) (in €) per independent auditor(s) ?*

		Audit certificate of the contractor (X)	
Legal name of the audit firm	Dr. Peter Köflner Wirtschaftsprüfer	Cost of the certificate	535,50 €
Audit certificate(s) of the third party(ies) (Ys) (if necessary)			
Y1: Legal name of the audit firm		Cost of the certificate	
Y2: Legal name of the audit firm		Cost of the certificate	
Y3: Legal name of the audit firm		Cost of the certificate	
Y4: Legal name of the audit firm		Cost of the certificate	
<i>If necessary add another Form C.</i>		Total (Z) = (X) + (Ys)	

**Reminders:**

*The cost of an audit certificate is included in the costs declared under the activity 'Management of the Consortium'. The required audit certificate (s) is (are) attached to this Financial Statement*

**7- Conversion rates**



Costs incurred in currencies other than EURO shall be reported in EURO.  
Please mention the conversion rate used (only one choice is possible) – Please note that the same principle applies for receipts.

Contractor	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party (06A) (if necessary)	
Third Party 1 (Y1)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 2 (Y2)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 3 (Y3)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	
Third Party 4 (Y4)	
- Conversion rate of the date of incurred actual costs? (YES / NO)	
- Conversion rate of the first day of the first month following the period covered by this Financial Statement? (YES/NO)	

If necessary add another Form C.

**B- Contractor's Certificate**

We certify that:

- the costs declared above are directly related to the resources used to reach the objectives of the project ;
- the receipts declared above are directly related to the resources used to reach the objectives of the project ;
- the costs declared above fall within the definition of eligible costs specified in Articles II.19, II.20, II.21, II.22 and II.25 of the contract, and, if relevant, in Annex III and Article 9 (special clauses) of the contract ;
- the receipts declared above fall within the definition of receipts specified in Article II.23 of the contract ;
- the interest generated by the pre-financing declared above falls within the definition of Article II.27 of the contract ;
- the necessary adjustments, especially to costs reported in previous Financial Statement(s) per Activity, have been incorporated in the above Statement ;
- the above information declared is complete and true ;

- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised represent

Contractor's Stamp	Name of the Person responsible for the work	Name of the duly authorised Financial Officer
	<b>Rupp Andreas</b>	<b>Dr. Büchner, Kanzler</b>
	Date	Date
	12.11.2007	12.11.2007
	Signature	Signature



## Section 3 Summary financial report

### 7.10.3.3.1. Final summary financial report

From 2005-04-20

To 2007-04-20



Type of Instrument		Project Title (or Acronym)		From (dd/mm/yyyy)		To (dd/mm/yyyy)		Contract N°		Page							
COOP - CT - 2005 - 017609		CALM TRACKS & ROUTES		20.04.2005		20.04.2007		20.012.2007		112							
Contractor Organisation Short Name	Cost model used	Eligible costs (p. 0)	Type of activities						Total eligible costs (P+M+D+C+I+J+E)			Receipts					
			Research and Technological Development / Innovation (A)		Cooperation (B)		Training (C)		Management of the consortium (D)		Other Specific Activities (E)		Contractor	AC Third parties	FC/FP Third parties	Contractor	AC Third parties
			Contractor	AC Third parties	FC/FP Third parties	Contractor	AC Third parties	FC/FP Third parties	Contractor	AC Third parties	FC/FP Third parties	Contractor	AC Third parties	FC/FP Third parties	Contractor	AC Third parties	FC/FP Third parties
1	CALMA FC	Direct eligible costs of which direct eligible costs of sub-activity	303.290,37						43.171,00			438.478,32	0,00	0,00			
		Indirect eligible costs	22.272,56						7.000,00			78.272,56	0,00	0,00			
		Adjustment on previous period(s)	0,00									78.290,87	0,00	0,00			
		Total eligible costs	472.324,00	0,00	0,00				42.171,00	0,00	0,00	514.425,00	0,00	0,00			
2	CORDES FC	Direct eligible costs of which direct eligible costs of sub-activity	96.000,00						3.000,00			100.200,00	0,00	0,00			
		Indirect eligible costs	13.700,00						3.700,00			11.272,00	0,00	0,00			
		Adjustment on previous period(s)	50.000,00									50.000,00	0,00	0,00			
		Total eligible costs	148.922,00	0,00	0,00				3.500,00	0,00	0,00	156.422,00	0,00	0,00			
3	MECAR FC	Direct eligible costs of which direct eligible costs of sub-activity										0,00	0,00	0,00			
		Indirect eligible costs										0,00	0,00	0,00			
		Adjustment on previous period(s)										0,00	0,00	0,00			
		Total eligible costs							0,00	0,00	0,00	0,00	0,00	0,00			
4	CELLOFAM FC	Direct eligible costs of which direct eligible costs of sub-activity	30.550,51						0,00			30.209,18	0,00	0,00			
		Indirect eligible costs	26.000,00								0,00	0,00	0,00	0,00			
		Adjustment on previous period(s)										0,00	0,00	0,00			
		Total eligible costs	62.148,54	0,00	0,00				0,00	0,00	0,00	62.962,79	0,00	0,00			
5	ISOLITH FC	Direct eligible costs of which direct eligible costs of sub-activity	19.323,00						0,00			20.123,00	0,00	0,00			
		Indirect eligible costs	0,00									0,00	0,00	0,00			
		Adjustment on previous period(s)	1.702,00									1.702,00	0,00	0,00			
		Total eligible costs	21.025,00	0,00	0,00				0,00	0,00	0,00	21.825,00	0,00	0,00			
6	ISF-DEAW FC	Direct eligible costs of which direct eligible costs of sub-activity	211.997,98						4.000,00			218.997,98	0,00	0,00			
		Indirect eligible costs	0,00						4.000,00			4.000,00	0,00	0,00			
		Adjustment on previous period(s)	0,00									0,00	0,00	0,00			
		Total eligible costs	211.997,98	0,00	0,00				4.000,00	0,00	0,00	218.997,98	0,00	0,00			
		Receipts															
		Total eligible costs	387.447,31	0,00	0,00				4.000,00	0,00	0,00	391.447,31	0,00	0,00			

