

DELIVERABLE 6.2 – PART 3

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ACRONYM QCITY
TITLE Quiet City Transport
Subproject 6 Consolidation - Action Plans - Dissemination
Part 3 - Validation
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| PROJECT CO-ORDINATOR PARTNERS | | | |
|--|--|-------|----|
| Acoustic Control | | ACL | SE |
| Accon | | ACC | DE |
| Akron | | AKR | BE |
| Alfa Products & Technologies | | APT | BE |
| Banverket | | BAN | SE |
| Composite Damping Material | | CDM | BE |
| Havenbedrijf Oostende | | HOOS | BE |
| Frateur de Pourcq | | FDP | BE |
| Goodyear | | GOOD | LU |
| Head Acoustics | | HAC | DE |
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| Vlaamse Vervoersmaatschappij DE LIJN | | LIJN | BE |
| Lucchini Sidermeccanica | | LUC | IT |
| NCC Roads | | NCC | SE |
| Stockholm Environmental & Health Administration | | SEA | SE |
| Société des Transports Intercommunaux de Bruxelles | | STIB | BE |
| Netherlands Organisation for Applied Scientific Research | | TNO | NL |
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| University of Thessaly | | UTH | GR |
| Voest Alpine Schienen | | VAS | AT |
| Zbloc Norden | | ZBN | SE |
| Union of European Railway Industries | | UNIFE | BE |

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DURATION

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PRIORITY 6
 Sustainable development, global change & ecosystems



**This deliverable has been quality checked
 and approved by QCITY Coordinator
 Nils-Åke Nilsson**

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0 EXECUTIVE SUMMARY

0.1 OBJECTIVE OF THE DELIVERABLE

The aim of this project is to provide to the municipalities a list of possible noise action plans within the scope of the EC directive. In Part I & II, a consolidated list of solutions for both global mitigation and local complaint handling measures is established.

The aim of this document (Part III) is the validation of the consolidation list towards the real complaints present on the field.

0.2 STRATEGY AND DESCRIPTION OF THE TECHNIQUES USED

An extensive list of all complaints known at the city of Stockholm is used as a start. Validation of the consolidated list of solutions is done in regard to the list of complaints.

0.3 PARTNERS INVOLVED AND THEIR CONTRIBUTION

| | |
|---|---|
| Akron (AKR) | <ul style="list-style-type: none">validation of action plans against complaints concerning rail transportco-ordination and reporting |
| Stockholm Environment & Health Administration (SEA) | <ul style="list-style-type: none">establishment of lists of complaints |
| Acoustic Control (ACL) | <ul style="list-style-type: none">validation of action plans against complaints concerning road transport: input to be provided |

0.4 CONCLUSIONS

Decision will have to be made concerning the content of deliverable D6.6 (at the end of the project).

0.5 RELATION WITH THE OTHER DELIVERABLES

Will lead to final deliverable D6.6.

1 INTRODUCTION

The QCITY project aims to provide municipalities with tools to establish noise maps and actions plans in regard to EC Directive 2002/49/EC.

Therefore, outcome of the project has to be validated to be an answer to the needs of the municipalities.

Within the consortium, the city of Stockholm is present and provided a list of complaints.

This list of complaints is now evaluated in relation to the consolidation list of global and local mitigation measures.

2 APPROACH

Validation of the complaint list may lead to three different types of answer:

- solutions provided in the global mitigation list (GM) or in the local complaints list (LC);
- solutions provided outside the scope of this project but available in projects such as SILENCE (in particular, solutions requiring modifications at the vehicle/installation itself are not studied within the QCITY project);
- solutions not provided yet, requires further work/search for solutions.

The validation should be done, both by the solution providers as by the city authorities based on the available documents.



3 EVALUATION OF COMPLAINT LISTS

3.1 ROAD TRAFFIC (TO BE DONE: ACL)

| complaint | action | discussion |
|--|--------|------------|
| High equivalent noise levels | | |
| High maximum noise levels | | |
| Man- hole covers | | |
| Construction, maintenance and repairing of roads | | |
| High noise levels where "sensitive" groups reside, e.g. schools, nursing homes etc | | |
| Complaints related to the flow of the traffic, e.g. " why do the trucks have to pass through my neighbourhood" | | |
| Noise from heavy vehicles, busses, emergency service vehicles | | |
| High speeds (more noise) - Major roads | | |
| Vehicles that accelerate at well frequented pedestrian crossings | | |
| Entrances to parking garages | | |
| Reversing trucks | | |
| Traffic generated by the construction of new residential areas or shopping centres | | |
| Speed bumps | | |
| Distribution of goods to shops and restaurants etc housed in residential buildings | | |
| Sharp curves on narrow streets | | |
| Busses | | |
| Low frequency noise from idling motors | | |
| Acceleration and breaking at bus stops | | |



| | | |
|---|--|--|
| High noise levels at traffic lights because of acceleration | | |
| High noise levels in sharp curves | | |



3.2 RAIL TRAFFIC

| complaint | action | discussion |
|--|-------------------|--|
| High equivalent noise levels | GM-RAIL-9 & 10 | wheel truing & rail grinding |
| | GM-RAIL-5 | wheel and rail dampers |
| High maximum noise levels | GM-RAIL-9 to 15 | impact noise mitigation |
| Squealing | LC-RAIL-1 to 8 | squeal |
| Rattling from the trains and rails | LC-RAIL-9 to 12 | special trackwork |
| Breaking at stations | - | station noise [2] |
| Announcements from loud speakers at stations | - | station noise [2] |
| Fans and other equipment on stationary trains | - | vehicle [1] |
| Squealing in curves | LC-RAIL-1 to 8 | |
| Signal sounds from railway crossings | - | station noise [2] |
| Noise from the depots | - | station noise [2] |
| Vehicles that grind the rails | LC | temporary situation: project scope [3] |
| Work on and around the rails | LC | temporary situation: project scope [3] |
| Heater construction on new commuter trains | | vehicle [1] |
| Noise reflection from new buildings | - | |
| Whining sound around lone tall building | GM-PROP-11 | |
| Point effects | GM-PROP-11 | |
| Worn rail | LC-RAIL-10 & 18 | corrugated rail |
| Construction, maintenance and repairing of the rail | LC | temporary situation: project scope [3] |
| High noise levels from bridges, particularly steel constructions | LC-Rail- 13 to 16 | steel bridges |
| High noise levels where "sensitive" groups reside, e.g. schools, nursing homes etc | GM-RAIL-1 to 8 | normal rolling noise reduction |



Further discussion

- [1] QCITY does not include the study of the rail vehicle itself. Information should be recalled from other projects or omitted from the deliverable.
- [2] In QCITY, station noise has not been addressed, although this seems to be within the scope of work. This has to be clarified before D6.6.
- [3] Temporary situations are outside the scope of the EC directive, and outside the scope of QCITY. Except indication to act otherwise, these items will not be discussed.