NOISE CONTROL STUDY IN VICINITY OF SHARRCEM CEMENT PLANT AND MARL QUARRY

Objectives of study

- Identification and inventorying of noise sources within the factory and marl quarry;
- Developing Noise Dispersion Model in vicinity of cement plant and marl quarry;
- Verification of Noise Dispersion Model and determining the noise impact of SHARRCEM cement plant to recipients in vicinity of cement plant and marl quarry;
- Proposing Noise Control Measures in the vicinity of SHARRCEM cement plant;
- Development of scenarios by modeling of defined control measures and selection of an optimal solution

To achieve this objectives expert team from the Faculty of Natural and Technical Sciences according to the Agreement signed with SHARRCEM, Titan Cement Group Company, were performed 15-minute measuring of noise levels in 1/3 octave band nearby noise sources (in industrial area of cement plant and close to marl quarry), based on that identify and inventory noise sources and using Sound PLAN 7.2.

Software for noise modeling and mapping were produced Noise Dispersion Model (NDM) in industrial area of cement plant and Noise Dispersion Model in vicinity of the cement plant and marl quarry close to recipients.
Verification of the Noise Dispersion Model in industrial area of the Sharrcem

- With noise level measurement of 15 measurement points in industrial area of cement plant,
- 5 measurement points close to marl quarry, and
- 10 measurement points in vicinity of the marl quarry and cement plant close to recipients

Conflicting Noise Map

Conflicting noise maps provide information on whether the existing noise levels in a part of town is higher or lower than maximum allowed (recommended) value and how much is it overcome.

Development of scenarios by modelling defined noise control measures

Given that SHARRCEM plant presents an example of sustainable development company that continually invests in cleaner and safer production technology through implementation of various projects in the field of environmental protection and safety of its employees, one of the study goals was to develop scenarios for noise level reduction in the vicinity of a cement plant and marl quarry. Scenarios were developed by applying different levels of noise control measures and taking into account the cost efficiency and viability of the applied noise reduction measures.