

FAQ 6 - Frequently Asked Questions FESI- Acoustic Commission

Question:

How effective is a screen to protect people in higher buildings

Answer:

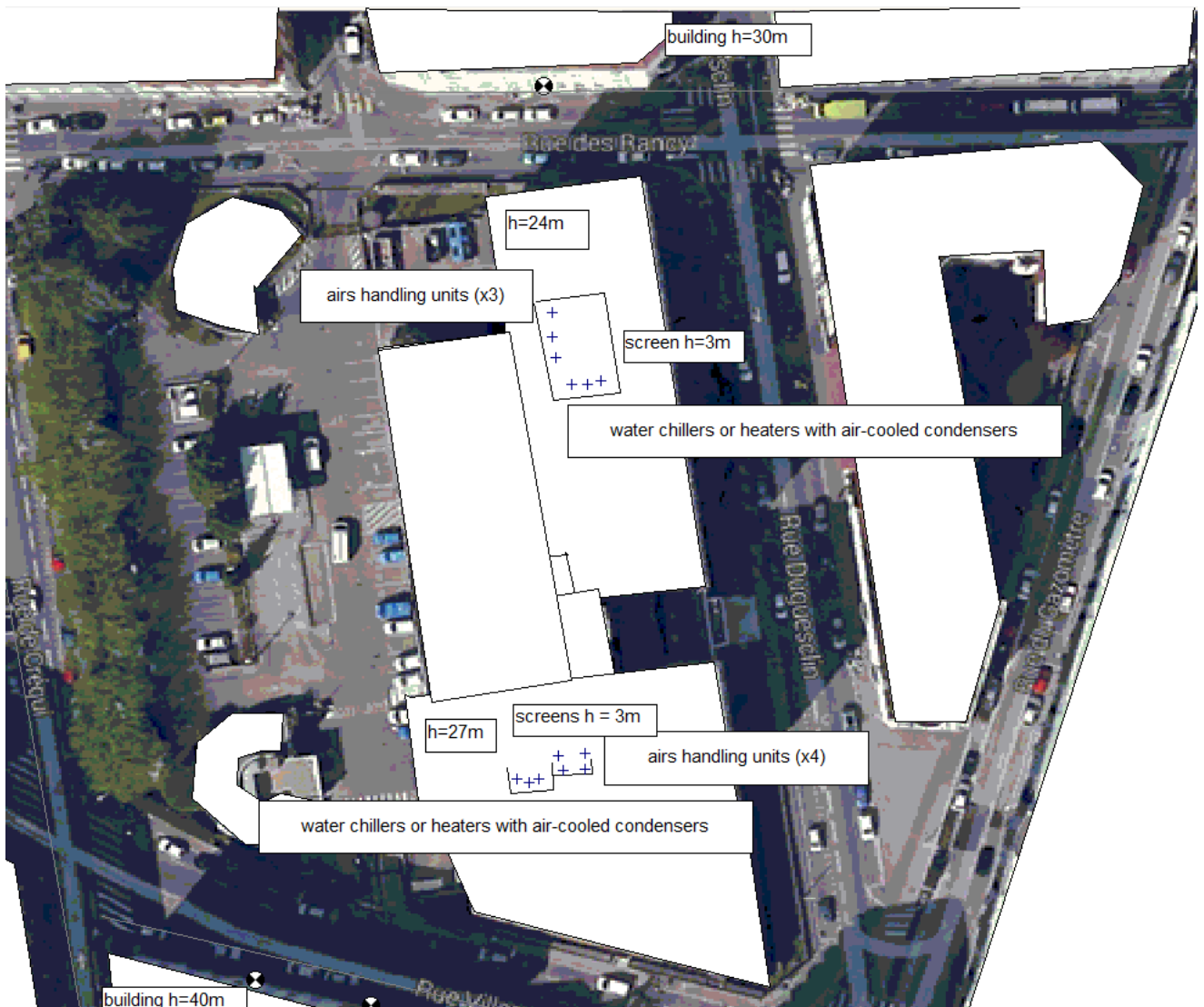
See an example:

It's a new building in Lyon, for offices.

On the roof of the constructions there are two water chillers or heaters with air-cooled condensers and seven air handling units.

The screens are simulated in a computer modelling.

The 3 m heights screens are covered with sound absorbing material on the noise source's side.



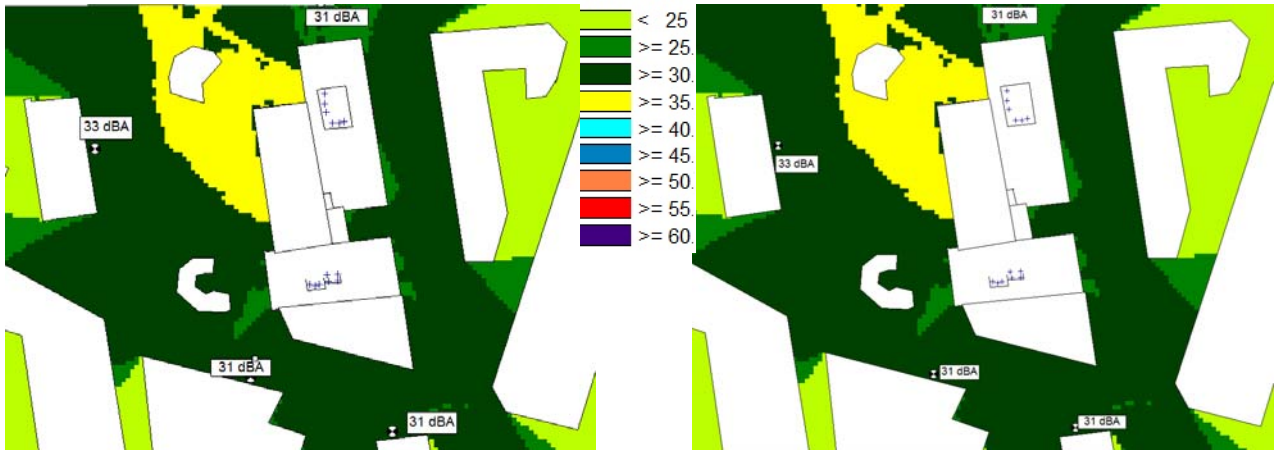
In the calculations all levels are in dBA.

First case: The receivers are higher level than the sounds sources

With screens

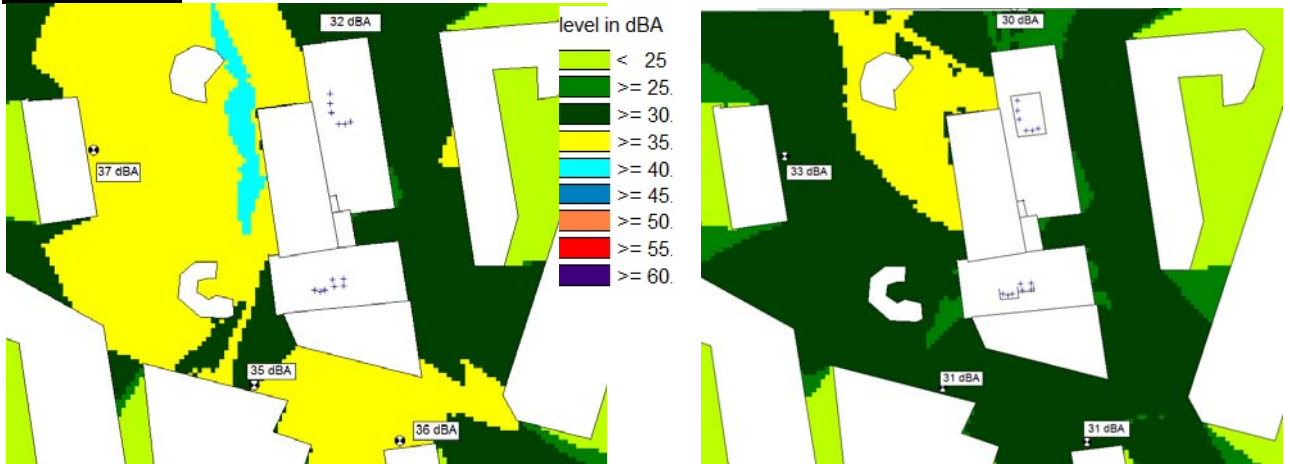
level in dBA

without screen



Level of receivers = 30 m : results are near the same, so screens are not efficient.

Second case: The receivers are lower level than the sounds sources

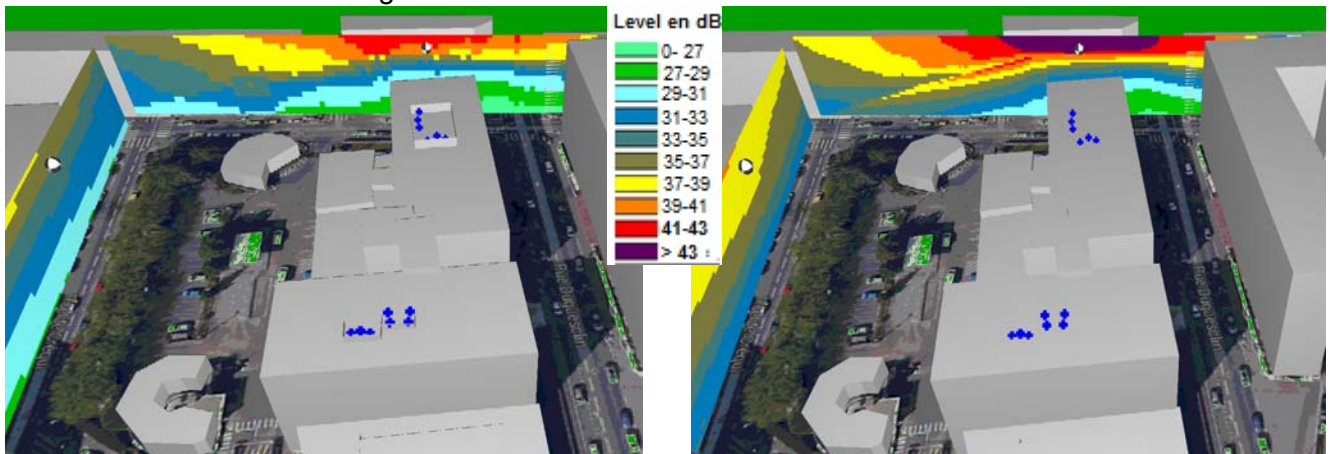


Level of receivers = 15 m: results there is a difference of 5 dBA between the calculation with and without screens, in that case screens are efficient.

Conclusion:

Calculation with 3 meters high screens.

Same calculation without screens



This example shows that screens are efficient in the receiver points, only when they are in a lower or a same level than the sound sources.