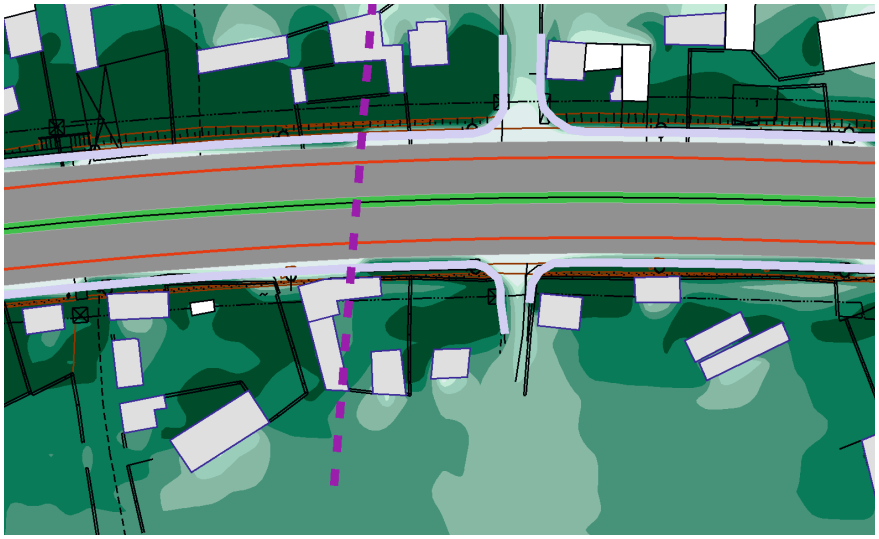
# SoundPLAN® noise





## Road/Rail Noise

**Many helpful tools and graphical features**
Edit, evaluate and present the data - no expensive GIS required

**Road day histogram library**
allows direct assignment of hourly traffic volumes from road planning software

**Flexible source definition**
Emission or other properties can change within the sources, no need to handle small source sections

**Maximum level and pass-by level for railway**
displayed either in a chart or as an animated noise map

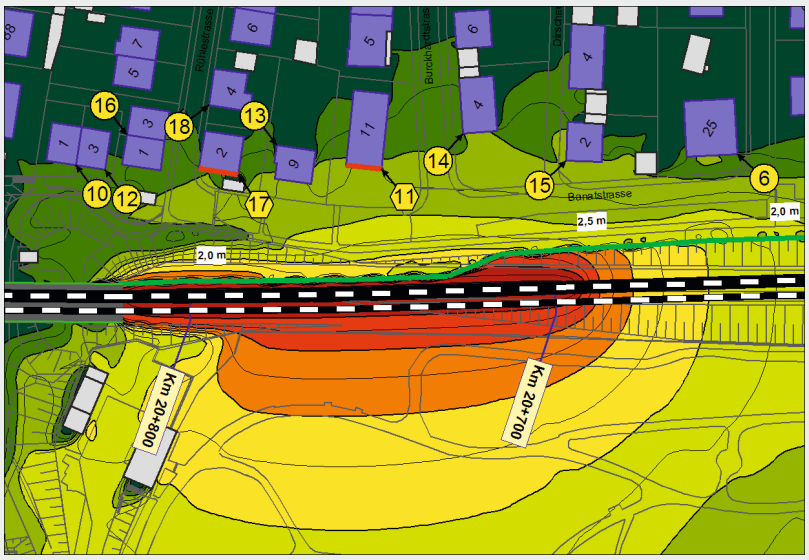
05.08.2025

# Road/Rail Noise

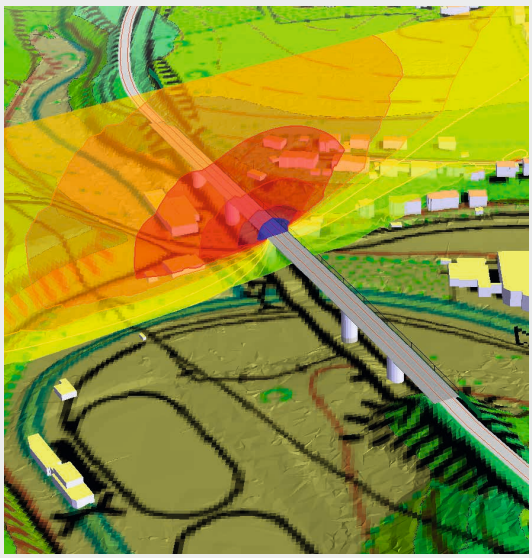
The road and rail modules consist of two main parts, the emission and the propagation calculation. The emission calculation is performed inside the Geo-Database where the vehicle numbers for various categories, the speed of vehicles and the road surfaces/ track conditions are fed into a calculation that results in the emission level. The propagation calculation is the executed inside the powerful Calculation Core. Calculations can be performed for single receivers or various types of noise maps (Grid Noise Map, Facade Noise Map, Vertical Noise Map, Meshed Noise Map). The results from the calculations can be presented in the Graphics module. The additional module Wall Design optimizes the height or cost of noise protection barriers. The optimization delivers the least expensive noise protection wall that properly shields the receivers.

| Floor | Direction | Status Quo LrD [dB(A)] | Status Quo LrN [dB(A)] | Prognosis LrD [dB(A)] | Prognosis LrN [dB(A)] | Difference Day [dB(A)] | Difference Night [dB(A)] | Limit exceeded Day [dB(A)] | Limit exceeded Night [dB(A)] |
|---|---|---|---|---|---|---|---|---|---|
| Jamaica Road 33 Usage: GR | | | | | | | | | |
| Limit day / night 59 / 49 dB(A) | | | | | | | | | |
| 1 | N | 62,6 | 52,2 | 63,4 | 52,9 | 0,7 | 0,7 | 4,4 | 3,9 |
| 2 | N | 63,4 | 53,0 | 64,1 | 53,7 | 0,7 | 0,7 | 5,1 | 4,7 |
| 1 | S | 60,8 | 50,3 | 61,5 | 51,0 | 0,7 | 0,7 | 2,5 | 2,0 |
| 2 | S | 62,0 | 51,6 | 62,7 | 52,3 | 0,7 | 0,7 | 3,7 | 3,3 |
| 1 | O | 54,8 | 45,0 | 55,6 | 45,6 | 0,7 | 0,6 | - | - |
| 2 | O | 56,8 | 47,1 | 57,5 | 47,6 | 0,7 | 0,6 | - | - |
| 1 | N | 54,8 | 45,0 | 55,6 | 45,6 | 0,7 | 0,6 | - | - |
| 2 | N | 57,3 | 47,8 | 58,0 | 48,2 | 0,7 | 0,5 | - | - |
| 1 | W | 67,1 | 56,6 | 67,8 | 57,3 | 0,7 | 0,7 | 8,8 | 8,3 |
| 2 | W | 67,2 | 56,7 | 67,9 | 57,4 | 0,7 | 0,7 | 8,9 | 8,4 |
| Jamaica Road 35 Usage: GR | | | | | | | | | |
| Limit day / night 59 / 49 dB(A) | | | | | | | | | |
| 1 | W | 66,1 | 55,5 | 66,8 | 56,2 | 0,7 | 0,7 | 7,8 | 7,2 |
| Jamaica Road 36 Usage: MI | | | | | | | | | |
| Limit day / night 64 / 54 dB(A) | | | | | | | | | |
| 1 | S | 62,6 | 52,0 | 63,3 | 52,7 | 0,7 | 0,7 | - | - |
| 2 | S | 63,0 | 52,4 | 63,7 | 53,1 | 0,7 | 0,7 | - | - |
| 1 | O | 69,3 | 58,7 | 70,0 | 59,4 | 0,7 | 0,7 | 6,0 | 5,4 |
| 2 | O | 68,7 | 58,2 | 69,5 | 58,9 | 0,7 | 0,7 | 5,5 | 4,9 |
| 1 | W | 52,2 | 43,5 | 52,9 | 43,7 | 0,7 | 0,2 | - | - |
| 2 | W | 53,1 | 44,3 | 53,8 | 44,5 | 0,7 | 0,2 | - | - |

Well-structured documentation, showing the results for different scenarios




Maximum noise level for a single train pass-by with automatically generated inscription of the kilometer index and the wall heights



Vertical noise map of a road bridge shown in 3D

**SOUNDPLAN - EIN PAKET - EIN PREIS - ALLE RICHTLINIEN**

**Road:**

ASJ RTN-Model 2018 · BUB: 2018/2021 · CNOSSOS-EU: 2015/2021 · CNOSSOS-Norway: 2021 · CoRTN: 1988 · DIN 18005: 1987 · EMPA StL 86/86+/97 · FHWA: 1978 · HJ 2.4 Road: 2009/2021 · NMPB 2008 · NMPB 96 · Nord2000 Road · ÖAL 28: 2019/2021 (RVS 4.02.11) · ODM 218.2.013-2011 · RLS-19 · RLS-90 · RTN: 1996 · Russian Road · RVS 3.02/4.02: 2009 · sonROAD 18: 2018/2021/2023/2024 · Standaardrekenmethode 2: 2012 · Statensplanverk report no. 48: 1990 · TNM 2.5 / 3.0 · VBUS: 2006 · VRSS: 1975

**Rail:**

BUB: 2018/2021 · CNOSSOS-EU: 2015/2021 · CNOSSOS-Norway: 2021 · CoRN: 1995 · DIN18005: 1987 · FTA: 2018 / FRA - HSGT: 2005 · GOST R 54933: 2012 · HS2 Phase 2b: 2017 · Israeli Rail: 2006 · Japan Narrow Gauge Railways: 2008 · Kilde Report 67/130 · NF S 31-133 Rail: 2007 · NMT: 1996 · Nord2000 Rail · ÖAL 28: 2019/2021 (RVE 4.02.11) · ONR 305011: 2004/2009 · RMR 2002 · Russian Rail · Schall 03: 1990/2012 · SEMIBEL: 1990 · VBUSch: 2006


**Software Designers and Consulting Engineers**

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