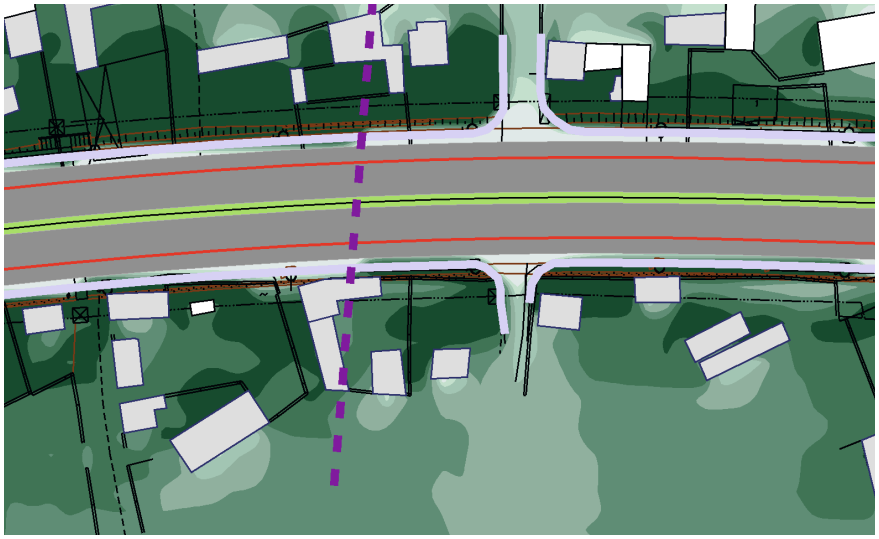
SoundPLAN® noise



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

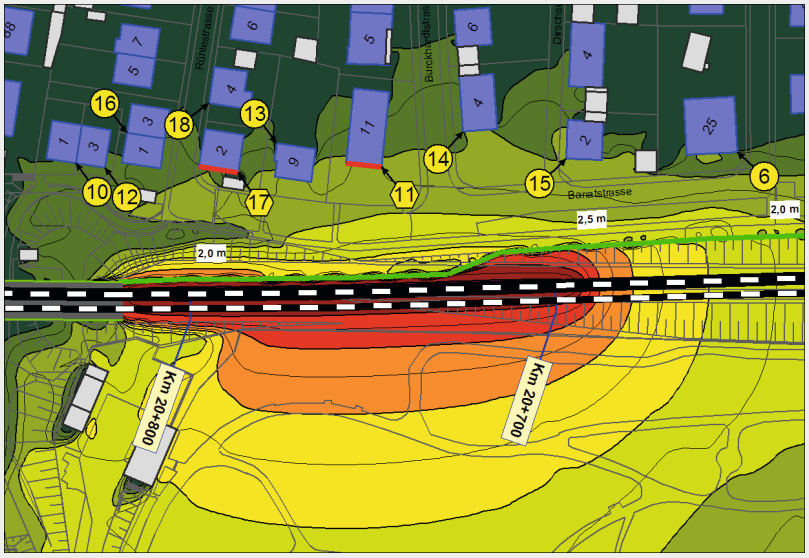
04.08.2020

Road/Rail Noise

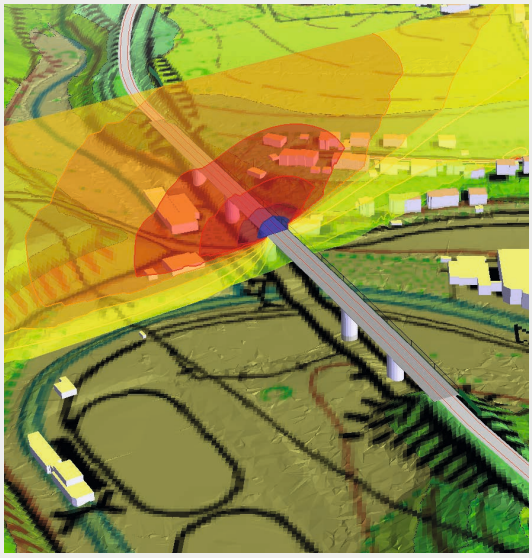
The road and rail modules consist of two main parts, the emission and the propagation calculation. The emission calculation is performed inside the Geo-Database where the vehicle numbers for various categories, the speed of vehicles and the road surfaces/ track conditions are fed into a calculation that 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 - ONE PACKAGE - ONE PRICE - ALL STANDARDS

Road: ASJ-RTN Model 2003 · ASJ-RTN Model 2013 · BUB:2018 · CNOSSOS-EU · CoRTN:1988 · CoRTN [AU-NSW]:2013 · DIN 18005 Strasse:1987 · EMPA StL 86 · EMPA StL 95 · EMPA StL 97 · FHWA:1978 · HJ2.Road:2009 · Hungarian Road · NMPB 96 · NMPB 2008 · NORD2000 Road · ODM 218.2.013-2011 · RLS-90 · RTN:1996 · Russian Road · RVS 3.02 · RVS 4.02.11:2019 · Statens planverk Report no.48:1980 · TNM 2.5 · VBUS:2005 · VRSS · Standaardrekenmethode 2:2012

Rail: BUB:2018 · CNOSSOS-EU · CoRN:1995 · DIN 18005 Rail:1987 · FRA-HSGT:2005 · GOST R 54933-2012 · Israeli Rail · Japan Narrow Gauge Railways · Kilde Report 67/130 · NFS 31-133 Rail · NMT:1996 · NORD2000 Rail · ONR 305011:2004 · ONR 305011:2009 · RMR 2002 (EU Interim) · Russian Rail · RVE 04.01.02:2019 · Schall 03 · Schall 03:2012 · SEMIBEL · Transrapid · VBUSch:2006

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