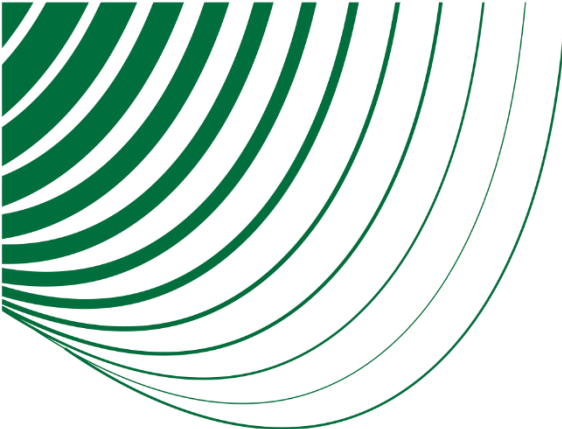




Greif-akustika
s.r.o.

Document No.:

Z250153-02

Revision:

3.0

ACOUSTIC STUDY

**Construction and Operation of SMR ETE –
Traffic Loading**

Acoustic Study for EIA

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Issue number: **1**

Number of pages: **23**

External annexes: **100**

Issue date: **9 July, 2025**

Greif-akustika, s.r.o.

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1. Assignment:

The Customer for the acoustic study, Jacobs Clean Energy s.r.o., requires an assessment of the future acoustic situation at the Temelín site caused by the effect of traffic loading along the transport routes considered in connection with the operation of the new SMR power plant at the Temelín site (SMR ETE), in combination with the operation of the existing part of the Temelín Nuclear Power Plant site (ETE1,2) and the future operation of New NPP ETE (ETE3,4).

For road traffic operation, it will be assessed whether noise in the nearest protected outdoor areas of buildings and in protected outdoor areas will exceed the public-health noise limits for daytime and night-time pursuant to Government Regulation No. 272/2011 Coll., on the protection of health against the adverse effects of noise and vibration, as amended.

The subject of the Project is the construction of the new SMR power plant at the Temelín site (SMR ETE). The acoustic study has been prepared for the stage of documentation on the Project's environmental impacts (EIA).

For the purposes of the acoustic study, a calculation-based assessment and comparison of the following operating conditions has been carried out:

- **Existing condition** – current traffic loading for the year 2025, baseline condition.
- **Future condition, year 2034 without SMR ETE** – traffic loading for the year 2034, operation of ETE1,2 without operation of SMR ETE.
- **Future condition, year 2034 with SMR ETE** – traffic loading for the year 2034, operation of ETE1,2 with operation of SMR ETE.
- **Target condition, year 2042 without SMR ETE** – traffic loading for the year 2042, operation of ETE1,2 without operation of SMR ETE + operation of New NPP ETE.
- **Target condition, year 2042 with SMR ETE** – traffic loading for the year 2042, operation of ETE1,2 with operation of SMR ETE + operation of New NPP ETE.

For the purposes of this assessment, the assessed area is bounded by the four nearest municipalities – Kočín, Temelín, Týn nad Vltavou, and Zvěrkovice.

This assessment only includes the traffic loading of the surrounding roads, excluding construction-site traffic.



2. Source Documents:

- [1] Act No. 258/2000 Coll., on the protection of public health and on the amendment of certain related acts, as amended.
- [2] Government Regulation No. 272/2011 Coll., on the protection of health against the adverse effects of noise and vibration, as amended.
- [3] ČSN ISO 9613-1 Acoustics – Attenuation of sound during propagation outdoors. Part 1: Calculation of the absorption of sound by the atmosphere.
- [4] ČSN ISO 9613-2 Acoustics – Attenuation of sound during propagation outdoors. Part 2: General method of calculation.
- [5] ČSN ISO 1996-1 Acoustics – Description, measurement and assessment of environmental noise – Part 1: Basic quantities and assessment procedures.
- [6] ČSN ISO 1996-2 Acoustics – Description, measurement and assessment of environmental noise. Part 2: Determination of sound pressure levels.
- [7] Acoustic Study Z080664-04-R02 STU ETE TRAFFIC, used in the EIA documentation, Greif-akustika, s.r.o., 08/2009.
- [8] Acoustic Study Z160903-01_R03 STU ETE TRAFFIC_update, used in the documentation for the EIA extension, Greif-akustika, s.r.o., 08/2017.
- [9] Traffic volumes on the monitored roads from the Road and Motorway Directorate of the Czech Republic, results of the 2020 national traffic census.
- [10] DOPRAVOPROJEKT Ostrava, a.s. – Traffic Study for the Construction and Operation of SMR ETE (in combination with the operation of ETE1,2 and the construction and operation of New NPP ETE)
- [11] EIA Acoustic Study, SMR at the ETE site, Z230163-03, Greif-akustika, s.r.o., 02/2024.
- [12] Drawing documentation with technical description.
- [13] Consultations with the Customer's staff.

3. Public-Health Noise Limits:

Public-health noise limits are laid down pursuant to [2], Section 12, “Public-health noise limits in protected outdoor areas of buildings and in protected outdoor areas”.

For noise from traffic on roads that were sited and permitted by a decision or measure pursuant to another legal regulation before 1 January, 2001, the public-health limits for protected outdoor areas of other buildings and other protected outdoor areas are set out in the following table.

Table 1 – Public-health limit for noise from traffic on roads sited and permitted before 1 January, 2001

Protected outdoor areas of other buildings and other protected outdoor areas	$L_{Aeq,T}$ [dB]
Daytime	68
Night-time – protected outdoor areas	68
Night-time – protected outdoor areas of buildings	58

4. Situation:

4.1 Site Description:

The existing Temelín Nuclear Power Plant (ETE1,2) is located in the South Bohemian Region near the municipality of Temelín. Other surrounding municipalities are also located near the power plant, namely Litoradlice, Kočín, Malešice, Zvěrkovice, and Sedlec. A larger residential agglomeration is located at a distance of approximately 5 km, in the town of Týn nad Vltavou. The area around the Temelín Nuclear Power Plant is defined by the adjacent road network, which is or will be associated with the future operation of the power plant and the new SMR ETE Project, or New NPP ETE.

4.2 Nearest Protected Areas:

The nearest residential development in the vicinity of the Temelín Nuclear Power Plant (including in the case of the future New NPP ETE) and the new SMR ETE Project, along the transport routes associated with the future operation of the Project, is located in the municipalities of Kočín, Temelín, Týn nad Vltavou, and Zvěrkovice. These municipalities are distributed in all cardinal directions around the power plant.

For the purposes of mapping traffic noise, it is necessary to consider the surroundings of the Temelín Nuclear Power Plant, taking into account the higher traffic levels due to the arrival and departure routes of power plant employees. When defining these routes, the surroundings of the Temelín Nuclear Power Plant are therefore defined as the area bounded by the municipalities of Kočín, Temelín, Týn nad Vltavou, and Zvěrkovice; see Figure 1.

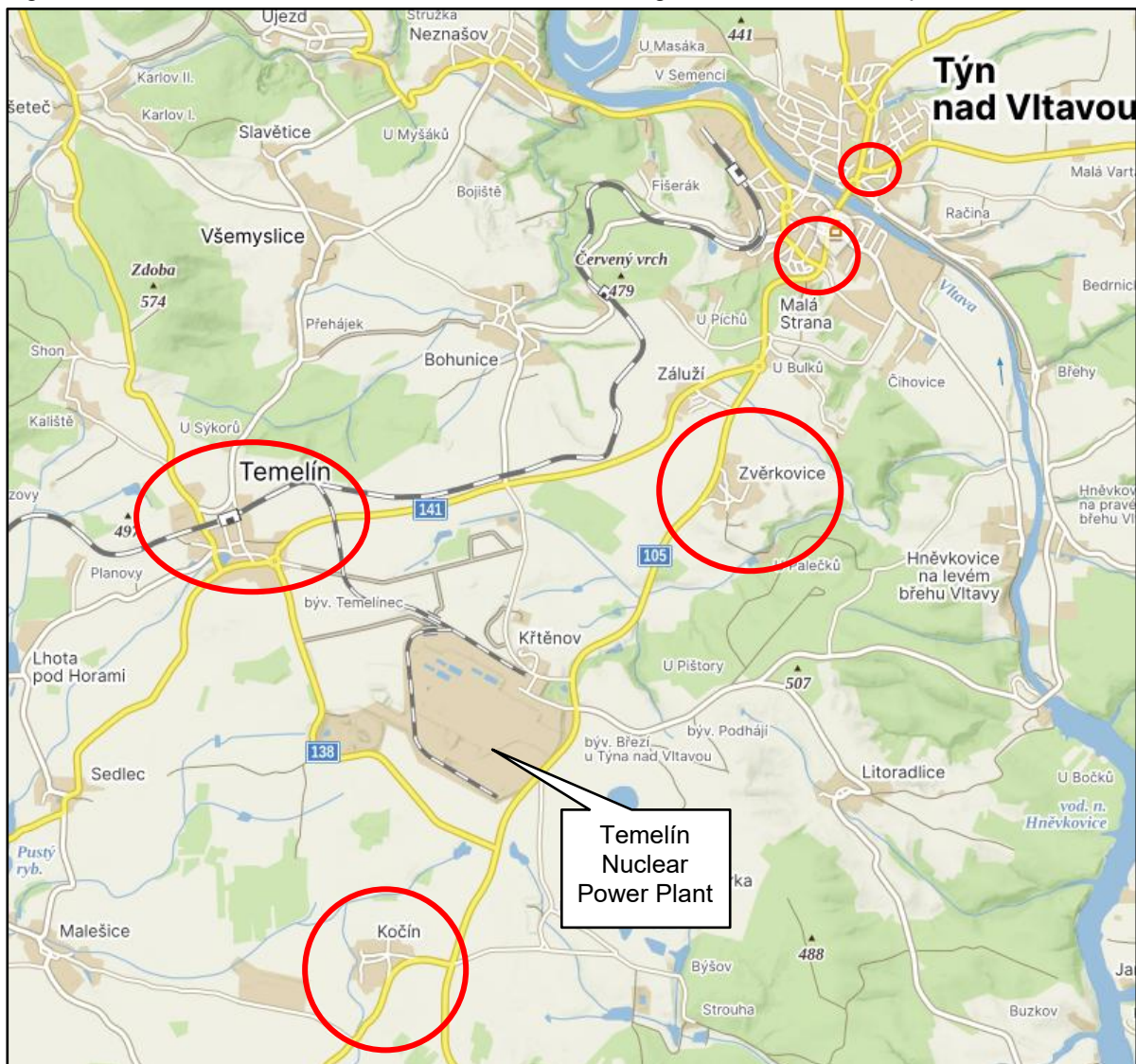
List of municipalities in which a more detailed mapping of road traffic noise is carried out, i.e., locations with protected outdoor areas and protected outdoor areas of buildings:

- Kočín
- Temelín
- Týn nad Vltavou
- Zvěrkovice

Pursuant to [1], a protected outdoor area of buildings means the area up to a distance of 2 m in front of the part of their external envelope that is relevant in terms of the penetration of noise from outside into the protected indoor space of apartment buildings, family houses, buildings for preschool and school education, buildings for healthcare and social purposes, as well as functionally similar buildings. The area relevant in terms of noise penetration is the area in front of the infill of an opening in the external envelope of the building that provides direct natural ventilation, behind which the protected indoor space of the building is located, if this protected space cannot be directly ventilated otherwise.

Pursuant to [1], a protected outdoor area means undeveloped land used for recreation, spa medical rehabilitation care and education, excluding forest and agricultural land and outdoor workplaces. Recreation also includes the use of land on the basis of ownership, tenancy, or subtenancy rights associated with the ownership of an apartment building or family house, or the tenancy or subtenancy of an apartment in such buildings.

Figure 1 – Overall situation of the assessed area, indicating the monitored municipalities and roads



Map source: www.seznam.cz - maps

The roads monitored for the purposes of the acoustic calculations are Class II Roads Nos. 105, 138 and 141, the Sedlec – Temelín road, the Temelín – Albrechtice nad Vltavou road, the Temelín – Záluží road, the Dříteň – Kočín road, Road 105 – Tým nad Vltavou, and Road 147 – Tým nad Vltavou – Bečice.

5. Road Traffic Noise:

5.1 Description of Traffic:

At present, the dominant source of noise in the given area is road traffic on the main Class II roads.

The road network defined in Figure 1 is based on the planned future condition, including the arrival and departure routes of employees for the future operation of the ETE site, including SMR ETE and New NPP ETE. This future operation defines the scope of the required mapping of traffic noise.

For a complete assessment of the noise contribution caused by traffic associated with the future operation of the power plant and the individual projects, a total of 5 variants of operation on the roads mentioned above are modelled (calculated).

For the purposes of the acoustic study, a calculation-based assessment and comparison of noise exposure levels is carried out for the following operating conditions:

- **Existing condition** – current traffic loading for the year 2025, baseline condition.
- **Future condition, year 2034 without SMR ETE** – traffic loading for the year 2034, operation of ETE1,2 without operation of SMR ETE.
- **Future condition, year 2034 with SMR ETE** – traffic loading for the year 2034, operation of ETE1,2 with operation of SMR ETE.
- **Target condition, year 2042 without SMR ETE** – traffic loading for the year 2042, operation of ETE1,2 without operation of SMR ETE + operation of New NPP ETE.
- **Target condition, year 2042 with SMR ETE** – traffic loading for the year 2042, operation of ETE1,2 with operation of SMR ETE + operation of New NPP ETE.

All variants with the relevant traffic volumes are taken from source document [10].

5.2 SoundPLAN Calculation Software:

The calculation software models the specified noise situation pursuant to the ČSN ISO 9613 standard, Acoustics – Attenuation of sound during propagation outdoors. This standard specifies an engineering method for calculating the attenuation of sound during propagation outdoors, with the aim of predicting environmental noise levels at a certain distance from individual sources. The method predicts the equivalent A-weighted sound pressure level under meteorological conditions favourable to propagation from sources of known sound emission.

The sound attenuation calculations are described by algorithms for octave bands (with centre frequencies from 63 Hz to 8 kHz) generated by a point source or a set of point sources. The sources may be moving or stationary.

The calculation algorithms include mathematical expressions taking into account the following physical phenomena:

- Geometrical divergence
- Atmospheric absorption
- Ground effect
- Reflections from various surfaces
- Screening by obstacles

Standards used for the calculation – SoundPLAN 7.4 – Standards:

- Road – RLS 19

5.3 Calculation:

5.3.1 Description of calculation:

Noise propagation modelling was carried out using the SoundPLAN calculation software, version 7.4. Noise from “existing” operation on public roads in the municipalities directly associated with the roads used in connection with the future construction of SMR ETE and the future operation of the Temelín Nuclear Power Plant as a whole (ETE1,2 + New NPP ETE) was assessed for both daytime and night-time.

Road traffic volume values were entered into the individual calculation model variants; see source document [10] and Chapter 5.3.3.

The calculations are always carried out separately for daytime and night-time. The calculation results are presented in the individual Annexes, which show noise maps at calculation heights of 3 m and 6 m above ground level. The calculation heights of 3 m and 6 m were selected as representative for assessing noise exposure at the level of the 1st and 2nd above-ground floors of protected outdoor areas of buildings, in accordance with common practice. At the same time, the calculation results are processed in tabular form; see Chapter 6.

5.3.2 Calculation points:

This chapter shows in more detail, in Figures 2, 3, 4, 5, and 6, the control calculation points in the four monitored municipalities of Kočín, Temelín, Týn nad Vltavou (2 calculation areas), and Zvěrkovice.

Figure 2 – Detailed view of the control point in the municipality of Kočín in relation to the monitored road network

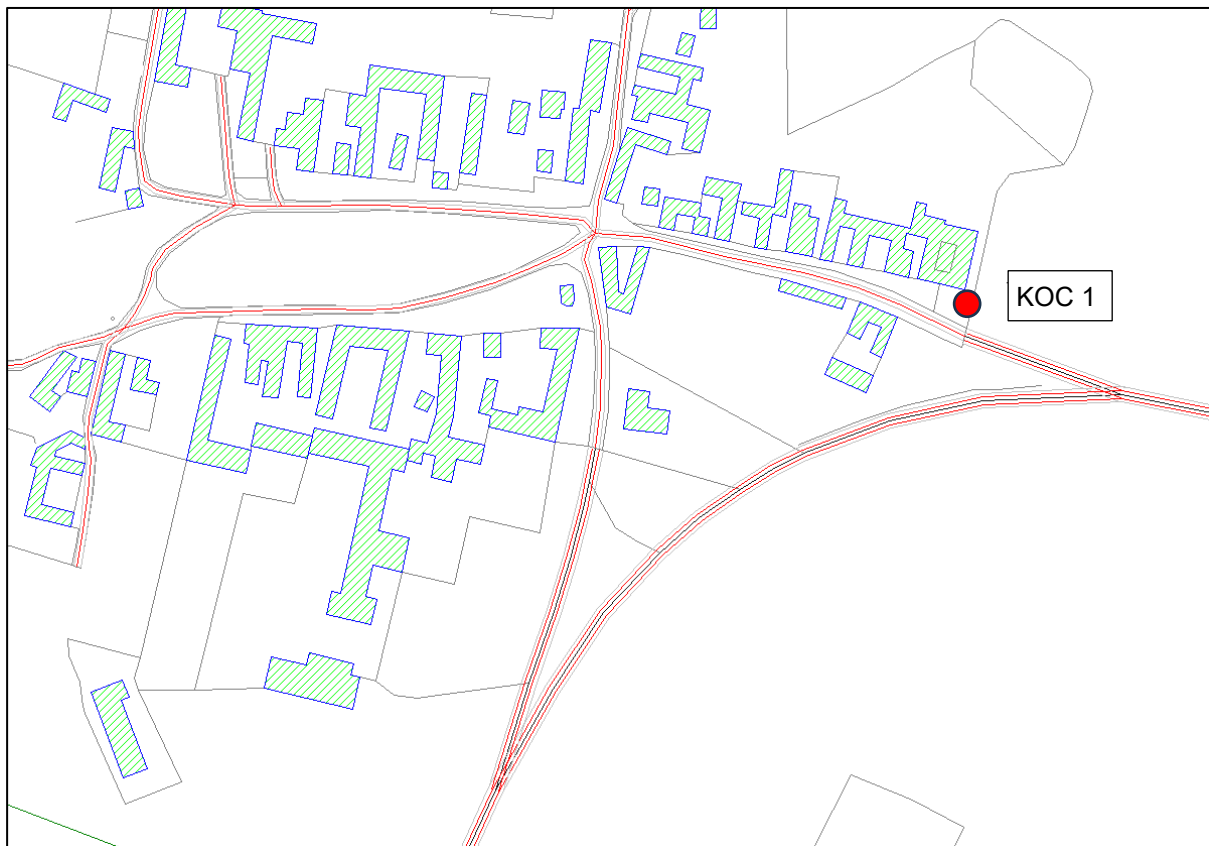


Figure 3 – Detailed view of the control points in the municipality of Temelín in relation to the monitored road network

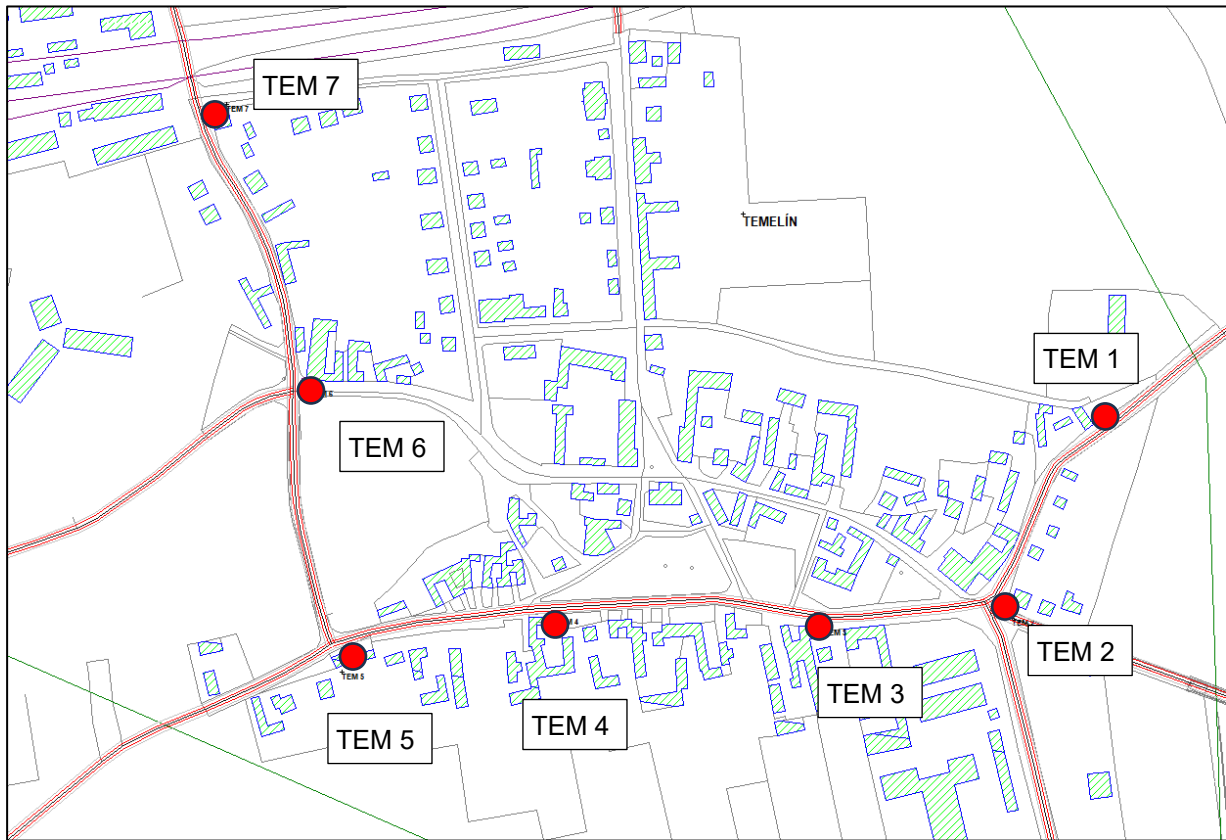


Figure 4 – Detailed view of the control points in the municipality of Zvěrkovice in relation to the monitored road network

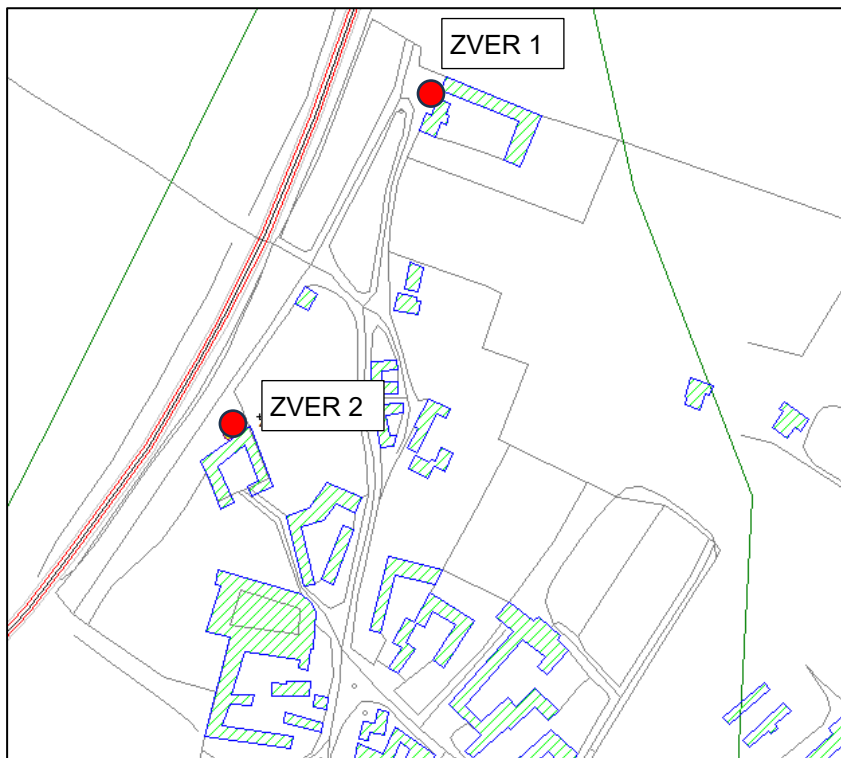


Figure 5 – Detailed view of the control points in the municipality of Týn nad Vltavou – Area 1, in relation to the monitored road network

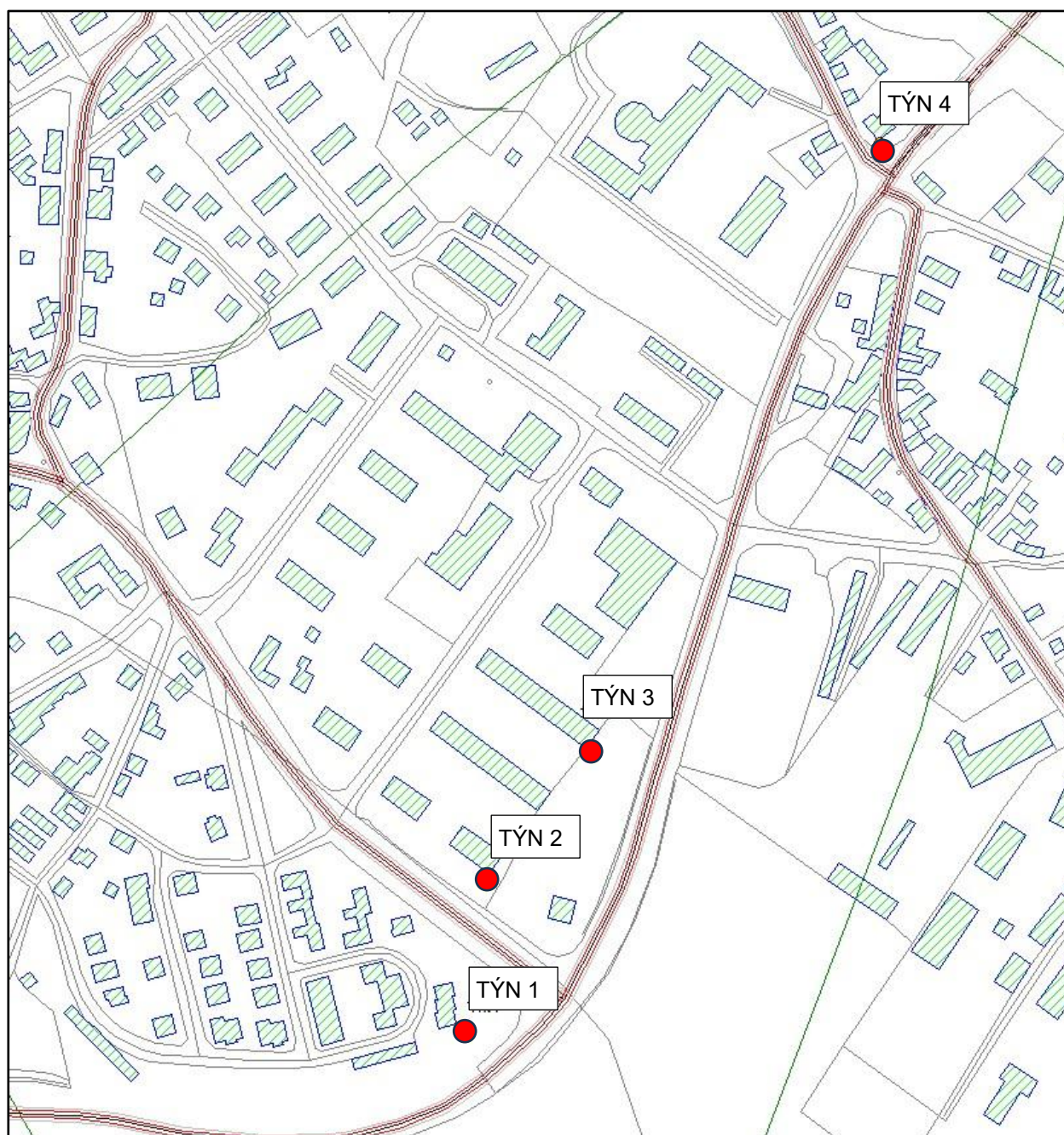
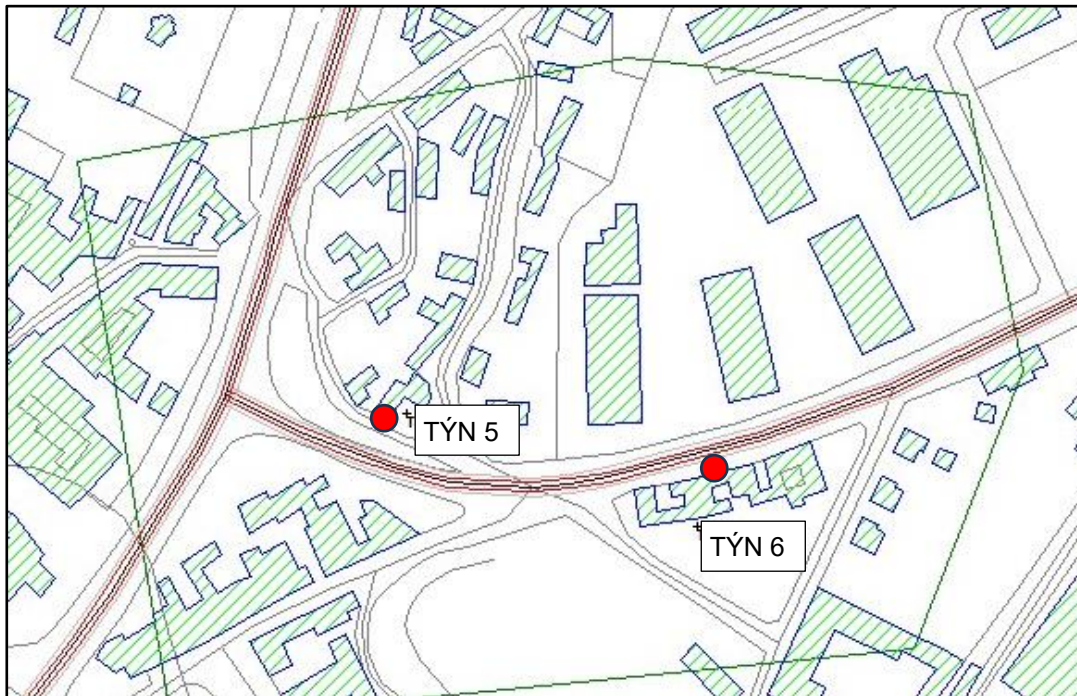


Figure 6 – Detailed view of the control points in the municipality of Týn nad Vltavou – Area 2, in relation to the monitored road network



5.3.3 Road traffic volumes considered in the calculations:

The volumes of road traffic on the individual roads monitored for the traffic loading of the road network in the vicinity of ETE are set out in more detail in Figure 7 below and in Tables 2 to 6.

Figure 7 – Illustration of the monitored road network in the ETE area, indicating the traffic count sections

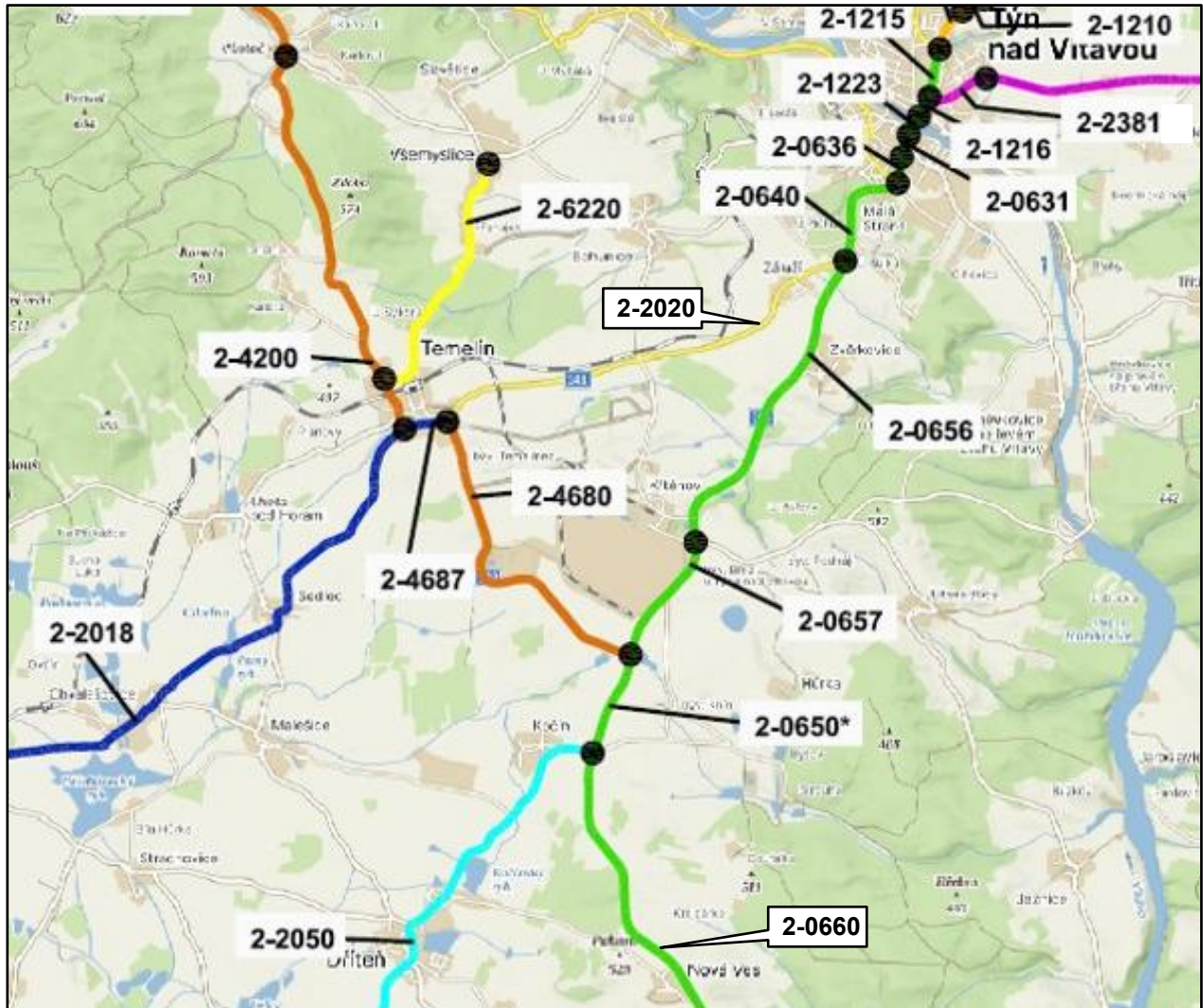




Table 2 – **Existing condition** – current traffic loading for the year 2025, baseline condition

Číslo kom.	Sčítací úsek	Kategorie vozidel pro hlukové a emisní výpočty					
		Den + Večer (06-22)			Noc (22-06)		
		OAL	NAL	NS	OAL	NAL	NS
105	2-1216	10211	635	279	704	47	27
105	2-1223	12029	672	214	810	50	21
105	2-0631	10862	736	235	751	55	23
105	2-0636	8664	605	257	608	45	25
105	2-0640	7095	528	261	515	39	26
105	2-0656	5143	415	206	376	31	20
105	2-0657	5572	381	205	397	28	20
105	2-0650	5572	381	205	397	28	20
105	2-0660	6647	544	351	496	40	34
122	2-2050	1573	175	79	120	12	8
138	2-4200	523	58	45	43	4	4
138	2-4200	523	58	45	43	4	4
138	2-4687	1348	216	207	122	16	20
138	2-4680	801	115	133	71	8	12
138	2-4680	801	115	133	71	8	12
147	2-2381	1481	164	150	122	13	15
1411	2-6220	265	94	30	26	7	3
141	2-2018	828	141	145	47	10	14
141	2-2020	1329	225	84	114	17	8

OAL – passenger cars, NAL – trucks, NS – truck combinations

Číslo kom.	Road No..
Sčítací úsek	Traffic count section
Kategorie vozidel pro hlukové a emisní výpočty	Vehicle categories for noise and emission calculations
Den + Večer (06-22)	Day + Evening (6am – 10pm)
Noc (22-06)	Night (10pm – 6am)



Table 3 – **Future condition, year 2034 without SMR ETE** – traffic loading for the year 2034, operation of ETE1,2 without operation of SMR ETE

Číslo kom.	Sčítací úsek	Kategorie vozidel pro hlukové a emisní výpočty					
		Den + Večer (06-22)			Noc (22-06)		
		OAL	NAL	NS	OAL	NAL	NS
105	2-1216	10616	696	294	732	52	28
105	2-1223	12505	739	225	842	55	22
105	2-0631	11296	805	247	781	60	24
105	2-0636	9011	662	270	633	50	26
105	2-0640	7392	583	274	536	43	27
105	2-0656	5358	457	216	392	34	21
105	2-0657	5800	419	215	413	31	21
105	2-0650	5800	419	215	413	31	21
105	2-0660	6965	595	369	520	44	36
122	2-2050	1646	188	83	125	13	9
138	2-4200	546	64	47	45	5	4
138	2-4200	546	64	47	45	5	4
138	2-4687	1409	236	217	127	17	21
138	2-4680	835	125	140	74	9	13
138	2-4680	835	125	140	74	9	13
147	2-2381	1546	180	157	127	14	15
1411	2-6220	276	100	31	27	8	3

OAL – passenger cars, NAL – trucks, NS – truck combinations

Číslo kom.	Road No..
Sčítací úsek	Traffic count section
Kategorie vozidel pro hlukové a emisní výpočty	Vehicle categories for noise and emission calculations
Den + Večer (06-22)	Day + Evening (6am – 10pm)
Noc (22-06)	Night (10pm – 6am)



Table 4 – **Future condition, year 2034 with SMR ETE** – traffic loading for the year 2034, operation of ETE1,2 with operation of SMR ETE

Číslo kom.	Sčítací úsek	Kategorie vozidel pro hlukové a emisní výpočty					
		Den + Večer (06-22)			Noc (22-06)		
		OAL	NAL	NS	OAL	NAL	NS
105	2-1216	10685	718	296	778	53	29
105	2-1223	12574	762	227	888	56	22
105	2-0631	11366	828	249	827	61	24
105	2-0636	9080	685	272	679	51	26
105	2-0640	7461	606	276	582	44	27
105	2-0656	5427	480	219	438	35	21
105	2-0657	5869	442	218	459	33	21
105	2-0650	5903	454	219	483	34	21
105	2-0660	7068	629	372	589	46	36
122	2-2050	1646	188	83	125	13	9
138	2-4200	554	66	47	50	5	4
138	2-4200	554	66	47	50	5	4
138	2-4687	1417	238	217	132	17	21
138	2-4680	843	127	140	79	9	13
138	2-4680	1008	182	146	189	13	13
147	2-2381	1560	185	158	136	14	15
1411	2-6220	276	100	31	27	8	3

OAL – passenger cars, NAL – trucks, NS – truck combinations

Číslo kom.	Road No..
Sčítací úsek	Traffic count section
Kategorie vozidel pro hlukové a emisní výpočty	Vehicle categories for noise and emission calculations
Den + Večer (06-22)	Day + Evening (6am – 10pm)
Noc (22-06)	Night (10pm – 6am)



Table 5 – **Target condition, year 2042 without SMR ETE** – traffic loading for the year 2042, operation of ETE1,2 without operation of SMR ETE + operation of New NPP ETE

Číslo kom.	Sčítací úsek	Kategorie vozidel pro hlukové a emisní výpočty					
		Den + Večer (06-22)			Noc (22-06)		
		OAL	NAL	NS	OAL	NAL	NS
105	2-1216	10843	759	306	880	56	29
105	2-1223	12733	805	236	990	59	23
105	2-0631	11526	874	258	929	64	25
105	2-0636	9240	724	282	781	53	27
105	2-0640	7626	644	286	685	47	28
105	2-0656	5588	512	227	541	37	22
105	2-0657	6028	473	225	562	34	22
105	2-0650	6138	491	227	636	36	22
105	2-0660	7319	676	389	743	49	37
122	2-2050	1650	196	86	125	14	9
138	2-4200	572	70	49	61	5	4
138	2-4200	572	70	49	61	5	4
138	2-4687	1438	249	224	144	18	21
138	2-4680	861	133	144	90	9	13
138	2-4680	1391	220	154	444	15	14
147	2-2381	1594	195	163	157	14	16
1411	2-6220	276	104	33	27	8	3

OAL – passenger cars, NAL – trucks, NS – truck combinations

Číslo kom.	Road No..
Sčítací úsek	Traffic count section
Kategorie vozidel pro hlukové a emisní výpočty	Vehicle categories for noise and emission calculations
Den + Večer (06-22)	Day + Evening (6am – 10pm)
Noc (22-06)	Night (10pm – 6am)



Table 6 – **Target condition, year 2042 with SMR ETE** – traffic loading for the year 2042, operation of ETE1,2 with operation of SMR ETE + operation of New NPP ETE

Číslo kom.	Sčítací úsek	Kategorie vozidel pro hlukové a emisní výpočty					
		Den + Večer (06-22)			Noc (22-06)		
		OAL	NAL	NS	OAL	NAL	NS
105	2-1216	10912	782	309	926	57	30
105	2-1223	12802	828	238	1036	60	23
105	2-0631	11595	896	261	975	65	25
105	2-0636	9309	747	284	827	54	27
105	2-0640	7695	667	289	731	48	28
105	2-0656	5657	535	229	587	38	22
105	2-0657	6097	496	228	608	36	22
105	2-0650	6242	525	231	705	39	22
105	2-0660	7422	711	393	812	51	38
122	2-2050	1650	196	86	125	14	9
138	2-4200	579	72	49	66	5	4
138	2-4200	579	72	49	66	5	4
138	2-4687	1445	251	224	149	18	21
138	2-4680	868	135	145	95	9	13
138	2-4680	1563	277	160	559	18	14
147	2-2381	1608	200	163	167	14	16
1411	2-6220	276	104	33	27	8	3

OAL – passenger cars, NAL – trucks, NS – truck combinations

Číslo kom.	Road No..
Sčítací úsek	Traffic count section
Kategorie vozidel pro hlukové a emisní výpočty	Vehicle categories for noise and emission calculations
Den + Večer (06-22)	Day + Evening (6am – 10pm)
Noc (22-06)	Night (10pm – 6am)

6. Calculation Results:

The resulting values, determined using the SoundPLAN calculation software, are presented both numerically, see Table 7 below – calculated sound pressure levels at the individual control calculation points in the surrounding municipalities along the roads – and by means of graphic noise maps. The graphic calculation results are provided in Annexes 1 to 100, showing noise maps at two calculation heights, 3 m and 6 m above ground level. These noise maps have been prepared for all modelled situations in the four monitored municipalities of Kočín, Temelín, Týn nad Vltavou, and Zvěrkovice.

Table 7 – Calculated sound pressure levels at the individual control calculation points in the surrounding municipalities on the monitored road network for the individual modelled variants

Název KB	Podlaží	Stávající stav, rok 2025		Rok 2034, provoz ETE 1,2, bez SMR ETE		Rok 2034, provoz ETE 1,2, + SMR ETE		Rok 2042, provoz ETE 1,2 + ETE 3,4 bez SMR ETE		Rok 2042, provoz ETE 1,2 + ETE 3,4 + SMR ETE	
		LAeq,16h	LAeq,8h	LAeq,16h	LAeq,8h	LAeq,16h	LAeq,8h	LAeq,16h	LAeq,8h	LAeq,16h	LAeq,8h
		[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
KOC 1	1	53,2	45,6	53,4	45,8	53,5	45,8	53,6	46,0	53,7	46,1
	2	53,9	46,3	54,1	46,5	54,2	46,5	54,3	46,7	54,4	46,8
TEM 1	1	62,0	54,0	62,0	54,0	62,0	54,0	62,0	54,0	62,0	54,0
	2	62,3	54,4	62,3	54,4	62,3	54,4	62,3	54,4	62,3	54,4
TEM 2	1	59,1	51,2	59,1	51,3	59,2	51,4	59,2	51,4	59,2	51,4
	2	62,3	54,5	62,4	54,6	62,4	54,7	62,5	54,7	62,5	54,7
TEM 3	1	63,4	55,4	63,7	56,2	63,7	56,3	63,9	56,3	63,9	56,3
	2	64,0	56,0	64,3	56,9	64,4	56,9	64,6	57,0	64,6	57,0
TEM 4	1	64,2	56,2	64,5	57,0	64,5	57,1	64,8	57,1	64,8	57,2
	2	64,6	56,5	64,9	57,4	64,9	57,4	65,1	57,5	65,1	57,5
TEM 5	1	63,1	55,1	63,4	55,8	63,4	55,8	63,7	55,9	63,7	55,9
	2	64,5	56,5	64,8	57,1	64,8	57,2	65,1	57,2	65,1	57,2
TEM 6	1	55,6	47,7	56,1	47,9	56,1	47,9	56,2	48,3	56,6	48,3
	2	56,9	49,1	57,4	49,2	57,5	49,3	57,5	49,6	58,0	49,6
TEM 7	1	58,5	50,6	59,0	50,8	59,0	50,8	59,1	51,1	59,5	51,1
	2	59,8	51,9	60,3	52,1	60,4	52,1	60,4	52,5	60,9	52,5
TYN 1	1	61,5	53,5	61,8	53,8	61,9	54,0	62,1	54,2	62,2	54,6
	2	63,2	55,1	63,5	55,5	63,6	55,7	63,8	55,9	63,9	56,3
TYN 2	1	56,2	48,2	56,5	48,3	56,6	48,6	56,7	48,9	56,8	49,1
	2	57,0	49,0	57,3	49,2	57,4	49,5	57,6	49,7	57,6	49,9
	3	57,8	49,8	58,1	50,0	58,2	50,3	58,3	50,5	58,4	50,7
	4	58,5	50,5	58,8	50,7	58,9	51,0	59,1	51,2	59,2	51,4
	5	59,2	51,1	59,5	51,3	59,5	51,6	59,7	51,9	59,8	52,1
	6	59,8	51,8	60,1	52,0	60,2	52,3	60,4	52,5	60,4	52,7
TYN 3	1	58,2	50,1	58,4	50,2	58,5	50,6	58,7	50,8	58,8	50,9
	2	59,2	51,2	59,5	51,3	59,6	51,7	59,8	51,9	59,8	52,0
	3	60,3	52,3	60,6	52,3	60,7	52,7	60,8	52,9	60,9	53,0
	4	61,3	53,2	61,5	53,3	61,6	53,7	61,8	53,9	61,9	54,0
	5	61,7	53,7	62,0	53,8	62,1	54,2	62,3	54,4	62,3	54,5
	6	61,9	53,9	62,2	54,0	62,3	54,4	62,5	54,6	62,5	54,7
TYN 4	1	62,2	54,1	62,5	54,3	62,6	54,5	62,8	54,7	62,8	54,8
	2	65,2	57,0	65,4	57,3	65,5	57,4	65,7	57,6	65,8	57,7
TYN 5	1	57,7	49,8	57,9	50,7	57,9	50,7	58,1	51,0	58,2	50,9
	2	62,6	54,7	62,9	55,6	62,9	55,6	63,1	55,9	63,1	55,8
TYN 6	1	62,7	54,6	62,9	55,6	62,9	55,7	63,1	55,8	63,3	55,8
	2	63,9	55,8	64,1	56,8	64,1	56,8	64,3	57,0	64,4	57,0
ZVER 1	1	57,9	50,1	58,1	50,6	58,3	50,8	58,4	51,2	58,6	51,4
	2	58,7	51,0	59,0	51,5	59,2	51,7	59,3	52,1	59,5	52,3
ZVER 2	1	61,6	53,9	61,9	54,4	62,0	54,6	62,2	55,0	62,3	55,2
	2	63,0	55,3	63,2	55,7	63,4	55,9	63,5	56,4	63,7	56,5

Název KB	CP name
Podlaží	Floor
Stávající stav, rok 2025	Existing condition, year 2025

Rok 2034, provoz ETE1,2, bez SMR ETE	Year 2034, operation of ETE1,2, without SMR ETE
Rok 2034, provoz ETE1,2, + SMR ETE	Year 2034, operation of ETE1,2 + SMR ETE
Rok 2042, provoz ETE1,2, + ETE3,4 bez SMR ETE	Year 2042, operation of ETE1,2 + ETE3,4 without SMR ETE
Rok 2042, provoz ETE1,2, + ETE3,4 + SMR ETE	Year 2042, operation of ETE1,2 + ETE3,4 + SMR ETE

Explanations:

$L_{Aeq,16h}$ – equivalent sound pressure level during daytime over 16 hours

$L_{Aeq,8h}$ – equivalent sound pressure level during night-time over 8 hours

For noise from traffic on roads that were sited and permitted by a decision or measure pursuant to another legal regulation before 1 January, 2001, the public-health limits for protected outdoor areas of other buildings and other protected outdoor areas are:

The public-health limit for DAY is $L_{Aeq,16h} = 68 \text{ dB}$.

The public-health limit for NIGHT is $L_{Aeq,8h} = 58 \text{ dB}$.

KOC – Kočín

TEM – Temelín

TYN – Týn nad Vltavou

ZVER – Zvěrkovice

The calculation height of 3 m corresponds to Floor 1 in Table 7.

The calculation height of 6 m corresponds to Floor 2 in Table 7.

Each additional floor indicates an increase in the height level by 3 m.

7. Conclusion:

Pursuant to Government Regulation No. 272/2011 Coll., on the protection of health against the adverse effects of noise and vibration, as amended, all monitored roads are considered to be roads that were sited and permitted before 1 January, 2001. The public-health limit for noise in their vicinity (in protected outdoor areas of other buildings) is $L_{Aeq,16h} = 68 \text{ dB}$ during daytime and $L_{Aeq,8h} = 58 \text{ dB}$ during night-time.

It is clear from the calculated results at the individual control points that, in all affected municipalities, at all calculation points and for all assessed operating conditions on the surrounding roads, the public-health limits pursuant to Government Regulation No. 272/2011 Coll., on the protection of health against the adverse effects of noise and vibration, as amended, are met.

A comparison of road traffic volumes on the monitored road network, see Chapter 5.3.3, shows that, when the individual possible operating scenarios are considered, there is a slight increase in the number of passenger cars and trucks on most roads. This slight increase is also reflected in the calculated sound pressure levels presented in Table 7 in Chapter 6. Nevertheless, despite this slight increase, which is up to 1.3 dB (existing condition 2025 versus target condition 2042) and even lower between the individual scenarios, the relevant public-health limits continue to be met and the limit values are not exceeded at any location. No acoustic measures need to be proposed.

8. External annexes:

List of attached noise maps for road traffic operation, current traffic loading for the year 2025:

Kočín:

- Annex No. 1 – noise map at a height of 3 m above ground level, year 2025 – daytime
- Annex No. 2 – noise map at a height of 3 m above ground level, year 2025 – night-time
- Annex No. 3 – noise map at a height of 6 m above ground level, year 2025 – daytime
- Annex No. 4 – noise map at a height of 6 m above ground level, year 2025 – night-time

Temelín:

- Annex No. 5 – noise map at a height of 3 m above ground level, year 2025 – daytime
- Annex No. 6 – noise map at a height of 3 m above ground level, year 2025 – night-time
- Annex No. 7 – noise map at a height of 6 m above ground level, year 2025 – daytime
- Annex No. 8 – noise map at a height of 6 m above ground level, year 2025 – night-time

Týn nad Vltavou 1:

- Annex No. 9 – noise map at a height of 3 m above ground level, year 2025 – daytime
- Annex No. 10 – noise map at a height of 3 m above ground level, year 2025 – night-time
- Annex No. 11 – noise map at a height of 6 m above ground level, year 2025 – daytime
- Annex No. 12 – noise map at a height of 6 m above ground level, year 2025 – night-time

Týn nad Vltavou 2:

- Annex No. 13 – noise map at a height of 3 m above ground level, year 2025 – daytime
- Annex No. 14 – noise map at a height of 3 m above ground level, year 2025 – night-time
- Annex No. 15 – noise map at a height of 6 m above ground level, year 2025 – daytime
- Annex No. 16 – noise map at a height of 6 m above ground level, year 2025 – night-time

Zvěrkovice:

- Annex No. 17 – noise map at a height of 3 m above ground level, year 2025 – daytime
- Annex No. 18 – noise map at a height of 3 m above ground level, year 2025 – night-time
- Annex No. 19 – noise map at a height of 6 m above ground level, year 2025 – daytime
- Annex No. 20 – noise map at a height of 6 m above ground level, year 2025 – night-time



List of attached noise maps for road traffic operation, traffic loading for the year 2034, operation of ETE1,2 without operation of SMR ETE:

Kočín:

- Annex No. 21 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 22 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 23 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 24 – noise map at a height of 6 m above ground level, year 2034 – night-time

Temelín:

- Annex No. 25 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 26 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 27 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 28 – noise map at a height of 6 m above ground level, year 2034 – night-time

Týn nad Vltavou 1:

- Annex No. 29 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 30 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 31 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 32 – noise map at a height of 6 m above ground level, year 2034 – night-time

Týn nad Vltavou 2:

- Annex No. 33 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 34 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 35 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 36 – noise map at a height of 6 m above ground level, year 2034 – night-time

Zvěrkovice:

- Annex No. 37 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 38 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 39 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 40 – noise map at a height of 6 m above ground level, year 2034 – night-time

List of attached noise maps for road traffic operation, traffic loading for the year 2034, operation of ETE1,2 with operation of SMR ETE:

Kočín:

- Annex No. 41 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 42 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 43 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 44 – noise map at a height of 6 m above ground level, year 2034 – night-time

Temelín:

- Annex No. 45 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 46 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 47 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 48 – noise map at a height of 6 m above ground level, year 2034 – night-time

Týn nad Vltavou 1:

- Annex No. 49 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 50 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 51 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 52 – noise map at a height of 6 m above ground level, year 2034 – night-time

Týn nad Vltavou 2:

- Annex No. 53 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 54 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 55 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 56 – noise map at a height of 6 m above ground level, year 2034 – night-time

Zvěrkovice:

- Annex No. 57 – noise map at a height of 3 m above ground level, year 2034 – daytime
- Annex No. 58 – noise map at a height of 3 m above ground level, year 2034 – night-time
- Annex No. 59 – noise map at a height of 6 m above ground level, year 2034 – daytime
- Annex No. 60 – noise map at a height of 6 m above ground level, year 2034 – night-time

List of attached noise maps for road traffic operation, traffic loading for the year 2042, operation of ETE1,2 without operation of SMR ETE + operation of New NPP ETE:

Kočín:

- Annex No. 61 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 62 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 63 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 64 – noise map at a height of 6 m above ground level, year 2042 – night-time

Temelín:

- Annex No. 65 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 66 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 67 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 68 – noise map at a height of 6 m above ground level, year 2042 – night-time

Týn nad Vltavou 1:

- Annex No. 69 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 70 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 71 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 72 – noise map at a height of 6 m above ground level, year 2042 – night-time

Týn nad Vltavou 2:

- Annex No. 73 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 74 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 75 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 76 – noise map at a height of 6 m above ground level, year 2042 – night-time

Zvěrkovice:

- Annex No. 77 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 78 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 79 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 80 – noise map at a height of 6 m above ground level, year 2042 – night-time

List of attached noise maps for road traffic operation, traffic loading for the year 2042, operation of ETE1,2 with operation of SMR ETE + operation of New NPP ETE:

Kočín:

- Annex No. 81 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 82 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 83 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 84 – noise map at a height of 6 m above ground level, year 2042 – night-time

Temelín:

- Annex No. 85 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 86 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 87 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 88 – noise map at a height of 6 m above ground level, year 2042 – night-time

Týn nad Vltavou 1:

- Annex No. 89 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 90 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 91 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 92 – noise map at a height of 6 m above ground level, year 2042 – night-time

Týn nad Vltavou 2:

- Annex No. 93 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 94 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 95 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 96 – noise map at a height of 6 m above ground level, year 2042 – night-time

Zvěrkovice:

- Annex No. 97 – noise map at a height of 3 m above ground level, year 2042 – daytime
- Annex No. 98 – noise map at a height of 3 m above ground level, year 2042 – night-time
- Annex No. 99 – noise map at a height of 6 m above ground level, year 2042 – daytime
- Annex No. 100 – noise map at a height of 6 m above ground level, year 2042 – night-time



9. Abbreviations:

ČR	Czech Republic
ČSN	Czech Technical Standard
DIN	Deutsche Industrie-Norm
RLS	Richtlinien für den lärmschutz an strassen (Guidelines for Noise Protection on Roads)
DP	partial performance
EIA	Environmental Impact Assessment
ETE	Temelín Power Plant
New NPP ETE	New Nuclear Power Plant at the Temelín site (Units 3,4)
SMR ETE	New SMR Power Plant at the Temelín site
SMR	small modular reactor
ISO	International Organization for Standardization
KB	control point