Zał. 5 Analiza akustyczna

Spis treści:

1. Pora nocy – z zastosowaniem rozwiązań minimalizujących

Program LEQ Professional v. 6-2019 dla Windows

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Dane do obliczeń :

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Współczynnik gruntu (całego obszaru analizy)-global G = 0.000

Temperatura otoczenia 10[°C]

Źródła punktowe

Nr	X[m]	Y[m]	z[m]	Pma	Symbol
1	451.7	224.0	9.0	89.1	Biuro
2	499.8	258.6	6.0	76.0	Portier
3	373.2	105.5	16.0	83.7	B+S_1
4	279.1	182.4	16.0	83.7	B+S_2
5	267.4	190.6	16.0	83.7	B+S_3
6	155.2	281.7	16.0	83.7	B+S_4
7	295.0	330.3	16.0	83.7	B+S_5
8	347.8	289.4	16.0	83.7	B+S_6
9	462.2	203.7	3.0	60.0	12.1
10	458.8	199.4	3.0	60.0	12.1
11	429.1	160.8	3.0	64.0	7
12	425.5	155.9	3.0	76.0	7
13	421.2	150.7	3.0	77.0	7
14	329.0	225.4	16.0	87.0	15
15	337.3	218.2	16.0	87.0	15
16	346.3	211.7	16.0	87.0	15
17	355.7	203.8	16.0	87.0	15
18	364.0	196.9	16.0	87.0	15
19	373.0	190.8	16.0	87.0	15

20 381.6 183.2 16.0 87.0 15

21 390.2 176.4 16.0 87.0 15

22 398.9 169.6 16.0 87.0 15

23 407.2 162.7 16.0 87.0 15

24 379.8 208.1 16.0 65.0 12.2

25 383.0 212.8 16.0 65.0 12.2

26 349.2 254.9 16.0 80.0 4

27 397.4 216.7 16.0 80.0 4

28 346.3 249.1 16.0 63.0 2

29 393.8 211.7 16.0 63.0 2

30 351.7 245.9 16.0 86.0 2.1

31 398.9 207.4 16.0 86.0 2.1

32 350.6 193.0 16.0 77.0 13

33 395.3 157.3 16.0 77.0 13

34 214.9 313.6 16.0 85.0 14

35 199.1 294.8 16.0 85.0 14

36 240.5 292.3 16.0 85.0 14

37 225.4 274.3 16.0 85.0 14

38 267.8 271.4 16.0 85.0 14

39 252.7 252.4 16.0 85.0 14

40 294.5 250.6 16.0 85.0 14

41 279.4 231.1 16.0 85.0 14

42 177.1 321.8 3.0 75.0 7

43 173.5 317.5 3.0 75.0 7

44 168.8 311.4 3.0 75.0 7

45 172.7 311.7 16.0 65.0 30

46 175.4 309.4 16.0 65.0 30

47 172.4 308.6 16.0 65.0 30

48 175.0 314.3 16.0 70.0 28

49 178.3 314.1 16.0 70.0 28

50 182.3 317.7 16.0 76.0 29

51 181.1 320.3 16.0 75.0 27

52 177.9 318.3 16.0 75.0 27.1

53 529.8 244.2 0.5 70.8 R-1

54 523.0 249.5 0.5 70.8 R-1

55 511.5 252.6 0.5 73.8 R-2

56 494.4 253.4 0.5 73.8 R-2

57 477.4 254.2 0.5 73.8 R-2

58 460.4 255.0 0.5 73.8 R-2

59 444.5 260.5 0.5 72.8 R-3

60 431.2 270.9 0.5 72.8 R-3

61 417.8 281.3 0.5 72.8 R-3

62 404.5 291.6 0.5 72.8 R-3

63 391.2 302.0 0.5 72.8 R-3

64 377.8 312.4 0.5 72.8 R-3

65 364.5 322.8 0.5 72.8 R-3

66 351.1 333.1 0.5 72.8 R-3

67 337.8 343.5 0.5 72.8 R-3

68 324.4 353.9 0.5 72.8 R-3

69 309.2 357.9 0.5 73.5 R-4

70 293.3 356.1 0.5 73.5 R-4

71 277.4 354.4 0.5 73.5 R-4

72 261.5 352.7 0.5 73.5 R-4

73 245.6 350.9 0.5 73.5 R-4

74 229.6 349.2 0.5 73.5 R-4

75 213.7 347.5 0.5 73.5 R-4

76 197.8 345.8 0.5 73.5 R-4

77 181.9 344.0 0.5 73.5 R-4

78 166.0 342.3 0.5 73.5 R-4

79 154.7 336.9 0.5 72.2 R-5

80 147.2 327.8 0.5 72.2 R-5

81 139.7 318.7 0.5 72.2 R-5

82 132.2 309.6 0.5 72.2 R-5

83 124.7 300.5 0.5 72.2 R-5

84 121.6 290.0 0.5 71.8 R-6

85 122.4 279.4 0.5 71.8 R-6

86 123.1 268.8 0.5 71.8 R-6

87 123.8 258.1 0.5 71.8 R-6

88 128.2 249.3 0.5 71.6 R-7

89 136.2 242.9 0.5 71.6 R-7

90 144.3 236.5 0.5 71.6 R-7

91 152.3 230.1 0.5 71.6 R-7

92 160.4 223.7 0.5 71.6 R-7

93 168.4 217.3 0.5 71.6 R-7

94 176.5 210.9 0.5 71.6 R-7

95 184.5 204.5 0.5 71.6 R-7

96 192.6 198.1 0.5 71.6 R-7

97 200.6 191.7 0.5 71.6 R-7

98 208.7 185.3 0.5 71.6 R-7

99 216.7 178.9 0.5 71.6 R-7

100 224.8 172.5 0.5 71.6 R-7

101 232.8 166.1 0.5 71.6 R-7

102 240.8 159.7 0.5 71.6 R-7

103 248.9 153.3 0.5 71.6 R-7

104 256.9 146.9 0.5 71.6 R-7

105 265.0 140.5 0.5 71.6 R-7

106 273.0 134.1 0.5 71.6 R-7

107 281.1 127.7 0.5 71.6 R-7

108 289.1 121.3 0.5 71.6 R-7

109 297.2 114.9 0.5 71.6 R-7

110 305.2 108.5 0.5 71.6 R-7

111 313.3 102.1 0.5 71.6 R-7

112 321.3 95.7 0.5 71.6 R-7

113 329.4 89.3 0.5 71.6 R-7

114 337.4 82.9 0.5 71.6 R-7

115 347.5 80.6 0.5 72.5 R-8

116 360.2 81.8 0.5 72.5 R-8

117 372.9 82.9 0.5 72.5 R-8

118 382.7 87.9 0.5 71.6 R-9

119 389.1 96.1 0.5 71.6 R-9

120 395.5 104.3 0.5 71.6 R-9

121 401.8 112.5 0.5 71.6 R-9

122 408.2 120.7 0.5 71.6 R-9

123 414.6 128.9 0.5 71.6 R-9

124 421.0 137.1 0.5 71.6 R-9

125 427.4 145.3 0.5 71.6 R-9

126 433.8 153.5 0.5 71.6 R-9

127 440.1 161.7 0.5 71.6 R-9

128 446.5 169.9 0.5 71.6 R-9

129 452.9 178.1 0.5 71.6 R-9

130 459.3 186.3 0.5 71.6 R-9

131 465.7 194.5 0.5 71.6 R-9

132 472.0 202.7 0.5 71.6 R-9

133 478.4 210.9 0.5 71.6 R-9

134 480.8 220.5 0.5 70.5 R-10

135 478.6 230.2 0.5 70.5 R-10

136 476.3 239.9 0.5 70.5 R-10

137 474.1 249.6 0.5 70.5 R-10

138 433.3 268.8 0.5 73.4 S+H1

139 342.1 339.5 0.5 73.4 S+H2

140 236.8 349.4 0.5 73.4 S+H3

141 137.3 315.5 0.5 73.4 S+H4

142 175.0 211.8 0.5 73.4 S+H5

143 301.4 112.6 0.5 73.4 S+H6

144 337.3 241.6 16.0 81.0 Mal1

145 358.2 268.6 16.0 81.0 Mal2

146 424.5 154.7 3.0 76.0 7

147 456.2 196.0 3.0 60.0 12.1

148 413.8 148.0 16.0 65.0 12.3

149 411.6 145.2 16.0 65.0 12.3

150 410.2 143.0 16.0 65.0 12.3

151 416.9 144.8 3.0 60.0 12.1

152 414.9 142.2 3.0 60.0 12.1

153 538.5 238.7 1.0 72.5 R-11

154 549.2 232.0 1.0 72.5 R-11

155 559.9 225.3 1.0 72.5 R-11

156 583.0 245.3 1.0 72.1 R-12

157 576.2 236.0 1.0 72.1 R-12

158 569.4 226.7 1.0 72.1 R-12

159 498.0 261.0 1.0 80.6 S+H8

160 414.4 124.3 1.0 73.4 S+H7

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Źródła typu hala produkcyjna :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] h0[m] h[m]

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1 357.0 290.8 311.1 233.7 418.4 146.7 463.2 205.4 0.0 15.0

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POZIOMY HAŁASU i IZOLACYJNOŚĆ PRZEGRÓD

Nr źródła A 63 125 250 500 1000 2000 4000 8000 wsp.odb.

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1 sc.1 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.2 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.3 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.4 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

dach L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R d 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

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Ekrany akustyczne :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	h0[m]	h[m]	symbol
1	453.5	229.9	445.5	220.6	463.3	205.3	471.3	214.6	0.0	8.0	E1
2	494.4	260.2	494.4	257.6	505.0	256.9	505.0	259.3	0.0	5.0	E2
3	311.1	233.4	265.4	176.8	373.0	90.0	418.6	146.6	0.0	15.0	E3
4	356.5	290.6	294.6	340.2	203.3	226.2	265.2	176.7	0.0	15.0	E4
5	287.2	331.1	203.0	226.3	193.3	234.2	277.4	339.0	0.0	15.0	E5
6	269.8	329.5	193.2	234.2	184.4	241.2	261.0	336.6	0.0	15.0	E6
7	253.5	327.2	184.4	241.4	175.8	248.3	244.9	334.0	0.0	15.0	E7
8	237.1	324.1	175.7	248.3	166.6	255.6	228.0	331.5	0.0	15.0	E8
9	220.8	321.8	166.7	255.4	157.7	262.8	211.8	329.2	0.0	15.0	E9
10	203.8	319.5	157.6	262.8	148.4	269.9	194.8	326.8	0.0	15.0	E10
11	186.6	316.6	148.4	269.9	140.0	276.4	178.4	323.3	0.0	15.0	E11
12	134.5	179.5	146.8	174.7	149.3	181.2	137.0	185.9	0.0	2.0	Wał1
13	149.2	181.2	146.7	174.7	159.5	170.2	165.3	184.3	0.0	3.0	Wał2
14	165.3	184.3	159.4	170.2	202.8	153.5	208.2	167.7	0.0	4.0	Wał3
15	208.3	167.7	202.8	153.4	207.4	151.8	212.1	164.1	0.0	3.8	Wał4
16	212.1	164.1	207.3	151.8	215.7	148.8	220.1	160.5	0.0	3.5	Wał5
17	220.1	160.5	215.7	148.7	233.2	142.2	235.6	148.0	0.0	3.0	Wał6

18 235.6 147.9 233.2 142.2 245.0 136.6 244.5 142.0 0.0 2.5 Wał7

19 239.6 139.1 236.2 135.5 241.0 131.2 244.9 136.6 0.0 2.5 Wał8

20 236.3 135.5 232.0 130.2 241.8 121.8 241.1 131.2 0.0 3.0 Wał9

21 231.9 130.2 224.6 122.6 235.2 114.8 241.7 121.8 0.0 3.5 Wał10

22 224.6 122.6 222.6 119.5 234.9 110.2 235.2 114.8 0.0 3.8 Wał11

23 222.6 119.4 212.2 101.8 227.0 95.8 234.8 110.2 0.0 4.0 Wał12

24 212.2 101.6 206.5 71.8 228.4 72.8 227.0 95.8 0.0 4.0 Wał13

25 227.5 89.8 269.6 84.3 269.5 69.4 228.5 72.9 0.0 4.0 Wał14

26 269.6 84.3 269.5 69.3 282.1 67.9 282.4 75.5 0.0 3.0 Wał15

27 282.5 75.5 282.1 67.9 292.7 67.4 293.1 74.6 0.0 2.0 Wał16

28 293.3 74.6 298.2 79.5 297.7 67.1 292.7 67.4 0.0 2.8 Wał17

29 328.2 64.5 297.7 67.2 298.2 79.3 329.2 76.2 0.0 3.5 Wał18

30 171.7 199.3 164.6 190.2 171.1 185.2 178.1 194.3 0.0 4.5 E12

31 113.3 323.7 114.2 323.8 120.6 250.0 119.9 249.8 0.0 4.0 Ekr1

32 120.6 250.1 144.2 231.2 143.8 230.3 119.8 249.8 0.0 4.0 Ekr2

33 144.2 231.1 144.8 223.0 144.1 223.0 143.5 230.8 0.0 4.0 Ekr3

34 144.7 223.0 130.8 205.1 130.2 205.5 144.2 223.4 0.0 4.0 Ekr4

35 118.7 188.1 118.3 187.1 134.7 180.4 135.1 181.2 0.0 4.0 Ekr5

36 227.7 159.3 248.2 143.3 247.8 142.6 227.4 158.7 0.0 4.0 Ekr6

37 248.2 143.3 249.0 138.1 248.5 138.0 247.6 143.1 0.0 4.0 Ekr7

38 249.0 138.2 329.0 75.0 328.6 74.4 248.6 137.8 0.0 4.0 Ekr8

39 329.0 75.0 338.2 71.7 338.1 70.8 328.7 74.4 0.0 4.0 Ekr9

40 338.2 71.6 346.5 70.1 346.5 69.2 338.1 70.8 0.0 4.0 Ekr10

41 346.5 70.0 353.7 70.0 353.8 69.4 346.4 69.3 0.0 4.0 Ekr11

42 353.8 70.0 360.6 70.6 360.6 69.8 353.6 69.4 0.0 4.0 Ekr12

43 360.6 70.6 368.0 72.8 368.2 72.0 360.6 69.9 0.0 4.0 Ekr13

44 368.0 72.7 374.7 75.9 375.0 75.2 368.2 72.0 0.0 4.0 Ekr14

45 374.8 76.0 382.7 81.4 383.1 80.8 375.0 75.3 0.0 4.0 Ekr15

46 382.7 81.3 392.4 92.3 393.1 91.8 383.1 80.8 0.0 4.0 Ekr16

47 514.0 245.0 515.1 244.1 478.0 198.6 477.2 199.3 0.0 4.0 Ekr17

48 542.5 229.4 556.9 218.8 556.3 217.8 541.8 228.5 0.0 4.0 Ekr18

49	556.8	218.6	563.3	217.6	563.2	216.4	556.3	217.7	0.0	4.0	Ekr19
50	563.2	217.4	570.3	219.3	570.6	218.6	563.2	216.4	0.0	4.0	Ekr20
51	570.2	219.4	574.1	221.3	574.6	220.7	570.6	218.6	0.0	4.0	Ekr21
52	574.2	221.4	587.4	239.0	588.0	238.6	574.6	220.6	0.0	4.0	Ekr22

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WSPÓŁCZYNNIKI ODBICIA DLA ŚCIAN

Nr	ściana 1	ściana 2	ściana 3	ściana 4	dach
1	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000
3	1.0000	1.0000	1.0000	1.0000	1.0000
4	1.0000	1.0000	1.0000	1.0000	1.0000
5	1.0000	1.0000	1.0000	1.0000	1.0000
6	1.0000	1.0000	1.0000	1.0000	1.0000
7	1.0000	1.0000	1.0000	1.0000	1.0000
8	1.0000	1.0000	1.0000	1.0000	1.0000
9	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	1.0000
11	1.0000	1.0000	1.0000	1.0000	1.0000
12	1.0000	1.0000	1.0000	1.0000	1.0000
13	1.0000	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	1.0000	1.0000	1.0000
15	1.0000	1.0000	1.0000	1.0000	1.0000
16	1.0000	1.0000	1.0000	1.0000	1.0000
17	1.0000	1.0000	1.0000	1.0000	1.0000
18	1.0000	1.0000	1.0000	1.0000	1.0000
19	1.0000	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000	1.0000
21	1.0000	1.0000	1.0000	1.0000	1.0000
22	1.0000	1.0000	1.0000	1.0000	1.0000

23	1.0000	1.0000	1.0000	1.0000	1.0000
24	1.0000	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000	1.0000
26	1.0000	1.0000	1.0000	1.0000	1.0000
27	1.0000	1.0000	1.0000	1.0000	1.0000
28	1.0000	1.0000	1.0000	1.0000	1.0000
29	1.0000	1.0000	1.0000	1.0000	1.0000
30	1.0000	1.0000	1.0000	1.0000	1.0000
31	1.0000	1.0000	1.0000	1.0000	1.0000
32	1.0000	1.0000	1.0000	1.0000	1.0000
33	1.0000	1.0000	1.0000	1.0000	1.0000
34	1.0000	1.0000	1.0000	1.0000	1.0000
35	1.0000	1.0000	1.0000	1.0000	1.0000
36	1.0000	1.0000	1.0000	1.0000	1.0000
37	1.0000	1.0000	1.0000	1.0000	1.0000
38	1.0000	1.0000	1.0000	1.0000	1.0000
39	1.0000	1.0000	1.0000	1.0000	1.0000
40	1.0000	1.0000	1.0000	1.0000	1.0000
41	1.0000	1.0000	1.0000	1.0000	1.0000
42	1.0000	1.0000	1.0000	1.0000	1.0000
43	1.0000	1.0000	1.0000	1.0000	1.0000
44	1.0000	1.0000	1.0000	1.0000	1.0000
45	1.0000	1.0000	1.0000	1.0000	1.0000
46	1.0000	1.0000	1.0000	1.0000	1.0000
47	1.0000	1.0000	1.0000	1.0000	1.0000
48	1.0000	1.0000	1.0000	1.0000	1.0000
49	1.0000	1.0000	1.0000	1.0000	1.0000
50	1.0000	1.0000	1.0000	1.0000	1.0000
51	1.0000	1.0000	1.0000	1.0000	1.0000
52	1.0000	1.0000	1.0000	1.0000	1.0000

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Punkty obserwacji

Nr	Symbol	X[m]	Y[m]	z[m]
1	P1	95.5	268.1	1.5
2	P2	95.5	268.1	4.5
3	P3	106.1	268.7	4.0
4	P4	107.0	236.4	1.5
5	P5	104.3	238.0	4.5
6	P6	97.1	220.7	1.5
7	P7	97.1	220.7	4.5
8	P8	113.1	225.8	4.0
9	P9	98.4	165.7	1.5
10	P10	98.4	165.7	4.5
11	P11	109.3	164.7	4.0
12	P12	132.0	173.4	1.5
13	P13	132.0	173.4	4.5
14	P14	133.9	177.8	4.0
15	P15	98.4	133.0	1.5
16	P16	98.4	133.0	4.5
17	P17	106.7	140.4	4.0
18	P18	124.6	114.5	1.5
19	P19	124.6	114.5	4.5
20	P20	135.8	150.0	4.0
21	P21	155.4	70.3	1.5
22	P22	155.4	70.3	4.5
23	P23	159.5	78.3	4.0
24	P24	215.5	71.0	1.5
25	P25	215.5	71.0	4.5
26	P26	215.5	71.0	4.0
27	P27	203.0	31.3	1.5

28 P28 203.0 31.3 4.5

29 P29 204.0 52.4 4.0

30 P30 616.0 196.7 1.5

31 P31 616.0 196.7 4.5

32 P32 606.3 195.4 4.0

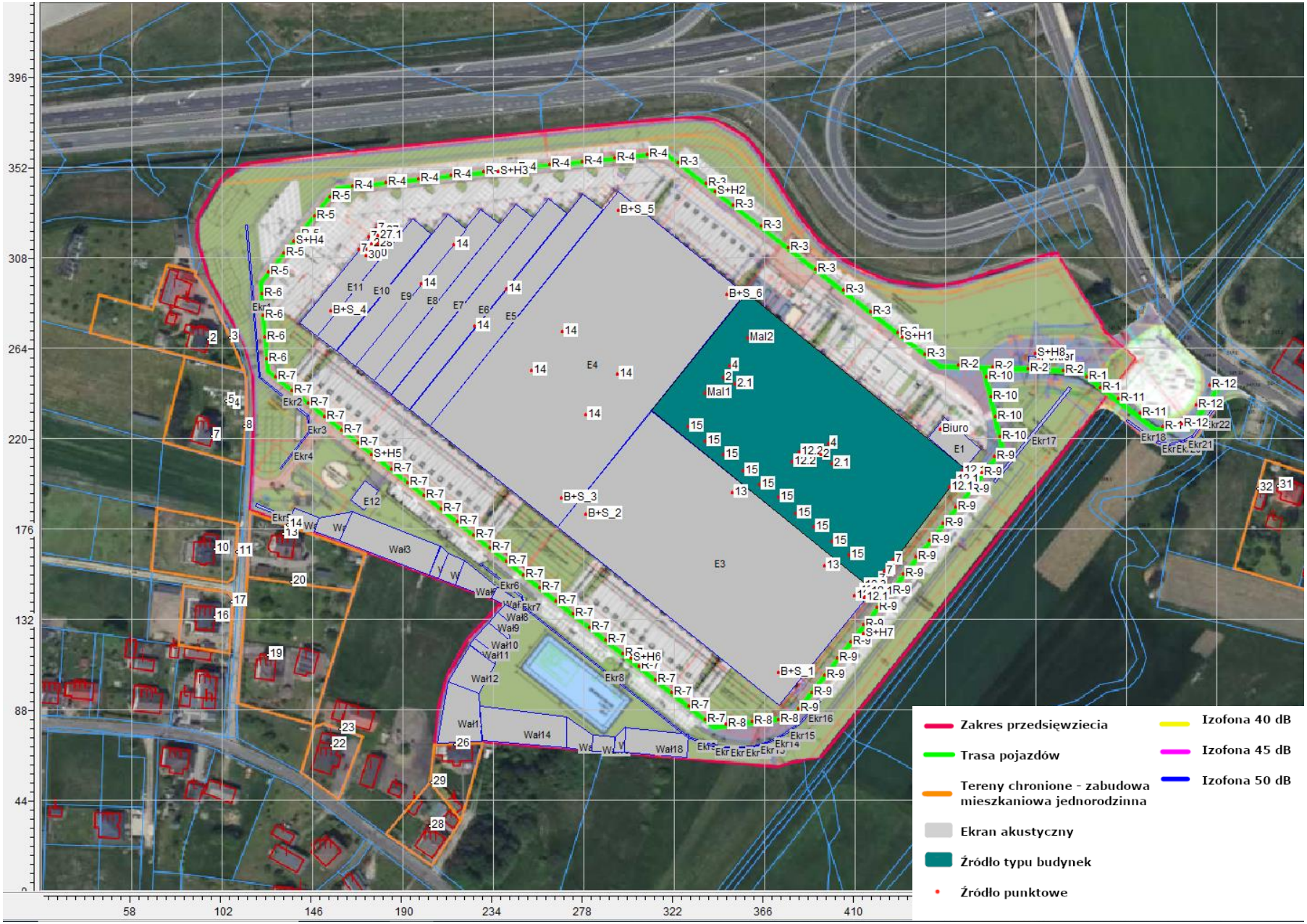
Obszary o innym niż globalny współczynniku gruntu G :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

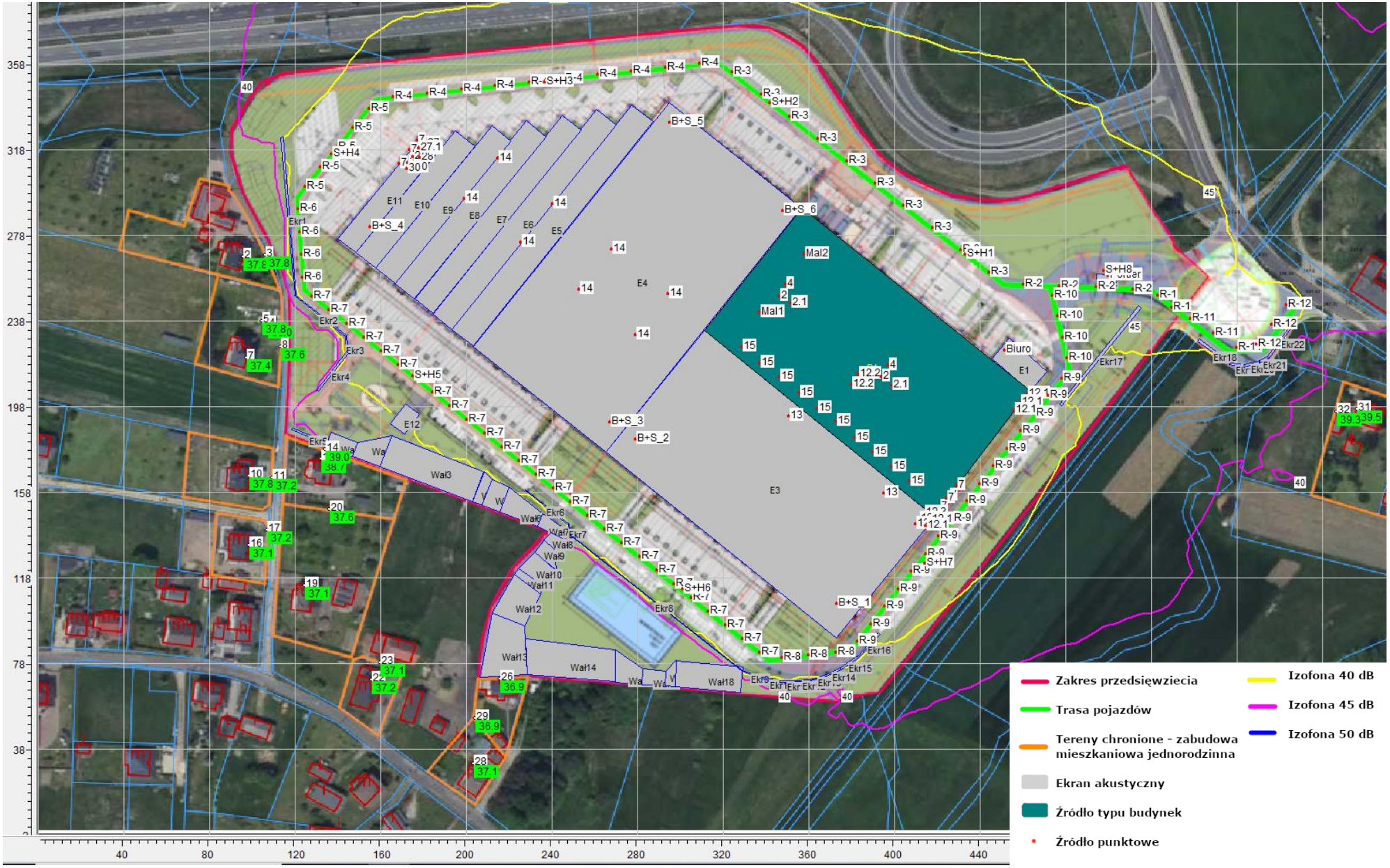
Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	wsp.G
1	250.1	190.1	234.4	171.5	268.0	144.0	282.7	162.2	1.000
2	151.8	221.4	242.1	147.5	238.2	140.2	121.8	183.4	1.000
3	147.6	225.8	128.8	200.6	118.4	202.8	119.4	249.6	1.000
4	129.2	283.0	148.0	268.0	133.6	250.0	128.0	253.6	1.000
5	121.0	248.2	117.6	296.6	90.6	315.4	97.0	296.0	1.000
6	90.6	315.4	117.8	296.8	161.6	353.6	111.2	350.8	1.000
7	241.6	144.6	206.8	72.2	330.2	64.6	339.8	77.8	1.000
8	238.1	138.2	221.4	122.2	210.9	102.6	206.1	71.6	1.000
9	555.7	270.6	393.4	63.4	544.3	13.2	617.8	233.2	1.000
10	510.4	245.5	367.0	60.7	393.4	62.0	528.9	237.2	1.000

Program LEQ Professional w.6(2019)
Wydruk wyników obliczeń
Projekt :

Nr pkt.	X [m]	Y [m]	z [m]	Leq [dB(A)]
1	95.5	268.1	1.5	36.2
2	95.5	268.1	4.5	37.8
3	106.1	268.7	4.0	37.8
4	107.0	236.4	1.5	36.0
5	104.3	238.0	4.5	37.8
6	97.1	220.7	1.5	35.6
7	97.1	220.7	4.5	37.4
8	113.1	225.8	4.0	37.6
9	98.4	165.7	1.5	36.9
10	98.4	165.7	4.5	37.8
11	109.3	164.7	4.0	37.2
12	132.0	173.4	1.5	35.9
13	132.0	173.4	4.5	38.7
14	133.9	177.8	4.0	39.0
15	98.4	133.0	1.5	36.1
16	98.4	133.0	4.5	37.1
17	106.7	140.4	4.0	37.2
18	124.6	114.5	1.5	35.8
19	124.6	114.5	4.5	37.1
20	135.8	150.0	4.0	37.6
21	155.4	70.3	1.5	35.8
22	155.4	70.3	4.5	37.2
23	159.5	78.3	4.0	37.1
24	215.5	71.0	1.5	26.0
25	215.5	71.0	4.5	37.7
26	215.5	71.0	4.0	36.9
27	203.0	31.3	1.5	35.6
28	203.0	31.3	4.5	37.1
29	204.0	52.4	4.0	36.9
30	616.0	196.7	1.5	37.0
31	616.0	196.7	4.5	39.5
32	606.3	195.4	4.0	39.3



Rysunek 1 Plan sytuacyjny – pora nocy, z zastosowaniem rozwiązań minimalizujących



Rysunek 2 Izofony w porze nocy – z zastosowaniem rozwiązań minimalizujących

2. Pora dnia – z zastosowaniem rozwiązań minimalizujących

Program LEQ Professional v. 6-2019 dla Windows

****

Dane do obliczeń :

****

Współczynnik gruntu (całego obszaru analizy)-global G = 0.000

Temperatura otoczenia 10[°C]

Źródła punktowe

Nr	X[m]	Y[m]	z[m]	Pma	Symbol
1	451.7	224.0	9.0	89.1	Biuro
2	499.8	258.6	6.0	76.0	Portier
3	373.2	105.5	16.0	83.7	B+S_1
4	279.1	182.4	16.0	83.7	B+S_2
5	267.4	190.6	16.0	83.7	B+S_3
6	155.2	281.7	16.0	83.7	B+S_4
7	295.0	330.3	16.0	83.7	B+S_5
8	347.8	289.4	16.0	83.7	B+S_6
9	462.2	203.7	3.0	60.0	12.1
10	458.8	199.4	3.0	60.0	12.1
11	429.1	160.8	3.0	64.0	7
12	425.5	155.9	3.0	76.0	7
13	421.2	150.7	3.0	77.0	7
14	329.0	225.4	16.0	87.0	15
15	337.3	218.2	16.0	87.0	15
16	346.3	211.7	16.0	87.0	15
17	355.7	203.8	16.0	87.0	15
18	364.0	196.9	16.0	87.0	15
19	373.0	190.8	16.0	87.0	15

20 381.6 183.2 16.0 87.0 15

21 390.2 176.4 16.0 87.0 15

22 398.9 169.6 16.0 87.0 15

23 407.2 162.7 16.0 87.0 15

24 379.8 208.1 16.0 65.0 12.2

25 383.0 212.8 16.0 65.0 12.2

26 349.2 254.9 16.0 80.0 4

27 397.4 216.7 16.0 80.0 4

28 346.3 249.1 16.0 63.0 2

29 393.8 211.7 16.0 63.0 2

30 351.7 245.9 16.0 86.0 2.1

31 398.9 207.4 16.0 86.0 2.1

32 350.6 193.0 16.0 77.0 13

33 395.3 157.3 16.0 77.0 13

34 214.9 313.6 16.0 85.0 14

35 199.1 294.8 16.0 85.0 14

36 240.5 292.3 16.0 85.0 14

37 225.4 274.3 16.0 85.0 14

38 267.8 271.4 16.0 85.0 14

39 252.7 252.4 16.0 85.0 14

40 294.5 250.6 16.0 85.0 14

41 279.4 231.1 16.0 85.0 14

42 177.1 321.8 3.0 75.0 7

43 173.5 317.5 3.0 75.0 7

44 168.8 311.4 3.0 75.0 7

45 172.7 311.7 16.0 65.0 30

46 175.4 309.4 16.0 65.0 30

47 172.4 308.6 16.0 65.0 30

48 175.0 314.3 16.0 70.0 28

49 178.3 314.1 16.0 70.0 28

50 182.3 317.7 16.0 76.0 29

51 181.1 320.3 16.0 75.0 27

52 177.9 318.3 16.0 75.0 27.1

53 529.8 244.2 0.5 69.9 R-1

54 523.0 249.5 0.5 69.9 R-1

55 511.5 252.6 0.5 72.9 R-2

56 494.4 253.4 0.5 72.9 R-2

57 477.4 254.2 0.5 72.9 R-2

58 460.4 255.0 0.5 72.9 R-2

59 444.5 260.5 0.5 72.4 R-3

60 431.2 270.9 0.5 72.4 R-3

61 417.8 281.3 0.5 72.4 R-3

62 404.5 291.6 0.5 72.4 R-3

63 391.2 302.0 0.5 72.4 R-3

64 377.8 312.4 0.5 72.4 R-3

65 364.5 322.8 0.5 72.4 R-3

66 351.1 333.1 0.5 72.4 R-3

67 337.8 343.5 0.5 72.4 R-3

68 324.4 353.9 0.5 72.4 R-3

69 309.2 357.9 0.5 72.6 R-4

70 293.3 356.1 0.5 72.6 R-4

71 277.4 354.4 0.5 72.6 R-4

72 261.5 352.7 0.5 72.6 R-4

73 245.6 350.9 0.5 72.6 R-4

74 229.6 349.2 0.5 72.6 R-4

75 213.7 347.5 0.5 72.6 R-4

76 197.8 345.8 0.5 72.6 R-4

77 181.9 344.0 0.5 72.6 R-4

78 166.0 342.3 0.5 72.6 R-4

79 154.7 336.9 0.5 71.2 R-5

80 147.2 327.8 0.5 71.2 R-5

81 139.7 318.7 0.5 71.2 R-5

82 132.2 309.6 0.5 71.2 R-5

83 124.7 300.5 0.5 71.2 R-5

84 121.6 290.0 0.5 70.8 R-6

85 122.4 279.4 0.5 70.8 R-6

86 123.1 268.8 0.5 70.8 R-6

87 123.8 258.1 0.5 70.8 R-6

88 128.2 249.3 0.5 70.7 R-7

89 136.2 242.9 0.5 70.7 R-7

90 144.3 236.5 0.5 70.7 R-7

91 152.3 230.1 0.5 70.7 R-7

92 160.4 223.7 0.5 70.7 R-7

93 168.4 217.3 0.5 70.7 R-7

94 176.5 210.9 0.5 70.7 R-7

95 184.5 204.5 0.5 70.7 R-7

96 192.6 198.1 0.5 70.7 R-7

97 200.6 191.7 0.5 70.7 R-7

98 208.7 185.3 0.5 70.7 R-7

99 216.7 178.9 0.5 70.7 R-7

100 224.8 172.5 0.5 70.7 R-7

101 232.8 166.1 0.5 70.7 R-7

102 240.8 159.7 0.5 70.7 R-7

103 248.9 153.3 0.5 70.7 R-7

104 256.9 146.9 0.5 70.7 R-7

105 265.0 140.5 0.5 70.7 R-7

106 273.0 134.1 0.5 70.7 R-7

107 281.1 127.7 0.5 70.7 R-7

108 289.1 121.3 0.5 70.7 R-7

109 297.2 114.9 0.5 70.7 R-7

110 305.2 108.5 0.5 70.7 R-7

111 313.3 102.1 0.5 70.7 R-7

112 321.3 95.7 0.5 70.7 R-7

113 329.4 89.3 0.5 70.7 R-7

114 337.4 82.9 0.5 70.7 R-7

115 347.5 80.6 0.5 71.6 R-8

116 360.2 81.8 0.5 71.6 R-8

117 372.9 82.9 0.5 71.6 R-8

118 382.7 87.9 0.5 70.7 R-9

119 389.1 96.1 0.5 70.7 R-9

120 395.5 104.3 0.5 70.7 R-9

121 401.8 112.5 0.5 70.7 R-9

122 408.2 120.7 0.5 70.7 R-9

123 414.6 128.9 0.5 70.7 R-9

124 421.0 137.1 0.5 70.7 R-9

125 427.4 145.3 0.5 70.7 R-9

126 433.8 153.5 0.5 70.7 R-9

127 440.1 161.7 0.5 70.7 R-9

128 446.5 169.9 0.5 70.7 R-9

129 452.9 178.1 0.5 70.7 R-9

130 459.3 186.3 0.5 70.7 R-9

131 465.7 194.5 0.5 70.7 R-9

132 472.0 202.7 0.5 70.7 R-9

133 478.4 210.9 0.5 70.7 R-9

134 480.8 220.5 0.5 70.5 R-10

135 478.6 230.2 0.5 70.5 R-10

136 476.3 239.9 0.5 70.5 R-10

137 474.1 249.6 0.5 70.5 R-10

138 433.3 268.8 0.5 71.8 S+H1

139 342.1 339.5 0.5 71.0 S+H2

140 236.8 349.4 0.5 71.0 S+H3

141 137.3 315.5 0.5 71.0 S+H4

142 175.0 211.8 0.5 71.0 S+H5

143 301.4 112.6 0.5 71.0 S+H6

144 337.3 241.6 16.0 81.0 Mal1

145 358.2 268.6 16.0 81.0 Mal2

146 424.5 154.7 3.0 76.0 7

147 456.2 196.0 3.0 60.0 12.1

148 413.8 148.0 16.0 65.0 12.3

149 411.6 145.2 16.0 65.0 12.3

150 410.2 143.0 16.0 65.0 12.3

151 416.9 144.8 3.0 60.0 12.1

152 414.9 142.2 3.0 60.0 12.1

153 538.5 238.7 1.0 71.5 R-11

154 549.2 232.0 1.0 71.5 R-11

155 559.9 225.3 1.0 71.5 R-11

156 583.0 245.3 1.0 71.2 R-12

157 576.2 236.0 1.0 71.2 R-12

158 569.4 226.7 1.0 71.2 R-12

159 498.0 261.0 1.0 79.8 S+H8

160 414.4 124.3 1.0 71.0 S+H7

161 437.0 145.2 1.0 63.0 31

162 140.1 225.1 1.0 63.0 31

163 170.8 195.1 5.5 70.0 P2

164 168.6 192.5 5.5 70.0 P3

==========

Źródła typu hala produkcyjna :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] h0[m] h[m]

==========

1 357.0 290.8 311.1 233.7 418.4 146.7 463.2 205.4 0.0 15.0

2 171.7 199.3 164.4 190.2 171.1 185.2 178.1 194.3 0.0 4.5

==========

POZIOMY HAŁASU i IZOLACYJNOść PRZEGRóD

Nr źródła	A	63	125	250	500	1000	2000	4000	8000	wsp.odb.
1 sc.1 L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R sc	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
sc.2 L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R sc	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
sc.3 L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R sc	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
sc.4 L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R sc	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
dach L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R d	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Nr źródła	A	63	125	250	500	1000	2000	4000	8000	wsp.odb.
2 sc.1 L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R sc	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
sc.2 L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R sc	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
sc.3 L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R sc	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
sc.4 L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R sc	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
dach L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
R d	28.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Ekrany akustyczne :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	h0[m]	h[m]	Symbol

==========

1 453.5 229.9 445.5 220.6 463.3 205.3 471.3 214.6 0.0 8.0 E1

2 494.4 260.2 494.4 257.6 505.0 256.9 505.0 259.3 0.0 5.0 E2

3 311.1 233.4 265.4 176.8 373.0 90.0 418.6 146.6 0.0 15.0 E3

4 356.5 290.6 294.6 340.2 203.3 226.2 265.2 176.7 0.0 15.0 E4

5 287.2 331.1 203.0 226.3 193.3 234.2 277.4 339.0 0.0 15.0 E5

6 269.8 329.5 193.2 234.2 184.4 241.2 261.0 336.6 0.0 15.0 E6

7 253.5 327.2 184.4 241.4 175.8 248.3 244.9 334.0 0.0 15.0 E7

8 237.1 324.1 175.7 248.3 166.6 255.6 228.0 331.5 0.0 15.0 E8

9 220.8 321.8 166.7 255.4 157.7 262.8 211.8 329.2 0.0 15.0 E9

10 203.8 319.5 157.6 262.8 148.4 269.9 194.8 326.8 0.0 15.0 E10

11 186.6 316.6 148.4 269.9 140.0 276.4 178.4 323.3 0.0 15.0 E11

12 134.5 179.5 146.8 174.7 149.3 181.2 137.0 185.9 0.0 2.0 Wał1

13 149.2 181.2 146.7 174.7 159.5 170.2 165.3 184.3 0.0 3.0 Wał2

14 165.3 184.3 159.4 170.2 202.8 153.5 208.2 167.7 0.0 4.0 Wał3

15 208.3 167.7 202.8 153.4 207.4 151.8 212.1 164.1 0.0 3.8 Wał4

16 212.1 164.1 207.3 151.8 215.7 148.8 220.1 160.5 0.0 3.5 Wał5

17 220.1 160.5 215.7 148.7 233.2 142.2 235.6 148.0 0.0 3.0 Wał6

18 235.6 147.9 233.2 142.2 245.0 136.6 244.5 142.0 0.0 2.5 Wał7

19 239.6 139.1 236.2 135.5 241.0 131.2 244.9 136.6 0.0 2.5 Wał8

20 236.3 135.5 232.0 130.2 241.8 121.8 241.1 131.2 0.0 3.0 Wał9

21 231.9 130.2 224.6 122.6 235.2 114.8 241.7 121.8 0.0 3.5 Wał10

22 224.6 122.6 222.6 119.5 234.9 110.2 235.2 114.8 0.0 3.8 Wał11

23 222.6 119.4 212.2 101.8 227.0 95.8 234.8 110.2 0.0 4.0 Wał12

24 212.2 101.6 206.5 71.8 228.4 72.8 227.0 95.8 0.0 4.0 Wał13

25 227.5 89.8 269.6 84.3 269.5 69.4 228.5 72.9 0.0 4.0 Wał14

26 269.6 84.3 269.5 69.3 282.1 67.9 282.4 75.5 0.0 3.0 Wał15

27 282.5 75.5 282.1 67.9 292.7 67.4 293.1 74.6 0.0 2.0 Wał16

28 293.3 74.6 298.2 79.5 297.7 67.1 292.7 67.4 0.0 2.8 Wał17

29 328.2 64.5 297.7 67.2 298.2 79.3 329.2 76.2 0.0 3.5 Wał18

30 113.3 323.7 114.2 323.8 120.6 250.0 119.9 249.8 0.0 4.0 Ekr1

31 120.6 250.1 144.2 231.2 143.8 230.3 119.8 249.8 0.0 4.0 Ekr2

32 144.2 231.1 144.8 223.0 144.1 223.0 143.5 230.8 0.0 4.0 Ekr3

33 144.7 223.0 130.8 205.1 130.2 205.5 144.2 223.4 0.0 4.0 Ekr4

34 118.7 188.1 118.3 187.1 134.7 180.4 135.1 181.2 0.0 4.0 Ekr5

35 227.7 159.3 248.2 143.3 247.8 142.6 227.4 158.7 0.0 4.0 Ekr6

36 248.2 143.3 249.0 138.1 248.5 138.0 247.6 143.1 0.0 4.0 Ekr7

37 249.0 138.2 329.0 75.0 328.6 74.4 248.6 137.8 0.0 4.0 Ekr8

38 329.0 75.0 338.2 71.7 338.1 70.8 328.7 74.4 0.0 4.0 Ekr9

39 338.2 71.6 346.5 70.1 346.5 69.2 338.1 70.8 0.0 4.0 Ekr10

40 346.5 70.0 353.7 70.0 353.8 69.4 346.4 69.3 0.0 4.0 Ekr11

41 353.8 70.0 360.6 70.6 360.6 69.8 353.6 69.4 0.0 4.0 Ekr12

42 360.6 70.6 368.0 72.8 368.2 72.0 360.6 69.9 0.0 4.0 Ekr13

43 368.0 72.7 374.7 75.9 375.0 75.2 368.2 72.0 0.0 4.0 Ekr14

44 374.8 76.0 382.7 81.4 383.1 80.8 375.0 75.3 0.0 4.0 Ekr15

45 382.7 81.3 392.4 92.3 393.1 91.8 383.1 80.8 0.0 4.0 Ekr16

46 514.0 245.0 515.1 244.1 478.0 198.6 477.2 199.3 0.0 4.0 Ekr17

47 542.5 229.4 556.9 218.8 556.3 217.8 541.8 228.5 0.0 4.0 Ekr18

48 556.8 218.6 563.3 217.6 563.2 216.4 556.3 217.7 0.0 4.0 Ekr19

49 563.2 217.4 570.3 219.3 570.6 218.6 563.2 216.4 0.0 4.0 Ekr20

50 570.2 219.4 574.1 221.3 574.6 220.7 570.6 218.6 0.0 4.0 Ekr21

51 574.2 221.4 587.4 239.0 588.0 238.6 574.6 220.6 0.0 4.0 Ekr22

==========

WSPÓŁCZYNNIKI ODBICIA DLA ŚCIAN

Nr ściana 1 ściana 2 ściana 3 ściana 4 dach

==========

1 1.0000 1.0000 1.0000 1.0000 1.0000

2 1.0000 1.0000 1.0000 1.0000 1.0000

3 1.0000 1.0000 1.0000 1.0000 1.0000

4 1.0000 1.0000 1.0000 1.0000 1.0000

5 1.0000 1.0000 1.0000 1.0000 1.0000

6	1.0000	1.0000	1.0000	1.0000	1.0000
7	1.0000	1.0000	1.0000	1.0000	1.0000
8	1.0000	1.0000	1.0000	1.0000	1.0000
9	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	1.0000
11	1.0000	1.0000	1.0000	1.0000	1.0000
12	1.0000	1.0000	1.0000	1.0000	1.0000
13	1.0000	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	1.0000	1.0000	1.0000
15	1.0000	1.0000	1.0000	1.0000	1.0000
16	1.0000	1.0000	1.0000	1.0000	1.0000
17	1.0000	1.0000	1.0000	1.0000	1.0000
18	1.0000	1.0000	1.0000	1.0000	1.0000
19	1.0000	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000	1.0000
21	1.0000	1.0000	1.0000	1.0000	1.0000
22	1.0000	1.0000	1.0000	1.0000	1.0000
23	1.0000	1.0000	1.0000	1.0000	1.0000
24	1.0000	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000	1.0000
26	1.0000	1.0000	1.0000	1.0000	1.0000
27	1.0000	1.0000	1.0000	1.0000	1.0000
28	1.0000	1.0000	1.0000	1.0000	1.0000
29	1.0000	1.0000	1.0000	1.0000	1.0000
30	1.0000	1.0000	1.0000	1.0000	1.0000
31	1.0000	1.0000	1.0000	1.0000	1.0000
32	1.0000	1.0000	1.0000	1.0000	1.0000
33	1.0000	1.0000	1.0000	1.0000	1.0000
34	1.0000	1.0000	1.0000	1.0000	1.0000
35	1.0000	1.0000	1.0000	1.0000	1.0000
36	1.0000	1.0000	1.0000	1.0000	1.0000

37	1.0000	1.0000	1.0000	1.0000	1.0000
38	1.0000	1.0000	1.0000	1.0000	1.0000
39	1.0000	1.0000	1.0000	1.0000	1.0000
40	1.0000	1.0000	1.0000	1.0000	1.0000
41	1.0000	1.0000	1.0000	1.0000	1.0000
42	1.0000	1.0000	1.0000	1.0000	1.0000
43	1.0000	1.0000	1.0000	1.0000	1.0000
44	1.0000	1.0000	1.0000	1.0000	1.0000
45	1.0000	1.0000	1.0000	1.0000	1.0000
46	1.0000	1.0000	1.0000	1.0000	1.0000
47	1.0000	1.0000	1.0000	1.0000	1.0000
48	1.0000	1.0000	1.0000	1.0000	1.0000
49	1.0000	1.0000	1.0000	1.0000	1.0000
50	1.0000	1.0000	1.0000	1.0000	1.0000
51	1.0000	1.0000	1.0000	1.0000	1.0000

==========

Punkty obserwacji

Nr	Symbol	X[m]	Y[m]	z[m]
1	P1	95.5	268.1	1.5
2	P2	95.5	268.1	4.5
3	P3	106.1	268.7	4.0
4	P4	107.0	236.4	1.5
5	P5	104.3	238.0	4.5
6	P6	97.1	220.7	1.5
7	P7	97.1	220.7	4.5
8	P8	113.1	225.8	4.0
9	P9	98.4	165.7	1.5
10	P10	98.4	165.7	4.5
11	P11	109.3	164.7	4.0

12 P12 132.0 173.4 1.5

13 P13 132.0 173.4 4.5

14 P14 133.9 177.8 4.0

15 P15 98.4 133.0 1.5

16 P16 98.4 133.0 4.5

17 P17 106.7 140.4 4.0

18 P18 124.6 114.5 1.5

19 P19 124.6 114.5 4.5

20 P20 135.8 150.0 4.0

21 P21 155.4 70.3 1.5

22 P22 155.4 70.3 4.5

23 P23 159.5 78.3 4.0

24 P24 215.5 71.0 1.5

25 P25 215.5 71.0 4.5

26 P26 215.5 71.0 4.0

27 P27 203.0 31.3 1.5

28 P28 203.0 31.3 4.5

29 P29 204.0 52.4 4.0

30 P30 616.0 196.7 1.5

31 P31 616.0 196.7 4.5

32 P32 606.3 195.4 4.0

Obszary o innym niż globalny współczynniku gruntu G :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] wsp.G

==========

1 250.1 190.1 234.4 171.5 268.0 144.0 282.7 162.2 1.000

2 151.8 221.4 242.1 147.5 238.2 140.2 121.8 183.4 1.000

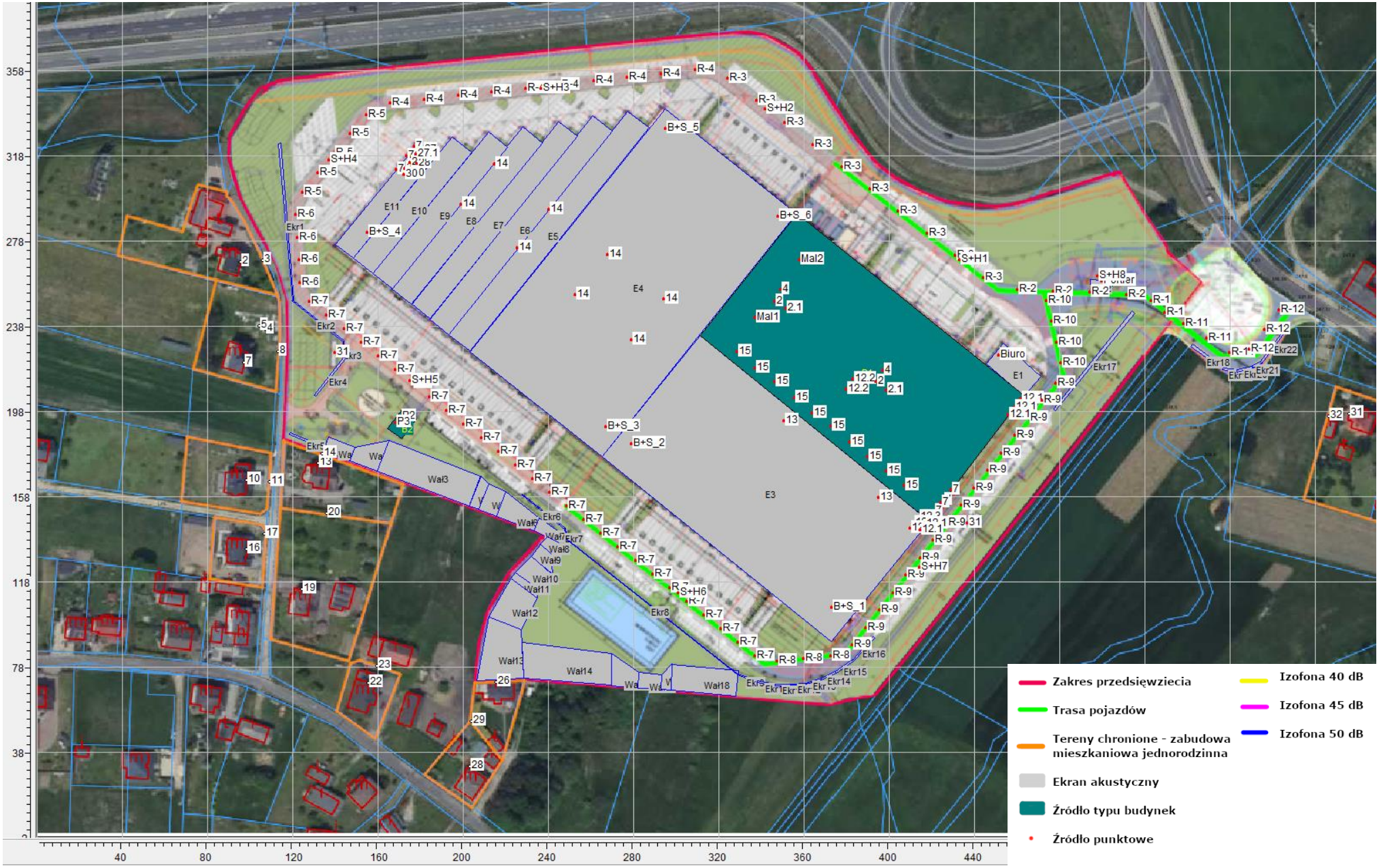
3 147.6 225.8 128.8 200.6 118.4 202.8 119.4 249.6 1.000

4 129.2 283.0 148.0 268.0 133.6 250.0 128.0 253.6 1.000

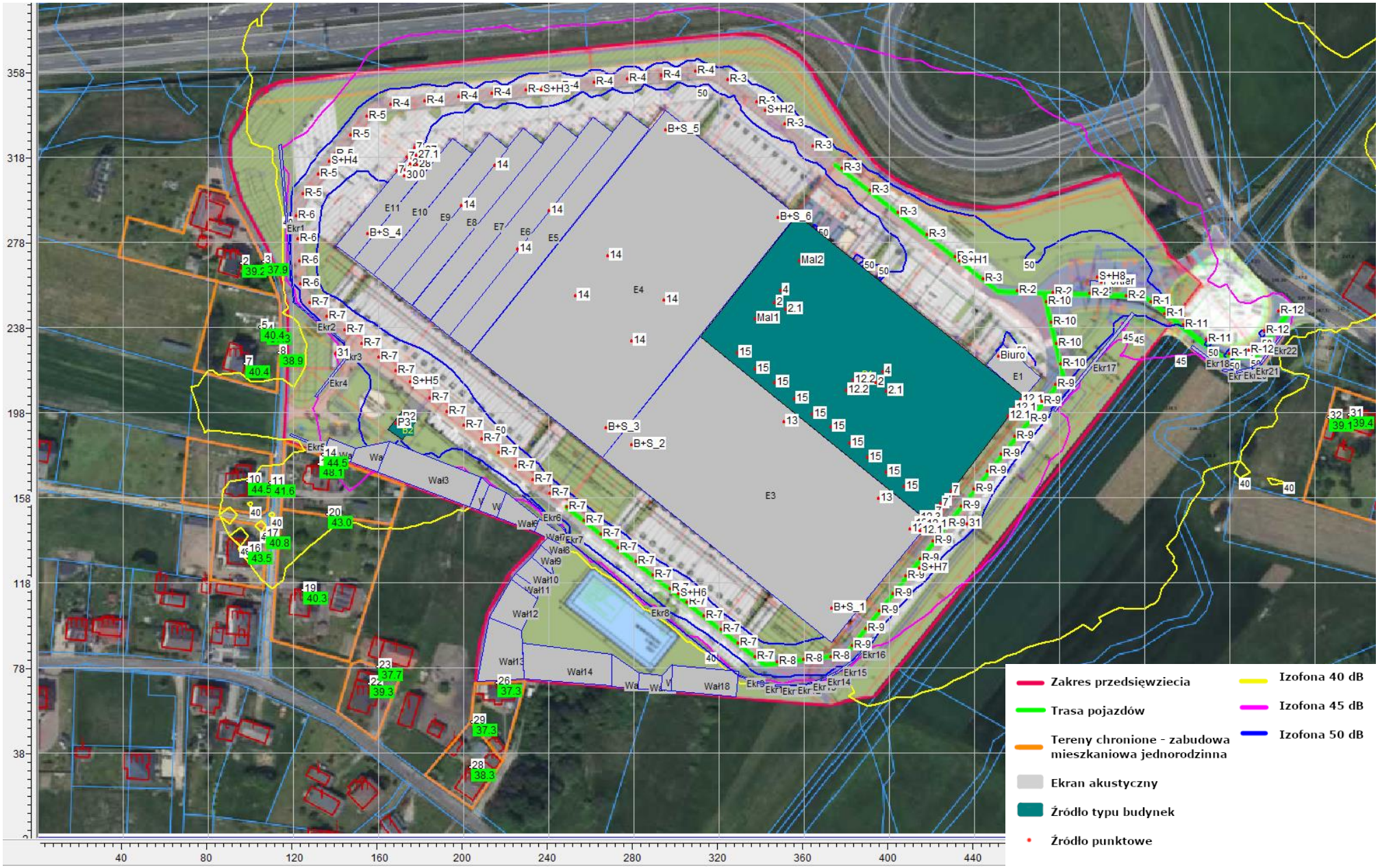
5	121.0	248.2	117.6	296.6	90.6	315.4	97.0	296.0	1.000
6	90.6	315.4	117.8	296.8	161.6	353.6	111.2	350.8	1.000
7	241.6	144.6	206.8	72.2	330.2	64.6	339.8	77.8	1.000
8	238.1	138.2	221.4	122.2	210.9	102.6	206.1	71.6	1.000
9	555.7	270.6	393.4	63.4	544.3	13.2	617.8	233.2	1.000
10	510.4	245.5	367.0	60.7	393.4	62.0	528.9	237.2	1.000

Program LEQ Professional w.6(2019)
Wydruk wyników obliczeń
Projekt :

Nr pkt.	X [m]	Y [m]	z [m]	Leq [dB(A)]
1	95.5	268.1	1.5	36.9
2	95.5	268.1	4.5	39.2
3	106.1	268.7	4.0	37.9
4	107.0	236.4	1.5	37.3
5	104.3	238.0	4.5	40.4
6	97.1	220.7	1.5	37.5
7	97.1	220.7	4.5	40.4
8	113.1	225.8	4.0	38.9
9	98.4	165.7	1.5	39.9
10	98.4	165.7	4.5	44.5
11	109.3	164.7	4.0	41.6
12	132.0	173.4	1.5	39.8
13	132.0	173.4	4.5	48.1
14	133.9	177.8	4.0	44.5
15	98.4	133.0	1.5	37.5
16	98.4	133.0	4.5	43.5
17	106.7	140.4	4.0	40.8
18	124.6	114.5	1.5	37.1
19	124.6	114.5	4.5	40.3
20	135.8	150.0	4.0	43.0
21	155.4	70.3	1.5	36.4
22	155.4	70.3	4.5	39.3
23	159.5	78.3	4.0	37.7
24	215.5	71.0	1.5	26.1
25	215.5	71.0	4.5	39.0
26	215.5	71.0	4.0	37.3
27	203.0	31.3	1.5	36.0
28	203.0	31.3	4.5	38.3
29	204.0	52.4	4.0	37.3
30	616.0	196.7	1.5	36.8
31	616.0	196.7	4.5	39.4
32	606.3	195.4	4.0	39.1



Rysunek 3 Plan sytuacyjny – pora dnia, z zastosowaniem rozwiązań minimalizujących



Rysunek 4 Izofony w porze dnia – z zastosowaniem rozwiązań minimalizujących

3. Pora nocy – bez zastosowania rozwiązań minimalizujących

Program LEQ Professional v. 6-2019 dla Windows

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Dane do obliczeń :

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Współczynnik gruntu (całego obszaru analizy)-global G = 0.000

Temperatura otoczenia 10[°C]

Źródła punktowe

Nr	X[m]	Y[m]	z[m]	Pma	Symbol
1	451.7	224.0	9.0	89.1	Biuro
2	499.8	258.6	6.0	76.0	Portier
3	373.2	105.5	16.0	83.7	B+S_1
4	279.1	182.4	16.0	83.7	B+S_2
5	267.4	190.6	16.0	83.7	B+S_3
6	155.2	281.7	16.0	83.7	B+S_4
7	295.0	330.3	16.0	83.7	B+S_5
8	347.8	289.4	16.0	83.7	B+S_6
9	462.2	203.7	3.0	60.0	12.1
10	458.8	199.4	3.0	60.0	12.1
11	429.1	160.8	3.0	64.0	7
12	425.5	155.9	3.0	76.0	7
13	421.2	150.7	3.0	77.0	7
14	329.0	225.4	16.0	87.0	15
15	337.3	218.2	16.0	87.0	15
16	346.3	211.7	16.0	87.0	15
17	355.7	203.8	16.0	87.0	15

18 364.0 196.9 16.0 87.0 15

19 373.0 190.8 16.0 87.0 15

20 381.6 183.2 16.0 87.0 15

21 390.2 176.4 16.0 87.0 15

22 398.9 169.6 16.0 87.0 15

23 407.2 162.7 16.0 87.0 15

24 379.8 208.1 16.0 65.0 12.2

25 383.0 212.8 16.0 65.0 12.2

26 349.2 254.9 16.0 80.0 4

27 397.4 216.7 16.0 80.0 4

28 346.3 249.1 16.0 63.0 2

29 393.8 211.7 16.0 63.0 2

30 351.7 245.9 16.0 86.0 2.1

31 398.9 207.4 16.0 86.0 2.1

32 350.6 193.0 16.0 77.0 13

33 395.3 157.3 16.0 77.0 13

34 214.9 313.6 16.0 85.0 14

35 199.1 294.8 16.0 85.0 14

36 240.5 292.3 16.0 85.0 14

37 225.4 274.3 16.0 85.0 14

38 267.8 271.4 16.0 85.0 14

39 252.7 252.4 16.0 85.0 14

40 294.5 250.6 16.0 85.0 14

41 279.4 231.1 16.0 85.0 14

42 177.1 321.8 3.0 75.0 7

43 173.5 317.5 3.0 75.0 7

44 168.8 311.4 3.0 75.0 7

45 172.7 311.7 16.0 65.0 30

46 175.4 309.4 16.0 65.0 30

47 172.4 308.6 16.0 65.0 30

48 175.0 314.3 16.0 70.0 28

49 178.3 314.1 16.0 70.0 28

50 182.3 317.7 16.0 76.0 29

51 181.1 320.3 16.0 75.0 27

52 177.9 318.3 16.0 75.0 27.1

53 529.8 244.2 0.5 70.8 R-1

54 523.0 249.5 0.5 70.8 R-1

55 511.5 252.6 0.5 73.8 R-2

56 494.4 253.4 0.5 73.8 R-2

57 477.4 254.2 0.5 73.8 R-2

58 460.4 255.0 0.5 73.8 R-2

59 444.5 260.5 0.5 72.8 R-3

60 431.2 270.9 0.5 72.8 R-3

61 417.8 281.3 0.5 72.8 R-3

62 404.5 291.6 0.5 72.8 R-3

63 391.2 302.0 0.5 72.8 R-3

64 377.8 312.4 0.5 72.8 R-3

65 364.5 322.8 0.5 72.8 R-3

66 351.1 333.1 0.5 72.8 R-3

67 337.8 343.5 0.5 72.8 R-3

68 324.4 353.9 0.5 72.8 R-3

69 309.2 357.9 0.5 73.5 R-4

70 293.3 356.1 0.5 73.5 R-4

71 277.4 354.4 0.5 73.5 R-4

72 261.5 352.7 0.5 73.5 R-4

73 245.6 350.9 0.5 73.5 R-4

74 229.6 349.2 0.5 73.5 R-4

75 213.7 347.5 0.5 73.5 R-4

76 197.8 345.8 0.5 73.5 R-4

77 181.9 344.0 0.5 73.5 R-4

78 166.0 342.3 0.5 73.5 R-4

79 154.7 336.9 0.5 72.2 R-5

80	147.2	327.8	0.5	72.2	R-5
81	139.7	318.7	0.5	72.2	R-5
82	132.2	309.6	0.5	72.2	R-5
83	124.7	300.5	0.5	72.2	R-5
84	121.6	290.0	0.5	71.8	R-6
85	122.4	279.4	0.5	71.8	R-6
86	123.1	268.8	0.5	71.8	R-6
87	123.8	258.1	0.5	71.8	R-6
88	128.2	249.3	0.5	71.6	R-7
89	136.2	242.9	0.5	71.6	R-7
90	144.3	236.5	0.5	71.6	R-7
91	152.3	230.1	0.5	71.6	R-7
92	160.4	223.7	0.5	71.6	R-7
93	168.4	217.3	0.5	71.6	R-7
94	176.5	210.9	0.5	71.6	R-7
95	184.5	204.5	0.5	71.6	R-7
96	192.6	198.1	0.5	71.6	R-7
97	200.6	191.7	0.5	71.6	R-7
98	208.7	185.3	0.5	71.6	R-7
99	216.7	178.9	0.5	71.6	R-7
100	224.8	172.5	0.5	71.6	R-7
101	232.8	166.1	0.5	71.6	R-7
102	240.8	159.7	0.5	71.6	R-7
103	248.9	153.3	0.5	71.6	R-7
104	256.9	146.9	0.5	71.6	R-7
105	265.0	140.5	0.5	71.6	R-7
106	273.0	134.1	0.5	71.6	R-7
107	281.1	127.7	0.5	71.6	R-7
108	289.1	121.3	0.5	71.6	R-7
109	297.2	114.9	0.5	71.6	R-7
110	305.2	108.5	0.5	71.6	R-7

111 313.3 102.1 0.5 71.6 R-7

112 321.3 95.7 0.5 71.6 R-7

113 329.4 89.3 0.5 71.6 R-7

114 337.4 82.9 0.5 71.6 R-7

115 347.5 80.6 0.5 72.5 R-8

116 360.2 81.8 0.5 72.5 R-8

117 372.9 82.9 0.5 72.5 R-8

118 382.7 87.9 0.5 71.6 R-9

119 389.1 96.1 0.5 71.6 R-9

120 395.5 104.3 0.5 71.6 R-9

121 401.8 112.5 0.5 71.6 R-9

122 408.2 120.7 0.5 71.6 R-9

123 414.6 128.9 0.5 71.6 R-9

124 421.0 137.1 0.5 71.6 R-9

125 427.4 145.3 0.5 71.6 R-9

126 433.8 153.5 0.5 71.6 R-9

127 440.1 161.7 0.5 71.6 R-9

128 446.5 169.9 0.5 71.6 R-9

129 452.9 178.1 0.5 71.6 R-9

130 459.3 186.3 0.5 71.6 R-9

131 465.7 194.5 0.5 71.6 R-9

132 472.0 202.7 0.5 71.6 R-9

133 478.4 210.9 0.5 71.6 R-9

134 480.8 220.5 0.5 70.5 R-10

135 478.6 230.2 0.5 70.5 R-10

136 476.3 239.9 0.5 70.5 R-10

137 474.1 249.6 0.5 70.5 R-10

138 433.3 268.8 0.5 73.4 S+H1

139 342.1 339.5 0.5 73.4 S+H2

140 236.8 349.4 0.5 73.4 S+H3

141 137.3 315.5 0.5 73.4 S+H4

142 175.0 211.8 0.5 73.4 S+H5

143 301.4 112.6 0.5 73.4 S+H6

144 337.3 241.6 16.0 81.0 Mal1

145 358.2 268.6 16.0 81.0 Mal2

146 424.5 154.7 3.0 76.0 7

147 456.2 196.0 3.0 60.0 12.1

148 413.8 148.0 16.0 65.0 12.3

149 411.6 145.2 16.0 65.0 12.3

150 410.2 143.0 16.0 65.0 12.3

151 416.9 144.8 3.0 60.0 12.1

152 414.9 142.2 3.0 60.0 12.1

153 538.5 238.7 1.0 72.5 R-11

154 549.2 232.0 1.0 72.5 R-11

155 559.9 225.3 1.0 72.5 R-11

156 583.0 245.3 1.0 72.1 R-12

157 576.2 236.0 1.0 72.1 R-12

158 569.4 226.7 1.0 72.1 R-12

159 498.0 261.0 1.0 80.6 S+H8

160 414.4 124.3 1.0 73.4 S+H7

==========

Źródła typu hala produkcyjna :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] h0[m] h[m]

==========

1 357.0 290.8 311.1 233.7 418.4 146.7 463.2 205.4 0.0 15.0

==========

POZIOMY HAŁASU i IZOLACYJNOść PRZEGRóD

Nr źródła A 63 125 250 500 1000 2000 4000 8000 wsp.odb.

==========

1 sc.1 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.2 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.3 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.4 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

dach L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R d 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

==========

Ekrany akustyczne :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	h0[m]	h[m]	Symbol
1	453.5	229.9	445.5	220.6	463.3	205.3	471.3	214.6	0.0	8.0	E1
2	494.4	260.2	494.4	257.6	505.0	256.9	505.0	259.3	0.0	5.0	E2
3	311.1	233.4	265.4	176.8	373.0	90.0	418.6	146.6	0.0	15.0	E3
4	356.5	290.6	294.6	340.2	203.3	226.2	265.2	176.7	0.0	15.0	E4
5	287.2	331.1	203.0	226.3	193.3	234.2	277.4	339.0	0.0	15.0	E5
6	269.8	329.5	193.2	234.2	184.4	241.2	261.0	336.6	0.0	15.0	E6
7	253.5	327.2	184.4	241.4	175.8	248.3	244.9	334.0	0.0	15.0	E7
8	237.1	324.1	175.7	248.3	166.6	255.6	228.0	331.5	0.0	15.0	E8
9	220.8	321.8	166.7	255.4	157.7	262.8	211.8	329.2	0.0	15.0	E9
10	203.8	319.5	157.6	262.8	148.4	269.9	194.8	326.8	0.0	15.0	E10
11	186.6	316.6	148.4	269.9	140.0	276.4	178.4	323.3	0.0	15.0	E11
12	134.5	179.5	146.8	174.7	149.3	181.2	137.0	185.9	0.0	2.0	Wał1
13	149.2	181.2	146.7	174.7	159.5	170.2	165.3	184.3	0.0	3.0	Wał2
14	165.3	184.3	159.4	170.2	202.8	153.5	208.2	167.7	0.0	4.0	Wał3
15	208.3	167.7	202.8	153.4	207.4	151.8	212.1	164.1	0.0	3.8	Wał4

16 212.1 164.1 207.3 151.8 215.7 148.8 220.1 160.5 0.0 3.5 Wał5

17 220.1 160.5 215.7 148.7 233.2 142.2 235.6 148.0 0.0 3.0 Wał6

18 235.6 147.9 233.2 142.2 245.0 136.6 244.5 142.0 0.0 2.5 Wał7

19 239.6 139.1 236.2 135.5 241.0 131.2 244.9 136.6 0.0 2.5 Wał8

20 236.3 135.5 232.0 130.2 241.8 121.8 241.1 131.2 0.0 3.0 Wał9

21 231.9 130.2 224.6 122.6 235.2 114.8 241.7 121.8 0.0 3.5 Wał10

22 224.6 122.6 222.6 119.5 234.9 110.2 235.2 114.8 0.0 3.8 Wał11

23 222.6 119.4 212.2 101.8 227.0 95.8 234.8 110.2 0.0 4.0 Wał12

24 212.2 101.6 206.5 71.8 228.4 72.8 227.0 95.8 0.0 4.0 Wał13

25 227.5 89.8 269.6 84.3 269.5 69.4 228.5 72.9 0.0 4.0 Wał14

26 269.6 84.3 269.5 69.3 282.1 67.9 282.4 75.5 0.0 3.0 Wał15

27 282.5 75.5 282.1 67.9 292.7 67.4 293.1 74.6 0.0 2.0 Wał16

28 293.3 74.6 298.2 79.5 297.7 67.1 292.7 67.4 0.0 2.8 Wał17

29 328.2 64.5 297.7 67.2 298.2 79.3 329.2 76.2 0.0 3.5 Wał18

30 171.7 199.3 164.6 190.2 171.1 185.2 178.1 194.3 0.0 4.5 E12

==========

WSPÓŁCZYNNIKI ODBICIA DLA ŚCIAN

Nr ściana 1 ściana 2 ściana 3 ściana 4 dach

==========

1 1.0000 1.0000 1.0000 1.0000 1.0000

2 1.0000 1.0000 1.0000 1.0000 1.0000

3 1.0000 1.0000 1.0000 1.0000 1.0000

4 1.0000 1.0000 1.0000 1.0000 1.0000

5 1.0000 1.0000 1.0000 1.0000 1.0000

6 1.0000 1.0000 1.0000 1.0000 1.0000

7 1.0000 1.0000 1.0000 1.0000 1.0000

8 1.0000 1.0000 1.0000 1.0000 1.0000

9 1.0000 1.0000 1.0000 1.0000 1.0000

10 1.0000 1.0000 1.0000 1.0000 1.0000

11 1.0000 1.0000 1.0000 1.0000 1.0000

12	1.0000	1.0000	1.0000	1.0000	1.0000
13	1.0000	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	1.0000	1.0000	1.0000
15	1.0000	1.0000	1.0000	1.0000	1.0000
16	1.0000	1.0000	1.0000	1.0000	1.0000
17	1.0000	1.0000	1.0000	1.0000	1.0000
18	1.0000	1.0000	1.0000	1.0000	1.0000
19	1.0000	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000	1.0000
21	1.0000	1.0000	1.0000	1.0000	1.0000
22	1.0000	1.0000	1.0000	1.0000	1.0000
23	1.0000	1.0000	1.0000	1.0000	1.0000
24	1.0000	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000	1.0000
26	1.0000	1.0000	1.0000	1.0000	1.0000
27	1.0000	1.0000	1.0000	1.0000	1.0000
28	1.0000	1.0000	1.0000	1.0000	1.0000
29	1.0000	1.0000	1.0000	1.0000	1.0000
30	1.0000	1.0000	1.0000	1.0000	1.0000

==========

Punkty obserwacji

Nr	Symbol	X[m]	Y[m]	z[m]
1	P1	95.5	268.1	1.5
2	P2	95.5	268.1	4.5
3	P3	106.1	268.7	4.0
4	P4	107.0	236.4	1.5
5	P5	104.3	238.0	4.5
6	P6	97.1	220.7	1.5
7	P7	97.1	220.7	4.5

8	P8	113.1	225.8	4.0
9	P9	98.4	165.7	1.5
10	P10	98.4	165.7	4.5
11	P11	109.3	164.7	4.0
12	P12	132.0	173.4	1.5
13	P13	132.0	173.4	4.5
14	P14	133.9	177.8	4.0
15	P15	98.4	133.0	1.5
16	P16	98.4	133.0	4.5
17	P17	106.7	140.4	4.0
18	P18	124.6	114.5	1.5
19	P19	124.6	114.5	4.5
20	P20	135.8	150.0	4.0
21	P21	155.4	70.3	1.5
22	P22	155.4	70.3	4.5
23	P23	159.5	78.3	4.0
24	P24	215.5	71.0	1.5
25	P25	215.5	71.0	4.5
26	P26	215.5	71.0	4.0
27	P27	203.0	31.3	1.5
28	P28	203.0	31.3	4.5
29	P29	204.0	52.4	4.0
30	P30	616.0	196.7	1.5
31	P31	616.0	196.7	4.5
32	P32	606.3	195.4	4.0

Obszary o innym niż globalny współczynniku gruntu G :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	wsp.G

==========

1	250.1	190.1	234.4	171.5	268.0	144.0	282.7	162.2	1.000
2	151.8	221.4	242.1	147.5	238.2	140.2	121.8	183.4	1.000
3	147.6	225.8	128.8	200.6	118.4	202.8	119.4	249.6	1.000
4	129.2	283.0	148.0	268.0	133.6	250.0	128.0	253.6	1.000
5	121.0	248.2	117.6	296.6	90.6	315.4	97.0	296.0	1.000
6	90.6	315.4	117.8	296.8	161.6	353.6	111.2	350.8	1.000
7	241.6	144.6	206.8	72.2	330.2	64.6	339.8	77.8	1.000
8	238.1	138.2	221.4	122.2	210.9	102.6	206.1	71.6	1.000
9	555.7	270.6	393.4	63.4	544.3	13.2	617.8	233.2	1.000
10	510.4	245.5	367.0	60.7	393.4	62.0	528.9	237.2	1.000

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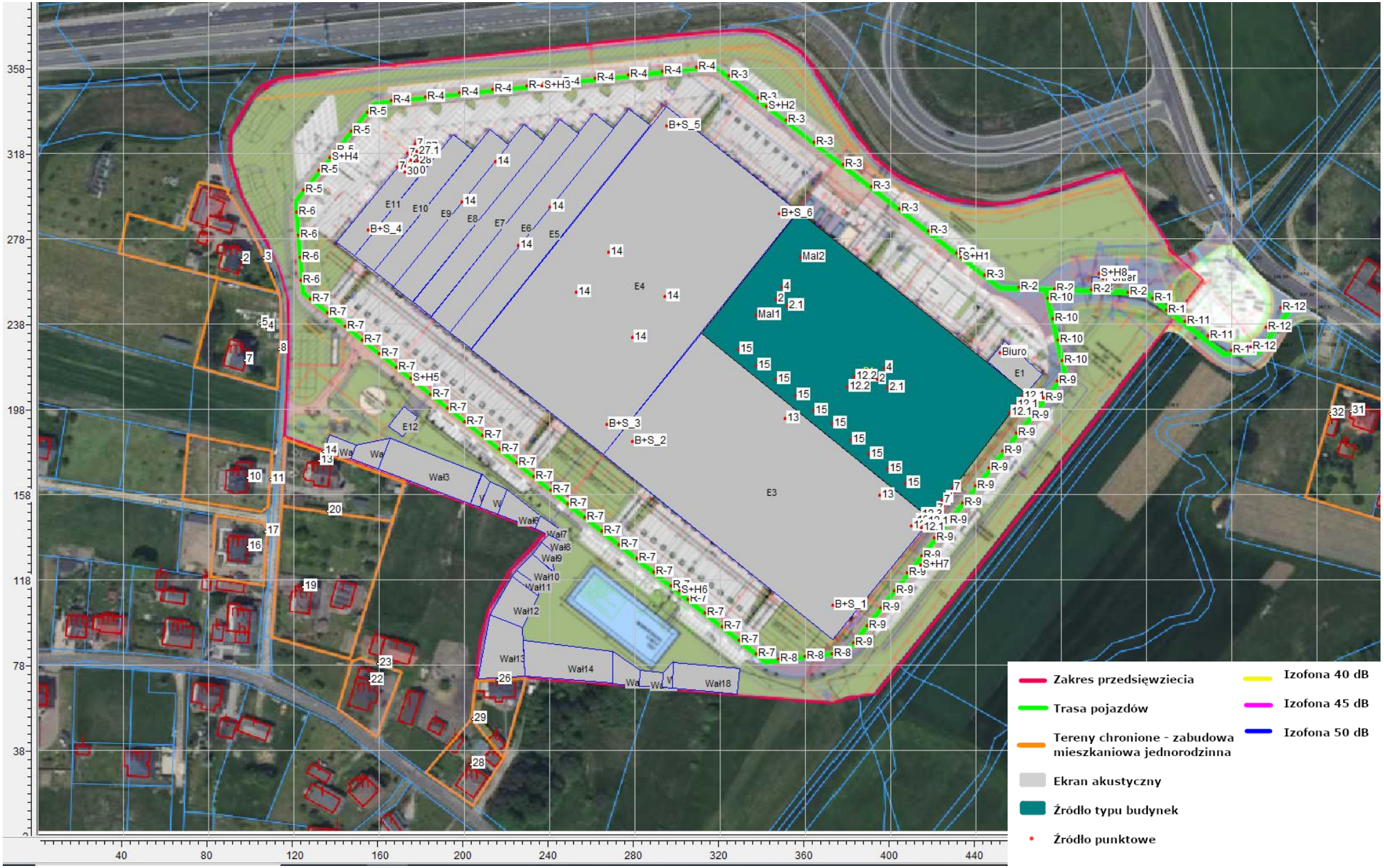
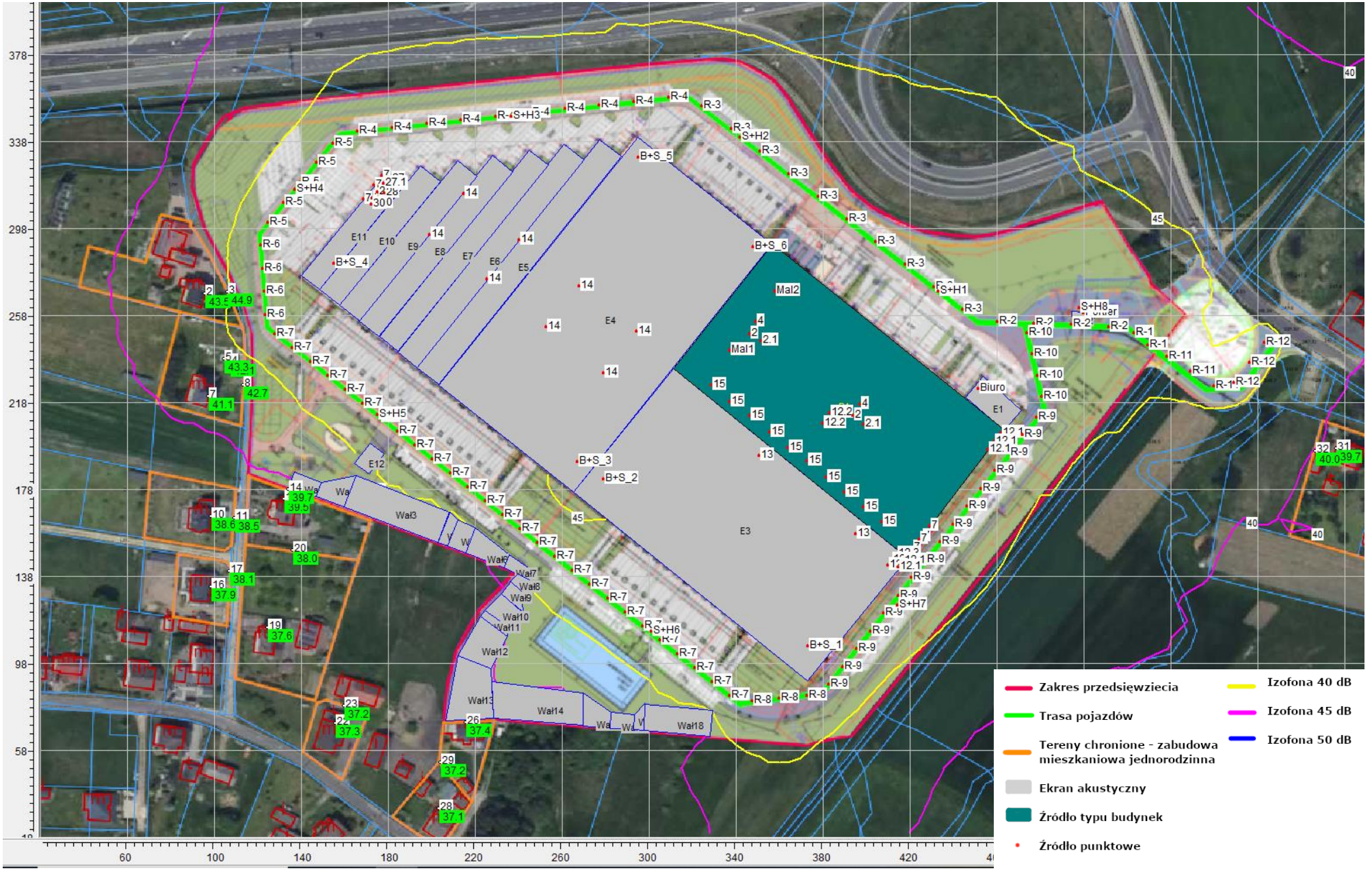
Program LEQ Professional w.6(2019)
Wydruk wyników obliczeń
Projekt :

Nr pkt.	X [m]	Y [m]	z [m]	Leq [dB(A)]
1	95.5	268.1	1.5	42.6
2	95.5	268.1	4.5	43.5
3	106.1	268.7	4.0	44.9
4	107.0	236.4	1.5	42.1
5	104.3	238.0	4.5	43.3
6	97.1	220.7	1.5	40.3
7	97.1	220.7	4.5	41.1
8	113.1	225.8	4.0	42.7
9	98.4	165.7	1.5	38.4
10	98.4	165.7	4.5	38.6
11	109.3	164.7	4.0	38.5
12	132.0	173.4	1.5	37.2
13	132.0	173.4	4.5	39.5
14	133.9	177.8	4.0	39.7
15	98.4	133.0	1.5	37.6
16	98.4	133.0	4.5	37.9
17	106.7	140.4	4.0	38.1
18	124.6	114.5	1.5	36.7
19	124.6	114.5	4.5	37.6
20	135.8	150.0	4.0	38.0
21	155.4	70.3	1.5	36.1
22	155.4	70.3	4.5	37.3
23	159.5	78.3	4.0	37.3
24	215.5	71.0	1.5	26.1
25	215.5	71.0	4.5	37.8
26	215.5	71.0	4.0	37.5
27	203.0	31.3	1.5	35.7
28	203.0	31.3	4.5	37.1
29	204.0	52.4	4.0	37.2
30	616.0	196.7	1.5	37.4
31	616.0	196.7	4.5	39.7
32	606.3	195.4	4.0	40.0



Rysunek 5 Plan sytuacyjny – pora nocy, bez rozwiązań minimalizujących



Rysunek 6 Izofony w porze nocy – bez zastosowania rozwiązań minimalizujących

4. Pora dnia – bez zastosowania rozwiązań minimalizujących

Program LEQ Professional v. 6-2019 dla Windows

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Dane do obliczeń :

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Współczynnik gruntu (całego obszaru analizy)-global G = 0.000

Temperatura otoczenia 10[°C]

Źródła punktowe

Nr	X[m]	Y[m]	z[m]	Pma	Symbol
1	451.7	224.0	9.0	89.1	Biuro
2	499.8	258.6	6.0	76.0	Portier
3	373.2	105.5	16.0	83.7	B+S_1
4	279.1	182.4	16.0	83.7	B+S_2
5	267.4	190.6	16.0	83.7	B+S_3
6	155.2	281.7	16.0	83.7	B+S_4
7	295.0	330.3	16.0	83.7	B+S_5
8	347.8	289.4	16.0	83.7	B+S_6
9	462.2	203.7	3.0	60.0	12.1
10	458.8	199.4	3.0	60.0	12.1
11	429.1	160.8	3.0	64.0	7
12	425.5	155.9	3.0	76.0	7
13	421.2	150.7	3.0	77.0	7
14	329.0	225.4	16.0	87.0	15
15	337.3	218.2	16.0	87.0	15
16	346.3	211.7	16.0	87.0	15
17	355.7	203.8	16.0	87.0	15
18	364.0	196.9	16.0	87.0	15

19 373.0 190.8 16.0 87.0 15

20 381.6 183.2 16.0 87.0 15

21 390.2 176.4 16.0 87.0 15

22 398.9 169.6 16.0 87.0 15

23 407.2 162.7 16.0 87.0 15

24 379.8 208.1 16.0 65.0 12.2

25 383.0 212.8 16.0 65.0 12.2

26 349.2 254.9 16.0 80.0 4

27 397.4 216.7 16.0 80.0 4

28 346.3 249.1 16.0 63.0 2

29 393.8 211.7 16.0 63.0 2

30 351.7 245.9 16.0 86.0 2.1

31 398.9 207.4 16.0 86.0 2.1

32 350.6 193.0 16.0 77.0 13

33 395.3 157.3 16.0 77.0 13

34 214.9 313.6 16.0 85.0 14

35 199.1 294.8 16.0 85.0 14

36 240.5 292.3 16.0 85.0 14

37 225.4 274.3 16.0 85.0 14

38 267.8 271.4 16.0 85.0 14

39 252.7 252.4 16.0 85.0 14

40 294.5 250.6 16.0 85.0 14

41 279.4 231.1 16.0 85.0 14

42 177.1 321.8 3.0 75.0 7

43 173.5 317.5 3.0 75.0 7

44 168.8 311.4 3.0 75.0 7

45 172.7 311.7 16.0 65.0 30

46 175.4 309.4 16.0 65.0 30

47 172.4 308.6 16.0 65.0 30

48 175.0 314.3 16.0 70.0 28

49 178.3 314.1 16.0 70.0 28

50 182.3 317.7 16.0 76.0 29

51 181.1 320.3 16.0 75.0 27

52 177.9 318.3 16.0 75.0 27.1

53 529.8 244.2 0.5 69.9 R-1

54 523.0 249.5 0.5 69.9 R-1

55 511.5 252.6 0.5 72.9 R-2

56 494.4 253.4 0.5 72.9 R-2

57 477.4 254.2 0.5 72.9 R-2

58 460.4 255.0 0.5 72.9 R-2

59 444.5 260.5 0.5 72.4 R-3

60 431.2 270.9 0.5 72.4 R-3

61 417.8 281.3 0.5 72.4 R-3

62 404.5 291.6 0.5 72.4 R-3

63 391.2 302.0 0.5 72.4 R-3

64 377.8 312.4 0.5 72.4 R-3

65 364.5 322.8 0.5 72.4 R-3

66 351.1 333.1 0.5 72.4 R-3

67 337.8 343.5 0.5 72.4 R-3

68 324.4 353.9 0.5 72.4 R-3

69 309.2 357.9 0.5 72.6 R-4

70 293.3 356.1 0.5 72.6 R-4

71 277.4 354.4 0.5 72.6 R-4

72 261.5 352.7 0.5 72.6 R-4

73 245.6 350.9 0.5 72.6 R-4

74 229.6 349.2 0.5 72.6 R-4

75 213.7 347.5 0.5 72.6 R-4

76 197.8 345.8 0.5 72.6 R-4

77 181.9 344.0 0.5 72.6 R-4

78 166.0 342.3 0.5 72.6 R-4

79 154.7 336.9 0.5 71.2 R-5

80 147.2 327.8 0.5 71.2 R-5

81 139.7 318.7 0.5 71.2 R-5

82 132.2 309.6 0.5 71.2 R-5

83 124.7 300.5 0.5 71.2 R-5

84 121.6 290.0 0.5 70.8 R-6

85 122.4 279.4 0.5 70.8 R-6

86 123.1 268.8 0.5 70.8 R-6

87 123.8 258.1 0.5 70.8 R-6

88 128.2 249.3 0.5 70.7 R-7

89 136.2 242.9 0.5 70.7 R-7

90 144.3 236.5 0.5 70.7 R-7

91 152.3 230.1 0.5 70.7 R-7

92 160.4 223.7 0.5 70.7 R-7

93 168.4 217.3 0.5 70.7 R-7

94 176.5 210.9 0.5 70.7 R-7

95 184.5 204.5 0.5 70.7 R-7

96 192.6 198.1 0.5 70.7 R-7

97 200.6 191.7 0.5 70.7 R-7

98 208.7 185.3 0.5 70.7 R-7

99 216.7 178.9 0.5 70.7 R-7

100 224.8 172.5 0.5 70.7 R-7

101 232.8 166.1 0.5 70.7 R-7

102 240.8 159.7 0.5 70.7 R-7

103 248.9 153.3 0.5 70.7 R-7

104 256.9 146.9 0.5 70.7 R-7

105 265.0 140.5 0.5 70.7 R-7

106 273.0 134.1 0.5 70.7 R-7

107 281.1 127.7 0.5 70.7 R-7

108 289.1 121.3 0.5 70.7 R-7

109 297.2 114.9 0.5 70.7 R-7

110 305.2 108.5 0.5 70.7 R-7

111 313.3 102.1 0.5 70.7 R-7

112 321.3 95.7 0.5 70.7 R-7

113 329.4 89.3 0.5 70.7 R-7

114 337.4 82.9 0.5 70.7 R-7

115 347.5 80.6 0.5 71.6 R-8

116 360.2 81.8 0.5 71.6 R-8

117 372.9 82.9 0.5 71.6 R-8

118 382.7 87.9 0.5 70.7 R-9

119 389.1 96.1 0.5 70.7 R-9

120 395.5 104.3 0.5 70.7 R-9

121 401.8 112.5 0.5 70.7 R-9

122 408.2 120.7 0.5 70.7 R-9

123 414.6 128.9 0.5 70.7 R-9

124 421.0 137.1 0.5 70.7 R-9

125 427.4 145.3 0.5 70.7 R-9

126 433.8 153.5 0.5 70.7 R-9

127 440.1 161.7 0.5 70.7 R-9

128 446.5 169.9 0.5 70.7 R-9

129 452.9 178.1 0.5 70.7 R-9

130 459.3 186.3 0.5 70.7 R-9

131 465.7 194.5 0.5 70.7 R-9

132 472.0 202.7 0.5 70.7 R-9

133 478.4 210.9 0.5 70.7 R-9

134 480.8 220.5 0.5 70.5 R-10

135 478.6 230.2 0.5 70.5 R-10

136 476.3 239.9 0.5 70.5 R-10

137 474.1 249.6 0.5 70.5 R-10

138 433.3 268.8 0.5 71.8 S+H1

139 342.1 339.5 0.5 71.0 S+H2

140 236.8 349.4 0.5 71.0 S+H3

141 137.3 315.5 0.5 71.0 S+H4

142 175.0 211.8 0.5 71.0 S+H5

143 301.4 112.6 0.5 71.0 S+H6

144 337.3 241.6 16.0 81.0 Mal1

145 358.2 268.6 16.0 81.0 Mal2

146 424.5 154.7 3.0 76.0 7

147 456.2 196.0 3.0 60.0 12.1

148 413.8 148.0 16.0 65.0 12.3

149 411.6 145.2 16.0 65.0 12.3

150 410.2 143.0 16.0 65.0 12.3

151 416.9 144.8 3.0 60.0 12.1

152 414.9 142.2 3.0 60.0 12.1

153 538.5 238.7 1.0 71.5 R-11

154 549.2 232.0 1.0 71.5 R-11

155 559.9 225.3 1.0 71.5 R-11

156 583.0 245.3 1.0 71.2 R-12

157 576.2 236.0 1.0 71.2 R-12

158 569.4 226.7 1.0 71.2 R-12

159 498.0 261.0 1.0 79.8 S+H8

160 414.4 124.3 1.0 71.0 S+H7

161 437.0 145.2 1.0 63.0 31

162 140.1 225.1 1.0 63.0 31

163 170.8 195.1 5.5 70.0 P2

164 168.6 192.5 5.5 70.0 P3

==========

Źródła typu hala produkcyjna :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] h0[m] h[m]

==========

1 357.0 290.8 311.1 233.7 418.4 146.7 463.2 205.4 0.0 15.0

2 171.7 199.3 164.4 190.2 171.1 185.2 178.1 194.3 0.0 4.5

==========

POZIOMY HAŁASU i IZOLACYJNOść PRZEGRóD

Nr źródła		A	63	125	250	500	1000	2000	4000	8000	wsp.odb.
1	sc.1	L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R sc	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	sc.2	L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R sc	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	sc.3	L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R sc	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	sc.4	L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R sc	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	dach	L wew	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R d	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Nr źródła		A	63	125	250	500	1000	2000	4000	8000	wsp.odb.
2	sc.1	L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R sc	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	sc.2	L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R sc	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	sc.3	L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R sc	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	sc.4	L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R sc	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	dach	L wew	105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0000
		R d	28.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Ekrany akustyczne :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	h0[m]	h[m]	Symbol
1	453.5	229.9	445.5	220.6	463.3	205.3	471.3	214.6	0.0	8.0	E1
2	494.4	260.2	494.4	257.6	505.0	256.9	505.0	259.3	0.0	5.0	E2
3	311.1	233.4	265.4	176.8	373.0	90.0	418.6	146.6	0.0	15.0	E3
4	356.5	290.6	294.6	340.2	203.3	226.2	265.2	176.7	0.0	15.0	E4
5	287.2	331.1	203.0	226.3	193.3	234.2	277.4	339.0	0.0	15.0	E5
6	269.8	329.5	193.2	234.2	184.4	241.2	261.0	336.6	0.0	15.0	E6
7	253.5	327.2	184.4	241.4	175.8	248.3	244.9	334.0	0.0	15.0	E7
8	237.1	324.1	175.7	248.3	166.6	255.6	228.0	331.5	0.0	15.0	E8
9	220.8	321.8	166.7	255.4	157.7	262.8	211.8	329.2	0.0	15.0	E9
10	203.8	319.5	157.6	262.8	148.4	269.9	194.8	326.8	0.0	15.0	E10
11	186.6	316.6	148.4	269.9	140.0	276.4	178.4	323.3	0.0	15.0	E11
12	134.5	179.5	146.8	174.7	149.3	181.2	137.0	185.9	0.0	2.0	Wał1
13	149.2	181.2	146.7	174.7	159.5	170.2	165.3	184.3	0.0	3.0	Wał2
14	165.3	184.3	159.4	170.2	202.8	153.5	208.2	167.7	0.0	4.0	Wał3
15	208.3	167.7	202.8	153.4	207.4	151.8	212.1	164.1	0.0	3.8	Wał4
16	212.1	164.1	207.3	151.8	215.7	148.8	220.1	160.5	0.0	3.5	Wał5
17	220.1	160.5	215.7	148.7	233.2	142.2	235.6	148.0	0.0	3.0	Wał6
18	235.6	147.9	233.2	142.2	245.0	136.6	244.5	142.0	0.0	2.5	Wał7
19	239.6	139.1	236.2	135.5	241.0	131.2	244.9	136.6	0.0	2.5	Wał8
20	236.3	135.5	232.0	130.2	241.8	121.8	241.1	131.2	0.0	3.0	Wał9
21	231.9	130.2	224.6	122.6	235.2	114.8	241.7	121.8	0.0	3.5	Wał10
22	224.6	122.6	222.6	119.5	234.9	110.2	235.2	114.8	0.0	3.8	Wał11
23	222.6	119.4	212.2	101.8	227.0	95.8	234.8	110.2	0.0	4.0	Wał12
24	212.2	101.6	206.5	71.8	228.4	72.8	227.0	95.8	0.0	4.0	Wał13
25	227.5	89.8	269.6	84.3	269.5	69.4	228.5	72.9	0.0	4.0	Wał14
26	269.6	84.3	269.5	69.3	282.1	67.9	282.4	75.5	0.0	3.0	Wał15
27	282.5	75.5	282.1	67.9	292.7	67.4	293.1	74.6	0.0	2.0	Wał16
28	293.3	74.6	298.2	79.5	297.7	67.1	292.7	67.4	0.0	2.8	Wał17
29	328.2	64.5	297.7	67.2	298.2	79.3	329.2	76.2	0.0	3.5	Wał18

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WSPÓŁCZYNNIKI ODBICIA DLA ŚCIAN

Nr	ściana 1	ściana 2	ściana 3	ściana 4	dach
1	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000
3	1.0000	1.0000	1.0000	1.0000	1.0000
4	1.0000	1.0000	1.0000	1.0000	1.0000
5	1.0000	1.0000	1.0000	1.0000	1.0000
6	1.0000	1.0000	1.0000	1.0000	1.0000
7	1.0000	1.0000	1.0000	1.0000	1.0000
8	1.0000	1.0000	1.0000	1.0000	1.0000
9	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	1.0000
11	1.0000	1.0000	1.0000	1.0000	1.0000
12	1.0000	1.0000	1.0000	1.0000	1.0000
13	1.0000	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	1.0000	1.0000	1.0000
15	1.0000	1.0000	1.0000	1.0000	1.0000
16	1.0000	1.0000	1.0000	1.0000	1.0000
17	1.0000	1.0000	1.0000	1.0000	1.0000
18	1.0000	1.0000	1.0000	1.0000	1.0000
19	1.0000	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000	1.0000
21	1.0000	1.0000	1.0000	1.0000	1.0000
22	1.0000	1.0000	1.0000	1.0000	1.0000
23	1.0000	1.0000	1.0000	1.0000	1.0000
24	1.0000	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000	1.0000
26	1.0000	1.0000	1.0000	1.0000	1.0000

27	1.0000	1.0000	1.0000	1.0000	1.0000
28	1.0000	1.0000	1.0000	1.0000	1.0000
29	1.0000	1.0000	1.0000	1.0000	1.0000

==========

Punkty obserwacji

Nr	Symbol	X[m]	Y[m]	z[m]
1	P1	95.5	268.1	1.5
2	P2	95.5	268.1	4.5
3	P3	106.1	268.7	4.0
4	P4	107.0	236.4	1.5
5	P5	104.3	238.0	4.5
6	P6	97.1	220.7	1.5
7	P7	97.1	220.7	4.5
8	P8	113.1	225.8	4.0
9	P9	98.4	165.7	1.5
10	P10	98.4	165.7	4.5
11	P11	109.3	164.7	4.0
12	P12	132.0	173.4	1.5
13	P13	132.0	173.4	4.5
14	P14	133.9	177.8	4.0
15	P15	98.4	133.0	1.5
16	P16	98.4	133.0	4.5
17	P17	106.7	140.4	4.0
18	P18	124.6	114.5	1.5
19	P19	124.6	114.5	4.5
20	P20	135.8	150.0	4.0
21	P21	155.4	70.3	1.5
22	P22	155.4	70.3	4.5
23	P23	159.5	78.3	4.0

24 P24 215.5 71.0 1.5

25 P25 215.5 71.0 4.5

26 P26 215.5 71.0 4.0

27 P27 203.0 31.3 1.5

28 P28 203.0 31.3 4.5

29 P29 204.0 52.4 4.0

30 P30 616.0 196.7 1.5

31 P31 616.0 196.7 4.5

32 P32 606.3 195.4 4.0

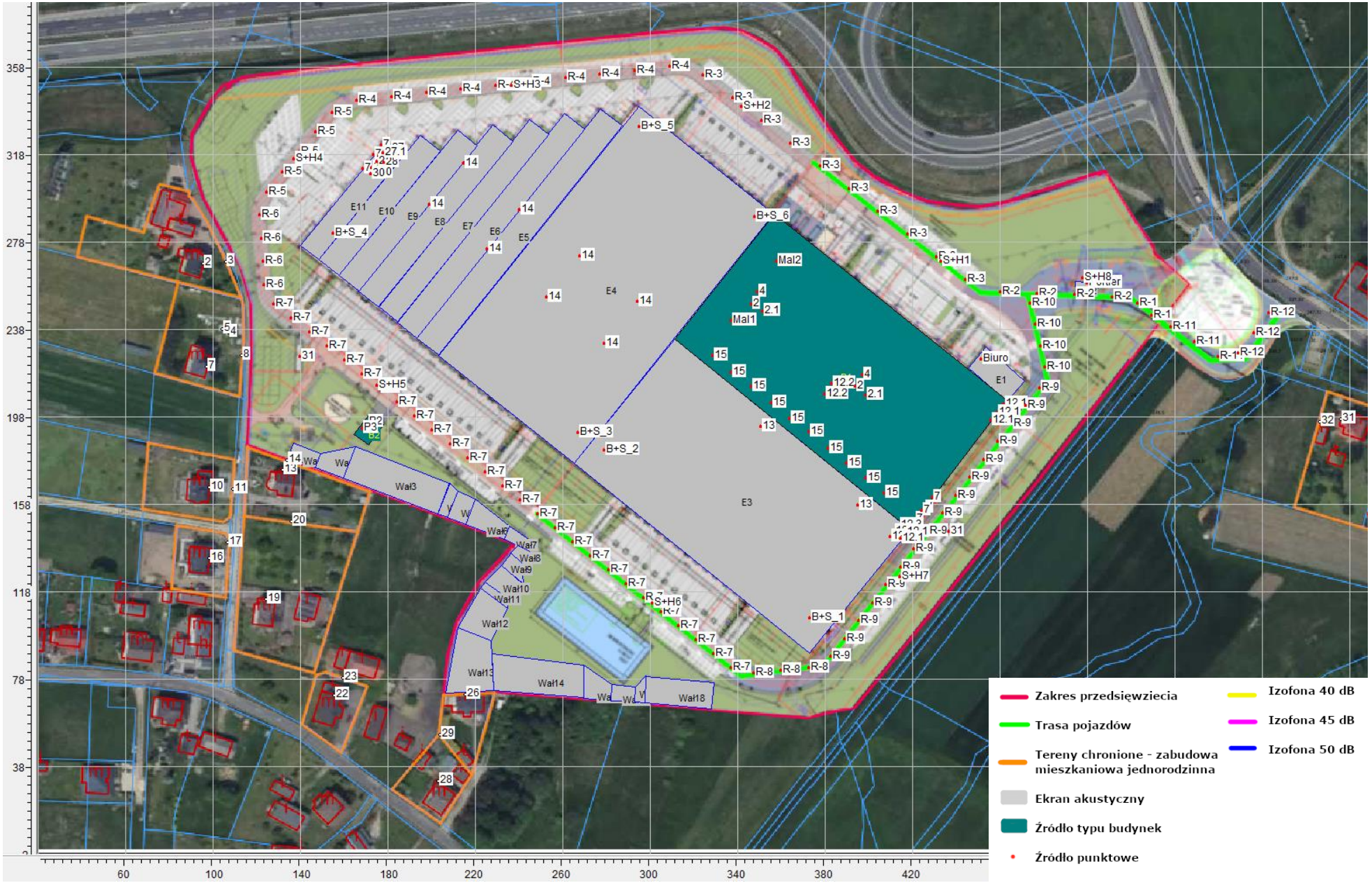
Obszary o innym niż globalny współczynniku gruntu G :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

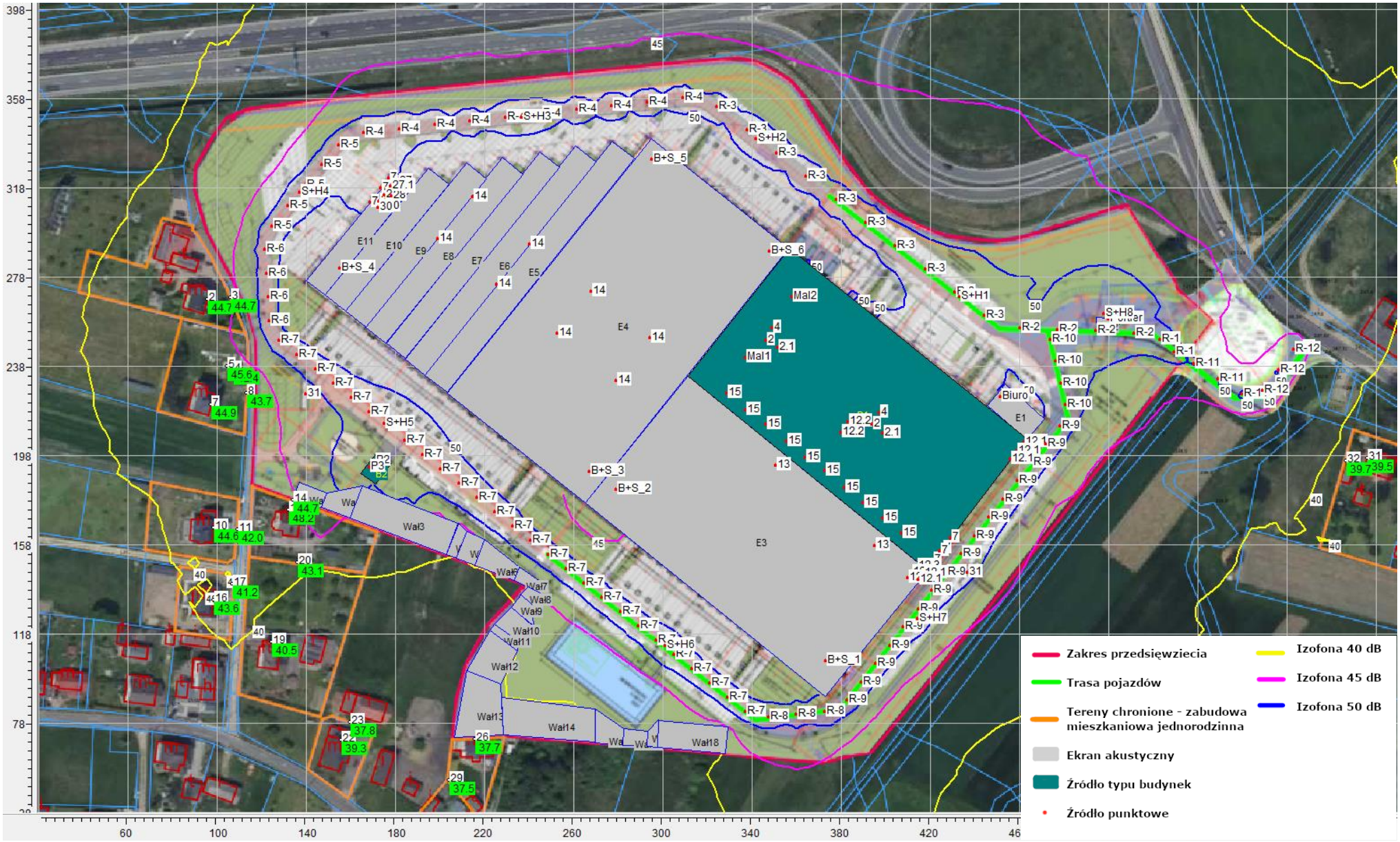
Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	wsp.G
1	250.1	190.1	234.4	171.5	268.0	144.0	282.7	162.2	1.000
2	151.8	221.4	242.1	147.5	238.2	140.2	121.8	183.4	1.000
3	147.6	225.8	128.8	200.6	118.4	202.8	119.4	249.6	1.000
4	129.2	283.0	148.0	268.0	133.6	250.0	128.0	253.6	1.000
5	121.0	248.2	117.6	296.6	90.6	315.4	97.0	296.0	1.000
6	90.6	315.4	117.8	296.8	161.6	353.6	111.2	350.8	1.000
7	241.6	144.6	206.8	72.2	330.2	64.6	339.8	77.8	1.000
8	238.1	138.2	221.4	122.2	210.9	102.6	206.1	71.6	1.000
9	555.7	270.6	393.4	63.4	544.3	13.2	617.8	233.2	1.000
10	510.4	245.5	367.0	60.7	393.4	62.0	528.9	237.2	1.000

Program LEQ Professional w.6(2019)
Wydruk wyników obliczeń
Projekt :

Nr pkt.	X [m]	Y [m]	z [m]	Leq [dB(A)]
1	95.5	268.1	1.5	42.6
2	95.5	268.1	4.5	44.7
3	106.1	268.7	4.0	44.7
4	107.0	236.4	1.5	42.4
5	104.3	238.0	4.5	45.6
6	97.1	220.7	1.5	41.5
7	97.1	220.7	4.5	44.9
8	113.1	225.8	4.0	43.7
9	98.4	165.7	1.5	40.5
10	98.4	165.7	4.5	44.6
11	109.3	164.7	4.0	42.0
12	132.0	173.4	1.5	40.3
13	132.0	173.4	4.5	48.2
14	133.9	177.8	4.0	44.7
15	98.4	133.0	1.5	38.4
16	98.4	133.0	4.5	43.6
17	106.7	140.4	4.0	41.2
18	124.6	114.5	1.5	37.7
19	124.6	114.5	4.5	40.5
20	135.8	150.0	4.0	43.1
21	155.4	70.3	1.5	36.6
22	155.4	70.3	4.5	39.3
23	159.5	78.3	4.0	37.8
24	215.5	71.0	1.5	26.3
25	215.5	71.0	4.5	39.1
26	215.5	71.0	4.0	37.7
27	203.0	31.3	1.5	36.1
28	203.0	31.3	4.5	38.2
29	204.0	52.4	4.0	37.5
30	616.0	196.7	1.5	37.2
31	616.0	196.7	4.5	39.5
32	606.3	195.4	4.0	39.6



Rysunek 7 Plan sytuacyjny – pora dnia, bez zastosowania rozwiązań minimalizujących



Rysunek 8 Izofony w porze dnia - bez zastosowania rozwiązań minimalizujących

5. Pora nocy – I etap, z zastosowaniem rozwiązań minimalizujących

Program LEQ Professional v. 6-2019 dla Windows

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Dane do obliczeń :

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Współczynnik gruntu (całego obszaru analizy)-global G = 0.000

Temperatura otoczenia 10[°C]

Źródła punktowe

Nr	X[m]	Y[m]	z[m]	Pma	Symbol
1	451.7	224.0	9.0	89.1	Biuro
2	499.8	258.6	6.0	76.0	Portier
3	373.2	105.5	16.0	83.7	B+S_1
4	279.1	182.4	16.0	83.7	B+S_2
5	462.2	203.7	3.0	60.0	12.1
6	458.8	199.4	3.0	60.0	12.1
7	429.1	160.8	3.0	64.0	7
8	425.5	155.9	3.0	76.0	7
9	421.2	150.7	3.0	77.0	7
10	329.0	225.4	16.0	87.0	15
11	337.3	218.2	16.0	87.0	15
12	346.3	211.7	16.0	87.0	15
13	355.7	203.8	16.0	87.0	15
14	364.0	196.9	16.0	87.0	15
15	373.0	190.8	16.0	87.0	15
16	381.6	183.2	16.0	87.0	15
17	390.2	176.4	16.0	87.0	15
18	398.9	169.6	16.0	87.0	15
19	407.2	162.7	16.0	87.0	15
20	379.8	208.1	16.0	65.0	12.2

21 383.0 212.8 16.0 65.0 12.2

22 349.2 254.9 16.0 80.0 4

23 397.4 216.7 16.0 80.0 4

24 346.3 249.1 16.0 63.0 2

25 393.8 211.7 16.0 63.0 2

26 351.7 245.9 16.0 86.0 2.1

27 398.9 207.4 16.0 86.0 2.1

28 350.6 193.0 16.0 77.0 13

29 395.3 157.3 16.0 77.0 13

30 433.3 268.8 0.5 76.5 S+H2

31 301.4 112.6 0.5 76.5 S+H4

32 337.3 241.6 16.0 81.0 Mal1

33 358.2 268.6 16.0 81.0 Mal2

34 424.5 154.7 3.0 76.0 7

35 456.2 196.0 3.0 60.0 12.1

36 413.8 148.0 16.0 65.0 12.3

37 411.6 145.2 16.0 65.0 12.3

38 410.2 143.0 16.0 65.0 12.3

39 416.9 144.8 3.0 60.0 12.1

40 414.9 142.2 3.0 60.0 12.1

41 585.9 243.4 1.0 72.1 R-1

42 580.5 236.0 1.0 72.1 R-1

43 571.8 226.2 1.0 72.1 R-1

44 498.0 261.0 1.0 80.6 S+H1

45 553.6 226.9 1.0 72.3 R-2

46 543.6 233.8 1.0 72.3 R-2

47 534.3 241.3 1.0 72.3 R-2

48 525.0 249.4 1.0 72.3 R-2

49 510.9 253.3 1.0 73.8 R-3

50 494.0 253.7 1.0 73.8 R-3

51 477.0 254.2 1.0 73.8 R-3

52 460.1 254.6 1.0 73.8 R-3

53 474.2 248.8 1.0 71.4 R-5

54 476.4 239.1 1.0 71.4 R-5

55 478.6 229.5 1.0 71.4 R-5

56 480.9 219.9 1.0 71.4 R-5

57 476.9 207.9 1.0 72.7 R-6

58 466.6 194.8 1.0 72.7 R-6

59 456.4 181.8 1.0 72.7 R-6

60 446.1 168.7 1.0 72.7 R-6

61 435.8 155.6 1.0 72.7 R-6

62 425.6 142.6 1.0 72.7 R-6

63 415.3 129.5 1.0 72.7 R-6

64 405.1 116.5 1.0 72.7 R-6

65 394.8 103.4 1.0 72.7 R-6

66 384.5 90.3 1.0 72.7 R-6

67 374.6 82.9 1.0 71.2 R-7

68 365.3 81.8 1.0 71.2 R-7

69 356.1 80.7 1.0 71.2 R-7

70 346.8 79.5 1.0 71.2 R-7

71 337.3 82.4 1.0 74.4 R-8

72 328.7 89.3 1.0 74.4 R-8

73 320.1 96.1 1.0 74.4 R-8

74 311.5 103.0 1.0 74.4 R-8

75 302.9 109.8 1.0 74.4 R-8

76 294.3 116.7 1.0 74.4 R-8

77 285.7 123.6 1.0 74.4 R-8

78 277.1 130.4 1.0 74.4 R-8

79 268.5 137.3 1.0 74.4 R-8

80 259.9 144.1 1.0 74.4 R-8

81 251.3 151.0 1.0 74.4 R-8

82 423.6 137.8 1.0 74.2 S+H3

83 447.7 258.0 1.0 71.8 R-4

84 439.2 264.5 1.0 71.8 R-4

85 430.7 271.1 1.0 71.8 R-4

86 422.2 277.6 1.0 71.8 R-4

87 413.7 284.1 1.0 71.8 R-4

88 405.2 290.7 1.0 71.8 R-4

89 396.8 297.2 1.0 71.8 R-4

90 388.3 303.7 1.0 71.8 R-4

91 379.8 310.3 1.0 71.8 R-4

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Źródła typu hala produkcyjna :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] h0[m] h[m]

==========

1 357.0 290.8 311.1 233.7 418.4 146.7 463.2 205.4 0.0 15.0

==========

POZIOMY HAŁASU i IZOLACYJNOść PRZEGRóD

Nr źródła A 63 125 250 500 1000 2000 4000 8000 wsp.odb.

==========

1 sc.1 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.2 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.3 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.4 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

dach L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R d 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

==========

Ekrany akustyczne :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	h0[m]	h[m]	Symbol
1	453.5	229.9	445.5	220.6	463.3	205.3	471.3	214.6	0.0	8.0	E1
2	494.4	260.2	494.4	257.6	505.0	256.9	505.0	259.3	0.0	5.0	E2
3	311.1	233.4	265.4	176.8	373.0	90.0	418.6	146.6	0.0	15.0	E3
4	134.5	179.5	146.8	174.7	149.3	181.2	137.0	185.9	0.0	2.0	Wał1
5	149.2	181.2	146.7	174.7	159.5	170.2	165.3	184.3	0.0	3.0	Wał2
6	165.3	184.3	159.4	170.2	202.8	153.5	208.2	167.7	0.0	4.0	Wał3
7	208.3	167.7	202.8	153.4	207.4	151.8	212.1	164.1	0.0	3.8	Wał4
8	212.1	164.1	207.3	151.8	215.7	148.8	220.1	160.5	0.0	3.5	Wał5
9	220.1	160.5	215.7	148.7	233.2	142.2	235.6	148.0	0.0	3.0	Wał6
10	235.6	147.9	233.2	142.2	245.0	136.6	244.5	142.0	0.0	2.5	Wał7
11	239.6	139.1	236.2	135.5	241.0	131.2	244.9	136.6	0.0	2.5	Wał8
12	236.3	135.5	232.0	130.2	241.8	121.8	241.1	131.2	0.0	3.0	Wał9
13	231.9	130.2	224.6	122.6	235.2	114.8	241.7	121.8	0.0	3.5	Wał10
14	224.6	122.6	222.6	119.5	234.9	110.2	235.2	114.8	0.0	3.8	Wał11
15	222.6	119.4	212.2	101.8	227.0	95.8	234.8	110.2	0.0	4.0	Wał12
16	212.2	101.6	206.5	71.8	228.4	72.8	227.0	95.8	0.0	4.0	Wał13
17	227.5	89.8	269.6	84.3	269.5	69.4	228.5	72.9	0.0	4.0	Wał14
18	269.6	84.3	269.5	69.3	282.1	67.9	282.4	75.5	0.0	3.0	Wał15
19	282.5	75.5	282.1	67.9	292.7	67.4	293.1	74.6	0.0	2.0	Wał16
20	293.3	74.6	298.2	79.5	297.7	67.1	292.7	67.4	0.0	2.8	Wał17
21	328.2	64.5	297.7	67.2	298.2	79.3	329.2	76.2	0.0	3.5	Wał18
22	171.7	199.3	164.6	190.2	171.1	185.2	178.1	194.3	0.0	4.5	E12
23	227.7	159.3	248.2	143.3	247.8	142.6	227.4	158.7	0.0	4.0	Ekr6
24	248.2	143.3	249.0	138.1	248.5	138.0	247.6	143.1	0.0	4.0	Ekr7
25	249.0	138.2	329.0	75.0	328.6	74.4	248.6	137.8	0.0	4.0	Ekr8

26	329.0	75.0	338.2	71.7	338.1	70.8	328.7	74.4	0.0	4.0	Ekr9
27	338.2	71.6	346.5	70.1	346.5	69.2	338.1	70.8	0.0	4.0	Ekr10
28	346.5	70.0	353.7	70.0	353.8	69.4	346.4	69.3	0.0	4.0	Ekr11
29	353.8	70.0	360.6	70.6	360.6	69.8	353.6	69.4	0.0	4.0	Ekr12
30	360.6	70.6	368.0	72.8	368.2	72.0	360.6	69.9	0.0	4.0	Ekr13
31	368.0	72.7	374.7	75.9	375.0	75.2	368.2	72.0	0.0	4.0	Ekr14
32	374.8	76.0	382.7	81.4	383.1	80.8	375.0	75.3	0.0	4.0	Ekr15
33	382.7	81.3	392.4	92.3	393.1	91.8	383.1	80.8	0.0	4.0	Ekr16
34	514.0	245.0	515.1	244.1	478.0	198.6	477.2	199.3	0.0	4.0	Ekr17
35	542.5	229.4	556.9	218.8	556.3	217.8	541.8	228.5	0.0	4.0	Ekr18
36	556.8	218.6	563.3	217.6	563.2	216.4	556.3	217.7	0.0	4.0	Ekr19
37	563.2	217.4	570.3	219.3	570.6	218.6	563.2	216.4	0.0	4.0	Ekr20
38	570.2	219.4	574.1	221.3	574.6	220.7	570.6	218.6	0.0	4.0	Ekr21
39	574.2	221.4	587.4	239.0	588.0	238.6	574.6	220.6	0.0	4.0	Ekr22

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WSPÓŁCZYNNIKI ODBICIA DLA ŚCIAN

Nr	ściana 1	ściana 2	ściana 3	ściana 4	dach
1	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000
3	1.0000	1.0000	1.0000	1.0000	1.0000
4	1.0000	1.0000	1.0000	1.0000	1.0000
5	1.0000	1.0000	1.0000	1.0000	1.0000
6	1.0000	1.0000	1.0000	1.0000	1.0000
7	1.0000	1.0000	1.0000	1.0000	1.0000
8	1.0000	1.0000	1.0000	1.0000	1.0000
9	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	1.0000
11	1.0000	1.0000	1.0000	1.0000	1.0000
12	1.0000	1.0000	1.0000	1.0000	1.0000

13	1.0000	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	1.0000	1.0000	1.0000
15	1.0000	1.0000	1.0000	1.0000	1.0000
16	1.0000	1.0000	1.0000	1.0000	1.0000
17	1.0000	1.0000	1.0000	1.0000	1.0000
18	1.0000	1.0000	1.0000	1.0000	1.0000
19	1.0000	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000	1.0000
21	1.0000	1.0000	1.0000	1.0000	1.0000
22	1.0000	1.0000	1.0000	1.0000	1.0000
23	1.0000	1.0000	1.0000	1.0000	1.0000
24	1.0000	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000	1.0000
26	1.0000	1.0000	1.0000	1.0000	1.0000
27	1.0000	1.0000	1.0000	1.0000	1.0000
28	1.0000	1.0000	1.0000	1.0000	1.0000
29	1.0000	1.0000	1.0000	1.0000	1.0000
30	1.0000	1.0000	1.0000	1.0000	1.0000
31	1.0000	1.0000	1.0000	1.0000	1.0000
32	1.0000	1.0000	1.0000	1.0000	1.0000
33	1.0000	1.0000	1.0000	1.0000	1.0000
34	1.0000	1.0000	1.0000	1.0000	1.0000
35	1.0000	1.0000	1.0000	1.0000	1.0000
36	1.0000	1.0000	1.0000	1.0000	1.0000
37	1.0000	1.0000	1.0000	1.0000	1.0000
38	1.0000	1.0000	1.0000	1.0000	1.0000
39	1.0000	1.0000	1.0000	1.0000	1.0000

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Punkty obserwacji

Nr	Symbol	X[m]	Y[m]	z[m]

1	P1	95.5	268.1	1.5
2	P2	95.5	268.1	4.5
3	P3	106.1	268.7	4.0
4	P4	107.0	236.4	1.5
5	P5	104.3	238.0	4.5
6	P6	97.1	220.7	1.5
7	P7	97.1	220.7	4.5
8	P8	113.1	225.8	4.0
9	P9	98.4	165.7	1.5
10	P10	98.4	165.7	4.5
11	P11	109.3	164.7	4.0
12	P12	132.0	173.4	1.5
13	P13	132.0	173.4	4.5
14	P14	133.9	177.8	4.0
15	P15	98.4	133.0	1.5
16	P16	98.4	133.0	4.5
17	P17	106.7	140.4	4.0
18	P18	124.6	114.5	1.5
19	P19	124.6	114.5	4.5
20	P20	135.8	150.0	4.0
21	P21	155.4	70.3	1.5
22	P22	155.4	70.3	4.5
23	P23	159.5	78.3	4.0
24	P24	215.5	71.0	1.5
25	P25	215.5	71.0	4.5
26	P26	215.5	71.0	4.0
27	P27	203.0	31.3	1.5
28	P28	203.0	31.3	4.5
29	P29	204.0	52.4	4.0
30	P30	616.0	196.7	1.5

31 P31 616.0 196.7 4.5

32 P32 606.3 195.4 4.0

Obszary o innym niż globalny współczynniku gruntu G :

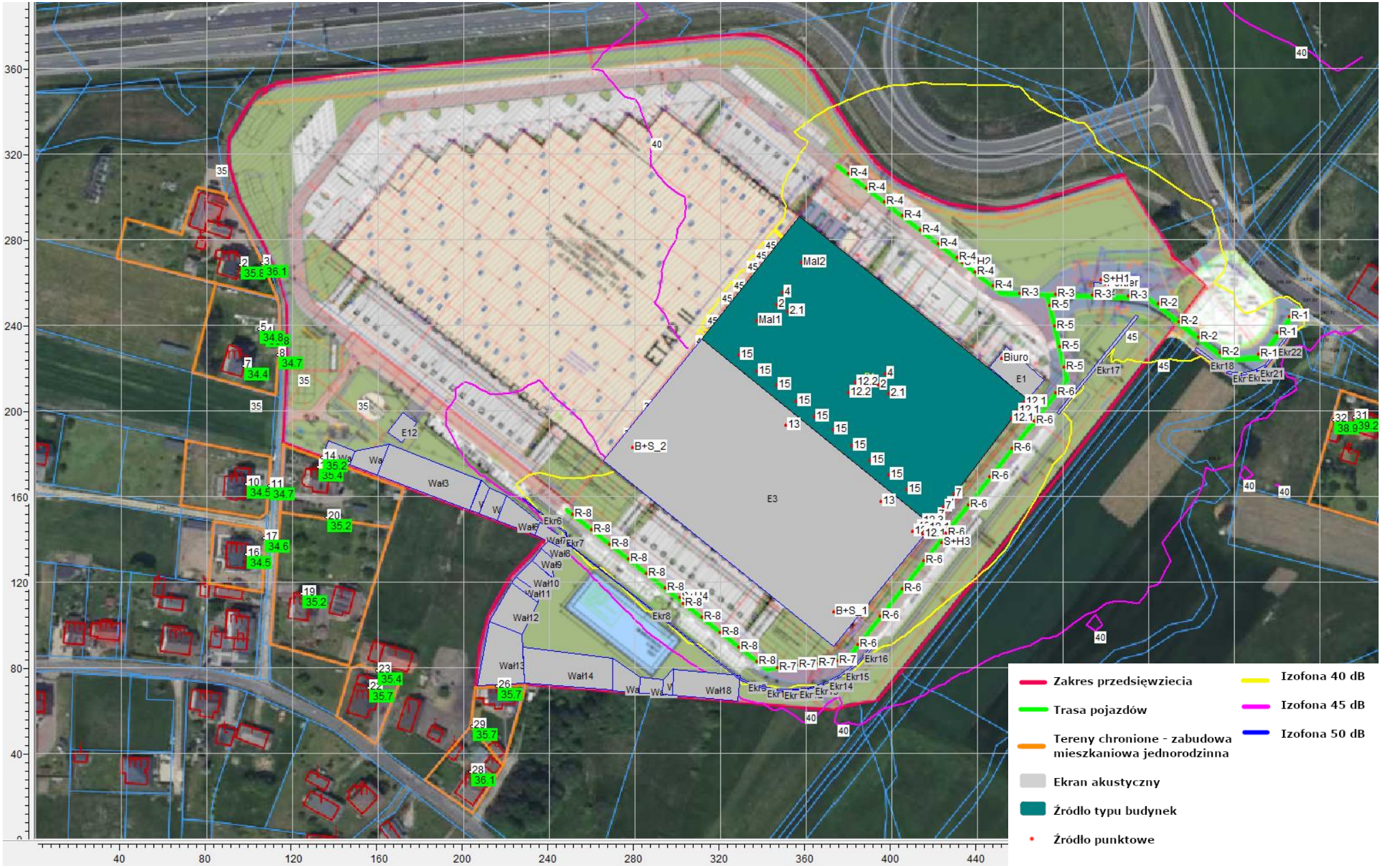
WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr	X1[m]	Y1[m]	X2[m]	Y2[m]	X3[m]	Y3[m]	X4[m]	Y4[m]	wsp.G
1	250.1	190.1	234.4	171.5	268.0	144.0	282.7	162.2	1.000
2	151.8	221.4	242.1	147.5	238.2	140.2	121.8	183.4	1.000
3	147.6	225.8	128.8	200.6	118.4	202.8	119.4	249.6	1.000
4	129.2	283.0	148.0	268.0	133.6	250.0	128.0	253.6	1.000
5	121.0	248.2	117.6	296.6	90.6	315.4	97.0	296.0	1.000
6	90.6	315.4	117.8	296.8	161.6	353.6	111.2	350.8	1.000
7	241.6	144.6	206.8	72.2	330.2	64.6	339.8	77.8	1.000
8	238.1	138.2	221.4	122.2	210.9	102.6	206.1	71.6	1.000
9	555.7	270.6	393.4	63.4	544.3	13.2	617.8	233.2	1.000
10	510.4	245.5	367.0	60.7	393.4	62.0	528.9	237.2	1.000

Program LEQ Professional w.6(2019)
Wydruk wyników obliczeń
Projekt :

Nr pkt.	X [m]	Y [m]	z [m]	Leq [dB(A)]
1	95.5	268.1	1.5	35.6
2	95.5	268.1	4.5	35.8
3	106.1	268.7	4.0	36.1
4	107.0	236.4	1.5	33.8
5	104.3	238.0	4.5	34.8
6	97.1	220.7	1.5	33.1
7	97.1	220.7	4.5	34.4
8	113.1	225.8	4.0	34.7
9	98.4	165.7	1.5	33.6
10	98.4	165.7	4.5	34.5
11	109.3	164.7	4.0	34.7
12	132.0	173.4	1.5	34.7
13	132.0	173.4	4.5	35.4
14	133.9	177.8	4.0	35.2
15	98.4	133.0	1.5	33.8
16	98.4	133.0	4.5	34.5
17	106.7	140.4	4.0	34.6
18	124.6	114.5	1.5	34.1
19	124.6	114.5	4.5	35.2
20	135.8	150.0	4.0	35.2
21	155.4	70.3	1.5	34.0
22	155.4	70.3	4.5	35.7
23	159.5	78.3	4.0	35.5
24	215.5	71.0	1.5	25.5
25	215.5	71.0	4.5	36.9
26	215.5	71.0	4.0	35.7
27	203.0	31.3	1.5	33.8
28	203.0	31.3	4.5	36.1
29	204.0	52.4	4.0	35.7
30	616.0	196.7	1.5	36.5
31	616.0	196.7	4.5	39.2
32	606.3	195.4	4.0	39.0

Rysunek 9 Plan sytuacyjny etapu I – pora nocy, z zastosowaniem rozwiązań minimalizujących



Rysunek 10 Izofony w porze nocy, etap I – z zastosowaniem rozwiązań minimalizujących

6. Pora dnia – I etap, z zastosowaniem rozwiązań minimalizujących

Program LEQ Professional v. 6-2019 dla Windows

****

Dane do obliczeń :

****

Współczynnik gruntu (całego obszaru analizy)-global G = 0.000

Temperatura otoczenia 10[°C]

Źródła punktowe

Nr	X[m]	Y[m]	z[m]	Pma	Symbol
1	451.7	224.0	9.0	89.1	Biuro
2	499.8	258.6	6.0	76.0	Portier
3	373.2	105.5	16.0	83.7	B+S_1
4	279.1	182.4	16.0	83.7	B+S_2
5	462.2	203.7	3.0	60.0	12.1
6	458.8	199.4	3.0	60.0	12.1
7	429.1	160.8	3.0	64.0	7
8	425.5	155.9	3.0	76.0	7
9	421.2	150.7	3.0	77.0	7
10	329.0	225.4	16.0	87.0	15
11	337.3	218.2	16.0	87.0	15
12	346.3	211.7	16.0	87.0	15
13	355.7	203.8	16.0	87.0	15
14	364.0	196.9	16.0	87.0	15
15	373.0	190.8	16.0	87.0	15
16	381.6	183.2	16.0	87.0	15
17	390.2	176.4	16.0	87.0	15
18	398.9	169.6	16.0	87.0	15

19 407.2 162.7 16.0 87.0 15

20 379.8 208.1 16.0 65.0 12.2

21 383.0 212.8 16.0 65.0 12.2

22 349.2 254.9 16.0 80.0 4

23 397.4 216.7 16.0 80.0 4

24 346.3 249.1 16.0 63.0 2

25 393.8 211.7 16.0 63.0 2

26 351.7 245.9 16.0 86.0 2.1

27 398.9 207.4 16.0 86.0 2.1

28 350.6 193.0 16.0 77.0 13

29 395.3 157.3 16.0 77.0 13

30 433.3 268.8 0.5 74.9 S+H2

31 301.4 112.6 0.5 74.9 S+H4

32 337.3 241.6 16.0 81.0 Mal1

33 358.2 268.6 16.0 81.0 Mal2

34 424.5 154.7 3.0 76.0 7

35 456.2 196.0 3.0 60.0 12.1

36 413.8 148.0 16.0 65.0 12.3

37 411.6 145.2 16.0 65.0 12.3

38 410.2 143.0 16.0 65.0 12.3

39 416.9 144.8 3.0 60.0 12.1

40 414.9 142.2 3.0 60.0 12.1

41 585.9 243.4 1.0 71.2 R-1

42 580.5 236.0 1.0 71.2 R-1

43 571.8 226.2 1.0 71.2 R-1

44 498.0 261.0 1.0 79.8 S+H1

45 553.6 226.9 1.0 71.4 R-2

46 543.6 233.8 1.0 71.4 R-2

47 534.3 241.3 1.0 71.4 R-2

48 525.0 249.4 1.0 71.4 R-2

49 510.9 253.3 1.0 72.8 R-3

50 494.0 253.7 1.0 72.8 R-3

51 477.0 254.2 1.0 72.8 R-3

52 460.1 254.6 1.0 72.8 R-3

53 474.2 248.8 1.0 70.5 R-5

54 476.4 239.1 1.0 70.5 R-5

55 478.6 229.5 1.0 70.5 R-5

56 480.9 219.9 1.0 70.5 R-5

57 476.9 207.9 1.0 72.4 R-6

58 466.6 194.8 1.0 72.4 R-6

59 456.4 181.8 1.0 72.4 R-6

60 446.1 168.7 1.0 72.4 R-6

61 435.8 155.6 1.0 72.4 R-6

62 425.6 142.6 1.0 72.4 R-6

63 415.3 129.5 1.0 72.4 R-6

64 405.1 116.5 1.0 72.4 R-6

65 394.8 103.4 1.0 72.4 R-6

66 384.5 90.3 1.0 72.4 R-6

67 374.6 82.9 1.0 70.3 R-7

68 365.3 81.8 1.0 70.3 R-7

69 356.1 80.7 1.0 70.3 R-7

70 346.8 79.5 1.0 70.3 R-7

71 337.3 82.4 1.0 71.0 R-8

72 328.7 89.3 1.0 71.0 R-8

73 320.1 96.1 1.0 71.0 R-8

74 311.5 103.0 1.0 71.0 R-8

75 302.9 109.8 1.0 71.0 R-8

76 294.3 116.7 1.0 71.0 R-8

77 285.7 123.6 1.0 71.0 R-8

78 277.1 130.4 1.0 71.0 R-8

79 268.5 137.3 1.0 71.0 R-8

80 259.9 144.1 1.0 71.0 R-8

81 251.3 151.0 1.0 71.0 R-8

82 423.6 137.8 1.0 74.9 S+H3

83 447.7 258.0 1.0 70.8 R-4

84 439.2 264.5 1.0 70.8 R-4

85 430.7 271.1 1.0 70.8 R-4

86 422.2 277.6 1.0 70.8 R-4

87 413.7 284.1 1.0 70.8 R-4

88 405.2 290.7 1.0 70.8 R-4

89 396.8 297.2 1.0 70.8 R-4

90 388.3 303.7 1.0 70.8 R-4

91 379.8 310.3 1.0 70.8 R-4

92 437.0 145.2 1.0 63.0 31

93 140.1 225.1 1.0 63.0 31

94 170.8 195.1 5.5 70.0 P2

95 168.6 192.5 5.5 70.0 P3

==========

Źródła typu hala produkcyjna :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] h0[m] h[m]

==========

1 357.0 290.8 311.1 233.7 418.4 146.7 463.2 205.4 0.0 15.0

2 171.7 199.3 164.4 190.2 171.1 185.2 178.1 194.3 0.0 4.5

==========

POZIOMY HAŁASU i IZOLACYJNOść PRZEGRóD

Nr źródła A 63 125 250 500 1000 2000 4000 8000 wsp.odb.

==========

1 sc.1 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.2 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.3 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.4 L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

dach L wew 80.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R d 30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

==========

Nr źródła A 63 125 250 500 1000 2000 4000 8000 wsp.odb.

==========

2 sc.1 L wew 105.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 46.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.2 L wew 105.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 46.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.3 L wew 105.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 46.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

sc.4 L wew 105.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R sc 46.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

dach L wew 105.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0000

R d 28.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

==========

Ekrany akustyczne :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] h0[m] h[m] Symbol

==========

1 453.5 229.9 445.5 220.6 463.3 205.3 471.3 214.6 0.0 8.0 E1

2 494.4 260.2 494.4 257.6 505.0 256.9 505.0 259.3 0.0 5.0 E2

3 311.1 233.4 265.4 176.8 373.0 90.0 418.6 146.6 0.0 15.0 E3

4 134.5 179.5 146.8 174.7 149.3 181.2 137.0 185.9 0.0 2.0 Wał1

5 149.2 181.2 146.7 174.7 159.5 170.2 165.3 184.3 0.0 3.0 Wał2

6 165.3 184.3 159.4 170.2 202.8 153.5 208.2 167.7 0.0 4.0 Wał3

7 208.3 167.7 202.8 153.4 207.4 151.8 212.1 164.1 0.0 3.8 Wał4

8 212.1 164.1 207.3 151.8 215.7 148.8 220.1 160.5 0.0 3.5 Wał5

9 220.1 160.5 215.7 148.7 233.2 142.2 235.6 148.0 0.0 3.0 Wał6

10 235.6 147.9 233.2 142.2 245.0 136.6 244.5 142.0 0.0 2.5 Wał7

11 239.6 139.1 236.2 135.5 241.0 131.2 244.9 136.6 0.0 2.5 Wał8

12 236.3 135.5 232.0 130.2 241.8 121.8 241.1 131.2 0.0 3.0 Wał9

13 231.9 130.2 224.6 122.6 235.2 114.8 241.7 121.8 0.0 3.5 Wał10

14 224.6 122.6 222.6 119.5 234.9 110.2 235.2 114.8 0.0 3.8 Wał11

15 222.6 119.4 212.2 101.8 227.0 95.8 234.8 110.2 0.0 4.0 Wał12

16 212.2 101.6 206.5 71.8 228.4 72.8 227.0 95.8 0.0 4.0 Wał13

17 227.5 89.8 269.6 84.3 269.5 69.4 228.5 72.9 0.0 4.0 Wał14

18 269.6 84.3 269.5 69.3 282.1 67.9 282.4 75.5 0.0 3.0 Wał15

19 282.5 75.5 282.1 67.9 292.7 67.4 293.1 74.6 0.0 2.0 Wał16

20 293.3 74.6 298.2 79.5 297.7 67.1 292.7 67.4 0.0 2.8 Wał17

21 328.2 64.5 297.7 67.2 298.2 79.3 329.2 76.2 0.0 3.5 Wał18

22 227.7 159.3 248.2 143.3 247.8 142.6 227.4 158.7 0.0 4.0 Ekr6

23 248.2 143.3 249.0 138.1 248.5 138.0 247.6 143.1 0.0 4.0 Ekr7

24 249.0 138.2 329.0 75.0 328.6 74.4 248.6 137.8 0.0 4.0 Ekr8

25 329.0 75.0 338.2 71.7 338.1 70.8 328.7 74.4 0.0 4.0 Ekr9

26 338.2 71.6 346.5 70.1 346.5 69.2 338.1 70.8 0.0 4.0 Ekr10

27 346.5 70.0 353.7 70.0 353.8 69.4 346.4 69.3 0.0 4.0 Ekr11

28 353.8 70.0 360.6 70.6 360.6 69.8 353.6 69.4 0.0 4.0 Ekr12

29 360.6 70.6 368.0 72.8 368.2 72.0 360.6 69.9 0.0 4.0 Ekr13

30 368.0 72.7 374.7 75.9 375.0 75.2 368.2 72.0 0.0 4.0 Ekr14

31 374.8 76.0 382.7 81.4 383.1 80.8 375.0 75.3 0.0 4.0 Ekr15

32 382.7 81.3 392.4 92.3 393.1 91.8 383.1 80.8 0.0 4.0 Ekr16

33 514.0 245.0 515.1 244.1 478.0 198.6 477.2 199.3 0.0 4.0 Ekr17

34 542.5 229.4 556.9 218.8 556.3 217.8 541.8 228.5 0.0 4.0 Ekr18

35 556.8 218.6 563.3 217.6 563.2 216.4 556.3 217.7 0.0 4.0 Ekr19

36 563.2 217.4 570.3 219.3 570.6 218.6 563.2 216.4 0.0 4.0 Ekr20

37 570.2 219.4 574.1 221.3 574.6 220.7 570.6 218.6 0.0 4.0 Ekr21

38 574.2 221.4 587.4 239.0 588.0 238.6 574.6 220.6 0.0 4.0 Ekr22

==========

WSPÓŁCZYNNIKI ODBICIA DLA ŚCIAN

Nr	ściana 1	ściana 2	ściana 3	ściana 4	dach
1	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000
3	1.0000	1.0000	1.0000	1.0000	1.0000
4	1.0000	1.0000	1.0000	1.0000	1.0000
5	1.0000	1.0000	1.0000	1.0000	1.0000
6	1.0000	1.0000	1.0000	1.0000	1.0000
7	1.0000	1.0000	1.0000	1.0000	1.0000
8	1.0000	1.0000	1.0000	1.0000	1.0000
9	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	1.0000
11	1.0000	1.0000	1.0000	1.0000	1.0000
12	1.0000	1.0000	1.0000	1.0000	1.0000
13	1.0000	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	1.0000	1.0000	1.0000
15	1.0000	1.0000	1.0000	1.0000	1.0000
16	1.0000	1.0000	1.0000	1.0000	1.0000
17	1.0000	1.0000	1.0000	1.0000	1.0000
18	1.0000	1.0000	1.0000	1.0000	1.0000
19	1.0000	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000	1.0000
21	1.0000	1.0000	1.0000	1.0000	1.0000
22	1.0000	1.0000	1.0000	1.0000	1.0000
23	1.0000	1.0000	1.0000	1.0000	1.0000
24	1.0000	1.0000	1.0000	1.0000	1.0000

25	1.0000	1.0000	1.0000	1.0000	1.0000
26	1.0000	1.0000	1.0000	1.0000	1.0000
27	1.0000	1.0000	1.0000	1.0000	1.0000
28	1.0000	1.0000	1.0000	1.0000	1.0000
29	1.0000	1.0000	1.0000	1.0000	1.0000
30	1.0000	1.0000	1.0000	1.0000	1.0000
31	1.0000	1.0000	1.0000	1.0000	1.0000
32	1.0000	1.0000	1.0000	1.0000	1.0000
33	1.0000	1.0000	1.0000	1.0000	1.0000
34	1.0000	1.0000	1.0000	1.0000	1.0000
35	1.0000	1.0000	1.0000	1.0000	1.0000
36	1.0000	1.0000	1.0000	1.0000	1.0000
37	1.0000	1.0000	1.0000	1.0000	1.0000
38	1.0000	1.0000	1.0000	1.0000	1.0000

==========

Punkty obserwacji

Nr	Symbol	X[m]	Y[m]	z[m]
1	P1	95.5	268.1	1.5
2	P2	95.5	268.1	4.5
3	P3	106.1	268.7	4.0
4	P4	107.0	236.4	1.5
5	P5	104.3	238.0	4.5
6	P6	97.1	220.7	1.5
7	P7	97.1	220.7	4.5
8	P8	113.1	225.8	4.0
9	P9	98.4	165.7	1.5
10	P10	98.4	165.7	4.5
11	P11	109.3	164.7	4.0
12	P12	132.0	173.4	1.5

13 P13 132.0 173.4 4.5

14 P14 133.9 177.8 4.0

15 P15 98.4 133.0 1.5

16 P16 98.4 133.0 4.5

17 P17 106.7 140.4 4.0

18 P18 124.6 114.5 1.5

19 P19 124.6 114.5 4.5

20 P20 135.8 150.0 4.0

21 P21 155.4 70.3 1.5

22 P22 155.4 70.3 4.5

23 P23 159.5 78.3 4.0

24 P24 215.5 71.0 1.5

25 P25 215.5 71.0 4.5

26 P26 215.5 71.0 4.0

27 P27 203.0 31.3 1.5

28 P28 203.0 31.3 4.5

29 P29 204.0 52.4 4.0

30 P30 616.0 196.7 1.5

31 P31 616.0 196.7 4.5

32 P32 606.3 195.4 4.0

Obszary o innym niż globalny współczynniku gruntu G :

WSPÓŁRZĘDNE WIERZCHOŁKÓW :

Nr X1[m] Y1[m] X2[m] Y2[m] X3[m] Y3[m] X4[m] Y4[m] wsp.G

==========

1 250.1 190.1 234.4 171.5 268.0 144.0 282.7 162.2 1.000

2 151.8 221.4 242.1 147.5 238.2 140.2 121.8 183.4 1.000

3 147.6 225.8 128.8 200.6 118.4 202.8 119.4 249.6 1.000

4 129.2 283.0 148.0 268.0 133.6 250.0 128.0 253.6 1.000

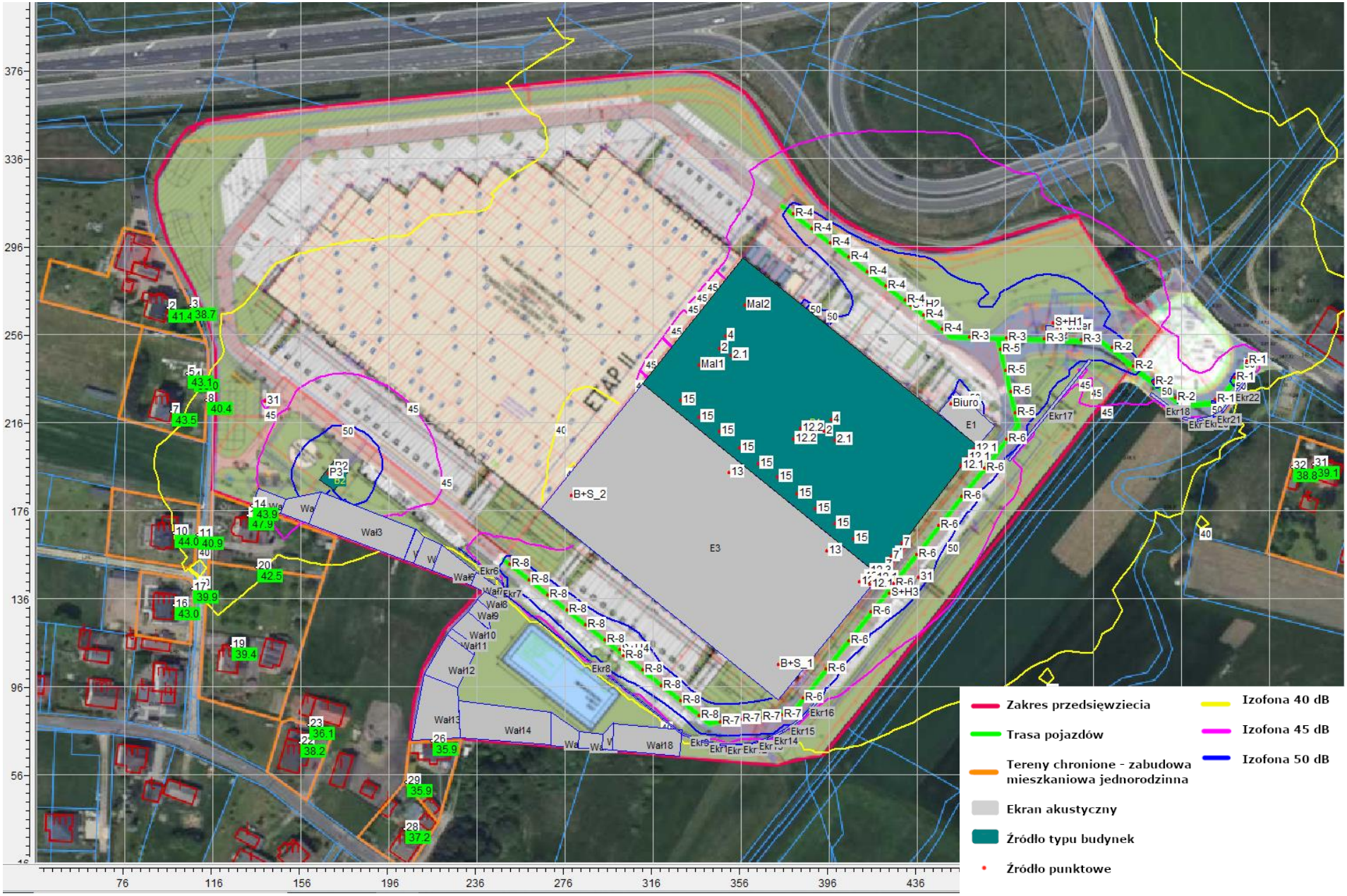
5 121.0 248.2 117.6 296.6 90.6 315.4 97.0 296.0 1.000

6	90.6	315.4	117.8	296.8	161.6	353.6	111.2	350.8	1.000
7	241.6	144.6	206.8	72.2	330.2	64.6	339.8	77.8	1.000
8	238.1	138.2	221.4	122.2	210.9	102.6	206.1	71.6	1.000
9	555.7	270.6	393.4	63.4	544.3	13.2	617.8	233.2	1.000
10	510.4	245.5	367.0	60.7	393.4	62.0	528.9	237.2	1.000

Program LEQ Professional w.6(2019)
Wydruk wyników obliczeń
Projekt :

Nr pkt.	X [m]	Y [m]	z [m]	Leq [dB(A)]
1	95.5	268.1	1.5	37.8
2	95.5	268.1	4.5	41.4
3	106.1	268.7	4.0	38.7
4	107.0	236.4	1.5	38.0
5	104.3	238.0	4.5	43.1
6	97.1	220.7	1.5	38.5
7	97.1	220.7	4.5	43.5
8	113.1	225.8	4.0	40.4
9	98.4	165.7	1.5	38.8
10	98.4	165.7	4.5	44.0
11	109.3	164.7	4.0	40.9
12	132.0	173.4	1.5	39.5
13	132.0	173.4	4.5	47.9
14	133.9	177.8	4.0	43.9
15	98.4	133.0	1.5	36.0
16	98.4	133.0	4.5	43.0
17	106.7	140.4	4.0	39.9
18	124.6	114.5	1.5	35.9
19	124.6	114.5	4.5	39.4
20	135.8	150.0	4.0	42.5
21	155.4	70.3	1.5	34.7
22	155.4	70.3	4.5	38.2
23	159.5	78.3	4.0	36.1
24	215.5	71.0	1.5	25.4
25	215.5	71.0	4.5	38.1
26	215.5	71.0	4.0	35.9
27	203.0	31.3	1.5	34.3
28	203.0	31.3	4.5	37.2
29	204.0	52.4	4.0	35.9
30	616.0	196.7	1.5	36.4
31	616.0	196.7	4.5	39.1
32	606.3	195.4	4.0	38.8

Rysunek 11 Plan sytuacyjny etapu I – pora dnia, z zastosowaniem rozwiązań minimalizujących



Rysunek 12 Izofony w porze dnia, etap I – z zastosowaniem rozwiązań minimalizujących