



appendix d

Ground Movement Assessment

PDisp Analysis – Contour output - Stage 1
PDisp Analysis – Contour output - Stage 2
PDisp Analysis – Contour output - Stage 3

Stage 1

XDisp Analysis – Vertical movements
XDisp Analysis – Horizontal movements
XDisp Analysis – Tabular input and output

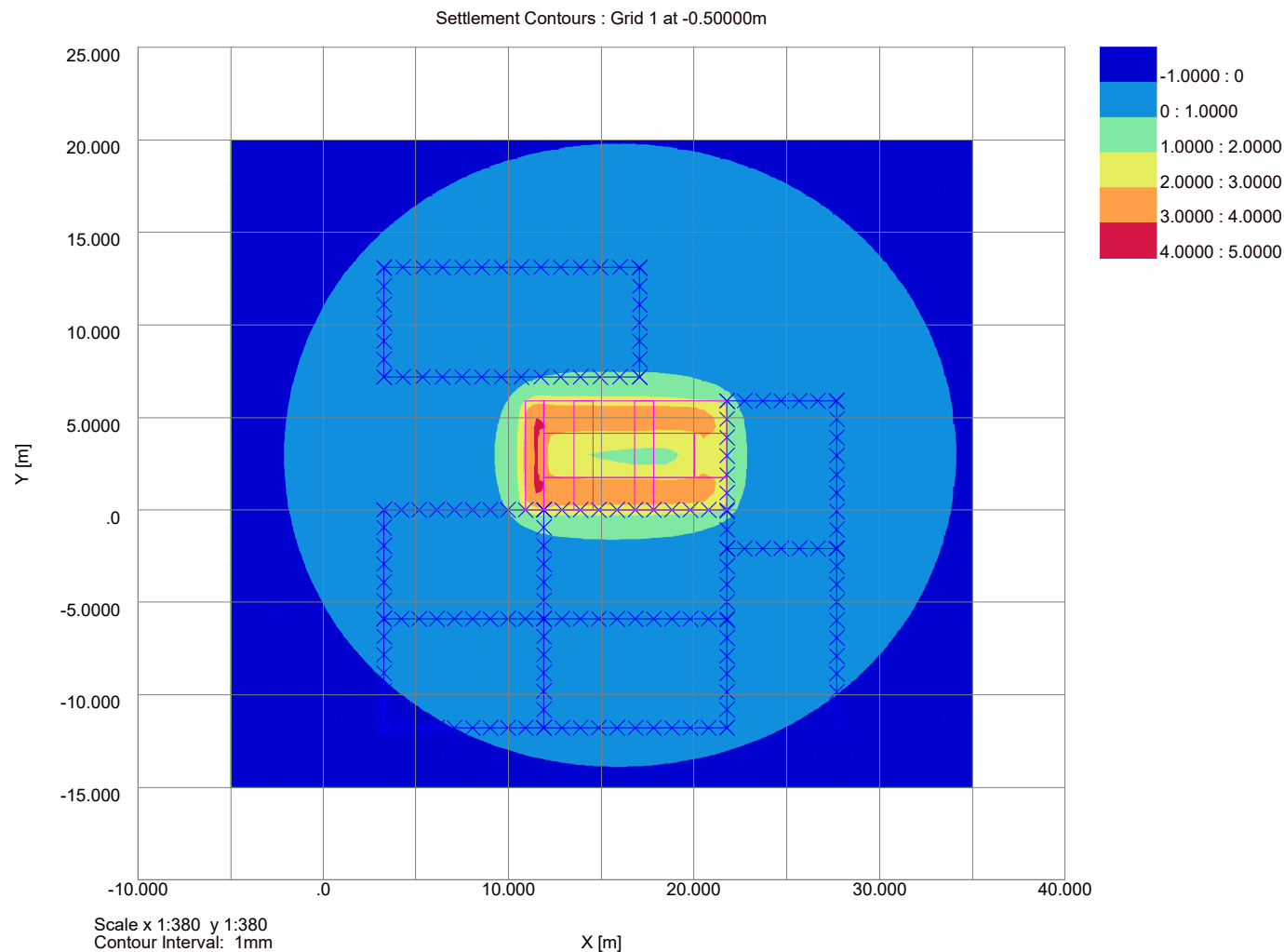
Stage 2

XDisp Analysis – Vertical movements
XDisp Analysis – Horizontal movements
XDisp Analysis – Tabular input and output

Stage 3

XDisp Analysis – Vertical movements
XDisp Analysis – Horizontal movements
XDisp Analysis – Tabular input and output

Job No.	Sheet No.	Rev.
J23153		
Drg. Ref.		
Made by AG	Date	Checked Date

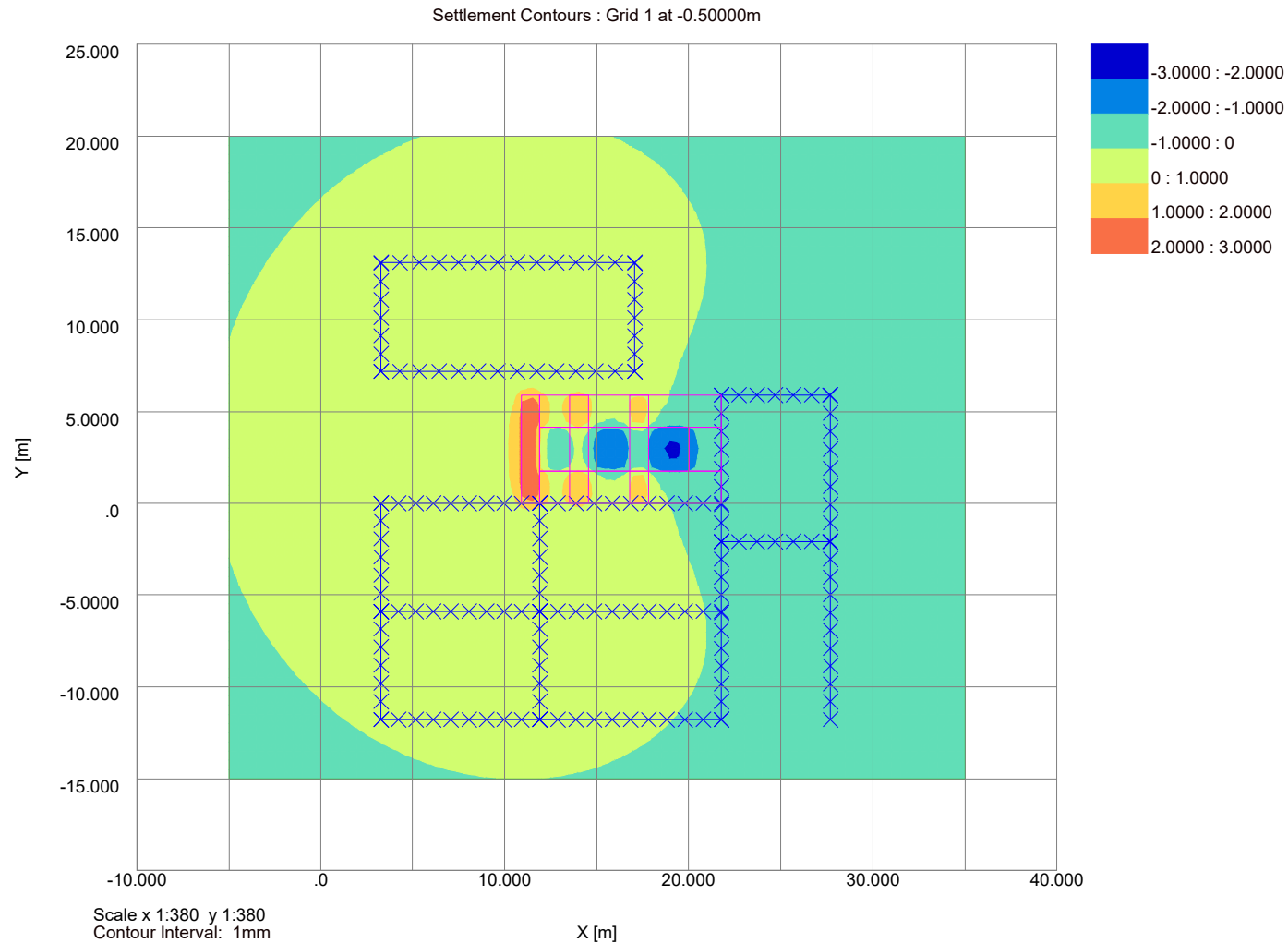




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118 Malden Road
PDISP
Stage 2

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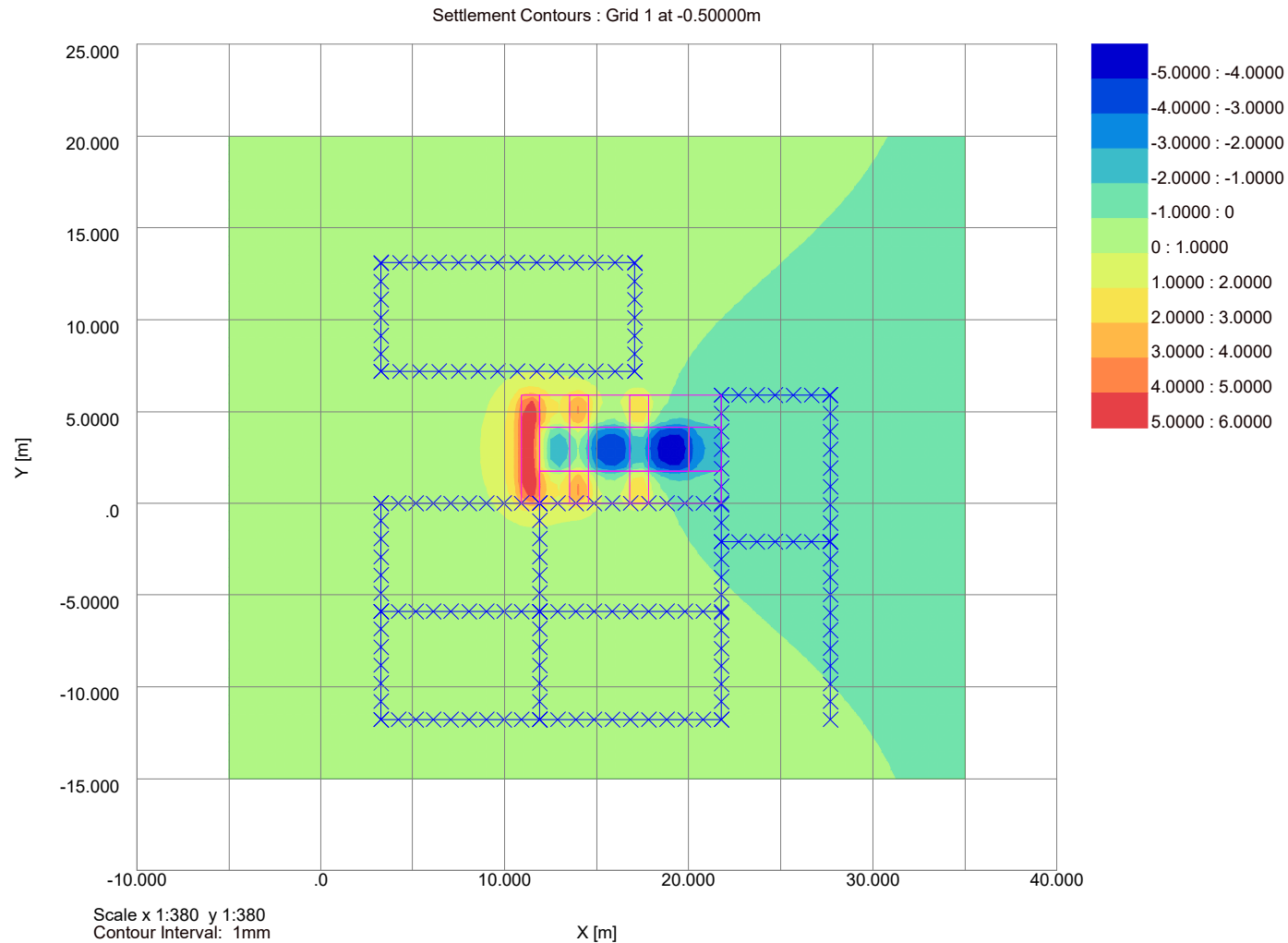




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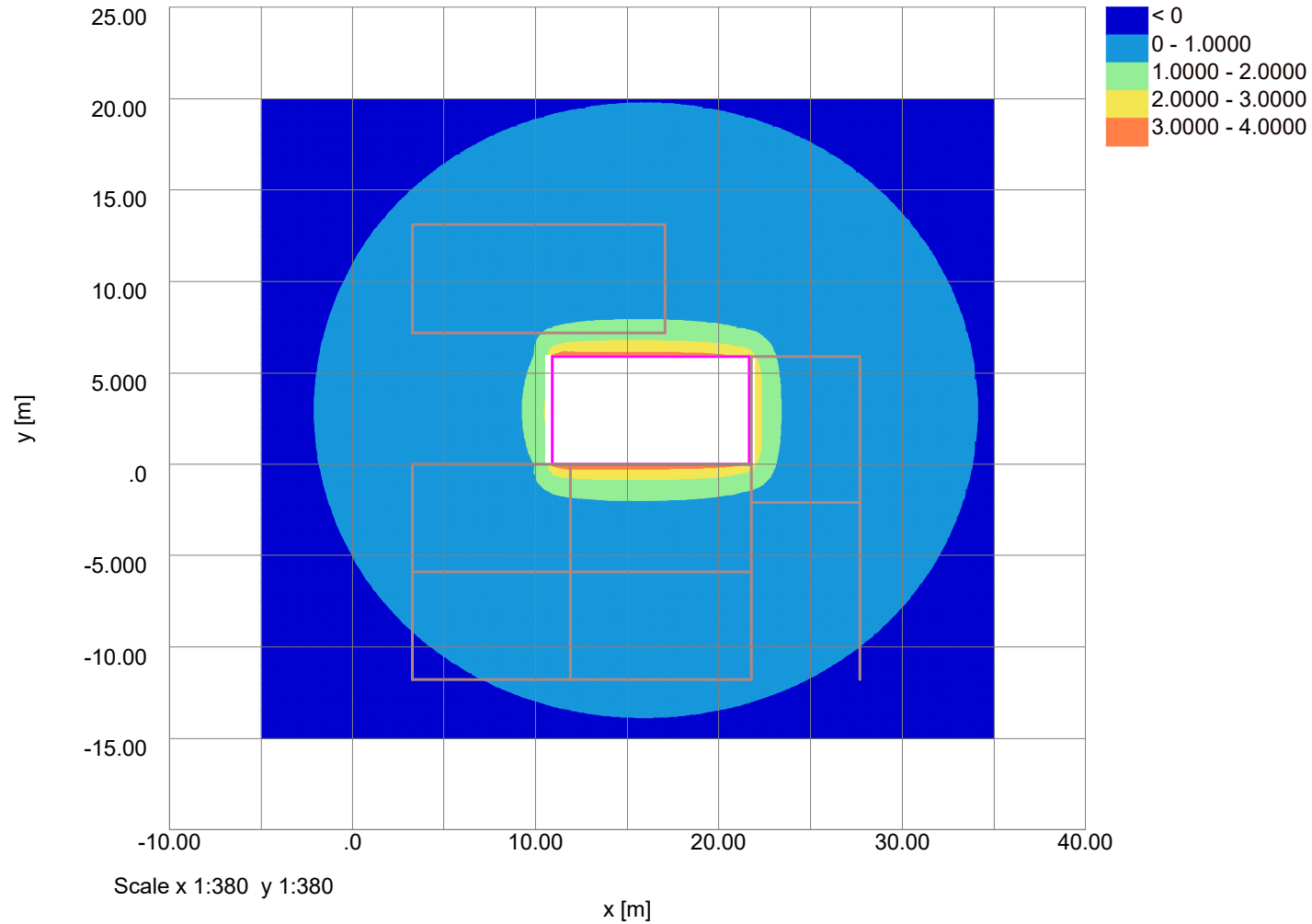
118 Malden Road
PDISP
Stage 3

Job No.	Sheet No.	Rev.
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Drg. Ref.		
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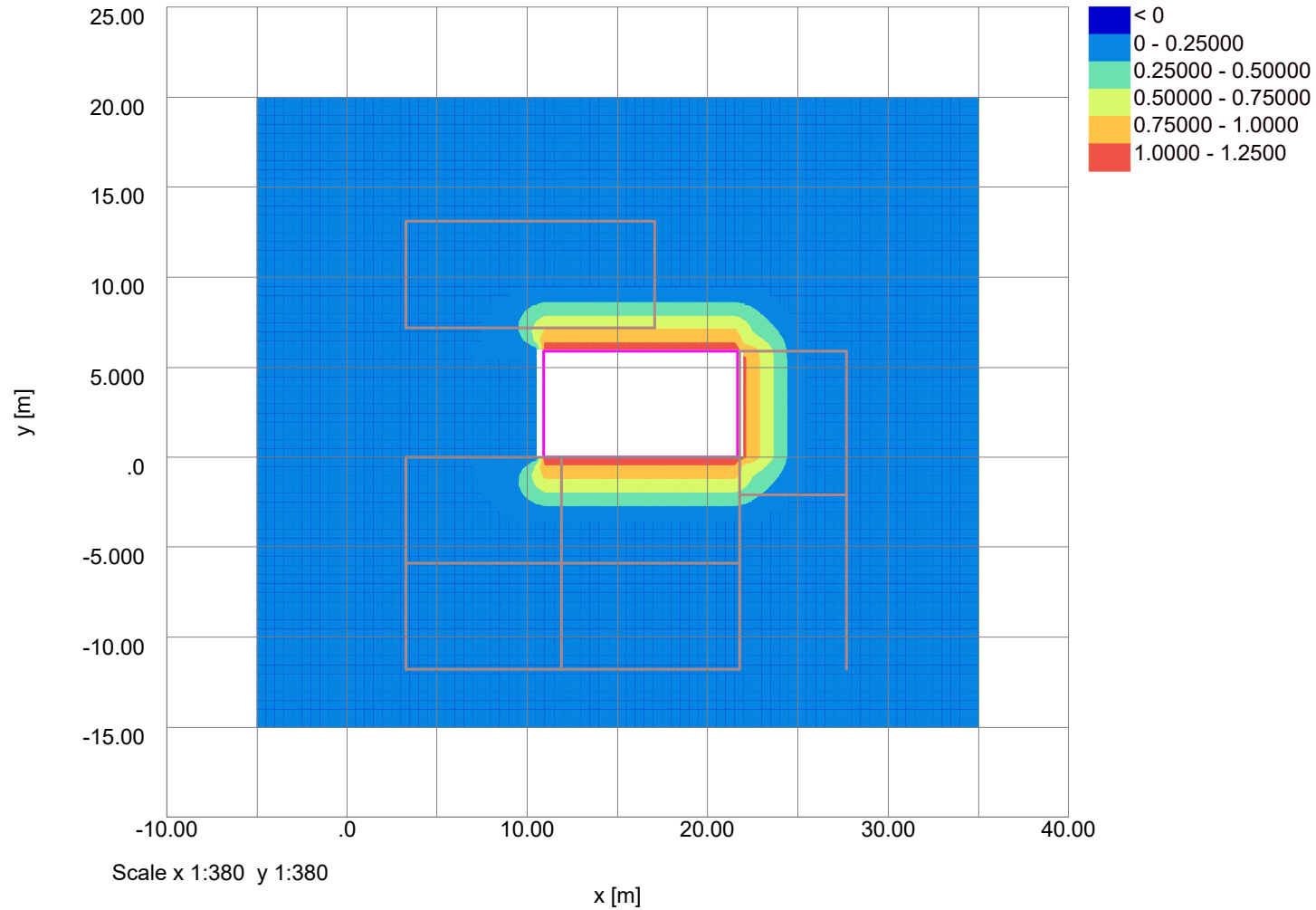


Job No.	Sheet No.	Rev.
J23153		
Drg. Ref.		
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Vertical Settlement Contours: Grid 1 (level -0.500m) (Interval 1mm)



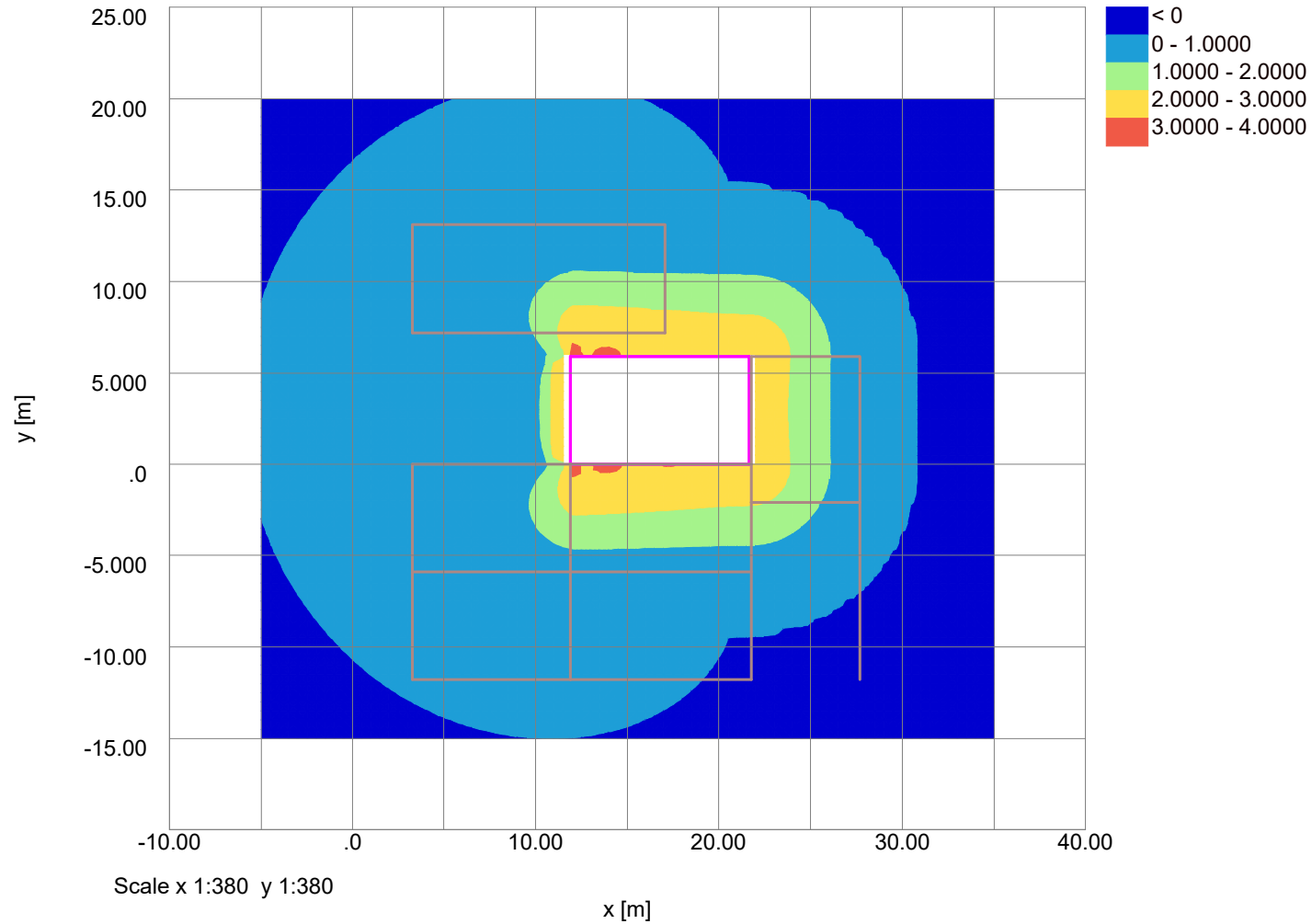
Horizontal Displacement Contours: Grid 1 (level -0.500m) Interval 0.25mm



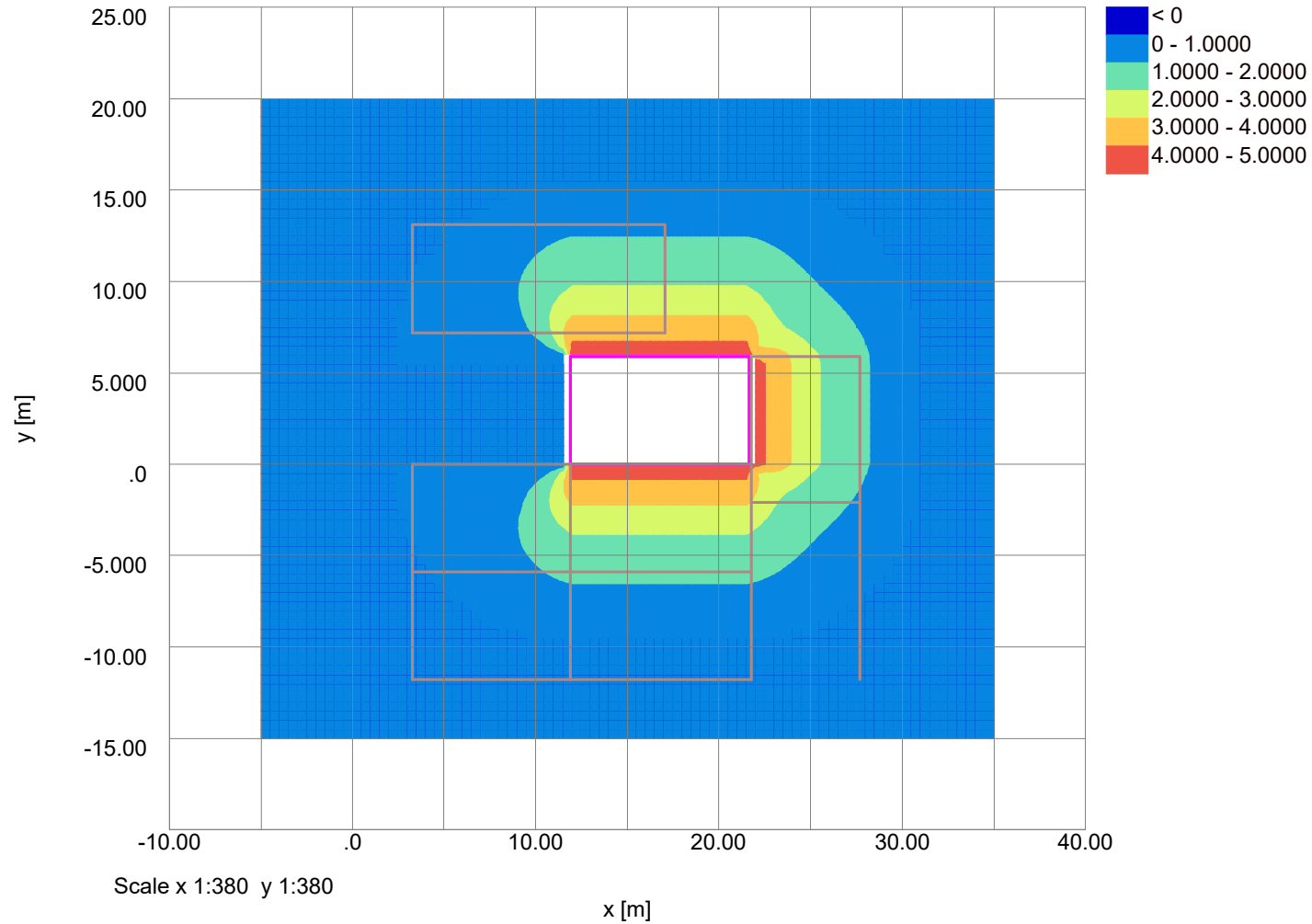
Stage: Name		Specific	Specific	Sub-building	Vertical	Deflection	Average	Max Slope	Max	Max	Max Gradient of	Max Gradient of
Min Radius	Min Radius	Damage	Category									
Ref. of	Building:	Building:	Name	Offset from	Ratio	Horizontal		Settlement	Tensile	Horizontal	Vertical	
Curvature	Curvature			Line for		Strain			Strain	Displacement	Displacement	
(Hogging)	(Sagging)			Vertical						Curve	Curve	
				Movement								
				Calculations								
[m]	[m]			[m]	[%]	[%]		[mm]	[%]			
0	Base Model	1	120	A	0.0	0.0048005	0.0	-426.00E-6	1.5165	0.0043552	0.0	-426.00E-6
-	- 0 (Negligible)	2	120	B	0.0	0.0085702	0.012132	662.94E-6	1.4933	0.018698	-333.22E-6	662.94E-6
-	- 0 (Negligible)	3	120	C	0.0	231.06E-6	0.0	-14.531E-6	0.15226	212.90E-6	0.0	-14.531E-6
-	- 0 (Negligible)	5	116	A	0.0	0.037928	0.0	-0.0022507	3.7552	0.037803	0.0	-0.0022507
-	- 0 (Negligible)	6	116	B	0.0	0.028022	0.019501	0.0020541	3.7184	0.037842	-333.22E-6	0.0020541
689.40	- 0 (Negligible)	7	116	C	0.0	64.149E-6	0.0	-23.121E-6	0.19381	63.479E-6	0.0	-23.121E-6
-	- 0 (Negligible)	9	116	E	0.0	0.0085588	-0.015787	720.00E-6	3.7698	0.0051778	0.0011384	720.00E-6
-	- 0 (Negligible)	10	116	F	0.0	543.60E-6	0.0	21.210E-6	0.23088	800.76E-6	0.0	21.210E-6
-	- 0 (Negligible)	11	114	A	0.0	321.02E-6	0.0	52.914E-6	0.19320	319.18E-6	0.0	52.914E-6
-	- 0 (Negligible)	15	131	A	0.0	0.018281	0.018937	0.0012809	2.5121	0.039755	-333.22E-6	0.0012809
-	- 0 (Negligible)	16	131	B	0.0	0.021701	-0.018610	0.0011030	3.1480	0.018178	535.62E-6	0.0011030
-	- 0 (Negligible)	17	131	C	0.0	0.0019681	-0.0097111	155.56E-6	0.64090	0.0028461	97.120E-6	155.56E-6
-	- 0 (Negligible)	18	131	D	0.0	404.40E-6	0.0	16.386E-6	0.15115	511.44E-6	0.0	16.386E-6
-	- 0 (Negligible)	19	131	E	0.0	0.0031641	0.0089346	256.60E-6	0.63817	0.012072	-321.72E-6	256.60E-6

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Vertical Settlement Contours: Grid 1 (level -0.500m) (Interval 1mm)



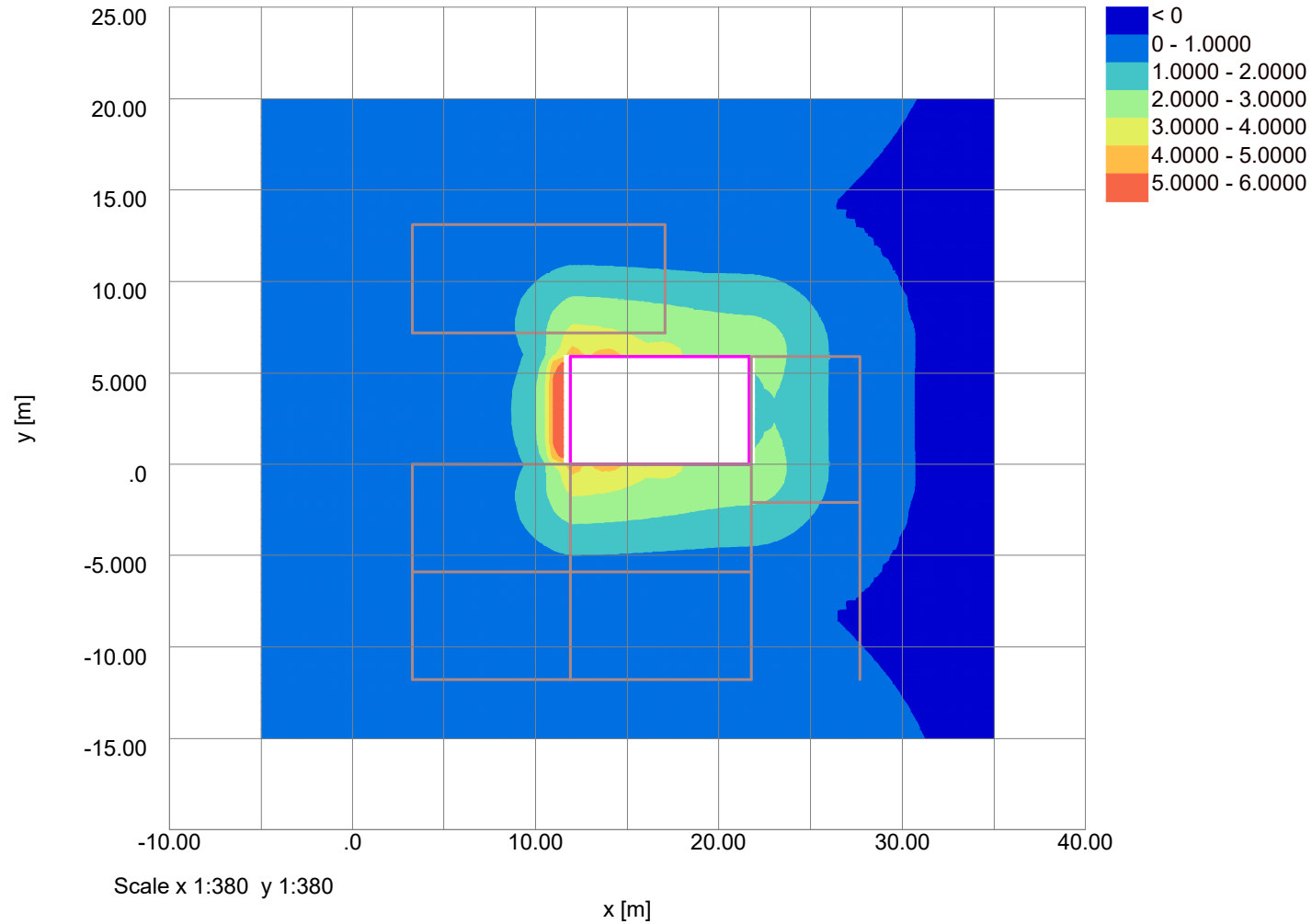
Horizontal Displacement Contours: Grid 1 (level -0.500m) Interval 1mm



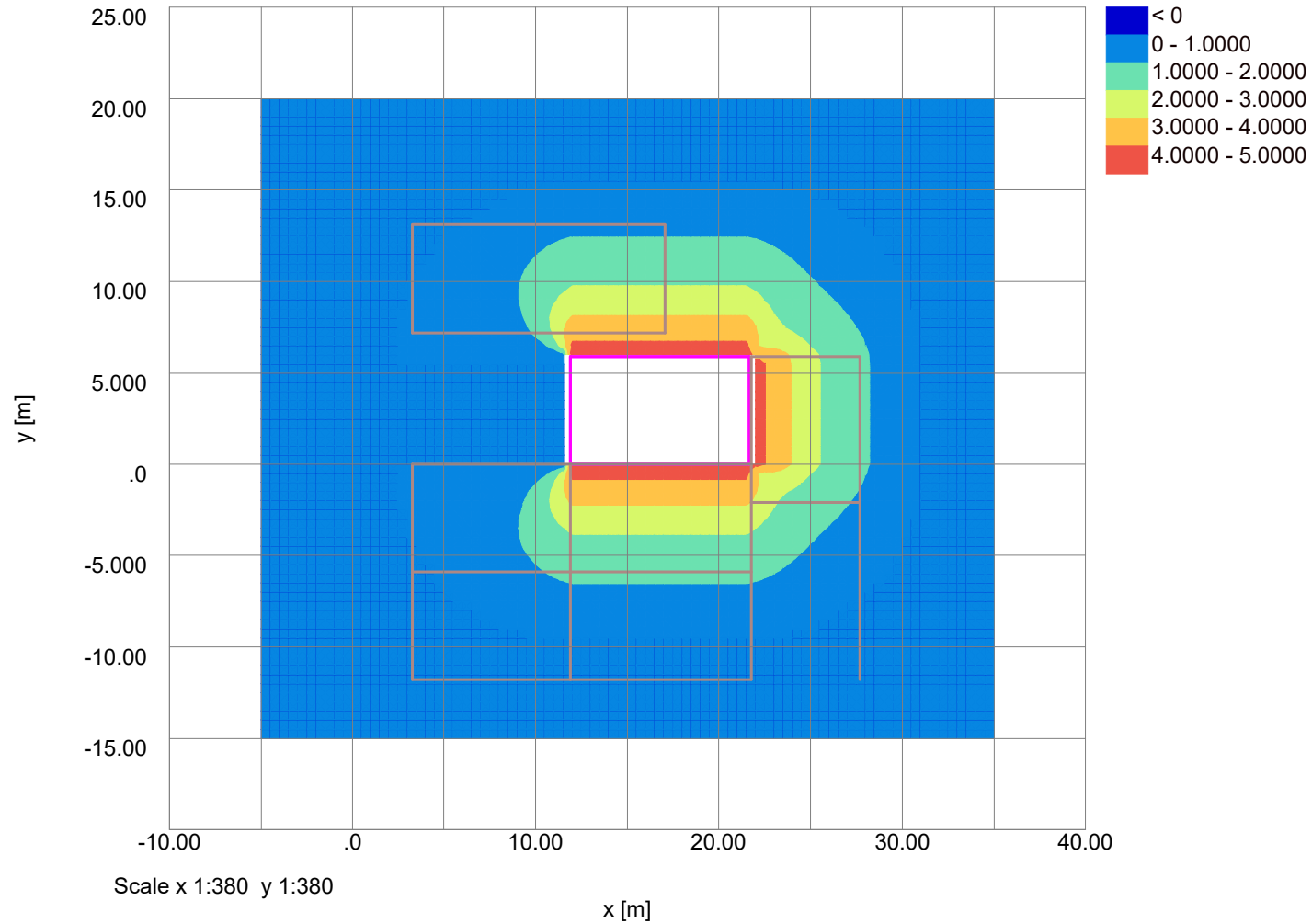
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Vertical Settlement Contours: Grid 1 (level -0.500m) (Interval 1mm)



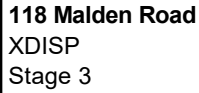
Horizontal Displacement Contours: Grid 1 (level -0.500m) Interval 1mm



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Specific Building Damage Results - Critical Values for All Segments within Each Sub-Building

Stage: Stage: Name Specific Specific Sub-building Vertical Deflection Average Max Slope Max Max Max Gradient of Max Gradient of												
Min Radius Min Radius Damage Category												
Ref. Building: Building: Name												
of of Ref. Name												
Curvature Curvature												
(Hogging) (Sagging)												
[m]	[m]											
0	Base Model 1	120	A	0.0	0.021184	0.0	-0.0010495	3.2675	0.020440	0.0	-0.0010495	
-	- 0 (Negligible)	2	B	0.0	0.0055335	0.069339	534.14E-6	2.7400	0.069623	-707.83E-6	534.14E-6	
-	- 1 (Very Slight)	3	C	0.0	856.37E-6	0.0	-33.520E-6	0.26305	838.10E-6	0.0	-33.520E-6	
-	- 0 (Negligible)	4	D	0.0	127.64E-6	739.53E-6	19.201E-6	0.14752	768.86E-6	-19.039E-6	19.201E-6	
-	- 0 (Negligible)	5	A	0.0	0.030525	0.0	-0.0022984	5.0513	0.029715	0.0	-0.0022984	
1190.0	- 0 (Negligible)	6	B	0.0	0.011884	0.057001	0.0014557	5.0280	0.064756	-707.83E-6	0.0014557	
-	- 1 (Very Slight)	7	C	0.0	0.0011199	0.0	-105.49E-6	0.59778	0.0010883	0.0	-105.49E-6	
-	- 0 (Negligible)	8	D	0.0	128.41E-6	870.25E-6	17.196E-6	0.16098	870.22E-6	14.997E-6	17.196E-6	
-	- 0 (Negligible)	9	E	0.0	0.053500	-0.13648	0.0014408	5.1100	0.052588	0.0046266	0.0014408	
-	- 1 (Very Slight)	10	F	0.0	254.38E-6	-250.28E-6	22.244E-6	0.59760	266.25E-6	12.197E-6	22.244E-6	
-	- 0 (Negligible)	11	A	0.0	0.0038606	0.037500	279.40E-6	0.59416	0.038807	-374.86E-6	279.40E-6	
-	- 0 (Negligible)	15	A	0.0	0.0099261	0.066483	467.42E-6	2.2226	0.074536	-707.83E-6	467.42E-6	
-	- 1 (Very Slight)	16	B	0.0	0.016575	-0.090090	574.22E-6	2.2865	0.018841	0.0021879	574.22E-6	
-	- 0 (Negligible)	17	C	0.0	0.0050155	-0.032061	410.27E-6	2.0489	0.018140	804.33E-6	410.27E-6	
-	- 0 (Negligible)	18	D	0.0	0.0011463	-0.0061589	60.730E-6	0.34910	0.0013811	121.58E-6	60.730E-6	
-	- 0 (Negligible)	19	E	0.0	0.0041137	0.058143	474.69E-6	2.0458	0.058926	-662.34E-6	474.69E-6	
-	- 1 (Very Slight)	20	F	0.0	173.59E-6	-0.0025216	84.850E-6	0.29138	513.80E-6	50.335E-6	84.850E-6	



Stage:	Stage:	Name	Specific	Specific	Sub-building	Vertical	Deflection	Average	Max	Slope	Max	Max	Max	Gradient	of	Max	Gradient	of
Min	Radius	Min	Radius	Damage	Category													
Ref.		Building:	Building:		Name	Offset from	Ratio	Horizontal			Settlement	Tensile		Horizontal		Vertical		
of	of																	
-	-	0	(Negligible)															
(Hogging)	(Sagging)																	
						Movement												
						Calculations												
[m]	[m]					[m]	[%]	[%]			[mm]	[%]						



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