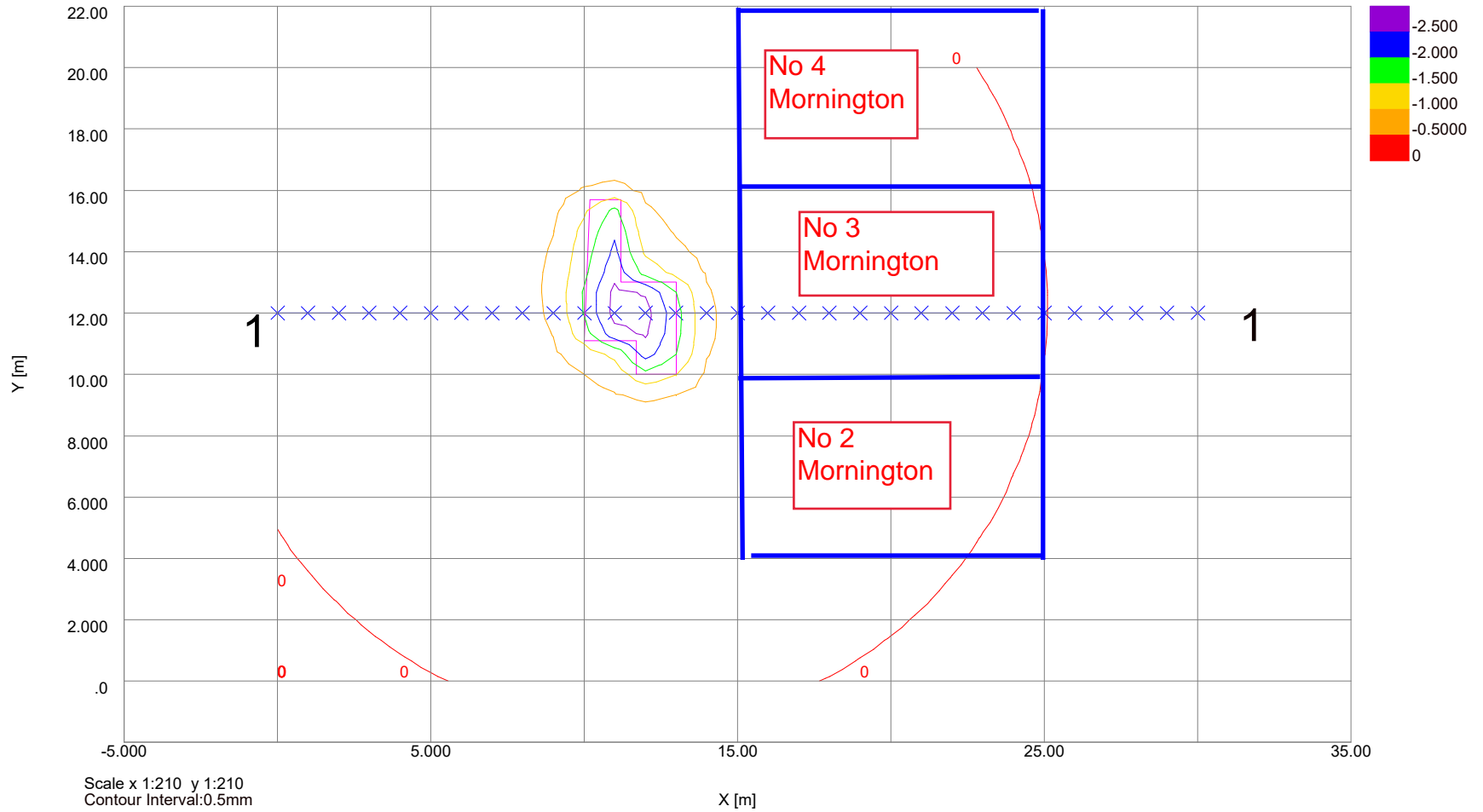


# Appendix E PDISP Output

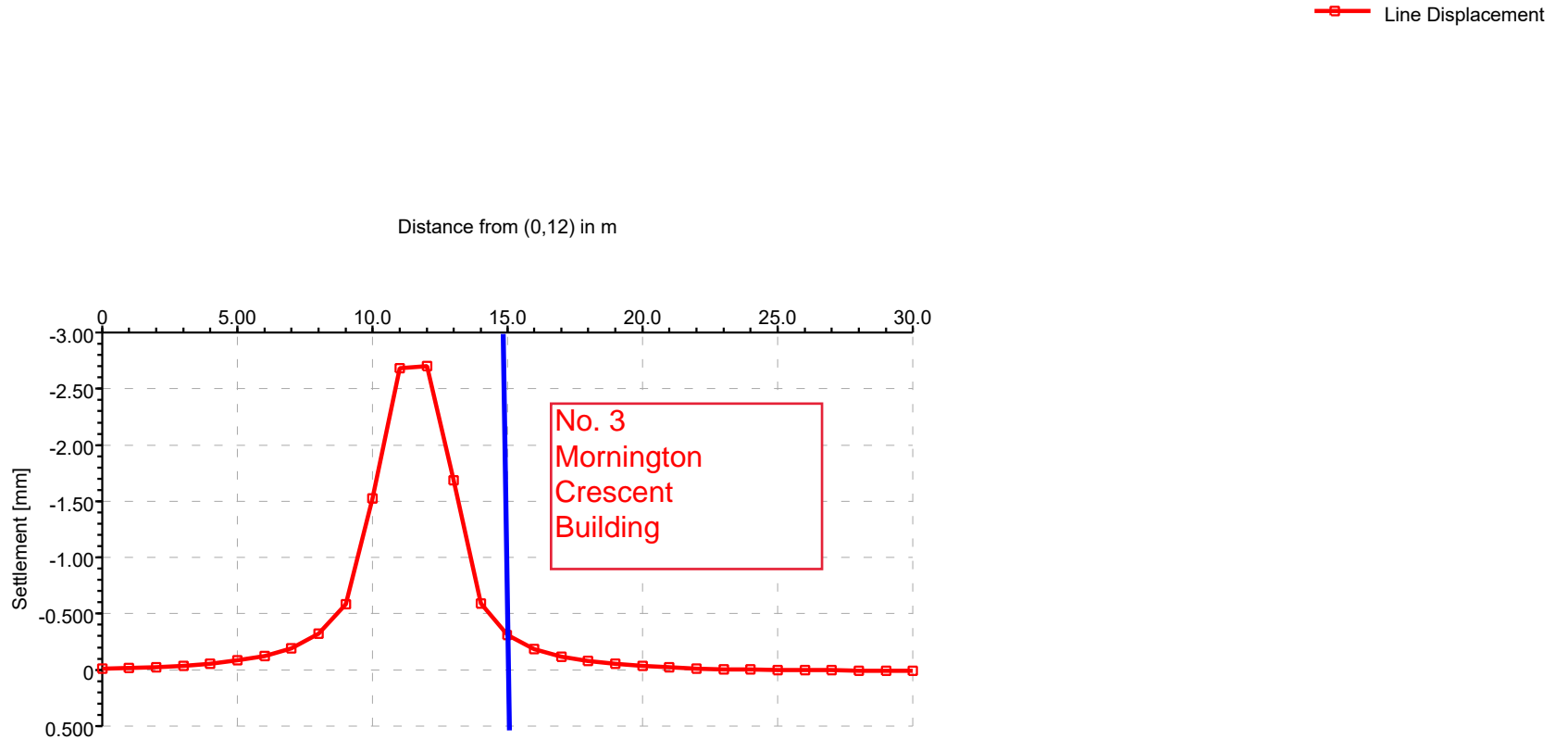
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Settlement Contours : Grid 1 at 23.0000m



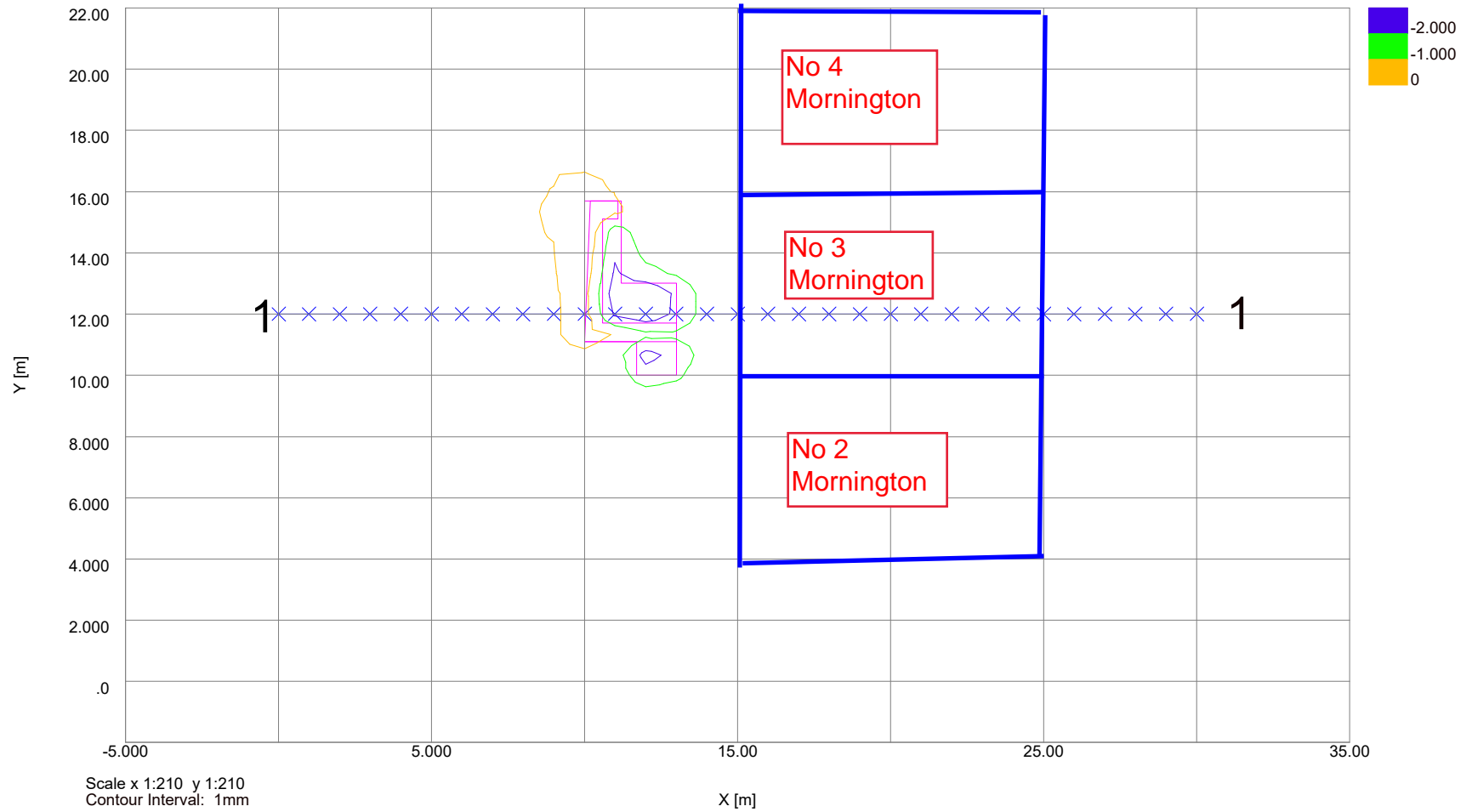
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## Displacement for SW-NE 2



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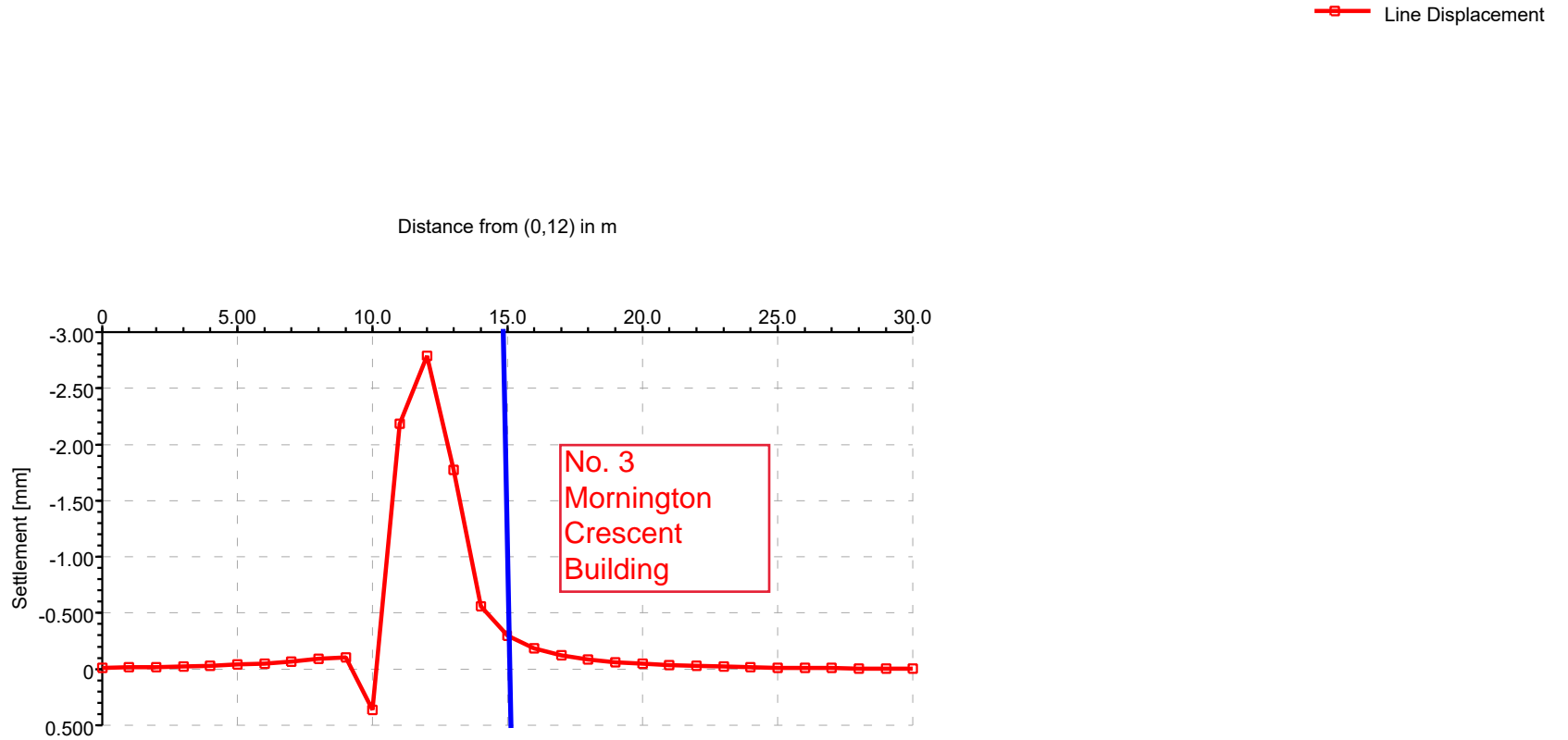
Settlement Contours : Grid 1 at 23.0000m



Scale x 1:210 y 1:210  
Contour Interval: 1mm

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## Displacement for SW-NE 2





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Job No.	Sheet No.	Rev.
MGC-17-27		
Drg. Ref.		
Made by JGM	Date 30/11/17	Checked DD

3A Mornington Crescent  
BIA  
Undrained short term movement from excavation

### Analysis Options

Analysis: Boussinesq  
Global Poisson's ratio: 0.50  
Maximum allowable ratio between values of E: 1.5  
Horizontal rigid boundary level: 0.00 [m OD]  
Stiffness for horizontal displacement calculations: Weighted average  
Using legacy heave correction factor: No  
Displacements at load centroids: Yes

### Soil Profiles/Soil Profile 1

Layer	Level at top	Number of intermediate displacement levels	Youngs Modulus	Poissons ratio	Non-linear curve
1	26.000	52	16200.0	0.50000	None

### Soil Zones

Zone	Name	X coordinates min	X coordinates max	Y coordinates min	Y coordinates max	Profile
1	London Clay	0.00000	30.00000	0.00000	20.00000	Soil Profile 1

### Load Data

Load ref.	Name	Shape	Orientation of Plane	Centre of load (Global) X, Y, Z (level)	Load position Angle of local x from	Width x or Radius	Length y	Polygon Coordinates	Rectangle tolerance	Number of rectangles	Normal Load value (local z)	Tangential Load value (local x)
1	excavation	Polygonal	Horizontal	N/A, N/A, 23.00000	N/A	N/A	N/A	(11.7,10) (13,10) (13,13) (11.2,13) (11.2,15.7) (10.2,15.7) (10,11.1) (11.7,11.1) (11.7,10)	10.000	3	-60.000	N/A

### Polygonal Loads' Rectangles

No.	Centre of load X	Centre of load Y	Angle of local x from global X [Degrees]	Width x [m]	Depth y [m]
Load 1 : excavation (Edge 2 optimal)					
1	12.35000	10.55000	90.000	1.1000	1.3000
2	11.52065	12.05000	90.000	1.9000	2.9587
3	10.67065	14.35000	90.000	2.7000	1.0587

### Displacement Data

Ref.	Type	Name	Direction of Extrusion	Line/Line for extrusion First point X, Y, Z (level)	Second point X, Y, Z (level)	No. of intrvl across extrusion/line	Extrusion Depth	No. of intrvl along extrusion	Calculate	Show Detailed results
1	Grid	Grid 1	Global X	0.00000, 0.00000, 23.00000	N/A, 20.00000, 23.00000	30	30.00000	30	Yes	Yes
2	Line	NW-SE	N/A	13.00000, 0.00000, 23.00000	10.00000, 20.00000, 23.00000	20	N/A	N/A	Yes	No
3	Line	SW-NE 2	N/A	0.00000, 12.00000, 23.00000	30.00000, 12.00000, 23.00000	30	N/A	N/A	Yes	No

### RESULTS FOR GRIDS

Analysis: Boussinesq  
Global Poisson's ratio: 0.50  
Horizontal rigid boundary level: 0.00 [m OD]

The maximum displacement difference between the Boussinesq method (-1.6936mm) and the Mindlin method (-1.7021mm) occurs at point X = 11.35000m, Y = 11.00000m, level = 23.000mOD, and is 0.0085846mm.

Name	X [m]	Location Y [m]	Displacement Z [Level] [m]	Stresses Calc Level [mOD]	Vert Stress [kN/m²]	Sum Princ [kN/m²]	Vert Strain [-]
excavation	11.39494	12.48727	23.00000	-2.6905	22.933	-59.977	-147.84E-6
Grid 1	0.00000	0.00000	23.00000	0.0052118	22.933	0.0	-0.0039801
	1.00000	0.00000	23.00000	0.0045548	22.933	0.0	-0.0044920
	2.00000	0.00000	23.00000	0.0037634	22.933	0.0	-0.0050620
	3.00000	0.00000	23.00000	0.0028419	22.933	0.0	-0.0056884
	4.00000	0.00000	23.00000	0.0018047	22.933	0.0	-0.0063650
	5.00000	0.00000	23.00000	679.29E-6	22.933	0.0	-0.0070788
	6.00000	0.00000	23.00000	-492.43E-6	22.933	0.0	-0.0078091
	7.00000	0.00000	23.00000	-0.0016533	22.933	0.0	-0.0085256
	8.00000	0.00000	23.00000	-0.0027332	22.933	0.0	-0.0091896
	9.00000	0.00000	23.00000	-0.0036545	22.933	0.0	-0.0097563
	10.00000	0.00000	23.00000	-0.0043412	22.933	0.0	-0.010180
	11.00000	0.00000	23.00000	-0.0047299	22.933	0.0	-0.010420
	12.00000	0.00000	23.00000	-0.0047813	22.933	0.0	-0.010453
	13.00000	0.00000	23.00000	-0.0044886	22.933	0.0	-0.010271
	14.00000	0.00000	23.00000	-0.0038787	22.933	0.0	-0.0098930
	15.00000	0.00000	23.00000	-0.0030078	22.933	0.0	-0.0093524
	16.00000	0.00000	23.00000	-0.0019510	22.933	0.0	-0.0086954
	17.00000	0.00000	23.00000	-789.44E-6	22.933	0.0	-0.0079707
	18.00000	0.00000	23.00000	400.23E-6	22.933	0.0	-0.0072220
	19.00000	0.00000	23.00000	0.0015540	22.933	0.0	-0.0064847
	20.00000	0.00000	23.00000	0.0026239	22.933	0.0	-0.0057836
	21.00000	0.00000	23.00000	0.0035781	22.933	0.0	-0.0051342
	22.00000	0.00000	23.00000	0.0043995	22.933	0.0	-0.0045443
	23.00000	0.00000	23.00000	-0.0050823	22.933	0.0	-0.0040159
	24.00000	0.00000	23.00000	0.0056292	22.933	0.0	-0.0035474
	25.00000	0.00000	23.00000	0.0060487	22.933	0.0	-0.0031349
	26.00000	0.00000	23.00000	0.0063526	22.933	0.0	-0.0027735
	27.00000	0.00000	23.00000	0.0065942	22.933	0.0	-0.0024576
	28.00000	0.00000	23.00000	0.0066676	22.933	0.0	-0.0021820
	29.00000	0.00000	23.00000	0.0067063	22.933	0.0	-0.0019417
	30.00000	0.00000	23.00000	0.0066829	22.933	0.0	-0.0017319
	0.00000	0.66667	23.00000	0.0047583	22.933	0.0	-0.0043420
	1.00000	0.66667	23.00000	0.0039468	22.933	0.0	-0.0049372
	2.00000	0.66667	23.00000	0.0029882	22.933	0.0	-0.0056087
	3.00000	0.66667	23.00000	0.0018246	22.933	0.0	-0.0063570
	4.00000	0.66667	23.00000	530.25E-6	22.933	0.0	-0.0071772
	5.00000	0.66667	23.00000	-884.21E-6	22.933	0.0	-0.0080562
	6.00000	0.66667	23.00000	-0.0023687	22.933	0.0	-0.0089698
	7.00000	0.66667	23.00000	-0.0038521	22.933	0.0	-0.0098805
	8.00000	0.66667	23.00000	-0.0052439	22.933	0.0	-0.010738
	9.00000	0.66667	23.00000	-0.0064409	22.933	0.0	-0.011480
	10.00000	0.66667	23.00000	-0.0073395	22.933	0.0	-0.012041
	11.00000	0.66667	23.00000	-0.0078513	22.933	0.0	-0.012365
	12.00000	0.66667	23.00000	-0.0079207	22.933	0.0	-0.012412
	13.00000	0.66667	23.00000	-0.0075372	22.933	0.0	-0.012174
	14.00000	0.66667	23.00000	-0.0067385	22.933	0.0	-0.011675
	15.00000	0.66667	23.00000	-0.0056031	22.933	0.0	-0.010967
	16.00000	0.66667	23.00000	-0.0042345	22.933	0.0	-0.010115
	17.00000	0.66667	23.00000	-0.0027425	22.933	0.0	-0.0091879
	18.00000	0.66667	23.00000	-0.0012277	22.933	0.0	-0.0082450
	19.00000	0.66667	23.00000	228.80E-6	22.933	0.0	-0.0073314
	20.00000	0.66667	23.00000	0.0015687	22.933	0.0	-0.0064766
	21.00000	0.66667	23.00000	0.0027559	22.933	0.0	-0.0056973
	22.00000	0.66667	23.00000	0.0037730	22.933	0.0	-0.0049998
	23.00000	0.66667	23.00000	0.0046167	22.933	0.0	-0.0043837
	24.00000	0.66667	23.00000	0.0052935	22.933	0.0	-0.0038444
	25.00000	0.66667	23.00000	0.0058161	22.933	0.0	-0.0033752
	26.00000	0.66667	23.00000	0.0062007	22.933	0.0	-0.0029682
	27.00000	0.66667	23.00000	0.0064647	22.933	0.0	-0.026461
	28.00000	0.66667	23.00000	0.0066255	22.933	0.0	-0.023114



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JGM

Date

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Table with columns: Name, Location (X, Y), Displacement (Z [Level], Z [mm]), Calc Level, Vert Stress [kN/m^2], Sum Princ [kN/m^2], Vert Strain [-]. The table contains multiple rows of data for different points, including coordinates and various stress/displacement values.

















3A Mornington Crescent
BIA

Drained long term movements. Including basement loads

Analysis Options

Analysis: Boussinesq
Global Poisson's ratio: 0.20
Maximum allowable ratio between values of E: 1.5
Horizontal rigid boundary level: 0.00 [m OD]
Stiffness for horizontal displacement calculations: Weighted average
Using legacy heave correction factor: No
Displacements at load centroids: Yes

Soil Profiles Soil Profile 1

Table with columns: Layer, Level at top, Number of intermediate displacement levels, Young's Modulus, Poissons ratio, Non-linear curve. Row 1: 1, 26.000, 52, 12150, 117000, 0.20000, None

Soil Zones

Table with columns: Zone, Name, X coordinates, Y coordinates, Profile. Row 1: 1, London Clay, 0.00000, 30.00000, 0.00000, 20.00000, Soil Profile 1

Load Data

Table with columns: Load ref., Name, Shape, Orientation of Plane, Centre of load (Global), Load position (Angle of local x, Width x, Length y), Polygon Coordinates, Rectangle of tolerance, Number of rectangles, Load value (Normal, Tangential). Rows for excavation and basement wall load.

Polygonal Loads' Rectangles

Table with columns: No., Centre of load X, Y, Angle of local x from global X, Width x, Depth y. Rows for Load 1 (excavation) and Load 2 (basement wall load).

RESULTS FOR GRIDS

Analysis: Boussinesq
Global Poisson's ratio: 0.20
Horizontal rigid boundary level: 0.00 [m OD]

The maximum displacement difference between the Boussinesq method (-0.74487mm) and the Mindlin method (-0.73688mm) occurs at point X = 10.75000m, Y = 15.00000m, level = 23.000mOD, and is 0.0079816mm.

Large table with columns: Name, Location (X, Y, Z), Displacement, Calc Level, Vert Stress, Sum Princ, Vert Strain. Contains data for excavation and basement wall load across various grid levels.

















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Job No. Sheet No. Rev.

MGC-17-27

3A Mornington Crescent

BIA

Drained long term movements. Including basement loads

Drng. Ref.

Made by Date Checked

Table with columns: Name, Location (X, Y), Displacement (Z), Calc Level, Vert Stress, Sum Princ, Vert Strain. Contains numerical data for various points.