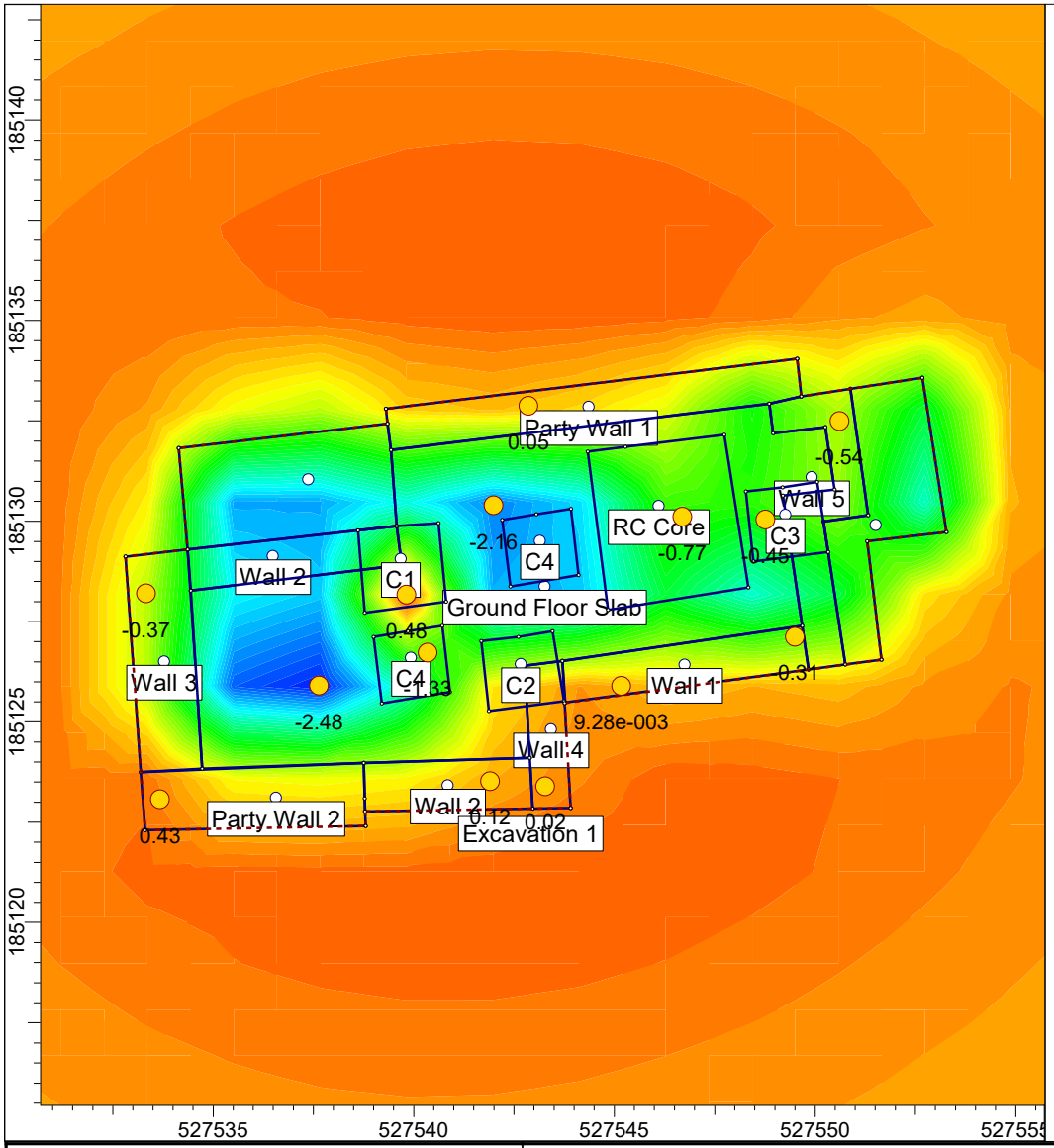
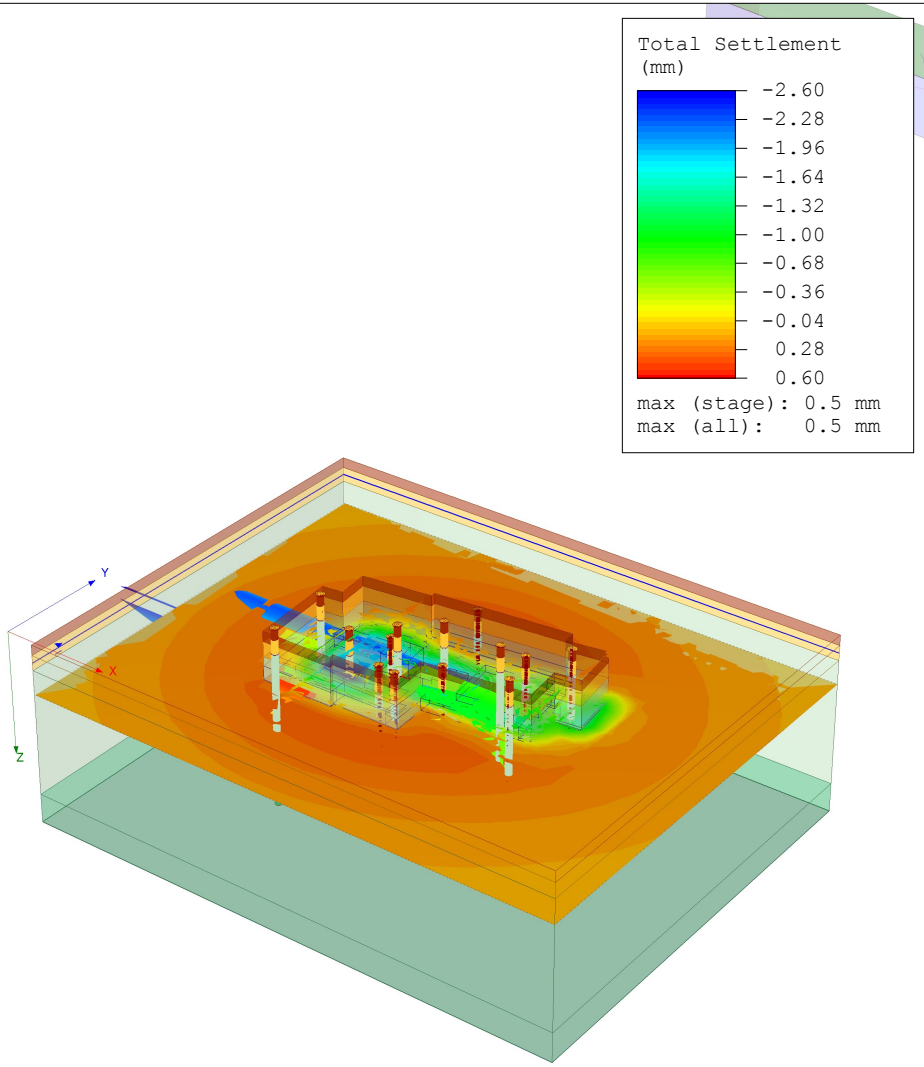




SETTLE3D 4.008	*Project*	125183 - 75 Lawn Road	
	Analysis Description	Settle3D - Undrained Reloading	
	Drawn By	JT	*Company* Fairhurst
	Date	05/03/2018, 22:37:13	*File Name* Settle 3D - Stage 2 - Undrained Reloading.s3z

Settle3D Analysis Information
125183 - 75 Lawn Road

Project Settings

Document Name	Settle 3D - Stage 2 - Undrained Reloading
Project Title	125183 - 75 Lawn Road
Analysis	Settle3D - Undrained Reloading
Author	JT
Company	Fairhurst
Date Created	05/03/2018, 22:37:13
Stress Computation Method	Boussinesq
Minimum settlement ratio for subgrade modulus	0.9

Calculate settlement with mean stress

Use average properties to calculate layered stresses

Ignore negative effective stresses in settlement calculations

Stage Settings

Stage #	Name
1	Stage 1

Results

Time taken to compute: 2.57493 seconds

Stage: Stage 1

Data Type	Minimum	Maximum
Total Settlement [mm]	-2.66563	0.527099
Total Consolidation Settlement [mm]	0	0
Virgin Consolidation Settlement [mm]	0	0
Recompression Consolidation Settlement [mm]	0	0
Immediate Settlement [mm]	-2.66563	0.527099
Loading Stress ZZ [kPa]	-47.25	44.3591
Loading Stress XX [kPa]	-45.5172	42.205
Loading Stress YY [kPa]	-47.9059	41.9323
Effective Stress ZZ [kPa]	0	114.819
Effective Stress XX [kPa]	0	118.232
Effective Stress YY [kPa]	0	119.135
Mean Stress [kPa]	-58.3834	54.4086
Total Stress ZZ [kPa]	0	204.727
Total Stress XX [kPa]	0	204.587
Total Stress YY [kPa]	0	204.693
Modulus of Subgrade Reaction (Total) [kPa/m]	-3.14973e+006	7.28916e+006
Modulus of Subgrade Reaction (Immediate) [kPa/m]	-3.14973e+006	7.28916e+006
Modulus of Subgrade Reaction (Consolidation) [kPa/m]	0	0
Total Strain	-0.000620677	0.00108761
Pore Water Pressure [kPa]	0	105.948
Degree of Consolidation [%]	0	0
Pre-consolidation Stress [kPa]	0.56	114.675
Over-consolidation Ratio	1	3.73052
Void Ratio	0	0
Hydroconsolidation Settlement [mm]	0	0
Undrained Shear Strength	-1.18085	1.25698

Loads

1. Polygonal Load: "Wall 5"

Label	Wall 5
Load Type	Flexible
Area of Load	7.69175 m^2
Load	63 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527549	185132
527550	185132
527550	185131
527549	185131
527550	185126
527551	185126
527550	185130
527551	185130
527551	185133
527550	185133
527550	185133
527549	185133
527549	185133

2. Polygonal Load: "Party Wall 1"

Label	Party Wall 1
Load Type	Flexible
Area of Load	10.6346 m^2
Load	68 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527550	185134
527539	185133
527539	185132
527539	185132
527549	185133
527550	185133

3. Polygonal Load: "Wall 1"

Label	Wall 1
Load Type	Flexible
Area of Load	6.49395 m^2
Load	62 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527544	185127
527544	185125
527550	185126
527550	185127

4. Polygonal Load: "Wall 4"

Label	Wall 4
Load Type	Flexible
Area of Load	3.39743 m^2
Load	50 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527544	185123
527544	185125
527544	185127
527543	185126
527543	185123

5. Polygonal Load: "Wall 2"

Label	Wall 2
Load Type	Flexible
Area of Load	5.15855 m^2
Load	67 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527539	185124
527539	185123
527543	185123
527543	185124

6. Polygonal Load: "Party Wall 2"

Label	Party Wall 2
Load Type	Flexible
Area of Load	8.35142 m^2
Load	70 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527533	185124
527533	185122
527539	185122
527539	185123
527539	185124

7. Polygonal Load: "Wall 3"

Label	Wall 3
Load Type	Flexible
Area of Load	8.38217 m^2
Load	50 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527535	185124
527534	185129
527533	185129
527533	185124

8. Polygonal Load: "Wall 2"

Label	Wall 2
Load Type	Flexible
Area of Load	5.27477 m^2
Load	67 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527534	185129
527534	185128
527540	185129
527540	185130
527534	185129

9. Polygonal Load: "Ground Floor Slab"

Label	Ground Floor Slab
Load Type	Flexible
Area of Load	88.1464 m^2
Load	11.75 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527535	185124
527539	185124
527539	185124
527543	185124
527543	185126
527544	185127
527550	185127
527549	185131
527550	185131
527550	185132
527549	185132
527549	185133
527539	185132
527540	185130
527540	185129
527534	185128

10. Polygonal Load

Load Type	Flexible
Area of Load	13.398 m^2
Load	11.75 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527534	185129
527540	185130
527539	185132
527539	185132
527534	185132

11. Polygonal Load

Load Type	Flexible
Area of Load	10.6597 m^2
Load	11.75 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527552	185127
527551	185130
527553	185130
527553	185134
527551	185133
527551	185130
527550	185130
527551	185126

12. Polygonal Load: "C1"

Label	C1
Load Type	Flexible
Area of Load	4.10046 m^2
Load	91.25 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527539	185130
527539	185128
527541	185128
527541	185130
527540	185130

13. Polygonal Load: "C2"

Label	C2
Load Type	Flexible
Area of Load	3.21484 m^2
Load	78 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527542	185127
527542	185125
527544	185126
527543	185127
527543	185127

14. Polygonal Load: "C4"

Label	C4
Load Type	Flexible
Area of Load	2.87965 m^2
Load	29 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527539	185127
527539	185125
527541	185126
527541	185127
527540	185127

15. Polygonal Load: "C4"

Label	C4
Load Type	Flexible
Area of Load	2.87965 m^2
Load	29 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527542	185130
527542	185128
527544	185129
527544	185130
527543	185130

16. Polygonal Load: "C3"

Label	C3
Load Type	Flexible
Area of Load	3.21484 m^2
Load	46 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527548	185131
527548	185129
527550	185129
527550	185131
527549	185131

17. Polygonal Load: "RC Core"

Label	RC Core
Load Type	Flexible
Area of Load	13.662 m^2
Load	35 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527544	185132
527545	185128
527548	185128
527548	185132
527545	185132

Excavations

1. Excavation: "Excavation 1"

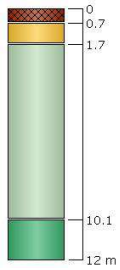
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527539	185133
527539	185132
527534	185132
527534	185129
527533	185129
527533	185122
527539	185122
527539	185123
527544	185123
527544	185125
527552	185127
527551	185130
527553	185130
527553	185134
527550	185133
527550	185134

Soil Layers

Layer #	Type	Thickness [m]	Depth [m]
1	Made Ground	0.7	0
2	Superficial Head Deposits	1	0.7
3	Weathered London Clay	8.4	1.7
4	London Clay	1.9	10.1



Soil Properties

Property		Made Ground	Weathered London Clay	London Clay	Superficial Head Deposits
Color					
Unit Weight [kN/m^3]		16	18	18	19
Saturated Unit Weight [kN/m^3]		15	17	17	18
Poisson's Ratio		0.3	0.4999	0.4999	0.4999
K0		1	1	1	1
Immediate Settlement		Enabled	Enabled	Enabled	Enabled
E [kPa]	top	3000	17079	43824	13895
	bottom	-	43824	49874	17079
Eur [kPa]	top	3000	17079	43824	13895
	bottom	-	43824	49874	17079
Undrained Su A [kN/m2]		0	0	0	0
Undrained Su S		0.2	0.2	0.2	0.2
Undrained Su m		0.8	0.8	0.8	0.8
Piezo Line ID		1	1	1	1

Groundwater

Groundwater method Piezometric Lines
Water Unit Weight 9.81 kN/m^3

Piezometric Line Entities

ID	Depth (m)
1	1.2 m

Query Points

Point #	Query Point Name	(X,Y) Location	Number of Divisions
1	Query Point 1	527540, 185128	Auto: 57
3	Query Point 3	527543, 185133	Auto: 57
4	Query Point 4	527549, 185127	Auto: 57
8	Query Point 8	527533, 185128	Auto: 57
9	Query Point 9	527538, 185126	Auto: 57
10	Query Point 10	527543, 185123	Auto: 57
11	Query Point 11	527547, 185130	Auto: 57
12	Query Point 12	527542, 185124	Auto: 57
13	Query Point 13	527534, 185123	Auto: 57
14	Query Point 14	527540, 185127	Auto: 57
15	Query Point 15	527549, 185130	Auto: 57
17	Query Point 17	527542, 185130	Auto: 57
18	Query Point 18	527545, 185126	Auto: 57
19	Query Point 19	527551, 185132	Auto: 57

Field Point Grid

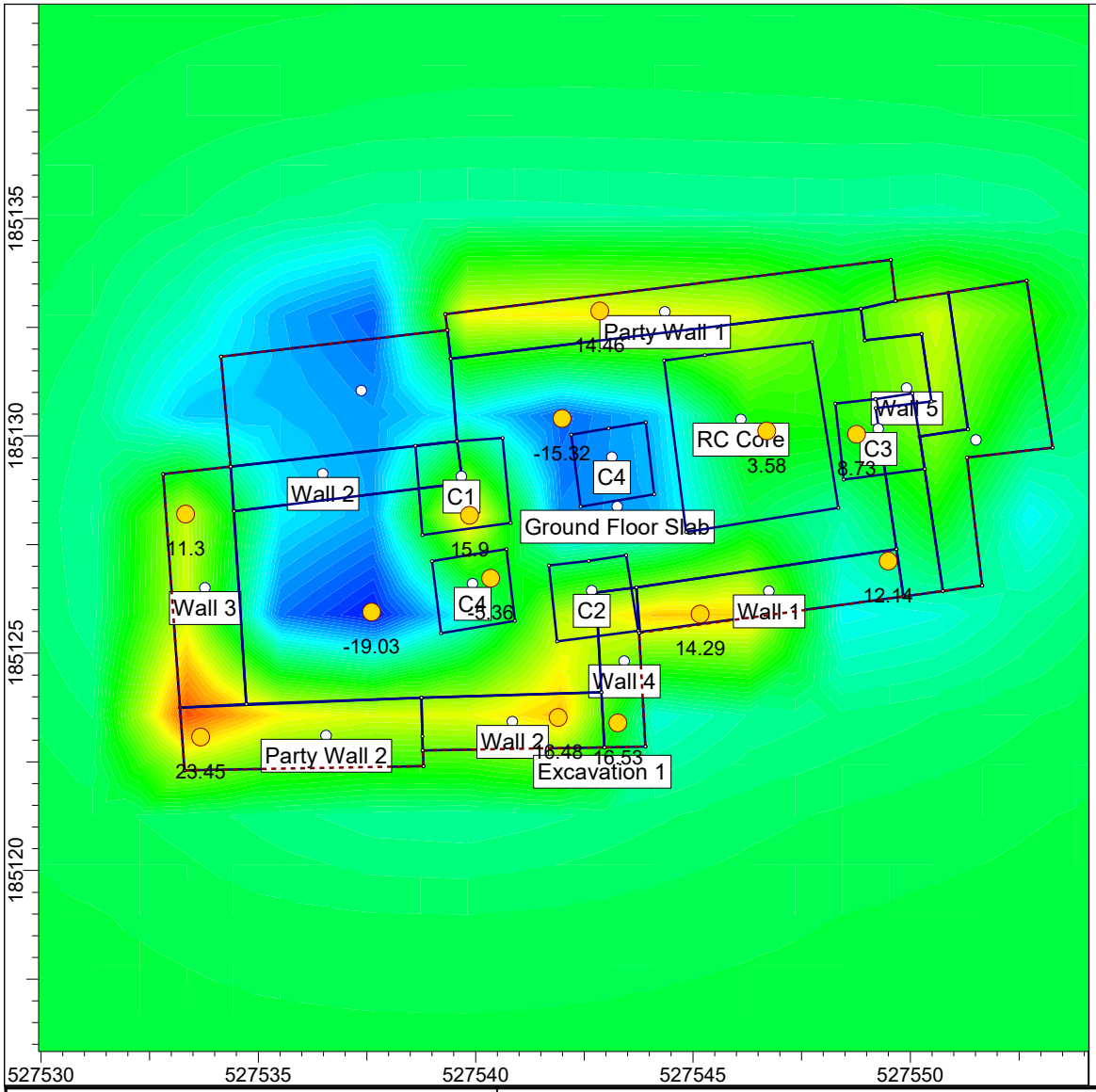
Number of points 300
Expansion Factor 2

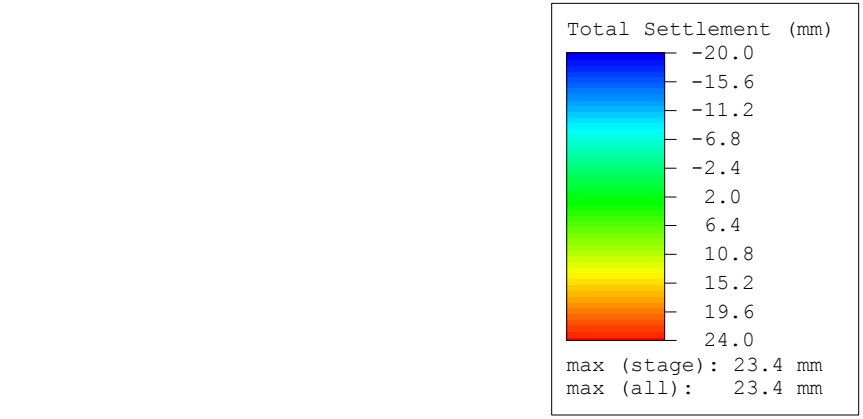
Grid Coordinates

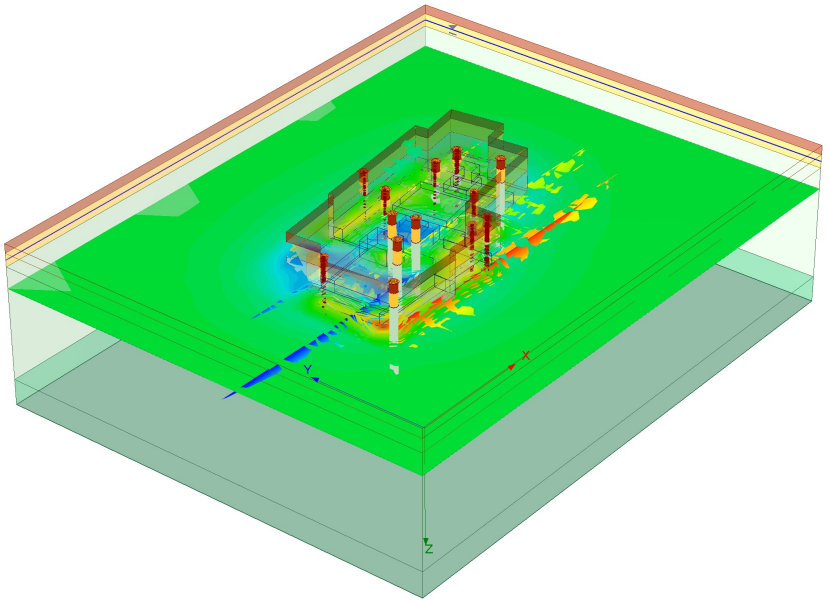
X [m]	Y [m]
527563	185144
527563	185112
527523	185112
527523	185144

APPENDIX E

SETTLE 3D – STAGE 3 (DRAINED RELOADING)







SETTLE3D 4.008	*Project*	125183 - 75 Lawn Road	
	Analysis Description	Settle3D - Drained Reloading (Long Term)	
	Drawn By	JT	*Company* Fairhurst
	Date	05/03/2018, 22:37:13	*File Name* Settle 3D - Stage 3 - Drained Reloading.s3z

Settle3D Analysis Information
125183 - 75 Lawn Road

Project Settings

Document Name	Settle 3D - Stage 3 - Drained Reloading
Project Title	125183 - 75 Lawn Road
Analysis	Settle3D - Drained Reloading (Long Term)
Author	JT
Company	Fairhurst
Date Created	05/03/2018, 22:37:13
Stress Computation Method	Boussinesq
Minimum settlement ratio for subgrade modulus	0.9

Calculate settlement with mean stress

Use average properties to calculate layered stresses

Ignore negative effective stresses in settlement calculations

Stage Settings

Stage #	Name
1	Stage 1

Results

Time taken to compute: 0 seconds

Stage: Stage 1

Data Type	Minimum	Maximum
Total Settlement [mm]	-19.0256	23.4484
Total Consolidation Settlement [mm]	-12.2563	23.7502
Virgin Consolidation Settlement [mm]	0	23.7502
Recompression Consolidation Settlement [mm]	-12.2563	0
Immediate Settlement [mm]	-9.8065	0.0198049
Loading Stress ZZ [kPa]	-47.25	44.3872
Loading Stress XX [kPa]	-37.5745	30.9292
Loading Stress YY [kPa]	-51.1999	31.6839
Effective Stress ZZ [kPa]	0	114.82
Effective Stress XX [kPa]	0	119.826
Effective Stress YY [kPa]	0	119.67
Mean Stress [kPa]	-37.9576	35.419
Total Stress ZZ [kPa]	0	204.727
Total Stress XX [kPa]	0	205.173
Total Stress YY [kPa]	0	205.017
Modulus of Subgrade Reaction (Total) [kPa/m]	-43395	15546.9
Modulus of Subgrade Reaction (Immediate) [kPa/m]	-1.85273e+006	3191.81
Modulus of Subgrade Reaction (Consolidation) [kPa/m]	-133909	32281.9
Total Strain	-0.0078862	0.0156269
Pore Water Pressure [kPa]	0	105.948
Degree of Consolidation [%]	0	100
Pre-consolidation Stress [kPa]	0.56	114.675
Over-consolidation Ratio	1	3.73052
Void Ratio	0	0
Hydroconsolidation Settlement [mm]	0	0
Undrained Shear Strength	-1.18129	1.25757

Loads

1. Polygonal Load: "Wall 5"

Label	Wall 5
Load Type	Flexible
Area of Load	7.69175 m^2
Load	63 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527549	185132
527550	185132
527550	185131
527549	185131
527550	185126
527551	185126
527550	185130
527551	185130
527551	185133
527550	185133
527550	185133
527549	185133
527549	185133

2. Polygonal Load: "Party Wall 1"

Label	Party Wall 1
Load Type	Flexible
Area of Load	10.6346 m^2
Load	68 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527550	185134
527539	185133
527539	185132
527539	185132
527549	185133
527550	185133

3. Polygonal Load: "Wall 1"

Label	Wall 1
Load Type	Flexible
Area of Load	6.49395 m^2
Load	62 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527544	185127
527544	185125
527550	185126
527550	185127

4. Polygonal Load: "Wall 4"

Label	Wall 4
Load Type	Flexible
Area of Load	3.39743 m^2
Load	50 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527544	185123
527544	185125
527544	185127
527543	185126
527543	185123

5. Polygonal Load: "Wall 2"

Label	Wall 2
Load Type	Flexible
Area of Load	5.15855 m^2
Load	67 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527539	185124
527539	185123
527543	185123
527543	185124

6. Polygonal Load: "Party Wall 2"

Label	Party Wall 2
Load Type	Flexible
Area of Load	8.35142 m^2
Load	70 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527533	185124
527533	185122
527539	185122
527539	185123
527539	185124

7. Polygonal Load: "Wall 3"

Label	Wall 3
Load Type	Flexible
Area of Load	8.38217 m^2
Load	50 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527535	185124
527534	185129
527533	185129
527533	185124

8. Polygonal Load: "Wall 2"

Label	Wall 2
Load Type	Flexible
Area of Load	5.27477 m^2
Load	67 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527534	185129
527534	185128
527540	185129
527540	185130
527534	185129

9. Polygonal Load: "Ground Floor Slab"

Label	Ground Floor Slab
Load Type	Flexible
Area of Load	88.1464 m^2
Load	11.75 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527535	185124
527539	185124
527539	185124
527543	185124
527543	185126
527544	185127
527550	185127
527549	185131
527550	185131
527550	185132
527549	185132
527549	185133
527539	185132
527540	185130
527540	185129
527534	185128

10. Polygonal Load

Load Type	Flexible
Area of Load	13.398 m^2
Load	11.75 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527534	185129
527540	185130
527539	185132
527539	185132
527534	185132

11. Polygonal Load

Load Type	Flexible
Area of Load	10.6597 m^2
Load	11.75 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527552	185127
527551	185130
527553	185130
527553	185134
527551	185133
527551	185130
527550	185130
527551	185126

12. Polygonal Load: "C1"

Label	C1
Load Type	Flexible
Area of Load	4.10046 m^2
Load	91.25 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527539	185130
527539	185128
527541	185128
527541	185130
527540	185130

13. Polygonal Load: "C2"

Label	C2
Load Type	Flexible
Area of Load	3.21484 m^2
Load	78 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527542	185127
527542	185125
527544	185126
527543	185127
527543	185127

14. Polygonal Load: "C4"

Label	C4
Load Type	Flexible
Area of Load	2.87965 m^2
Load	29 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527539	185127
527539	185125
527541	185126
527541	185127
527540	185127

15. Polygonal Load: "C4"

Label	C4
Load Type	Flexible
Area of Load	2.87965 m^2
Load	29 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527542	185130
527542	185128
527544	185129
527544	185130
527543	185130

16. Polygonal Load: "C3"

Label	C3
Load Type	Flexible
Area of Load	3.21484 m^2
Load	46 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527548	185131
527548	185129
527550	185129
527550	185131
527549	185131

17. Polygonal Load: "RC Core"

Label	RC Core
Load Type	Flexible
Area of Load	13.662 m^2
Load	35 kPa
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527544	185132
527545	185128
527548	185128
527548	185132
527545	185132

Excavations

1. Excavation: "Excavation 1"

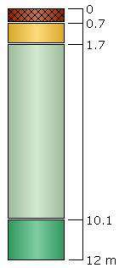
Depth	3.3 m
Installation Stage	Stage 1

Coordinates

X [m]	Y [m]
527539	185133
527539	185132
527534	185132
527534	185129
527533	185129
527533	185122
527539	185122
527539	185123
527544	185123
527544	185125
527552	185127
527551	185130
527553	185130
527553	185134
527550	185133
527550	185134

Soil Layers

Layer #	Type	Thickness [m]	Depth [m]
1	Made Ground	0.7	0
2	Superficial Head Deposits	1	0.7
3	Weathered London Clay	8.4	1.7
4	London Clay	1.9	10.1



Soil Properties

Property		Made Ground	Weathered London Clay	London Clay	Superficial Head Deposits
Color					
Unit Weight [kN/m^3]		16	18	18	19
Saturated Unit Weight [kN/m^3]		15	17	17	18
Poisson's Ratio		0.2	0.2	0.2	0.2
K0		1	1	1	1
Immediate Settlement		Enabled	Enabled	Enabled	Enabled
E [kPa]	top	3000	11400	28200	9400
	bottom	-	28200	32000	11400
Eur [kPa]	top	3000	11400	28200	9400
	bottom	-	28200	32000	11400
Primary Consolidation		Disabled	Enabled	Enabled	Enabled
Material Type			Linear	Linear	Linear
mv [m^2/kN]	top	-	0.00023	0.000107	0.000244
	bottom	-	0.000107	7.9e-005	0.00023
mvur [m^2/kN]	top	-	0.00023	0.000107	0.000244
	bottom	-	0.000107	7.9e-005	0.00023
Undrained Su A [kN/m2]		0	0	0	0
Undrained Su S		0.2	0.2	0.2	0.2
Undrained Su m		0.8	0.8	0.8	0.8
Piezo Line ID		1	1	1	1

Groundwater

Groundwater method	Piezometric Lines
Water Unit Weight	9.81 kN/m^3

Piezometric Line Entities

ID	Depth (m)
1	1.2 m

Query Points

Point #	Query Point Name	(X,Y) Location	Number of Divisions
1	Query Point 1	527540, 185128	Auto: 57
3	Query Point 3	527543, 185133	Auto: 57
4	Query Point 4	527549, 185127	Auto: 57
8	Query Point 8	527533, 185128	Auto: 57
9	Query Point 9	527538, 185126	Auto: 57
10	Query Point 10	527543, 185123	Auto: 57
11	Query Point 11	527547, 185130	Auto: 57
12	Query Point 12	527542, 185124	Auto: 57
13	Query Point 13	527534, 185123	Auto: 57
14	Query Point 14	527540, 185127	Auto: 57
15	Query Point 15	527549, 185130	Auto: 57
17	Query Point 17	527542, 185130	Auto: 57
18	Query Point 18	527545, 185126	Auto: 57

Field Point Grid

Number of points 300
Expansion Factor 2

Grid Coordinates

X [m]	Y [m]
527563	185144
527563	185112
527523	185112
527523	185144

APPENDIX F

XDISP ANALYSIS

Problem Type

Problem Type : Tunnelling and Embedded Wall Excavations

Displacement Data

Type	Name	Direction of extrusion	Point/Line/Line for extrusion						No. of intervals across extrusion/line	Extrusion depth	No. of intervals along extrusion	Calculate	Surface type for tunnels
			First point			Second point							
			X [m]	Y [m]	Z(level) [m]	X [m]	Y [m]	Z(level) [m]		[m]			
Line	Wall 1	-	527548.65000	185141.80000	0.00000	527549.55000	185134.05000	0.00000	8	-	-	Yes	Surface
Line	Party Wall 1	-	527549.55000	185134.05000	0.00000	527539.30000	185132.80000	0.00000	10	-	-	Yes	Surface
Line	Wall 2	-	527539.30000	185132.80000	0.00000	527539.11000	185134.10000	0.00000	2	-	-	Yes	Surface
Line	Wall 3	-	527539.11000	185134.10000	0.00000	527535.98000	185133.82000	0.00000	4	-	-	Yes	Surface
Line	Wall 4	-	527535.98000	185133.82000	0.00000	527535.79000	185135.98000	0.00000	2	-	-	Yes	Surface
Line	Wall 5	-	527535.79000	185135.98000	0.00000	527532.74000	185135.71000	0.00000	4	-	-	Yes	Surface
Line	Wall 6	-	527532.70000	185118.00000	0.00000	527532.86300	185122.28700	0.00000	4	-	-	Yes	Surface
Line	Wall 7	-	527534.45000	185118.05000	0.00000	527532.70000	185118.00000	0.00000	2	-	-	Yes	Surface
Line	Wall 8	-	527534.50000	185114.85000	0.00000	527534.45000	185118.05000	0.00000	4	-	-	Yes	Surface
Line	Wall 9	-	527538.80000	185122.40000	0.00000	527544.15000	185122.55000	0.00000	6	-	-	Yes	Surface
Line	Wall 10	-	527544.15000	185122.55000	0.00000	527544.30000	185119.65000	0.00000	2	-	-	Yes	Surface
Line	Wall 11	-	527544.30000	185119.65000	0.00000	527550.40000	185119.80000	0.00000	6	-	-	Yes	Surface
Line	Party Wall 2	-	527532.86300	185122.28700	0.00000	527538.80000	185122.40000	0.00000	6	-	-	Yes	Surface
Grid	Grid 1	Global X	527530.00000	185110.00000	0.00000	-	185145.00000	0.00000	10	25.00000	20	Yes	Surface

Polylines

Name	Coordinates x [m]	y [m]	z [m]
74 Lawn Road	527550.	185140.	0.0
	527550.	185130.	0.0
	527540.	185130.	0.0
	527540.	185130.	0.0
	527540.	185130.	0.0
	527540.	185140.	0.0
	527530.	185140.	0.0
	527530.	185140.	0.0
75 Lawn Road	527550.	185130.	0.0
	527540.	185130.	0.0
	527540.	185130.	0.0
	527530.	185130.	0.0
	527530.	185130.	0.0
	527530.	185130.	0.0
	527530.	185120.	0.0
	527540.	185120.	0.0
	527540.	185120.	0.0
	527540.	185120.	0.0
	527540.	185130.	0.0
	527550.	185130.	0.0
	527550.	185130.	0.0
	527550.	185130.	0.0
	527550.	185130.	0.0
	527550.	185130.	0.0
	527550.	185130.	0.0
76 Lawn Road	527530.	185110.	0.0
	527530.	185120.	0.0
	527530.	185120.	0.0
	527530.	185120.	0.0
	527530.	185120.	0.0
	527540.	185120.	0.0
	527540.	185120.	0.0
	527540.	185120.	0.0
	527550.	185120.	0.0

Vertical Ground Movement Curves

Curve Name: **Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))**
Coordinates: [Distance from wall / wall depth or max. excavation depth (x), Depth / wall depth or max. excavation depth (y), Settlement / wall depth or max. excavation depth (z)(%)]
[0.000,0.000,0.040][2.000,0.000,0.000]
Curve Fitting Method: Polynomial
x Order: 1
y Order: 0
Polynomial: z = $-2.0E-2x + 4.0E-2$
Coeff. of Determination: 1.0

Curve Name: **Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)**
Coordinates: [Distance from wall / wall depth or max. excavation depth (x), Depth / wall depth or max. excavation depth (y), Settlement / wall depth or max. excavation depth (z)(%)]
[0.000,0.000,0.039][0.100,0.000,0.049][0.200,0.000,0.056][0.300,0.000,0.062]
[0.400,0.000,0.067][0.500,0.000,0.070][0.600,0.000,0.072][0.700,0.000,0.073]
[0.800,0.000,0.073][0.900,0.000,0.072][1.000,0.000,0.070][1.100,0.000,0.068]
[1.200,0.000,0.065][1.300,0.000,0.061][1.400,0.000,0.058][1.500,0.000,0.054]
[1.600,0.000,0.050][1.700,0.000,0.046][1.800,0.000,0.042][1.900,0.000,0.038]
[2.000,0.000,0.034][2.100,0.000,0.030][2.200,0.000,0.027][2.300,0.000,0.023]
[2.400,0.000,0.020][2.500,0.000,0.017][2.600,0.000,0.014][2.700,0.000,0.012]
[2.800,0.000,0.010][2.900,0.000,0.008][3.000,0.000,0.007][3.100,0.000,0.005]
[3.200,0.000,0.004][3.300,0.000,0.004][3.400,0.000,0.003][3.500,0.000,0.002]
[3.600,0.000,0.002][3.700,0.000,0.002][3.800,0.000,0.001][3.900,0.000,0.001]
[4.000,0.000,0.000]
Curve Fitting Method: Polynomial
x Order: 4
y Order: 0
Polynomial: z = $-2.6455E-3x^4 + 2.8495E-2x^3 - 1.0051E-1x^2 + 1.0569E-1x + 3.8990E-2$
Coeff. of Determination: 9.9991E-1

Horizontal Ground Movement Curves

Curve Name: **Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))**
Coordinates: [Distance from wall / wall depth or max. excavation depth (x), Depth / wall depth or max. excavation depth (y), Horizontal movement / wall depth or max. excavation depth (z)(%)]
[0.000,0.000,0.041][0.050,0.000,0.039][0.100,0.000,0.036][0.150,0.000,0.034]
[0.200,0.000,0.032][0.250,0.000,0.030][0.300,0.000,0.029][0.350,0.000,0.027]
[0.400,0.000,0.025][0.450,0.000,0.023][0.500,0.000,0.022][0.550,0.000,0.020]
[0.600,0.000,0.019][0.650,0.000,0.018][0.700,0.000,0.016][0.750,0.000,0.015]
[0.800,0.000,0.014][0.850,0.000,0.013][0.900,0.000,0.012][0.950,0.000,0.010]
[1.000,0.000,0.009][1.050,0.000,0.008][1.100,0.000,0.007][1.150,0.000,0.006]
[1.200,0.000,0.005][1.250,0.000,0.004][1.300,0.000,0.004][1.350,0.000,0.003]
[1.400,0.000,0.002][1.450,0.000,0.001][1.500,0.000,0.000]
Curve Fitting Method: Polynomial
x Order: 3
y Order: 0
Polynomial: z = $-4.2486E-3x^3 + 1.9096E-2x^2 - 4.6221E-2x + 4.0729E-2$
Coeff. of Determination: 1.0000

Curve Name: **Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))**
Coordinates: [Distance from wall / wall depth or max. excavation depth (x), Depth / wall depth or max. excavation depth (y), Horizontal movement / wall depth or max.

Name	Coordinates x [m]	y [m]	z [m]

excavation depth (z)(%)]
[0.000,0.000,0.150][4.000,0.000,0.000]

Curve Fitting Method:	Polynomial
x Order:	1
y Order:	0
Polynomial: z =	-3.75E-2x + 1.50E-1
Coeff. of Determination:	1.00

Polygonal Excavations

Excavation Name: **REC1: Excavation**
Surface level [m]: 0.0
Contribution: Positive
Enabled: Yes

Corner	x [m]	y [m]	Base Level [m]	Stiffened	Previous Side d [m]	Previous Side p1 [%]	Previous Side p2* [%]	Next Side d [m]	Next Side p1 [%]	Next Side p2* [%]
1	527530.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
2	527530.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
3	527530.	185120.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
4	527540.	185120.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
5	527540.	185120.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
6	527550.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
7	527550.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
8	527550.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
9	527550.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
10	527540.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000

Side	Corner 1 x [m]	Corner 1 y [m]	Corner 2 x [m]	Corner 2 y [m]	Ground Movement Curve Vertical	Ground Movement Curve Horizontal
1	527530.	185130.	527530.	185130.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
2	527530.	185130.	527530.	185120.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
3	527530.	185120.	527540.	185120.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
4	527540.	185120.	527540.	185120.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
5	527540.	185120.	527550.	185130.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
6	527550.	185130.	527550.	185130.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
7	527550.	185130.	527550.	185130.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
8	527550.	185130.	527550.	185130.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
9	527550.	185130.	527540.	185130.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))
10	527540.	185130.	527530.	185130.	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(b)	Excavation in front of high stiffness wall in stiff clay (CIRIA 580 Fig. 2.11(a))

Excavation Name: **REC1: Installation of Piles**
Surface level [m]: 0.0
Contribution: Positive
Enabled: Yes

Corner	x [m]	y [m]	Base Level [m]	Stiffened	Previous Side d [m]	Previous Side p1 [%]	Previous Side p2* [%]	Next Side d [m]	Next Side p1 [%]	Next Side p2* [%]
1	527530.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
2	527530.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
3	527530.	185120.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
4	527540.	185120.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
5	527540.	185120.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
6	527550.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
7	527550.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
8	527550.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
9	527550.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000
10	527540.	185130.	-3.3000	Yes	0.0	67.000	25.000	0.0	67.000	25.000

Side	Corner 1 x [m]	Corner 1 y [m]	Corner 2 x [m]	Corner 2 y [m]	Ground Movement Curve Vertical	Ground Movement Curve Horizontal
1	527530.	185130.	527530.	185130.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
2	527530.	185130.	527530.	185120.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
3	527530.	185120.	527540.	185120.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
4	527540.	185120.	527540.	185120.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
5	527540.	185120.	527550.	185130.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
6	527550.	185130.	527550.	185130.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
7	527550.	185130.	527550.	185130.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
8	527550.	185130.	527550.	185130.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
9	527550.	185130.	527540.	185130.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))
10	527540.	185130.	527530.	185130.	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(b))	Installation of contiguous bored pile wall in stiff clay (CIRIA 580 Fig. 2.8(a))

Damage Category Strains

Name	0 (Negligible) to 1 (Very Slight)	1 (Very Slight) to 2 (Slight)	2 (Slight) to 3 (Moderate)	3 (Moderate) to 4 (Severe)
Burland Strain Limits	0.0	500.00E-6	750.00E-6	0.0015000

Specific Structures - Geometry

Structure Name	Sub-Structure Name	Displacement Line	Start Distance Along Line [m]	End Distance Along Line [m]	Vertical Offsets from Line for Vertical Movement Calculations [m]	Vertical Displacement Limit Sensitivity [mm]	Damage Category Strains	Poisson's Ratio	E/G
74 Lawn Road	Wall 1	Wall 1	0.00000	7.80100	0.0	0.10000	Burland Strain Limits	0.20000	2.6000

Structure Name	Sub-Structure Name	Displacement Line	Start Distance Along Line	End Distance Along Line	Vertical Offsets from Line for Vertical	Vertical Displacement Limit Sensitivity	Damage Category Strains	Poisson's Ratio	E/G
74 Lawn Road	Party Wall 1	Party Wall 1	0.00000	10.32400	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
74 Lawn Road	Wall 2	Wall 2	0.00000	1.31200	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
74 Lawn Road	Wall 3	Wall 3	0.00000	3.14000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
74 Lawn Road	Wall 4	Wall 4	0.00000	2.16800	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
74 Lawn Road	Wall 5	Wall 5	0.00000	3.06000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
76 Lawn Road	Wall 6	Wall 6	0.00000	4.29000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
76 Lawn Road	Wall 7	Wall 7	0.00000	1.75000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
76 Lawn Road	Wall 8	Wall 8	0.00000	3.20000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
76 Lawn Road	Wall 9	Wall 9	0.00000	5.35000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
76 Lawn Road	Wall 10	Wall 10	0.00000	2.90000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
76 Lawn Road	Wall 11	Wall 11	0.00000	6.10100	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
76 Lawn Road	Party Wall 2	Party Wall 2	0.00000	5.50000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000

Specific Structures - Bending Parameters

Structure Name	Sub-Structure Name	Height	Default Properties	Hogging			Sagging		
				2nd Moment of Area (per unit width)	Distance of Bending Strain from N.A.	Distance of N.A. from Edge of Beam in Tension	2nd Moment of Area (per unit width)	Distance of Bending Strain from N.A.	Distance of N.A. from Edge of Beam in Tension
		[m]		[m³]	[m]	[m]	[m³]	[m]	[m]
74 Lawn Road	Wall 1	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
74 Lawn Road	Party Wall 1	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
74 Lawn Road	Wall 2	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
74 Lawn Road	Wall 3	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
74 Lawn Road	Wall 4	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
74 Lawn Road	Wall 5	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
76 Lawn Road	Wall 6	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
76 Lawn Road	Wall 7	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
76 Lawn Road	Wall 8	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
76 Lawn Road	Wall 9	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
76 Lawn Road	Wall 10	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
76 Lawn Road	Wall 11	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000
76 Lawn Road	Party Wall 2	9.0000	Yes	243.00	9.0000	9.0000	60.750	4.5000	4.5000

Building Segment Combinations

Structure Name	Sub-Structure Name	Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Combined Segment
		[m]		[m]	[m]		

No structures have segments combined.

Utility Strain Calculation Options

Neglect beneficial contribution of axial strains : No

Warnings

1 Multiple excavations have been specified. The displacements resulting from these excavations are calculated by summing the displacements resulting from each individual excavation. No account has been taken of the interactions between excavations (e.g. overlapping zones of influence or 'shielding' of one excavation by another).

Errors

None

Displacement and Strain Results

Type/No.		Coordinates			Displacements					Angle of Line
Name	Dist.	x	y	z	x	y	z	Horizontal displacement along Line	Horizontal displacement perpendicular to Line	to x Axis
	[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]
Wall 1	Line 1	527548.65000	185141.80000	0.00000	0.22007	-1.8912	0.65196	1.9039	453.44E-6	276.62
	0.97526	527548.76250	185140.83125	0.00000	0.25984	-2.2328	0.97323	2.2479	535.37E-6	276.62
	1.9505	527548.87500	185139.86250	0.00000	0.29960	-2.5745	1.4798	2.5919	617.29E-6	276.62
	2.9258	527548.98750	185138.89375	0.00000	0.34086	-2.9291	2.0341	2.9488	702.30E-6	276.62
	3.9010	527549.10000	185137.92500	0.00000	0.39977	-3.4354	2.5391	3.4585	823.69E-6	276.62
	4.8763	527549.21250	185136.95625	0.00000	0.46121	-3.9633	2.9256	3.9901	950.29E-6	276.62
	5.8516	527549.32500	185135.98750	0.00000	0.52754	-4.5333	3.1089	4.5639	0.0010869	276.62
	6.8268	527549.43750	185135.01875	0.00000	0.60111	-5.1655	2.9898	5.2004	0.0012385	276.62
	7.8021	527549.55000	185134.05000	0.00000	0.35906	-2.9443	1.2284	2.9661	0.017028	276.62
Party Wall 1	Line 2	527549.55000	185134.05000	0.00000	0.35906	-2.9443	1.2284	0.0	2.9661	186.95
	1.0326	527548.52500	185133.92500	0.00000	0.76192	-6.2478	2.6067	0.0	6.2940	186.95
	2.0652	527547.50000	185133.80000	0.00000	0.76192	-6.2478	2.6067	0.0	6.2940	186.95
	3.0978	527546.47500	185133.67500	0.00000	0.0	0.0	0.0	0.0	0.0	186.95
	4.1304	527545.45000	185133.55000	0.00000	0.0	0.0	0.0	0.0	0.0	186.95
	5.1630	527544.42500	185133.42500	0.00000	0.0	0.0	0.0	0.0	0.0	186.95
	6.1956	527543.40000	185133.30000	0.00000	0.76192	-6.2478	2.6067	0.0	6.2940	186.95
	7.2282	527542.37500	185133.17500	0.00000	0.76192	-6.2478	2.6067	0.0	6.2940	186.95
	8.2608	527541.35000	185133.05000	0.00000	0.0	0.0	0.0	0.0	0.0	186.95
	9.2933	527540.32500	185132.92500	0.00000	0.0	0.0	0.0	0.0	0.0	186.95
	10.326	527539.30000	185132.80000	0.00000	0.57951	-3.0485	1.2851	-0.20622	3.0962	186.95
Wall 2	Line 3	527539.30000	185132.80000	0.00000	0.57951	-3.0485	1.2851	-3.1002	-0.13256	98.315
	0.65691	527539.20500	185133.45000	0.00000	0.81749	-5.5954	2.9872	-5.6548	299.44E-6	98.315
	1.3138	527539.11000	185134.10000	0.00000	0.74906	-5.1270	3.2015	-5.1815	274.38E-6	98.315
Wall 3	Line 4	527539.11000	185134.10000	0.00000	0.74906	-5.1270	3.2015	-0.28926	5.1734	185.11
	0.78562	527538.32750	185134.03000	0.00000	0.97704	-5.1396	3.2769	-0.51521	5.2062	185.11
	1.5712	527537.54500	185133.96000	0.00000	0.96699	-5.0867	3.2876	-0.50991	5.1527	185.11
	2.3569	527536.76250	185133.89000	0.00000	0.95703	-5.0343	3.2959	-0.50466	5.0996	185.11
	3.1425	527535.98000	185133.82000	0.00000	0.94715	-4.9824	3.3019	-0.49945	5.0470	185.11
Wall 4	Line 5	527535.98000	185133.82000	0.00000	0.94715	-4.9824	3.3019	-5.0462	-0.50693	95.027
	1.0842	527535.88500	185134.90000	0.00000	0.81764	-4.3011	3.1758	-4.3562	-0.43761	95.027
	2.1683	527535.79000	185135.98000	0.00000	0.69954	-3.6798	2.7573	-3.7270	-0.37440	95.027
Wall 5	Line 6	527535.79000	185135.98000	0.00000	0.69954	-3.6798	2.7573	-0.37232	3.7272	185.06
	0.76548	527535.02750	185135.91250	0.00000	0.69149	-3.6375	2.7201	-0.36804	3.6843	185.06
	1.5310	527534.26500	185135.84500	0.00000	0.68348	-3.5954	2.6822	-0.36378	3.6416	185.06
	2.2964	527533.50250	185135.77750	0.00000	0.67549	-3.5533	2.6435	-0.35953	3.5991	185.06
	3.0619	527532.74000	185135.71000	0.00000	0.80483	-2.4435	1.9783	-0.58622	2.5050	185.06
Wall 6	Line 7	527532.70000	185118.00000	0.00000	0.14564	2.0495	1.5958	2.0536	-0.067667	87.823
	1.0725	527532.74075	185119.07175	0.00000	0.21771	2.3399	1.9074	2.3465	-0.12865	87.823
	2.1450	527532.78150	185120.14350	0.00000	0.35788	2.5529	2.0514	2.5647	-0.26062	87.823
	3.2176	527532.82225	185121.21525	0.00000	0.74754	2.4210	1.9010	2.4476	-0.65502	87.823
	4.2901	527532.86300	185122.28700	0.00000	5.9242	0.42043	2.9250	0.64521	-5.9039	87.823
Wall 7	Line 8	527534.45000	185118.05000	0.00000	-0.063087	3.4698	2.5050	-0.036035	-3.4702	181.64
	0.87536	527533.57500	185118.02500	0.00000	-0.062995	3.4647	2.5000	-0.035983	-3.4651	181.64
	1.7507	527532.70000	185118.00000	0.00000	0.14564	2.0495	1.5958	-0.20412	-2.0446	181.64
Wall 8	Line 9	527534.50000	185114.85000	0.00000	-0.039058	2.1482	0.80143	2.1485	0.0054918	90.895
	0.80010	527534.48750	185115.65000	0.00000	-0.044512	2.4482	1.0939	2.4486	0.0062587	90.895
	1.6002	527534.47500	185116.45000	0.00000	-0.049966	2.7481	1.5606	2.7486	0.0070257	90.895
	2.4003	527534.46250	185117.25000	0.00000	-0.055421	3.0481	2.0460	3.0486	0.0077926	90.895
	3.2004	527534.45000	185118.05000	0.00000	-0.063087	3.4698	2.5050	3.4704	0.0088706	90.895
Wall 9	Line 10	527538.80000	185122.40000	0.00000	-0.27203	3.0890	1.2843	-0.18535	3.0954	1.6060
	0.89202	527539.69167	185122.42500	0.00000	-0.54823	6.2255	2.6515	-0.37354	6.2384	1.6060
	1.7840	527540.58333	185122.45000	0.00000	-0.54436	6.1815	2.6946	-0.37090	6.1943	1.6060
	2.6761	527541.47500	185122.47500	0.00000	-0.54051	6.1379	2.7361	-0.36828	6.1506	1.6060
	3.5681	527542.36667	185122.50000	0.00000	-0.53670	6.0945	2.7758	-0.36568	6.1072	1.6060
	4.4601	527543.25833	185122.52500	0.00000	-0.53291	6.0515	2.8140	-0.36310	6.0640	1.6060
	5.3521	527544.15000	185122.55000	0.00000	-2.5805	5.4021	2.8875	-2.4281	5.4723	1.6060

Type/No.		Coordinates			Displacements					Angle of Line to x Axis
Name	Dist.	x	y	z	x	y	z	Horizontal displacement	Horizontal displacement	
Wall 10	Line 11	527544.15000	185122.55000	0.00000	-2.5805	5.4021	2.8875	-5.5282	-2.2981	272.96
	1.4519	527544.22500	185121.10000	0.00000	-0.79123	4.3657	2.9912	-4.4008	-0.56466	272.96
	2.9039	527544.30000	185119.65000	0.00000	-0.45001	3.6808	2.7524	-3.6991	-0.25928	272.96
Wall 11	Line 12	527544.30000	185119.65000	0.00000	-0.45001	3.6808	2.7524	-0.35939	3.6908	1.4086
	1.0170	527545.31667	185119.67500	0.00000	-1.4638	3.2750	2.6628	-1.3828	3.3100	1.4086
	2.0339	527546.33333	185119.70000	0.00000	-1.5878	3.3239	2.7034	-1.5056	3.3619	1.4086
	3.0509	527547.35000	185119.72500	0.00000	-1.4875	3.1140	2.4861	-1.4105	3.1496	1.4086
	4.0679	527548.36667	185119.75000	0.00000	-1.3884	2.9064	2.2519	-1.3165	2.9397	1.4086
	5.0849	527549.38333	185119.77500	0.00000	-1.3034	2.7286	2.0065	-1.2359	2.7598	1.4086
	6.1018	527550.40000	185119.80000	0.00000	-1.2362	2.5879	1.7548	-1.1722	2.6175	1.4086
Party Wall 2	Line 13	527532.86300	185122.28700	0.00000	5.9242	0.42043	2.9250	5.9311	0.30762	1.0904
	0.98968	527533.85250	185122.30583	0.00000	-0.11435	6.2895	2.6103	0.0053537	6.2905	1.0904
	1.9794	527534.84200	185122.32467	0.00000	-0.11437	6.2902	2.6096	0.0053543	6.2912	1.0904
	2.9690	527535.83150	185122.34350	0.00000	-0.11438	6.2909	2.6088	0.0053549	6.2919	1.0904
	3.9587	527536.82100	185122.36233	0.00000	-0.11439	6.2916	2.6081	0.0053555	6.2926	1.0904
	4.9484	527537.81050	185122.38117	0.00000	-0.11441	6.2923	2.6074	0.0053561	6.2933	1.0904
	5.9381	527538.80000	185122.40000	0.00000	-0.27203	3.0890	1.2843	-0.21319	3.0936	1.0904
Grid 1	Grid 1	527530.00000	185110.00000	0.00000	0.014932	0.092708	0.020076	-	-	-
		527531.25000	185110.00000	0.00000	0.014166	0.15975	0.028627	-	-	-
		527532.50000	185110.00000	0.00000	0.0054690	0.20867	0.033463	-	-	-
		527533.75000	185110.00000	0.00000	-0.0060934	0.33514	0.051242	-	-	-
		527535.00000	185110.00000	0.00000	-0.0059385	0.32662	0.050353	-	-	-
		527536.25000	185110.00000	0.00000	-0.0057836	0.31810	0.049456	-	-	-
		527537.50000	185110.00000	0.00000	-0.0056287	0.30958	0.048550	-	-	-
		527538.75000	185110.00000	0.00000	-0.0054738	0.30106	0.047634	-	-	-
		527540.00000	185110.00000	0.00000	-0.024427	0.27738	0.045146	-	-	-
		527541.25000	185110.00000	0.00000	-0.020819	0.23642	0.040393	-	-	-
		527542.50000	185110.00000	0.00000	-0.017212	0.19545	0.035265	-	-	-
		527543.75000	185110.00000	0.00000	-0.013605	0.15449	0.029673	-	-	-
		527545.00000	185110.00000	0.00000	-0.0099978	0.11353	0.023529	-	-	-
		527546.25000	185110.00000	0.00000	-0.0081938	0.045540	0.011741	-	-	-
		527547.50000	185110.00000	0.00000	0.0	0.0	0.0	-	-	-
		527548.75000	185110.00000	0.00000	0.0	0.0	0.0	-	-	-
		527550.00000	185110.00000	0.00000	0.0	0.0	0.0	-	-	-
		527551.25000	185110.00000	0.00000	0.0	0.0	0.0	-	-	-
		527552.50000	185110.00000	0.00000	0.0	0.0	0.0	-	-	-
		527553.75000	185110.00000	0.00000	0.0	0.0	0.0	-	-	-
		527555.00000	185110.00000	0.00000	0.0	0.0	0.0	-	-	-
		527530.00000	185113.50000	0.00000	0.17025	0.68452	0.17768	-	-	-
		527531.25000	185113.50000	0.00000	0.11557	0.85790	0.23028	-	-	-
		527532.50000	185113.50000	0.00000	0.042017	1.0194	0.26998	-	-	-
		527533.75000	185113.50000	0.00000	-0.029949	1.6472	0.41739	-	-	-
		527535.00000	185113.50000	0.00000	-0.029794	1.6387	0.41218	-	-	-
		527536.25000	185113.50000	0.00000	-0.029639	1.6302	0.40701	-	-	-
		527537.50000	185113.50000	0.00000	-0.029484	1.6216	0.40188	-	-	-
		527538.75000	185113.50000	0.00000	-0.029330	1.6131	0.39680	-	-	-
		527540.00000	185113.50000	0.00000	-0.13912	1.5798	0.38072	-	-	-
		527541.25000	185113.50000	0.00000	-0.13551	1.5388	0.35756	-	-	-
		527542.50000	185113.50000	0.00000	-0.13190	1.4979	0.33546	-	-	-
		527543.75000	185113.50000	0.00000	-0.12830	1.4569	0.31441	-	-	-
		527545.00000	185113.50000	0.00000	-0.14936	1.2897	0.26979	-	-	-
		527546.25000	185113.50000	0.00000	-0.28379	1.1355	0.22783	-	-	-
		527547.50000	185113.50000	0.00000	-0.38749	0.99942	0.18325	-	-	-
		527548.75000	185113.50000	0.00000	-0.43232	0.90501	0.14640	-	-	-
		527550.00000	185113.50000	0.00000	-0.34522	0.72269	0.10563	-	-	-
		527551.25000	185113.50000	0.00000	-0.25813	0.54037	0.078250	-	-	-
		527552.50000	185113.50000	0.00000	-0.17104	0.35806	0.057481	-	-	-
		527553.75000	185113.50000	0.00000	-0.083951	0.17574	0.035076	-	-	-
		527555.00000	185113.50000	0.00000	0.0	0.0	0.0	-	-	-
		527530.00000	185117.00000	0.00000	0.49228	0.97731	0.74266	-	-	-
		527531.25000	185117.00000	0.00000	0.34681	1.3381	1.0005	-	-	-
		527532.50000	185117.00000	0.00000	0.13630	1.7389	1.2065	-	-	-
		527533.75000	185117.00000	0.00000	-0.053805	2.9593	1.9034	-	-	-
		527535.00000	185117.00000	0.00000	-0.053650	2.9508	1.8897	-	-	-
		527536.25000	185117.00000	0.00000	-0.053495	2.9422	1.8759	-	-	-
		527537.50000	185117.00000	0.00000	-0.053340	2.9337	1.8621	-	-	-
		527538.75000	185117.00000	0.00000	-0.053185	2.9252	1.8483	-	-	-
		527540.00000	185117.00000	0.00000	-0.25381	2.8822	1.7959	-	-	-
		527541.25000	185117.00000	0.00000	-0.25020	2.8412	1.7291	-	-	-
		527542.50000	185117.00000	0.00000	-0.24660	2.8003	1.6622	-	-	-
		527543.75000	185117.00000	0.00000	-0.24299	2.7593	1.5954	-	-	-
		527545.00000	185117.00000	0.00000	-0.44087	2.3855	1.3658	-	-	-
		527546.25000	185117.00000	0.00000	-0.87465	2.1646	1.1830	-	-	-
		527547.50000	185117.00000	0.00000	-1.0299	2.1560	1.0333	-	-	-
		527548.75000	185117.00000	0.00000	-0.94280	1.9737	0.83697	-	-	-
		527550.00000	185117.00000	0.00000	-0.85571	1.7913	0.66024	-	-	-
		527551.25000	185117.00000	0.00000	-0.76862	1.6090	0.50659	-	-	-
		527552.50000	185117.00000	0.00000	-0.68153	1.4267	0.37798	-	-	-
		527553.75000	185117.00000	0.00000	-0.59444	1.2444	0.27490	-	-	-
		527555.00000	185117.00000	0.00000	-0.50734	1.0621	0.19632	-	-	-
		527530.00000	185120.50000	0.00000	1.6484	0.66565	1.6280	-	-	-
		527531.25000	185120.50000	0.00000	1.3715	1.0630	1.7122	-	-	-
		527532.50000	185120.50000	0.00000	0.67859	2.1706	1.9369	-	-	-
		527533.75000	185120.50000	0.00000	-0.089922	4.9457	3.3072	-	-	-
		527535.00000	185120.50000	0.00000	-0.089648	4.9306	3.3070	-	-	-
		527536.25000	185120.50000	0.00000	-0.089373	4.9155	3.3066	-	-	-
		527537.50000	185120.50000	0.00000	-0.089100	4.9005	3.3060	-	-	-
		527538.75000	185120.50000	0.00000	-0.088827	4.8855	3.3053	-	-	-
		527540.00000	185120.50000	0.00000	-0.42293	4.8026	3.3000	-	-	-
		527541.25000	185120.50000	0.00000	-0.41669	4.7318	3.2903	-	-	-
		527542.50000	185120.50000	0.00000	-0.41052	4.6617	3.2768	-	-	-
		527543.75000	185120.50000	0.00000	-0.40441	4.5923	3.2597	-	-	-
		527545.00000	185120.50000	0.00000	-1.7345	3.7103	2.9569	-	-	-
		527546.25000	185120.50000	0.00000	-1.7759	3.7176	3.0362	-	-	-
		527547.50000	185120.50000	0.00000	-1.6413	3.4360	2.8092	-	-	-
		527548.75000	185120.50000	0.00000	-1.5105	3.1621	2.5379	-	-	-
		527550.00000	185120.50000	0.00000	-1.3819	2.8928	2.2361	-	-	-
		527551.25000	185120.50000	0.00000	-1.2791	2.6777	1.9159	-	-	-
		527552.50000	185120.50000	0.00000	-1.1920	2.4953	1.5880	-	-	-
		527553.75000	185120.50000	0.00000	-1.1049	2.3130	1.2616	-	-	-
		527555.00000	185120.50000	0.00000	-0.94195	1.7300	0.85005	-	-	-
		527530.00000	185124.00000	0.00000	4.0862	0.28999	3.0212	-	-	-
		527531.25000	185124.00000	0.00000	4.8571	0.34471	3.3042	-	-	-
		527532.50000	185124.00000	0.00000	5.7376	0.40719	3.0555	-	-	-
		527533.75000	185124.00000	0.00000	Point lies within an excavation.					
		527535.00000	185124.00000	0.00000	Point lies within an excavation.					
		527536.25000	185124.00000	0.00000	Point lies within an excavation.					
		527537.50000	185124.00000	0.00000	Point lies within an excavation.					
		527538.75000	185124.00000	0.00000	Point lies within an excavation.					
		527540.00000	185124.00000	0.00000	Point lies within an excavation.					
		527541.25000	185124.00000	0.00000	Point lies within an excavation.					
		527542.50000	185124.00000	0.00000	Point lies within an excavation.					
		527543.75000	185124.00000	0.00000	Point lies within an excavation.					
		527545.00000	185124.00000	0.00000	Point lies within an excavation.					
		527546.25000	185124.00000	0.00000	Point lies within an excavation.					
		527547.50000	185124.00000	0.00000	-2.5345	5.3057	2.9691	-	-	-
		527548.75000	185124.00000	0.00000	-2.3593	4.9390	3.2003	-	-	-
		527550.00000	185124.00000	0.00000	-2.1956	4.5962	3.2997	-	-	-
		527551.25000	185124.00000	0.00000	-2.0416	4.2740	3.2880	-	-	-
		527552.50000	185124.00000	0.00000	-1.8960	3.9690	3.1848	-	-	-
		527553.75000	185124.00000	0.00000	-1.9480	2.4068	2.4053	-	-	-
		527555.00000	185124.00000	0.00000	-2.2221	1.6520	2.0905	-	-	-
		527530.00000	185127.50000	0.00000	4.2328	0.30040	3.1088	-	-	-
		527531.25000	185127.50000	0.00000	5.0219	0.35640	3.3048	-	-	-
		527532.50000	185127.50000	0.00000	5.9296	0.42082	2.9208	-	-	-
		527533.75000	185127.50000	0.00000	Point lies within an excavation.					
		527535.00000	185127.50000	0.00000	Point lies within an excavation.					
		527536.25000	185127.50000	0.00000	Point lies within an excavation.					
		527537.50000	185127.50000	0.00000	Point lies within an excavation.					
		527538.75000	185127.50000	0.00000	Point lies within an excavation.					
		527540.00000	185127.50000	0.00000	Point lies within an excavation.					
		527541.25000	185127.50000	0.00000	Point lies within an excavation.					
		527542.50000	185127.50000	0.00000	Point lies within an excavation.					
		527543.75000	185127.50000	0.00000	Point lies within an excavation.					
		527545.00000	185127.50000	0.00000	Point lies within an excavation.					
		527546.25000	185127.50000	0.00000	Point lies within an excavation.					
		527547.50000	185127.50000	0.00000	Point lies within an excavation.					
		527548.75000	185127.50000	0.00000	Point lies within an excavation.					
		527550.00000	185127.50000	0.00000	Point lies within an excavation.					
		527551.25000	185127.50000	0.00000	Point lies within an excavation.					

Type/No. Name	Dist.	Coordinates x	y	z	Displacements x	y	z	Horizontal displacement	Horizontal displacement	Angle of Line to x Axis
		527552.50000	185127.50000	0.00000	-5.3698	2.7375	2.8544	-	-	-
		527553.75000	185127.50000	0.00000	-4.6302	2.3605	3.2840	-	-	-
		527555.00000	185127.50000	0.00000	-3.9813	2.0297	3.2134	-	-	-
		527530.00000	185131.00000	0.00000	3.5886	-1.6826	2.9297	-	-	-
		527531.25000	185131.00000	0.00000	4.2080	-1.9730	3.2694	-	-	-
		527532.50000	185131.00000	0.00000	4.9001	-2.2975	3.2242	-	-	-
		527533.75000	185131.00000	0.00000	5.6956	-2.6705	2.6102	-	-	-
		527535.00000	185131.00000	0.00000		Point lies within an excavation.				
		527536.25000	185131.00000	0.00000		Point lies within an excavation.				
		527537.50000	185131.00000	0.00000		Point lies within an excavation.				
		527538.75000	185131.00000	0.00000		Point lies within an excavation.				
		527540.00000	185131.00000	0.00000		Point lies within an excavation.				
		527541.25000	185131.00000	0.00000		Point lies within an excavation.				
		527542.50000	185131.00000	0.00000		Point lies within an excavation.				
		527543.75000	185131.00000	0.00000		Point lies within an excavation.				
		527545.00000	185131.00000	0.00000		Point lies within an excavation.				
		527546.25000	185131.00000	0.00000		Point lies within an excavation.				
		527547.50000	185131.00000	0.00000		Point lies within an excavation.				
		527548.75000	185131.00000	0.00000		Point lies within an excavation.				
		527550.00000	185131.00000	0.00000		Point lies within an excavation.				
		527551.25000	185131.00000	0.00000		Point lies within an excavation.				
		527552.50000	185131.00000	0.00000		Point lies within an excavation.				
		527553.75000	185131.00000	0.00000	-5.6891	-0.88722	3.0518	-	-	-
		527555.00000	185131.00000	0.00000	-4.8238	-0.75227	3.3050	-	-	-
		527530.00000	185134.50000	0.00000	1.9450	-1.1926	1.6434	-	-	-
		527531.25000	185134.50000	0.00000	1.8281	-1.6072	1.9667	-	-	-
		527532.50000	185134.50000	0.00000	1.3454	-2.3110	2.1938	-	-	-
		527533.75000	185134.50000	0.00000	0.81698	-4.2977	3.1742	-	-	-
		527535.00000	185134.50000	0.00000	0.84384	-4.4389	3.2314	-	-	-
		527536.25000	185134.50000	0.00000	0.87129	-4.5833	3.2736	-	-	-
		527537.50000	185134.50000	0.00000	0.89938	-4.7311	3.2994	-	-	-
		527538.75000	185134.50000	0.00000	0.92817	-4.8825	3.3072	-	-	-
		527540.00000	185134.50000	0.00000	0.61554	-5.0474	3.3006	-	-	-
		527541.25000	185134.50000	0.00000	0.62813	-5.1507	3.2856	-	-	-
		527542.50000	185134.50000	0.00000	0.64096	-5.2559	3.2614	-	-	-
		527543.75000	185134.50000	0.00000	0.65402	-5.3630	3.2276	-	-	-
		527545.00000	185134.50000	0.00000	0.66733	-5.4721	3.1836	-	-	-
		527546.25000	185134.50000	0.00000	0.68089	-5.5833	3.1292	-	-	-
		527547.50000	185134.50000	0.00000	0.69472	-5.6967	3.0637	-	-	-
		527548.75000	185134.50000	0.00000	0.70883	-5.8124	2.9866	-	-	-
		527550.00000	185134.50000	0.00000	-0.89191	-5.8112	2.9696	-	-	-
		527551.25000	185134.50000	0.00000	-0.86972	-5.6666	3.0673	-	-	-
		527552.50000	185134.50000	0.00000	-0.84808	-5.5256	3.1469	-	-	-
		527553.75000	185134.50000	0.00000	-2.0146	-1.6356	2.0155	-	-	-
		527555.00000	185134.50000	0.00000	-2.6475	-0.87420	2.2110	-	-	-
		527530.00000	185138.00000	0.00000	0.75061	-1.1577	0.58043	-	-	-
		527531.25000	185138.00000	0.00000	0.65114	-1.5102	0.77414	-	-	-
		527532.50000	185138.00000	0.00000	0.47145	-1.8958	0.97753	-	-	-
		527533.75000	185138.00000	0.00000	0.49408	-2.5991	1.3937	-	-	-
		527535.00000	185138.00000	0.00000	0.51043	-2.6851	1.5355	-	-	-
		527536.25000	185138.00000	0.00000	0.52678	-2.7711	1.6779	-	-	-
		527537.50000	185138.00000	0.00000	0.54313	-2.8571	1.8201	-	-	-
		527538.75000	185138.00000	0.00000	0.36188	-2.9674	1.9511	-	-	-
		527540.00000	185138.00000	0.00000	0.36875	-3.0237	2.0419	-	-	-
		527541.25000	185138.00000	0.00000	0.37623	-3.0851	2.1319	-	-	-
		527542.50000	185138.00000	0.00000	0.38633	-3.1679	2.2207	-	-	-
		527543.75000	185138.00000	0.00000	0.39643	-3.2508	2.3080	-	-	-
		527545.00000	185138.00000	0.00000	0.40656	-3.3338	2.3938	-	-	-
		527546.25000	185138.00000	0.00000	0.41672	-3.4171	2.4776	-	-	-
		527547.50000	185138.00000	0.00000	0.42692	-3.5008	2.5592	-	-	-
		527548.75000	185138.00000	0.00000	0.43717	-3.5848	2.6384	-	-	-
		527550.00000	185138.00000	0.00000	-0.38659	-3.3583	2.4847	-	-	-
		527551.25000	185138.00000	0.00000	-0.53561	-3.4897	2.5629	-	-	-
		527552.50000	185138.00000	0.00000	-0.51959	-3.3854	2.4604	-	-	-
		527553.75000	185138.00000	0.00000	-0.47298	-2.2287	1.6783	-	-	-
		527555.00000	185138.00000	0.00000	-0.71240	-1.6107	1.3819	-	-	-
		527530.00000	185141.50000	0.00000	0.25641	-0.65339	0.11028	-	-	-
		527531.25000	185141.50000	0.00000	0.23216	-0.84038	0.14904	-	-	-
		527532.50000	185141.50000	0.00000	0.23693	-1.2464	0.22905	-	-	-
		527533.75000	185141.50000	0.00000	0.25328	-1.3324	0.26481	-	-	-
		527535.00000	185141.50000	0.00000	0.26963	-1.4184	0.30515	-	-	-
		527536.25000	185141.50000	0.00000	0.28598	-1.5044	0.35020	-	-	-
		527537.50000	185141.50000	0.00000	0.30233	-1.5904	0.40004	-	-	-
		527538.75000	185141.50000	0.00000	0.20416	-1.6741	0.44188	-	-	-
		527540.00000	185141.50000	0.00000	0.21103	-1.7304	0.47917	-	-	-
		527541.25000	185141.50000	0.00000	0.21790	-1.7868	0.51845	-	-	-
		527542.50000	185141.50000	0.00000	0.22477	-1.8431	0.55972	-	-	-
		527543.75000	185141.50000	0.00000	0.23164	-1.8994	0.60292	-	-	-
		527545.00000	185141.50000	0.00000	0.23851	-1.9558	0.64802	-	-	-
		527546.25000	185141.50000	0.00000	0.24538	-2.0121	0.69497	-	-	-
		527547.50000	185141.50000	0.00000	0.25225	-2.0684	0.74370	-	-	-
		527548.75000	185141.50000	0.00000	0.21538	-1.9953	0.74577	-	-	-
		527550.00000	185141.50000	0.00000	-0.12107	-1.9645	0.74161	-	-	-
		527551.25000	185141.50000	0.00000	-0.31735	-2.0677	0.75083	-	-	-
		527552.50000	185141.50000	0.00000	-0.30656	-1.9974	0.68973	-	-	-
		527553.75000	185141.50000	0.00000	-0.29577	-1.9271	0.63144	-	-	-
		527555.00000	185141.50000	0.00000	-0.29582	-1.1935	0.39193	-	-	-
		527530.00000	185145.00000	0.00000	0.0	0.0	0.0	-	-	-
		527531.25000	185145.00000	0.00000	0.0	0.0	0.0	-	-	-
		527532.50000	185145.00000	0.00000	0.0	0.0	0.0	-	-	-
		527533.75000	185145.00000	0.00000	0.012476	-0.065631	0.015681	-	-	-
		527535.00000	185145.00000	0.00000	0.028825	-0.15163	0.029567	-	-	-
		527536.25000	185145.00000	0.00000	0.045174	-0.23763	0.040937	-	-	-
		527537.50000	185145.00000	0.00000	0.046545	-0.31558	0.049252	-	-	-
		527538.75000	185145.00000	0.00000	0.046446	-0.38086	0.056172	-	-	-
		527540.00000	185145.00000	0.00000	0.053315	-0.43718	0.061796	-	-	-
		527541.25000	185145.00000	0.00000	0.060184	-0.49351	0.067451	-	-	-
		527542.50000	185145.00000	0.00000	0.067053	-0.54984	0.073324	-	-	-
		527543.75000	185145.00000	0.00000	0.073922	-0.60616	0.079593	-	-	-
		527545.00000	185145.00000	0.00000	0.080792	-0.66249	0.086428	-	-	-
		527546.25000	185145.00000	0.00000	0.087661	-0.71882	0.093987	-	-	-
		527547.50000	185145.00000	0.00000	0.094530	-0.77514	0.10242	-	-	-
		527548.75000	185145.00000	0.00000	0.057268	-0.76992	0.10348	-	-	-
		527550.00000	185145.00000	0.00000	-0.032038	-0.76413	0.10318	-	-	-
		527551.25000	185145.00000	0.00000	-0.12054	-0.78537	0.10460	-	-	-
		527552.50000	185145.00000	0.00000	-0.10975	-0.71508	0.093890	-	-	-
		527553.75000	185145.00000	0.00000	-0.098963	-0.64479	0.084550	-	-	-
		527555.00000	185145.00000	0.00000	-0.074370	-0.40111	0.054811	-	-	-

Specific Building Damage Results - Horizontal Displacements

Structure: 74 Lawn Road | Sub-structure: Wall 1

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527548.65000	185141.80000	0.00000	0.22007	-1.8912	1.9039	453.44E-6
0.97526	527548.76250	185140.83125	0.00000	0.25984	-2.2328	2.2479	535.37E-6
1.9505	527548.87500	185139.86250	0.00000	0.29960	-2.5745	2.5919	617.29E-6
2.9258	527548.98750	185138.89375	0.00000	0.34086	-2.9291	2.9488	702.30E-6
3.9010	527549.10000	185137.92500	0.00000	0.39977	-3.4354	3.4585	823.69E-6
4.8763	527549.21250	185136.95625	0.00000	0.46121	-3.9633	3.9901	950.29E-6
5.8516	527549.32500	185135.98750	0.00000	0.52754	-4.5333	4.5639	0.0010869
6.8268	527549.43750	185135.01875	0.00000	0.60111	-5.1655	5.2004	0.0012385
7.8021	527549.55000	185134.05000	0.00000	0.35906	-2.9443	2.9661	0.017028

Structure: 74 Lawn Road | Sub-structure: Party Wall 1

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line

[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527549.55000	185134.05000	0.00000	0.35906	-2.9443	0.0	2.9661
1.0326	527548.52500	185133.92500	0.00000	0.76192	-6.2478	0.0	6.2940
2.0652	527547.50000	185133.80000	0.00000	0.76192	-6.2478	0.0	6.2940
3.0978	527546.47500	185133.67500	0.00000	0.0	0.0	0.0	0.0
4.1304	527545.45000	185133.55000	0.00000	0.0	0.0	0.0	0.0
5.1630	527544.42500	185133.42500	0.00000	0.0	0.0	0.0	0.0
6.1956	527543.40000	185133.30000	0.00000	0.76192	-6.2478	0.0	6.2940
7.2282	527542.37500	185133.17500	0.00000	0.76192	-6.2478	0.0	6.2940
8.2608	527541.35000	185133.05000	0.00000	0.0	0.0	0.0	0.0
9.2933	527540.32500	185132.92500	0.00000	0.0	0.0	0.0	0.0
10.326	527539.30000	185132.80000	0.00000	0.57951	-3.0485	-0.20622	3.0962

Structure: 74 Lawn Road | Sub-structure: Wall 2

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527539.30000	185132.80000	0.00000	0.57951	-3.0485	-3.1002	-0.13256
0.65691	527539.20500	185133.45000	0.00000	0.81749	-5.5954	-5.6548	299.44E-6
1.3138	527539.11000	185134.10000	0.00000	0.74906	-5.1270	-5.1815	274.38E-6

Structure: 74 Lawn Road | Sub-structure: Wall 3

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527539.11000	185134.10000	0.00000	0.74906	-5.1270	-0.28926	5.1734
0.78562	527538.32750	185134.03000	0.00000	0.97704	-5.1396	-0.51521	5.2062
1.5712	527537.54500	185133.96000	0.00000	0.96699	-5.0867	-0.50991	5.1527
2.3569	527536.76250	185133.89000	0.00000	0.95703	-5.0343	-0.50466	5.0996
3.1425	527535.98000	185133.82000	0.00000	0.94715	-4.9824	-0.49945	5.0470

Structure: 74 Lawn Road | Sub-structure: Wall 4

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527535.98000	185133.82000	0.00000	0.94715	-4.9824	-5.0462	-0.50693
1.0842	527535.88500	185134.90000	0.00000	0.81764	-4.3011	-4.3562	-0.43761
2.1683	527535.79000	185135.98000	0.00000	0.69954	-3.6798	-3.7270	-0.37440

Structure: 74 Lawn Road | Sub-structure: Wall 5

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527535.79000	185135.98000	0.00000	0.69954	-3.6798	-0.37232	3.7272
0.76548	527535.02750	185135.91250	0.00000	0.69149	-3.6375	-0.36804	3.6843
1.5310	527534.26500	185135.84500	0.00000	0.68348	-3.5954	-0.36378	3.6416
2.2964	527533.50250	185135.77750	0.00000	0.67549	-3.5533	-0.35953	3.5991
3.0619	527532.74000	185135.71000	0.00000	0.80483	-2.4435	-0.58622	2.5050

Structure: 76 Lawn Road | Sub-structure: Wall 6

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527532.70000	185118.00000	0.00000	0.14564	2.0495	2.0536	-0.067667
1.0725	527532.74075	185119.07175	0.00000	0.21771	2.3399	2.3465	-0.12865
2.1450	527532.78150	185120.14350	0.00000	0.35788	2.5529	2.5647	-0.26062
3.2176	527532.82225	185121.21525	0.00000	0.74754	2.4210	2.4476	-0.65502
4.2901	527532.86300	185122.28700	0.00000	5.9242	0.42043	0.64521	-5.9039

Structure: 76 Lawn Road | Sub-structure: Wall 7

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527534.45000	185118.05000	0.00000	-0.063087	3.4698	-0.036035	-3.4702
0.87536	527533.57500	185118.02500	0.00000	-0.062995	3.4647	-0.035983	-3.4651
1.7507	527532.70000	185118.00000	0.00000	0.14564	2.0495	-0.20412	-2.0446

Structure: 76 Lawn Road | Sub-structure: Wall 8

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527534.50000	185114.85000	0.00000	-0.039058	2.1482	2.1485	0.0054918
0.80010	527534.48750	185115.65000	0.00000	-0.044512	2.4482	2.4486	0.0062587
1.6002	527534.47500	185116.45000	0.00000	-0.049966	2.7481	2.7486	0.0070257
2.4003	527534.46250	185117.25000	0.00000	-0.055421	3.0481	3.0486	0.0077926
3.2004	527534.45000	185118.05000	0.00000	-0.063087	3.4698	3.4704	0.0088706

Structure: 76 Lawn Road | Sub-structure: Wall 9

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527538.80000	185122.40000	0.00000	-0.27203	3.0890	-0.18535	3.0954
0.89202	527539.69167	185122.42500	0.00000	-0.54823	6.2255	-0.37354	6.2384
1.7840	527540.58333	185122.45000	0.00000	-0.54436	6.1815	-0.37090	6.1943
2.6761	527541.47500	185122.47500	0.00000	-0.54051	6.1379	-0.36828	6.1506
3.5681	527542.36667	185122.50000	0.00000	-0.53670	6.0945	-0.36568	6.1072
4.4601	527543.25833	185122.52500	0.00000	-0.53291	6.0515	-0.36310	6.0640
5.3521	527544.15000	185122.55000	0.00000	-2.5805	5.4021	-2.4281	5.4723

Structure: 76 Lawn Road | Sub-structure: Wall 10

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the	Horizontal displacement perpendicular
0.0	527544.15000	185122.55000	0.00000	-2.5805	5.4021	-5.5282	-2.2981
1.4519	527544.22500	185121.10000	0.00000	-0.79123	4.3657	-4.4008	-0.56466
2.9039	527544.30000	185119.65000	0.00000	-0.45001	3.6808	-3.6991	-0.25928

Structure: 76 Lawn Road | Sub-structure: Wall 11

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527544.30000	185119.65000	0.00000	-0.45001	3.6808	-0.35939	3.6908
1.0170	527545.31667	185119.67500	0.00000	-1.4638	3.2750	-1.3828	3.3100
2.0339	527546.33333	185119.70000	0.00000	-1.5878	3.3239	-1.5056	3.3619
3.0509	527547.35000	185119.72500	0.00000	-1.4875	3.1140	-1.4105	3.1496
4.0679	527548.36667	185119.75000	0.00000	-1.3884	2.9064	-1.3165	2.9397
5.0849	527549.38333	185119.77500	0.00000	-1.3034	2.7286	-1.2359	2.7598
6.1018	527550.40000	185119.80000	0.00000	-1.2362	2.5879	-1.1722	2.6175

Structure: 76 Lawn Road | Sub-structure: Party Wall 2

Dist.	Coordinates x	y	z	Displacements x	y	Horizontal displacement along the Line	Horizontal displacement perpendicular to Line
[m]	[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0.0	527532.86300	185122.28700	0.00000	5.9242	0.42043	5.9311	0.30762
0.98968	527533.85250	185122.30583	0.00000	-0.11435	6.2895	0.0053537	6.2905
1.9794	527534.84200	185122.32467	0.00000	-0.11437	6.2902	0.0053543	6.2912
2.9690	527535.83150	185122.34350	0.00000	-0.11438	6.2909	0.0053549	6.2919
3.9587	527536.82100	185122.36233	0.00000	-0.11439	6.2916	0.0053555	6.2926
4.9484	527537.81050	185122.38117	0.00000	-0.11441	6.2923	0.0053561	6.2933
5.9381	527538.80000	185122.40000	0.00000	-0.27203	3.0890	-0.21319	3.0936

Specific Building Damage Results - Vertical Displacements

Structure: 74 Lawn Road | Sub-structure: Wall 1

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527548.65000	185141.80000	0.00000	0.65196
0.97526	527548.76250	185140.83125	0.00000	0.97323
1.9505	527548.87500	185139.86250	0.00000	1.4798
2.9258	527548.98750	185138.89375	0.00000	2.0341
3.9010	527549.10000	185137.92500	0.00000	2.5391
4.8763	527549.21250	185136.95625	0.00000	2.9256
5.8516	527549.32500	185135.98750	0.00000	3.1089
6.8268	527549.43750	185135.01875	0.00000	2.9898
7.8021	527549.55000	185134.05000	0.00000	1.2284

Structure: 74 Lawn Road | Sub-structure: Party Wall 1

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527549.55000	185134.05000	0.00000	1.2284
1.0326	527548.52500	185133.92500	0.00000	2.6067
2.0652	527547.50000	185133.80000	0.00000	2.6067
3.0978	527546.47500	185133.67500	0.00000	0.0
4.1304	527545.45000	185133.55000	0.00000	0.0
5.1630	527544.42500	185133.42500	0.00000	0.0
6.1956	527543.40000	185133.30000	0.00000	2.6067
7.2282	527542.37500	185133.17500	0.00000	2.6067
8.2608	527541.35000	185133.05000	0.00000	0.0
9.2933	527540.32500	185132.92500	0.00000	0.0
10.326	527539.30000	185132.80000	0.00000	1.2851

Structure: 74 Lawn Road | Sub-structure: Wall 2

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527539.30000	185132.80000	0.00000	1.2851
0.65691	527539.20500	185133.45000	0.00000	2.9872
1.3138	527539.11000	185134.10000	0.00000	3.2015

Structure: 74 Lawn Road | Sub-structure: Wall 3

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527539.11000	185134.10000	0.00000	3.2015
0.78562	527538.32750	185134.03000	0.00000	3.2769
1.5712	527537.54500	185133.96000	0.00000	3.2876
2.3569	527536.76250	185133.89000	0.00000	3.2959
3.1425	527535.98000	185133.82000	0.00000	3.3019

Structure: 74 Lawn Road | Sub-structure: Wall 4

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527535.98000	185133.82000	0.00000	3.3019
1.0842	527535.88500	185134.90000	0.00000	3.1758
2.1683	527535.79000	185135.98000	0.00000	2.7573

Structure: 74 Lawn Road | Sub-structure: Wall 5

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527535.79000	185135.98000	0.00000	2.7573
0.76548	527535.02750	185135.91250	0.00000	2.7201
1.5310	527534.26500	185135.84500	0.00000	2.6822
2.2964	527533.50250	185135.77750	0.00000	2.6435
3.0619	527532.74000	185135.71000	0.00000	1.9783

Structure: 76 Lawn Road | Sub-structure: Wall 6

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527532.70000	185118.00000	0.00000	1.5958
1.0725	527532.74075	185119.07175	0.00000	1.9074
2.1450	527532.78150	185120.14350	0.00000	2.0514
3.2176	527532.82225	185121.21525	0.00000	1.9010
4.2901	527532.86300	185122.28700	0.00000	2.9250

Structure: 76 Lawn Road | Sub-structure: Wall 7

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527534.45000	185118.05000	0.00000	2.5050
0.87536	527533.57500	185118.02500	0.00000	2.5000
1.7507	527532.70000	185118.00000	0.00000	1.5958

Structure: 76 Lawn Road | Sub-structure: Wall 8

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527534.50000	185114.85000	0.00000	0.80143
0.80010	527534.48750	185115.65000	0.00000	1.0939
1.6002	527534.47500	185116.45000	0.00000	1.5606
2.4003	527534.46250	185117.25000	0.00000	2.0460
3.2004	527534.45000	185118.05000	0.00000	2.5050

Structure: 76 Lawn Road | Sub-structure: Wall 9

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527538.80000	185122.40000	0.00000	1.2843
0.89202	527539.69167	185122.42500	0.00000	2.6515
1.7840	527540.58333	185122.45000	0.00000	2.6946
2.6761	527541.47500	185122.47500	0.00000	2.7361
3.5681	527542.36667	185122.50000	0.00000	2.7758
4.4601	527543.25833	185122.52500	0.00000	2.8140
5.3521	527544.15000	185122.55000	0.00000	2.8875

Structure: 76 Lawn Road | Sub-structure: Wall 10

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527544.15000	185122.55000	0.00000	2.8875
1.4519	527544.22500	185121.10000	0.00000	2.9912
2.9039	527544.30000	185119.65000	0.00000	2.7524

Structure: 76 Lawn Road | Sub-structure: Wall 11

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527544.30000	185119.65000	0.00000	2.7524
1.0170	527545.31667	185119.67500	0.00000	2.6628
2.0339	527546.33333	185119.70000	0.00000	2.7034
3.0509	527547.35000	185119.72500	0.00000	2.4861
4.0679	527548.36667	185119.75000	0.00000	2.2519
5.0849	527549.38333	185119.77500	0.00000	2.0065
6.1018	527550.40000	185119.80000	0.00000	1.7548

Structure: 76 Lawn Road | Sub-structure: Party Wall 2

Dist.	Coordinates x	y	z	Displacements z
[m]	[m]	[m]	[m]	[mm]
Vertical Offset 1				
0.0	527532.86300	185122.28700	0.00000	2.9250
0.98968	527533.85250	185122.30583	0.00000	2.6103
1.9794	527534.84200	185122.32467	0.00000	2.6096
2.9690	527535.83150	185122.34350	0.00000	2.6088
3.9587	527536.82100	185122.36233	0.00000	2.6081
4.9484	527537.81050	185122.38117	0.00000	2.6074
5.9381	527538.80000	185122.40000	0.00000	1.2843

Specific Building Damage Results - All Segments

Structure: 74 Lawn Road | Sub-structure: Wall 1

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	2.5135	Hogging	0.0048975	0.035569	0.036616	-365.86E-6	-568.17E-6	4333.6	0 (Negligible)
	2	2.5135	5.2875	Sagging	0.031554	0.0032262	0.030343	0.0022963	0.0018102	479.28	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 74 Lawn Road | Sub-structure: Party Wall 1

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	2.6894	Sagging	0.056887	0.0	0.055614	0.0	0.0025244	632.71	1 (Very Slight)
	2	2.6894	2.8177	Hogging	0.035713	0.0	0.035490	0.0	0.0025244	822.32	0 (Negligible)
	3	5.5072	2.3121	Sagging	0.071942	0.0	0.070745	0.0	0.0025244	818.09	1 (Very Slight)
	4	7.8193	2.5047	Hogging	0.048434	-0.0082178	0.045159	199.75E-6	0.0025244	661.38	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 74 Lawn Road | Sub-structure: Wall 2

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category

	[m]		[m]	[m]		[%]	[%]	[%]			[m]	
	0.0	1	0.0	1.3120	Sagging	0.056357	-0.15873	0.047016	0.0039040	-0.0026012	287.87	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 74 Lawn Road | Sub-structure: Wall 3

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	3.1400	Sagging	0.0015953	-0.0066946	0.0016265	287.69E-6	-95.904E-6	7694.4	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 74 Lawn Road | Sub-structure: Wall 4

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	2.1680	Sagging	0.0066716	0.060842	0.063278	-636.05E-6	385.80E-6	4024.2	1 (Very Slight)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 74 Lawn Road | Sub-structure: Wall 5

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	3.0600	Sagging	0.015286	-0.0069715	0.012636	296.24E-6	869.29E-6	747.28	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 76 Lawn Road | Sub-structure: Wall 6

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	1.7743	Sagging	0.0037216	0.024554	0.025671	-273.01E-6	-290.50E-6	5795.0	0 (Negligible)
	2	1.7743	2.5157	Hogging	0.024994	-0.073293	0.021204	0.0016834	-956.43E-6	744.54	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 76 Lawn Road | Sub-structure: Wall 7

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	1.7500	Sagging	0.025442	-0.0095969	0.022009	192.11E-6	0.0010332	851.45	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 76 Lawn Road | Sub-structure: Wall 8

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	2.2030	Hogging	0.0052610	0.037500	0.038487	-374.86E-6	-606.37E-6	3007.2	0 (Negligible)
	2	2.2030	0.99705	Sagging	521.12E-6	0.049700	0.049789	-526.83E-6	-606.37E-6	17000.	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 76 Lawn Road | Sub-structure: Wall 9

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	2.8345	Sagging	0.031888	-0.0064376	0.028761	211.02E-6	-0.0015331	480.72	0 (Negligible)
	2	2.8345	2.5155	Hogging	892.78E-6	-0.081711	0.016350	0.0023204	-82.677E-6	17679.	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 76 Lawn Road | Sub-structure: Wall 10

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	2.9000	Sagging	0.0058444	0.063006	0.065828	-775.89E-6	164.45E-6	6152.8	1 (Very Slight)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 76 Lawn Road | Sub-structure: Wall 11

Vertical Offset from Line for Vertical Movement Calculations	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	1.2698	Hogging	0.0020358	-0.083003	0.016642	0.0010073	88.125E-6	4549.6	0 (Negligible)
	2	1.2698	4.8312	Sagging	0.0036279	0.0049892	0.0077792	120.79E-6	247.44E-6	10323.	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

Structure: 76 Lawn Road | Sub-structure: Party Wall 2

Vertical Offset from Line for Vertical Movement	Segment	Start	Length	Curvature	Deflection Ratio	Average Horizontal Strain	Max Tensile Strain	Max Gradient of Horizontal Displacement	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature	Damage Category

Calculations							Curve				
[m]		[m]	[m]		[%]	[%]	[%]			[m]	
0.0	1	0.0	2.9690	Hogging	0.0070656	-0.19958	0.040122	0.0060236	319.96E-6	2474.2	0 (Negligible)
	2	2.9690	2.5310	Sagging	0.022651	-0.0048127	0.020463	220.88E-6	0.0013372	489.07	0 (Negligible)

Tensile horizontal strains are +ve, compressive horizontal strains are -ve.

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

Structure: 74 Lawn Road | Sub-structure: Wall 1

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.031554	0.035569	0.0018102	3.1059	0.036616	0.0022963	0.0018102	4333.6	479.28	0 (Negligible)

Structure: 74 Lawn Road | Sub-structure: Party Wall 1

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.071942	-0.0082178	0.0025244	2.6067	0.070745	199.75E-6	0.0025244	661.38	632.71	1 (Very Slight)

Structure: 74 Lawn Road | Sub-structure: Wall 2

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.056357	-0.15873	-0.0026012	3.2010	0.047016	0.0039040	-0.0026012	-	287.87	0 (Negligible)

Structure: 74 Lawn Road | Sub-structure: Wall 3

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.0015953	-0.0066946	-95.904E-6	3.3019	0.0016265	287.69E-6	-95.904E-6	-	7694.4	0 (Negligible)

Structure: 74 Lawn Road | Sub-structure: Wall 4

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.0066716	0.060842	385.80E-6	3.3019	0.063278	-636.05E-6	385.80E-6	-	4024.2	1 (Very Slight)

Structure: 74 Lawn Road | Sub-structure: Wall 5

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.015286	-0.0069715	869.29E-6	2.7573	0.012636	296.24E-6	869.29E-6	-	747.28	0 (Negligible)

Structure: 76 Lawn Road | Sub-structure: Wall 6

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.024994	-0.073293	-956.43E-6	2.9249	0.025671	0.0016834	-956.43E-6	744.54	5795.0	0 (Negligible)

Structure: 76 Lawn Road | Sub-structure: Wall 7

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.025442	-0.0095969	0.0010332	2.5050	0.022009	192.11E-6	0.0010332	-	851.45	0 (Negligible)

Structure: 76 Lawn Road | Sub-structure: Wall 8

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.0052610	0.049700	-606.37E-6	2.5047	0.049789	-526.83E-6	-606.37E-6	3007.2	17000.	0 (Negligible)

Structure: 76 Lawn Road | Sub-structure: Wall 9

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.031888	-0.081711	-0.0015331	2.8874	0.028761	0.0023204	-0.0015331	17679.	480.72	0 (Negligible)

Structure: 76 Lawn Road | Sub-structure: Wall 10

Vertical	Deflection	Average	Max Slope	Max	Max	Max Gradient	Max Gradient	Min	Min	Damage Category

Offset from Line for Vertical Movement Calculations	Ratio	Horizontal Strain		Settlement	Tensile Strain	of Horizontal Displacement Curve	of Vertical Displacement Curve	Radius of Curvature (Hogging)	Radius of Curvature (Sagging)	
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.0058444	0.063006	164.45E-6	2.9900	0.065828	-775.89E-6	164.45E-6	-	6152.8	1 (Very Slight)

Structure: 76 Lawn Road | Sub-structure: Wall 11

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.0036279	-0.083003	247.44E-6	2.7524	0.016642	0.0010073	247.44E-6	4549.6	10323.	0 (Negligible)

Structure: 76 Lawn Road | Sub-structure: Party Wall 2

Vertical Offset from Line for Vertical Movement Calculations	Deflection Ratio	Average Horizontal Strain	Max Slope	Max Settlement	Max Tensile Strain	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
[m]	[%]	[%]		[mm]	[%]			[m]	[m]	
0.0	0.022651	-0.19958	0.0013372	2.9250	0.040122	0.0060236	0.0013372	2474.2	489.07	0 (Negligible)

Specific Building Damage Results - Critical Segments within Each Structure

Structure Name	Parameter	Critical Sub-Structure	Critical Segment	Start	End	Curvature	Max Slope	Max Settlement	Max Tensile Strain	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
				[m]	[m]			[mm]	[%]	[m]	[m]	
74 Lawn Road	Max Slope	Wall 2	1	0.0	1.3120	Sagging	**0.0026012**	3.2010	0.047016	-	287.87	0 (Negligible)
	Max Settlement	Wall 4	1	0.0	2.1680	Sagging	385.80E-6	**3.3019**	0.063278	-	4024.2	1 (Very Slight)
	Max Tensile Strain	Party Wall 1	3	5.5072	7.8193	Sagging	0.0025244	2.6067	**0.070745**	-	818.09	1 (Very Slight)
	Min Radius of Curvature (Hogging)	Party Wall 1	4	7.8193	10.324	Hogging	0.0025244	1.2827	0.045159	**661.38**	-	0 (Negligible)
	Min Radius of Curvature (Sagging)	Wall 2	1	0.0	1.3120	Sagging	0.0026012	3.2010	0.047016	-	**287.87**	0 (Negligible)
76 Lawn Road	Max Slope	Wall 9	1	0.0	2.8345	Sagging	**0.0015331**	2.7431	0.028761	-	480.72	0 (Negligible)
	Max Settlement	Wall 10	1	0.0	2.9000	Sagging	164.45E-6	**2.9900**	0.065828	-	6152.8	1 (Very Slight)
	Max Tensile Strain	Wall 10	1	0.0	2.9000	Sagging	164.45E-6	2.9900	**0.065828**	-	6152.8	1 (Very Slight)
	Min Radius of Curvature (Hogging)	Wall 6	2	1.7743	4.2900	Hogging	956.43E-6	2.9249	0.021204	**744.54**	-	0 (Negligible)
	Min Radius of Curvature (Sagging)	Wall 9	1	0.0	2.8345	Sagging	0.0015331	2.7431	0.028761	-	**480.72**	0 (Negligible)

Vertical Settlement Contours: Grid 1 (level 0.000m) (Interval 1mm)