



Preliminary UXO Risk Assessment

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Client	GEA Ltd.
Project	2 Thurlow Road, London
Site Address	2 Thurlow Road, London NW3 5PJ
Report Reference	PA14838 -00
Date	23/12/21
Originator	LD

Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the 2 Thurlow Road site. The assessment involves the consideration of the basic factors that affect the potential for UXO to be present at a site as outlined in Stage One of the UXO risk management process.

Background

This assessment uses the sources of information available in-house to 1st Line Defence Ltd to enable the placement of a development site in context with events that may have led to the presence of German air-delivered or Allied military UXO. The report will identify any immediate necessity for risk mitigation or additional research in the form of a Detailed UXO Risk Assessment. It makes use of 1st Line Defence's extensive historical archives, library and unique geo-databases, as well as internet resources, and is researched and compiled by UXO specialists and graduate researchers.

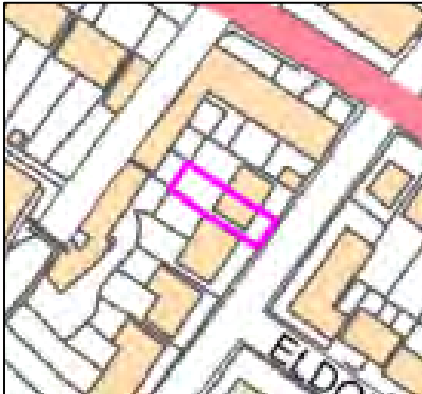
The assessment directly follows CIRIA C681 guidelines "Unexploded Ordnance, a Guide for the Construction Industry". The document will therefore assess the following factors:

- Basic Site Data
- Previous Military Use
- Indicators of potential aerial delivered UXO threat
- Consideration of any Mitigating Factors
- Extent of Proposed Intrusive Works
- Any requirement for Further Work

It should be noted that the vast majority of construction sites in the UK will have a low or negligible risk of encountering UXO and should be able to be screened out at this preliminary stage. The report is meant as a common sense 'first step' in the UXO risk management process. The content of the report and conclusions drawn are based on basic, preliminary research using the information available to 1st Line Defence at the time this report was produced. It should be noted that the only way to entirely negate risk from UXO to a project would be to support the works proposed with appropriate UXO risk mitigation measures. It is rarely possible to state that there is absolutely 'no' risk from UXO to a project.





Risk Assessment Considerations	
Site location and description/current use	The site is located in the district of Hampstead, within the London Borough of Camden. Recent aerial photography shows the site to comprise a single terraced, residential property and its associated garden. The site is bound to the north and south by further properties, and to the east by Thurlow Road. The site's eastern boundary is formed by a section of hardstanding. The site is approximately centred on the OS grid reference: TQ 26764 85486. 
Are there any indicators of current/historical military activity on/close to the site?	1st Line Defence could find no evidence in-house to indicate that the site footprint had any former military use. No features such as WWII defensive positions, encampments or firing ranges are recorded to have been located at or in the immediate vicinity of the site. In addition, no information of ordnance being stored, produced, or disposed of within the proposed site boundary could be found. Although the closest Heavy Anti-Aircraft (HAA) battery was situated approximately 1km to the north-east of the site, the range of a fired projectile can be up to 15km. The conditions in which unexploded anti-aircraft ordnance may have fallen unrecorded within the proposed site are analogous to that of German aerial-delivered ordnance - see below for further information.
What was the pre- and post-WWII history of the site?	Pre-WWII OS mapping from 1913-35 shows the site to have comprised a single terraced, residential property and its associated garden. The site is bound to the north and south by further properties, to the east by <i>Thurlow Road</i> and to the west by a continuation of its own garden. Post-WWII OS mapping from 1953 shows no significant change to the site or its boundaries.
Was the area subject to bombing during WWII?	During WWII the site was situated within the Municipal Borough of Hampstead. This borough is recorded to have sustained an overall very high density of bombing with an average of 166 bombs recorded per 1,000 acres. This comprised of 321 high explosive (HE) bombs, six parachute mines 31 phosphorous bombs, five oil bombs, 10 V-1 Flying bombs and three V-2 Long Range Rockets. Available consolidated and weekly London bomb census mapping highlights a number of bombs to have affected the area: the closest strike was recorded to have fallen approximately 60m to the south of the site.
Is there any evidence of bomb damage on/close to the site?	London County Council (LCC) bomb damage mapping, does not attribute any damage to the property on site, as well as others in the surrounding area. This is corroborated in post-WWII aerial photography.



To what degree would the site have been subject to access?	Owing to the site's wartime composition of a residential property, it is likely that it was frequently accessed during WWII. Frequent access may increase the likelihood that obvious indications of UXO, such as damage or entry holes would have been noticed. However, it may be noted that the discovery of UXO in the rear gardens of properties would generally rely on the vigilance of individual residents.
To what degree has the site been developed post-WWII?	The site does not appear to have changed significantly since WWII.
What is the nature and extent of the intrusive works proposed?	According to information provided by the client, proposed works will include three hand held window sampler boreholes to a depth of 5m.

Summary and Conclusions

During WWII, the site was situated within the Metropolitan Borough of Hampstead and comprised a large residential property and its surrounding grounds. HO statistics suggest that Hampstead sustained an overall very high density of bombing with an average of 166 bombs recorded per 1,000 acres.

Available consolidated and weekly London bomb census mapping highlights a number of bombs to have affected the area: the closest strike was recorded to have fallen approximately 60m to the south of the site.

LCC bomb damage mapping does not indicate no damage to the structure onsite, or to structures in its vicinity. This is corroborated in a comparison of pre- and post-WWII OS mapping whereby the site appears to have largely retained its pre-war composition.

Access to the property on site is thought to have been frequent, which may increase the likelihood of obvious indicators of UXO being seen and noticed. Although, it may be noted that the discovery of UXO in the rear gardens of properties would generally rely on the vigilance of their residents.

Recommendations

Given the findings of this preliminary report, the risk from UXO on site is not considered to be significantly elevated above the background level for the region. It is therefore recommended that **no further research** be undertaken for this site. Whilst it would be possible to conduct a Detailed UXO Risk Assessment to analyse local bombing records, it is not thought likely that the acquisition of such records would significantly alter the findings of this report

If the client has any anecdotal or empirical evidence of UXO risk on site, please contact 1st Line Defence.





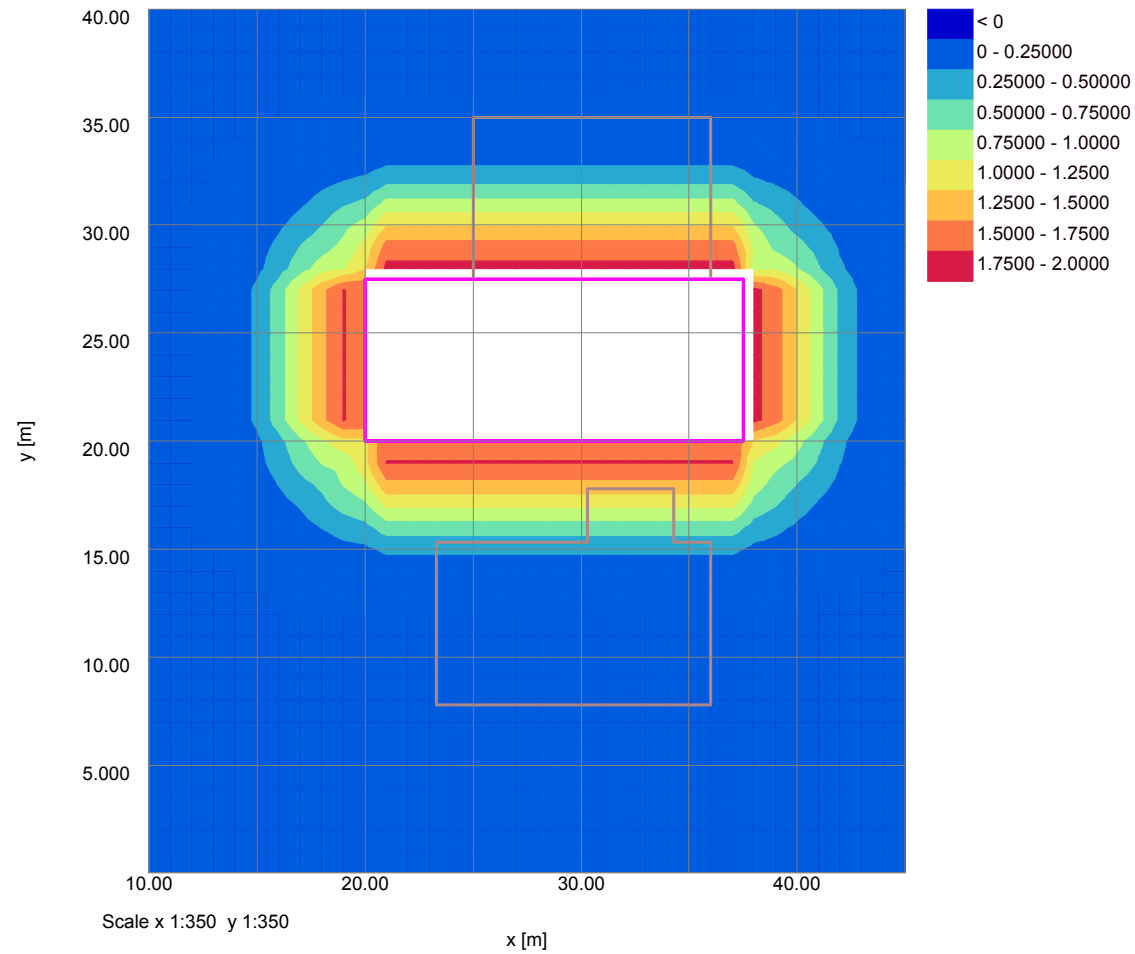
It should be noted that although the risk from unexploded ordnance on this site has been assessed as low/minimal, this does not mean there is 'no' risk of encountering UXO. This preliminary report has been undertaken with due diligence, and all reasonable care has been taken to access and analyse relevant historical information. By necessity, when dealing with historical evidence, and when making assessments of UXO risk, various assumptions have to be made which we have discussed and justified within this report. Our reports take a common-sense and practical approach to the assessment of UXO risk, and we strive to be reasonable and pragmatic in our conclusions. As referenced, it would be possible to undertake further research into this site, but based on the evidence to hand, this is not deemed strictly necessary, and no reasonably justifiable requirement for proactive on-site mitigation has been identified.

It should however be stressed that if any suspect items are encountered during the proposed works, 1st Line Defence should be contacted for advice/assistance, and to re-assess the risk as necessary. Furthermore, we would recommend that ground personnel are always made aware of the potential for encountering UXO, what to look out for and what to do in the unlikely event that a suspect item is encountered, and that a UXO Risk Management Plan is put together for the proposed works. We would be happy to provide a template and guidance for this – contact us on 01992 245020. Should the scope of works change or additional works be proposed, 1st Line Defence should be contacted to re-evaluate the risk.



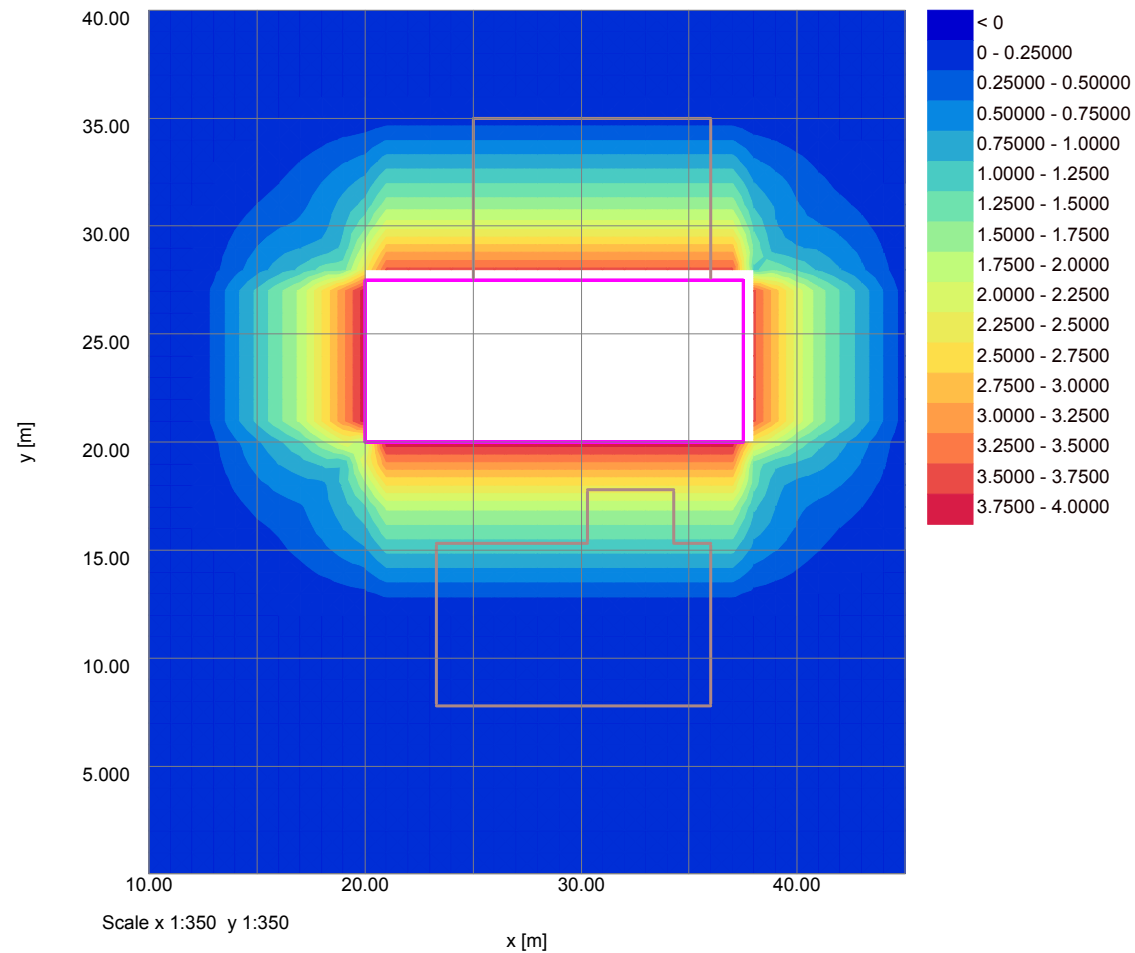
Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Vertical Settlement Contours: Grid 1 (level 0.000m) (Interval 0.25mm)



Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Horizontal Displacement Contours: Grid 1 (level 0.000m) Interval 0.25mm





GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES

Job No. Sheet No. Rev.

LJ21377

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

Titles

Job No.: J21377
Job Title: 2 Thurlow Road, London
Sub-title: Ground Movement Assessment
Calculation Heading: Tabular Inputs and Outputs
Initials: AT
Checker:
Date Saved: 24-Feb-2022
Date Checked:
Notes:
File Name: XDisp - Overall Term - Planar Diaphragm Wall.xdd
File Path: Z:\PROJECTS\2021\J21377 - 2 Thurlow Road\GMA

History

Date	Time	By	Notes
23-Feb-2022	13:22	Alex Taylor	New
23-Feb-2022	15:07	Alex Taylor	
24-Feb-2022	11:29	Alex Taylor	

Displacement Lines

Ref.	Name	x1	y1	z1	x2	y2	z2	Intervals	Calculate	Surface type for tunnels
		[m]	[m]	[m]	[m]	[m]	[m]	[No.]		
1	No 1 Thurlow Road - Wall 1	36.00000	27.60000	-0.50000	36.00000	34.90000	-0.50000	7	Surface	Yes
2	No 1 Thurlow Road - Wall 2	36.00000	35.00000	-0.50000	25.00000	35.00000	-0.50000	11	Surface	Yes
3	No 1 Thurlow Road - Wall 3	25.00000	27.60000	-0.50000	25.00000	34.90000	-0.50000	7	Surface	Yes
4	No 3 Thurlow Road - Wall 1	36.00000	7.90000	-0.50000	36.00000	15.20000	-0.50000	7	Surface	Yes
5	No 3 Thurlow Road - Wall 2	36.00000	15.30000	-0.50000	34.30000	15.30000	-0.50000	2	Surface	Yes
6	No 3 Thurlow Road - Wall 3	34.30000	15.40000	-0.50000	34.30000	17.70000	-0.50000	3	Surface	Yes
7	No 3 Thurlow Road - Wall 4	34.30000	17.80000	-0.50000	30.30000	17.80000	-0.50000	4	Surface	Yes
8	No 3 Thurlow Road - Wall 5	30.30000	17.70000	-0.50000	30.30000	15.40000	-0.50000	3	Surface	Yes
9	No 3 Thurlow Road - Wall 6	30.30000	15.30000	-0.50000	23.30000	15.30000	-0.50000	7	Surface	Yes
10	No 3 Thurlow Road - Wall 7	23.30000	15.20000	-0.50000	23.30000	7.90000	-0.50000	7	Surface	Yes
11	No 3 Thurlow Road - Wall 8	23.30000	7.80000	-0.50000	36.00000	7.80000	-0.50000	13	Surface	Yes

Displacement Grids

Ref.	Name	Extrusion: Direction	Base line start: X [m]	Base line start: Y [m]	Base line start: Z(level) [m]	Base line end: X [m]	Base line end: Y [m]	Base line end: Z(level) [m]	Base line: Intervals [No.]	Extrusion: Distance [m]	Extrusion: Intervals [No.]	Surface type for tunnels	Calculate
1	Grid 1	Global X	0.00000	0.00000	0.00000	-	50.00000	0.00000	50	50.00000	50	Surface	Yes

Polygonal Excavations

Ref. 1
Excavation Name: Lower Ground Floor Excavation
Surface level [m]: 0.0
Contribution: Positive
Surface movement curves which are selected are applied between surface and [m]: -1.9500

Corner	x	y	Base Level	Arc Enabled	Stiffened	Prev. Side: d [m]	Prev. Side: p1 [%]	Prev. Side: p2* [%]	Next Side: d [m]	Next Side: p1 [%]	Next Side: p2* [%]
	[m]	[m]	[m]			[m]	[%]	[%]	[m]	[%]	[%]
1	20.000	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
2	20.000	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
3	37.500	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
4	37.500	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000

Side	x1 [m]	y1 [m]	x2 [m]	y2 [m]	G.M. Curve: Vertical	G.M. Curve: Horizontal
1	20.000	20.000	20.000	27.500	Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(b))	Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(a))
2	20.000	27.500	37.500	27.500	Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(b))	Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(a))
3	37.500	27.500	37.500	20.000	Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(b))	Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(a))
4	37.500	20.000	20.000	20.000	Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(b))	Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(a))

Ref. 2
Excavation Name: Retaining Wall Installation
Surface level [m]: 0.0
Contribution: Positive
Surface movement curves which are selected are applied between surface and [m]: -1.9500

Corner	x	y	Base Level	Arc Enabled	Stiffened	Prev. Side: d [m]	Prev. Side: p1 [%]	Prev. Side: p2* [%]	Next Side: d [m]	Next Side: p1 [%]	Next Side: p2* [%]
	[m]	[m]	[m]			[m]	[%]	[%]	[m]	[%]	[%]
1	20.000	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
2	20.000	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
3	37.500	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
4	37.500	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000

Side	x1 [m]	y1 [m]	x2 [m]	y2 [m]	G.M. Curve: Vertical	G.M. Curve: Horizontal
1	20.000	20.000	20.000	27.500	Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(b))	Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(a))
2	20.000	27.500	37.500	27.500	Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(b))	Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(a))
3	37.500	27.500	37.500	20.000	Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(b))	Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(a))
4	37.500	20.000	20.000	20.000	Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(b))	Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(a))

Circular Excavations

Vertical Ground Movement Curves



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London Ground Movement Assessment Tabular Inputs and Outputs

Side	x1 [m]	y1 [m]	x2 [m]	y2 [m]	G.M. Curve: Vertical	G.M. Curve: Horizontal
Curve Name: Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(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)(%)]						
[0.000,0.000,0.050][0.050,0.000,0.047][0.100,0.000,0.043][0.150,0.000,0.040]						
[0.200,0.000,0.037][0.250,0.000,0.034][0.300,0.000,0.031][0.350,0.000,0.028]						
[0.400,0.000,0.025][0.450,0.000,0.022][0.500,0.000,0.020][0.550,0.000,0.018]						
[0.600,0.000,0.015][0.650,0.000,0.013][0.700,0.000,0.012][0.750,0.000,0.010]						
[0.800,0.000,0.008][0.850,0.000,0.007][0.900,0.000,0.006][0.950,0.000,0.005]						
[1.000,0.000,0.004][1.050,0.000,0.003][1.100,0.000,0.003][1.150,0.000,0.002]						
[1.200,0.000,0.002][1.250,0.000,0.001][1.300,0.000,0.001][1.350,0.000,0.001]						
[1.400,0.000,0.001][1.450,0.000,0.000][1.500,0.000,0.000]						
Curve Fitting Method: Polynomial						
x Order: 4						
y Order: 0						
Polynomial: z = -1.2355E-2x ⁴ + 3.4814E-2x ³ - 2.885E-3x ² - 6.5618E-2x + 4.9987E-2						
Coeff. of Determination: 1.0000						
Curve Name: Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(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: Inst. of planar diaphragm wall in stiff clay (CIRIA C760 Fig. 6.9(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)(%)]						
[0.000,0.000,0.050][1.500,0.000,0.000]						
Curve Fitting Method: Polynomial						
x Order: 1						
y Order: 0						
Polynomial: z = -3.33E-2x + 5.00E-2						
Coeff. of Determination: 1.00						
Curve Name: Exc. in front of high stiffness wall in stiff clay (CIRIA C760 Fig. 6.15(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)(%)]						
[0.000,0.000,0.150][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						

Damage Category Strains

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

Specific Buildings - Geometry

Ref.	Building Name	Sub-Building Name	Displacement Line	Distance Along Line: Start	Distance Along Line: End	Vertical Offsets from Line for Vertical Movement Calculations	Vertical Displacement Limit Sensitivity	Damage Category Strains	Poisson's Ratio	E/G
				[m]	[m]	[m]	[mm]			
1	No 1 Thurlow Road	Wall 1	No 1 Thurlow Road - Wall 1	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
2	No 1 Thurlow Road	Wall 2	No 1 Thurlow Road - Wall 2	0.00000	11.00000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
3	No 1 Thurlow Road	Wall 3	No 1 Thurlow Road - Wall 3	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
4	No 3 Thurlow Road	Wall 1	No 3 Thurlow Road - Wall 1	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
5	No 3 Thurlow Road	Wall 2	No 3 Thurlow Road - Wall 2	0.00000	1.70000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
6	No 3 Thurlow Road	Wall 3	No 3 Thurlow Road - Wall 3	0.00000	2.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
7	No 3 Thurlow Road	Wall 4	No 3 Thurlow Road - Wall 4	0.00000	3.99900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
8	No 3 Thurlow Road	Wall 5	No 3 Thurlow Road - Wall 5	0.00000	2.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
9	No 3 Thurlow Road	Wall 6	No 3 Thurlow Road - Wall 6	0.00000	7.00000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
10	No 3 Thurlow Road	Wall 7	No 3 Thurlow Road - Wall 7	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
11	No 3 Thurlow Road	Wall 8	No 3 Thurlow Road - Wall 8	0.00000	12.70000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000

Specific Buildings - Bending Parameters

Ref.	Building Name	Sub-Building Name	Height	Default	Hogging:	Hogging:	Hogging:	Sagging:	Sagging:	Sagging:
					2nd Mom. of Area (per unit width)	Dist. of Bending Strain from N.A.	Dist. of N.A. from Edge of Beam in Tension	2nd Mom. of Area (per unit width)	Dist. of Bending Strain from N.A.	Dist. of N.A. from Edge of Beam in Tension
					[m ³]	[m]	[m]	[m ³]	[m]	[m]
1	No 1 Thurlow Road	Wall 1	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
2	No 1 Thurlow Road	Wall 2	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
3	No 1 Thurlow Road	Wall 3	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
4	No 3 Thurlow Road	Wall 1	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
5	No 3 Thurlow Road	Wall 2	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
6	No 3 Thurlow Road	Wall 3	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
7	No 3 Thurlow Road	Wall 4	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
8	No 3 Thurlow Road	Wall 5	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
9	No 3 Thurlow Road	Wall 6	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
10	No 3 Thurlow Road	Wall 7	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500
11	No 3 Thurlow Road	Wall 8	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500	7.2500

Warnings

- 1 Multiple excavations have been specified. Displacements resulting from each excavation are summed with no account taken of the interactions between excavations (e.g. overlapping zones of influence or 'shielding' of one excavation by another).

Errors

None



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Ground Movement Assessment
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Ref.	Building Name	Sub-Building Name	Height	Default Name	Hogging: 2nd Mom. of Area	Hogging: Dist. of Bending	Hogging: Dist. of N.A. from	Sagging: 2nd Mom. of Area	Sagging: Dist. of Bending	Sagging: Dist. of N.A. from				
Displacement Results - Displacement Lines														
Stage: Ref.	Stage: Name	Disp. Line: Ref.	Disp. Line: Name	Chainage	x	y	z	δx	δy	δz	δH//	δHperp.	Angle	
					[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]
0	Base Model 1	No 1	ThurLOW Road - Wall 1	1	0.0	36.00000	27.60000	-0.50000	0.0	-3.8292	1.7700	-3.8292	0.0	90.000
					1.0429	36.00000	28.64286	-0.50000	0.0	-3.0905	1.7145	-3.0905	0.0	90.000
					2.0857	36.00000	29.68571	-0.50000	0.0	-2.3518	1.3547	-2.3518	0.0	90.000
					3.1286	36.00000	30.72857	-0.50000	0.0	-1.7143	0.93437	-1.7143	0.0	90.000
					4.1714	36.00000	31.77143	-0.50000	0.0	-1.3232	0.52343	-1.3232	0.0	90.000
					5.2143	36.00000	32.81429	-0.50000	0.0	-0.93214	0.22212	-0.93214	0.0	90.000
					6.2571	36.00000	33.85714	-0.50000	0.0	-0.54107	0.074910	-0.54107	0.0	90.000
					7.3000	36.00000	34.90000	-0.50000	0.0	-0.15000	0.025021	-0.15000	0.0	90.000
		2	No 1 ThurLOW Road - Wall 2	2	0.0	36.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					1.0000	35.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					2.0000	34.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					3.0000	33.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					4.0000	32.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					5.0000	31.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					6.0000	30.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					7.0000	29.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					8.0000	28.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					9.0000	27.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					10.000	26.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
					11.000	25.00000	35.00000	-0.50000	0.0	-0.11250	0.020388	0.0	0.11250	180.00
		3	No 1 ThurLOW Road - Wall 3	3	0.0	25.00000	27.60000	-0.50000	0.0	-3.8292	1.7700	-3.8292	0.0	90.000
					1.0429	25.00000	28.64286	-0.50000	0.0	-3.0905	1.7145	-3.0905	0.0	90.000
					2.0857	25.00000	29.68571	-0.50000	0.0	-2.3518	1.3547	-2.3518	0.0	90.000
					3.1286	25.00000	30.72857	-0.50000	0.0	-1.7143	0.93437	-1.7143	0.0	90.000
					4.1714	25.00000	31.77143	-0.50000	0.0	-1.3232	0.52343	-1.3232	0.0	90.000
					5.2143	25.00000	32.81429	-0.50000	0.0	-0.93214	0.22212	-0.93214	0.0	90.000
					6.2571	25.00000	33.85714	-0.50000	0.0	-0.54107	0.074910	-0.54107	0.0	90.000
					7.3000	25.00000	34.90000	-0.50000	0.0	-0.15000	0.025021	-0.15000	0.0	90.000
		4	No 3 ThurLOW Road - Wall 1	1	0.0	36.00000	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	90.000
					1.0429	36.00000	8.94286	-0.50000	0.0	0.0	0.0	0.0	0.0	90.000
					2.0857	36.00000	9.98571	-0.50000	0.0	0.0	0.0	0.0	0.0	90.000
					3.1286	36.00000	11.02857	-0.50000	0.0	0.0	0.0	0.0	0.0	90.000
					4.1714	36.00000	12.07143	-0.50000	0.0	0.0	0.0	0.0	0.0	90.000
					5.2143	36.00000	13.11429	-0.50000	0.0	0.34286	0.045010	0.34286	0.0	90.000
					6.2571	36.00000	14.15714	-0.50000	0.0	0.73393	0.12944	0.73393	0.0	90.000
					7.3000	36.00000	15.20000	-0.50000	0.0	1.1250	0.35185	1.1250	0.0	90.000
		5	No 3 ThurLOW Road - Wall 2	2	0.0	36.00000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
					0.85000	35.15000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
		6	No 3 ThurLOW Road - Wall 3	3	0.0	34.30000	15.40000	-0.50000	0.0	1.2000	0.41255	1.2000	0.0	90.000
					0.76667	34.30000	16.16667	-0.50000	0.0	1.4875	0.68881	1.4875	0.0	90.000
					1.5333	34.30000	16.93333	-0.50000	0.0	1.7750	0.99999	1.7750	0.0	90.000
					2.3000	34.30000	17.70000	-0.50000	0.0	2.2708	1.3114	2.2708	0.0	90.000
		7	No 3 ThurLOW Road - Wall 4	4	0.0	34.30000	17.80000	-0.50000	0.0	2.3417	1.3493	0.0	-2.3417	180.00
					1.0000	33.30000	17.80000	-0.50000	0.0	2.3417	1.3493	0.0	-2.3417	180.00
					2.0000	32.30000	17.80000	-0.50000	0.0	2.3417	1.3493	0.0	-2.3417	180.00
					3.0000	31.30000	17.80000	-0.50000	0.0	2.3417	1.3493	0.0	-2.3417	180.00
					4.0000	30.30000	17.80000	-0.50000	0.0	2.3417	1.3493	0.0	-2.3417	180.00
		8	No 3 ThurLOW Road - Wall 5	5	0.0	30.30000	17.70000	-0.50000	0.0	2.2708	1.3114	-2.2708	0.0	270.00
					0.76667	30.30000	16.93333	-0.50000	0.0	1.7750	0.99999	-1.7750	0.0	270.00
					1.5333	30.30000	16.16667	-0.50000	0.0	1.4875	0.68881	-1.4875	0.0	270.00
					2.3000	30.30000	15.40000	-0.50000	0.0	1.2000	0.41255	-1.2000	0.0	270.00
		9	No 3 ThurLOW Road - Wall 6	6	0.0	30.30000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
					1.0000	29.30000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
					2.0000	28.30000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
					3.0000	27.30000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
					4.0000	26.30000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
					5.0000	25.30000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
					6.0000	24.30000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
					7.0000	23.30000	15.30000	-0.50000	0.0	1.1625	0.38151	0.0	-1.1625	180.00
		10	No 3 ThurLOW Road - Wall 7	7	0.0	23.30000	15.20000	-0.50000	0.0	1.1250	0.35185	-1.1250	0.0	270.00
					1.0429	23.30000	14.15714	-0.50000	0.0	0.73393	0.12944	-0.73393	0.0	270.00
					2.0857	23.30000	13.11429	-0.50000	0.0	0.34286	0.045010	-0.34286	0.0	270.00
					3.1286	23.30000	12.07143	-0.50000	0.0	0.0	0.0	0.0	0.0	270.00
					4.1714	23.30000	11.02857	-0.50000	0.0	0.0	0.0	0.0	0.0	270.00
					5.2143	23.30000	9.98571	-0.50000	0.0	0.0	0.0	0.0	0.0	270.00
					6.2571	23.30000	8.94286	-0.50000	0.0	0.0	0.0	0.0	0.0	270.00
					7.3000	23.30000	7.90000	-0.50000	0.0	0.0	0.0	0.0	0.0	270.00
		11	No 3 ThurLOW Road - Wall 8	8	0.0	23.30000	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					0.97692	24.27692	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					1.9538	25.25385	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					2.9308	26.23077	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					3.9077	27.20769	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					4.8846	28.18462	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					5.8615	29.16154	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					6.8385	30.13846	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					7.8154	31.11538	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					8.7923	32.09231	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					9.7692	33.06923	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					10.746	34.04615	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					11.723	35.02308	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0
					12.700	36.00000	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0	0.0

Displacement Results - Displacement Grids

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
0	Base Model 1	Grid 1		0.00000	0.00000	0.00000	0.0	0.0	0.0
				1.00000	0.00000	0.00000	0.0	0.0	0.0
				2.00000	0.00000	0.00000	0.0	0.0	0.0
				3.00000	0.00000	0.00000	0.0	0.0	0.0
				4.00000	0.00000	0.00000	0.0	0.0	0.0
				5.00000	0.00000	0.00000	0.0	0.0	0.0
				6.00000	0.00000	0.00000	0.0	0.0	0.0
				7.00000	0.00000	0.00000	0.0	0.0	0.0
				8.00000	0.00000	0.00000	0.0	0.0	0.0
				9.00000	0.00000	0.00000	0.0	0.0	0.0
				10.00000	0.00000	0.00000	0.0	0.0	0.0
				11.00000	0.00000	0.00000	0.0	0.0	0.0
				12.00000	0.00000	0.00000	0.0	0.0	0.0
				13.00000	0.00000	0.00000	0.0	0.0	0.0
				14.00000	0.00000	0.00000	0.0	0.0	0.0
				15.00000	0.00000	0.00000	0.0	0.0	0.0
				16.00000	0.00000	0.00000	0.0	0.0	0.0
				17.00000	0.00000	0.00000	0.0	0.0	0.0
				18.00000	0.00000	0.00000	0.0	0.0	0.0
				19.00000	0.00000	0.00000	0.0	0.0	0.0
				20.00000	0.00000	0.00000	0.0	0.0	0.0
				21.00000	0.00000	0.00000	0.0	0.0	0.0
				22.00000	0.00000	0.00000	0.0	0.0	0.0
				23.00000	0.00000	0.00000	0.0	0.0	0.0
				24.00000	0.00000	0.00000	0.0	0.0	0.0
				25.00000	0.00000	0.00000	0.0	0.0	0.0
				26.00000	0.00000	0.00000	0.0	0.0	0.0
				27.00000	0.00000	0.00000	0.0	0.0	0.0
				28.00000	0.00000	0.00000	0.0	0.0	0.0
				29.00000	0.00000	0.00000	0.0	0.0	0.0
				30.00000	0.00000	0.00000	0.0	0.0	0.0
				31.00000	0.00000	0.00000	0.0	0.0	0.0
				32.00000	0.00000	0.00000	0.0	0.0	0.0
				33.00000	0.00000	0.00000	0.0	0.0	0.0
				34.00000	0.00000	0.00000	0.0	0.0	0.0
				35.00000	0.00000	0.00000	0.0	0.0	0.0
				36.00000	0.00000	0.00000	0.0	0.0	0.0
				37.00000	0.00000	0.00000	0.0	0.0	0.0
				38.00000	0.00000	0.00000	0.0	0.0	0.0
				39.00000	0.00000	0.00000	0.0	0.0	0.0
				40.00000	0.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				41.00000	0.00000	0.00000	0.0	0.0	0.0
				42.00000	0.00000	0.00000	0.0	0.0	0.0
				43.00000	0.00000	0.00000	0.0	0.0	0.0
				44.00000	0.00000	0.00000	0.0	0.0	0.0
				45.00000	0.00000	0.00000	0.0	0.0	0.0
				46.00000	0.00000	0.00000	0.0	0.0	0.0
				47.00000	0.00000	0.00000	0.0	0.0	0.0
				48.00000	0.00000	0.00000	0.0	0.0	0.0
				49.00000	0.00000	0.00000	0.0	0.0	0.0
				50.00000	0.00000	0.00000	0.0	0.0	0.0
				0.00000	1.00000	0.00000	0.0	0.0	0.0
				1.00000	1.00000	0.00000	0.0	0.0	0.0
				2.00000	1.00000	0.00000	0.0	0.0	0.0
				3.00000	1.00000	0.00000	0.0	0.0	0.0
				4.00000	1.00000	0.00000	0.0	0.0	0.0
				5.00000	1.00000	0.00000	0.0	0.0	0.0
				6.00000	1.00000	0.00000	0.0	0.0	0.0
				7.00000	1.00000	0.00000	0.0	0.0	0.0
				8.00000	1.00000	0.00000	0.0	0.0	0.0
				9.00000	1.00000	0.00000	0.0	0.0	0.0
				10.00000	1.00000	0.00000	0.0	0.0	0.0
				11.00000	1.00000	0.00000	0.0	0.0	0.0
				12.00000	1.00000	0.00000	0.0	0.0	0.0
				13.00000	1.00000	0.00000	0.0	0.0	0.0
				14.00000	1.00000	0.00000	0.0	0.0	0.0
				15.00000	1.00000	0.00000	0.0	0.0	0.0
				16.00000	1.00000	0.00000	0.0	0.0	0.0
				17.00000	1.00000	0.00000	0.0	0.0	0.0
				18.00000	1.00000	0.00000	0.0	0.0	0.0
				19.00000	1.00000	0.00000	0.0	0.0	0.0
				20.00000	1.00000	0.00000	0.0	0.0	0.0
				21.00000	1.00000	0.00000	0.0	0.0	0.0
				22.00000	1.00000	0.00000	0.0	0.0	0.0
				23.00000	1.00000	0.00000	0.0	0.0	0.0
				24.00000	1.00000	0.00000	0.0	0.0	0.0
				25.00000	1.00000	0.00000	0.0	0.0	0.0
				26.00000	1.00000	0.00000	0.0	0.0	0.0
				27.00000	1.00000	0.00000	0.0	0.0	0.0
				28.00000	1.00000	0.00000	0.0	0.0	0.0
				29.00000	1.00000	0.00000	0.0	0.0	0.0
				30.00000	1.00000	0.00000	0.0	0.0	0.0
				31.00000	1.00000	0.00000	0.0	0.0	0.0
				32.00000	1.00000	0.00000	0.0	0.0	0.0
				33.00000	1.00000	0.00000	0.0	0.0	0.0
				34.00000	1.00000	0.00000	0.0	0.0	0.0
				35.00000	1.00000	0.00000	0.0	0.0	0.0
				36.00000	1.00000	0.00000	0.0	0.0	0.0
				37.00000	1.00000	0.00000	0.0	0.0	0.0
				38.00000	1.00000	0.00000	0.0	0.0	0.0
				39.00000	1.00000	0.00000	0.0	0.0	0.0
				40.00000	1.00000	0.00000	0.0	0.0	0.0
				41.00000	1.00000	0.00000	0.0	0.0	0.0
				42.00000	1.00000	0.00000	0.0	0.0	0.0
				43.00000	1.00000	0.00000	0.0	0.0	0.0
				44.00000	1.00000	0.00000	0.0	0.0	0.0
				45.00000	1.00000	0.00000	0.0	0.0	0.0
				46.00000	1.00000	0.00000	0.0	0.0	0.0
				47.00000	1.00000	0.00000	0.0	0.0	0.0
				48.00000	1.00000	0.00000	0.0	0.0	0.0
				49.00000	1.00000	0.00000	0.0	0.0	0.0
				50.00000	1.00000	0.00000	0.0	0.0	0.0
				0.00000	2.00000	0.00000	0.0	0.0	0.0
				1.00000	2.00000	0.00000	0.0	0.0	0.0
				2.00000	2.00000	0.00000	0.0	0.0	0.0
				3.00000	2.00000	0.00000	0.0	0.0	0.0
				4.00000	2.00000	0.00000	0.0	0.0	0.0
				5.00000	2.00000	0.00000	0.0	0.0	0.0
				6.00000	2.00000	0.00000	0.0	0.0	0.0
				7.00000	2.00000	0.00000	0.0	0.0	0.0
				8.00000	2.00000	0.00000	0.0	0.0	0.0
				9.00000	2.00000	0.00000	0.0	0.0	0.0
				10.00000	2.00000	0.00000	0.0	0.0	0.0
				11.00000	2.00000	0.00000	0.0	0.0	0.0
				12.00000	2.00000	0.00000	0.0	0.0	0.0
				13.00000	2.00000	0.00000	0.0	0.0	0.0
				14.00000	2.00000	0.00000	0.0	0.0	0.0
				15.00000	2.00000	0.00000	0.0	0.0	0.0
				16.00000	2.00000	0.00000	0.0	0.0	0.0
				17.00000	2.00000	0.00000	0.0	0.0	0.0
				18.00000	2.00000	0.00000	0.0	0.0	0.0
				19.00000	2.00000	0.00000	0.0	0.0	0.0
				20.00000	2.00000	0.00000	0.0	0.0	0.0
				21.00000	2.00000	0.00000	0.0	0.0	0.0
				22.00000	2.00000	0.00000	0.0	0.0	0.0
				23.00000	2.00000	0.00000	0.0	0.0	0.0
				24.00000	2.00000	0.00000	0.0	0.0	0.0
				25.00000	2.00000	0.00000	0.0	0.0	0.0
				26.00000	2.00000	0.00000	0.0	0.0	0.0
				27.00000	2.00000	0.00000	0.0	0.0	0.0
				28.00000	2.00000	0.00000	0.0	0.0	0.0
				29.00000	2.00000	0.00000	0.0	0.0	0.0
				30.00000	2.00000	0.00000	0.0	0.0	0.0
				31.00000	2.00000	0.00000	0.0	0.0	0.0
				32.00000	2.00000	0.00000	0.0	0.0	0.0
				33.00000	2.00000	0.00000	0.0	0.0	0.0
				34.00000	2.00000	0.00000	0.0	0.0	0.0
				35.00000	2.00000	0.00000	0.0	0.0	0.0
				36.00000	2.00000	0.00000	0.0	0.0	0.0
				37.00000	2.00000	0.00000	0.0	0.0	0.0
				38.00000	2.00000	0.00000	0.0	0.0	0.0
				39.00000	2.00000	0.00000	0.0	0.0	0.0
				40.00000	2.00000	0.00000	0.0	0.0	0.0
				41.00000	2.00000	0.00000	0.0	0.0	0.0
				42.00000	2.00000	0.00000	0.0	0.0	0.0
				43.00000	2.00000	0.00000	0.0	0.0	0.0
				44.00000	2.00000	0.00000	0.0	0.0	0.0
				45.00000	2.00000	0.00000	0.0	0.0	0.0
				46.00000	2.00000	0.00000	0.0	0.0	0.0
				47.00000	2.00000	0.00000	0.0	0.0	0.0
				48.00000	2.00000	0.00000	0.0	0.0	0.0
				49.00000	2.00000	0.00000	0.0	0.0	0.0
				50.00000	2.00000	0.00000	0.0	0.0	0.0
				0.00000	3.00000	0.00000	0.0	0.0	0.0
				1.00000	3.00000	0.00000	0.0	0.0	0.0
				2.00000	3.00000	0.00000	0.0	0.0	0.0
				3.00000	3.00000	0.00000	0.0	0.0	0.0
				4.00000	3.00000	0.00000	0.0	0.0	0.0
				5.00000	3.00000	0.00000	0.0	0.0	0.0
				6.00000	3.00000	0.00000	0.0	0.0	0.0
				7.00000	3.00000	0.00000	0.0	0.0	0.0
				8.00000	3.00000	0.00000	0.0	0.0	0.0
				9.00000	3.00000	0.00000	0.0	0.0	0.0
				10.00000	3.00000	0.00000	0.0	0.0	0.0
				11.00000	3.00000	0.00000	0.0	0.0	0.0
				12.00000	3.00000	0.00000	0.0	0.0	0.0
				13.00000	3.00000	0.00000	0.0	0.0	0.0
				14.00000	3.00000	0.00000	0.0	0.0	0.0
				15.00000	3.00000	0.00000	0.0	0.0	0.0
				16.00000	3.00000	0.00000	0.0	0.0	0.0
				17.00000	3.00000	0.00000	0.0	0.0	0.0
				18.00000	3.00000	0.00000	0.0	0.0	0.0
				19.00000	3.00000	0.00000	0.0	0.0	0.0
				20.00000	3.00000	0.00000	0.0	0.0	0.0
				21.00000	3.00000	0.00000	0.0	0.0	0.0
				22.00000	3.00000	0.00000	0.0	0.0	0.0
				23.00000	3.00000	0.00000	0.0	0.0	0.0
				24.00000	3.00000	0.00000	0.0	0.0	0.0
				25.00000	3.00000	0.00000	0.0	0.0	0.0
				26.00000	3.00000	0.00000	0.0	0.0	0.0
				27.00000	3.00000	0.00000	0.0	0.0	0.0
				28.00000	3.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				29.00000	3.00000	0.00000	0.0	0.0	0.0
				30.00000	3.00000	0.00000	0.0	0.0	0.0
				31.00000	3.00000	0.00000	0.0	0.0	0.0
				32.00000	3.00000	0.00000	0.0	0.0	0.0
				33.00000	3.00000	0.00000	0.0	0.0	0.0
				34.00000	3.00000	0.00000	0.0	0.0	0.0
				35.00000	3.00000	0.00000	0.0	0.0	0.0
				36.00000	3.00000	0.00000	0.0	0.0	0.0
				37.00000	3.00000	0.00000	0.0	0.0	0.0
				38.00000	3.00000	0.00000	0.0	0.0	0.0
				39.00000	3.00000	0.00000	0.0	0.0	0.0
				40.00000	3.00000	0.00000	0.0	0.0	0.0
				41.00000	3.00000	0.00000	0.0	0.0	0.0
				42.00000	3.00000	0.00000	0.0	0.0	0.0
				43.00000	3.00000	0.00000	0.0	0.0	0.0
				44.00000	3.00000	0.00000	0.0	0.0	0.0
				45.00000	3.00000	0.00000	0.0	0.0	0.0
				46.00000	3.00000	0.00000	0.0	0.0	0.0
				47.00000	3.00000	0.00000	0.0	0.0	0.0
				48.00000	3.00000	0.00000	0.0	0.0	0.0
				49.00000	3.00000	0.00000	0.0	0.0	0.0
				50.00000	3.00000	0.00000	0.0	0.0	0.0
				0.00000	4.00000	0.00000	0.0	0.0	0.0
				1.00000	4.00000	0.00000	0.0	0.0	0.0
				2.00000	4.00000	0.00000	0.0	0.0	0.0
				3.00000	4.00000	0.00000	0.0	0.0	0.0
				4.00000	4.00000	0.00000	0.0	0.0	0.0
				5.00000	4.00000	0.00000	0.0	0.0	0.0
				6.00000	4.00000	0.00000	0.0	0.0	0.0
				7.00000	4.00000	0.00000	0.0	0.0	0.0
				8.00000	4.00000	0.00000	0.0	0.0	0.0
				9.00000	4.00000	0.00000	0.0	0.0	0.0
				10.00000	4.00000	0.00000	0.0	0.0	0.0
				11.00000	4.00000	0.00000	0.0	0.0	0.0
				12.00000	4.00000	0.00000	0.0	0.0	0.0
				13.00000	4.00000	0.00000	0.0	0.0	0.0
				14.00000	4.00000	0.00000	0.0	0.0	0.0
				15.00000	4.00000	0.00000	0.0	0.0	0.0
				16.00000	4.00000	0.00000	0.0	0.0	0.0
				17.00000	4.00000	0.00000	0.0	0.0	0.0
				18.00000	4.00000	0.00000	0.0	0.0	0.0
				19.00000	4.00000	0.00000	0.0	0.0	0.0
				20.00000	4.00000	0.00000	0.0	0.0	0.0
				21.00000	4.00000	0.00000	0.0	0.0	0.0
				22.00000	4.00000	0.00000	0.0	0.0	0.0
				23.00000	4.00000	0.00000	0.0	0.0	0.0
				24.00000	4.00000	0.00000	0.0	0.0	0.0
				25.00000	4.00000	0.00000	0.0	0.0	0.0
				26.00000	4.00000	0.00000	0.0	0.0	0.0
				27.00000	4.00000	0.00000	0.0	0.0	0.0
				28.00000	4.00000	0.00000	0.0	0.0	0.0
				29.00000	4.00000	0.00000	0.0	0.0	0.0
				30.00000	4.00000	0.00000	0.0	0.0	0.0
				31.00000	4.00000	0.00000	0.0	0.0	0.0
				32.00000	4.00000	0.00000	0.0	0.0	0.0
				33.00000	4.00000	0.00000	0.0	0.0	0.0
				34.00000	4.00000	0.00000	0.0	0.0	0.0
				35.00000	4.00000	0.00000	0.0	0.0	0.0
				36.00000	4.00000	0.00000	0.0	0.0	0.0
				37.00000	4.00000	0.00000	0.0	0.0	0.0
				38.00000	4.00000	0.00000	0.0	0.0	0.0
				39.00000	4.00000	0.00000	0.0	0.0	0.0
				40.00000	4.00000	0.00000	0.0	0.0	0.0
				41.00000	4.00000	0.00000	0.0	0.0	0.0
				42.00000	4.00000	0.00000	0.0	0.0	0.0
				43.00000	4.00000	0.00000	0.0	0.0	0.0
				44.00000	4.00000	0.00000	0.0	0.0	0.0
				45.00000	4.00000	0.00000	0.0	0.0	0.0
				46.00000	4.00000	0.00000	0.0	0.0	0.0
				47.00000	4.00000	0.00000	0.0	0.0	0.0
				48.00000	4.00000	0.00000	0.0	0.0	0.0
				49.00000	4.00000	0.00000	0.0	0.0	0.0
				50.00000	4.00000	0.00000	0.0	0.0	0.0
				0.00000	5.00000	0.00000	0.0	0.0	0.0
				1.00000	5.00000	0.00000	0.0	0.0	0.0
				2.00000	5.00000	0.00000	0.0	0.0	0.0
				3.00000	5.00000	0.00000	0.0	0.0	0.0
				4.00000	5.00000	0.00000	0.0	0.0	0.0
				5.00000	5.00000	0.00000	0.0	0.0	0.0
				6.00000	5.00000	0.00000	0.0	0.0	0.0
				7.00000	5.00000	0.00000	0.0	0.0	0.0
				8.00000	5.00000	0.00000	0.0	0.0	0.0
				9.00000	5.00000	0.00000	0.0	0.0	0.0
				10.00000	5.00000	0.00000	0.0	0.0	0.0
				11.00000	5.00000	0.00000	0.0	0.0	0.0
				12.00000	5.00000	0.00000	0.0	0.0	0.0
				13.00000	5.00000	0.00000	0.0	0.0	0.0
				14.00000	5.00000	0.00000	0.0	0.0	0.0
				15.00000	5.00000	0.00000	0.0	0.0	0.0
				16.00000	5.00000	0.00000	0.0	0.0	0.0
				17.00000	5.00000	0.00000	0.0	0.0	0.0
				18.00000	5.00000	0.00000	0.0	0.0	0.0
				19.00000	5.00000	0.00000	0.0	0.0	0.0
				20.00000	5.00000	0.00000	0.0	0.0	0.0
				21.00000	5.00000	0.00000	0.0	0.0	0.0
				22.00000	5.00000	0.00000	0.0	0.0	0.0
				23.00000	5.00000	0.00000	0.0	0.0	0.0
				24.00000	5.00000	0.00000	0.0	0.0	0.0
				25.00000	5.00000	0.00000	0.0	0.0	0.0
				26.00000	5.00000	0.00000	0.0	0.0	0.0
				27.00000	5.00000	0.00000	0.0	0.0	0.0
				28.00000	5.00000	0.00000	0.0	0.0	0.0
				29.00000	5.00000	0.00000	0.0	0.0	0.0
				30.00000	5.00000	0.00000	0.0	0.0	0.0
				31.00000	5.00000	0.00000	0.0	0.0	0.0
				32.00000	5.00000	0.00000	0.0	0.0	0.0
				33.00000	5.00000	0.00000	0.0	0.0	0.0
				34.00000	5.00000	0.00000	0.0	0.0	0.0
				35.00000	5.00000	0.00000	0.0	0.0	0.0
				36.00000	5.00000	0.00000	0.0	0.0	0.0
				37.00000	5.00000	0.00000	0.0	0.0	0.0
				38.00000	5.00000	0.00000	0.0	0.0	0.0
				39.00000	5.00000	0.00000	0.0	0.0	0.0
				40.00000	5.00000	0.00000	0.0	0.0	0.0
				41.00000	5.00000	0.00000	0.0	0.0	0.0
				42.00000	5.00000	0.00000	0.0	0.0	0.0
				43.00000	5.00000	0.00000	0.0	0.0	0.0
				44.00000	5.00000	0.00000	0.0	0.0	0.0
				45.00000	5.00000	0.00000	0.0	0.0	0.0
				46.00000	5.00000	0.00000	0.0	0.0	0.0
				47.00000	5.00000	0.00000	0.0	0.0	0.0
				48.00000	5.00000	0.00000	0.0	0.0	0.0
				49.00000	5.00000	0.00000	0.0	0.0	0.0
				50.00000	5.00000	0.00000	0.0	0.0	0.0
				0.00000	6.00000	0.00000	0.0	0.0	0.0
				1.00000	6.00000	0.00000	0.0	0.0	0.0
				2.00000	6.00000	0.00000	0.0	0.0	0.0
				3.00000	6.00000	0.00000	0.0	0.0	0.0
				4.00000	6.00000	0.00000	0.0	0.0	0.0
				5.00000	6.00000	0.00000	0.0	0.0	0.0
				6.00000	6.00000	0.00000	0.0	0.0	0.0
				7.00000	6.00000	0.00000	0.0	0.0	0.0
				8.00000	6.00000	0.00000	0.0	0.0	0.0
				9.00000	6.00000	0.00000	0.0	0.0	0.0
				10.00000	6.00000	0.00000	0.0	0.0	0.0
				11.00000	6.00000	0.00000	0.0	0.0	0.0
				12.00000	6.00000	0.00000	0.0	0.0	0.0
				13.00000	6.00000	0.00000	0.0	0.0	0.0
				14.00000	6.00000	0.00000	0.0	0.0	0.0
				15.00000	6.00000	0.00000	0.0	0.0	0.0
				16.00000	6.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				17.00000	6.00000	0.00000	0.0	0.0	0.0
				18.00000	6.00000	0.00000	0.0	0.0	0.0
				19.00000	6.00000	0.00000	0.0	0.0	0.0
				20.00000	6.00000	0.00000	0.0	0.0	0.0
				21.00000	6.00000	0.00000	0.0	0.0	0.0
				22.00000	6.00000	0.00000	0.0	0.0	0.0
				23.00000	6.00000	0.00000	0.0	0.0	0.0
				24.00000	6.00000	0.00000	0.0	0.0	0.0
				25.00000	6.00000	0.00000	0.0	0.0	0.0
				26.00000	6.00000	0.00000	0.0	0.0	0.0
				27.00000	6.00000	0.00000	0.0	0.0	0.0
				28.00000	6.00000	0.00000	0.0	0.0	0.0
				29.00000	6.00000	0.00000	0.0	0.0	0.0
				30.00000	6.00000	0.00000	0.0	0.0	0.0
				31.00000	6.00000	0.00000	0.0	0.0	0.0
				32.00000	6.00000	0.00000	0.0	0.0	0.0
				33.00000	6.00000	0.00000	0.0	0.0	0.0
				34.00000	6.00000	0.00000	0.0	0.0	0.0
				35.00000	6.00000	0.00000	0.0	0.0	0.0
				36.00000	6.00000	0.00000	0.0	0.0	0.0
				37.00000	6.00000	0.00000	0.0	0.0	0.0
				38.00000	6.00000	0.00000	0.0	0.0	0.0
				39.00000	6.00000	0.00000	0.0	0.0	0.0
				40.00000	6.00000	0.00000	0.0	0.0	0.0
				41.00000	6.00000	0.00000	0.0	0.0	0.0
				42.00000	6.00000	0.00000	0.0	0.0	0.0
				43.00000	6.00000	0.00000	0.0	0.0	0.0
				44.00000	6.00000	0.00000	0.0	0.0	0.0
				45.00000	6.00000	0.00000	0.0	0.0	0.0
				46.00000	6.00000	0.00000	0.0	0.0	0.0
				47.00000	6.00000	0.00000	0.0	0.0	0.0
				48.00000	6.00000	0.00000	0.0	0.0	0.0
				49.00000	6.00000	0.00000	0.0	0.0	0.0
				50.00000	6.00000	0.00000	0.0	0.0	0.0
				0.00000	7.00000	0.00000	0.0	0.0	0.0
				1.00000	7.00000	0.00000	0.0	0.0	0.0
				2.00000	7.00000	0.00000	0.0	0.0	0.0
				3.00000	7.00000	0.00000	0.0	0.0	0.0
				4.00000	7.00000	0.00000	0.0	0.0	0.0
				5.00000	7.00000	0.00000	0.0	0.0	0.0
				6.00000	7.00000	0.00000	0.0	0.0	0.0
				7.00000	7.00000	0.00000	0.0	0.0	0.0
				8.00000	7.00000	0.00000	0.0	0.0	0.0
				9.00000	7.00000	0.00000	0.0	0.0	0.0
				10.00000	7.00000	0.00000	0.0	0.0	0.0
				11.00000	7.00000	0.00000	0.0	0.0	0.0
				12.00000	7.00000	0.00000	0.0	0.0	0.0
				13.00000	7.00000	0.00000	0.0	0.0	0.0
				14.00000	7.00000	0.00000	0.0	0.0	0.0
				15.00000	7.00000	0.00000	0.0	0.0	0.0
				16.00000	7.00000	0.00000	0.0	0.0	0.0
				17.00000	7.00000	0.00000	0.0	0.0	0.0
				18.00000	7.00000	0.00000	0.0	0.0	0.0
				19.00000	7.00000	0.00000	0.0	0.0	0.0
				20.00000	7.00000	0.00000	0.0	0.0	0.0
				21.00000	7.00000	0.00000	0.0	0.0	0.0
				22.00000	7.00000	0.00000	0.0	0.0	0.0
				23.00000	7.00000	0.00000	0.0	0.0	0.0
				24.00000	7.00000	0.00000	0.0	0.0	0.0
				25.00000	7.00000	0.00000	0.0	0.0	0.0
				26.00000	7.00000	0.00000	0.0	0.0	0.0
				27.00000	7.00000	0.00000	0.0	0.0	0.0
				28.00000	7.00000	0.00000	0.0	0.0	0.0
				29.00000	7.00000	0.00000	0.0	0.0	0.0
				30.00000	7.00000	0.00000	0.0	0.0	0.0
				31.00000	7.00000	0.00000	0.0	0.0	0.0
				32.00000	7.00000	0.00000	0.0	0.0	0.0
				33.00000	7.00000	0.00000	0.0	0.0	0.0
				34.00000	7.00000	0.00000	0.0	0.0	0.0
				35.00000	7.00000	0.00000	0.0	0.0	0.0
				36.00000	7.00000	0.00000	0.0	0.0	0.0
				37.00000	7.00000	0.00000	0.0	0.0	0.0
				38.00000	7.00000	0.00000	0.0	0.0	0.0
				39.00000	7.00000	0.00000	0.0	0.0	0.0
				40.00000	7.00000	0.00000	0.0	0.0	0.0
				41.00000	7.00000	0.00000	0.0	0.0	0.0
				42.00000	7.00000	0.00000	0.0	0.0	0.0
				43.00000	7.00000	0.00000	0.0	0.0	0.0
				44.00000	7.00000	0.00000	0.0	0.0	0.0
				45.00000	7.00000	0.00000	0.0	0.0	0.0
				46.00000	7.00000	0.00000	0.0	0.0	0.0
				47.00000	7.00000	0.00000	0.0	0.0	0.0
				48.00000	7.00000	0.00000	0.0	0.0	0.0
				49.00000	7.00000	0.00000	0.0	0.0	0.0
				50.00000	7.00000	0.00000	0.0	0.0	0.0
				0.00000	8.00000	0.00000	0.0	0.0	0.0
				1.00000	8.00000	0.00000	0.0	0.0	0.0
				2.00000	8.00000	0.00000	0.0	0.0	0.0
				3.00000	8.00000	0.00000	0.0	0.0	0.0
				4.00000	8.00000	0.00000	0.0	0.0	0.0
				5.00000	8.00000	0.00000	0.0	0.0	0.0
				6.00000	8.00000	0.00000	0.0	0.0	0.0
				7.00000	8.00000	0.00000	0.0	0.0	0.0
				8.00000	8.00000	0.00000	0.0	0.0	0.0
				9.00000	8.00000	0.00000	0.0	0.0	0.0
				10.00000	8.00000	0.00000	0.0	0.0	0.0
				11.00000	8.00000	0.00000	0.0	0.0	0.0
				12.00000	8.00000	0.00000	0.0	0.0	0.0
				13.00000	8.00000	0.00000	0.0	0.0	0.0
				14.00000	8.00000	0.00000	0.0	0.0	0.0
				15.00000	8.00000	0.00000	0.0	0.0	0.0
				16.00000	8.00000	0.00000	0.0	0.0	0.0
				17.00000	8.00000	0.00000	0.0	0.0	0.0
				18.00000	8.00000	0.00000	0.0	0.0	0.0
				19.00000	8.00000	0.00000	0.0	0.0	0.0
				20.00000	8.00000	0.00000	0.0	0.0	0.0
				21.00000	8.00000	0.00000	0.0	0.0	0.0
				22.00000	8.00000	0.00000	0.0	0.0	0.0
				23.00000	8.00000	0.00000	0.0	0.0	0.0
				24.00000	8.00000	0.00000	0.0	0.0	0.0
				25.00000	8.00000	0.00000	0.0	0.0	0.0
				26.00000	8.00000	0.00000	0.0	0.0	0.0
				27.00000	8.00000	0.00000	0.0	0.0	0.0
				28.00000	8.00000	0.00000	0.0	0.0	0.0
				29.00000	8.00000	0.00000	0.0	0.0	0.0
				30.00000	8.00000	0.00000	0.0	0.0	0.0
				31.00000	8.00000	0.00000	0.0	0.0	0.0
				32.00000	8.00000	0.00000	0.0	0.0	0.0
				33.00000	8.00000	0.00000	0.0	0.0	0.0
				34.00000	8.00000	0.00000	0.0	0.0	0.0
				35.00000	8.00000	0.00000	0.0	0.0	0.0
				36.00000	8.00000	0.00000	0.0	0.0	0.0
				37.00000	8.00000	0.00000	0.0	0.0	0.0
				38.00000	8.00000	0.00000	0.0	0.0	0.0
				39.00000	8.00000	0.00000	0.0	0.0	0.0
				40.00000	8.00000	0.00000	0.0	0.0	0.0
				41.00000	8.00000	0.00000	0.0	0.0	0.0
				42.00000	8.00000	0.00000	0.0	0.0	0.0
				43.00000	8.00000	0.00000	0.0	0.0	0.0
				44.00000	8.00000	0.00000	0.0	0.0	0.0
				45.00000	8.00000	0.00000	0.0	0.0	0.0
				46.00000	8.00000	0.00000	0.0	0.0	0.0
				47.00000	8.00000	0.00000	0.0	0.0	0.0
				48.00000	8.00000	0.00000	0.0	0.0	0.0
				49.00000	8.00000	0.00000	0.0	0.0	0.0
				50.00000	8.00000	0.00000	0.0	0.0	0.0
				0.00000	9.00000	0.00000	0.0	0.0	0.0
				1.00000	9.00000	0.00000	0.0	0.0	0.0
				2.00000	9.00000	0.00000	0.0	0.0	0.0
				3.00000	9.00000	0.00000	0.0	0.0	0.0
				4.00000	9.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				5.00000	9.00000	0.00000	0.0	0.0	0.0
				6.00000	9.00000	0.00000	0.0	0.0	0.0
				7.00000	9.00000	0.00000	0.0	0.0	0.0
				8.00000	9.00000	0.00000	0.0	0.0	0.0
				9.00000	9.00000	0.00000	0.0	0.0	0.0
				10.00000	9.00000	0.00000	0.0	0.0	0.0
				11.00000	9.00000	0.00000	0.0	0.0	0.0
				12.00000	9.00000	0.00000	0.0	0.0	0.0
				13.00000	9.00000	0.00000	0.0	0.0	0.0
				14.00000	9.00000	0.00000	0.0	0.0	0.0
				15.00000	9.00000	0.00000	0.0	0.0	0.0
				16.00000	9.00000	0.00000	0.0	0.0	0.0
				17.00000	9.00000	0.00000	0.0	0.0	0.0
				18.00000	9.00000	0.00000	0.0	0.0	0.0
				19.00000	9.00000	0.00000	0.0	0.0	0.0
				20.00000	9.00000	0.00000	0.0	0.0	0.0
				21.00000	9.00000	0.00000	0.0	0.0	0.0
				22.00000	9.00000	0.00000	0.0	0.0	0.0
				23.00000	9.00000	0.00000	0.0	0.0	0.0
				24.00000	9.00000	0.00000	0.0	0.0	0.0
				25.00000	9.00000	0.00000	0.0	0.0	0.0
				26.00000	9.00000	0.00000	0.0	0.0	0.0
				27.00000	9.00000	0.00000	0.0	0.0	0.0
				28.00000	9.00000	0.00000	0.0	0.0	0.0
				29.00000	9.00000	0.00000	0.0	0.0	0.0
				30.00000	9.00000	0.00000	0.0	0.0	0.0
				31.00000	9.00000	0.00000	0.0	0.0	0.0
				32.00000	9.00000	0.00000	0.0	0.0	0.0
				33.00000	9.00000	0.00000	0.0	0.0	0.0
				34.00000	9.00000	0.00000	0.0	0.0	0.0
				35.00000	9.00000	0.00000	0.0	0.0	0.0
				36.00000	9.00000	0.00000	0.0	0.0	0.0
				37.00000	9.00000	0.00000	0.0	0.0	0.0
				38.00000	9.00000	0.00000	0.0	0.0	0.0
				39.00000	9.00000	0.00000	0.0	0.0	0.0
				40.00000	9.00000	0.00000	0.0	0.0	0.0
				41.00000	9.00000	0.00000	0.0	0.0	0.0
				42.00000	9.00000	0.00000	0.0	0.0	0.0
				43.00000	9.00000	0.00000	0.0	0.0	0.0
				44.00000	9.00000	0.00000	0.0	0.0	0.0
				45.00000	9.00000	0.00000	0.0	0.0	0.0
				46.00000	9.00000	0.00000	0.0	0.0	0.0
				47.00000	9.00000	0.00000	0.0	0.0	0.0
				48.00000	9.00000	0.00000	0.0	0.0	0.0
				49.00000	9.00000	0.00000	0.0	0.0	0.0
				50.00000	9.00000	0.00000	0.0	0.0	0.0
				0.00000	10.00000	0.00000	0.0	0.0	0.0
				1.00000	10.00000	0.00000	0.0	0.0	0.0
				2.00000	10.00000	0.00000	0.0	0.0	0.0
				3.00000	10.00000	0.00000	0.0	0.0	0.0
				4.00000	10.00000	0.00000	0.0	0.0	0.0
				5.00000	10.00000	0.00000	0.0	0.0	0.0
				6.00000	10.00000	0.00000	0.0	0.0	0.0
				7.00000	10.00000	0.00000	0.0	0.0	0.0
				8.00000	10.00000	0.00000	0.0	0.0	0.0
				9.00000	10.00000	0.00000	0.0	0.0	0.0
				10.00000	10.00000	0.00000	0.0	0.0	0.0
				11.00000	10.00000	0.00000	0.0	0.0	0.0
				12.00000	10.00000	0.00000	0.0	0.0	0.0
				13.00000	10.00000	0.00000	0.0	0.0	0.0
				14.00000	10.00000	0.00000	0.0	0.0	0.0
				15.00000	10.00000	0.00000	0.0	0.0	0.0
				16.00000	10.00000	0.00000	0.0	0.0	0.0
				17.00000	10.00000	0.00000	0.0	0.0	0.0
				18.00000	10.00000	0.00000	0.0	0.0	0.0
				19.00000	10.00000	0.00000	0.0	0.0	0.0
				20.00000	10.00000	0.00000	0.0	0.0	0.0
				21.00000	10.00000	0.00000	0.0	0.0	0.0
				22.00000	10.00000	0.00000	0.0	0.0	0.0
				23.00000	10.00000	0.00000	0.0	0.0	0.0
				24.00000	10.00000	0.00000	0.0	0.0	0.0
				25.00000	10.00000	0.00000	0.0	0.0	0.0
				26.00000	10.00000	0.00000	0.0	0.0	0.0
				27.00000	10.00000	0.00000	0.0	0.0	0.0
				28.00000	10.00000	0.00000	0.0	0.0	0.0
				29.00000	10.00000	0.00000	0.0	0.0	0.0
				30.00000	10.00000	0.00000	0.0	0.0	0.0
				31.00000	10.00000	0.00000	0.0	0.0	0.0
				32.00000	10.00000	0.00000	0.0	0.0	0.0
				33.00000	10.00000	0.00000	0.0	0.0	0.0
				34.00000	10.00000	0.00000	0.0	0.0	0.0
				35.00000	10.00000	0.00000	0.0	0.0	0.0
				36.00000	10.00000	0.00000	0.0	0.0	0.0
				37.00000	10.00000	0.00000	0.0	0.0	0.0
				38.00000	10.00000	0.00000	0.0	0.0	0.0
				39.00000	10.00000	0.00000	0.0	0.0	0.0
				40.00000	10.00000	0.00000	0.0	0.0	0.0
				41.00000	10.00000	0.00000	0.0	0.0	0.0
				42.00000	10.00000	0.00000	0.0	0.0	0.0
				43.00000	10.00000	0.00000	0.0	0.0	0.0
				44.00000	10.00000	0.00000	0.0	0.0	0.0
				45.00000	10.00000	0.00000	0.0	0.0	0.0
				46.00000	10.00000	0.00000	0.0	0.0	0.0
				47.00000	10.00000	0.00000	0.0	0.0	0.0
				48.00000	10.00000	0.00000	0.0	0.0	0.0
				49.00000	10.00000	0.00000	0.0	0.0	0.0
				50.00000	10.00000	0.00000	0.0	0.0	0.0
				0.00000	11.00000	0.00000	0.0	0.0	0.0
				1.00000	11.00000	0.00000	0.0	0.0	0.0
				2.00000	11.00000	0.00000	0.0	0.0	0.0
				3.00000	11.00000	0.00000	0.0	0.0	0.0
				4.00000	11.00000	0.00000	0.0	0.0	0.0
				5.00000	11.00000	0.00000	0.0	0.0	0.0
				6.00000	11.00000	0.00000	0.0	0.0	0.0
				7.00000	11.00000	0.00000	0.0	0.0	0.0
				8.00000	11.00000	0.00000	0.0	0.0	0.0
				9.00000	11.00000	0.00000	0.0	0.0	0.0
				10.00000	11.00000	0.00000	0.0	0.0	0.0
				11.00000	11.00000	0.00000	0.0	0.0	0.0
				12.00000	11.00000	0.00000	0.0	0.0	0.0
				13.00000	11.00000	0.00000	0.0	0.0	0.0
				14.00000	11.00000	0.00000	0.0	0.0	0.0
				15.00000	11.00000	0.00000	0.0	0.0	0.0
				16.00000	11.00000	0.00000	0.0	0.0	0.0
				17.00000	11.00000	0.00000	0.0	0.0	0.0
				18.00000	11.00000	0.00000	0.0	0.0	0.0
				19.00000	11.00000	0.00000	0.0	0.0	0.0
				20.00000	11.00000	0.00000	0.0	0.0	0.0
				21.00000	11.00000	0.00000	0.0	0.0	0.0
				22.00000	11.00000	0.00000	0.0	0.0	0.0
				23.00000	11.00000	0.00000	0.0	0.0	0.0
				24.00000	11.00000	0.00000	0.0	0.0	0.0
				25.00000	11.00000	0.00000	0.0	0.0	0.0
				26.00000	11.00000	0.00000	0.0	0.0	0.0
				27.00000	11.00000	0.00000	0.0	0.0	0.0
				28.00000	11.00000	0.00000	0.0	0.0	0.0
				29.00000	11.00000	0.00000	0.0	0.0	0.0
				30.00000	11.00000	0.00000	0.0	0.0	0.0
				31.00000	11.00000	0.00000	0.0	0.0	0.0
				32.00000	11.00000	0.00000	0.0	0.0	0.0
				33.00000	11.00000	0.00000	0.0	0.0	0.0
				34.00000	11.00000	0.00000	0.0	0.0	0.0
				35.00000	11.00000	0.00000	0.0	0.0	0.0
				36.00000	11.00000	0.00000	0.0	0.0	0.0
				37.00000	11.00000	0.00000	0.0	0.0	0.0
				38.00000	11.00000	0.00000	0.0	0.0	0.0
				39.00000	11.00000	0.00000	0.0	0.0	0.0
				40.00000	11.00000	0.00000	0.0	0.0	0.0
				41.00000	11.00000	0.00000	0.0	0.0	0.0
				42.00000	11.00000	0.00000	0.0	0.0	0.0
				43.00000	11.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				44.00000	11.00000	0.00000	0.0	0.0	0.0
				45.00000	11.00000	0.00000	0.0	0.0	0.0
				46.00000	11.00000	0.00000	0.0	0.0	0.0
				47.00000	11.00000	0.00000	0.0	0.0	0.0
				48.00000	11.00000	0.00000	0.0	0.0	0.0
				49.00000	11.00000	0.00000	0.0	0.0	0.0
				50.00000	11.00000	0.00000	0.0	0.0	0.0
				0.00000	12.00000	0.00000	0.0	0.0	0.0
				1.00000	12.00000	0.00000	0.0	0.0	0.0
				2.00000	12.00000	0.00000	0.0	0.0	0.0
				3.00000	12.00000	0.00000	0.0	0.0	0.0
				4.00000	12.00000	0.00000	0.0	0.0	0.0
				5.00000	12.00000	0.00000	0.0	0.0	0.0
				6.00000	12.00000	0.00000	0.0	0.0	0.0
				7.00000	12.00000	0.00000	0.0	0.0	0.0
				8.00000	12.00000	0.00000	0.0	0.0	0.0
				9.00000	12.00000	0.00000	0.0	0.0	0.0
				10.00000	12.00000	0.00000	0.0	0.0	0.0
				11.00000	12.00000	0.00000	0.0	0.0	0.0
				12.00000	12.00000	0.00000	0.0	0.0	0.0
				13.00000	12.00000	0.00000	0.0	0.0	0.0
				14.00000	12.00000	0.00000	0.0	0.0	0.0
				15.00000	12.00000	0.00000	0.0	0.0	0.0
				16.00000	12.00000	0.00000	0.0	0.0	0.0
				17.00000	12.00000	0.00000	0.0	0.0	0.0
				18.00000	12.00000	0.00000	0.0	0.0	0.0
				19.00000	12.00000	0.00000	0.0	0.0	0.0
				20.00000	12.00000	0.00000	0.0	0.0	0.0
				21.00000	12.00000	0.00000	0.0	0.0	0.0
				22.00000	12.00000	0.00000	0.0	0.0	0.0
				23.00000	12.00000	0.00000	0.0	0.0	0.0
				24.00000	12.00000	0.00000	0.0	0.0	0.0
				25.00000	12.00000	0.00000	0.0	0.0	0.0
				26.00000	12.00000	0.00000	0.0	0.0	0.0
				27.00000	12.00000	0.00000	0.0	0.0	0.0
				28.00000	12.00000	0.00000	0.0	0.0	0.0
				29.00000	12.00000	0.00000	0.0	0.0	0.0
				30.00000	12.00000	0.00000	0.0	0.0	0.0
				31.00000	12.00000	0.00000	0.0	0.0	0.0
				32.00000	12.00000	0.00000	0.0	0.0	0.0
				33.00000	12.00000	0.00000	0.0	0.0	0.0
				34.00000	12.00000	0.00000	0.0	0.0	0.0
				35.00000	12.00000	0.00000	0.0	0.0	0.0
				36.00000	12.00000	0.00000	0.0	0.0	0.0
				37.00000	12.00000	0.00000	0.0	0.0	0.0
				38.00000	12.00000	0.00000	0.0	0.0	0.0
				39.00000	12.00000	0.00000	0.0	0.0	0.0
				40.00000	12.00000	0.00000	0.0	0.0	0.0
				41.00000	12.00000	0.00000	0.0	0.0	0.0
				42.00000	12.00000	0.00000	0.0	0.0	0.0
				43.00000	12.00000	0.00000	0.0	0.0	0.0
				44.00000	12.00000	0.00000	0.0	0.0	0.0
				45.00000	12.00000	0.00000	0.0	0.0	0.0
				46.00000	12.00000	0.00000	0.0	0.0	0.0
				47.00000	12.00000	0.00000	0.0	0.0	0.0
				48.00000	12.00000	0.00000	0.0	0.0	0.0
				49.00000	12.00000	0.00000	0.0	0.0	0.0
				50.00000	12.00000	0.00000	0.0	0.0	0.0
				0.00000	13.00000	0.00000	0.0	0.0	0.0
				1.00000	13.00000	0.00000	0.0	0.0	0.0
				2.00000	13.00000	0.00000	0.0	0.0	0.0
				3.00000	13.00000	0.00000	0.0	0.0	0.0
				4.00000	13.00000	0.00000	0.0	0.0	0.0
				5.00000	13.00000	0.00000	0.0	0.0	0.0
				6.00000	13.00000	0.00000	0.0	0.0	0.0
				7.00000	13.00000	0.00000	0.0	0.0	0.0
				8.00000	13.00000	0.00000	0.0	0.0	0.0
				9.00000	13.00000	0.00000	0.0	0.0	0.0
				10.00000	13.00000	0.00000	0.0	0.0	0.0
				11.00000	13.00000	0.00000	0.0	0.0	0.0
				12.00000	13.00000	0.00000	0.0	0.0	0.0
				13.00000	13.00000	0.00000	0.0	0.0	0.0
				14.00000	13.00000	0.00000	0.0	0.0	0.0
				15.00000	13.00000	0.00000	0.0	0.0	0.0
				16.00000	13.00000	0.00000	0.0	0.0	0.0
				17.00000	13.00000	0.00000	0.0089038	0.031329	0.0082550
				18.00000	13.00000	0.00000	0.017271	0.10161	0.018266
				19.00000	13.00000	0.00000	0.012346	0.16240	0.024173
				20.00000	13.00000	0.00000	0.0	0.20180	0.027127
				21.00000	13.00000	0.00000	0.0	0.30000	0.040488
				22.00000	13.00000	0.00000	0.0	0.30000	0.040488
				23.00000	13.00000	0.00000	0.0	0.30000	0.040488
				24.00000	13.00000	0.00000	0.0	0.30000	0.040488
				25.00000	13.00000	0.00000	0.0	0.30000	0.040488
				26.00000	13.00000	0.00000	0.0	0.30000	0.040488
				27.00000	13.00000	0.00000	0.0	0.30000	0.040488
				28.00000	13.00000	0.00000	0.0	0.30000	0.040488
				29.00000	13.00000	0.00000	0.0	0.30000	0.040488
				30.00000	13.00000	0.00000	0.0	0.30000	0.040488
				31.00000	13.00000	0.00000	0.0	0.30000	0.040488
				32.00000	13.00000	0.00000	0.0	0.30000	0.040488
				33.00000	13.00000	0.00000	0.0	0.30000	0.040488
				34.00000	13.00000	0.00000	0.0	0.30000	0.040488
				35.00000	13.00000	0.00000	0.0	0.30000	0.040488
				36.00000	13.00000	0.00000	0.0	0.30000	0.040488
				37.00000	13.00000	0.00000	0.0	0.30000	0.040488
				38.00000	13.00000	0.00000	-0.0066576	0.18533	0.026058
				39.00000	13.00000	0.00000	-0.016154	0.13394	0.021573
				40.00000	13.00000	0.00000	-0.015026	0.066957	0.014031
				41.00000	13.00000	0.00000	0.0	0.0	0.0
				42.00000	13.00000	0.00000	0.0	0.0	0.0
				43.00000	13.00000	0.00000	0.0	0.0	0.0
				44.00000	13.00000	0.00000	0.0	0.0	0.0
				45.00000	13.00000	0.00000	0.0	0.0	0.0
				46.00000	13.00000	0.00000	0.0	0.0	0.0
				47.00000	13.00000	0.00000	0.0	0.0	0.0
				48.00000	13.00000	0.00000	0.0	0.0	0.0
				49.00000	13.00000	0.00000	0.0	0.0	0.0
				50.00000	13.00000	0.00000	0.0	0.0	0.0
				0.00000	14.00000	0.00000	0.0	0.0	0.0
				1.00000	14.00000	0.00000	0.0	0.0	0.0
				2.00000	14.00000	0.00000	0.0	0.0	0.0
				3.00000	14.00000	0.00000	0.0	0.0	0.0
				4.00000	14.00000	0.00000	0.0	0.0	0.0
				5.00000	14.00000	0.00000	0.0	0.0	0.0
				6.00000	14.00000	0.00000	0.0	0.0	0.0
				7.00000	14.00000	0.00000	0.0	0.0	0.0
				8.00000	14.00000	0.00000	0.0	0.0	0.0
				9.00000	14.00000	0.00000	0.0	0.0	0.0
				10.00000	14.00000	0.00000	0.0	0.0	0.0
				11.00000	14.00000	0.00000	0.0	0.0	0.0
				12.00000	14.00000	0.00000	0.0	0.0	0.0
				13.00000	14.00000	0.00000	0.0	0.0	0.0
				14.00000	14.00000	0.00000	0.0	0.0	0.0
				15.00000	14.00000	0.00000	0.0	0.0	0.0
				16.00000	14.00000	0.00000	0.041333	0.078521	0.017694
				17.00000	14.00000	0.00000	0.060424	0.17280	0.030201
				18.00000	14.00000	0.00000	0.056666	0.27551	0.046517
				19.00000	14.00000	0.00000	0.033852	0.37458	0.063485
				20.00000	14.00000	0.00000	0.0	0.45225	0.073292
				21.00000	14.00000	0.00000	0.0	0.67500	0.10939
				22.00000	14.00000	0.00000	0.0	0	



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				32.00000	14.00000	0.00000	0.0	0.67500	0.10939
				33.00000	14.00000	0.00000	0.0	0.67500	0.10939
				34.00000	14.00000	0.00000	0.0	0.67500	0.10939
				35.00000	14.00000	0.00000	0.0	0.67500	0.10939
				36.00000	14.00000	0.00000	0.0	0.67500	0.10939
				37.00000	14.00000	0.00000	0.0	0.67500	0.10939
				38.00000	14.00000	0.00000	-0.017657	0.41736	0.069748
				39.00000	14.00000	0.00000	-0.047236	0.32650	0.055387
				40.00000	14.00000	0.00000	-0.061262	0.22370	0.037883
				41.00000	14.00000	0.00000	-0.053817	0.12410	0.023657
				42.00000	14.00000	0.00000	-0.023044	0.036662	0.010820
				43.00000	14.00000	0.00000	0.0	0.0	0.0
				44.00000	14.00000	0.00000	0.0	0.0	0.0
				45.00000	14.00000	0.00000	0.0	0.0	0.0
				46.00000	14.00000	0.00000	0.0	0.0	0.0
				47.00000	14.00000	0.00000	0.0	0.0	0.0
				48.00000	14.00000	0.00000	0.0	0.0	0.0
				49.00000	14.00000	0.00000	0.0	0.0	0.0
				50.00000	14.00000	0.00000	0.0	0.0	0.0
				0.00000	15.00000	0.00000	0.0	0.0	0.0
				1.00000	15.00000	0.00000	0.0	0.0	0.0
				2.00000	15.00000	0.00000	0.0	0.0	0.0
				3.00000	15.00000	0.00000	0.0	0.0	0.0
				4.00000	15.00000	0.00000	0.0	0.0	0.0
				5.00000	15.00000	0.00000	0.0	0.0	0.0
				6.00000	15.00000	0.00000	0.0	0.0	0.0
				7.00000	15.00000	0.00000	0.0	0.0	0.0
				8.00000	15.00000	0.00000	0.0	0.0	0.0
				9.00000	15.00000	0.00000	0.0	0.0	0.0
				10.00000	15.00000	0.00000	0.0	0.0	0.0
				11.00000	15.00000	0.00000	0.0	0.0	0.0
				12.00000	15.00000	0.00000	0.0	0.0	0.0
				13.00000	15.00000	0.00000	0.0	0.0	0.0
				14.00000	15.00000	0.00000	0.0	0.0	0.0
				15.00000	15.00000	0.00000	0.060337	0.060337	0.018907
				16.00000	15.00000	0.00000	0.11251	0.16195	0.037439
				17.00000	15.00000	0.00000	0.12702	0.28133	0.072496
				18.00000	15.00000	0.00000	0.10968	0.42246	0.12183
				19.00000	15.00000	0.00000	0.063641	0.57170	0.17041
				20.00000	15.00000	0.00000	0.0	0.70350	0.13084
				21.00000	15.00000	0.00000	0.0	1.0500	0.29677
				22.00000	15.00000	0.00000	0.0	1.0500	0.29677
				23.00000	15.00000	0.00000	0.0	1.0500	0.29677
				24.00000	15.00000	0.00000	0.0	1.0500	0.29677
				25.00000	15.00000	0.00000	0.0	1.0500	0.29677
				26.00000	15.00000	0.00000	0.0	1.0500	0.29677
				27.00000	15.00000	0.00000	0.0	1.0500	0.29677
				28.00000	15.00000	0.00000	0.0	1.0500	0.29677
				29.00000	15.00000	0.00000	0.0	1.0500	0.29677
				30.00000	15.00000	0.00000	0.0	1.0500	0.29677
				31.00000	15.00000	0.00000	0.0	1.0500	0.29677
				32.00000	15.00000	0.00000	0.0	1.0500	0.29677
				33.00000	15.00000	0.00000	0.0	1.0500	0.29677
				34.00000	15.00000	0.00000	0.0	1.0500	0.29677
				35.00000	15.00000	0.00000	0.0	1.0500	0.29677
				36.00000	15.00000	0.00000	0.0	1.0500	0.29677
				37.00000	15.00000	0.00000	0.0	1.0500	0.29677
				38.00000	15.00000	0.00000	-0.033015	0.64177	0.18824
				39.00000	15.00000	0.00000	-0.089753	0.49740	0.14744
				40.00000	15.00000	0.00000	-0.12230	0.34975	0.096104
				41.00000	15.00000	0.00000	-0.12369	0.21850	0.052661
				42.00000	15.00000	0.00000	-0.093875	0.11193	0.026645
				43.00000	15.00000	0.00000	-0.037905	0.032319	0.012019
				44.00000	15.00000	0.00000	0.0	0.0	0.0
				45.00000	15.00000	0.00000	0.0	0.0	0.0
				46.00000	15.00000	0.00000	0.0	0.0	0.0
				47.00000	15.00000	0.00000	0.0	0.0	0.0
				48.00000	15.00000	0.00000	0.0	0.0	0.0
				49.00000	15.00000	0.00000	0.0	0.0	0.0
				50.00000	15.00000	0.00000	0.0	0.0	0.0
				0.00000	16.00000	0.00000	0.0	0.0	0.0
				1.00000	16.00000	0.00000	0.0	0.0	0.0
				2.00000	16.00000	0.00000	0.0	0.0	0.0
				3.00000	16.00000	0.00000	0.0	0.0	0.0
				4.00000	16.00000	0.00000	0.0	0.0	0.0
				5.00000	16.00000	0.00000	0.0	0.0	0.0
				6.00000	16.00000	0.00000	0.0	0.0	0.0
				7.00000	16.00000	0.00000	0.0	0.0	0.0
				8.00000	16.00000	0.00000	0.0	0.0	0.0
				9.00000	16.00000	0.00000	0.0	0.0	0.0
				10.00000	16.00000	0.00000	0.0	0.0	0.0
				11.00000	16.00000	0.00000	0.0	0.0	0.0
				12.00000	16.00000	0.00000	0.0	0.0	0.0
				13.00000	16.00000	0.00000	0.0	0.0	0.0
				14.00000	16.00000	0.00000	0.078521	0.041333	0.017694
				15.00000	16.00000	0.00000	0.16195	0.11251	0.037439
				16.00000	16.00000	0.00000	0.20092	0.20092	0.078736
				17.00000	16.00000	0.00000	0.21507	0.34218	0.15750
				18.00000	16.00000	0.00000	0.18418	0.52671	0.25870
				19.00000	16.00000	0.00000	0.10752	0.74319	0.35629
				20.00000	16.00000	0.00000	0.0	0.95475	0.41805
				21.00000	16.00000	0.00000	0.0	1.4250	0.62395
				22.00000	16.00000	0.00000	0.0	1.4250	0.62395
				23.00000	16.00000	0.00000	0.0	1.4250	0.62395
				24.00000	16.00000	0.00000	0.0	1.4250	0.62395
				25.00000	16.00000	0.00000	0.0	1.4250	0.62395
				26.00000	16.00000	0.00000	0.0	1.4250	0.62395
				27.00000	16.00000	0.00000	0.0	1.4250	0.62395
				28.00000	16.00000	0.00000	0.0	1.4250	0.62395
				29.00000	16.00000	0.00000	0.0	1.4250	0.62395
				30.00000	16.00000	0.00000	0.0	1.4250	0.62395
				31.00000	16.00000	0.00000	0.0	1.4250	0.62395
				32.00000	16.00000	0.00000	0.0	1.4250	0.62395
				33.00000	16.00000	0.00000	0.0	1.4250	0.62395
				34.00000	16.00000	0.00000	0.0	1.4250	0.62395
				35.00000	16.00000	0.00000	0.0	1.4250	0.62395
				36.00000	16.00000	0.00000	0.0	1.4250	0.62395
				37.00000	16.00000	0.00000	0.0	1.4250	0.62395
				38.00000	16.00000	0.00000	-0.055944	0.05294	0.39362
				39.00000	16.00000	0.00000	-0.15109	0.63258	0.30993
				40.00000	16.00000	0.00000	-0.20557	0.42925	0.20666
				41.00000	16.00000	0.00000	-0.21322	0.26613	0.11417
				42.00000	16.00000	0.00000	-0.18776	0.15432	0.054848
				43.00000	16.00000	0.00000	-0.12506	0.075002	0.025979
				44.00000	16.00000	0.00000	-0.023601	0.011052	0.0072707
				45.00000	16.00000	0.00000	0.0	0.0	0.0
				46.00000	16.00000	0.00000	0.0	0.0	0.0
				47.00000	16.00000	0.00000	0.0	0.0	0.0
				48.00000	16.00000	0.00000	0.0	0.0	0.0
				49.00000	16.00000	0.00000	0.0	0.0	0.0
				50.00000	16.00000	0.00000	0.0	0.0	0.0
				0.00000	17.00000	0.00000	0.0	0.0	0.0
				1.00000	17.00000	0.00000	0.0	0.0	0.0
				2.00000	17.00000	0.00000	0.0	0.0	0.0
				3.00000	17.00000	0.00000	0.0	0.0	0.0
				4.00000	17.00000	0.00000	0.0	0.0	0.0
				5.00000	17.00000	0.00000	0.0	0.0	0.0
				6.00000	17.00000	0.00000	0.0	0.0	0.0
				7.00000	17.00000	0.00000	0.0	0.0	0.0
				8.00000	17.00000	0.00000	0.0	0.0	0.0
				9.00000	17.00000	0.00000	0.0	0.0	0.0
				10.00000	17.00000	0.00000	0.0	0.0	0.0
				11.00000	17.00000	0.00000	0.0	0.0	0.0
				12.00000	17.00000	0.00000	0.0	0.0	0.0
				13.00000	17.00000	0.00000	0.031329	0.0089038	0.0082550
				14.00000	17.00000	0.00000	0.17280	0.060424	0.030201
				15.00000	17.00000	0.00000	0.28133	0.12702	0.0724



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				20.00000	17.00000	0.00000	0.0	1.2060	0.68785
				21.00000	17.00000	0.00000	0.0	1.8000	1.0266
				22.00000	17.00000	0.00000	0.0	1.8000	1.0266
				23.00000	17.00000	0.00000	0.0	1.8000	1.0266
				24.00000	17.00000	0.00000	0.0	1.8000	1.0266
				25.00000	17.00000	0.00000	0.0	1.8000	1.0266
				26.00000	17.00000	0.00000	0.0	1.8000	1.0266
				27.00000	17.00000	0.00000	0.0	1.8000	1.0266
				28.00000	17.00000	0.00000	0.0	1.8000	1.0266
				29.00000	17.00000	0.00000	0.0	1.8000	1.0266
				30.00000	17.00000	0.00000	0.0	1.8000	1.0266
				31.00000	17.00000	0.00000	0.0	1.8000	1.0266
				32.00000	17.00000	0.00000	0.0	1.8000	1.0266
				33.00000	17.00000	0.00000	0.0	1.8000	1.0266
				34.00000	17.00000	0.00000	0.0	1.8000	1.0266
				35.00000	17.00000	0.00000	0.0	1.8000	1.0266
				36.00000	17.00000	0.00000	0.0	1.8000	1.0266
				37.00000	17.00000	0.00000	0.0	1.8000	1.0266
				38.00000	17.00000	0.00000	-0.093887	1.0380	0.64068
				39.00000	17.00000	0.00000	-0.24605	0.70365	0.50299
				40.00000	17.00000	0.00000	-0.32300	0.43595	0.34328
				41.00000	17.00000	0.00000	-0.34820	0.26985	0.21153
				42.00000	17.00000	0.00000	-0.31889	0.16787	0.10998
				43.00000	17.00000	0.00000	-0.23196	0.091495	0.046337
				44.00000	17.00000	0.00000	-0.18548	0.033090	0.019917
				45.00000	17.00000	0.00000	0.0	0.0	0.0
				46.00000	17.00000	0.00000	0.0	0.0	0.0
				47.00000	17.00000	0.00000	0.0	0.0	0.0
				48.00000	17.00000	0.00000	0.0	0.0	0.0
				49.00000	17.00000	0.00000	0.0	0.0	0.0
				50.00000	17.00000	0.00000	0.0	0.0	0.0
				0.00000	18.00000	0.00000	0.0	0.0	0.0
				1.00000	18.00000	0.00000	0.0	0.0	0.0
				2.00000	18.00000	0.00000	0.0	0.0	0.0
				3.00000	18.00000	0.00000	0.0	0.0	0.0
				4.00000	18.00000	0.00000	0.0	0.0	0.0
				5.00000	18.00000	0.00000	0.0	0.0	0.0
				6.00000	18.00000	0.00000	0.0	0.0	0.0
				7.00000	18.00000	0.00000	0.0	0.0	0.0
				8.00000	18.00000	0.00000	0.0	0.0	0.0
				9.00000	18.00000	0.00000	0.0	0.0	0.0
				10.00000	18.00000	0.00000	0.0	0.0	0.0
				11.00000	18.00000	0.00000	0.0	0.0	0.0
				12.00000	18.00000	0.00000	0.0	0.0	0.0
				13.00000	18.00000	0.00000	0.18151	0.017271	0.018266
				14.00000	18.00000	0.00000	0.27551	0.056665	0.046517
				15.00000	18.00000	0.00000	0.42246	0.10968	0.12183
				16.00000	18.00000	0.00000	0.52671	0.18418	0.25870
				17.00000	18.00000	0.00000	0.55927	0.29440	0.42343
				18.00000	18.00000	0.00000	0.47413	0.47413	0.54962
				19.00000	18.00000	0.00000	0.34182	0.97754	0.76086
				20.00000	18.00000	0.00000	0.0	1.6638	0.95400
				21.00000	18.00000	0.00000	0.0	2.4833	1.4239
				22.00000	18.00000	0.00000	0.0	2.4833	1.4239
				23.00000	18.00000	0.00000	0.0	2.4833	1.4239
				24.00000	18.00000	0.00000	0.0	2.4833	1.4239
				25.00000	18.00000	0.00000	0.0	2.4833	1.4239
				26.00000	18.00000	0.00000	0.0	2.4833	1.4239
				27.00000	18.00000	0.00000	0.0	2.4833	1.4239
				28.00000	18.00000	0.00000	0.0	2.4833	1.4239
				29.00000	18.00000	0.00000	0.0	2.4833	1.4239
				30.00000	18.00000	0.00000	0.0	2.4833	1.4239
				31.00000	18.00000	0.00000	0.0	2.4833	1.4239
				32.00000	18.00000	0.00000	0.0	2.4833	1.4239
				33.00000	18.00000	0.00000	0.0	2.4833	1.4239
				34.00000	18.00000	0.00000	0.0	2.4833	1.4239
				35.00000	18.00000	0.00000	0.0	2.4833	1.4239
				36.00000	18.00000	0.00000	0.0	2.4833	1.4239
				37.00000	18.00000	0.00000	0.0	2.4833	1.4239
				38.00000	18.00000	0.00000	-0.19025	1.3150	0.86442
				39.00000	18.00000	0.00000	-0.43612	0.69385	0.65499
				40.00000	18.00000	0.00000	-0.53315	0.37036	0.49534
				41.00000	18.00000	0.00000	-0.55456	0.23355	0.34131
				42.00000	18.00000	0.00000	-0.48132	0.14355	0.18364
				43.00000	18.00000	0.00000	-0.35313	0.081084	0.07617
				44.00000	18.00000	0.00000	-0.19125	0.035604	0.029457
				45.00000	18.00000	0.00000	-0.0075442	0.0011794	0.0027977
				46.00000	18.00000	0.00000	0.0	0.0	0.0
				47.00000	18.00000	0.00000	0.0	0.0	0.0
				48.00000	18.00000	0.00000	0.0	0.0	0.0
				49.00000	18.00000	0.00000	0.0	0.0	0.0
				50.00000	18.00000	0.00000	0.0	0.0	0.0
				0.00000	19.00000	0.00000	0.0	0.0	0.0
				1.00000	19.00000	0.00000	0.0	0.0	0.0
				2.00000	19.00000	0.00000	0.0	0.0	0.0
				3.00000	19.00000	0.00000	0.0	0.0	0.0
				4.00000	19.00000	0.00000	0.0	0.0	0.0
				5.00000	19.00000	0.00000	0.0	0.0	0.0
				6.00000	19.00000	0.00000	0.0	0.0	0.0
				7.00000	19.00000	0.00000	0.0	0.0	0.0
				8.00000	19.00000	0.00000	0.0	0.0	0.0
				9.00000	19.00000	0.00000	0.0	0.0	0.0
				10.00000	19.00000	0.00000	0.0	0.0	0.0
				11.00000	19.00000	0.00000	0.0	0.0	0.0
				12.00000	19.00000	0.00000	0.0	0.0	0.0
				13.00000	19.00000	0.00000	0.16240	0.012346	0.024173
				14.00000	19.00000	0.00000	0.37458	0.033852	0.063485
				15.00000	19.00000	0.00000	0.57170	0.063641	0.17041
				16.00000	19.00000	0.00000	0.74319	0.10752	0.35629
				17.00000	19.00000	0.00000	0.86509	0.17812	0.57716
				18.00000	19.00000	0.00000	0.97754	0.34182	0.76086
				19.00000	19.00000	0.00000	0.72457	0.72457	0.81566
				20.00000	19.00000	0.00000	0.0	2.1384	1.1737
				21.00000	19.00000	0.00000	0.0	3.1917	1.7518
				22.00000	19.00000	0.00000	0.0	3.1917	1.7518
				23.00000	19.00000	0.00000	0.0	3.1917	1.7518
				24.00000	19.00000	0.00000	0.0	3.1917	1.7518
				25.00000	19.00000	0.00000	0.0	3.1917	1.7518
				26.00000	19.00000	0.00000	0.0	3.1917	1.7518
				27.00000	19.00000	0.00000	0.0	3.1917	1.7518
				28.00000	19.00000	0.00000	0.0	3.1917	1.7518
				29.00000	19.00000	0.00000	0.0	3.1917	1.7518
				30.00000	19.00000	0.00000	0.0	3.1917	1.7518
				31.00000	19.00000	0.00000	0.0	3.1917	1.7518
				32.00000	19.00000	0.00000	0.0	3.1917	1.7518
				33.00000	19.00000	0.00000	0.0	3.1917	1.7518
				34.00000	19.00000	0.00000	0.0	3.1917	1.7518
				35.00000	19.00000	0.00000	0.0	3.1917	1.7518
				36.00000	19.00000	0.00000	0.0	3.1917	1.7518
				37.00000	19.00000	0.00000	0.0	3.1917	1.7518
				38.00000	19.00000	0.00000	-0.45870	1.3118	0.98057
				39.00000	19.00000	0.00000	-0.93264	0.49095	0.81195
				40.00000	19.00000	0.00000	-0.92966	0.24136	0.67973
				41.00000	19.00000	0.00000	-0.81302	0.13819	0.46720
				42.00000	19.00000	0.00000	-0.66165	0.083270	0.25496
				43.00000	19.00000	0.00000	-0.47552	0.047442	0.10647
				44.00000	19.00000	0.00000	-0.26996	0.022294	0.038290
				45.00000	19.00000	0.00000	-0.052489	0.0036965	0.010874
				46.00000	19.00000	0.00000	0.0	0.0	0.0
				47.00000	19.00000	0.00000	0.0	0.0	0.0
				48.00000	19.00000	0.00000	0.0	0.0	0.0
				49.00000	19.00000	0.00000	0.0	0.0	0.0
				50.00000	19.00000	0.00000	0.0	0.0	0.0
				0.00000	20.00000	0.00000	0.0	0.0	0.0
				1.00000	20.00000	0.00000	0.0	0.0	0.0
				2.00000	20.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				8.00000	20.00000	0.00000	0.0	0.0	0.0
				9.00000	20.00000	0.00000	0.0	0.0	0.0
				10.00000	20.00000	0.00000	0.0	0.0	0.0
				11.00000	20.00000	0.00000	0.0	0.0	0.0
				12.00000	20.00000	0.00000	0.0	0.0	0.0
				13.00000	20.00000	0.00000	0.20100	0.0	0.027127
				14.00000	20.00000	0.00000	0.45225	0.0	0.073292
				15.00000	20.00000	0.00000	0.70350	0.0	0.19884
				16.00000	20.00000	0.00000	0.95475	0.0	0.41805
				17.00000	20.00000	0.00000	1.2060	0.0	0.68785
				18.00000	20.00000	0.00000	1.6538	0.0	0.95400
				19.00000	20.00000	0.00000	2.1384	0.0	1.1737
				20.00000	20.00000	0.00000	1.3065	1.3065	1.1625
				21.00000	20.00000	0.00000	0.0	3.9000	1.7351
				22.00000	20.00000	0.00000	0.0	3.9000	1.7351
				23.00000	20.00000	0.00000	0.0	3.9000	1.7351
				24.00000	20.00000	0.00000	0.0	3.9000	1.7351
				25.00000	20.00000	0.00000	0.0	3.9000	1.7351
				26.00000	20.00000	0.00000	0.0	3.9000	1.7351
				27.00000	20.00000	0.00000	0.0	3.9000	1.7351
				28.00000	20.00000	0.00000	0.0	3.9000	1.7351
				29.00000	20.00000	0.00000	0.0	3.9000	1.7351
				30.00000	20.00000	0.00000	0.0	3.9000	1.7351
				31.00000	20.00000	0.00000	0.0	3.9000	1.7351
				32.00000	20.00000	0.00000	0.0	3.9000	1.7351
				33.00000	20.00000	0.00000	0.0	3.9000	1.7351
				34.00000	20.00000	0.00000	0.0	3.9000	1.7351
				35.00000	20.00000	0.00000	0.0	3.9000	1.7351
				36.00000	20.00000	0.00000	0.0	3.9000	1.7351
				37.00000	20.00000	0.00000	0.0	3.9000	1.7351
				38.00000	20.00000	0.00000	-2.3757	0.0	1.2210
				39.00000	20.00000	0.00000	-1.9011	0.0	1.0738
				40.00000	20.00000	0.00000	-1.4265	0.0	0.82690
				41.00000	20.00000	0.00000	-1.0804	0.0	0.55156
				42.00000	20.00000	0.00000	-0.82912	0.0	0.29000
				43.00000	20.00000	0.00000	-0.57787	0.0	0.12390
				44.00000	20.00000	0.00000	-0.32662	0.0	0.043421
				45.00000	20.00000	0.00000	-0.075375	0.0	0.013660
				46.00000	20.00000	0.00000	0.0	0.0	0.0
				47.00000	20.00000	0.00000	0.0	0.0	0.0
				48.00000	20.00000	0.00000	0.0	0.0	0.0
				49.00000	20.00000	0.00000	0.0	0.0	0.0
				50.00000	20.00000	0.00000	0.0	0.0	0.0
				0.00000	21.00000	0.00000	0.0	0.0	0.0
				1.00000	21.00000	0.00000	0.0	0.0	0.0
				2.00000	21.00000	0.00000	0.0	0.0	0.0
				3.00000	21.00000	0.00000	0.0	0.0	0.0
				4.00000	21.00000	0.00000	0.0	0.0	0.0
				5.00000	21.00000	0.00000	0.0	0.0	0.0
				6.00000	21.00000	0.00000	0.0	0.0	0.0
				7.00000	21.00000	0.00000	0.0	0.0	0.0
				8.00000	21.00000	0.00000	0.0	0.0	0.0
				9.00000	21.00000	0.00000	0.0	0.0	0.0
				10.00000	21.00000	0.00000	0.0	0.0	0.0
				11.00000	21.00000	0.00000	0.0	0.0	0.0
				12.00000	21.00000	0.00000	0.0	0.0	0.0
				13.00000	21.00000	0.00000	0.30000	0.0	0.040488
				14.00000	21.00000	0.00000	0.67500	0.0	0.10939
				15.00000	21.00000	0.00000	1.0500	0.0	0.29677
				16.00000	21.00000	0.00000	1.4250	0.0	0.62395
				17.00000	21.00000	0.00000	1.8000	0.0	1.0266
				18.00000	21.00000	0.00000	2.4833	0.0	1.4239
				19.00000	21.00000	0.00000	3.1917	0.0	1.7518
				20.00000	21.00000	0.00000	3.9000	0.0	1.7351
				21.00000	21.00000	0.00000	Point lies within an excavation.		
				22.00000	21.00000	0.00000	Point lies within an excavation.		
				23.00000	21.00000	0.00000	Point lies within an excavation.		
				24.00000	21.00000	0.00000	Point lies within an excavation.		
				25.00000	21.00000	0.00000	Point lies within an excavation.		
				26.00000	21.00000	0.00000	Point lies within an excavation.		
				27.00000	21.00000	0.00000	Point lies within an excavation.		
				28.00000	21.00000	0.00000	Point lies within an excavation.		
				29.00000	21.00000	0.00000	Point lies within an excavation.		
				30.00000	21.00000	0.00000	Point lies within an excavation.		
				31.00000	21.00000	0.00000	Point lies within an excavation.		
				32.00000	21.00000	0.00000	Point lies within an excavation.		
				33.00000	21.00000	0.00000	Point lies within an excavation.		
				34.00000	21.00000	0.00000	Point lies within an excavation.		
				35.00000	21.00000	0.00000	Point lies within an excavation.		
				36.00000	21.00000	0.00000	Point lies within an excavation.		
				37.00000	21.00000	0.00000	Point lies within an excavation.		
				38.00000	21.00000	0.00000	-3.5458	0.0	1.8224
				39.00000	21.00000	0.00000	-2.8375	0.0	1.6026
				40.00000	21.00000	0.00000	-2.1292	0.0	1.2342
				41.00000	21.00000	0.00000	-1.6125	0.0	0.82322
				42.00000	21.00000	0.00000	-1.2375	0.0	0.44490
				43.00000	21.00000	0.00000	-0.86250	0.0	0.18493
				44.00000	21.00000	0.00000	-0.48750	0.0	0.064808
				45.00000	21.00000	0.00000	-0.11250	0.0	0.020388
				46.00000	21.00000	0.00000	0.0	0.0	0.0
				47.00000	21.00000	0.00000	0.0	0.0	0.0
				48.00000	21.00000	0.00000	0.0	0.0	0.0
				49.00000	21.00000	0.00000	0.0	0.0	0.0
				50.00000	21.00000	0.00000	0.0	0.0	0.0
				0.00000	22.00000	0.00000	0.0	0.0	0.0
				1.00000	22.00000	0.00000	0.0	0.0	0.0
				2.00000	22.00000	0.00000	0.0	0.0	0.0
				3.00000	22.00000	0.00000	0.0	0.0	0.0
				4.00000	22.00000	0.00000	0.0	0.0	0.0
				5.00000	22.00000	0.00000	0.0	0.0	0.0
				6.00000	22.00000	0.00000	0.0	0.0	0.0
				7.00000	22.00000	0.00000	0.0	0.0	0.0
				8.00000	22.00000	0.00000	0.0	0.0	0.0
				9.00000	22.00000	0.00000	0.0	0.0	0.0
				10.00000	22.00000	0.00000	0.0	0.0	0.0
				11.00000	22.00000	0.00000	0.0	0.0	0.0
				12.00000	22.00000	0.00000	0.0	0.0	0.0
				13.00000	22.00000	0.00000	0.30000	0.0	0.040488
				14.00000	22.00000	0.00000	0.67500	0.0	0.10939
				15.00000	22.00000	0.00000	1.0500	0.0	0.29677
				16.00000	22.00000	0.00000	1.4250	0.0	0.62395
				17.00000	22.00000	0.00000	1.8000	0.0	1.0266
				18.00000	22.00000	0.00000	2.4833	0.0	1.4239
				19.00000	22.00000	0.00000	3.1917	0.0	1.7518
				20.00000	22.00000	0.00000	3.9000	0.0	1.7351
				21.00000	22.00000	0.00000	Point lies within an excavation.		
				22.00000	22.00000	0.00000	Point lies within an excavation.		
				23.00000	22.00000	0.00000	Point lies within an excavation.		
				24.00000	22.00000	0.00000	Point lies within an excavation.		
				25.00000	22.00000	0.00000	Point lies within an excavation.		
				26.00000	22.00000	0.00000	Point lies within an excavation.		
				27.00000	22.00000	0.00000	Point lies within an excavation.		
				28.00000	22.00000	0.00000	Point lies within an excavation.		
				29.00000	22.00000	0.00000	Point lies within an excavation.		
				30.00000	22.00000	0.00000	Point lies within an excavation.		
				31.00000	22.00000	0.00000	Point lies within an excavation.		
				32.00000	22.00000	0.00000	Point lies within an excavation.		
				33.00000	22.00000	0.00000	Point lies within an excavation.		
				34.00000	22.00000	0.00000	Point lies within an excavation.		
				35.00000	22.00000	0.00000	Point lies within an excavation.		
				36.00000	22.00000	0.00000	Point lies within an excavation.		
				37.00000	22.00000	0.00000	Point lies within an excavation.		
				38.00000	22.00000	0.00000	-3.5458	0.0	1.8224
				39.00000	22.00000	0.00000	-2.8375	0.0	1.6026
				40.00000	22.00000	0.00000	-2.1292	0.0	1.2342
				41.00000	22.00000	0.00000	-1.6125	0.0	0.82322
				42.00000	22.00000	0.00000	-1.2375	0.0	0.44490
				43.00000	22.00000	0.00000	-0.86250	0.0	0.18493
				44.00000	22.00000	0.00000	-0.48750	0.0	0.064808
				45.00000	22.00000	0.00000	-0.11250	0.0	0.020388
				46.00000	22.00000	0.00000	0.0	0.0	0.0



Job No.	Sheet No.	Rev.
\$ L101372		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

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GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				35.00000	25.00000	0.00000	Point lies within an excavation.		
				36.00000	25.00000	0.00000	Point lies within an excavation.		
				37.00000	25.00000	0.00000	Point lies within an excavation.		
				38.00000	25.00000	0.00000	-3.5458	0.0	1.8224
				39.00000	25.00000	0.00000	-2.8375	0.0	1.6026
				40.00000	25.00000	0.00000	-2.1292	0.0	1.2342
				41.00000	25.00000	0.00000	-1.6125	0.0	0.82322
				42.00000	25.00000	0.00000	-1.2375	0.0	0.44490
				43.00000	25.00000	0.00000	-0.86250	0.0	0.18493
				44.00000	25.00000	0.00000	-0.48750	0.0	0.064808
				45.00000	25.00000	0.00000	-0.11250	0.0	0.020388
				46.00000	25.00000	0.00000	0.0	0.0	0.0
				47.00000	25.00000	0.00000	0.0	0.0	0.0
				48.00000	25.00000	0.00000	0.0	0.0	0.0
				49.00000	25.00000	0.00000	0.0	0.0	0.0
				50.00000	25.00000	0.00000	0.0	0.0	0.0
				0.00000	26.00000	0.00000	0.0	0.0	0.0
				1.00000	26.00000	0.00000	0.0	0.0	0.0
				2.00000	26.00000	0.00000	0.0	0.0	0.0
				3.00000	26.00000	0.00000	0.0	0.0	0.0
				4.00000	26.00000	0.00000	0.0	0.0	0.0
				5.00000	26.00000	0.00000	0.0	0.0	0.0
				6.00000	26.00000	0.00000	0.0	0.0	0.0
				7.00000	26.00000	0.00000	0.0	0.0	0.0
				8.00000	26.00000	0.00000	0.0	0.0	0.0
				9.00000	26.00000	0.00000	0.0	0.0	0.0
				10.00000	26.00000	0.00000	0.0	0.0	0.0
				11.00000	26.00000	0.00000	0.0	0.0	0.0
				12.00000	26.00000	0.00000	0.0	0.0	0.0
				13.00000	26.00000	0.00000	0.30000	0.0	0.040488
				14.00000	26.00000	0.00000	0.67500	0.0	0.10939
				15.00000	26.00000	0.00000	1.0500	0.0	0.29677
				16.00000	26.00000	0.00000	1.4250	0.0	0.62395
				17.00000	26.00000	0.00000	1.8000	0.0	1.0266
				18.00000	26.00000	0.00000	2.4833	0.0	1.4239
				19.00000	26.00000	0.00000	3.1917	0.0	1.7518
				20.00000	26.00000	0.00000	3.9000	0.0	1.7351
				21.00000	26.00000	0.00000	Point lies within an excavation.		
				22.00000	26.00000	0.00000	Point lies within an excavation.		
				23.00000	26.00000	0.00000	Point lies within an excavation.		
				24.00000	26.00000	0.00000	Point lies within an excavation.		
				25.00000	26.00000	0.00000	Point lies within an excavation.		
				26.00000	26.00000	0.00000	Point lies within an excavation.		
				27.00000	26.00000	0.00000	Point lies within an excavation.		
				28.00000	26.00000	0.00000	Point lies within an excavation.		
				29.00000	26.00000	0.00000	Point lies within an excavation.		
				30.00000	26.00000	0.00000	Point lies within an excavation.		
				31.00000	26.00000	0.00000	Point lies within an excavation.		
				32.00000	26.00000	0.00000	Point lies within an excavation.		
				33.00000	26.00000	0.00000	Point lies within an excavation.		
				34.00000	26.00000	0.00000	Point lies within an excavation.		
				35.00000	26.00000	0.00000	Point lies within an excavation.		
				36.00000	26.00000	0.00000	Point lies within an excavation.		
				37.00000	26.00000	0.00000	Point lies within an excavation.		
				38.00000	26.00000	0.00000	-3.5458	0.0	1.8224
				39.00000	26.00000	0.00000	-2.8375	0.0	1.6026
				40.00000	26.00000	0.00000	-2.1292	0.0	1.2342
				41.00000	26.00000	0.00000	-1.6125	0.0	0.82322
				42.00000	26.00000	0.00000	-1.2375	0.0	0.44490
				43.00000	26.00000	0.00000	-0.86250	0.0	0.18493
				44.00000	26.00000	0.00000	-0.48750	0.0	0.064808
				45.00000	26.00000	0.00000	-0.11250	0.0	0.020388
				46.00000	26.00000	0.00000	0.0	0.0	0.0
				47.00000	26.00000	0.00000	0.0	0.0	0.0
				48.00000	26.00000	0.00000	0.0	0.0	0.0
				49.00000	26.00000	0.00000	0.0	0.0	0.0
				50.00000	26.00000	0.00000	0.0	0.0	0.0
				0.00000	27.00000	0.00000	0.0	0.0	0.0
				1.00000	27.00000	0.00000	0.0	0.0	0.0
				2.00000	27.00000	0.00000	0.0	0.0	0.0
				3.00000	27.00000	0.00000	0.0	0.0	0.0
				4.00000	27.00000	0.00000	0.0	0.0	0.0
				5.00000	27.00000	0.00000	0.0	0.0	0.0
				6.00000	27.00000	0.00000	0.0	0.0	0.0
				7.00000	27.00000	0.00000	0.0	0.0	0.0
				8.00000	27.00000	0.00000	0.0	0.0	0.0
				9.00000	27.00000	0.00000	0.0	0.0	0.0
				10.00000	27.00000	0.00000	0.0	0.0	0.0
				11.00000	27.00000	0.00000	0.0	0.0	0.0
				12.00000	27.00000	0.00000	0.0	0.0	0.0
				13.00000	27.00000	0.00000	0.30000	0.0	0.040488
				14.00000	27.00000	0.00000	0.67500	0.0	0.10939
				15.00000	27.00000	0.00000	1.0500	0.0	0.29677
				16.00000	27.00000	0.00000	1.4250	0.0	0.62395
				17.00000	27.00000	0.00000	1.8000	0.0	1.0266
				18.00000	27.00000	0.00000	2.4833	0.0	1.4239
				19.00000	27.00000	0.00000	3.1917	0.0	1.7518
				20.00000	27.00000	0.00000	3.9000	0.0	1.7351
				21.00000	27.00000	0.00000	Point lies within an excavation.		
				22.00000	27.00000	0.00000	Point lies within an excavation.		
				23.00000	27.00000	0.00000	Point lies within an excavation.		
				24.00000	27.00000	0.00000	Point lies within an excavation.		
				25.00000	27.00000	0.00000	Point lies within an excavation.		
				26.00000	27.00000	0.00000	Point lies within an excavation.		
				27.00000	27.00000	0.00000	Point lies within an excavation.		
				28.00000	27.00000	0.00000	Point lies within an excavation.		
				29.00000	27.00000	0.00000	Point lies within an excavation.		
				30.00000	27.00000	0.00000	Point lies within an excavation.		
				31.00000	27.00000	0.00000	Point lies within an excavation.		
				32.00000	27.00000	0.00000	Point lies within an excavation.		
				33.00000	27.00000	0.00000	Point lies within an excavation.		
				34.00000	27.00000	0.00000	Point lies within an excavation.		
				35.00000	27.00000	0.00000	Point lies within an excavation.		
				36.00000	27.00000	0.00000	Point lies within an excavation.		
				37.00000	27.00000	0.00000	Point lies within an excavation.		
				38.00000	27.00000	0.00000	-3.5458	0.0	1.8224
				39.00000	27.00000	0.00000	-2.8375	0.0	1.6026
				40.00000	27.00000	0.00000	-2.1292	0.0	1.2342
				41.00000	27.00000	0.00000	-1.6125	0.0	0.82322
				42.00000	27.00000	0.00000	-1.2375	0.0	0.44490
				43.00000	27.00000	0.00000	-0.86250	0.0	0.18493
				44.00000	27.00000	0.00000	-0.48750	0.0	0.064808
				45.00000	27.00000	0.00000	-0.11250	0.0	0.020388
				46.00000	27.00000	0.00000	0.0	0.0	0.0
				47.00000	27.00000	0.00000	0.0	0.0	0.0
				48.00000	27.00000	0.00000	0.0	0.0	0.0
				49.00000	27.00000	0.00000	0.0	0.0	0.0
				50.00000	27.00000	0.00000	0.0	0.0	0.0
				0.00000	28.00000	0.00000	0.0	0.0	0.0
				1.00000	28.00000	0.00000	0.0	0.0	0.0
				2.00000	28.00000	0.00000	0.0	0.0	0.0
				3.00000	28.00000	0.00000	0.0	0.0	0.0
				4.00000	28.00000	0.00000	0.0	0.0	0.0
				5.00000	28.00000	0.00000	0.0	0.0	0.0
				6.00000	28.00000	0.00000	0.0	0.0	0.0
				7.00000	28.00000	0.00000	0.0	0.0	0.0
				8.00000	28.00000	0.00000	0.0	0.0	0.0
				9.00000	28.00000	0.00000	0.0	0.0	0.0
				10.00000	28.00000	0.00000	0.0	0.0	0.0
				11.00000	28.00000	0.00000	0.0	0.0	0.0
				12.00000	28.00000	0.00000	0.0	0.0	0.0
				13.00000	28.00000	0.00000	0.18533	-0.0066576	0.026058
				14.00000	28.00000	0.00000	0.41736	-0.017657	0.069748
				15.00000	28.00000	0.00000	0.64177	-0.033615	0.18824
				16.00000	28.00000	0.00000	0.85294	-0.055944	0.39362
				17.00000	28.00000	0.00000	1.0380	-0.093807	0.64068
				18.00000	28.00000	0.00000	1.3150	-0.19025	0.86442
				19.00000	28.00000	0.00000	1.3118	-0.45870	0.98957
				20.00000	28.00000	0.00000	0.0	-2.3757	1.2210
				21.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				22.00000	28.00000	0.00000	0.0	-3.5458	1.8224



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				23.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				24.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				25.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				26.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				27.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				28.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				29.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				30.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				31.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				32.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				33.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				34.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				35.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				36.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				37.00000	28.00000	0.00000	0.0	-3.5458	1.8224
				38.00000	28.00000	0.00000	-0.84978	-0.84978	0.90355
				39.00000	28.00000	0.00000	-1.3843	-0.28472	0.94543
				40.00000	28.00000	0.00000	-1.1820	-0.13158	0.76189
				41.00000	28.00000	0.00000	-0.95010	-0.072230	0.51699
				42.00000	28.00000	0.00000	-0.74955	-0.043223	0.28155
				43.00000	28.00000	0.00000	-0.53077	-0.024645	0.11755
				44.00000	28.00000	0.00000	-0.30208	-0.011737	0.041545
				45.00000	28.00000	0.00000	-0.067410	-0.0022515	0.012821
				46.00000	28.00000	0.00000	0.0	0.0	0.0
				47.00000	28.00000	0.00000	0.0	0.0	0.0
				48.00000	28.00000	0.00000	0.0	0.0	0.0
				49.00000	28.00000	0.00000	0.0	0.0	0.0
				50.00000	28.00000	0.00000	0.0	0.0	0.0
				0.00000	29.00000	0.00000	0.0	0.0	0.0
				1.00000	29.00000	0.00000	0.0	0.0	0.0
				2.00000	29.00000	0.00000	0.0	0.0	0.0
				3.00000	29.00000	0.00000	0.0	0.0	0.0
				4.00000	29.00000	0.00000	0.0	0.0	0.0
				5.00000	29.00000	0.00000	0.0	0.0	0.0
				6.00000	29.00000	0.00000	0.0	0.0	0.0
				7.00000	29.00000	0.00000	0.0	0.0	0.0
				8.00000	29.00000	0.00000	0.0	0.0	0.0
				9.00000	29.00000	0.00000	0.0	0.0	0.0
				10.00000	29.00000	0.00000	0.0	0.0	0.0
				11.00000	29.00000	0.00000	0.0	0.0	0.0
				12.00000	29.00000	0.00000	0.0	0.0	0.0
				13.00000	29.00000	0.00000	0.13394	-0.016154	0.021573
				14.00000	29.00000	0.00000	0.32650	-0.047236	0.055387
				15.00000	29.00000	0.00000	0.49740	-0.089753	0.14744
				16.00000	29.00000	0.00000	0.63258	-0.15109	0.30993
				17.00000	29.00000	0.00000	0.70365	-0.24605	0.50299
				18.00000	29.00000	0.00000	0.69385	-0.43612	0.65499
				19.00000	29.00000	0.00000	0.49095	-0.93264	0.81195
				20.00000	29.00000	0.00000	0.0	-1.9011	1.0738
				21.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				22.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				23.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				24.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				25.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				26.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				27.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				28.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				29.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				30.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				31.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				32.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				33.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				34.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				35.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				36.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				37.00000	29.00000	0.00000	0.0	-2.8375	1.6026
				38.00000	29.00000	0.00000	-0.28472	-1.3843	0.94543
				39.00000	29.00000	0.00000	-0.59935	-0.59935	0.68939
				40.00000	29.00000	0.00000	-0.69909	-0.31564	0.58663
				41.00000	29.00000	0.00000	-0.67888	-0.19294	0.40700
				42.00000	29.00000	0.00000	-0.57075	-0.11739	0.22121
				43.00000	29.00000	0.00000	-0.41533	-0.066713	0.092100
				44.00000	29.00000	0.00000	-0.23235	-0.030569	0.034097
				45.00000	29.00000	0.00000	-0.032061	-0.0035690	0.0076605
				46.00000	29.00000	0.00000	0.0	0.0	0.0
				47.00000	29.00000	0.00000	0.0	0.0	0.0
				48.00000	29.00000	0.00000	0.0	0.0	0.0
				49.00000	29.00000	0.00000	0.0	0.0	0.0
				50.00000	29.00000	0.00000	0.0	0.0	0.0
				0.00000	30.00000	0.00000	0.0	0.0	0.0
				1.00000	30.00000	0.00000	0.0	0.0	0.0
				2.00000	30.00000	0.00000	0.0	0.0	0.0
				3.00000	30.00000	0.00000	0.0	0.0	0.0
				4.00000	30.00000	0.00000	0.0	0.0	0.0
				5.00000	30.00000	0.00000	0.0	0.0	0.0
				6.00000	30.00000	0.00000	0.0	0.0	0.0
				7.00000	30.00000	0.00000	0.0	0.0	0.0
				8.00000	30.00000	0.00000	0.0	0.0	0.0
				9.00000	30.00000	0.00000	0.0	0.0	0.0
				10.00000	30.00000	0.00000	0.0	0.0	0.0
				11.00000	30.00000	0.00000	0.0	0.0	0.0
				12.00000	30.00000	0.00000	0.0	0.0	0.0
				13.00000	30.00000	0.00000	0.066957	-0.015026	0.014031
				14.00000	30.00000	0.00000	0.22370	-0.061262	0.037883
				15.00000	30.00000	0.00000	0.31675	-0.12230	0.096104
				16.00000	30.00000	0.00000	0.42925	-0.20557	0.20666
				17.00000	30.00000	0.00000	0.43596	-0.32300	0.34328
				18.00000	30.00000	0.00000	0.37036	-0.53315	0.49534
				19.00000	30.00000	0.00000	0.24136	-0.92966	0.67973
				20.00000	30.00000	0.00000	0.0	-1.4265	0.82690
				21.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				22.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				23.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				24.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				25.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				26.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				27.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				28.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				29.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				30.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				31.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				32.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				33.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				34.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				35.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				36.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				37.00000	30.00000	0.00000	0.0	-2.1292	1.2342
				38.00000	30.00000	0.00000	-0.13158	-1.1820	0.76189
				39.00000	30.00000	0.00000	-0.31564	-0.69909	0.58663
				40.00000	30.00000	0.00000	-0.39979	-0.39979	0.49435
				41.00000	30.00000	0.00000	-0.44389	-0.25904	0.27477
				42.00000	30.00000	0.00000	-0.39666	-0.16054	0.14556
				43.00000	30.00000	0.00000	-0.29137	-0.089550	0.060435
				44.00000	30.00000	0.00000	-0.14845	-0.036632	0.024724
				45.00000	30.00000	0.00000	0.0	0.0	0.0
				46.00000	30.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				11.00000	31.00000	0.00000	0.0	0.0	0.0
				12.00000	31.00000	0.00000	0.0	0.0	0.0
				13.00000	31.00000	0.00000	0.0	0.0	0.0
				14.00000	31.00000	0.00000	0.12410	-0.053817	0.023657
				15.00000	31.00000	0.00000	0.21850	-0.12360	0.052661
				16.00000	31.00000	0.00000	0.26613	-0.21322	0.11417
				17.00000	31.00000	0.00000	0.26985	-0.34820	0.21153
				18.00000	31.00000	0.00000	0.23355	-0.55456	0.34131
				19.00000	31.00000	0.00000	0.13819	-0.81302	0.46720
				20.00000	31.00000	0.00000	0.0	-1.0004	0.55156
				21.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				22.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				23.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				24.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				25.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				26.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				27.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				28.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				29.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				30.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				31.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				32.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				33.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				34.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				35.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				36.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				37.00000	31.00000	0.00000	0.0	-1.6125	0.82322
				38.00000	31.00000	0.00000	-0.072230	-0.95010	0.51699
				39.00000	31.00000	0.00000	-0.19294	-0.67888	0.40790
				40.00000	31.00000	0.00000	-0.25904	-0.44389	0.27477
				41.00000	31.00000	0.00000	-0.26721	-0.26721	0.15503
				42.00000	31.00000	0.00000	-0.24914	-0.16563	0.079248
				43.00000	31.00000	0.00000	-0.17624	-0.086644	0.034802
				44.00000	31.00000	0.00000	-0.063556	-0.024621	0.014517
				45.00000	31.00000	0.00000	0.0	0.0	0.0
				46.00000	31.00000	0.00000	0.0	0.0	0.0
				47.00000	31.00000	0.00000	0.0	0.0	0.0
				48.00000	31.00000	0.00000	0.0	0.0	0.0
				49.00000	31.00000	0.00000	0.0	0.0	0.0
				50.00000	31.00000	0.00000	0.0	0.0	0.0
				0.00000	32.00000	0.00000	0.0	0.0	0.0
				1.00000	32.00000	0.00000	0.0	0.0	0.0
				2.00000	32.00000	0.00000	0.0	0.0	0.0
				3.00000	32.00000	0.00000	0.0	0.0	0.0
				4.00000	32.00000	0.00000	0.0	0.0	0.0
				5.00000	32.00000	0.00000	0.0	-1.2375	0.0
				6.00000	32.00000	0.00000	0.0	0.0	0.0
				7.00000	32.00000	0.00000	0.0	0.0	0.0
				8.00000	32.00000	0.00000	0.0	0.0	0.0
				9.00000	32.00000	0.00000	0.0	0.0	0.0
				10.00000	32.00000	0.00000	0.0	0.0	0.0
				11.00000	32.00000	0.00000	0.0	0.0	0.0
				12.00000	32.00000	0.00000	0.0	0.0	0.0
				13.00000	32.00000	0.00000	0.0	0.0	0.0
				14.00000	32.00000	0.00000	0.936602	-0.023044	0.010820
				15.00000	32.00000	0.00000	0.11193	-0.093875	0.026645
				16.00000	32.00000	0.00000	0.15432	-0.18776	0.054848
				17.00000	32.00000	0.00000	0.16787	-0.31889	0.10998
				18.00000	32.00000	0.00000	0.14355	-0.48132	0.18364
				19.00000	32.00000	0.00000	0.083270	-0.56165	0.25495
				20.00000	32.00000	0.00000	0.0	-0.82912	0.29808
				21.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				22.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				23.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				24.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				25.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				26.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				27.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				28.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				29.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				30.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				31.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				32.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				33.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				34.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				35.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				36.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				37.00000	32.00000	0.00000	0.0	-1.2375	0.44490
				38.00000	32.00000	0.00000	-0.043223	-0.74955	0.28155
				39.00000	32.00000	0.00000	-0.11739	-0.57075	0.22121
				40.00000	32.00000	0.00000	-0.16054	-0.39666	0.14556
				41.00000	32.00000	0.00000	-0.16563	-0.24914	0.079248
				42.00000	32.00000	0.00000	-0.13463	-0.13463	0.037192
				43.00000	32.00000	0.00000	-0.078895	-0.056778	0.019039
				44.00000	32.00000	0.00000	0.0	0.0	0.0
				45.00000	32.00000	0.00000	0.0	0.0	0.0
				46.00000	32.00000	0.00000	0.0	0.0	0.0
				47.00000	32.00000	0.00000	0.0	0.0	0.0
				48.00000	32.00000	0.00000	0.0	0.0	0.0
				49.00000	32.00000	0.00000	0.0	0.0	0.0
				50.00000	32.00000	0.00000	0.0	0.0	0.0
				0.00000	33.00000	0.00000	0.0	0.0	0.0
				1.00000	33.00000	0.00000	0.0	0.0	0.0
				2.00000	33.00000	0.00000	0.0	0.0	0.0
				3.00000	33.00000	0.00000	0.0	0.0	0.0
				4.00000	33.00000	0.00000	0.0	0.0	0.0
				5.00000	33.00000	0.00000	0.0	0.0	0.0
				6.00000	33.00000	0.00000	0.0	0.0	0.0
				7.00000	33.00000	0.00000	0.0	0.0	0.0
				8.00000	33.00000	0.00000	0.0	0.0	0.0
				9.00000	33.00000	0.00000	0.0	0.0	0.0
				10.00000	33.00000	0.00000	0.0	0.0	0.0
				11.00000	33.00000	0.00000	0.0	0.0	0.0
				12.00000	33.00000	0.00000	0.0	0.0	0.0
				13.00000	33.00000	0.00000	0.0	0.0	0.0
				14.00000	33.00000	0.00000	0.0	0.0	0.0
				15.00000	33.00000	0.00000	0.032319	-0.037905	0.012019
				16.00000	33.00000	0.00000	0.075002	-0.12506	0.025979
				17.00000	33.00000	0.00000	0.091495	-0.23196	0.046337
				18.00000	33.00000	0.00000	0.081084	-0.35313	0.076177
				19.00000	33.00000	0.00000	0.047442	-0.47552	0.10647
				20.00000	33.00000	0.00000	0.0	-0.57787	0.12390
				21.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				22.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				23.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				24.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				25.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				26.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				27.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				28.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				29.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				30.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				31.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				32.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				33.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				34.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				35.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				36.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				37.00000	33.00000	0.00000	0.0	-0.86250	0.18493
				38.00000	33.00000	0.00000	-0.024645	-0.53077	0.11755
				39.00000	33.00000	0.00000	-0.066713	-0.41533	0.092100
				40.00000	33.00000	0.00000	-0.089550	-0.29137	0.060435
				41.00000	33.00000	0.00000	-0.086644	-0.17624	0.034802
				42.00000	33.00000	0.00000	-0.056778	-0.078895	0.019039
				43.00000	33.00000	0.00000	-0.0020461	-0.0020461	0.0016786



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by AT

Date 24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				50.00000	33.00000	0.00000	0.0	0.0	0.0
				0.00000	34.00000	0.00000	0.0	0.0	0.0
				1.00000	34.00000	0.00000	0.0	0.0	0.0
				2.00000	34.00000	0.00000	0.0	0.0	0.0
				3.00000	34.00000	0.00000	0.0	0.0	0.0
				4.00000	34.00000	0.00000	0.0	0.0	0.0
				5.00000	34.00000	0.00000	0.0	0.0	0.0
				6.00000	34.00000	0.00000	0.0	0.0	0.0
				7.00000	34.00000	0.00000	0.0	0.0	0.0
				8.00000	34.00000	0.00000	0.0	0.0	0.0
				9.00000	34.00000	0.00000	0.0	0.0	0.0
				10.00000	34.00000	0.00000	0.0	0.0	0.0
				11.00000	34.00000	0.00000	0.0	0.0	0.0
				12.00000	34.00000	0.00000	0.0	0.0	0.0
				13.00000	34.00000	0.00000	0.0	0.0	0.0
				14.00000	34.00000	0.00000	0.0	0.0	0.0
				15.00000	34.00000	0.00000	0.0	0.0	0.0
				16.00000	34.00000	0.00000	0.011052	-0.023601	0.0072707
				17.00000	34.00000	0.00000	0.033090	-0.10548	0.019917
				18.00000	34.00000	0.00000	0.035604	-0.19125	0.029457
				19.00000	34.00000	0.00000	0.022294	-0.26995	0.038290
				20.00000	34.00000	0.00000	0.0	-0.32662	0.043421
				21.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				22.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				23.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				24.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				25.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				26.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				27.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				28.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				29.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				30.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				31.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				32.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				33.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				34.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				35.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				36.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				37.00000	34.00000	0.00000	0.0	-0.48750	0.064808
				38.00000	34.00000	0.00000	-0.011737	-0.30200	0.014545
				39.00000	34.00000	0.00000	-0.030569	-0.23235	0.034097
				40.00000	34.00000	0.00000	-0.036632	-0.14845	0.024724
				41.00000	34.00000	0.00000	-0.024621	-0.063556	0.014517
				42.00000	34.00000	0.00000	0.0	0.0	0.0
				43.00000	34.00000	0.00000	0.0	0.0	0.0
				44.00000	34.00000	0.00000	0.0	0.0	0.0
				45.00000	34.00000	0.00000	0.0	0.0	0.0
				46.00000	34.00000	0.00000	0.0	0.0	0.0
				47.00000	34.00000	0.00000	0.0	0.0	0.0
				48.00000	34.00000	0.00000	0.0	0.0	0.0
				49.00000	34.00000	0.00000	0.0	0.0	0.0
				50.00000	34.00000	0.00000	0.0	0.0	0.0
				0.00000	35.00000	0.00000	0.0	0.0	0.0
				1.00000	35.00000	0.00000	0.0	0.0	0.0
				2.00000	35.00000	0.00000	0.0	0.0	0.0
				3.00000	35.00000	0.00000	0.0	0.0	0.0
				4.00000	35.00000	0.00000	0.0	0.0	0.0
				5.00000	35.00000	0.00000	0.0	0.0	0.0
				6.00000	35.00000	0.00000	0.0	0.0	0.0
				7.00000	35.00000	0.00000	0.0	0.0	0.0
				8.00000	35.00000	0.00000	0.0	0.0	0.0
				9.00000	35.00000	0.00000	0.0	0.0	0.0
				10.00000	35.00000	0.00000	0.0	0.0	0.0
				11.00000	35.00000	0.00000	0.0	0.0	0.0
				12.00000	35.00000	0.00000	0.0	0.0	0.0
				13.00000	35.00000	0.00000	0.0	0.0	0.0
				14.00000	35.00000	0.00000	0.0	0.0	0.0
				15.00000	35.00000	0.00000	0.0	0.0	0.0
				16.00000	35.00000	0.00000	0.0	0.0	0.0
				17.00000	35.00000	0.00000	0.0	0.0	0.0
				18.00000	35.00000	0.00000	0.0011794	-0.0075442	0.0027977
				19.00000	35.00000	0.00000	0.0036965	-0.052489	0.010874
				20.00000	35.00000	0.00000	0.0	-0.075375	0.013660
				21.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				22.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				23.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				24.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				25.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				26.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				27.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				28.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				29.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				30.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				31.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				32.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				33.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				34.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				35.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				36.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				37.00000	35.00000	0.00000	0.0	-0.11250	0.020388
				38.00000	35.00000	0.00000	-0.0022515	-0.067410	0.012821
				39.00000	35.00000	0.00000	-0.0035690	-0.032061	0.0076605
				40.00000	35.00000	0.00000	0.0	0.0	0.0
				41.00000	35.00000	0.00000	0.0	0.0	0.0
				42.00000	35.00000	0.00000	0.0	0.0	0.0
				43.00000	35.00000	0.00000	0.0	0.0	0.0
				44.00000	35.00000	0.00000	0.0	0.0	0.0
				45.00000	35.00000	0.00000	0.0	0.0	0.0
				46.00000	35.00000	0.00000	0.0	0.0	0.0
				47.00000	35.00000	0.00000	0.0	0.0	0.0
				48.00000	35.00000	0.00000	0.0	0.0	0.0
				49.00000	35.00000	0.00000	0.0	0.0	0.0
				50.00000	35.00000	0.00000	0.0	0.0	0.0
				0.00000	36.00000	0.00000	0.0	0.0	0.0
				1.00000	36.00000	0.00000	0.0	0.0	0.0
				2.00000	36.00000	0.00000	0.0	0.0	0.0
				3.00000	36.00000	0.00000	0.0	0.0	0.0
				4.00000	36.00000	0.00000	0.0	0.0	0.0
				5.00000	36.00000	0.00000	0.0	0.0	0.0
				6.00000	36.00000	0.00000	0.0	0.0	0.0
				7.00000	36.00000	0.00000	0.0	0.0	0.0
				8.00000	36.00000	0.00000	0.0	0.0	0.0
				9.00000	36.00000	0.00000	0.0	0.0	0.0
				10.00000	36.00000	0.00000	0.0	0.0	0.0
				11.00000	36.00000	0.00000	0.0	0.0	0.0
				12.00000	36.00000	0.00000	0.0	0.0	0.0
				13.00000	36.00000	0.00000	0.0	0.0	0.0
				14.00000	36.00000	0.00000	0.0	0.0	0.0
				15.00000	36.00000	0.00000	0.0	0.0	0.0
				16.00000	36.00000	0.00000	0.0	0.0	0.0
				17.00000	36.00000	0.00000	0.0	0.0	0.0
				18.00000	36.00000	0.00000	0.0	0.0	0.0
				19.00000	36.00000	0.00000	0.0	0.0	0.0
				20.00000	36.00000	0.00000	0.0	0.0	0.0
				21.00000	36.00000	0.00000	0.0	0.0	0.0
				22.00000	36.00000	0.00000	0.0	0.0	0.0
				23.00000	36.00000	0.00000	0.0	0.0	0.0
				24.00000	36.00000	0.00000	0.0	0.0	0.0
				25.00000	36.00000	0.00000	0.0	0.0	0.0
				26.00000	36.00000	0.00000	0.0	0.0	0.0
				27.00000	36.00000	0.00000	0.0	0.0	0.0
				28.00000	36.00000	0.00000	0.0	0.0	0.0
				29.00000	36.00000	0.00000	0.0	0.0	0.0
				30.00000	36.00000	0.00000	0.0	0.0	0.0
				31.00000	36.00000	0.00000	0.0	0.0	0.0
				32.00000	36.00000	0.00000	0.0	0.0	0.0
				33.00000	36.00000	0.00000	0.0	0.0	0.0
				34.00000	36.00000	0.00000	0.0	0.0	0.0
				35.00000	36.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				38.00000	36.00000	0.00000	0.0	0.0	0.0
				39.00000	36.00000	0.00000	0.0	0.0	0.0
				40.00000	36.00000	0.00000	0.0	0.0	0.0
				41.00000	36.00000	0.00000	0.0	0.0	0.0
				42.00000	36.00000	0.00000	0.0	0.0	0.0
				43.00000	36.00000	0.00000	0.0	0.0	0.0
				44.00000	36.00000	0.00000	0.0	0.0	0.0
				45.00000	36.00000	0.00000	0.0	0.0	0.0
				46.00000	36.00000	0.00000	0.0	0.0	0.0
				47.00000	36.00000	0.00000	0.0	0.0	0.0
				48.00000	36.00000	0.00000	0.0	0.0	0.0
				49.00000	36.00000	0.00000	0.0	0.0	0.0
				50.00000	36.00000	0.00000	0.0	0.0	0.0
				0.00000	37.00000	0.00000	0.0	0.0	0.0
				1.00000	37.00000	0.00000	0.0	0.0	0.0
				2.00000	37.00000	0.00000	0.0	0.0	0.0
				3.00000	37.00000	0.00000	0.0	0.0	0.0
				4.00000	37.00000	0.00000	0.0	0.0	0.0
				5.00000	37.00000	0.00000	0.0	0.0	0.0
				6.00000	37.00000	0.00000	0.0	0.0	0.0
				7.00000	37.00000	0.00000	0.0	0.0	0.0
				8.00000	37.00000	0.00000	0.0	0.0	0.0
				9.00000	37.00000	0.00000	0.0	0.0	0.0
				10.00000	37.00000	0.00000	0.0	0.0	0.0
				11.00000	37.00000	0.00000	0.0	0.0	0.0
				12.00000	37.00000	0.00000	0.0	0.0	0.0
				13.00000	37.00000	0.00000	0.0	0.0	0.0
				14.00000	37.00000	0.00000	0.0	0.0	0.0
				15.00000	37.00000	0.00000	0.0	0.0	0.0
				16.00000	37.00000	0.00000	0.0	0.0	0.0
				17.00000	37.00000	0.00000	0.0	0.0	0.0
				18.00000	37.00000	0.00000	0.0	0.0	0.0
				19.00000	37.00000	0.00000	0.0	0.0	0.0
				20.00000	37.00000	0.00000	0.0	0.0	0.0
				21.00000	37.00000	0.00000	0.0	0.0	0.0
				22.00000	37.00000	0.00000	0.0	0.0	0.0
				23.00000	37.00000	0.00000	0.0	0.0	0.0
				24.00000	37.00000	0.00000	0.0	0.0	0.0
				25.00000	37.00000	0.00000	0.0	0.0	0.0
				26.00000	37.00000	0.00000	0.0	0.0	0.0
				27.00000	37.00000	0.00000	0.0	0.0	0.0
				28.00000	37.00000	0.00000	0.0	0.0	0.0
				29.00000	37.00000	0.00000	0.0	0.0	0.0
				30.00000	37.00000	0.00000	0.0	0.0	0.0
				31.00000	37.00000	0.00000	0.0	0.0	0.0
				32.00000	37.00000	0.00000	0.0	0.0	0.0
				33.00000	37.00000	0.00000	0.0	0.0	0.0
				34.00000	37.00000	0.00000	0.0	0.0	0.0
				35.00000	37.00000	0.00000	0.0	0.0	0.0
				36.00000	37.00000	0.00000	0.0	0.0	0.0
				37.00000	37.00000	0.00000	0.0	0.0	0.0
				38.00000	37.00000	0.00000	0.0	0.0	0.0
				39.00000	37.00000	0.00000	0.0	0.0	0.0
				40.00000	37.00000	0.00000	0.0	0.0	0.0
				41.00000	37.00000	0.00000	0.0	0.0	0.0
				42.00000	37.00000	0.00000	0.0	0.0	0.0
				43.00000	37.00000	0.00000	0.0	0.0	0.0
				44.00000	37.00000	0.00000	0.0	0.0	0.0
				45.00000	37.00000	0.00000	0.0	0.0	0.0
				46.00000	37.00000	0.00000	0.0	0.0	0.0
				47.00000	37.00000	0.00000	0.0	0.0	0.0
				48.00000	37.00000	0.00000	0.0	0.0	0.0
				49.00000	37.00000	0.00000	0.0	0.0	0.0
				50.00000	37.00000	0.00000	0.0	0.0	0.0
				0.00000	38.00000	0.00000	0.0	0.0	0.0
				1.00000	38.00000	0.00000	0.0	0.0	0.0
				2.00000	38.00000	0.00000	0.0	0.0	0.0
				3.00000	38.00000	0.00000	0.0	0.0	0.0
				4.00000	38.00000	0.00000	0.0	0.0	0.0
				5.00000	38.00000	0.00000	0.0	0.0	0.0
				6.00000	38.00000	0.00000	0.0	0.0	0.0
				7.00000	38.00000	0.00000	0.0	0.0	0.0
				8.00000	38.00000	0.00000	0.0	0.0	0.0
				9.00000	38.00000	0.00000	0.0	0.0	0.0
				10.00000	38.00000	0.00000	0.0	0.0	0.0
				11.00000	38.00000	0.00000	0.0	0.0	0.0
				12.00000	38.00000	0.00000	0.0	0.0	0.0
				13.00000	38.00000	0.00000	0.0	0.0	0.0
				14.00000	38.00000	0.00000	0.0	0.0	0.0
				15.00000	38.00000	0.00000	0.0	0.0	0.0
				16.00000	38.00000	0.00000	0.0	0.0	0.0
				17.00000	38.00000	0.00000	0.0	0.0	0.0
				18.00000	38.00000	0.00000	0.0	0.0	0.0
				19.00000	38.00000	0.00000	0.0	0.0	0.0
				20.00000	38.00000	0.00000	0.0	0.0	0.0
				21.00000	38.00000	0.00000	0.0	0.0	0.0
				22.00000	38.00000	0.00000	0.0	0.0	0.0
				23.00000	38.00000	0.00000	0.0	0.0	0.0
				24.00000	38.00000	0.00000	0.0	0.0	0.0
				25.00000	38.00000	0.00000	0.0	0.0	0.0
				26.00000	38.00000	0.00000	0.0	0.0	0.0
				27.00000	38.00000	0.00000	0.0	0.0	0.0
				28.00000	38.00000	0.00000	0.0	0.0	0.0
				29.00000	38.00000	0.00000	0.0	0.0	0.0
				30.00000	38.00000	0.00000	0.0	0.0	0.0
				31.00000	38.00000	0.00000	0.0	0.0	0.0
				32.00000	38.00000	0.00000	0.0	0.0	0.0
				33.00000	38.00000	0.00000	0.0	0.0	0.0
				34.00000	38.00000	0.00000	0.0	0.0	0.0
				35.00000	38.00000	0.00000	0.0	0.0	0.0
				36.00000	38.00000	0.00000	0.0	0.0	0.0
				37.00000	38.00000	0.00000	0.0	0.0	0.0
				38.00000	38.00000	0.00000	0.0	0.0	0.0
				39.00000	38.00000	0.00000	0.0	0.0	0.0
				40.00000	38.00000	0.00000	0.0	0.0	0.0
				41.00000	38.00000	0.00000	0.0	0.0	0.0
				42.00000	38.00000	0.00000	0.0	0.0	0.0
				43.00000	38.00000	0.00000	0.0	0.0	0.0
				44.00000	38.00000	0.00000	0.0	0.0	0.0
				45.00000	38.00000	0.00000	0.0	0.0	0.0
				46.00000	38.00000	0.00000	0.0	0.0	0.0
				47.00000	38.00000	0.00000	0.0	0.0	0.0
				48.00000	38.00000	0.00000	0.0	0.0	0.0
				49.00000	38.00000	0.00000	0.0	0.0	0.0
				50.00000	38.00000	0.00000	0.0	0.0	0.0
				0.00000	39.00000	0.00000	0.0	0.0	0.0
				1.00000	39.00000	0.00000	0.0	0.0	0.0
				2.00000	39.00000	0.00000	0.0	0.0	0.0
				3.00000	39.00000	0.00000	0.0	0.0	0.0
				4.00000	39.00000	0.00000	0.0	0.0	0.0
				5.00000	39.00000	0.00000	0.0	0.0	0.0
				6.00000	39.00000	0.00000	0.0	0.0	0.0
				7.00000	39.00000	0.00000	0.0	0.0	0.0
				8.00000	39.00000	0.00000	0.0	0.0	0.0
				9.00000	39.00000	0.00000	0.0	0.0	0.0
				10.00000	39.00000	0.00000	0.0	0.0	0.0
				11.00000	39.00000	0.00000	0.0	0.0	0.0
				12.00000	39.00000	0.00000	0.0	0.0	0.0
				13.00000	39.00000	0.00000	0.0	0.0	0.0
				14.00000	39.00000	0.00000	0.0	0.0	0.0
				15.00000	39.00000	0.00000	0.0	0.0	0.0
				16.00000	39.00000	0.00000	0.0	0.0	0.0
				17.00000	39.00000	0.00000	0.0	0.0	0.0
				18.00000	39.00000	0.00000	0.0	0.0	0.0
				19.00000	39.00000	0.00000	0.0	0.0	0.0
				20.00000	39.00000	0.00000	0.0	0.0	0.0
				21.00000	39.00000	0.00000	0.0	0.0	0.0
				22.00000	39.00000	0.00000	0.0	0.0	0.0
				23.00000	39.00000	0.00000	0.0	0.0	0.0
				24.00000	39.00000	0.00000	0.0	0.0	0.0
				25.00000	39.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				26.00000	39.00000	0.00000	0.0	0.0	0.0
				27.00000	39.00000	0.00000	0.0	0.0	0.0
				28.00000	39.00000	0.00000	0.0	0.0	0.0
				29.00000	39.00000	0.00000	0.0	0.0	0.0
				30.00000	39.00000	0.00000	0.0	0.0	0.0
				31.00000	39.00000	0.00000	0.0	0.0	0.0
				32.00000	39.00000	0.00000	0.0	0.0	0.0
				33.00000	39.00000	0.00000	0.0	0.0	0.0
				34.00000	39.00000	0.00000	0.0	0.0	0.0
				35.00000	39.00000	0.00000	0.0	0.0	0.0
				36.00000	39.00000	0.00000	0.0	0.0	0.0
				37.00000	39.00000	0.00000	0.0	0.0	0.0
				38.00000	39.00000	0.00000	0.0	0.0	0.0
				39.00000	39.00000	0.00000	0.0	0.0	0.0
				40.00000	39.00000	0.00000	0.0	0.0	0.0
				41.00000	39.00000	0.00000	0.0	0.0	0.0
				42.00000	39.00000	0.00000	0.0	0.0	0.0
				43.00000	39.00000	0.00000	0.0	0.0	0.0
				44.00000	39.00000	0.00000	0.0	0.0	0.0
				45.00000	39.00000	0.00000	0.0	0.0	0.0
				46.00000	39.00000	0.00000	0.0	0.0	0.0
				47.00000	39.00000	0.00000	0.0	0.0	0.0
				48.00000	39.00000	0.00000	0.0	0.0	0.0
				49.00000	39.00000	0.00000	0.0	0.0	0.0
				50.00000	39.00000	0.00000	0.0	0.0	0.0
				0.00000	40.00000	0.00000	0.0	0.0	0.0
				1.00000	40.00000	0.00000	0.0	0.0	0.0
				2.00000	40.00000	0.00000	0.0	0.0	0.0
				3.00000	40.00000	0.00000	0.0	0.0	0.0
				4.00000	40.00000	0.00000	0.0	0.0	0.0
				5.00000	40.00000	0.00000	0.0	0.0	0.0
				6.00000	40.00000	0.00000	0.0	0.0	0.0
				7.00000	40.00000	0.00000	0.0	0.0	0.0
				8.00000	40.00000	0.00000	0.0	0.0	0.0
				9.00000	40.00000	0.00000	0.0	0.0	0.0
				10.00000	40.00000	0.00000	0.0	0.0	0.0
				11.00000	40.00000	0.00000	0.0	0.0	0.0
				12.00000	40.00000	0.00000	0.0	0.0	0.0
				13.00000	40.00000	0.00000	0.0	0.0	0.0
				14.00000	40.00000	0.00000	0.0	0.0	0.0
				15.00000	40.00000	0.00000	0.0	0.0	0.0
				16.00000	40.00000	0.00000	0.0	0.0	0.0
				17.00000	40.00000	0.00000	0.0	0.0	0.0
				18.00000	40.00000	0.00000	0.0	0.0	0.0
				19.00000	40.00000	0.00000	0.0	0.0	0.0
				20.00000	40.00000	0.00000	0.0	0.0	0.0
				21.00000	40.00000	0.00000	0.0	0.0	0.0
				22.00000	40.00000	0.00000	0.0	0.0	0.0
				23.00000	40.00000	0.00000	0.0	0.0	0.0
				24.00000	40.00000	0.00000	0.0	0.0	0.0
				25.00000	40.00000	0.00000	0.0	0.0	0.0
				26.00000	40.00000	0.00000	0.0	0.0	0.0
				27.00000	40.00000	0.00000	0.0	0.0	0.0
				28.00000	40.00000	0.00000	0.0	0.0	0.0
				29.00000	40.00000	0.00000	0.0	0.0	0.0
				30.00000	40.00000	0.00000	0.0	0.0	0.0
				31.00000	40.00000	0.00000	0.0	0.0	0.0
				32.00000	40.00000	0.00000	0.0	0.0	0.0
				33.00000	40.00000	0.00000	0.0	0.0	0.0
				34.00000	40.00000	0.00000	0.0	0.0	0.0
				35.00000	40.00000	0.00000	0.0	0.0	0.0
				36.00000	40.00000	0.00000	0.0	0.0	0.0
				37.00000	40.00000	0.00000	0.0	0.0	0.0
				38.00000	40.00000	0.00000	0.0	0.0	0.0
				39.00000	40.00000	0.00000	0.0	0.0	0.0
				40.00000	40.00000	0.00000	0.0	0.0	0.0
				41.00000	40.00000	0.00000	0.0	0.0	0.0
				42.00000	40.00000	0.00000	0.0	0.0	0.0
				43.00000	40.00000	0.00000	0.0	0.0	0.0
				44.00000	40.00000	0.00000	0.0	0.0	0.0
				45.00000	40.00000	0.00000	0.0	0.0	0.0
				46.00000	40.00000	0.00000	0.0	0.0	0.0
				47.00000	40.00000	0.00000	0.0	0.0	0.0
				48.00000	40.00000	0.00000	0.0	0.0	0.0
				49.00000	40.00000	0.00000	0.0	0.0	0.0
				50.00000	40.00000	0.00000	0.0	0.0	0.0
				0.00000	41.00000	0.00000	0.0	0.0	0.0
				1.00000	41.00000	0.00000	0.0	0.0	0.0
				2.00000	41.00000	0.00000	0.0	0.0	0.0
				3.00000	41.00000	0.00000	0.0	0.0	0.0
				4.00000	41.00000	0.00000	0.0	0.0	0.0
				5.00000	41.00000	0.00000	0.0	0.0	0.0
				6.00000	41.00000	0.00000	0.0	0.0	0.0
				7.00000	41.00000	0.00000	0.0	0.0	0.0
				8.00000	41.00000	0.00000	0.0	0.0	0.0
				9.00000	41.00000	0.00000	0.0	0.0	0.0
				10.00000	41.00000	0.00000	0.0	0.0	0.0
				11.00000	41.00000	0.00000	0.0	0.0	0.0
				12.00000	41.00000	0.00000	0.0	0.0	0.0
				13.00000	41.00000	0.00000	0.0	0.0	0.0
				14.00000	41.00000	0.00000	0.0	0.0	0.0
				15.00000	41.00000	0.00000	0.0	0.0	0.0
				16.00000	41.00000	0.00000	0.0	0.0	0.0
				17.00000	41.00000	0.00000	0.0	0.0	0.0
				18.00000	41.00000	0.00000	0.0	0.0	0.0
				19.00000	41.00000	0.00000	0.0	0.0	0.0
				20.00000	41.00000	0.00000	0.0	0.0	0.0
				21.00000	41.00000	0.00000	0.0	0.0	0.0
				22.00000	41.00000	0.00000	0.0	0.0	0.0
				23.00000	41.00000	0.00000	0.0	0.0	0.0
				24.00000	41.00000	0.00000	0.0	0.0	0.0
				25.00000	41.00000	0.00000	0.0	0.0	0.0
				26.00000	41.00000	0.00000	0.0	0.0	0.0
				27.00000	41.00000	0.00000	0.0	0.0	0.0
				28.00000	41.00000	0.00000	0.0	0.0	0.0
				29.00000	41.00000	0.00000	0.0	0.0	0.0
				30.00000	41.00000	0.00000	0.0	0.0	0.0
				31.00000	41.00000	0.00000	0.0	0.0	0.0
				32.00000	41.00000	0.00000	0.0	0.0	0.0
				33.00000	41.00000	0.00000	0.0	0.0	0.0
				34.00000	41.00000	0.00000	0.0	0.0	0.0
				35.00000	41.00000	0.00000	0.0	0.0	0.0
				36.00000	41.00000	0.00000	0.0	0.0	0.0
				37.00000	41.00000	0.00000	0.0	0.0	0.0
				38.00000	41.00000	0.00000	0.0	0.0	0.0
				39.00000	41.00000	0.00000	0.0	0.0	0.0
				40.00000	41.00000	0.00000	0.0	0.0	0.0
				41.00000	41.00000	0.00000	0.0	0.0	0.0
				42.00000	41.00000	0.00000	0.0	0.0	0.0
				43.00000	41.00000	0.00000	0.0	0.0	0.0
				44.00000	41.00000	0.00000	0.0	0.0	0.0
				45.00000	41.00000	0.00000	0.0	0.0	0.0
				46.00000	41.00000	0.00000	0.0	0.0	0.0
				47.00000	41.00000	0.00000	0.0	0.0	0.0
				48.00000	41.00000	0.00000	0.0	0.0	0.0
				49.00000	41.00000	0.00000	0.0	0.0	0.0
				50.00000	41.00000	0.00000	0.0	0.0	0.0
				0.00000	42.00000	0.00000	0.0	0.0	0.0
				1.00000	42.00000	0.00000	0.0	0.0	0.0
				2.00000	42.00000	0.00000	0.0	0.0	0.0
				3.00000	42.00000	0.00000	0.0	0.0	0.0
				4.00000	42.00000	0.00000	0.0	0.0	0.0
				5.00000	42.00000	0.00000	0.0	0.0	0.0
				6.00000	42.00000	0.00000	0.0	0.0	0.0
				7.00000	42.00000	0.00000	0.0	0.0	0.0
				8.00000	42.00000	0.00000	0.0	0.0	0.0
				9.00000	42.00000	0.00000	0.0	0.0	0.0
				10.00000	42.00000	0.00000	0.0	0.0	0.0
				11.00000	42.00000	0.00000	0.0	0.0	0.0
				12.00000	42.00000	0.00000	0.0	0.0	0.0
				13.00000	42.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				14.00000	42.00000	0.00000	0.0	0.0	0.0
				15.00000	42.00000	0.00000	0.0	0.0	0.0
				16.00000	42.00000	0.00000	0.0	0.0	0.0
				17.00000	42.00000	0.00000	0.0	0.0	0.0
				18.00000	42.00000	0.00000	0.0	0.0	0.0
				19.00000	42.00000	0.00000	0.0	0.0	0.0
				20.00000	42.00000	0.00000	0.0	0.0	0.0
				21.00000	42.00000	0.00000	0.0	0.0	0.0
				22.00000	42.00000	0.00000	0.0	0.0	0.0
				23.00000	42.00000	0.00000	0.0	0.0	0.0
				24.00000	42.00000	0.00000	0.0	0.0	0.0
				25.00000	42.00000	0.00000	0.0	0.0	0.0
				26.00000	42.00000	0.00000	0.0	0.0	0.0
				27.00000	42.00000	0.00000	0.0	0.0	0.0
				28.00000	42.00000	0.00000	0.0	0.0	0.0
				29.00000	42.00000	0.00000	0.0	0.0	0.0
				30.00000	42.00000	0.00000	0.0	0.0	0.0
				31.00000	42.00000	0.00000	0.0	0.0	0.0
				32.00000	42.00000	0.00000	0.0	0.0	0.0
				33.00000	42.00000	0.00000	0.0	0.0	0.0
				34.00000	42.00000	0.00000	0.0	0.0	0.0
				35.00000	42.00000	0.00000	0.0	0.0	0.0
				36.00000	42.00000	0.00000	0.0	0.0	0.0
				37.00000	42.00000	0.00000	0.0	0.0	0.0
				38.00000	42.00000	0.00000	0.0	0.0	0.0
				39.00000	42.00000	0.00000	0.0	0.0	0.0
				40.00000	42.00000	0.00000	0.0	0.0	0.0
				41.00000	42.00000	0.00000	0.0	0.0	0.0
				42.00000	42.00000	0.00000	0.0	0.0	0.0
				43.00000	42.00000	0.00000	0.0	0.0	0.0
				44.00000	42.00000	0.00000	0.0	0.0	0.0
				45.00000	42.00000	0.00000	0.0	0.0	0.0
				46.00000	42.00000	0.00000	0.0	0.0	0.0
				47.00000	42.00000	0.00000	0.0	0.0	0.0
				48.00000	42.00000	0.00000	0.0	0.0	0.0
				49.00000	42.00000	0.00000	0.0	0.0	0.0
				50.00000	42.00000	0.00000	0.0	0.0	0.0
				0.00000	43.00000	0.00000	0.0	0.0	0.0
				1.00000	43.00000	0.00000	0.0	0.0	0.0
				2.00000	43.00000	0.00000	0.0	0.0	0.0
				3.00000	43.00000	0.00000	0.0	0.0	0.0
				4.00000	43.00000	0.00000	0.0	0.0	0.0
				5.00000	43.00000	0.00000	0.0	0.0	0.0
				6.00000	43.00000	0.00000	0.0	0.0	0.0
				7.00000	43.00000	0.00000	0.0	0.0	0.0
				8.00000	43.00000	0.00000	0.0	0.0	0.0
				9.00000	43.00000	0.00000	0.0	0.0	0.0
				10.00000	43.00000	0.00000	0.0	0.0	0.0
				11.00000	43.00000	0.00000	0.0	0.0	0.0
				12.00000	43.00000	0.00000	0.0	0.0	0.0
				13.00000	43.00000	0.00000	0.0	0.0	0.0
				14.00000	43.00000	0.00000	0.0	0.0	0.0
				15.00000	43.00000	0.00000	0.0	0.0	0.0
				16.00000	43.00000	0.00000	0.0	0.0	0.0
				17.00000	43.00000	0.00000	0.0	0.0	0.0
				18.00000	43.00000	0.00000	0.0	0.0	0.0
				19.00000	43.00000	0.00000	0.0	0.0	0.0
				20.00000	43.00000	0.00000	0.0	0.0	0.0
				21.00000	43.00000	0.00000	0.0	0.0	0.0
				22.00000	43.00000	0.00000	0.0	0.0	0.0
				23.00000	43.00000	0.00000	0.0	0.0	0.0
				24.00000	43.00000	0.00000	0.0	0.0	0.0
				25.00000	43.00000	0.00000	0.0	0.0	0.0
				26.00000	43.00000	0.00000	0.0	0.0	0.0
				27.00000	43.00000	0.00000	0.0	0.0	0.0
				28.00000	43.00000	0.00000	0.0	0.0	0.0
				29.00000	43.00000	0.00000	0.0	0.0	0.0
				30.00000	43.00000	0.00000	0.0	0.0	0.0
				31.00000	43.00000	0.00000	0.0	0.0	0.0
				32.00000	43.00000	0.00000	0.0	0.0	0.0
				33.00000	43.00000	0.00000	0.0	0.0	0.0
				34.00000	43.00000	0.00000	0.0	0.0	0.0
				35.00000	43.00000	0.00000	0.0	0.0	0.0
				36.00000	43.00000	0.00000	0.0	0.0	0.0
				37.00000	43.00000	0.00000	0.0	0.0	0.0
				38.00000	43.00000	0.00000	0.0	0.0	0.0
				39.00000	43.00000	0.00000	0.0	0.0	0.0
				40.00000	43.00000	0.00000	0.0	0.0	0.0
				41.00000	43.00000	0.00000	0.0	0.0	0.0
				42.00000	43.00000	0.00000	0.0	0.0	0.0
				43.00000	43.00000	0.00000	0.0	0.0	0.0
				44.00000	43.00000	0.00000	0.0	0.0	0.0
				45.00000	43.00000	0.00000	0.0	0.0	0.0
				46.00000	43.00000	0.00000	0.0	0.0	0.0
				47.00000	43.00000	0.00000	0.0	0.0	0.0
				48.00000	43.00000	0.00000	0.0	0.0	0.0
				49.00000	43.00000	0.00000	0.0	0.0	0.0
				50.00000	43.00000	0.00000	0.0	0.0	0.0
				0.00000	44.00000	0.00000	0.0	0.0	0.0
				1.00000	44.00000	0.00000	0.0	0.0	0.0
				2.00000	44.00000	0.00000	0.0	0.0	0.0
				3.00000	44.00000	0.00000	0.0	0.0	0.0
				4.00000	44.00000	0.00000	0.0	0.0	0.0
				5.00000	44.00000	0.00000	0.0	0.0	0.0
				6.00000	44.00000	0.00000	0.0	0.0	0.0
				7.00000	44.00000	0.00000	0.0	0.0	0.0
				8.00000	44.00000	0.00000	0.0	0.0	0.0
				9.00000	44.00000	0.00000	0.0	0.0	0.0
				10.00000	44.00000	0.00000	0.0	0.0	0.0
				11.00000	44.00000	0.00000	0.0	0.0	0.0
				12.00000	44.00000	0.00000	0.0	0.0	0.0
				13.00000	44.00000	0.00000	0.0	0.0	0.0
				14.00000	44.00000	0.00000	0.0	0.0	0.0
				15.00000	44.00000	0.00000	0.0	0.0	0.0
				16.00000	44.00000	0.00000	0.0	0.0	0.0
				17.00000	44.00000	0.00000	0.0	0.0	0.0
				18.00000	44.00000	0.00000	0.0	0.0	0.0
				19.00000	44.00000	0.00000	0.0	0.0	0.0
				20.00000	44.00000	0.00000	0.0	0.0	0.0
				21.00000	44.00000	0.00000	0.0	0.0	0.0
				22.00000	44.00000	0.00000	0.0	0.0	0.0
				23.00000	44.00000	0.00000	0.0	0.0	0.0
				24.00000	44.00000	0.00000	0.0	0.0	0.0
				25.00000	44.00000	0.00000	0.0	0.0	0.0
				26.00000	44.00000	0.00000	0.0	0.0	0.0
				27.00000	44.00000	0.00000	0.0	0.0	0.0
				28.00000	44.00000	0.00000	0.0	0.0	0.0
				29.00000	44.00000	0.00000	0.0	0.0	0.0
				30.00000	44.00000	0.00000	0.0	0.0	0.0
				31.00000	44.00000	0.00000	0.0	0.0	0.0
				32.00000	44.00000	0.00000	0.0	0.0	0.0
				33.00000	44.00000	0.00000	0.0	0.0	0.0
				34.00000	44.00000	0.00000	0.0	0.0	0.0
				35.00000	44.00000	0.00000	0.0	0.0	0.0
				36.00000	44.00000	0.00000	0.0	0.0	0.0
				37.00000	44.00000	0.00000	0.0	0.0	0.0
				38.00000	44.00000	0.00000	0.0	0.0	0.0
				39.00000	44.00000	0.00000	0.0	0.0	0.0
				40.00000	44.00000	0.00000	0.0	0.0	0.0
				41.00000	44.00000	0.00000	0.0	0.0	0.0
				42.00000	44.00000	0.00000	0.0	0.0	0.0
				43.00000	44.00000	0.00000	0.0	0.0	0.0
				44.00000	44.00000	0.00000	0.0	0.0	0.0
				45.00000	44.00000	0.00000	0.0	0.0	0.0
				46.00000	44.00000	0.00000	0.0	0.0	0.0
				47.00000	44.00000	0.00000	0.0	0.0	0.0
				48.00000	44.00000	0.00000	0.0	0.0	0.0
				49.00000	44.00000	0.00000	0.0	0.0	0.0
				50.00000	44.00000	0.00000	0.0	0.0	0.0
				0.00000	45.00000	0.00000	0.0	0.0	0.0
				1.00000	45.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				2.00000	45.00000	0.00000	0.0	0.0	0.0
				3.00000	45.00000	0.00000	0.0	0.0	0.0
				4.00000	45.00000	0.00000	0.0	0.0	0.0
				5.00000	45.00000	0.00000	0.0	0.0	0.0
				6.00000	45.00000	0.00000	0.0	0.0	0.0
				7.00000	45.00000	0.00000	0.0	0.0	0.0
				8.00000	45.00000	0.00000	0.0	0.0	0.0
				9.00000	45.00000	0.00000	0.0	0.0	0.0
				10.00000	45.00000	0.00000	0.0	0.0	0.0
				11.00000	45.00000	0.00000	0.0	0.0	0.0
				12.00000	45.00000	0.00000	0.0	0.0	0.0
				13.00000	45.00000	0.00000	0.0	0.0	0.0
				14.00000	45.00000	0.00000	0.0	0.0	0.0
				15.00000	45.00000	0.00000	0.0	0.0	0.0
				16.00000	45.00000	0.00000	0.0	0.0	0.0
				17.00000	45.00000	0.00000	0.0	0.0	0.0
				18.00000	45.00000	0.00000	0.0	0.0	0.0
				19.00000	45.00000	0.00000	0.0	0.0	0.0
				20.00000	45.00000	0.00000	0.0	0.0	0.0
				21.00000	45.00000	0.00000	0.0	0.0	0.0
				22.00000	45.00000	0.00000	0.0	0.0	0.0
				23.00000	45.00000	0.00000	0.0	0.0	0.0
				24.00000	45.00000	0.00000	0.0	0.0	0.0
				25.00000	45.00000	0.00000	0.0	0.0	0.0
				26.00000	45.00000	0.00000	0.0	0.0	0.0
				27.00000	45.00000	0.00000	0.0	0.0	0.0
				28.00000	45.00000	0.00000	0.0	0.0	0.0
				29.00000	45.00000	0.00000	0.0	0.0	0.0
				30.00000	45.00000	0.00000	0.0	0.0	0.0
				31.00000	45.00000	0.00000	0.0	0.0	0.0
				32.00000	45.00000	0.00000	0.0	0.0	0.0
				33.00000	45.00000	0.00000	0.0	0.0	0.0
				34.00000	45.00000	0.00000	0.0	0.0	0.0
				35.00000	45.00000	0.00000	0.0	0.0	0.0
				36.00000	45.00000	0.00000	0.0	0.0	0.0
				37.00000	45.00000	0.00000	0.0	0.0	0.0
				38.00000	45.00000	0.00000	0.0	0.0	0.0
				39.00000	45.00000	0.00000	0.0	0.0	0.0
				40.00000	45.00000	0.00000	0.0	0.0	0.0
				41.00000	45.00000	0.00000	0.0	0.0	0.0
				42.00000	45.00000	0.00000	0.0	0.0	0.0
				43.00000	45.00000	0.00000	0.0	0.0	0.0
				44.00000	45.00000	0.00000	0.0	0.0	0.0
				45.00000	45.00000	0.00000	0.0	0.0	0.0
				46.00000	45.00000	0.00000	0.0	0.0	0.0
				47.00000	45.00000	0.00000	0.0	0.0	0.0
				48.00000	45.00000	0.00000	0.0	0.0	0.0
				49.00000	45.00000	0.00000	0.0	0.0	0.0
				50.00000	45.00000	0.00000	0.0	0.0	0.0
				0.00000	46.00000	0.00000	0.0	0.0	0.0
				1.00000	46.00000	0.00000	0.0	0.0	0.0
				2.00000	46.00000	0.00000	0.0	0.0	0.0
				3.00000	46.00000	0.00000	0.0	0.0	0.0
				4.00000	46.00000	0.00000	0.0	0.0	0.0
				5.00000	46.00000	0.00000	0.0	0.0	0.0
				6.00000	46.00000	0.00000	0.0	0.0	0.0
				7.00000	46.00000	0.00000	0.0	0.0	0.0
				8.00000	46.00000	0.00000	0.0	0.0	0.0
				9.00000	46.00000	0.00000	0.0	0.0	0.0
				10.00000	46.00000	0.00000	0.0	0.0	0.0
				11.00000	46.00000	0.00000	0.0	0.0	0.0
				12.00000	46.00000	0.00000	0.0	0.0	0.0
				13.00000	46.00000	0.00000	0.0	0.0	0.0
				14.00000	46.00000	0.00000	0.0	0.0	0.0
				15.00000	46.00000	0.00000	0.0	0.0	0.0
				16.00000	46.00000	0.00000	0.0	0.0	0.0
				17.00000	46.00000	0.00000	0.0	0.0	0.0
				18.00000	46.00000	0.00000	0.0	0.0	0.0
				19.00000	46.00000	0.00000	0.0	0.0	0.0
				20.00000	46.00000	0.00000	0.0	0.0	0.0
				21.00000	46.00000	0.00000	0.0	0.0	0.0
				22.00000	46.00000	0.00000	0.0	0.0	0.0
				23.00000	46.00000	0.00000	0.0	0.0	0.0
				24.00000	46.00000	0.00000	0.0	0.0	0.0
				25.00000	46.00000	0.00000	0.0	0.0	0.0
				26.00000	46.00000	0.00000	0.0	0.0	0.0
				27.00000	46.00000	0.00000	0.0	0.0	0.0
				28.00000	46.00000	0.00000	0.0	0.0	0.0
				29.00000	46.00000	0.00000	0.0	0.0	0.0
				30.00000	46.00000	0.00000	0.0	0.0	0.0
				31.00000	46.00000	0.00000	0.0	0.0	0.0
				32.00000	46.00000	0.00000	0.0	0.0	0.0
				33.00000	46.00000	0.00000	0.0	0.0	0.0
				34.00000	46.00000	0.00000	0.0	0.0	0.0
				35.00000	46.00000	0.00000	0.0	0.0	0.0
				36.00000	46.00000	0.00000	0.0	0.0	0.0
				37.00000	46.00000	0.00000	0.0	0.0	0.0
				38.00000	46.00000	0.00000	0.0	0.0	0.0
				39.00000	46.00000	0.00000	0.0	0.0	0.0
				40.00000	46.00000	0.00000	0.0	0.0	0.0
				41.00000	46.00000	0.00000	0.0	0.0	0.0
				42.00000	46.00000	0.00000	0.0	0.0	0.0
				43.00000	46.00000	0.00000	0.0	0.0	0.0
				44.00000	46.00000	0.00000	0.0	0.0	0.0
				45.00000	46.00000	0.00000	0.0	0.0	0.0
				46.00000	46.00000	0.00000	0.0	0.0	0.0
				47.00000	46.00000	0.00000	0.0	0.0	0.0
				48.00000	46.00000	0.00000	0.0	0.0	0.0
				49.00000	46.00000	0.00000	0.0	0.0	0.0
				50.00000	46.00000	0.00000	0.0	0.0	0.0
				0.00000	47.00000	0.00000	0.0	0.0	0.0
				1.00000	47.00000	0.00000	0.0	0.0	0.0
				2.00000	47.00000	0.00000	0.0	0.0	0.0
				3.00000	47.00000	0.00000	0.0	0.0	0.0
				4.00000	47.00000	0.00000	0.0	0.0	0.0
				5.00000	47.00000	0.00000	0.0	0.0	0.0
				6.00000	47.00000	0.00000	0.0	0.0	0.0
				7.00000	47.00000	0.00000	0.0	0.0	0.0
				8.00000	47.00000	0.00000	0.0	0.0	0.0
				9.00000	47.00000	0.00000	0.0	0.0	0.0
				10.00000	47.00000	0.00000	0.0	0.0	0.0
				11.00000	47.00000	0.00000	0.0	0.0	0.0
				12.00000	47.00000	0.00000	0.0	0.0	0.0
				13.00000	47.00000	0.00000	0.0	0.0	0.0
				14.00000	47.00000	0.00000	0.0	0.0	0.0
				15.00000	47.00000	0.00000	0.0	0.0	0.0
				16.00000	47.00000	0.00000	0.0	0.0	0.0
				17.00000	47.00000	0.00000	0.0	0.0	0.0
				18.00000	47.00000	0.00000	0.0	0.0	0.0
				19.00000	47.00000	0.00000	0.0	0.0	0.0
				20.00000	47.00000	0.00000	0.0	0.0	0.0
				21.00000	47.00000	0.00000	0.0	0.0	0.0
				22.00000	47.00000	0.00000	0.0	0.0	0.0
				23.00000	47.00000	0.00000	0.0	0.0	0.0
				24.00000	47.00000	0.00000	0.0	0.0	0.0
				25.00000	47.00000	0.00000	0.0	0.0	0.0
				26.00000	47.00000	0.00000	0.0	0.0	0.0
				27.00000	47.00000	0.00000	0.0	0.0	0.0
				28.00000	47.00000	0.00000	0.0	0.0	0.0
				29.00000	47.00000	0.00000	0.0	0.0	0.0
				30.00000	47.00000	0.00000	0.0	0.0	0.0
				31.00000	47.00000	0.00000	0.0	0.0	0.0
				32.00000	47.00000	0.00000	0.0	0.0	0.0
				33.00000	47.00000	0.00000	0.0	0.0	0.0
				34.00000	47.00000	0.00000	0.0	0.0	0.0
				35.00000	47.00000	0.00000	0.0	0.0	0.0
				36.00000	47.00000	0.00000	0.0	0.0	0.0
				37.00000	47.00000	0.00000	0.0	0.0	0.0
				38.00000	47.00000	0.00000	0.0	0.0	0.0
				39.00000	47.00000	0.00000	0.0	0.0	0.0
				40.00000	47.00000	0.00000	0.0	0.0	0.0



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Ground Movement Assessment
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				41.00000	47.00000	0.00000	0.0	0.0	0.0
				42.00000	47.00000	0.00000	0.0	0.0	0.0
				43.00000	47.00000	0.00000	0.0	0.0	0.0
				44.00000	47.00000	0.00000	0.0	0.0	0.0
				45.00000	47.00000	0.00000	0.0	0.0	0.0
				46.00000	47.00000	0.00000	0.0	0.0	0.0
				47.00000	47.00000	0.00000	0.0	0.0	0.0
				48.00000	47.00000	0.00000	0.0	0.0	0.0
				49.00000	47.00000	0.00000	0.0	0.0	0.0
				50.00000	47.00000	0.00000	0.0	0.0	0.0
				0.00000	48.00000	0.00000	0.0	0.0	0.0
				1.00000	48.00000	0.00000	0.0	0.0	0.0
				2.00000	48.00000	0.00000	0.0	0.0	0.0
				3.00000	48.00000	0.00000	0.0	0.0	0.0
				4.00000	48.00000	0.00000	0.0	0.0	0.0
				5.00000	48.00000	0.00000	0.0	0.0	0.0
				6.00000	48.00000	0.00000	0.0	0.0	0.0
				7.00000	48.00000	0.00000	0.0	0.0	0.0
				8.00000	48.00000	0.00000	0.0	0.0	0.0
				9.00000	48.00000	0.00000	0.0	0.0	0.0
				10.00000	48.00000	0.00000	0.0	0.0	0.0
				11.00000	48.00000	0.00000	0.0	0.0	0.0
				12.00000	48.00000	0.00000	0.0	0.0	0.0
				13.00000	48.00000	0.00000	0.0	0.0	0.0
				14.00000	48.00000	0.00000	0.0	0.0	0.0
				15.00000	48.00000	0.00000	0.0	0.0	0.0
				16.00000	48.00000	0.00000	0.0	0.0	0.0
				17.00000	48.00000	0.00000	0.0	0.0	0.0
				18.00000	48.00000	0.00000	0.0	0.0	0.0
				19.00000	48.00000	0.00000	0.0	0.0	0.0
				20.00000	48.00000	0.00000	0.0	0.0	0.0
				21.00000	48.00000	0.00000	0.0	0.0	0.0
				22.00000	48.00000	0.00000	0.0	0.0	0.0
				23.00000	48.00000	0.00000	0.0	0.0	0.0
				24.00000	48.00000	0.00000	0.0	0.0	0.0
				25.00000	48.00000	0.00000	0.0	0.0	0.0
				26.00000	48.00000	0.00000	0.0	0.0	0.0
				27.00000	48.00000	0.00000	0.0	0.0	0.0
				28.00000	48.00000	0.00000	0.0	0.0	0.0
				29.00000	48.00000	0.00000	0.0	0.0	0.0
				30.00000	48.00000	0.00000	0.0	0.0	0.0
				31.00000	48.00000	0.00000	0.0	0.0	0.0
				32.00000	48.00000	0.00000	0.0	0.0	0.0
				33.00000	48.00000	0.00000	0.0	0.0	0.0
				34.00000	48.00000	0.00000	0.0	0.0	0.0
				35.00000	48.00000	0.00000	0.0	0.0	0.0
				36.00000	48.00000	0.00000	0.0	0.0	0.0
				37.00000	48.00000	0.00000	0.0	0.0	0.0
				38.00000	48.00000	0.00000	0.0	0.0	0.0
				39.00000	48.00000	0.00000	0.0	0.0	0.0
				40.00000	48.00000	0.00000	0.0	0.0	0.0
				41.00000	48.00000	0.00000	0.0	0.0	0.0
				42.00000	48.00000	0.00000	0.0	0.0	0.0
				43.00000	48.00000	0.00000	0.0	0.0	0.0
				44.00000	48.00000	0.00000	0.0	0.0	0.0
				45.00000	48.00000	0.00000	0.0	0.0	0.0
				46.00000	48.00000	0.00000	0.0	0.0	0.0
				47.00000	48.00000	0.00000	0.0	0.0	0.0
				48.00000	48.00000	0.00000	0.0	0.0	0.0
				49.00000	48.00000	0.00000	0.0	0.0	0.0
				50.00000	48.00000	0.00000	0.0	0.0	0.0
				0.00000	49.00000	0.00000	0.0	0.0	0.0
				1.00000	49.00000	0.00000	0.0	0.0	0.0
				2.00000	49.00000	0.00000	0.0	0.0	0.0
				3.00000	49.00000	0.00000	0.0	0.0	0.0
				4.00000	49.00000	0.00000	0.0	0.0	0.0
				5.00000	49.00000	0.00000	0.0	0.0	0.0
				6.00000	49.00000	0.00000	0.0	0.0	0.0
				7.00000	49.00000	0.00000	0.0	0.0	0.0
				8.00000	49.00000	0.00000	0.0	0.0	0.0
				9.00000	49.00000	0.00000	0.0	0.0	0.0
				10.00000	49.00000	0.00000	0.0	0.0	0.0
				11.00000	49.00000	0.00000	0.0	0.0	0.0
				12.00000	49.00000	0.00000	0.0	0.0	0.0
				13.00000	49.00000	0.00000	0.0	0.0	0.0
				14.00000	49.00000	0.00000	0.0	0.0	0.0
				15.00000	49.00000	0.00000	0.0	0.0	0.0
				16.00000	49.00000	0.00000	0.0	0.0	0.0
				17.00000	49.00000	0.00000	0.0	0.0	0.0
				18.00000	49.00000	0.00000	0.0	0.0	0.0
				19.00000	49.00000	0.00000	0.0	0.0	0.0
				20.00000	49.00000	0.00000	0.0	0.0	0.0
				21.00000	49.00000	0.00000	0.0	0.0	0.0
				22.00000	49.00000	0.00000	0.0	0.0	0.0
				23.00000	49.00000	0.00000	0.0	0.0	0.0
				24.00000	49.00000	0.00000	0.0	0.0	0.0
				25.00000	49.00000	0.00000	0.0	0.0	0.0
				26.00000	49.00000	0.00000	0.0	0.0	0.0
				27.00000	49.00000	0.00000	0.0	0.0	0.0
				28.00000	49.00000	0.00000	0.0	0.0	0.0
				29.00000	49.00000	0.00000	0.0	0.0	0.0
				30.00000	49.00000	0.00000	0.0	0.0	0.0
				31.00000	49.00000	0.00000	0.0	0.0	0.0
				32.00000	49.00000	0.00000	0.0	0.0	0.0
				33.00000	49.00000	0.00000	0.0	0.0	0.0
				34.00000	49.00000	0.00000	0.0	0.0	0.0
				35.00000	49.00000	0.00000	0.0	0.0	0.0
				36.00000	49.00000	0.00000	0.0	0.0	0.0
				37.00000	49.00000	0.00000	0.0	0.0	0.0
				38.00000	49.00000	0.00000	0.0	0.0	0.0
				39.00000	49.00000	0.00000	0.0	0.0	0.0
				40.00000	49.00000	0.00000	0.0	0.0	0.0
				41.00000	49.00000	0.00000	0.0	0.0	0.0
				42.00000	49.00000	0.00000	0.0	0.0	0.0
				43.00000	49.00000	0.00000	0.0	0.0	0.0
				44.00000	49.00000	0.00000	0.0	0.0	0.0
				45.00000	49.00000	0.00000	0.0	0.0	0.0
				46.00000	49.00000	0.00000	0.0	0.0	0.0
				47.00000	49.00000	0.00000	0.0	0.0	0.0
				48.00000	49.00000	0.00000	0.0	0.0	0.0
				49.00000	49.00000	0.00000	0.0	0.0	0.0
				50.00000	49.00000	0.00000	0.0	0.0	0.0
				0.00000	50.00000	0.00000	0.0	0.0	0.0
				1.00000	50.00000	0.00000	0.0	0.0	0.0
				2.00000	50.00000	0.00000	0.0	0.0	0.0
				3.00000	50.00000	0.00000	0.0	0.0	0.0
				4.00000	50.00000	0.00000	0.0	0.0	0.0
				5.00000	50.00000	0.00000	0.0	0.0	0.0
				6.00000	50.00000	0.00000	0.0	0.0	0.0
				7.00000	50.00000	0.00000	0.0	0.0	0.0
				8.00000	50.00000	0.00000	0.0	0.0	0.0
				9.00000	50.00000	0.00000	0.0	0.0	0.0
				10.00000	50.00000	0.00000	0.0	0.0	0.0
				11.00000	50.00000	0.00000	0.0	0.0	0.0
				12.00000	50.00000	0.00000	0.0	0.0	0.0
				13.00000	50.00000	0.00000	0.0	0.0	0.0
				14.00000	50.00000	0.00000	0.0	0.0	0.0
				15.00000	50.00000	0.00000	0.0	0.0	0.0
				16.00000	50.00000	0.00000	0.0	0.0	0.0
				17.00000	50.00000	0.00000	0.0	0.0	0.0
				18.00000	50.00000	0.00000	0.0	0.0	0.0
				19.00000	50.00000	0.00000	0.0	0.0	0.0
				20.00000	50.00000	0.00000	0.0	0.0	0.0
				21.00000	50.00000	0.00000	0.0	0.0	0.0
				22.00000	50.00000	0.00000	0.0	0.0	0.0
				23.00000	50.00000	0.00000	0.0	0.0	0.0
				24.00000	50.00000	0.00000	0.0	0.0	0.0
				25.00000	50.00000	0.00000	0.0	0.0	0.0
				26.00000	50.00000	0.00000	0.0	0.0	0.0
				27.00000	50.00000	0.00000	0.0	0.0	0.0
				28.00000	50.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD 377

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				29.00000	50.00000	0.00000	0.0	0.0	0.0
				30.00000	50.00000	0.00000	0.0	0.0	0.0
				31.00000	50.00000	0.00000	0.0	0.0	0.0
				32.00000	50.00000	0.00000	0.0	0.0	0.0
				33.00000	50.00000	0.00000	0.0	0.0	0.0
				34.00000	50.00000	0.00000	0.0	0.0	0.0
				35.00000	50.00000	0.00000	0.0	0.0	0.0
				36.00000	50.00000	0.00000	0.0	0.0	0.0
				37.00000	50.00000	0.00000	0.0	0.0	0.0
				38.00000	50.00000	0.00000	0.0	0.0	0.0
				39.00000	50.00000	0.00000	0.0	0.0	0.0
				40.00000	50.00000	0.00000	0.0	0.0	0.0
				41.00000	50.00000	0.00000	0.0	0.0	0.0
				42.00000	50.00000	0.00000	0.0	0.0	0.0
				43.00000	50.00000	0.00000	0.0	0.0	0.0
				44.00000	50.00000	0.00000	0.0	0.0	0.0
				45.00000	50.00000	0.00000	0.0	0.0	0.0
				46.00000	50.00000	0.00000	0.0	0.0	0.0
				47.00000	50.00000	0.00000	0.0	0.0	0.0
				48.00000	50.00000	0.00000	0.0	0.0	0.0
				49.00000	50.00000	0.00000	0.0	0.0	0.0
				50.00000	50.00000	0.00000	0.0	0.0	0.0

Specific Building Damage Results - Horizontal Displacements

Stage: Ref.	Stage: Name	Specific Building: Ref.	Specific Building: Name	Sub-building Name	Dist.	x	y	z	δx	δy	δH//	δHперп.	
						[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]	
0	Base Model	1	No 1 Thurlow Road	Wall 1		0.0	36.00000	27.60000	-0.50000	0.0	-3.8292	-3.8292	0.0
					1.0429	36.00000	28.64286	-0.50000	0.0	-3.0905	-3.0905	0.0	
					2.0857	36.00000	29.68571	-0.50000	0.0	-2.3518	-2.3518	0.0	
					3.1286	36.00000	30.72857	-0.50000	0.0	-1.7143	-1.7143	0.0	
					4.1714	36.00000	31.77143	-0.50000	0.0	-1.3232	-1.3232	0.0	
					5.2143	36.00000	32.81429	-0.50000	0.0	-0.93214	-0.93214	0.0	
					6.2571	36.00000	33.85714	-0.50000	0.0	-0.54107	-0.54107	0.0	
					7.3000	36.00000	34.90000	-0.50000	0.0	-0.15000	-0.15000	0.0	
					8.0	36.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					9.0000	35.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
		2	No 1 Thurlow Road	Wall 2		0.0	36.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250
					1.0000	35.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					2.0000	34.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					3.0000	33.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					4.0000	32.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					5.0000	31.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					6.0000	30.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					7.0000	29.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					8.0000	28.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
					9.0000	27.00000	35.00000	-0.50000	0.0	-0.11250	0.0	0.11250	
		3	No 1 Thurlow Road	Wall 3		0.0	25.00000	27.60000	-0.50000	0.0	-3.8292	-3.8292	0.0
					1.0429	25.00000	28.64286	-0.50000	0.0	-3.0905	-3.0905	0.0	
					2.0857	25.00000	29.68571	-0.50000	0.0	-2.3518	-2.3518	0.0	
					3.1286	25.00000	30.72857	-0.50000	0.0	-1.7143	-1.7143	0.0	
					4.1714	25.00000	31.77143	-0.50000	0.0	-1.3232	-1.3232	0.0	
					5.2143	25.00000	32.81429	-0.50000	0.0	-0.93214	-0.93214	0.0	
					6.2571	25.00000	33.85714	-0.50000	0.0	-0.54107	-0.54107	0.0	
					7.3000	25.00000	34.90000	-0.50000	0.0	-0.15000	-0.15000	0.0	
					8.0	36.00000	7.90000	-0.50000	0.0	0.0	0.0	0.0	
					9.0000	36.00000	8.94286	-0.50000	0.0	0.0	0.0	0.0	
		4	No 3 Thurlow Road	Wall 1		2.0857	36.00000	9.98571	-0.50000	0.0	0.0	0.0	0.0
					3.1286	36.00000	11.02857	-0.50000	0.0	0.0	0.0	0.0	
					4.1714	36.00000	12.07143	-0.50000	0.0	0.0	0.0	0.0	
					5.2143	36.00000	13.11429	-0.50000	0.0	0.34286	0.34286	0.0	
					6.2571	36.00000	14.15714	-0.50000	0.0	0.73393	0.73393	0.0	
					7.3000	36.00000	15.20000	-0.50000	0.0	1.12500	1.12500	0.0	
					8.0	36.00000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
					9.0000	35.15000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
					10.0000	34.30000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
							5	No 3 Thurlow Road	Wall 2		0.0	34.30000	15.40000
0.76667	34.30000	16.16667	-0.50000	0.0						1.48750	0.0	1.48750	
1.5333	34.30000	16.93333	-0.50000	0.0						1.77500	1.77500	0.0	
2.3000	34.30000	17.70000	-0.50000	0.0						2.27680	2.27680	0.0	
3.0	34.30000	17.80000	-0.50000	0.0						2.34170	0.0	-2.34170	
1.0000	33.30000	17.80000	-0.50000	0.0						2.34170	0.0	-2.34170	
2.0000	32.30000	17.80000	-0.50000	0.0						2.34170	0.0	-2.34170	
3.0000	31.30000	17.80000	-0.50000	0.0						2.34170	0.0	-2.34170	
4.0000	30.30000	17.80000	-0.50000	0.0						2.34170	0.0	-2.34170	
5.0	30.30000	17.70000	-0.50000	0.0						2.27680	-2.27680	0.0	
		6	No 3 Thurlow Road	Wall 3		0.76667	30.30000	16.93333	-0.50000	0.0	1.77500	-1.77500	0.0
					1.5333	30.30000	16.16667	-0.50000	0.0	1.48750	0.0	1.48750	
					2.3000	30.30000	15.30000	-0.50000	0.0	1.20900	-1.20900	0.0	
					3.0	30.30000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
					1.0000	29.30000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
					2.0000	28.30000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
					3.0000	27.30000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
					4.0000	26.30000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
					5.0000	25.30000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
					6.0000	24.30000	15.30000	-0.50000	0.0	1.16250	0.0	-1.16250	
		7	No 3 Thurlow Road	Wall 4		0.76667	23.30000	15.30000	-0.50000	0.0	1.16250	-1.16250	0.0
					1.5333	23.30000	14.53333	-0.50000	0.0	1.12500	-1.12500	0.0	
					2.3000	23.30000	13.76667	-0.50000	0.0	0.73393	-0.73393	0.0	
					3.0	23.30000	13.11429	-0.50000	0.0	0.34286	-0.34286	0.0	
					1.0000	22.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					2.0000	21.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					3.0000	20.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					4.0000	19.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					5.0000	18.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					6.0000	17.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
		8	No 3 Thurlow Road	Wall 5		1.5333	23.30000	14.53333	-0.50000	0.0	1.12500	-1.12500	0.0
					2.3000	23.30000	13.76667	-0.50000	0.0	0.73393	-0.73393	0.0	
					3.0	23.30000	13.11429	-0.50000	0.0	0.34286	-0.34286	0.0	
					1.0000	22.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					2.0000	21.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					3.0000	20.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					4.0000	19.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					5.0000	18.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					6.0000	17.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
					7.0000	16.30000	12.85714	-0.50000	0.0	0.0	0.0	0.0	
		9	No 3 Thurlow Road	Wall 6		0.0	23.30000	14.57143	-0.50000	0.0	0.73393	-0.73393	0.0
					1.0429	23.30000	14.15714	-0.50000	0.0	0.34286	-0.34286	0.0	
					2.0857	23.30000	13.74286	-0.50000	0.0	0.0	0.0	0.0	
					3.1286	23.30000	13.32857	-0.50000	0.0	0.0	0.0	0.0	
					4.1714	23.30000	12.91429	-0.50000	0.0	0.0	0.0	0.0	
					5.2143	23.30000	12.50000	-0.50000	0.0	0.0	0.0	0.0	
					6.2571	23.30000	12.08571	-0.50000	0.0	0.0	0.0	0.0	
					7.3000	23.30000	11.67143	-0.50000	0.0	0.0	0.0	0.0	
					8.0	23.30000	11.25714	-0.50000	0.0	0.0	0.0	0.0	
					9.0000	23.30000	10.84286	-0.50000	0.0	0.0	0.0	0.0	
		10	No 3 Thurlow Road	Wall 7		0.0	23.30000	7.80000	-0.50000	0.0	0.0	0.0	0.0
					0.97692	24.27692	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					1.9538	25.25385	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					2.9388	26.23077	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					3.9277	27.20769	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					4.8846	28.18462	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					5.8515	29.16154	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					6.8305	30.13846	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					7.8154	31.11538	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					8.7923	32.09231	7.80000	-0.50000	0.0	0.0	0.0	0.0	
		11	No 3 Thurlow Road	Wall 8		9.7692	33.06923	7.80000	-0.50000	0.0	0.0	0.0	0.0
					10.746	34.04615	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					11.723	35.02308	7.80000	-0.50000	0.0	0.0	0.0	0.0	
					12.700	36.00000	7.80000	-0.50000	0.0	0.0	0.0	0.0	



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage Ref.	Stage Name	Specific Building Ref.	Specific Building Name	Sub-building Name	Vertical Offset	Dist. [m]	x [m]	y [m]	z [mm]	δz
						10.000	26.00000	35.00000	-0.50000	0.020388
						11.000	25.00000	35.00000	-0.50000	0.020388
3	No 1 Thurlow Road	Wall 3			0.0	0.0	25.00000	27.60000	-0.50000	1.7700
						1.0429	25.00000	28.64286	-0.50000	1.7145
						2.0857	25.00000	29.68571	-0.50000	1.3547
						3.1286	25.00000	30.72857	-0.50000	0.93437
						4.1714	25.00000	31.77143	-0.50000	0.52343
						5.2143	25.00000	32.81429	-0.50000	0.22212
						6.2571	25.00000	33.85714	-0.50000	0.074910
						7.3000	25.00000	34.90000	-0.50000	0.025021
4	No 3 Thurlow Road	Wall 1			0.0	0.0	36.00000	7.90000	-0.50000	0.0
						1.0429	36.00000	8.94286	-0.50000	0.0
						2.0857	36.00000	9.98571	-0.50000	0.0
						3.1286	36.00000	11.02857	-0.50000	0.0
						4.1714	36.00000	12.07143	-0.50000	0.0
						5.2143	36.00000	13.11429	-0.50000	0.045010
						6.2571	36.00000	14.15714	-0.50000	0.12944
						7.3000	36.00000	15.20000	-0.50000	0.35185
5	No 3 Thurlow Road	Wall 2			0.0	0.0	36.00000	15.30000	-0.50000	0.38151
						0.85000	35.15000	15.30000	-0.50000	0.38151
						1.7000	34.30000	15.30000	-0.50000	0.38151
6	No 3 Thurlow Road	Wall 3			0.0	0.0	34.30000	15.40000	-0.50000	0.41255
						0.76667	34.30000	16.16667	-0.50000	0.68881
						1.5333	34.30000	16.93333	-0.50000	0.99999
						2.3000	34.30000	17.70000	-0.50000	1.3114
7	No 3 Thurlow Road	Wall 4			0.0	0.0	34.30000	17.80000	-0.50000	1.3493
						1.0000	33.30000	17.80000	-0.50000	1.3493
						2.0000	32.30000	17.80000	-0.50000	1.3493
						3.0000	31.30000	17.80000	-0.50000	1.3493
						4.0000	30.30000	17.80000	-0.50000	1.3493
8	No 3 Thurlow Road	Wall 5			0.0	0.0	30.30000	17.70000	-0.50000	1.3114
						0.76667	30.30000	16.93333	-0.50000	0.99999
						1.5333	30.30000	16.16667	-0.50000	0.68881
						2.3000	30.30000	15.40000	-0.50000	0.41255
9	No 3 Thurlow Road	Wall 6			0.0	0.0	30.30000	15.30000	-0.50000	0.38151
						1.0000	29.30000	15.30000	-0.50000	0.38151
						2.0000	28.30000	15.30000	-0.50000	0.38151
						3.0000	27.30000	15.30000	-0.50000	0.38151
						4.0000	26.30000	15.30000	-0.50000	0.38151
						5.0000	25.30000	15.30000	-0.50000	0.38151
						6.0000	24.30000	15.30000	-0.50000	0.38151
						7.0000	23.30000	15.30000	-0.50000	0.38151
10	No 3 Thurlow Road	Wall 7			0.0	0.0	23.30000	15.20000	-0.50000	0.35185
						1.0429	23.30000	14.15714	-0.50000	0.12944
						2.0857	23.30000	13.11429	-0.50000	0.045010
						3.1286	23.30000	12.07143	-0.50000	0.0
						4.1714	23.30000	11.02857	-0.50000	0.0
						5.2143	23.30000	9.98571	-0.50000	0.0
						6.2571	23.30000	8.94286	-0.50000	0.0
						7.3000	23.30000	7.90000	-0.50000	0.0
11	No 3 Thurlow Road	Wall 8			0.0	0.0	23.30000	7.80000	-0.50000	0.0
						0.97692	24.27692	7.80000	-0.50000	0.0
						1.9538	25.25385	7.80000	-0.50000	0.0
						2.9308	26.23077	7.80000	-0.50000	0.0
						3.9077	27.20769	7.80000	-0.50000	0.0
						4.8846	28.18462	7.80000	-0.50000	0.0
						5.8615	29.16154	7.80000	-0.50000	0.0
						6.8385	30.13846	7.80000	-0.50000	0.0
						7.8154	31.11538	7.80000	-0.50000	0.0
						8.7923	32.09231	7.80000	-0.50000	0.0
						9.7692	33.06923	7.80000	-0.50000	0.0
						10.746	34.04615	7.80000	-0.50000	0.0
						11.723	35.02308	7.80000	-0.50000	0.0
						12.700	36.00000	7.80000	-0.50000	0.0

Specific Building Damage Results - Detail

Stage Category Ref.	Stage Name	Specific Building Ref.	Specific Building Name	Sub-building Name	Vertical Offset	Segment	Start	Length	Curvature	Deflection	Average	Max	Max Gradient	Max Gradient	Min	Damage
0	Base Model	1	No 1 Thurlow Road	Wall 1	0.0	1	0.0	2.9826	Sagging	0.0072088	0.067916	0.070172	-707.83E-6	402.76E-6	2980.9	1 (Very Slight)
(Negligible)						2	2.9826	2.2317	Hogging	0.0026279	0.039046	0.039357	-610.93E-6	402.76E-6	8450.0	0
		2	No 1 Thurlow Road	Wall 2	0.0	All vertical displacements are less than the limit sensitivity.										
(Negligible)		3	No 1 Thurlow Road	Wall 3	0.0	1	0.0	2.9826	Sagging	0.0072088	0.067916	0.070172	-707.83E-6	402.76E-6	2980.9	1 (Very Slight)
						2	2.9826	2.2317	Hogging	0.0026279	0.039046	0.039357	-610.93E-6	402.76E-6	8450.0	0
(Negligible)		4	No 3 Thurlow Road	Wall 1	0.0	1	6.2571	1.0419	Hogging	0.0	0.037500	0.037500	-374.86E-6	-213.19E-6	6689.6	0
(Negligible)		5	No 3 Thurlow Road	Wall 2	0.0	1	0.0	1.7000	None	0.0	0.0	35.763E-9	0.0	0.0	-	0
(Negligible)		6	No 3 Thurlow Road	Wall 3	0.0	1	0.0	1.9241	Hogging	0.0010829	0.043019	0.043129	-646.32E-6	-405.97E-6	13491.0	0
						2	1.9241	0.37489	None	0.0	0.064674	0.064674	-646.32E-6	-405.97E-6	69209.1	1 (Very Slight)
(Negligible)		7	No 3 Thurlow Road	Wall 4	0.0	1	0.0	3.9990	None	0.0	0.0	35.763E-9	0.0	0.0	-	0
(Negligible)		8	No 3 Thurlow Road	Wall 5	0.0	1	0.0	0.37539	Sagging	0.0	0.064674	0.064674	-646.32E-6	405.97E-6	69115.1	1 (Very Slight)
						2	0.37539	1.9236	Hogging	0.0010818	0.043027	0.043138	-646.32E-6	405.97E-6	13484.0	0
(Negligible)		9	No 3 Thurlow Road	Wall 6	0.0	1	0.0	7.0000	None	0.0	0.0	35.763E-9	0.0	0.0	-	0
(Negligible)		10	No 3 Thurlow Road	Wall 7	0.0	1	0.0	1.0429	None	0.0	0.037500	0.037500	-374.86E-6	213.19E-6	6692.6	0
(Negligible)		11	No 3 Thurlow Road	Wall 8	0.0	All vertical displacements are less than the limit sensitivity.										
Tensile horizontal strains are +ve, compressive horizontal strains are -ve.																

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

Stage Category Ref.	Stage Name	Specific Building Ref.	Specific Building Name	Sub-building Name	Vertical Offset from Line for Vertical Movement Calculations [m]	Deflection Ratio [%]	Average Horizontal Strain [%]	Max Slope [mm]	Max Settlement [%]	Max Tensile Strain [%]	Max Gradient of Horizontal Displacement Curve	Max Gradient of Vertical Displacement Curve	Min Radius of Curvature (Hogging) [m]	Min Radius of Curvature (Sagging) [m]	Damage	
0	Base Model	1	No 1	ThurLOW Road	Wall 1	0.0	0.0072088	0.067916	402.76E-6	1.7700	0.070172	-707.83E-6	402.76E-6	8450.0	2980.9	1 (Very Slight)
		3	No 1	ThurLOW Road	Wall 3	0.0	0.0072088	0.067916	402.76E-6	1.7700	0.070172	-707.83E-6	402.76E-6	8450.0	2980.9	1 (Very Slight)
		4	No 3	ThurLOW Road	Wall 1	0.0	0.0	0.037500	-213.19E-6	0.35163	0.037500	-374.86E-6	-213.19E-6	6689.6	-	0 (Negligible)
		5	No 3	ThurLOW Road	Wall 2	0.0	0.0	0.0	0.0	0.38151	35.763E-9	0.0	0.0	-	-	0 (Negligible)
		6	No 3	ThurLOW Road	Wall 3	0.0	0.0010829	0.064674	-405.97E-6	1.3110	0.064674	-646.32E-6	-405.97E-6	13491.0	-	1 (Very Slight)
		7	No 3	ThurLOW Road	Wall 4	0.0	0.0	0.0	0.0	1.3493	35.763E-9	0.0	0.0	-	-	0 (Negligible)
		8	No 3	ThurLOW Road	Wall 5	0.0	0.0010818	0.064674	405.97E-6	1.3114	0.064674	-646.32E-6	405.97E-6	13484.0	69115.1	1 (Very Slight)
		9	No 3	ThurLOW Road	Wall 6	0.0	0.0	0.0	0.0	0.38151	35.763E-9	0.0	0.0	-	-	0 (Negligible)
		10	No 3	ThurLOW Road	Wall 7	0.0	0.0	0.037500	213.19E-6	0.35185	0.037500	-374.86E-6	213.19E-6	-	-	0 (Negligible)

Specific Building Damage Results - Critical Segments within Each Building

Stage Ref.	Stage Name	Specific Building Ref.	Specific Building Name	Parameter	Critical Sub-Building	Critical Segment	Start	End	Curvature	Max Slope	Max Settlement	Max Tensile Strain	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage Category
0	Base Model	0	No 1 Thurlow Road	Max Slope	Wall 1	1	0.0	2.9826	Sagging	402.76E-6	1.7700	0.070172	-	2980.9	1 (Very Slight)
				Max Settlement	Wall 1	1	0.0	2.9826	Sagging	402.76E-6	1.7700	0.070172	-	2980.9	1 (Very Slight)



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
Ground Movement Assessment
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

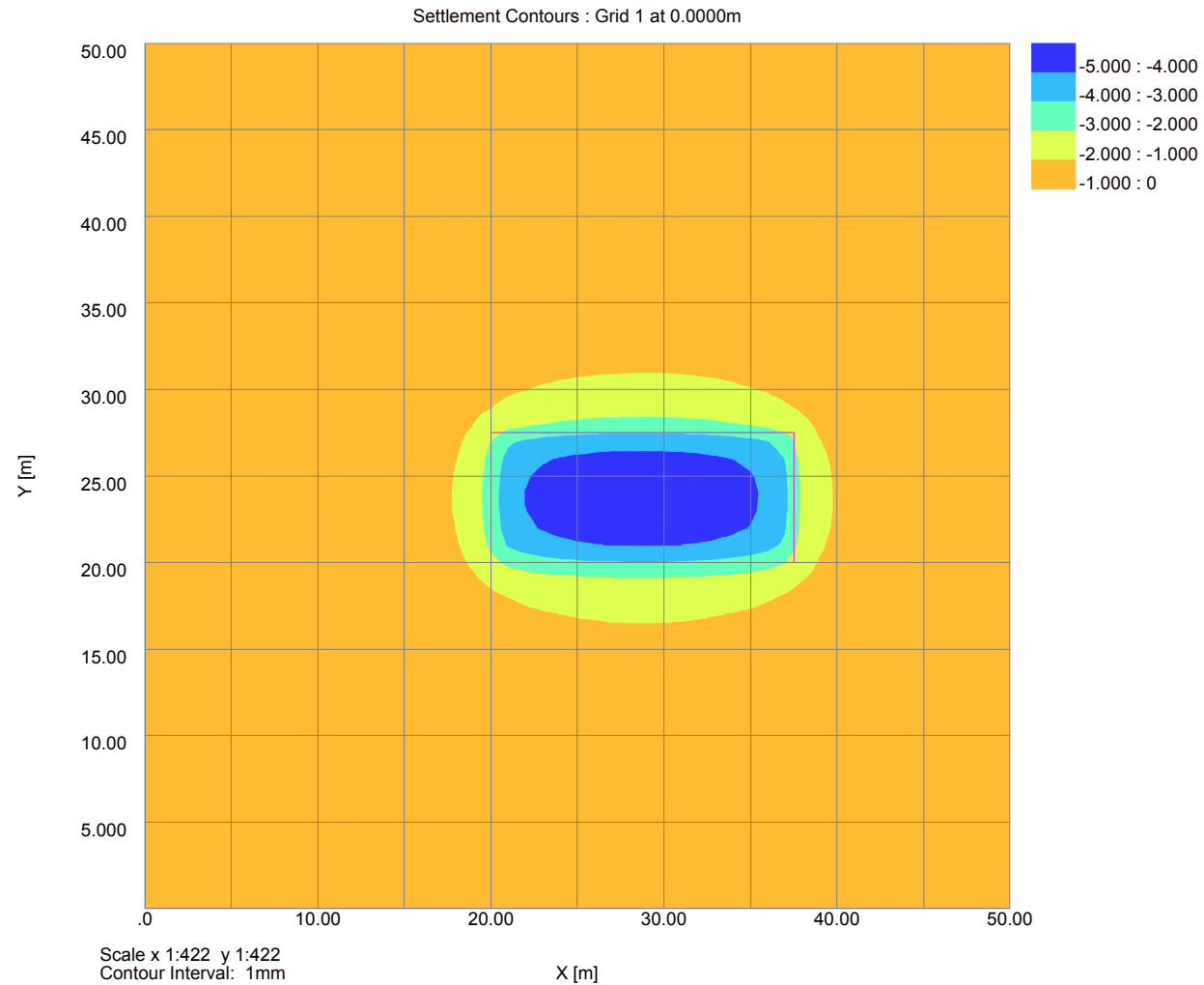
Stage: Ref.	Stage: Name	Specific Building: Ref.	Specific Building: Name	Parameter	Critical Sub-Building	Critical Segment	Start	End	Curvature	Max Slope	Max Settlement	Max Tensile Strain	Min Radius of Curvature (Hogging)	Min Radius of Curvature (Sagging)	Damage	Category
		0	No 3 Thurlow Road	Max Tensile Strain	Wall 1	1	- 0.0	2.9826	Sagging	402.76E-6	- 1.7700	0.070172	-	2980.9	1 (Very Slight)	
	Min Radius of Curvature (Hogging)			Wall 1	2	2.9826	5.2143	Hogging	402.76E-6	0.99322	0.039357	8450.0	- 0 (Negligible)			
	Min Radius of Curvature (Sagging)			Wall 1	1	0.0	2.9826	Sagging	402.76E-6	1.7700	0.070172	-	2980.9	1 (Very Slight)		
	Max Slope			Wall 3	1	0.0	1.9241	Hogging	405.97E-6	1.1587	0.043129	13491.	- 0 (Negligible)			
	Max Settlement			Wall 4	1	0.0	3.9990	Sagging	0.0	1.3493	35.763E-9	-	- 0 (Negligible)			
	Max Tensile Strain			Wall 1	2	1.9241	2.2990	Sagging	405.97E-6	1.3110	0.064674	-	69209.1	1 (Very Slight)		
	Min Radius of Curvature (Hogging)			Wall 1	1	6.2571	7.2990	Hogging	213.19E-6	0.35163	0.037500	6689.6	- 0 (Negligible)			
	Min Radius of Curvature (Sagging)			Wall 5	1	0.0	0.37539	Sagging	405.97E-6	1.3114	0.064674	-	69115.1	1 (Very Slight)		

2 Thurlow Road

Ground Movement Assessment - Short Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date	Checked

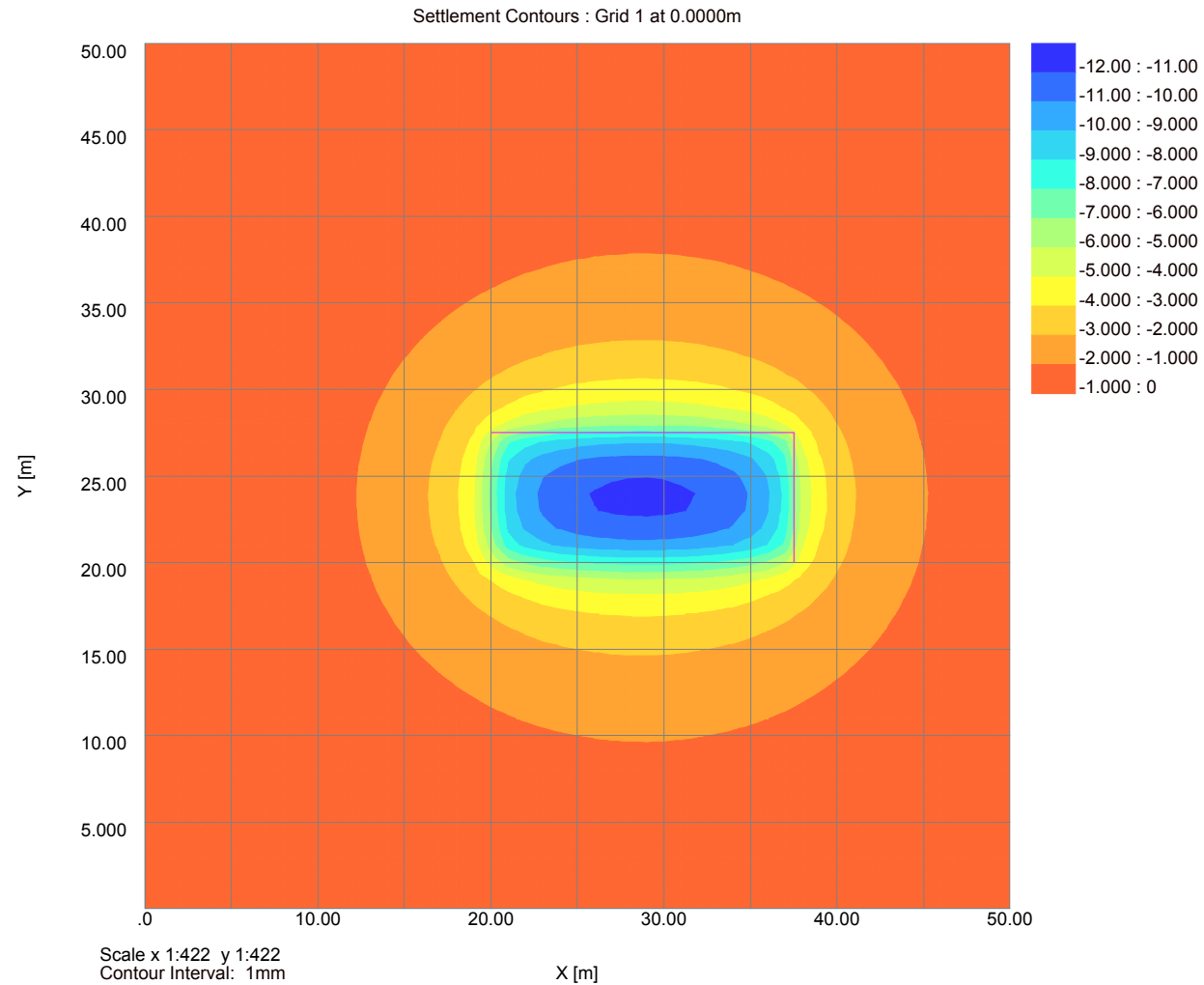


2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date	Checked





GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road
Ground Movement Assessment - Overall Term
Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
DJ21377		
Drg. Ref.		
Made by AT	Date	Checked

Titles

Job No.: J21377
Job Title: 2 Thurlow Road
Sub-title: Ground Movement Assessment - Overall Term
Calculation Heading: Heave due to Basement Excavation
Initials: AT
Checker:
Date Saved:
Date Checked:
Notes:
File Name: PDisp1 - Overall Term.pdd
File Path: G:\PROJECTS\2021\J21377 - 2 Thurlow Road\GMA

History

Date	Time	By	Notes
25-Feb-2022	13:27	Alex Taylor	New
25-Feb-2022	13:40	Alex Taylor	

Analysis Options

General

Global Poisson's ratio: 0.20
Maximum allowable ratio between values of E: 1.5
Horizontal rigid boundary level: -107.50 [m OD]
Displacements at load centroids: Yes
GSA piled raft data: No

Elastic

Elastic: Yes
Analysis: Boussinesq
Stiffness for horizontal displacement calculations: Weighted average
Using legacy heave correction factor: No

Consolidation

Consolidation: No

Soil ProfilesOverall Term Profile

Layer ref.	Name	Level at top	Number of intermediate displacement levels	Youngs Modulus : Top	Youngs Modulus : Btm.	Poissons ratio	Non-linear curve
		[mOD]		[kN/m²]	[kN/m²]		
1	Made Ground	0.0	1	5000.0	5000.0	0.20000	None
2	Claygate Member	-0.40000	2	7500.0	9000.0	0.20000	None
3	London Clay	-1.6000	53	9000.0	9000.0	0.20000	None

Soil ProfilesShort Term Profile

Layer ref.	Name	Level at top	Number of intermediate displacement levels	Youngs Modulus : Top	Youngs Modulus : Btm.	Poissons ratio	Non-linear curve
		[mOD]		[kN/m²]	[kN/m²]		
1	Made Ground	0.0	1	10000.	10000.	0.50000	None
2	Claygate Member	-0.40000	2	12500.	15000.	0.50000	None
3	London Clay	-1.6000	53	15000.	15000.	0.50000	None

Soil Zones

Zone	Name	X min [m]	X max [m]	Y min [m]	Y max [m]	Profile
1	Soil Zone 1	0.0	50.000	0.0	50.000	Overall Term Profile

Polygonal Load Data

Load ref.	Name	Position : Level	Position : Polygon : Coords.	Position : Polygon : Rect. tolerance [%]	No. of Rectangles	Value : Normal (local z) [kN/m²]
1	Lower Ground Floor Excavation	[m]	(20,20) (20,27.5) (37.5,27.5) (37.5,20)	10.000	1	-15.000

Polygonal Loads' Rectangles

No.	Centre : x	Centre : y	Angle of local x from global X [Degrees]	Width x [m]	Depth y [m]
Load 1 : Lower Ground Floor Excavation (Edge 2 optimal)					
1	28.75000	23.75000	90.000	7.5000	17.500

Displacement Grids

Name	Extrusion: Direction	X1	Y1	Z1	X2	Y2	Z2	Intervals Along Line [No.]	Extrusion: Distance [m]	Extrusion: Intervals Along [No.]	Calculate	Detailed Results
Grid 1	Global X	0.00000	0.00000	0.00000	-	50.00000	0.00000	50	50.00000	50	Yes	Yes

Results : Immediate : Load Centres : Polygonal

Ref.	Name	x	y	z	δz	Stress: Calc. Level [MOD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
1	Lower Ground Floor Excavation	[m]	[m]	[MOD]	[mm]				
		28.75000	23.75000	-0.75000	-11.31560	-0.96020	-14.999	-34.604	-0.0013514

Results : Consolidation : Load Centres : Polygonal

None

Results : Total : Load Centres : Polygonal

None



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [MOD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[MOD]	[mm]				

Results : Immediate : Displacement Data : Grids

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[mOD]	[mm]	[mOD]	[kN/m²]	[kN/m²]	[μ]
1	Grid 1	0.00000	0.00000	0.00000	-0.15437	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	0.00000	0.00000	-0.16195	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	0.00000	0.00000	-0.16987	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	0.00000	0.00000	-0.17812	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	0.00000	0.00000	-0.18670	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	0.00000	0.00000	-0.19560	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	0.00000	0.00000	-0.20482	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	0.00000	0.00000	-0.21434	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	0.00000	0.00000	-0.22414	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	0.00000	0.00000	-0.23420	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	0.00000	0.00000	-0.24448	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	0.00000	0.00000	-0.25494	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	0.00000	0.00000	-0.26554	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	0.00000	0.00000	-0.27620	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	0.00000	0.00000	-0.28687	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	0.00000	0.00000	-0.29748	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	0.00000	0.00000	-0.30793	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	0.00000	0.00000	-0.31814	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	0.00000	0.00000	-0.32801	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	0.00000	0.00000	-0.33745	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	0.00000	0.00000	-0.34635	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	0.00000	0.00000	-0.35461	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	0.00000	0.00000	-0.36213	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	0.00000	0.00000	-0.36882	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	0.00000	0.00000	-0.37459	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	0.00000	0.00000	-0.37937	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	0.00000	0.00000	-0.38309	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	0.00000	0.00000	-0.38569	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	0.00000	0.00000	-0.38715	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	0.00000	0.00000	-0.38745	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	0.00000	0.00000	-0.38657	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	0.00000	0.00000	-0.38453	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	0.00000	0.00000	-0.38136	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	0.00000	0.00000	-0.37711	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	0.00000	0.00000	-0.37182	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	0.00000	0.00000	-0.36558	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	0.00000	0.00000	-0.35847	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	0.00000	0.00000	-0.35056	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	0.00000	0.00000	-0.34197	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	0.00000	0.00000	-0.33279	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	0.00000	0.00000	-0.32312	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	0.00000	0.00000	-0.31307	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	0.00000	0.00000	-0.30273	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	0.00000	0.00000	-0.29219	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	0.00000	0.00000	-0.28154	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	0.00000	0.00000	-0.27086	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	0.00000	0.00000	-0.26023	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	0.00000	0.00000	-0.24969	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	0.00000	0.00000	-0.23932	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	0.00000	0.00000	-0.22914	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	0.00000	0.00000	-0.21921	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	1.00000	0.00000	-0.16096	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	1.00000	0.00000	-0.16912	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	1.00000	0.00000	-0.17765	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	1.00000	0.00000	-0.18657	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	1.00000	0.00000	-0.19587	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	1.00000	0.00000	-0.20556	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	1.00000	0.00000	-0.21562	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	1.00000	0.00000	-0.22605	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	1.00000	0.00000	-0.23682	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	1.00000	0.00000	-0.24792	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	1.00000	0.00000	-0.25930	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	1.00000	0.00000	-0.27092	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	1.00000	0.00000	-0.28273	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	1.00000	0.00000	-0.29467	-0.10000	0.0	0.0	0.0
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1	Grid 1	17.00000	1.00000	0.00000	-0.34199	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	1.00000	0.00000	-0.35322	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	1.00000	0.00000	-0.36398	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	1.00000	0.00000	-0.37415	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	1.00000	0.00000	-0.38361	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	1.00000	0.00000	-0.39225	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	1.00000	0.00000	-0.39994	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	1.00000	0.00000	-0.40659	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	1.00000	0.00000	-0.41209	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	1.00000	0.00000	-0.41638	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	1.00000	0.00000	-0.41939	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	1.00000	0.00000	-0.42108	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	1.00000	0.00000	-0.42142	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	1.00000	0.00000	-0.42048	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	1.00000	0.00000	-0.41805	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	1.00000	0.00000	-0.41439	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	1.00000	0.00000	-0.40949	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	1.00000	0.00000	-0.40340	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	1.00000	0.00000	-0.39622	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	1.00000	0.00000	-0.38804	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	1.00000	0.00000	-0.37898	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	1.00000	0.00000	-0.36915	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	1.00000	0.00000	-0.35866	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	1.00000	0.00000	-0.34765	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	1.00000	0.00000	-0.33624	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	1.00000	0.00000	-0.32453	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	1.00000	0.00000	-0.31263	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	1.00000	0.00000	-0.30066	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	1.00000	0.00000	-0.28869	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	1.00000	0.00000	-0.27681	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	1.00000	0.00000	-0.26508	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	1.00000	0.00000					



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[mOD]	[mm]	[mOD]	[kN/m²]	[kN/m²]	[μ]
1	Grid 1	20.00000	2.00000	0.00000	-0.40497	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	2.00000	0.00000	-0.41585	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	2.00000	0.00000	-0.42580	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	2.00000	0.00000	-0.43469	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	2.00000	0.00000	-0.44237	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	2.00000	0.00000	-0.44875	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	2.00000	0.00000	-0.45372	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	2.00000	0.00000	-0.45721	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	2.00000	0.00000	-0.45917	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	2.00000	0.00000	-0.45957	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	2.00000	0.00000	-0.45839	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	2.00000	0.00000	-0.45566	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	2.00000	0.00000	-0.45142	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	2.00000	0.00000	-0.44573	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	2.00000	0.00000	-0.43869	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	2.00000	0.00000	-0.43039	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	2.00000	0.00000	-0.42095	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	2.00000	0.00000	-0.41052	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	2.00000	0.00000	-0.39922	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	2.00000	0.00000	-0.38720	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	2.00000	0.00000	-0.37452	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	2.00000	0.00000	-0.36161	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	2.00000	0.00000	-0.34831	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	2.00000	0.00000	-0.33485	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	2.00000	0.00000	-0.32135	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	2.00000	0.00000	-0.30790	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	2.00000	0.00000	-0.29460	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	2.00000	0.00000	-0.28154	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	2.00000	0.00000	-0.26876	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	2.00000	0.00000	-0.25632	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	2.00000	0.00000	-0.24427	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	3.00000	0.00000	-0.17471	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	3.00000	0.00000	-0.18412	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	3.00000	0.00000	-0.19402	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	3.00000	0.00000	-0.20444	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	3.00000	0.00000	-0.21538	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	3.00000	0.00000	-0.22685	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	3.00000	0.00000	-0.23885	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	3.00000	0.00000	-0.25138	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	3.00000	0.00000	-0.26443	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	3.00000	0.00000	-0.27796	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	3.00000	0.00000	-0.29196	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	3.00000	0.00000	-0.30637	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	3.00000	0.00000	-0.32113	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	3.00000	0.00000	-0.33617	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	3.00000	0.00000	-0.35139	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	3.00000	0.00000	-0.36668	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	3.00000	0.00000	-0.38191	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	3.00000	0.00000	-0.39695	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	3.00000	0.00000	-0.41163	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	3.00000	0.00000	-0.42578	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	3.00000	0.00000	-0.43923	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	3.00000	0.00000	-0.45181	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	3.00000	0.00000	-0.46333	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	3.00000	0.00000	-0.47364	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	3.00000	0.00000	-0.48257	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	3.00000	0.00000	-0.48999	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	3.00000	0.00000	-0.49578	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	3.00000	0.00000	-0.49985	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	3.00000	0.00000	-0.50213	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	3.00000	0.00000	-0.50259	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	3.00000	0.00000	-0.50121	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	3.00000	0.00000	-0.49803	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	3.00000	0.00000	-0.49309	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	3.00000	0.00000	-0.48648	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	3.00000	0.00000	-0.47829	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	3.00000	0.00000	-0.46865	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	3.00000	0.00000	-0.45771	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	3.00000	0.00000	-0.44564	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	3.00000	0.00000	-0.43260	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	3.00000	0.00000	-0.41878	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	3.00000	0.00000	-0.40434	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	3.00000	0.00000	-0.38947	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	3.00000	0.00000	-0.37431	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	3.00000	0.00000	-0.35903	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	3.00000	0.00000	-0.34376	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	3.00000	0.00000	-0.32862	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	3.00000	0.00000	-0.31371	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	3.00000	0.00000	-0.29912	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	3.00000	0.00000	-0.28491	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	3.00000	0.00000	-0.27113	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	3.00000	0.00000	-0.25784	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	4.00000	0.00000	-0.18184	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	4.00000	0.00000	-0.19193	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	4.00000	0.00000	-0.20259	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	4.00000	0.00000	-0.21384	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	4.00000	0.00000	-0.22570	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	4.00000	0.00000	-0.23818	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	4.00000	0.00000	-0.25129	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	4.00000	0.00000	-0.26503	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	4.00000	0.00000	-0.27940	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	4.00000	0.00000	-0.29437	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	4.00000	0.00000	-0.30992	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	4.00000	0.00000	-0.32600	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	4.00000	0.00000	-0.34255	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	4.00000	0.00000	-0.35949	-0.10000	0.0	0.0	0.



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road
Ground Movement Assessment - Overall Term
Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[m]	[mm]	[MPa]	[kN/m ²]	[kN/m ²]	[μ]
1	Grid 1	48.00000	4.00000	0.00000	-0.30208	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	4.00000	0.00000	-0.28681	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	4.00000	0.00000	-0.27214	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	5.00000	0.00000	-0.18911	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	5.00000	0.00000	-0.19993	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	5.00000	0.00000	-0.21139	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	5.00000	0.00000	-0.22354	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	5.00000	0.00000	-0.23638	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	5.00000	0.00000	-0.24996	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	5.00000	0.00000	-0.26428	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	5.00000	0.00000	-0.27935	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	5.00000	0.00000	-0.29518	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	5.00000	0.00000	-0.31175	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	5.00000	0.00000	-0.32905	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	5.00000	0.00000	-0.34702	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	5.00000	0.00000	-0.36561	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	5.00000	0.00000	-0.38472	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	5.00000	0.00000	-0.40425	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	5.00000	0.00000	-0.42405	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	5.00000	0.00000	-0.44396	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	5.00000	0.00000	-0.46377	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	5.00000	0.00000	-0.48326	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	5.00000	0.00000	-0.50220	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	5.00000	0.00000	-0.52031	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	5.00000	0.00000	-0.53733	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	5.00000	0.00000	-0.55361	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	5.00000	0.00000	-0.56709	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	5.00000	0.00000	-0.57932	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	5.00000	0.00000	-0.58952	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	5.00000	0.00000	-0.59748	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	5.00000	0.00000	-0.60309	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	5.00000	0.00000	-0.60624	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	5.00000	0.00000	-0.60687	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	5.00000	0.00000	-0.60498	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	5.00000	0.00000	-0.60059	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	5.00000	0.00000	-0.59379	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	5.00000	0.00000	-0.58469	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	5.00000	0.00000	-0.57345	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	5.00000	0.00000	-0.56027	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	5.00000	0.00000	-0.54536	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	5.00000	0.00000	-0.52897	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	5.00000	0.00000	-0.51137	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	5.00000	0.00000	-0.49282	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	5.00000	0.00000	-0.47357	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	5.00000	0.00000	-0.45389	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	5.00000	0.00000	-0.43401	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	5.00000	0.00000	-0.41413	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	5.00000	0.00000	-0.39444	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	5.00000	0.00000	-0.37511	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	5.00000	0.00000	-0.35624	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	5.00000	0.00000	-0.33795	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	5.00000	0.00000	-0.32031	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	5.00000	0.00000	-0.30337	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	5.00000	0.00000	-0.28717	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	6.00000	0.00000	-0.19649	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	6.00000	0.00000	-0.20808	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	6.00000	0.00000	-0.22040	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	6.00000	0.00000	-0.23350	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	6.00000	0.00000	-0.24741	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	6.00000	0.00000	-0.26216	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	6.00000	0.00000	-0.27789	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	6.00000	0.00000	-0.29433	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	6.00000	0.00000	-0.31177	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	6.00000	0.00000	-0.33013	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	6.00000	0.00000	-0.34938	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	6.00000	0.00000	-0.36950	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	6.00000	0.00000	-0.39041	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	6.00000	0.00000	-0.41203	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	6.00000	0.00000	-0.43425	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	6.00000	0.00000	-0.45689	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	6.00000	0.00000	-0.47977	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	6.00000	0.00000	-0.50265	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	6.00000	0.00000	-0.52526	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	6.00000	0.00000	-0.54732	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	6.00000	0.00000	-0.56849	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	6.00000	0.00000	-0.58846	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	6.00000	0.00000	-0.60689	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	6.00000	0.00000	-0.62348	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	6.00000	0.00000	-0.63792	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	6.00000	0.00000	-0.64996	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	6.00000	0.00000	-0.65938	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	6.00000	0.00000	-0.66601	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	6.00000	0.00000	-0.66974	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	6.00000	0.00000	-0.67048	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	6.00000	0.00000	-0.66624	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	6.00000	0.00000	-0.65805	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	6.00000	0.00000	-0.65501	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	6.00000	0.00000	-0.64425	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	6.00000	0.00000	-0.63098	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	6.00000	0.00000	-0.61543	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	6.00000	0.00000	-0.59709	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	6.00000	0.00000	-0.57865	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	6.00000	0.00000	-0.55803	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	6.00000	0.00000	-0.53638	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	6.00000	0.00000	-0.51401	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	6.00000	0.00000	-0.49122	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	6.00000	0.00000	-0.46831	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	6.00000	0.00000	-0.44553	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	6.00000	0.00000	-0.42308	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	6.00000	0.00000	-0.40114	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	6.00000	0.00000	-0.37906	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	6.00000	0.00000	-0.35934	-0.10000	0.0	0.0	0.0
1</									



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date

Checked

Ref.	Name	x	y	z	Δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[m]	[mm]	[MPa]	[kN/m ²]	[kN/m ²]	[μ]
1	Grid 1	25.00000	7.00000	0.00000	-0.71939	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	7.00000	0.00000	-0.73060	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	7.00000	0.00000	-0.73849	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	7.00000	0.00000	-0.74292	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	7.00000	0.00000	-0.74381	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	7.00000	0.00000	-0.74114	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	7.00000	0.00000	-0.73497	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	7.00000	0.00000	-0.72540	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	7.00000	0.00000	-0.71261	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	7.00000	0.00000	-0.69685	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	7.00000	0.00000	-0.67841	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	7.00000	0.00000	-0.65764	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	7.00000	0.00000	-0.63491	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	7.00000	0.00000	-0.61063	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	7.00000	0.00000	-0.58522	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	7.00000	0.00000	-0.55908	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	7.00000	0.00000	-0.53258	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	7.00000	0.00000	-0.50607	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	7.00000	0.00000	-0.47985	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	7.00000	0.00000	-0.45417	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	7.00000	0.00000	-0.42923	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	7.00000	0.00000	-0.40517	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	7.00000	0.00000	-0.38211	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	7.00000	0.00000	-0.36011	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	7.00000	0.00000	-0.33921	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	7.00000	0.00000	-0.31943	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	8.00000	0.00000	-0.21148	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	8.00000	0.00000	-0.22472	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	8.00000	0.00000	-0.23890	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	8.00000	0.00000	-0.25468	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	8.00000	0.00000	-0.27234	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	8.00000	0.00000	-0.28774	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	8.00000	0.00000	-0.30634	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	8.00000	0.00000	-0.32621	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	8.00000	0.00000	-0.34739	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	8.00000	0.00000	-0.36993	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	8.00000	0.00000	-0.39384	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	8.00000	0.00000	-0.41911	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	8.00000	0.00000	-0.44572	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	8.00000	0.00000	-0.47358	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	8.00000	0.00000	-0.50256	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	8.00000	0.00000	-0.53247	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	8.00000	0.00000	-0.56306	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	8.00000	0.00000	-0.59400	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	8.00000	0.00000	-0.62490	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	8.00000	0.00000	-0.65533	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	8.00000	0.00000	-0.68478	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	8.00000	0.00000	-0.71274	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	8.00000	0.00000	-0.73869	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	8.00000	0.00000	-0.76213	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	8.00000	0.00000	-0.78280	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	8.00000	0.00000	-0.79970	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	8.00000	0.00000	-0.81310	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	8.00000	0.00000	-0.82254	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	8.00000	0.00000	-0.82784	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	8.00000	0.00000	-0.82981	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	8.00000	0.00000	-0.82572	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	8.00000	0.00000	-0.81833	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	8.00000	0.00000	-0.80688	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	8.00000	0.00000	-0.79169	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	8.00000	0.00000	-0.77277	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	8.00000	0.00000	-0.75076	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	8.00000	0.00000	-0.72600	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	8.00000	0.00000	-0.69898	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	8.00000	0.00000	-0.67021	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	8.00000	0.00000	-0.64021	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	8.00000	0.00000	-0.60948	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	8.00000	0.00000	-0.57850	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	8.00000	0.00000	-0.54770	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	8.00000	0.00000	-0.51741	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	8.00000	0.00000	-0.48794	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	8.00000	0.00000	-0.45950	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	8.00000	0.00000	-0.43226	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	8.00000	0.00000	-0.40630	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	8.00000	0.00000	-0.38171	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	8.00000	0.00000	-0.35849	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	8.00000	0.00000	-0.33663	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	9.00000	0.00000	-0.21902	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	9.00000	0.00000	-0.23313	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	9.00000	0.00000	-0.24830	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	9.00000	0.00000	-0.26411	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	9.00000	0.00000	-0.28215	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	9.00000	0.00000	-0.30101	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	9.00000	0.00000	-0.32127	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	9.00000	0.00000	-0.34302	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	9.00000	0.00000	-0.36635	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	9.00000	0.00000	-0.39132	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	9.00000	0.00000	-0.41798	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	9.00000	0.00000	-0.44636	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	9.00000	0.00000	-0.47644	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	9.00000	0.00000	-0.50816	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	9.00000	0.00000	-0.54140	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	9.00000	0.00000	-0.57596	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	9.00000	0.00000	-0.61156	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	9.00000	0.00000	-0.64782	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	9.00000	0.00000	-0.68427	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	9.00000	0.00000	-0.72034	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	9.00000	0.00000	-0.75542	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	9.00000	0.00000	-0.78885	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	9.00000	0.00000	-0.81996	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	9.00000	0.00000	-0.84811	-0.10000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mdd]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mdd]	[mm]				
1	Grid 1	2.00000	10.00000	0.00000	-0.25773	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	10.00000	0.00000	-0.27522	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	10.00000	0.00000	-0.29411	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	10.00000	0.00000	-0.31451	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	10.00000	0.00000	-0.33655	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	10.00000	0.00000	-0.36034	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	10.00000	0.00000	-0.38601	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	10.00000	0.00000	-0.41366	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	10.00000	0.00000	-0.44338	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	10.00000	0.00000	-0.47525	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	10.00000	0.00000	-0.50929	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	10.00000	0.00000	-0.54549	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	10.00000	0.00000	-0.58373	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	10.00000	0.00000	-0.62382	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	10.00000	0.00000	-0.66545	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	10.00000	0.00000	-0.70818	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	10.00000	0.00000	-0.75144	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	10.00000	0.00000	-0.79453	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	10.00000	0.00000	-0.83664	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	10.00000	0.00000	-0.87692	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	10.00000	0.00000	-0.91451	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	10.00000	0.00000	-0.94856	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	10.00000	0.00000	-0.97835	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	10.00000	0.00000	-1.00325	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	10.00000	0.00000	-1.02275	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	10.00000	0.00000	-1.03647	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	10.00000	0.00000	-1.04418	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	10.00000	0.00000	-1.04573	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	10.00000	0.00000	-1.04109	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	10.00000	0.00000	-1.03035	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	10.00000	0.00000	-1.01379	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	10.00000	0.00000	-0.99145	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	10.00000	0.00000	-0.96403	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	10.00000	0.00000	-0.93202	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	10.00000	0.00000	-0.89611	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	10.00000	0.00000	-0.85707	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	10.00000	0.00000	-0.81576	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	10.00000	0.00000	-0.77305	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	10.00000	0.00000	-0.72978	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	10.00000	0.00000	-0.68671	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	10.00000	0.00000	-0.64446	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	10.00000	0.00000	-0.60356	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	10.00000	0.00000	-0.56436	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	10.00000	0.00000	-0.52713	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	10.00000	0.00000	-0.49200	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	10.00000	0.00000	-0.45904	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	10.00000	0.00000	-0.42825	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	10.00000	0.00000	-0.39958	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	10.00000	0.00000	-0.37293	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	11.00000	0.00000	-0.23393	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	11.00000	0.00000	-0.24906	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	11.00000	0.00000	-0.26712	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	11.00000	0.00000	-0.28583	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	11.00000	0.00000	-0.30613	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	11.00000	0.00000	-0.32810	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	11.00000	0.00000	-0.35209	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	11.00000	0.00000	-0.37807	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	11.00000	0.00000	-0.40626	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	11.00000	0.00000	-0.43685	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	11.00000	0.00000	-0.46997	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	11.00000	0.00000	-0.50577	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	11.00000	0.00000	-0.54433	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	11.00000	0.00000	-0.58569	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	11.00000	0.00000	-0.62980	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	11.00000	0.00000	-0.67648	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	11.00000	0.00000	-0.72541	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	11.00000	0.00000	-0.77609	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	11.00000	0.00000	-0.82782	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	11.00000	0.00000	-0.87971	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	11.00000	0.00000	-0.93072	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	11.00000	0.00000	-0.97979	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	11.00000	0.00000	-1.02551	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	11.00000	0.00000	-1.06705	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	11.00000	0.00000	-1.10338	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	11.00000	0.00000	-1.13371	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	11.00000	0.00000	-1.15744	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	11.00000	0.00000	-1.17412	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	11.00000	0.00000	-1.18348	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	11.00000	0.00000	-1.18536	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	11.00000	0.00000	-1.17973	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	11.00000	0.00000	-1.16668	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	11.00000	0.00000	-1.14643	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	11.00000	0.00000	-1.11934	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	11.00000	0.00000	-1.08592	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	11.00000	0.00000	-1.04687	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	11.00000	0.00000	-1.00307	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	11.00000	0.00000	-0.95553	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	11.00000	0.00000	-0.90540	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	11.00000	0.00000	-0.85381	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	11.00000	0.00000	-0.80188	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	11.00000	0.00000	-0.75057	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	11.00000	0.00000	-0.70069	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	11.00000	0.00000	-0.65283	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	11.00000	0.00000	-0.60741	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	11.00000	0.00000	-0.56466	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	11.00000	0.00000	-0.52470	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	11.00000	0.00000	-0.48753	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	11.00000	0.00000	-0.45308	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	11.00000	0.00000	-0.42125	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	11.00000	0.00000	-0.39188	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	12.00000	0.00000	-0.24119	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	12.00000	0.00000	-0.25806	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	12.00000	0.00000	-0.27640	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	12.00000	0.00000	-0.29637	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	12.00000	0.00000	-0.31812	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	12.00000	0.00000	-0.34186	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	12.00000	0.00000	-0.36776	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	12.00000	0.00000	-0.39606	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	12.00000	0.00000	-0.42698	-0.10000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road
Ground Movement Assessment - Overall Term
Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	Δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[m]	[mm]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[μ]
1	Grid 1	30.00000	12.00000	0.00000	-1.34646	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	12.00000	0.00000	-1.33855	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	12.00000	0.00000	-1.30580	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	12.00000	0.00000	-1.27262	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	12.00000	0.00000	-1.23158	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	12.00000	0.00000	-1.18354	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	12.00000	0.00000	-1.12960	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	12.00000	0.00000	-1.07112	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	12.00000	0.00000	-1.00962	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	12.00000	0.00000	-0.94668	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	12.00000	0.00000	-0.88378	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	12.00000	0.00000	-0.82220	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	12.00000	0.00000	-0.76294	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	12.00000	0.00000	-0.70669	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	12.00000	0.00000	-0.65388	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	12.00000	0.00000	-0.60471	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	12.00000	0.00000	-0.55921	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	12.00000	0.00000	-0.51730	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	12.00000	0.00000	-0.47879	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	12.00000	0.00000	-0.44350	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	12.00000	0.00000	-0.41118	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	13.00000	0.00000	-0.24824	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	13.00000	0.00000	-0.26605	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	13.00000	0.00000	-0.28548	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	13.00000	0.00000	-0.30672	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	13.00000	0.00000	-0.32997	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	13.00000	0.00000	-0.35545	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	13.00000	0.00000	-0.38343	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	13.00000	0.00000	-0.41417	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	13.00000	0.00000	-0.44799	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	13.00000	0.00000	-0.48521	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	13.00000	0.00000	-0.52618	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	13.00000	0.00000	-0.57123	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	13.00000	0.00000	-0.62072	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	13.00000	0.00000	-0.67491	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	13.00000	0.00000	-0.73400	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	13.00000	0.00000	-0.79802	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	13.00000	0.00000	-0.86674	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	13.00000	0.00000	-0.93958	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	13.00000	0.00000	-1.01554	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	13.00000	0.00000	-1.09314	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	13.00000	0.00000	-1.17047	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	13.00000	0.00000	-1.24535	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	13.00000	0.00000	-1.31559	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	13.00000	0.00000	-1.37920	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	13.00000	0.00000	-1.43455	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	13.00000	0.00000	-1.48048	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	13.00000	0.00000	-1.51616	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	13.00000	0.00000	-1.54111	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	13.00000	0.00000	-1.55595	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	13.00000	0.00000	-1.55784	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	13.00000	0.00000	-1.54947	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	13.00000	0.00000	-1.53000	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	13.00000	0.00000	-1.49964	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	13.00000	0.00000	-1.45875	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	13.00000	0.00000	-1.40789	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	13.00000	0.00000	-1.34833	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	13.00000	0.00000	-1.28118	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	13.00000	0.00000	-1.20836	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	13.00000	0.00000	-1.13197	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	13.00000	0.00000	-1.05425	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	13.00000	0.00000	-0.97725	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	13.00000	0.00000	-0.90269	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	13.00000	0.00000	-0.83182	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	13.00000	0.00000	-0.76540	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	13.00000	0.00000	-0.70384	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	13.00000	0.00000	-0.64721	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	13.00000	0.00000	-0.59540	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	13.00000	0.00000	-0.54817	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	13.00000	0.00000	-0.50520	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	13.00000	0.00000	-0.46616	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	13.00000	0.00000	-0.43068	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	14.00000	0.00000	-0.25501	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	14.00000	0.00000	-0.27374	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	14.00000	0.00000	-0.29426	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	14.00000	0.00000	-0.31678	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	14.00000	0.00000	-0.34154	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	14.00000	0.00000	-0.36881	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	14.00000	0.00000	-0.39891	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	14.00000	0.00000	-0.43220	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	14.00000	0.00000	-0.46906	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	14.00000	0.00000	-0.50994	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	14.00000	0.00000	-0.55533	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	14.00000	0.00000	-0.60575	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	14.00000	0.00000	-0.66171	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	14.00000	0.00000	-0.72375	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	14.00000	0.00000	-0.79230	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	14.00000	0.00000	-0.86765	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	14.00000	0.00000	-0.94976	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	14.00000	0.00000	-1.03817	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	14.00000	0.00000	-1.13172	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	14.00000	0.00000	-1.22849	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	14.00000	0.00000	-1.32577	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	14.00000	0.00000	-1.42038	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	14.00000	0.00000	-1.50910	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	14.00000	0.00000	-1.58912	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	14.00000	0.00000	-1.65834	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	14.00000	0.00000	-1.71537	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	14.00000	0.00000	-1.75940	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	14.00000	0.00000	-1.79802	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	14.00000	0.00000	-1.82977	-0.10000	0.		



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mD]	[mm]				
1	Grid 1	7.00000	15.00000	0.00000	-0.44989	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	15.00000	0.00000	-0.48990	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	15.00000	0.00000	-0.53463	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	15.00000	0.00000	-0.58474	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	15.00000	0.00000	-0.64095	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	15.00000	0.00000	-0.70498	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	15.00000	0.00000	-0.77499	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	15.00000	0.00000	-0.85452	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	15.00000	0.00000	-0.94340	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	15.00000	0.00000	-1.04295	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	15.00000	0.00000	-1.15032	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	15.00000	0.00000	-1.26708	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	15.00000	0.00000	-1.38983	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	15.00000	0.00000	-1.51464	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	15.00000	0.00000	-1.63655	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	15.00000	0.00000	-1.75956	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	15.00000	0.00000	-1.85258	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	15.00000	0.00000	-1.93991	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	15.00000	0.00000	-2.01108	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	15.00000	0.00000	-2.06551	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	15.00000	0.00000	-2.10309	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	15.00000	0.00000	-2.12390	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	15.00000	0.00000	-2.12806	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	15.00000	0.00000	-2.11558	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	15.00000	0.00000	-2.08640	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	15.00000	0.00000	-2.04040	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	15.00000	0.00000	-1.97756	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	15.00000	0.00000	-1.89820	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	15.00000	0.00000	-1.80327	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	15.00000	0.00000	-1.69483	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	15.00000	0.00000	-1.57628	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	15.00000	0.00000	-1.45227	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	15.00000	0.00000	-1.32792	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	15.00000	0.00000	-1.20776	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	15.00000	0.00000	-1.09593	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	15.00000	0.00000	-0.99149	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	15.00000	0.00000	-0.89775	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	15.00000	0.00000	-0.81363	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	15.00000	0.00000	-0.73851	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	15.00000	0.00000	-0.67160	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	15.00000	0.00000	-0.61293	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	15.00000	0.00000	-0.55897	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	15.00000	0.00000	-0.51164	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	15.00000	0.00000	-0.46934	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	16.00000	0.00000	-0.26740	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	16.00000	0.00000	-0.28792	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	16.00000	0.00000	-0.31053	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	16.00000	0.00000	-0.33553	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	16.00000	0.00000	-0.36325	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	16.00000	0.00000	-0.39408	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	16.00000	0.00000	-0.42847	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	16.00000	0.00000	-0.46696	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	16.00000	0.00000	-0.51018	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	16.00000	0.00000	-0.55887	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	16.00000	0.00000	-0.61390	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	16.00000	0.00000	-0.67628	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	16.00000	0.00000	-0.74720	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	16.00000	0.00000	-0.82798	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	16.00000	0.00000	-0.92007	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	16.00000	0.00000	-1.02498	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	16.00000	0.00000	-1.14399	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	16.00000	0.00000	-1.27781	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	16.00000	0.00000	-1.42581	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	16.00000	0.00000	-1.58501	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	16.00000	0.00000	-1.74944	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	16.00000	0.00000	-1.91874	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	16.00000	0.00000	-2.06049	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	16.00000	0.00000	-2.19254	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	16.00000	0.00000	-2.30364	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	16.00000	0.00000	-2.39273	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	16.00000	0.00000	-2.45906	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	16.00000	0.00000	-2.50592	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	16.00000	0.00000	-2.53122	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	16.00000	0.00000	-2.53626	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	16.00000	0.00000	-2.52112	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	16.00000	0.00000	-2.48555	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	16.00000	0.00000	-2.42904	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	16.00000	0.00000	-2.35094	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	16.00000	0.00000	-2.25082	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	16.00000	0.00000	-2.12900	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	16.00000	0.00000	-1.98752	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	16.00000	0.00000	-1.83104	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	16.00000	0.00000	-1.66706	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	16.00000	0.00000	-1.50431	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	16.00000	0.00000	-1.35016	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	16.00000	0.00000	-1.20905	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	16.00000	0.00000	-1.08266	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	16.00000	0.00000	-0.97084	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	16.00000	0.00000	-0.87252	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	16.00000	0.00000	-0.78627	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	16.00000	0.00000	-0.71059	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	16.00000	0.00000	-0.64410	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	16.00000	0.00000	-0.58553	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	16.00000	0.00000	-0.53379	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	16.00000	0.00000	-0.48794	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	17.00000	0.00000	-0.27288	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	17.00000	0.00000	-0.29421	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	17.00000	0.00000	-0.31779	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	17.00000	0.00000	-0.34395	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	17.00000	0.00000	-0.37397	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	17.000						



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mD]	[mm]				
1	Grid 1	35.00000	17.00000	0.00000	-2.56561	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	17.00000	0.00000	-2.37678	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	17.00000	0.00000	-2.16299	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	17.00000	0.00000	-1.93735	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	17.00000	0.00000	-1.71653	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	17.00000	0.00000	-1.51439	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	17.00000	0.00000	-1.33557	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	17.00000	0.00000	-1.18059	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	17.00000	0.00000	-1.04728	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	17.00000	0.00000	-0.93277	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	17.00000	0.00000	-0.83425	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	17.00000	0.00000	-0.74918	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	17.00000	0.00000	-0.67542	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	17.00000	0.00000	-0.61119	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	17.00000	0.00000	-0.55499	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	17.00000	0.00000	-0.50559	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	18.00000	0.00000	-0.27778	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	18.00000	0.00000	-0.29985	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	18.00000	0.00000	-0.32432	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	18.00000	0.00000	-0.35156	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	18.00000	0.00000	-0.38129	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	18.00000	0.00000	-0.41609	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	18.00000	0.00000	-0.45451	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	18.00000	0.00000	-0.49799	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	18.00000	0.00000	-0.54743	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	18.00000	0.00000	-0.60397	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	18.00000	0.00000	-0.66898	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	18.00000	0.00000	-0.74420	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	18.00000	0.00000	-0.83183	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	18.00000	0.00000	-0.93461	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	18.00000	0.00000	-1.05696	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	18.00000	0.00000	-1.20060	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	18.00000	0.00000	-1.37380	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	18.00000	0.00000	-1.58228	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	18.00000	0.00000	-1.83283	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	18.00000	0.00000	-2.12829	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	18.00000	0.00000	-2.45637	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	18.00000	0.00000	-2.78087	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	18.00000	0.00000	-3.06553	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	18.00000	0.00000	-3.29781	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	18.00000	0.00000	-3.48912	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	18.00000	0.00000	-3.61862	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	18.00000	0.00000	-3.71910	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	18.00000	0.00000	-3.78596	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	18.00000	0.00000	-3.82217	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	18.00000	0.00000	-3.82924	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	18.00000	0.00000	-3.80777	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	18.00000	0.00000	-3.75651	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	18.00000	0.00000	-3.67330	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	18.00000	0.00000	-3.55446	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	18.00000	0.00000	-3.39484	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	18.00000	0.00000	-3.18824	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	18.00000	0.00000	-2.92951	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	18.00000	0.00000	-2.62181	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	18.00000	0.00000	-2.29093	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	18.00000	0.00000	-1.97517	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	18.00000	0.00000	-1.70194	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	18.00000	0.00000	-1.47318	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	18.00000	0.00000	-1.28323	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	18.00000	0.00000	-1.12512	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	18.00000	0.00000	-0.99275	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	18.00000	0.00000	-0.88113	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	18.00000	0.00000	-0.78631	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	18.00000	0.00000	-0.70519	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	18.00000	0.00000	-0.63531	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	18.00000	0.00000	-0.57473	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	18.00000	0.00000	-0.52190	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	19.00000	0.00000	-0.28202	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	19.00000	0.00000	-0.30475	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	19.00000	0.00000	-0.33061	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	19.00000	0.00000	-0.35929	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	19.00000	0.00000	-0.38979	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	19.00000	0.00000	-0.42534	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	19.00000	0.00000	-0.46554	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	19.00000	0.00000	-0.51124	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	19.00000	0.00000	-0.56351	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	19.00000	0.00000	-0.62366	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	19.00000	0.00000	-0.69338	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	19.00000	0.00000	-0.77480	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	19.00000	0.00000	-0.87073	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	19.00000	0.00000	-0.98483	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	19.00000	0.00000	-1.12285	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	19.00000	0.00000	-1.28910	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	19.00000	0.00000	-1.49540	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	19.00000	0.00000	-1.75445	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	19.00000	0.00000	-2.08602	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	19.00000	0.00000	-2.51733	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	19.00000	0.00000	-3.05709	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	19.00000	0.00000	-3.59308	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	19.00000	0.00000	-4.01309	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	19.00000	0.00000	-4.32525	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	19.00000	0.00000	-4.55657	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	19.00000	0.00000	-4.72601	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	19.00000	0.00000	-4.84604	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	19.00000	0.00000	-4.92472	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	19.00000	0.00000	-4.96696	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	19.00000	0.00000	-4.97528	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	19.00000	0.00000	-4.95019	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	19.00000	0.00000	-4.89018	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	19.00000	0.00000	-4.79161	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	19.00000	0.00000					



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	Δz	Stress: Calc. Level [mdd]	Stress: Vertical [KN/m²]	Stress: Sum Princ. [KN/m²]	Vert. Strain [μ]
		[m]	[m]	[mdd]	[mm]				
1	Grid 1	12.00000	20.00000	0.00000	-0.98524	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	20.00000	0.00000	-1.03003	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	20.00000	0.00000	-1.18246	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	20.00000	0.00000	-1.37190	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	20.00000	0.00000	-1.61246	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	20.00000	0.00000	-1.92697	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	20.00000	0.00000	-2.35696	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	20.00000	0.00000	-2.99706	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	20.00000	0.00000	-4.28460	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	20.00000	0.00000	-5.56819	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	20.00000	0.00000	-6.19636	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	20.00000	0.00000	-6.68614	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	20.00000	0.00000	-6.89156	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	20.00000	0.00000	-7.09334	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	20.00000	0.00000	-7.23315	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	20.00000	0.00000	-7.32351	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	20.00000	0.00000	-7.37162	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	20.00000	0.00000	-7.38108	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	20.00000	0.00000	-7.35255	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	20.00000	0.00000	-7.28396	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	20.00000	0.00000	-7.17005	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	20.00000	0.00000	-7.00127	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	20.00000	0.00000	-6.76121	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	20.00000	0.00000	-6.42066	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	20.00000	0.00000	-5.91992	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	20.00000	0.00000	-5.09626	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	20.00000	0.00000	-3.47195	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	20.00000	0.00000	-2.64039	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	20.00000	0.00000	-2.12363	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	20.00000	0.00000	-1.75851	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	20.00000	0.00000	-1.48444	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	20.00000	0.00000	-1.27182	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	20.00000	0.00000	-1.10229	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	20.00000	0.00000	-0.96464	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	20.00000	0.00000	-0.85112	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	20.00000	0.00000	-0.75628	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	20.00000	0.00000	-0.67614	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	20.00000	0.00000	-0.60777	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	20.00000	0.00000	-0.54892	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	21.00000	0.00000	-0.28831	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	21.00000	0.00000	-0.31293	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	21.00000	0.00000	-0.33850	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	21.00000	0.00000	-0.36815	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	21.00000	0.00000	-0.40153	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	21.00000	0.00000	-0.43930	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	21.00000	0.00000	-0.48228	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	21.00000	0.00000	-0.53150	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	21.00000	0.00000	-0.58828	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	21.00000	0.00000	-0.65430	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	21.00000	0.00000	-0.73175	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	21.00000	0.00000	-0.82355	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	21.00000	0.00000	-0.93369	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	21.00000	0.00000	-1.06770	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	21.00000	0.00000	-1.23352	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	21.00000	0.00000	-1.44303	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	21.00000	0.00000	-1.71406	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	21.00000	0.00000	-2.08142	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	21.00000	0.00000	-2.60574	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	21.00000	0.00000	-3.44999	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	21.00000	0.00000	-5.48043	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	21.00000	0.00000	-7.50718	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	21.00000	0.00000	-8.33869	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	21.00000	0.00000	-8.84204	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	21.00000	0.00000	-9.17831	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	21.00000	0.00000	-9.46990	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	21.00000	0.00000	-9.58762	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	21.00000	0.00000	-9.66843	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	21.00000	0.00000	-9.72176	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	21.00000	0.00000	-9.73221	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	21.00000	0.00000	-9.70665	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	21.00000	0.00000	-9.62442	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	21.00000	0.00000	-9.49671	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	21.00000	0.00000	-9.30482	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	21.00000	0.00000	-9.02606	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	21.00000	0.00000	-8.61747	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	21.00000	0.00000	-7.98289	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	21.00000	0.00000	-6.82188	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	21.00000	0.00000	-4.13795	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	21.00000	0.00000	-2.96896	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	21.00000	0.00000	-2.31759	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	21.00000	0.00000	-1.88351	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	21.00000	0.00000	-1.58962	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	21.00000	0.00000	-1.33186	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	21.00000	0.00000	-1.14601	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	21.00000	0.00000	-0.99729	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	21.00000	0.00000	-0.87603	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	21.00000	0.00000	-0.77564	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	21.00000	0.00000	-0.69143	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	21.00000	0.00000	-0.62001	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	21.00000	0.00000	-0.55885	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	22.00000	0.00000	-0.29025	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	22.00000	0.00000	-0.31428	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	22.00000	0.00000	-0.34112	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	22.00000	0.00000	-0.37124	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	22.00000	0.00000	-0.40519	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	22.00000	0.00000	-0.44367	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	22.00000	0.00000	-0.48755	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	22.00000	0.00000	-0.53791	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	22.00000	0.00000	-0.59617	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	22.00000	0.00000	-0.66412	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000							



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[mOD]	[mm]	[mOD]	[kN/m²]	[kN/m²]	[μ]
1	Grid 1	40.00000	22.00000	0.00000	-2.46462	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	22.00000	0.00000	-1.97875	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	22.00000	0.00000	-1.63393	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	22.00000	0.00000	-1.37685	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	22.00000	0.00000	-1.17845	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	22.00000	0.00000	-1.02130	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	22.00000	0.00000	-0.89421	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	22.00000	0.00000	-0.78967	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	22.00000	0.00000	-0.70245	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	22.00000	0.00000	-0.62880	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	22.00000	0.00000	-0.56595	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	23.00000	0.00000	-0.29134	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	23.00000	0.00000	-0.31555	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	23.00000	0.00000	-0.34260	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	23.00000	0.00000	-0.37298	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	23.00000	0.00000	-0.40725	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	23.00000	0.00000	-0.44614	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	23.00000	0.00000	-0.49052	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	23.00000	0.00000	-0.54154	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	23.00000	0.00000	-0.60065	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	23.00000	0.00000	-0.66971	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	23.00000	0.00000	-0.75125	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	23.00000	0.00000	-0.84863	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	23.00000	0.00000	-0.96654	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	23.00000	0.00000	-1.11155	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	23.00000	0.00000	-1.29377	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	23.00000	0.00000	-1.52795	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	23.00000	0.00000	-1.83853	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	23.00000	0.00000	-2.26767	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	23.00000	0.00000	-2.89693	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	23.00000	0.00000	-3.91898	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	23.00000	0.00000	-6.21990	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	23.00000	0.00000	-8.51668	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	23.00000	0.00000	-9.52581	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	23.00000	0.00000	-10.13326	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	23.00000	0.00000	-10.53994	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	23.00000	0.00000	-10.79938	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	23.00000	0.00000	-10.97931	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	23.00000	0.00000	-11.09301	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	23.00000	0.00000	-11.15275	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	23.00000	0.00000	-11.16442	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	23.00000	0.00000	-11.12914	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	23.00000	0.00000	-11.04349	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	23.00000	0.00000	-10.89872	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	23.00000	0.00000	-10.67819	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	23.00000	0.00000	-10.35194	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	23.00000	0.00000	-9.86356	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	23.00000	0.00000	-9.09265	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	23.00000	0.00000	-7.70622	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	23.00000	0.00000	-4.73251	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	23.00000	0.00000	-3.33759	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	23.00000	0.00000	-2.54943	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	23.00000	0.00000	-2.03453	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	23.00000	0.00000	-1.67163	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	23.00000	0.00000	-1.40312	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	23.00000	0.00000	-1.19729	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	23.00000	0.00000	-1.03517	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	23.00000	0.00000	-0.90466	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	23.00000	0.00000	-0.79770	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	23.00000	0.00000	-0.70874	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	23.00000	0.00000	-0.63380	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	23.00000	0.00000	-0.56998	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	24.00000	0.00000	-0.29155	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	24.00000	0.00000	-0.31580	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	24.00000	0.00000	-0.34290	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	24.00000	0.00000	-0.37333	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	24.00000	0.00000	-0.40767	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	24.00000	0.00000	-0.44663	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	24.00000	0.00000	-0.49112	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	24.00000	0.00000	-0.54228	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	24.00000	0.00000	-0.60155	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	24.00000	0.00000	-0.67085	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	24.00000	0.00000	-0.75268	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	24.00000	0.00000	-0.85048	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	24.00000	0.00000	-0.96898	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	24.00000	0.00000	-1.11493	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	24.00000	0.00000	-1.29829	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	24.00000	0.00000	-1.53436	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	24.00000	0.00000	-1.84787	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	24.00000	0.00000	-2.28162	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	24.00000	0.00000	-2.91804	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	24.00000	0.00000	-3.95037	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	24.00000	0.00000	-6.26433	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	24.00000	0.00000	-8.57404	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	24.00000	0.00000	-9.59352	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	24.00000	0.00000	-10.20807	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	24.00000	0.00000	-10.61026	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	24.00000	0.00000	-10.88150	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	24.00000	0.00000	-11.06313	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	24.00000	0.00000	-11.17782	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	24.00000	0.00000	-11.23805	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	24.00000	0.00000	-11.24981	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	24.00000	0.00000	-11.21424	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	24.00000	0.00000	-11.12788	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	24.00000	0.00000	-10.98180</				



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mD]	[mm]				
1	Grid 1	17.00000	25.00000	0.00000	-2.24000	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	25.00000	0.00000	-2.85474	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	25.00000	0.00000	-3.85508	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	25.00000	0.00000	-6.12843	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	25.00000	0.00000	-8.39757	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	25.00000	0.00000	-9.38535	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	25.00000	0.00000	-9.97821	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	25.00000	0.00000	-10.36688	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	25.00000	0.00000	-10.62979	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	25.00000	0.00000	-10.88636	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	25.00000	0.00000	-10.91811	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	25.00000	0.00000	-10.97688	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	25.00000	0.00000	-10.98837	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	25.00000	0.00000	-10.95364	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	25.00000	0.00000	-10.86943	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	25.00000	0.00000	-10.72723	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	25.00000	0.00000	-10.51102	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	25.00000	0.00000	-10.19184	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	25.00000	0.00000	-9.71490	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	25.00000	0.00000	-8.96183	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	25.00000	0.00000	-7.68046	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	25.00000	0.00000	-6.65535	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	25.00000	0.00000	-3.28553	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	25.00000	0.00000	-2.51530	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	25.00000	0.00000	-2.01199	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	25.00000	0.00000	-1.65638	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	25.00000	0.00000	-1.39250	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	25.00000	0.00000	-1.18969	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	25.00000	0.00000	-1.02958	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	25.00000	0.00000	-0.98045	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	25.00000	0.00000	-0.79447	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	25.00000	0.00000	-0.78621	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	25.00000	0.00000	-0.63179	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	25.00000	0.00000	-0.56836	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	26.00000	0.00000	-0.28938	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	26.00000	0.00000	-0.31328	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	26.00000	0.00000	-0.33995	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	26.00000	0.00000	-0.36986	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	26.00000	0.00000	-0.40355	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	26.00000	0.00000	-0.44171	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	26.00000	0.00000	-0.48519	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	26.00000	0.00000	-0.53505	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	26.00000	0.00000	-0.59264	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	26.00000	0.00000	-0.65972	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	26.00000	0.00000	-0.73859	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	26.00000	0.00000	-0.83233	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	26.00000	0.00000	-0.94515	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	26.00000	0.00000	-1.08298	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	26.00000	0.00000	-1.25439	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	26.00000	0.00000	-1.47234	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	26.00000	0.00000	-1.75753	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	26.00000	0.00000	-2.14581	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	26.00000	0.00000	-2.70818	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	26.00000	0.00000	-3.62306	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	26.00000	0.00000	-5.77511	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	26.00000	0.00000	-7.92293	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	26.00000	0.00000	-8.82540	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	26.00000	0.00000	-9.36651	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	26.00000	0.00000	-9.72415	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	26.00000	0.00000	-9.96838	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	26.00000	0.00000	-10.11368	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	26.00000	0.00000	-10.23889	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	26.00000	0.00000	-10.29441	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	26.00000	0.00000	-10.30528	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	26.00000	0.00000	-10.27245	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	26.00000	0.00000	-10.18300	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	26.00000	0.00000	-10.05946	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	26.00000	0.00000	-9.85778	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	26.00000	0.00000	-9.56265	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	26.00000	0.00000	-9.12555	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	26.00000	0.00000	-8.47177	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	26.00000	0.00000	-7.18324	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	26.00000	0.00000	-4.36596	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	26.00000	0.00000	-3.10113	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	26.00000	0.00000	-2.39823	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	26.00000	0.00000	-1.93557	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	26.00000	0.00000	-1.60478	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	26.00000	0.00000	-1.35649	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	26.00000	0.00000	-1.16381	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	26.00000	0.00000	-1.03048	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	26.00000	0.00000	-0.88693	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	26.00000	0.00000	-0.78337	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	26.00000	0.00000	-0.69751	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	26.00000	0.00000	-0.62486	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	26.00000	0.00000	-0.56278	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	27.00000	0.00000	-0.28793	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	27.00000	0.00000	-0.31055	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	27.00000	0.00000	-0.33676	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	27.00000	0.00000	-0.36611	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	27.00000	0.00000	-0.39912	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	27.00000	0.00000	-0.43643	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	27.00000	0.00000	-0.47883	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	27.00000	0.00000	-0.52732	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	27.00000	0.00000	-0.58315	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	27.00000	0.00000	-0.64792	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	27.00000	0.00000	-0.72371	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	27.00000	0.00000	-0.81328	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	27.00000	0.00000	-0.92033	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	27.00000	0.00000	-1.04996	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	27.00000	0.00000	-1.20949	-0.10000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[mOD]	[mm]	[mOD]	[kN/m²]	[kN/m²]	[μ]
1	Grid 1	45.00000	27.00000	0.00000	-0.98193	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	27.00000	0.00000	-0.86434	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	27.00000	0.00000	-0.76657	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	27.00000	0.00000	-0.68428	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	27.00000	0.00000	-0.61430	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	27.00000	0.00000	-0.55423	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	28.00000	0.00000	-0.28388	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	28.00000	0.00000	-0.30690	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	28.00000	0.00000	-0.33251	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	28.00000	0.00000	-0.36113	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	28.00000	0.00000	-0.39324	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	28.00000	0.00000	-0.42943	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	28.00000	0.00000	-0.47043	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	28.00000	0.00000	-0.51715	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	28.00000	0.00000	-0.57071	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	28.00000	0.00000	-0.63253	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	28.00000	0.00000	-0.70443	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	28.00000	0.00000	-0.78877	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	28.00000	0.00000	-0.88864	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	28.00000	0.00000	-1.00821	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	28.00000	0.00000	-1.15318	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	28.00000	0.00000	-1.33157	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	28.00000	0.00000	-1.55509	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	28.00000	0.00000	-1.84170	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	28.00000	0.00000	-2.22127	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	28.00000	0.00000	-2.74923	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	28.00000	0.00000	-3.50495	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	28.00000	0.00000	-4.25681	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	28.00000	0.00000	-4.77309	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	28.00000	0.00000	-5.13287	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	28.00000	0.00000	-5.39106	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	28.00000	0.00000	-5.57671	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	28.00000	0.00000	-5.70672	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	28.00000	0.00000	-5.79132	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	28.00000	0.00000	-5.83655	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	28.00000	0.00000	-5.84545	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	28.00000	0.00000	-5.81861	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	28.00000	0.00000	-5.75424	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	28.00000	0.00000	-5.64791	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	28.00000	0.00000	-5.49169	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	28.00000	0.00000	-5.27246	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	28.00000	0.00000	-4.96826	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	28.00000	0.00000	-4.53961	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	28.00000	0.00000	-3.91168	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	28.00000	0.00000	-3.09725	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	28.00000	0.00000	-2.46158	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	28.00000	0.00000	-2.01726	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	28.00000	0.00000	-1.68902	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	28.00000	0.00000	-1.43676	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	28.00000	0.00000	-1.23758	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	28.00000	0.00000	-1.07799	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	28.00000	0.00000	-0.94565	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	28.00000	0.00000	-0.83653	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	28.00000	0.00000	-0.74487	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	28.00000	0.00000	-0.66709	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	28.00000	0.00000	-0.60048	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	28.00000	0.00000	-0.54299	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	29.00000	0.00000	-0.27999	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	29.00000	0.00000	-0.30240	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	29.00000	0.00000	-0.32728	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	29.00000	0.00000	-0.35501	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	29.00000	0.00000	-0.38603	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	29.00000	0.00000	-0.42088	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	29.00000	0.00000	-0.46022	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	29.00000	0.00000	-0.50484	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	29.00000	0.00000	-0.55573	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	29.00000	0.00000	-0.61412	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	29.00000	0.00000	-0.68152	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	29.00000	0.00000	-0.75990	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	29.00000	0.00000	-0.85172	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	29.00000	0.00000	-0.96020	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	29.00000	0.00000	-1.08952	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	29.00000	0.00000	-1.24522	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	29.00000	0.00000	-1.43462	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	29.00000	0.00000	-1.66741	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	29.00000	0.00000	-1.95568	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	29.00000	0.00000	-2.31045	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	29.00000	0.00000	-2.72231	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	29.00000	0.00000	-3.13050	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	29.00000	0.00000	-3.47416	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	29.00000	0.00000	-3.74362	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	29.00000	0.00000	-3.94944	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	29.00000	0.00000	-4.10304	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	29.00000	0.00000	-4.21316	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	29.00000	0.00000	-4.28588	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	29.00000	0.00000	-4.32509	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	29.00000	0.00000	-4.33284	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	29.00000	0.00000	-4.30951	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	29.00000	0.00000	-4.25390	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	29.00000	0.00000	-4.16399	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	29.00000	0.00000	-4.03215	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	29.00000	0.00000	-3.85372	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	29.00000	0.00000	-3.61762	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	29.00000	0.00000	-3.31191	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	29.00000	0.00000	-2.93192	-0.10000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mdd]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mdd]	[mm]				
1	Grid 1	22.00000	30.00000	0.00000	-2.74103	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	30.00000	0.00000	-2.94160	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	30.00000	0.00000	-3.10270	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	30.00000	0.00000	-3.22711	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	30.00000	0.00000	-3.31838	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	30.00000	0.00000	-3.37957	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	30.00000	0.00000	-3.41286	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	30.00000	0.00000	-3.41946	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	30.00000	0.00000	-3.39961	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	30.00000	0.00000	-3.35258	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	30.00000	0.00000	-3.27667	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	30.00000	0.00000	-3.16926	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	30.00000	0.00000	-3.02695	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	30.00000	0.00000	-2.84632	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	30.00000	0.00000	-2.62683	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	30.00000	0.00000	-2.37182	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	30.00000	0.00000	-2.10100	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	30.00000	0.00000	-1.83963	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	30.00000	0.00000	-1.60528	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	30.00000	0.00000	-1.40318	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	30.00000	0.00000	-1.23151	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	30.00000	0.00000	-1.08619	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	30.00000	0.00000	-0.96292	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	30.00000	0.00000	-0.85792	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	30.00000	0.00000	-0.76800	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	30.00000	0.00000	-0.69056	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	30.00000	0.00000	-0.62348	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	30.00000	0.00000	-0.56507	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	30.00000	0.00000	-0.51394	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	31.00000	0.00000	-0.27021	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	31.00000	0.00000	-0.28114	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	31.00000	0.00000	-0.31424	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	31.00000	0.00000	-0.33984	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	31.00000	0.00000	-0.36827	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	31.00000	0.00000	-0.39996	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	31.00000	0.00000	-0.43540	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	31.00000	0.00000	-0.47517	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	31.00000	0.00000	-0.51999	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	31.00000	0.00000	-0.57067	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	31.00000	0.00000	-0.62820	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	31.00000	0.00000	-0.69177	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	31.00000	0.00000	-0.76877	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	31.00000	0.00000	-0.85482	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	31.00000	0.00000	-0.95378	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	31.00000	0.00000	-1.06768	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	31.00000	0.00000	-1.19851	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	31.00000	0.00000	-1.34776	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	31.00000	0.00000	-1.51546	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	31.00000	0.00000	-1.69867	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	31.00000	0.00000	-1.89994	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	31.00000	0.00000	-2.07797	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	31.00000	0.00000	-2.25138	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	31.00000	0.00000	-2.40254	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	31.00000	0.00000	-2.52817	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	31.00000	0.00000	-2.62786	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	31.00000	0.00000	-2.70246	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	31.00000	0.00000	-2.75315	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	31.00000	0.00000	-2.78096	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	31.00000	0.00000	-2.78649	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	31.00000	0.00000	-2.76987	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	31.00000	0.00000	-2.73072	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	31.00000	0.00000	-2.66822	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	31.00000	0.00000	-2.58122	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	31.00000	0.00000	-2.46862	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	31.00000	0.00000	-2.33093	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	31.00000	0.00000	-2.16709	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	31.00000	0.00000	-1.98513	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	31.00000	0.00000	-1.79395	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	31.00000	0.00000	-1.60548	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	31.00000	0.00000	-1.42939	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	31.00000	0.00000	-1.27818	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	31.00000	0.00000	-1.13087	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	31.00000	0.00000	-1.00874	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	31.00000	0.00000	-0.90256	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	31.00000	0.00000	-0.81030	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	31.00000	0.00000	-0.73000	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	31.00000	0.00000	-0.65990	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	31.00000	0.00000	-0.59851	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	31.00000	0.00000	-0.54454	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	31.00000	0.00000	-0.49699	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	32.00000	0.00000	-0.25447	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	32.00000	0.00000	-0.28455	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	32.00000	0.00000	-0.30666	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	32.00000	0.00000	-0.33106	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	32.00000	0.00000	-0.35805	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	32.00000	0.00000	-0.38890	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	32.00000	0.00000	-0.42133	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	32.00000	0.00000	-0.45852	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	32.00000	0.00000	-0.50014	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	32.00000	0.00000	-0.54684	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	32.00000	0.00000	-0.59918	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	32.00000	0.00000	-0.65864	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	32.00000	0.00000	-0.72560	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	32.00000	0.00000	-0.80132	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	32.00000	0.00000	-0.88694	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	32.00000	0.00000	-0.98359	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	32.00000	0.00000	-1.09181	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	32.00000	0.00000	-1.21205	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	32.00000	0.00000	-1.34322	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	32.00000	0.00000	-1.48258	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	32.00000	0.00000	-1.62528				



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road
Ground Movement Assessment - Overall Term
Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	Δz	Stress: Calc. Level [mD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mD]	[mm]				
1	Grid 1	50.00000	32.00000	0.00000	-0.47874	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	33.00000	0.00000	-0.25826	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	33.00000	0.00000	-0.27746	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	33.00000	0.00000	-0.29851	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	33.00000	0.00000	-0.32166	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	33.00000	0.00000	-0.34717	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	33.00000	0.00000	-0.37534	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	33.00000	0.00000	-0.40652	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	33.00000	0.00000	-0.44110	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	33.00000	0.00000	-0.47953	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	33.00000	0.00000	-0.52232	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	33.00000	0.00000	-0.57003	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	33.00000	0.00000	-0.62329	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	33.00000	0.00000	-0.68276	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	33.00000	0.00000	-0.74910	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	33.00000	0.00000	-0.82295	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	33.00000	0.00000	-0.90476	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	33.00000	0.00000	-0.99471	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	33.00000	0.00000	-1.09244	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	33.00000	0.00000	-1.19676	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	33.00000	0.00000	-1.30548	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	33.00000	0.00000	-1.41537	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	33.00000	0.00000	-1.52246	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	33.00000	0.00000	-1.62279	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	33.00000	0.00000	-1.71299	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	33.00000	0.00000	-1.79665	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	33.00000	0.00000	-1.85432	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	33.00000	0.00000	-1.90327	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	33.00000	0.00000	-1.93720	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	33.00000	0.00000	-1.95605	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	33.00000	0.00000	-1.95922	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	33.00000	0.00000	-1.94851	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	33.00000	0.00000	-1.92212	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	33.00000	0.00000	-1.88067	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	33.00000	0.00000	-1.82430	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	33.00000	0.00000	-1.75350	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	33.00000	0.00000	-1.66933	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	33.00000	0.00000	-1.57370	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	33.00000	0.00000	-1.46952	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	33.00000	0.00000	-1.36052	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	33.00000	0.00000	-1.25075	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	33.00000	0.00000	-1.14388	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	33.00000	0.00000	-1.04266	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	33.00000	0.00000	-0.94873	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	33.00000	0.00000	-0.86284	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	33.00000	0.00000	-0.78505	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	33.00000	0.00000	-0.71503	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	33.00000	0.00000	-0.65221	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	33.00000	0.00000	-0.59593	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	33.00000	0.00000	-0.54552	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	33.00000	0.00000	-0.50034	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	33.00000	0.00000	-0.45980	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	34.00000	0.00000	-0.25166	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	34.00000	0.00000	-0.26994	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	34.00000	0.00000	-0.28992	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	34.00000	0.00000	-0.31179	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	34.00000	0.00000	-0.33580	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	34.00000	0.00000	-0.36217	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	34.00000	0.00000	-0.39121	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	34.00000	0.00000	-0.42321	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	34.00000	0.00000	-0.45833	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	34.00000	0.00000	-0.49756	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	34.00000	0.00000	-0.54070	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	34.00000	0.00000	-0.58837	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	34.00000	0.00000	-0.64101	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	34.00000	0.00000	-0.69900	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	34.00000	0.00000	-0.76264	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	34.00000	0.00000	-0.83207	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	34.00000	0.00000	-0.90713	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	34.00000	0.00000	-0.98729	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	34.00000	0.00000	-1.07146	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	34.00000	0.00000	-1.15795	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	34.00000	0.00000	-1.24450	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	34.00000	0.00000	-1.32849	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	34.00000	0.00000	-1.40728	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	34.00000	0.00000	-1.47851	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	34.00000	0.00000	-1.54035	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	34.00000	0.00000	-1.59149	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	34.00000	0.00000	-1.63111	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	34.00000	0.00000	-1.65875	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	34.00000	0.00000	-1.67416	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	34.00000	0.00000	-1.67725	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	34.00000	0.00000	-1.66799	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	34.00000	0.00000	-1.64645	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	34.00000	0.00000	-1.61277	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	34.00000	0.00000	-1.56732	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	34.00000	0.00000	-1.51070	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	34.00000	0.00000	-1.44397	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	34.00000	0.00000	-1.36869	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	34.00000	0.00000	-1.28699	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	34.00000	0.00000	-1.20138	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	34.00000	0.00000	-1.11455	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	34.00000	0.00000	-1.02897	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	34.00000	0.00000	-0.94663	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	34.00000	0.00000	-0.86892	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	34.00000	0.00000	-0.79663	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	34.00000	0.00000	-0.73810	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	34.00000	0.00000	-0.6932	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	34.00000	0.00000	-0.61405	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	34.00000	0.00000	-0.56394	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	34.00000	0.00000	-0.51859	-0.10000	0.0	0.0	0.0
1									



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[m]	[mm]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[μ]
1	Grid 1	27.00000	35.00000	0.00000	-1.43525	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	35.00000	0.00000	-1.44785	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	35.00000	0.00000	-1.45038	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	35.00000	0.00000	-1.44281	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	35.00000	0.00000	-1.42521	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	35.00000	0.00000	-1.39781	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	35.00000	0.00000	-1.36100	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	35.00000	0.00000	-1.31540	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	35.00000	0.00000	-1.26193	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	35.00000	0.00000	-1.20184	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	35.00000	0.00000	-1.13669	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	35.00000	0.00000	-1.06827	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	35.00000	0.00000	-0.99844	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	35.00000	0.00000	-0.92895	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	35.00000	0.00000	-0.86127	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	35.00000	0.00000	-0.79651	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	35.00000	0.00000	-0.73543	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	35.00000	0.00000	-0.67843	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	35.00000	0.00000	-0.62566	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	35.00000	0.00000	-0.57711	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	35.00000	0.00000	-0.53261	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	35.00000	0.00000	-0.49193	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	35.00000	0.00000	-0.45479	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	35.00000	0.00000	-0.42092	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	36.00000	0.00000	-0.23758	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	36.00000	0.00000	-0.25398	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	36.00000	0.00000	-0.27178	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	36.00000	0.00000	-0.29112	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	36.00000	0.00000	-0.31214	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	36.00000	0.00000	-0.33501	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	36.00000	0.00000	-0.35992	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	36.00000	0.00000	-0.38704	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	36.00000	0.00000	-0.41658	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	36.00000	0.00000	-0.44872	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	36.00000	0.00000	-0.48368	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	36.00000	0.00000	-0.52161	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	36.00000	0.00000	-0.56265	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	36.00000	0.00000	-0.60689	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	36.00000	0.00000	-0.65431	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	36.00000	0.00000	-0.70476	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	36.00000	0.00000	-0.75791	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	36.00000	0.00000	-0.81325	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	36.00000	0.00000	-0.86999	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	36.00000	0.00000	-0.92714	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	36.00000	0.00000	-0.98348	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	36.00000	0.00000	-1.03779	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	36.00000	0.00000	-1.08845	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	36.00000	0.00000	-1.13449	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	36.00000	0.00000	-1.17473	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	36.00000	0.00000	-1.20830	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	36.00000	0.00000	-1.23452	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	36.00000	0.00000	-1.25295	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	36.00000	0.00000	-1.26327	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	36.00000	0.00000	-1.26535	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	36.00000	0.00000	-1.25914	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	36.00000	0.00000	-1.24473	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	36.00000	0.00000	-1.22236	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	36.00000	0.00000	-1.19240	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	36.00000	0.00000	-1.15540	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	36.00000	0.00000	-1.11214	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	36.00000	0.00000	-1.06359	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	36.00000	0.00000	-1.01094	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	36.00000	0.00000	-0.95549	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	36.00000	0.00000	-0.89859	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	36.00000	0.00000	-0.84150	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	36.00000	0.00000	-0.78535	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	36.00000	0.00000	-0.73102	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	36.00000	0.00000	-0.67917	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	36.00000	0.00000	-0.63021	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	36.00000	0.00000	-0.58437	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	36.00000	0.00000	-0.54173	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	36.00000	0.00000	-0.50226	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	36.00000	0.00000	-0.46584	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	36.00000	0.00000	-0.43231	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	36.00000	0.00000	-0.40149	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	37.00000	0.00000	-0.23924	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	37.00000	0.00000	-0.24571	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	37.00000	0.00000	-0.26243	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	37.00000	0.00000	-0.28053	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	37.00000	0.00000	-0.30012	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	37.00000	0.00000	-0.32113	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	37.00000	0.00000	-0.34429	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	37.00000	0.00000	-0.36916	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	37.00000	0.00000	-0.39607	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	37.00000	0.00000	-0.42515	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	37.00000	0.00000	-0.45653	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	37.00000	0.00000	-0.49031	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	37.00000	0.00000	-0.52654	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	37.00000	0.00000	-0.56522	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	37.00000	0.00000	-0.60628	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	37.00000	0.00000	-0.64952	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	37.00000	0.00000	-0.69462	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	37.00000	0.00000	-0.74112	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	37.00000	0.00000	-0.78838	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	37.00000	0.00000	-0.83561	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	37.00000	0.00000	-0.88190	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	37.00000	0.00000	-0.92627	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	37.00000	0.00000	-0.96771	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	37.00000	0.00000	-1.00529	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	37.00000	0.00000	-1.03816	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	37.00000	0.00000	-1.06561	-0.100			



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[m]	[mm]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[μ]
1	Grid 1	4.00000	38.00000	0.00000	-0.28811	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	38.00000	0.00000	-0.30773	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	38.00000	0.00000	-0.32887	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	38.00000	0.00000	-0.35163	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	38.00000	0.00000	-0.37619	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	38.00000	0.00000	-0.40237	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	38.00000	0.00000	-0.43053	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	38.00000	0.00000	-0.46060	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	38.00000	0.00000	-0.49259	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	38.00000	0.00000	-0.52647	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	38.00000	0.00000	-0.56211	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	38.00000	0.00000	-0.59932	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	38.00000	0.00000	-0.63779	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	38.00000	0.00000	-0.67712	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	38.00000	0.00000	-0.71680	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	38.00000	0.00000	-0.75618	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	38.00000	0.00000	-0.79458	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	38.00000	0.00000	-0.83124	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	38.00000	0.00000	-0.86540	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	38.00000	0.00000	-0.89633	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	38.00000	0.00000	-0.92338	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	38.00000	0.00000	-0.94599	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	38.00000	0.00000	-0.96370	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	38.00000	0.00000	-0.97618	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	38.00000	0.00000	-0.98318	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	38.00000	0.00000	-0.98459	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	38.00000	0.00000	-0.98037	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	38.00000	0.00000	-0.97061	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	38.00000	0.00000	-0.95548	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	38.00000	0.00000	-0.93527	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	38.00000	0.00000	-0.91028	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	38.00000	0.00000	-0.88131	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	38.00000	0.00000	-0.84868	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	38.00000	0.00000	-0.81318	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	38.00000	0.00000	-0.77555	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	38.00000	0.00000	-0.73657	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	38.00000	0.00000	-0.69695	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	38.00000	0.00000	-0.65738	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	38.00000	0.00000	-0.61842	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	38.00000	0.00000	-0.58053	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	38.00000	0.00000	-0.54448	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	38.00000	0.00000	-0.50930	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	38.00000	0.00000	-0.47636	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	38.00000	0.00000	-0.44532	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	38.00000	0.00000	-0.41621	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	38.00000	0.00000	-0.38901	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	38.00000	0.00000	-0.36364	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	39.00000	0.00000	-0.21525	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	39.00000	0.00000	-0.22892	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	39.00000	0.00000	-0.24359	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	39.00000	0.00000	-0.25933	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	39.00000	0.00000	-0.27622	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	39.00000	0.00000	-0.29434	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	39.00000	0.00000	-0.31376	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	39.00000	0.00000	-0.33455	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	39.00000	0.00000	-0.35678	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	39.00000	0.00000	-0.38050	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	39.00000	0.00000	-0.40575	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	39.00000	0.00000	-0.43253	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	39.00000	0.00000	-0.46081	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	39.00000	0.00000	-0.49053	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	39.00000	0.00000	-0.52156	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	39.00000	0.00000	-0.55370	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	39.00000	0.00000	-0.58668	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	39.00000	0.00000	-0.62015	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	39.00000	0.00000	-0.65368	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	39.00000	0.00000	-0.68679	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	39.00000	0.00000	-0.71890	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	39.00000	0.00000	-0.74945	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	39.00000	0.00000	-0.77783	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	39.00000	0.00000	-0.80359	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	39.00000	0.00000	-0.82592	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	39.00000	0.00000	-0.84466	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	39.00000	0.00000	-0.85934	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	39.00000	0.00000	-0.86969	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	39.00000	0.00000	-0.87550	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	39.00000	0.00000	-0.87666	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	39.00000	0.00000	-0.87317	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	39.00000	0.00000	-0.86507	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	39.00000	0.00000	-0.85253	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	39.00000	0.00000	-0.83578	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	39.00000	0.00000	-0.81514	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	39.00000	0.00000	-0.79104	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	39.00000	0.00000	-0.76395	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	39.00000	0.00000	-0.73441	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	39.00000	0.00000	-0.70300	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	39.00000	0.00000	-0.67032	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	39.00000	0.00000	-0.63694	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	39.00000	0.00000	-0.60338	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	39.00000	0.00000	-0.57010	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	39.00000	0.00000	-0.53715	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	39.00000	0.00000	-0.50590	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	39.00000	0.00000	-0.47550	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	39.00000	0.00000	-0.44649	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	39.00000	0.00000	-0.41895	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	39.00000	0.00000	-0.39293	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	39.00000	0.00000	-0.36845	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	39.00000	0.00000	-0.34548	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	40.00000	0.00000	-0.20772	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	40.00000	0.00000	-0.22053	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000							



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road
Ground Movement Assessment - Overall Term
Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mD]	[mm]				
1	Grid 1	32.00000	40.00000	0.00000	-0.76461	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	40.00000	0.00000	-0.75065	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	40.00000	0.00000	-0.73343	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	40.00000	0.00000	-0.71330	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	40.00000	0.00000	-0.69064	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	40.00000	0.00000	-0.66588	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	40.00000	0.00000	-0.63948	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	40.00000	0.00000	-0.61189	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	40.00000	0.00000	-0.58356	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	40.00000	0.00000	-0.55493	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	40.00000	0.00000	-0.52637	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	40.00000	0.00000	-0.49821	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	40.00000	0.00000	-0.47071	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	40.00000	0.00000	-0.44408	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	40.00000	0.00000	-0.41849	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	40.00000	0.00000	-0.39403	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	40.00000	0.00000	-0.37077	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	40.00000	0.00000	-0.34874	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	40.00000	0.00000	-0.32795	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	41.00000	0.00000	-0.29622	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	41.00000	0.00000	-0.21220	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	41.00000	0.00000	-0.22497	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	41.00000	0.00000	-0.23857	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	41.00000	0.00000	-0.25304	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	41.00000	0.00000	-0.26842	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	41.00000	0.00000	-0.28475	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	41.00000	0.00000	-0.30206	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	41.00000	0.00000	-0.32038	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	41.00000	0.00000	-0.33970	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	41.00000	0.00000	-0.36062	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	41.00000	0.00000	-0.38311	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	41.00000	0.00000	-0.40350	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	41.00000	0.00000	-0.42652	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	41.00000	0.00000	-0.45024	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	41.00000	0.00000	-0.47448	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	41.00000	0.00000	-0.49904	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	41.00000	0.00000	-0.52367	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	41.00000	0.00000	-0.54807	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	41.00000	0.00000	-0.57192	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	41.00000	0.00000	-0.59487	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	41.00000	0.00000	-0.61654	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	41.00000	0.00000	-0.63657	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	41.00000	0.00000	-0.65461	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	41.00000	0.00000	-0.67033	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	41.00000	0.00000	-0.68344	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	41.00000	0.00000	-0.69371	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	41.00000	0.00000	-0.70094	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	41.00000	0.00000	-0.70500	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	41.00000	0.00000	-0.70582	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	41.00000	0.00000	-0.70337	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	41.00000	0.00000	-0.69771	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	41.00000	0.00000	-0.68895	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	41.00000	0.00000	-0.67723	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	41.00000	0.00000	-0.66278	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	41.00000	0.00000	-0.64566	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	41.00000	0.00000	-0.62678	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	41.00000	0.00000	-0.60588	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	41.00000	0.00000	-0.58353	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	41.00000	0.00000	-0.56009	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	41.00000	0.00000	-0.53592	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	41.00000	0.00000	-0.51127	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	41.00000	0.00000	-0.48674	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	41.00000	0.00000	-0.46230	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	41.00000	0.00000	-0.43830	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	41.00000	0.00000	-0.41492	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	41.00000	0.00000	-0.39230	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	41.00000	0.00000	-0.37054	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	41.00000	0.00000	-0.34974	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	41.00000	0.00000	-0.32991	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	41.00000	0.00000	-0.31110	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	42.00000	0.00000	-0.19279	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	42.00000	0.00000	-0.20398	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	42.00000	0.00000	-0.21587	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	42.00000	0.00000	-0.22849	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	42.00000	0.00000	-0.24185	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	42.00000	0.00000	-0.25601	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	42.00000	0.00000	-0.27097	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	42.00000	0.00000	-0.28676	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	42.00000	0.00000	-0.30337	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	42.00000	0.00000	-0.32082	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	42.00000	0.00000	-0.33906	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	42.00000	0.00000	-0.35807	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	42.00000	0.00000	-0.37778	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	42.00000	0.00000	-0.39811	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	42.00000	0.00000	-0.41893	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	42.00000	0.00000	-0.44009	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	42.00000	0.00000	-0.46142	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	42.00000	0.00000	-0.48270	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	42.00000	0.00000	-0.50369	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	42.00000	0.00000	-0.52411	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	42.00000	0.00000	-0.54369	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	42.00000	0.00000	-0.56210	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	42.00000	0.00000	-0.57909	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	42.00000	0.00000	-0.59436	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	42.00000	0.00000	-0.60874	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	42.00000	0.00000	-0.61871	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	42.00000	0.00000	-0.62737	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	42.00000	0.00000	-0.63347	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	42.00000	0.00000	-0.63689	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	42.00000	0.00000	-0.63757	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	42.00000	0.00000	-0.63551	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	42.000						



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mdd]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mdd]	[mm]				
1	Grid 1	9.00000	43.00000	0.00000	-0.30294	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	43.00000	0.00000	-0.31934	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	43.00000	0.00000	-0.33634	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	43.00000	0.00000	-0.35387	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	43.00000	0.00000	-0.37186	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	43.00000	0.00000	-0.39019	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	43.00000	0.00000	-0.40873	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	43.00000	0.00000	-0.42732	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	43.00000	0.00000	-0.44578	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	43.00000	0.00000	-0.46391	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	43.00000	0.00000	-0.48149	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	43.00000	0.00000	-0.49827	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	43.00000	0.00000	-0.51403	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	43.00000	0.00000	-0.52852	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	43.00000	0.00000	-0.54151	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	43.00000	0.00000	-0.55280	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	43.00000	0.00000	-0.56219	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	43.00000	0.00000	-0.56954	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	43.00000	0.00000	-0.57470	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	43.00000	0.00000	-0.57760	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	43.00000	0.00000	-0.57818	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	43.00000	0.00000	-0.57644	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	43.00000	0.00000	-0.57240	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	43.00000	0.00000	-0.56613	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	43.00000	0.00000	-0.55774	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	43.00000	0.00000	-0.54738	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	43.00000	0.00000	-0.53521	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	43.00000	0.00000	-0.52144	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	43.00000	0.00000	-0.50629	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	43.00000	0.00000	-0.48999	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	43.00000	0.00000	-0.47278	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	43.00000	0.00000	-0.45490	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	43.00000	0.00000	-0.43658	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	43.00000	0.00000	-0.41803	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	43.00000	0.00000	-0.39944	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	43.00000	0.00000	-0.38099	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	43.00000	0.00000	-0.36281	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	43.00000	0.00000	-0.34504	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	43.00000	0.00000	-0.32776	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	43.00000	0.00000	-0.31106	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	43.00000	0.00000	-0.29490	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	43.00000	0.00000	-0.27956	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	44.00000	0.00000	-0.17826	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	44.00000	0.00000	-0.18800	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	44.00000	0.00000	-0.19828	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	44.00000	0.00000	-0.20910	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	44.00000	0.00000	-0.22049	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	44.00000	0.00000	-0.23246	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	44.00000	0.00000	-0.24500	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	44.00000	0.00000	-0.25812	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	44.00000	0.00000	-0.27181	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	44.00000	0.00000	-0.28605	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	44.00000	0.00000	-0.30080	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	44.00000	0.00000	-0.31602	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	44.00000	0.00000	-0.33165	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	44.00000	0.00000	-0.34760	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	44.00000	0.00000	-0.36378	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	44.00000	0.00000	-0.38008	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	44.00000	0.00000	-0.39634	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	44.00000	0.00000	-0.41243	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	44.00000	0.00000	-0.42816	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	44.00000	0.00000	-0.44335	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	44.00000	0.00000	-0.45782	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	44.00000	0.00000	-0.47136	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	44.00000	0.00000	-0.48378	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	44.00000	0.00000	-0.49490	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	44.00000	0.00000	-0.50455	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	44.00000	0.00000	-0.51256	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	44.00000	0.00000	-0.51882	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	44.00000	0.00000	-0.52322	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	44.00000	0.00000	-0.52569	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	44.00000	0.00000	-0.52619	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	44.00000	0.00000	-0.52470	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	44.00000	0.00000	-0.52126	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	44.00000	0.00000	-0.51592	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	44.00000	0.00000	-0.50877	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	44.00000	0.00000	-0.49992	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	44.00000	0.00000	-0.48952	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	44.00000	0.00000	-0.47772	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	44.00000	0.00000	-0.46472	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	44.00000	0.00000	-0.45069	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	44.00000	0.00000	-0.43584	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	44.00000	0.00000	-0.42035	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	44.00000	0.00000	-0.40442	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	44.00000	0.00000	-0.38822	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	44.00000	0.00000	-0.37192	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	44.00000	0.00000	-0.35567	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	44.00000	0.00000	-0.33959	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	44.00000	0.00000	-0.32379	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	44.00000	0.00000	-0.30836	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	44.00000	0.00000	-0.29336	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	44.00000	0.00000	-0.27886	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	44.00000	0.00000	-0.26490	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	45.00000	0.00000	-0.17121	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	45.00000	0.00000	-0.18029	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	45.00000	0.00000	-0.18933	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	45.00000	0.00000	-0.19985	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	45.00000	0.00000	-0.21036	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	45.00000	0.00000	-0.22135	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	45.00000	0.00000	-0.23284	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	45.00000						



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road
Ground Movement Assessment - Overall Term
Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	dz	Stress: Calc. Level [mD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mD]	[mm]				
1	Grid 1	37.00000	45.00000	0.00000	-0.42760	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	45.00000	0.00000	-0.41547	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	45.00000	0.00000	-0.40259	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	45.00000	0.00000	-0.38912	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	45.00000	0.00000	-0.37521	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	45.00000	0.00000	-0.36102	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	45.00000	0.00000	-0.34669	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	45.00000	0.00000	-0.33233	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	45.00000	0.00000	-0.31807	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	45.00000	0.00000	-0.30399	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	45.00000	0.00000	-0.29018	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	45.00000	0.00000	-0.27671	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	45.00000	0.00000	-0.26362	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	45.00000	0.00000	-0.25096	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	46.00000	0.00000	-0.16433	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	46.00000	0.00000	-0.17279	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	46.00000	0.00000	-0.18164	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	46.00000	0.00000	-0.19091	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	46.00000	0.00000	-0.20060	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	46.00000	0.00000	-0.21071	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	46.00000	0.00000	-0.22122	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	46.00000	0.00000	-0.23214	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	46.00000	0.00000	-0.24344	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	46.00000	0.00000	-0.25510	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	46.00000	0.00000	-0.26708	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	46.00000	0.00000	-0.27933	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	46.00000	0.00000	-0.29181	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	46.00000	0.00000	-0.30444	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	46.00000	0.00000	-0.31715	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	46.00000	0.00000	-0.32985	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	46.00000	0.00000	-0.34242	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	46.00000	0.00000	-0.35477	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	46.00000	0.00000	-0.36676	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	46.00000	0.00000	-0.37826	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	46.00000	0.00000	-0.38916	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	46.00000	0.00000	-0.39930	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	46.00000	0.00000	-0.40856	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	46.00000	0.00000	-0.41683	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	46.00000	0.00000	-0.42397	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	46.00000	0.00000	-0.42989	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	46.00000	0.00000	-0.43451	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	46.00000	0.00000	-0.43775	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	46.00000	0.00000	-0.43956	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	46.00000	0.00000	-0.43993	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	46.00000	0.00000	-0.43884	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	46.00000	0.00000	-0.43630	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	46.00000	0.00000	-0.43237	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	46.00000	0.00000	-0.42709	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	46.00000	0.00000	-0.42054	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	46.00000	0.00000	-0.41283	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	46.00000	0.00000	-0.40405	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	46.00000	0.00000	-0.39433	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	46.00000	0.00000	-0.38379	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	46.00000	0.00000	-0.37258	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	46.00000	0.00000	-0.36081	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	46.00000	0.00000	-0.34853	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	46.00000	0.00000	-0.33616	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	46.00000	0.00000	-0.32351	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	46.00000	0.00000	-0.31080	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	46.00000	0.00000	-0.29811	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	46.00000	0.00000	-0.28555	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	46.00000	0.00000	-0.27317	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	46.00000	0.00000	-0.26105	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	46.00000	0.00000	-0.24923	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	46.00000	0.00000	-0.23774	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	47.00000	0.00000	-0.15764	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	47.00000	0.00000	-0.16551	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	47.00000	0.00000	-0.17373	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	47.00000	0.00000	-0.18230	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	47.00000	0.00000	-0.19123	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	47.00000	0.00000	-0.20052	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	47.00000	0.00000	-0.21015	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	47.00000	0.00000	-0.22012	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	47.00000	0.00000	-0.23039	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	47.00000	0.00000	-0.24096	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	47.00000	0.00000	-0.25177	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	47.00000	0.00000	-0.26280	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	47.00000	0.00000	-0.27398	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	47.00000	0.00000	-0.28526	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	47.00000	0.00000	-0.29656	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	47.00000	0.00000	-0.30781	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	47.00000	0.00000	-0.31892	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	47.00000	0.00000	-0.32979	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	47.00000	0.00000	-0.34031	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	47.00000	0.00000	-0.35039	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	47.00000	0.00000	-0.35990	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	47.00000	0.00000	-0.36873	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	47.00000	0.00000	-0.37679	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	47.00000	0.00000	-0.38396	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	47.00000	0.00000	-0.39015	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	47.00000	0.00000	-0.39527	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	47.00000	0.00000	-0.39927	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	47.00000	0.00000	-0.40207	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	47.00000	0.00000	-0.40363	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	47.00000	0.00000	-0.40395	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	47.00000	0.00000	-0.40301	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	47.00000	0.00000	-0.40082	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	47.00000	0.00000	-0.39742	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	47.00000	0.00000	-0.39285	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	47.00000	0.00000	-0.38718	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	47.00000	0.00000	-0.38049	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	47.00000	0.00000</					



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
		[m]	[m]	[mD]	[mm]				
1	Grid 1	14.00000	48.00000	0.00000	-0.27757	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	48.00000	0.00000	-0.28756	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	48.00000	0.00000	-0.29741	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	48.00000	0.00000	-0.30701	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	48.00000	0.00000	-0.31628	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	48.00000	0.00000	-0.32513	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	48.00000	0.00000	-0.33346	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	48.00000	0.00000	-0.34119	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	48.00000	0.00000	-0.34822	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	48.00000	0.00000	-0.35447	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	48.00000	0.00000	-0.35985	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	48.00000	0.00000	-0.36431	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	48.00000	0.00000	-0.36778	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	48.00000	0.00000	-0.37021	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	48.00000	0.00000	-0.37157	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	48.00000	0.00000	-0.37194	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	48.00000	0.00000	-0.37102	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	48.00000	0.00000	-0.36912	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	48.00000	0.00000	-0.36617	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	48.00000	0.00000	-0.36229	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	48.00000	0.00000	-0.35727	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	48.00000	0.00000	-0.35145	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	48.00000	0.00000	-0.34480	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	48.00000	0.00000	-0.33741	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	48.00000	0.00000	-0.32936	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	48.00000	0.00000	-0.32076	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	48.00000	0.00000	-0.31169	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	48.00000	0.00000	-0.30224	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	48.00000	0.00000	-0.29251	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	48.00000	0.00000	-0.28258	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	48.00000	0.00000	-0.27253	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	48.00000	0.00000	-0.26244	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	48.00000	0.00000	-0.25237	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	48.00000	0.00000	-0.24237	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	48.00000	0.00000	-0.23252	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	48.00000	0.00000	-0.22283	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	48.00000	0.00000	-0.21336	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	49.00000	0.00000	-0.14485	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	49.00000	0.00000	-0.15165	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	49.00000	0.00000	-0.15872	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	49.00000	0.00000	-0.16606	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	49.00000	0.00000	-0.17366	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	49.00000	0.00000	-0.18151	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	49.00000	0.00000	-0.18960	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	49.00000	0.00000	-0.19791	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	49.00000	0.00000	-0.20643	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	49.00000	0.00000	-0.21513	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	49.00000	0.00000	-0.22398	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	49.00000	0.00000	-0.23294	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	49.00000	0.00000	-0.24197	-0.10000	0.0	0.0	0.0
1	Grid 1	13.00000	49.00000	0.00000	-0.25101	-0.10000	0.0	0.0	0.0
1	Grid 1	14.00000	49.00000	0.00000	-0.26002	-0.10000	0.0	0.0	0.0
1	Grid 1	15.00000	49.00000	0.00000	-0.26893	-0.10000	0.0	0.0	0.0
1	Grid 1	16.00000	49.00000	0.00000	-0.27767	-0.10000	0.0	0.0	0.0
1	Grid 1	17.00000	49.00000	0.00000	-0.28618	-0.10000	0.0	0.0	0.0
1	Grid 1	18.00000	49.00000	0.00000	-0.29437	-0.10000	0.0	0.0	0.0
1	Grid 1	19.00000	49.00000	0.00000	-0.30217	-0.10000	0.0	0.0	0.0
1	Grid 1	20.00000	49.00000	0.00000	-0.30950	-0.10000	0.0	0.0	0.0
1	Grid 1	21.00000	49.00000	0.00000	-0.31628	-0.10000	0.0	0.0	0.0
1	Grid 1	22.00000	49.00000	0.00000	-0.32245	-0.10000	0.0	0.0	0.0
1	Grid 1	23.00000	49.00000	0.00000	-0.32791	-0.10000	0.0	0.0	0.0
1	Grid 1	24.00000	49.00000	0.00000	-0.33262	-0.10000	0.0	0.0	0.0
1	Grid 1	25.00000	49.00000	0.00000	-0.33651	-0.10000	0.0	0.0	0.0
1	Grid 1	26.00000	49.00000	0.00000	-0.33953	-0.10000	0.0	0.0	0.0
1	Grid 1	27.00000	49.00000	0.00000	-0.34165	-0.10000	0.0	0.0	0.0
1	Grid 1	28.00000	49.00000	0.00000	-0.34293	-0.10000	0.0	0.0	0.0
1	Grid 1	29.00000	49.00000	0.00000	-0.34387	-0.10000	0.0	0.0	0.0
1	Grid 1	30.00000	49.00000	0.00000	-0.34236	-0.10000	0.0	0.0	0.0
1	Grid 1	31.00000	49.00000	0.00000	-0.34070	-0.10000	0.0	0.0	0.0
1	Grid 1	32.00000	49.00000	0.00000	-0.33813	-0.10000	0.0	0.0	0.0
1	Grid 1	33.00000	49.00000	0.00000	-0.33457	-0.10000	0.0	0.0	0.0
1	Grid 1	34.00000	49.00000	0.00000	-0.33036	-0.10000	0.0	0.0	0.0
1	Grid 1	35.00000	49.00000	0.00000	-0.32527	-0.10000	0.0	0.0	0.0
1	Grid 1	36.00000	49.00000	0.00000	-0.31945	-0.10000	0.0	0.0	0.0
1	Grid 1	37.00000	49.00000	0.00000	-0.31297	-0.10000	0.0	0.0	0.0
1	Grid 1	38.00000	49.00000	0.00000	-0.30590	-0.10000	0.0	0.0	0.0
1	Grid 1	39.00000	49.00000	0.00000	-0.29832	-0.10000	0.0	0.0	0.0
1	Grid 1	40.00000	49.00000	0.00000	-0.29032	-0.10000	0.0	0.0	0.0
1	Grid 1	41.00000	49.00000	0.00000	-0.28196	-0.10000	0.0	0.0	0.0
1	Grid 1	42.00000	49.00000	0.00000	-0.27333	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	49.00000	0.00000	-0.26449	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	49.00000	0.00000	-0.25553	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	49.00000	0.00000	-0.24649	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	49.00000	0.00000	-0.23745	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	49.00000	0.00000	-0.22845	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	49.00000	0.00000	-0.21954	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	49.00000	0.00000	-0.21076	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	49.00000	0.00000	-0.20215	-0.10000	0.0	0.0	0.0
1	Grid 1	0.00000	50.00000	0.00000	-0.13876	-0.10000	0.0	0.0	0.0
1	Grid 1	1.00000	50.00000	0.00000	-0.14569	-0.10000	0.0	0.0	0.0
1	Grid 1	2.00000	50.00000	0.00000	-0.15155	-0.10000	0.0	0.0	0.0
1	Grid 1	3.00000	50.00000	0.00000	-0.15843	-0.10000	0.0	0.0	0.0
1	Grid 1	4.00000	50.00000	0.00000	-0.16544	-0.10000	0.0	0.0	0.0
1	Grid 1	5.00000	50.00000	0.00000	-0.17266	-0.10000	0.0	0.0	0.0
1	Grid 1	6.00000	50.00000	0.00000	-0.18008	-0.10000	0.0	0.0	0.0
1	Grid 1	7.00000	50.00000	0.00000	-0.18768	-0.10000	0.0	0.0	0.0
1	Grid 1	8.00000	50.00000	0.00000	-0.19545	-0.10000	0.0	0.0	0.0
1	Grid 1	9.00000	50.00000	0.00000	-0.20336	-0.10000	0.0	0.0	0.0
1	Grid 1	10.00000	50.00000	0.00000	-0.21138	-0.10000	0.0	0.0	0.0
1	Grid 1	11.00000	50.00000	0.00000	-0.21948	-0.10000	0.0	0.0	0.0
1	Grid 1	12.00000	50.00000	0.00000	-0.22761	-0.10000			



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

TDJ21377

2 Thurlow Road

Ground Movement Assessment - Overall Term

Heave due to Basement Excavation

Drg. Ref.

Made by
AT

Date

Checked

Ref.	Name	x	y	z	Δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [μ]
1	Grid 1	42.00000	50.00000	0.00000	-0.25568	-0.10000	0.0	0.0	0.0
1	Grid 1	43.00000	50.00000	0.00000	-0.24780	-0.10000	0.0	0.0	0.0
1	Grid 1	44.00000	50.00000	0.00000	-0.23978	-0.10000	0.0	0.0	0.0
1	Grid 1	45.00000	50.00000	0.00000	-0.23168	-0.10000	0.0	0.0	0.0
1	Grid 1	46.00000	50.00000	0.00000	-0.22354	-0.10000	0.0	0.0	0.0
1	Grid 1	47.00000	50.00000	0.00000	-0.21542	-0.10000	0.0	0.0	0.0
1	Grid 1	48.00000	50.00000	0.00000	-0.20736	-0.10000	0.0	0.0	0.0
1	Grid 1	49.00000	50.00000	0.00000	-0.19939	-0.10000	0.0	0.0	0.0
1	Grid 1	50.00000	50.00000	0.00000	-0.19155	-0.10000	0.0	0.0	0.0

Results : Consolidation : Displacement Data : Grids

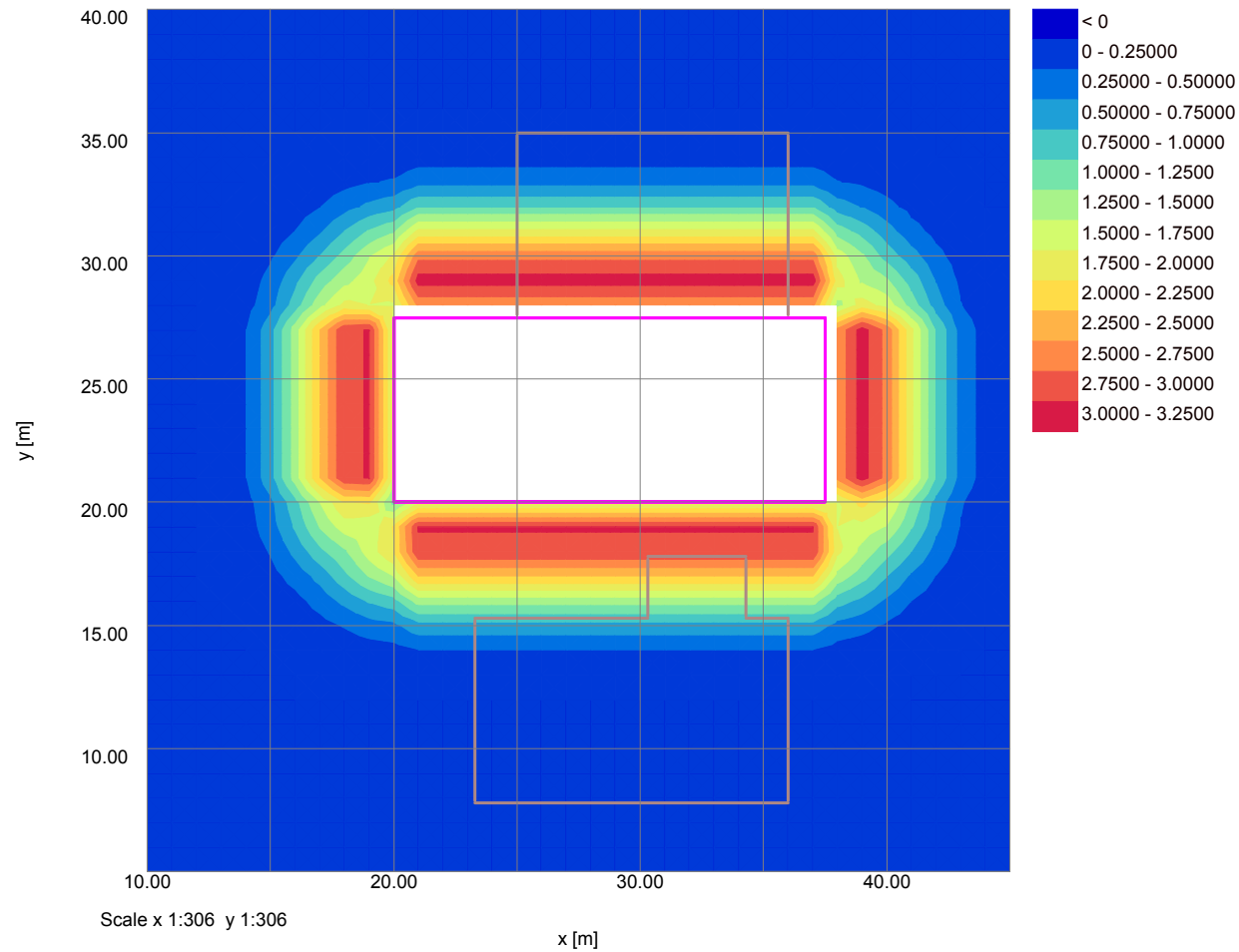
None

Results : Total : Displacement Data : Grids

None

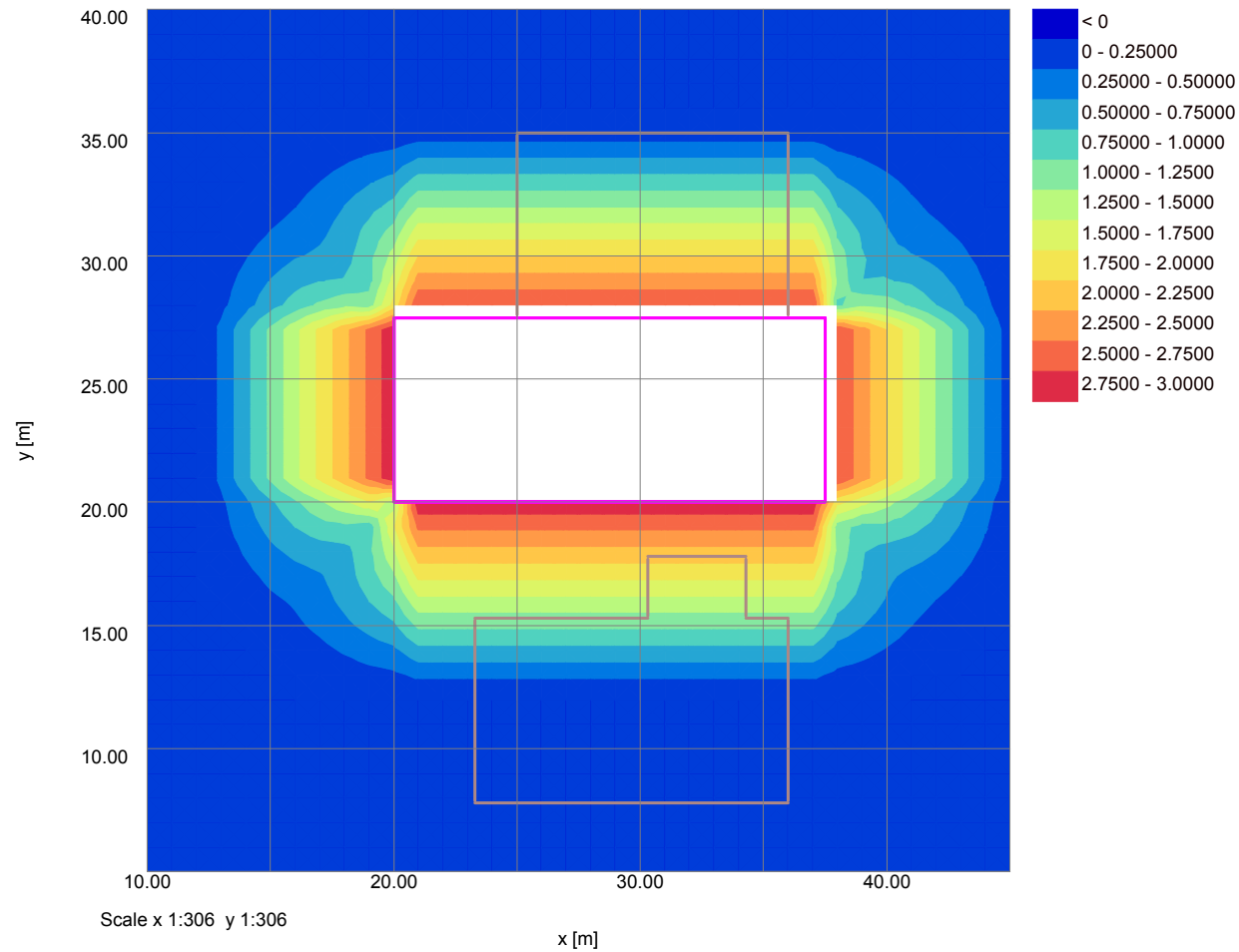
Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Vertical Settlement Contours: Grid 1 (level 0.000m) (Interval 0.25mm)



Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Horizontal Displacement Contours: Grid 1 (level 0.000m) Interval 0.25mm





GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES

Job No. Sheet No. Rev.

LJ21377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London
5mm Movement per Single Stage of Underpinning
Tabular Inputs and Outputs

Titles

Job No.: J21377
Job Title: 2 Thurlow Road, London
Sub-title: 5mm Movement per Single Stage of Underpinning
Calculation Heading: Tabular Inputs and Outputs
Initials: AT
Checker:
Date Saved: 24-Feb-2022
Date Checked:
Notes:
File Name: XDisp - Overall Term - 5 mm movement Curves.xdd
File Path: Z:\PROJECTS\2021\LJ21377 - 2 Thurlow Road\GMA

History

Date	Time	By	Notes
23-Feb-2022	13:22	Alex Taylor	New
23-Feb-2022	15:08	Alex Taylor	
23-Feb-2022	15:38	Alex Taylor	
23-Feb-2022	15:43	Alex Taylor	
24-Feb-2022	10:01	Alex Taylor	

Displacement Lines

Ref.	Name	x1	y1	z1	x2	y2	z2	Intervals	Calculate	Surface type for tunnels
		[m]	[m]	[m]	[m]	[m]	[m]	[No.]		
1	No 1 Thurlow Road - Wall 1	36.00000	27.60000	-0.50000	36.00000	34.90000	-0.50000	7	Surface	Yes
2	No 1 Thurlow Road - Wall 2	36.00000	35.00000	-0.50000	25.00000	35.00000	-0.50000	11	Surface	Yes
3	No 1 Thurlow Road - Wall 3	25.00000	27.60000	-0.50000	25.00000	34.90000	-0.50000	7	Surface	Yes
4	No 3 Thurlow Road - Wall 1	36.00000	7.90000	-0.50000	36.00000	15.20000	-0.50000	7	Surface	Yes
5	No 3 Thurlow Road - Wall 2	36.00000	15.30000	-0.50000	34.30000	15.30000	-0.50000	2	Surface	Yes
6	No 3 Thurlow Road - Wall 3	34.30000	15.40000	-0.50000	34.30000	17.70000	-0.50000	3	Surface	Yes
7	No 3 Thurlow Road - Wall 4	34.30000	17.80000	-0.50000	30.30000	17.80000	-0.50000	4	Surface	Yes
8	No 3 Thurlow Road - Wall 5	30.30000	17.70000	-0.50000	30.30000	15.40000	-0.50000	3	Surface	Yes
9	No 3 Thurlow Road - Wall 6	30.30000	15.30000	-0.50000	23.30000	15.30000	-0.50000	7	Surface	Yes
10	No 3 Thurlow Road - Wall 7	23.30000	15.20000	-0.50000	23.30000	7.90000	-0.50000	7	Surface	Yes
11	No 3 Thurlow Road - Wall 8	23.30000	7.80000	-0.50000	36.00000	7.80000	-0.50000	13	Surface	Yes

Displacement Grids

Ref.	Name	Extrusion: Direction	Base line start: X [m]	Base line start: Y [m]	Base line start: Z(level) [m]	Base line end: X [m]	Base line end: Y [m]	Base line end: Z(level) [m]	Base line: Intervals [No.]	Extrusion: Distance [m]	Extrusion: Intervals [No.]	Surface type for tunnels	Calculate
1	Grid 1	Global X	0.00000	0.00000	0.00000	-	50.00000	0.00000	50	50.00000	50	Surface	Yes

Polygonal Excavations

Ref. 1
Excavation Name: Lower Ground Floor Excavation
Surface level [m]: 0.0
Contribution: Positive
Surface movement curves which are selected are applied between surface and [m]: -1.9500

Corner	x	y	Base Level	Arc Enabled	Stiffened	Prev. Side: d	Prev. Side: p1	Prev. Side: p2*	Next Side: d	Next Side: p1	Next Side: p2*
	[m]	[m]	[m]			[m]	[%]	[%]	[m]	[%]	[%]
1	20.000	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
2	20.000	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
3	37.500	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
4	37.500	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000

Side	x1	y1	x2	y2	G.M. Curve: Vertical	G.M. Curve: Horizontal
	[m]	[m]	[m]	[m]		
1	20.000	20.000	20.000	27.500	0.16 (5mm/3000mm) Movement Ratio Curve	0.16 (5mm/3000mm) Movement Curve
2	20.000	27.500	37.500	27.500	0.16 (5mm/3000mm) Movement Ratio Curve	0.16 (5mm/3000mm) Movement Curve
3	37.500	27.500	37.500	20.000	0.16 (5mm/3000mm) Movement Ratio Curve	0.16 (5mm/3000mm) Movement Curve
4	37.500	20.000	20.000	20.000	0.16 (5mm/3000mm) Movement Ratio Curve	0.16 (5mm/3000mm) Movement Curve

Ref. 2
Excavation Name: Retaining Wall Installation
Surface level [m]: 0.0
Contribution: Positive
Surface movement curves which are selected are applied between surface and [m]: -1.9500

Corner	x	y	Base Level	Arc Enabled	Stiffened	Prev. Side: d	Prev. Side: p1	Prev. Side: p2*	Next Side: d	Next Side: p1	Next Side: p2*
	[m]	[m]	[m]			[m]	[%]	[%]	[m]	[%]	[%]
1	20.000	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
2	20.000	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
3	37.500	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
4	37.500	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000

Side	x1	y1	x2	y2	G.M. Curve: Vertical	G.M. Curve: Horizontal
	[m]	[m]	[m]	[m]		
1	20.000	20.000	20.000	27.500	No vertical ground movement	No horizontal ground movement
2	20.000	27.500	37.500	27.500	No vertical ground movement	No horizontal ground movement
3	37.500	27.500	37.500	20.000	No vertical ground movement	No horizontal ground movement
4	37.500	20.000	20.000	20.000	No vertical ground movement	No horizontal ground movement

Circular Excavations

Vertical Ground Movement Curves

Curve Name: No vertical ground movement
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)(%)]
[0.000,0.000,0.000][1.000,0.000,0.000][0.000,1.000,0.000][1.000,1.000,0.000]
Curve Fitting Method: Polynomial
x Order: 1
y Order: 0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
5mm Movement per Single Stage of Underpinning
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Side	x1 [m]	y1 [m]	x2 [m]	y2 [m]	G.M. Curve: Vertical	G.M. Curve: Horizontal
Polynomial: z = 0.0x + 0.0						
Coeff. of Determination:						
Curve Name: 0.16 (5mm/3000mm) Movement Ratio Curve						
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)(%)]						
[0.000,0.000,0.085][0.100,0.000,0.107][0.200,0.000,0.123][0.300,0.000,0.136]						
[0.400,0.000,0.147][0.500,0.000,0.153][0.600,0.000,0.158][0.700,0.000,0.160]						
[0.800,0.000,0.160][0.900,0.000,0.159][1.000,0.000,0.153][1.100,0.000,0.149]						
[1.200,0.000,0.142][1.300,0.000,0.134][1.400,0.000,0.127][1.500,0.000,0.118]						
[1.600,0.000,0.110][1.700,0.000,0.101][1.800,0.000,0.092][1.900,0.000,0.083]						
[2.000,0.000,0.075][2.100,0.000,0.066][2.200,0.000,0.059][2.300,0.000,0.050]						
[2.400,0.000,0.044][2.500,0.000,0.037][2.600,0.000,0.031][2.700,0.000,0.026]						
[2.800,0.000,0.022][2.900,0.000,0.018][3.000,0.000,0.015][3.100,0.000,0.011]						
[3.200,0.000,0.009][3.300,0.000,0.009][3.400,0.000,0.007][3.500,0.000,0.004]						
[3.600,0.000,0.004][3.700,0.000,0.004][3.800,0.000,0.002][3.900,0.000,0.002]						
[4.000,0.000,0.000]						
Curve Fitting Method: Polynomial						
x Order: 4						
y Order: 0						
Polynomial: z = -5.8253E-3x ⁴ + 6.2662E-2x ³ - 2.2084E-1x ² + 2.3226E-1x + 8.5218E-2						
Coeff. of Determination: 9.9991E-1						

Horizontal Ground Movement Curves

Curve Name: No horizontal ground movement	
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)(%)]	
[0.000,0.000,0.000][1.000,0.000,0.000][0.000,1.000,0.000][1.000,1.000,0.000]	
Curve Fitting Method: Polynomial	
x Order: 0	
y Order: 0	
Polynomial: z = 0.0	
Coeff. of Determination:	
Curve Name: 0.16 (5mm/3000mm) Movement Curve	
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)(%)]	
[0.000,0.000,0.150][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	

Damage Category Strains

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

Specific Buildings - Geometry

Ref.	Building Name	Sub-Building Name	Displacement Line	Distance Along Line: Start	Distance Along Line: End	Vertical Offsets from Line for Vertical Movement Calculations	Vertical Displacement Limit Sensitivity	Damage Category Strains	Poisson's Ratio	E/G
				[m]	[m]	[m]	[mm]			
1	No 1 Thurlow Road	Wall 1	No 1 Thurlow Road - Wall 1	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
2	No 1 Thurlow Road	Wall 2	No 1 Thurlow Road - Wall 2	0.00000	11.00000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
3	No 1 Thurlow Road	Wall 3	No 1 Thurlow Road - Wall 3	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
4	No 3 Thurlow Road	Wall 1	No 3 Thurlow Road - Wall 1	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
5	No 3 Thurlow Road	Wall 2	No 3 Thurlow Road - Wall 2	0.00000	1.70000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
6	No 3 Thurlow Road	Wall 3	No 3 Thurlow Road - Wall 3	0.00000	2.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
7	No 3 Thurlow Road	Wall 4	No 3 Thurlow Road - Wall 4	0.00000	3.99900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
8	No 3 Thurlow Road	Wall 5	No 3 Thurlow Road - Wall 5	0.00000	2.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
9	No 3 Thurlow Road	Wall 6	No 3 Thurlow Road - Wall 6	0.00000	7.00000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
10	No 3 Thurlow Road	Wall 7	No 3 Thurlow Road - Wall 7	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
11	No 3 Thurlow Road	Wall 8	No 3 Thurlow Road - Wall 8	0.00000	12.70000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000

Specific Buildings - Bending Parameters

Ref.	Building Name	Sub-Building Name	Height Default	Hogging:	Hogging:	Hogging:	Sagging:	Sagging:	Sagging:
				2nd Mom. of Area (per unit width)	Dist. of Bending Strain from N.A.	Dist. of N.A. from Edge of Beam in Tension	2nd Mom. of Area (per unit width)	Dist. of Bending Strain from N.A.	Dist. of N.A. from Edge of Beam in Tension
				[m ³]	[m]	[m]	[m ³]	[m]	[m]
1	No 1 Thurlow Road	Wall 1	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
2	No 1 Thurlow Road	Wall 2	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
3	No 1 Thurlow Road	Wall 3	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
4	No 3 Thurlow Road	Wall 1	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
5	No 3 Thurlow Road	Wall 2	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
6	No 3 Thurlow Road	Wall 3	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
7	No 3 Thurlow Road	Wall 4	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
8	No 3 Thurlow Road	Wall 5	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
9	No 3 Thurlow Road	Wall 6	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
10	No 3 Thurlow Road	Wall 7	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
11	No 3 Thurlow Road	Wall 8	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500

Warnings

1	Multiple excavations have been specified. Displacements resulting from each excavation are summed with no account taken of the interactions between excavations (e.g. overlapping zones of influence or 'shielding' of one excavation by another).
---	--

Errors

None

Displacement Results - Displacement Lines

Stage: Ref.	Stage: Name	Disp. Line: Ref.	Disp. Line: Name	Chainage	x	y	z	δx	δy	δz	δH//	δHperp.	Angle
					[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]
0	Base Model 1	No 1 Thurlow Road - Wall 1		0.0	36.00000	27.60000	-0.50000	0.0	-2.8875	1.8828	-2.8875	0.0	90.000
				1.0429	36.00000	28.64286	-0.50000	0.0	-2.4964	3.0695	-2.4964	0.0	90.000
				2.0857	36.00000	29.68571	-0.50000	0.0	-2.1054	2.8693	-2.1054	0.0	90.000
				3.1286	36.00000	30.72857	-0.50000	0.0	-1.7143	2.0477	-1.7143	0.0	90.000
				4.1714	36.00000	31.77143	-0.50000	0.0	-1.3232	1.1472	-1.3232	0.0	90.000
				5.2143	36.00000	32.81429	-0.50000	0.0	-0.93214	0.48730	-0.93214	0.0	90.000
				6.2571	36.00000	33.85714	-0.50000	0.0	-0.54107	0.16443	-0.54107	0.0	90.000
				7.3000	36.00000	34.90000	-0.50000	0.0	-0.15000	0.052066	-0.15000	0.0	90.000
				8.3429	36.00000	35.94286	-0.50000	0.0	0.24107	-0.16443	0.24107	0.0	90.000
				9.3857	36.00000	36.98571	-0.50000	0.0	0.65207	-0.48730	0.65207	0.0	90.000
2	No 1 Thurlow Road - Wall 2			0.0	36.00000	35.00000	-0.50000	0.0	-0.11250	0.641372	0.0	0.11250	180.00



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD 377

2 Thurlow Road, London
5mm Movement per Single Stage of Underpinning
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Line: Ref.	Disp. Line: Name	Chainage	x	y	z	δx	δy	δz	δH//	δHperp.	Angle
					[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]
					1.0000	35.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					2.0000	34.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					3.0000	33.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					4.0000	32.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					5.0000	31.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					6.0000	30.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					7.0000	29.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					8.0000	28.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					9.0000	27.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					10.0000	26.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					11.0000	25.00000	35.00000	-0.50000	0.0	-0.11250	0.041372	0.0	0.11250
					0.0	25.00000	27.60000	-0.50000	0.0	-2.8875	1.8828	-2.8875	0.0
					1.0429	25.00000	28.64286	-0.50000	0.0	-2.4964	3.0695	-2.4964	0.0
					2.0857	25.00000	29.68571	-0.50000	0.0	-2.1054	2.8693	-2.1054	0.0
					3.1286	25.00000	30.72857	-0.50000	0.0	-1.7143	2.0477	-1.7143	0.0
					4.1714	25.00000	31.77143	-0.50000	0.0	-1.3232	1.1472	-1.3232	0.0
					5.2143	25.00000	32.81429	-0.50000	0.0	-0.93214	0.48730	-0.93214	0.0
					6.2571	25.00000	33.85714	-0.50000	0.0	-0.54107	0.16443	-0.54107	0.0
					7.3000	25.00000	34.90000	-0.50000	0.0	-0.15000	0.052066	-0.15000	0.0
					0.0	30.30000	17.90000	-0.50000	0.0	0.0	0.0	0.0	0.0
					1.0429	30.00000	8.94286	-0.50000	0.0	0.0	0.0	0.0	0.0
					2.0857	36.00000	9.98571	-0.50000	0.0	0.0	0.0	0.0	0.0
					3.1286	36.00000	11.02857	-0.50000	0.0	0.0	0.0	0.0	0.0
					4.1714	36.00000	12.07143	-0.50000	0.0	0.0	0.0	0.0	0.0
					5.2143	36.00000	13.11429	-0.50000	0.0	0.34286	0.097885	0.34286	0.0
					6.2571	36.00000	14.15714	-0.50000	0.0	0.73393	0.28425	0.73393	0.0
					7.3000	36.00000	15.20000	-0.50000	0.0	1.1250	0.77139	1.1250	0.0
					0.0	36.00000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					0.85900	35.15000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					1.7090	34.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					0.0	34.30000	15.40000	-0.50000	0.0	1.2000	0.90433	1.2000	0.0
					0.76667	34.30000	16.16667	-0.50000	0.0	1.4875	1.5095	1.4875	0.0
					1.5333	34.30000	16.93333	-0.50000	0.0	1.7750	2.1915	1.7750	0.0
					2.3000	34.30000	17.70000	-0.50000	0.0	2.0625	2.7979	2.0625	0.0
					0.0	34.30000	17.80000	-0.50000	0.0	2.1000	2.8608	0.0	-2.1000
					1.0000	33.30000	17.80000	-0.50000	0.0	2.1000	2.8608	0.0	-2.1000
					2.0000	32.30000	17.80000	-0.50000	0.0	2.1000	2.8608	0.0	-2.1000
					3.0000	31.30000	17.80000	-0.50000	0.0	2.1000	2.8608	0.0	-2.1000
					4.0000	30.30000	17.80000	-0.50000	0.0	2.1000	2.8608	0.0	-2.1000
					0.0	30.30000	17.70000	-0.50000	0.0	2.0625	2.7979	-2.0625	0.0
					0.76667	30.30000	16.93333	-0.50000	0.0	1.7750	2.1915	-1.7750	0.0
					1.5333	30.30000	16.16667	-0.50000	0.0	1.4875	1.5095	-1.4875	0.0
					2.3000	30.30000	15.40000	-0.50000	0.0	1.2000	0.90433	-1.2000	0.0
					0.0	30.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					1.0000	29.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					2.0000	28.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					3.0000	27.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					4.0000	26.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					5.0000	25.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					6.0000	24.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					7.0000	23.30000	15.30000	-0.50000	0.0	1.1625	0.83636	0.0	-1.1625
					0.0	23.30000	15.20000	-0.50000	0.0	1.1250	0.77139	-1.1250	0.0
					1.0429	23.30000	14.15714	-0.50000	0.0	0.73393	0.28425	-0.73393	0.0
					2.0857	23.30000	13.11429	-0.50000	0.0	0.34286	0.097885	-0.34286	0.0
					3.1286	23.30000	12.07143	-0.50000	0.0	0.0	0.0	0.0	0.0
					4.1714	23.30000	11.02857	-0.50000	0.0	0.0	0.0	0.0	0.0
					5.2143	23.30000	9.98571	-0.50000	0.0	0.0	0.0	0.0	0.0
					6.2571	23.30000	8.94286	-0.50000	0.0	0.0	0.0	0.0	0.0
					7.3000	23.30000	7.90000	-0.50000	0.0	0.0	0.0	0.0	0.0
					0.0	23.30000	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					0.97692	24.27692	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					1.9538	25.25385	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					2.9308	26.23077	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					3.9077	27.20769	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					4.8846	28.18462	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					5.8615	29.16154	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					6.8385	30.13846	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					7.8154	31.11538	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					8.7923	32.09231	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					9.7692	33.06923	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					10.746	34.04615	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					11.723	35.02308	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0
					12.700	36.00000	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0

Displacement Results - Displacement Grids

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
0	Base Model 1	Grid 1		0.00000	0.00000	0.00000	0.0	0.0	0.0
				1.00000	0.00000	0.00000	0.0	0.0	0.0
				2.00000	0.00000	0.00000	0.0	0.0	0.0
				3.00000	0.00000	0.00000	0.0	0.0	0.0
				4.00000	0.00000	0.00000	0.0	0.0	0.0
				5.00000	0.00000	0.00000	0.0	0.0	0.0
				6.00000	0.00000	0.00000	0.0	0.0	0.0
				7.00000	0.00000	0.00000	0.0	0.0	0.0
				8.00000	0.00000	0.00000	0.0	0.0	0.0
				9.00000	0.00000	0.00000	0.0	0.0	0.0
				10.00000	0.00000	0.00000	0.0	0.0	0.0
				11.00000	0.00000	0.00000	0.0	0.0	0.0
				12.00000	0.00000	0.00000	0.0	0.0	0.0
				13.00000	0.00000	0.00000	0.0	0.0	0.0
				14.00000	0.00000	0.00000	0.0	0.0	0.0
				15.00000	0.00000	0.00000	0.0	0.0	0.0
				16.00000	0.00000	0.00000	0.0	0.0	0.0
				17.00000	0.00000	0.00000	0.0	0.0	0.0
				18.00000					



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				7.00000	1.00000	0.00000	0.0	0.0	0.0
				8.00000	1.00000	0.00000	0.0	0.0	0.0
				9.00000	1.00000	0.00000	0.0	0.0	0.0
				10.00000	1.00000	0.00000	0.0	0.0	0.0
				11.00000	1.00000	0.00000	0.0	0.0	0.0
				12.00000	1.00000	0.00000	0.0	0.0	0.0
				13.00000	1.00000	0.00000	0.0	0.0	0.0
				14.00000	1.00000	0.00000	0.0	0.0	0.0
				15.00000	1.00000	0.00000	0.0	0.0	0.0
				16.00000	1.00000	0.00000	0.0	0.0	0.0
				17.00000	1.00000	0.00000	0.0	0.0	0.0
				18.00000	1.00000	0.00000	0.0	0.0	0.0
				19.00000	1.00000	0.00000	0.0	0.0	0.0
				20.00000	1.00000	0.00000	0.0	0.0	0.0
				21.00000	1.00000	0.00000	0.0	0.0	0.0
				22.00000	1.00000	0.00000	0.0	0.0	0.0
				23.00000	1.00000	0.00000	0.0	0.0	0.0
				24.00000	1.00000	0.00000	0.0	0.0	0.0
				25.00000	1.00000	0.00000	0.0	0.0	0.0
				26.00000	1.00000	0.00000	0.0	0.0	0.0
				27.00000	1.00000	0.00000	0.0	0.0	0.0
				28.00000	1.00000	0.00000	0.0	0.0	0.0
				29.00000	1.00000	0.00000	0.0	0.0	0.0
				30.00000	1.00000	0.00000	0.0	0.0	0.0
				31.00000	1.00000	0.00000	0.0	0.0	0.0
				32.00000	1.00000	0.00000	0.0	0.0	0.0
				33.00000	1.00000	0.00000	0.0	0.0	0.0
				34.00000	1.00000	0.00000	0.0	0.0	0.0
				35.00000	1.00000	0.00000	0.0	0.0	0.0
				36.00000	1.00000	0.00000	0.0	0.0	0.0
				37.00000	1.00000	0.00000	0.0	0.0	0.0
				38.00000	1.00000	0.00000	0.0	0.0	0.0
				39.00000	1.00000	0.00000	0.0	0.0	0.0
				40.00000	1.00000	0.00000	0.0	0.0	0.0
				41.00000	1.00000	0.00000	0.0	0.0	0.0
				42.00000	1.00000	0.00000	0.0	0.0	0.0
				43.00000	1.00000	0.00000	0.0	0.0	0.0
				44.00000	1.00000	0.00000	0.0	0.0	0.0
				45.00000	1.00000	0.00000	0.0	0.0	0.0
				46.00000	1.00000	0.00000	0.0	0.0	0.0
				47.00000	1.00000	0.00000	0.0	0.0	0.0
				48.00000	1.00000	0.00000	0.0	0.0	0.0
				49.00000	1.00000	0.00000	0.0	0.0	0.0
				50.00000	1.00000	0.00000	0.0	0.0	0.0
				0.00000	2.00000	0.00000	0.0	0.0	0.0
				1.00000	2.00000	0.00000	0.0	0.0	0.0
				2.00000	2.00000	0.00000	0.0	0.0	0.0
				3.00000	2.00000	0.00000	0.0	0.0	0.0
				4.00000	2.00000	0.00000	0.0	0.0	0.0
				5.00000	2.00000	0.00000	0.0	0.0	0.0
				6.00000	2.00000	0.00000	0.0	0.0	0.0
				7.00000	2.00000	0.00000	0.0	0.0	0.0
				8.00000	2.00000	0.00000	0.0	0.0	0.0
				9.00000	2.00000	0.00000	0.0	0.0	0.0
				10.00000	2.00000	0.00000	0.0	0.0	0.0
				11.00000	2.00000	0.00000	0.0	0.0	0.0
				12.00000	2.00000	0.00000	0.0	0.0	0.0
				13.00000	2.00000	0.00000	0.0	0.0	0.0
				14.00000	2.00000	0.00000	0.0	0.0	0.0
				15.00000	2.00000	0.00000	0.0	0.0	0.0
				16.00000	2.00000	0.00000	0.0	0.0	0.0
				17.00000	2.00000	0.00000	0.0	0.0	0.0
				18.00000	2.00000	0.00000	0.0	0.0	0.0
				19.00000	2.00000	0.00000	0.0	0.0	0.0
				20.00000	2.00000	0.00000	0.0	0.0	0.0
				21.00000	2.00000	0.00000	0.0	0.0	0.0
				22.00000	2.00000	0.00000	0.0	0.0	0.0
				23.00000	2.00000	0.00000	0.0	0.0	0.0
				24.00000	2.00000	0.00000	0.0	0.0	0.0
				25.00000	2.00000	0.00000	0.0	0.0	0.0
				26.00000	2.00000	0.00000	0.0	0.0	0.0
				27.00000	2.00000	0.00000	0.0	0.0	0.0
				28.00000	2.00000	0.00000	0.0	0.0	0.0
				29.00000	2.00000	0.00000	0.0	0.0	0.0
				30.00000	2.00000	0.00000	0.0	0.0	0.0
				31.00000	2.00000	0.00000	0.0	0.0	0.0
				32.00000	2.00000	0.00000	0.0	0.0	0.0
				33.00000	2.00000	0.00000	0.0	0.0	0.0
				34.00000	2.00000	0.00000	0.0	0.0	0.0
				35.00000	2.00000	0.00000	0.0	0.0	0.0
				36.00000	2.00000	0.00000	0.0	0.0	0.0
				37.00000	2.00000	0.00000	0.0	0.0	0.0
				38.00000	2.00000	0.00000	0.0	0.0	0.0
				39.00000	2.00000	0.00000	0.0	0.0	0.0
				40.00000	2.00000	0.00000	0.0	0.0	0.0
				41.00000	2.00000	0.00000	0.0	0.0	0.0
				42.00000	2.00000	0.00000	0.0	0.0	0.0
				43.00000	2.00000	0.00000	0.0	0.0	0.0
				44.00000	2.00000	0.00000	0.0	0.0	0.0
				45.00000	2.00000	0.00000	0.0	0.0	0.0
				46.00000	2.00000	0.00000	0.0	0.0	0.0
				47.00000	2.00000	0.00000	0.0	0.0	0.0
				48.00000	2.00000	0.00000	0.0	0.0	0.0
				49.00000	2.00000	0.00000	0.0	0.0	0.0
				50.00000	2.00000	0.00000	0.0	0.0	0.0
				0.00000	3.00000	0.00000	0.0	0.0	0.0
				1.00000	3.00000	0.00000	0.0	0.0	0.0
				2.00000	3.00000	0.00000	0.0	0.0	0.0
				3.00000	3.00000	0.00000	0.0	0.0	0.0
				4.00000	3.00000	0.00000	0.0	0.0	0.0
				5.00000	3.00000	0.00000	0.0	0.0	0.0
				6.00000	3.00000	0.00000	0.0	0.0	0.0
				7.00000	3.00000	0.00000	0.0	0.0	0.0
				8.00000	3.00000	0.00000	0.0	0.0	0.0
				9.00000	3.00000	0.00000	0.0	0.0	0.0
				10.00000	3.00000	0.00000	0.0	0.0	0.0
				11.00000	3.00000	0.00000	0.0	0.0	0.0
				12.00000	3.00000	0.00000	0.0	0.0	0.0
				13.00000	3.00000	0.00000	0.0	0.0	0.0
				14.00000	3.00000	0.00000	0.0	0.0	0.0
				15.00000	3.00000	0.00000	0.0	0.0	0.0
				16.00000	3.00000	0.00000	0.0	0.0	0.0
				17.00000	3.00000	0.00000	0.0	0.0	0.0
				18.00000	3.00000	0.00000	0.0	0.0	0.0
				19.00000	3.00000	0.00000	0.0	0.0	0.0
				20.00000	3.00000	0.00000	0.0	0.0	0.0
				21.00000	3.00000	0.00000	0.0	0.0	0.0
				22.00000	3.00000	0.00000	0.0	0.0	0.0
				23.00000	3.00000	0.00000	0.0	0.0	0.0
				24.00000	3.00000	0.00000	0.0	0.0	0.0
				25.00000	3.00000	0.00000	0.0	0.0	0.0
				26.00000	3.00000	0.00000	0.0	0.0	0.0
				27.00000	3.00000	0.00000	0.0	0.0	0.0
				28.00000	3.00000	0.00000	0.0	0.0	0.0
				29.00000	3.00000	0.00000	0.0	0.0	0.0
				30.00000	3.00000	0.00000	0.0	0.0	0.0
				31.00000	3.00000	0.00000	0.0	0.0	0.0
				32.00000	3.00000	0.00000	0.0	0.0	0.0
				33.00000	3.00000	0.00000	0.0	0.0	0.0
				34.00000	3.00000	0.00000	0.0	0.0	0.0
				35.00000	3.00000	0.00000	0.0	0.0	0.0
				36.00000	3.00000	0.00000	0.0	0.0	0.0
				37.00000	3.00000	0.00000	0.0	0.0	0.0
				38.00000	3.00000	0.00000	0.0	0.0	0.0
				39.00000	3.00000	0.00000	0.0	0.0	0.0
				40.00000	3.00000	0.00000	0.0	0.0	0.0
				41.00000	3.00000	0.00000	0.0	0.0	0.0
				42.00000	3.00000	0.00000	0.0	0.0	0.0
				43.00000	3.00000	0.00000	0.0	0.0	0.0
				44.00000	3.00000	0.00000	0.0	0.0	0.0
				45.00000	3.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				34.00000	6.00000	0.00000	0.0	0.0	0.0
				35.00000	6.00000	0.00000	0.0	0.0	0.0
				36.00000	6.00000	0.00000	0.0	0.0	0.0
				37.00000	6.00000	0.00000	0.0	0.0	0.0
				38.00000	6.00000	0.00000	0.0	0.0	0.0
				39.00000	6.00000	0.00000	0.0	0.0	0.0
				40.00000	6.00000	0.00000	0.0	0.0	0.0
				41.00000	6.00000	0.00000	0.0	0.0	0.0
				42.00000	6.00000	0.00000	0.0	0.0	0.0
				43.00000	6.00000	0.00000	0.0	0.0	0.0
				44.00000	6.00000	0.00000	0.0	0.0	0.0
				45.00000	6.00000	0.00000	0.0	0.0	0.0
				46.00000	6.00000	0.00000	0.0	0.0	0.0
				47.00000	6.00000	0.00000	0.0	0.0	0.0
				48.00000	6.00000	0.00000	0.0	0.0	0.0
				49.00000	6.00000	0.00000	0.0	0.0	0.0
				50.00000	6.00000	0.00000	0.0	0.0	0.0
				0.00000	7.00000	0.00000	0.0	0.0	0.0
				1.00000	7.00000	0.00000	0.0	0.0	0.0
				2.00000	7.00000	0.00000	0.0	0.0	0.0
				3.00000	7.00000	0.00000	0.0	0.0	0.0
				4.00000	7.00000	0.00000	0.0	0.0	0.0
				5.00000	7.00000	0.00000	0.0	0.0	0.0
				6.00000	7.00000	0.00000	0.0	0.0	0.0
				7.00000	7.00000	0.00000	0.0	0.0	0.0
				8.00000	7.00000	0.00000	0.0	0.0	0.0
				9.00000	7.00000	0.00000	0.0	0.0	0.0
				10.00000	7.00000	0.00000	0.0	0.0	0.0
				11.00000	7.00000	0.00000	0.0	0.0	0.0
				12.00000	7.00000	0.00000	0.0	0.0	0.0
				13.00000	7.00000	0.00000	0.0	0.0	0.0
				14.00000	7.00000	0.00000	0.0	0.0	0.0
				15.00000	7.00000	0.00000	0.0	0.0	0.0
				16.00000	7.00000	0.00000	0.0	0.0	0.0
				17.00000	7.00000	0.00000	0.0	0.0	0.0
				18.00000	7.00000	0.00000	0.0	0.0	0.0
				19.00000	7.00000	0.00000	0.0	0.0	0.0
				20.00000	7.00000	0.00000	0.0	0.0	0.0
				21.00000	7.00000	0.00000	0.0	0.0	0.0
				22.00000	7.00000	0.00000	0.0	0.0	0.0
				23.00000	7.00000	0.00000	0.0	0.0	0.0
				24.00000	7.00000	0.00000	0.0	0.0	0.0
				25.00000	7.00000	0.00000	0.0	0.0	0.0
				26.00000	7.00000	0.00000	0.0	0.0	0.0
				27.00000	7.00000	0.00000	0.0	0.0	0.0
				28.00000	7.00000	0.00000	0.0	0.0	0.0
				29.00000	7.00000	0.00000	0.0	0.0	0.0
				30.00000	7.00000	0.00000	0.0	0.0	0.0
				31.00000	7.00000	0.00000	0.0	0.0	0.0
				32.00000	7.00000	0.00000	0.0	0.0	0.0
				33.00000	7.00000	0.00000	0.0	0.0	0.0
				34.00000	7.00000	0.00000	0.0	0.0	0.0
				35.00000	7.00000	0.00000	0.0	0.0	0.0
				36.00000	7.00000	0.00000	0.0	0.0	0.0
				37.00000	7.00000	0.00000	0.0	0.0	0.0
				38.00000	7.00000	0.00000	0.0	0.0	0.0
				39.00000	7.00000	0.00000	0.0	0.0	0.0
				40.00000	7.00000	0.00000	0.0	0.0	0.0
				41.00000	7.00000	0.00000	0.0	0.0	0.0
				42.00000	7.00000	0.00000	0.0	0.0	0.0
				43.00000	7.00000	0.00000	0.0	0.0	0.0
				44.00000	7.00000	0.00000	0.0	0.0	0.0
				45.00000	7.00000	0.00000	0.0	0.0	0.0
				46.00000	7.00000	0.00000	0.0	0.0	0.0
				47.00000	7.00000	0.00000	0.0	0.0	0.0
				48.00000	7.00000	0.00000	0.0	0.0	0.0
				49.00000	7.00000	0.00000	0.0	0.0	0.0
				50.00000	7.00000	0.00000	0.0	0.0	0.0
				0.00000	8.00000	0.00000	0.0	0.0	0.0
				1.00000	8.00000	0.00000	0.0	0.0	0.0
				2.00000	8.00000	0.00000	0.0	0.0	0.0
				3.00000	8.00000	0.00000	0.0	0.0	0.0
				4.00000	8.00000	0.00000	0.0	0.0	0.0
				5.00000	8.00000	0.00000	0.0	0.0	0.0
				6.00000	8.00000	0.00000	0.0	0.0	0.0
				7.00000	8.00000	0.00000	0.0	0.0	0.0
				8.00000	8.00000	0.00000	0.0	0.0	0.0
				9.00000	8.00000	0.00000	0.0	0.0	0.0
				10.00000	8.00000	0.00000	0.0	0.0	0.0
				11.00000	8.00000	0.00000	0.0	0.0	0.0
				12.00000	8.00000	0.00000	0.0	0.0	0.0
				13.00000	8.00000	0.00000	0.0	0.0	0.0
				14.00000	8.00000	0.00000	0.0	0.0	0.0
				15.00000	8.00000	0.00000	0.0	0.0	0.0
				16.00000	8.00000	0.00000	0.0	0.0	0.0
				17.00000	8.00000	0.00000	0.0	0.0	0.0
				18.00000	8.00000	0.00000	0.0	0.0	0.0
				19.00000	8.00000	0.00000	0.0	0.0	0.0
				20.00000	8.00000	0.00000	0.0	0.0	0.0
				21.00000	8.00000	0.00000	0.0	0.0	0.0
				22.00000	8.00000	0.00000	0.0	0.0	0.0
				23.00000	8.00000	0.00000	0.0	0.0	0.0
				24.00000	8.00000	0.00000	0.0	0.0	0.0
				25.00000	8.00000	0.00000	0.0	0.0	0.0
				26.00000	8.00000	0.00000	0.0	0.0	0.0
				27.00000	8.00000	0.00000	0.0	0.0	0.0
				28.00000	8.00000	0.00000	0.0	0.0	0.0
				29.00000	8.00000	0.00000	0.0	0.0	0.0
				30.00000	8.00000	0.00000	0.0	0.0	0.0
				31.00000	8.00000	0.00000	0.0	0.0	0.0
				32.00000	8.00000	0.00000	0.0	0.0	0.0
				33.00000	8.00000	0.00000	0.0	0.0	0.0
				34.00000	8.00000	0.00000	0.0	0.0	0.0
				35.00000	8.00000	0.00000	0.0	0.0	0.0
				36.00000	8.00000	0.00000	0.0	0.0	0.0
				37.00000	8.00000	0.00000	0.0	0.0	0.0
				38.00000	8.00000	0.00000	0.0	0.0	0.0
				39.00000	8.00000	0.00000	0.0	0.0	0.0
				40.00000	8.00000	0.00000	0.0	0.0	0.0
				41.00000	8.00000	0.00000	0.0	0.0	0.0
				42.00000	8.00000	0.00000	0.0	0.0	0.0
				43.00000	8.00000	0.00000	0.0	0.0	0.0
				44.00000	8.00000	0.00000	0.0	0.0	0.0
				45.00000	8.00000	0.00000	0.0	0.0	0.0
				46.00000	8.00000	0.00000	0.0	0.0	0.0
				47.00000	8.00000	0.00000	0.0	0.0	0.0
				48.00000	8.00000	0.00000	0.0	0.0	0.0
				49.00000	8.00000	0.00000	0.0	0.0	0.0
				50.00000	8.00000	0.00000	0.0	0.0	0.0
				0.00000	9.00000	0.00000	0.0	0.0	0.0
				1.00000	9.00000	0.00000	0.0	0.0	0.0
				2.00000	9.00000	0.00000	0.0	0.0	0.0
				3.00000	9.00000	0.00000	0.0	0.0	0.0
				4.00000	9.00000	0.00000	0.0	0.0	0.0
				5.00000	9.00000	0.00000	0.0	0.0	0.0
				6.00000	9.00000	0.00000	0.0	0.0	0.0
				7.00000	9.00000	0.00000	0.0	0.0	0.0
				8.00000	9.00000	0.00000	0.0	0.0	0.0
				9.00000	9.00000	0.00000	0.0	0.0	0.0
				10.00000	9.00000	0.00000	0.0	0.0	0.0
				11.00000	9.00000	0.00000	0.0	0.0	0.0
				12.00000	9.00000	0.00000	0.0	0.0	0.0
				13.00000	9.00000	0.00000	0.0	0.0	0.0
				14.00000	9.00000	0.00000	0.0	0.0	0.0
				15.00000	9.00000	0.00000	0.0	0.0	0.0
				16.00000	9.00000	0.00000	0.0	0.0	0.0
				17.00000	9.00000	0.00000	0.0	0.0	0.0
				18.00000	9.00000	0.00000	0.0	0.0	0.0
				19.00000	9.00000	0.00000	0.0	0.0	0.0
				20.00000	9.00000	0.00000	0.0	0.0	0.0
				21.00000	9.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				10.00000	12.00000	0.00000	0.0	0.0	0.0
				11.00000	12.00000	0.00000	0.0	0.0	0.0
				12.00000	12.00000	0.00000	0.0	0.0	0.0
				13.00000	12.00000	0.00000	0.0	0.0	0.0
				14.00000	12.00000	0.00000	0.0	0.0	0.0
				15.00000	12.00000	0.00000	0.0	0.0	0.0
				16.00000	12.00000	0.00000	0.0	0.0	0.0
				17.00000	12.00000	0.00000	0.0	0.0	0.0
				18.00000	12.00000	0.00000	0.0	0.0	0.0
				19.00000	12.00000	0.00000	0.0	0.0	0.0
				20.00000	12.00000	0.00000	0.0	0.0	0.0
				21.00000	12.00000	0.00000	0.0	0.0	0.0
				22.00000	12.00000	0.00000	0.0	0.0	0.0
				23.00000	12.00000	0.00000	0.0	0.0	0.0
				24.00000	12.00000	0.00000	0.0	0.0	0.0
				25.00000	12.00000	0.00000	0.0	0.0	0.0
				26.00000	12.00000	0.00000	0.0	0.0	0.0
				27.00000	12.00000	0.00000	0.0	0.0	0.0
				28.00000	12.00000	0.00000	0.0	0.0	0.0
				29.00000	12.00000	0.00000	0.0	0.0	0.0
				30.00000	12.00000	0.00000	0.0	0.0	0.0
				31.00000	12.00000	0.00000	0.0	0.0	0.0
				32.00000	12.00000	0.00000	0.0	0.0	0.0
				33.00000	12.00000	0.00000	0.0	0.0	0.0
				34.00000	12.00000	0.00000	0.0	0.0	0.0
				35.00000	12.00000	0.00000	0.0	0.0	0.0
				36.00000	12.00000	0.00000	0.0	0.0	0.0
				37.00000	12.00000	0.00000	0.0	0.0	0.0
				38.00000	12.00000	0.00000	0.0	0.0	0.0
				39.00000	12.00000	0.00000	0.0	0.0	0.0
				40.00000	12.00000	0.00000	0.0	0.0	0.0
				41.00000	12.00000	0.00000	0.0	0.0	0.0
				42.00000	12.00000	0.00000	0.0	0.0	0.0
				43.00000	12.00000	0.00000	0.0	0.0	0.0
				44.00000	12.00000	0.00000	0.0	0.0	0.0
				45.00000	12.00000	0.00000	0.0	0.0	0.0
				46.00000	12.00000	0.00000	0.0	0.0	0.0
				47.00000	12.00000	0.00000	0.0	0.0	0.0
				48.00000	12.00000	0.00000	0.0	0.0	0.0
				49.00000	12.00000	0.00000	0.0	0.0	0.0
				50.00000	12.00000	0.00000	0.0	0.0	0.0
				0.00000	13.00000	0.00000	0.0	0.0	0.0
				1.00000	13.00000	0.00000	0.0	0.0	0.0
				2.00000	13.00000	0.00000	0.0	0.0	0.0
				3.00000	13.00000	0.00000	0.0	0.0	0.0
				4.00000	13.00000	0.00000	0.0	0.0	0.0
				5.00000	13.00000	0.00000	0.0	0.0	0.0
				6.00000	13.00000	0.00000	0.0	0.0	0.0
				7.00000	13.00000	0.00000	0.0	0.0	0.0
				8.00000	13.00000	0.00000	0.0	0.0	0.0
				9.00000	13.00000	0.00000	0.0	0.0	0.0
				10.00000	13.00000	0.00000	0.0	0.0	0.0
				11.00000	13.00000	0.00000	0.0	0.0	0.0
				12.00000	13.00000	0.00000	0.0	0.0	0.0
				13.00000	13.00000	0.00000	0.0	0.0	0.0
				14.00000	13.00000	0.00000	0.0	0.0	0.0
				15.00000	13.00000	0.00000	0.0	0.0	0.0
				16.00000	13.00000	0.00000	0.0	0.0	0.0
				17.00000	13.00000	0.00000	0.0089038	0.031329	0.015757
				18.00000	13.00000	0.00000	0.0117271	0.10161	0.038696
				19.00000	13.00000	0.00000	0.012346	0.16240	0.052118
				20.00000	13.00000	0.00000	0.0	0.20100	0.058712
				21.00000	13.00000	0.00000	0.0	0.30000	0.087630
				22.00000	13.00000	0.00000	0.0	0.30000	0.087630
				23.00000	13.00000	0.00000	0.0	0.30000	0.087630
				24.00000	13.00000	0.00000	0.0	0.30000	0.087630
				25.00000	13.00000	0.00000	0.0	0.30000	0.087630
				26.00000	13.00000	0.00000	0.0	0.30000	0.087630
				27.00000	13.00000	0.00000	0.0	0.30000	0.087630
				28.00000	13.00000	0.00000	0.0	0.30000	0.087630
				29.00000	13.00000	0.00000	0.0	0.30000	0.087630
				30.00000	13.00000	0.00000	0.0	0.30000	0.087630
				31.00000	13.00000	0.00000	0.0	0.30000	0.087630
				32.00000	13.00000	0.00000	0.0	0.30000	0.087630
				33.00000	13.00000	0.00000	0.0	0.30000	0.087630
				34.00000	13.00000	0.00000	0.0	0.30000	0.087630
				35.00000	13.00000	0.00000	0.0	0.30000	0.087630
				36.00000	13.00000	0.00000	0.0	0.30000	0.087630
				37.00000	13.00000	0.00000	0.0	0.30000	0.087630
				38.00000	13.00000	0.00000	-0.0066576	0.18533	0.056348
				39.00000	13.00000	0.00000	-0.016154	0.13394	0.046232
				40.00000	13.00000	0.00000	-0.015026	0.066957	0.028999
				41.00000	13.00000	0.00000	0.0	0.0	0.0
				42.00000	13.00000	0.00000	0.0	0.0	0.0
				43.00000	13.00000	0.00000	0.0	0.0	0.0
				44.00000	13.00000	0.00000	0.0	0.0	0.0
				45.00000	13.00000	0.00000	0.0	0.0	0.0
				46.00000	13.00000	0.00000	0.0	0.0	0.0
				47.00000	13.00000	0.00000	0.0	0.0	0.0
				48.00000	13.00000	0.00000	0.0	0.0	0.0
				49.00000	13.00000	0.00000	0.0	0.0	0.0
				50.00000	13.00000	0.00000	0.0	0.0	0.0
				0.00000	14.00000	0.00000	0.0	0.0	0.0
				1.00000	14.00000	0.00000	0.0	0.0	0.0
				2.00000	14.00000	0.00000	0.0	0.0	0.0
				3.00000	14.00000	0.00000	0.0	0.0	0.0
				4.00000	14.00000	0.00000	0.0	0.0	0.0
				5.00000	14.00000	0.00000	0.0	0.0	0.0
				6.00000	14.00000	0.00000	0.0	0.0	0.0
				7.00000	14.00000	0.00000	0.0	0.0	0.0
				8.00000	14.00000	0.00000	0.0	0.0	0.0
				9.00000	14.00000	0.00000	0.0	0.0	0.0
				10.00000	14.00000	0.00000	0.0	0.0	0.0
				11.00000	14.00000	0.00000	0.0	0.0	0.0
				12.00000	14.00000	0.00000	0.0	0.0	0.0
				13.00000	14.00000	0.00000	0.0	0.0	0.0
				14.00000	14.00000	0.00000	0.0	0.0	0.0
				15.00000	14.00000	0.00000	0.0	0.0	0.0
				16.00000	14.00000	0.00000	0.041333	0.078521	0.037754
				17.00000	14.00000	0.00000	0.060424	0.1720	0.066007
				18.00000	14.00000	0.00000	0.056666	0.27551	0.10212
				19.00000	14.00000	0.00000	0.033852	0.37458	0.13944
				20.00000	14.00000	0.00000	0.0	0.45225	0.16098
				21.00000	14.00000	0.00000	0.0	0.67500	0.24027
				22.00000	14.00000	0.00000	0.0	0.67500	0.24027
				23.00000	14.00000	0.00000	0.0	0.67500	0.24027
				24.00000	14.00000	0.00000	0.0	0.67500	0.24027
				25.00000	14.00000	0.00000	0.0	0.67500	0.24027
				26.00000	14.00000	0.00000	0.0	0.67500	0.24027
				27.00000	14.00000	0.00000	0.0	0.67500	0.24027
				28.00000	14.00000	0.00000	0.0	0.67500	0.24027
				29.00000	14.00000	0.00000	0.0	0.67500	0.24027
				30.00000	14.00000	0.0000			



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				49.00000	14.00000	0.00000	0.0	0.0	0.0
				50.00000	14.00000	0.00000	0.0	0.0	0.0
				0.00000	15.00000	0.00000	0.0	0.0	0.0
				1.00000	15.00000	0.00000	0.0	0.0	0.0
				2.00000	15.00000	0.00000	0.0	0.0	0.0
				3.00000	15.00000	0.00000	0.0	0.0	0.0
				4.00000	15.00000	0.00000	0.0	0.0	0.0
				5.00000	15.00000	0.00000	0.0	0.0	0.0
				6.00000	15.00000	0.00000	0.0	0.0	0.0
				7.00000	15.00000	0.00000	0.0	0.0	0.0
				8.00000	15.00000	0.00000	0.0	0.0	0.0
				9.00000	15.00000	0.00000	0.0	0.0	0.0
				10.00000	15.00000	0.00000	0.0	0.0	0.0
				11.00000	15.00000	0.00000	0.0	0.0	0.0
				12.00000	15.00000	0.00000	0.0	0.0	0.0
				13.00000	15.00000	0.00000	0.0	0.0	0.0
				14.00000	15.00000	0.00000	0.0	0.0	0.0
				15.00000	15.00000	0.00000	0.068337	0.068337	0.040762
				16.00000	15.00000	0.00000	0.11251	0.16195	0.082156
				17.00000	15.00000	0.00000	0.12702	0.28133	0.15920
				18.00000	15.00000	0.00000	0.10968	0.42246	0.26711
				19.00000	15.00000	0.00000	0.063641	0.57170	0.37373
				20.00000	15.00000	0.00000	0.0	0.70350	0.43602
				21.00000	15.00000	0.00000	0.0	1.0500	0.65077
				22.00000	15.00000	0.00000	0.0	1.0500	0.65077
				23.00000	15.00000	0.00000	0.0	1.0500	0.65077
				24.00000	15.00000	0.00000	0.0	1.0500	0.65077
				25.00000	15.00000	0.00000	0.0	1.0500	0.65077
				26.00000	15.00000	0.00000	0.0	1.0500	0.65077
				27.00000	15.00000	0.00000	0.0	1.0500	0.65077
				28.00000	15.00000	0.00000	0.0	1.0500	0.65077
				29.00000	15.00000	0.00000	0.0	1.0500	0.65077
				30.00000	15.00000	0.00000	0.0	1.0500	0.65077
				31.00000	15.00000	0.00000	0.0	1.0500	0.65077
				32.00000	15.00000	0.00000	0.0	1.0500	0.65077
				33.00000	15.00000	0.00000	0.0	1.0500	0.65077
				34.00000	15.00000	0.00000	0.0	1.0500	0.65077
				35.00000	15.00000	0.00000	0.0	1.0500	0.65077
				36.00000	15.00000	0.00000	0.0	1.0500	0.65077
				37.00000	15.00000	0.00000	0.0	1.0500	0.65077
				38.00000	15.00000	0.00000	-0.033015	0.64177	0.41281
				39.00000	15.00000	0.00000	-0.089753	0.49740	0.32341
				40.00000	15.00000	0.00000	-0.12230	0.34975	0.21095
				41.00000	15.00000	0.00000	-0.12369	0.21193	0.11567
				42.00000	15.00000	0.00000	-0.093875	0.11850	0.058211
				43.00000	15.00000	0.00000	-0.037905	0.032319	0.024639
				44.00000	15.00000	0.00000	0.0	0.0	0.0
				45.00000	15.00000	0.00000	0.0	0.0	0.0
				46.00000	15.00000	0.00000	0.0	0.0	0.0
				47.00000	15.00000	0.00000	0.0	0.0	0.0
				48.00000	15.00000	0.00000	0.0	0.0	0.0
				49.00000	15.00000	0.00000	0.0	0.0	0.0
				50.00000	15.00000	0.00000	0.0	0.0	0.0
				0.00000	16.00000	0.00000	0.0	0.0	0.0
				1.00000	16.00000	0.00000	0.0	0.0	0.0
				2.00000	16.00000	0.00000	0.0	0.0	0.0
				3.00000	16.00000	0.00000	0.0	0.0	0.0
				4.00000	16.00000	0.00000	0.0	0.0	0.0
				5.00000	16.00000	0.00000	0.0	0.0	0.0
				6.00000	16.00000	0.00000	0.0	0.0	0.0
				7.00000	16.00000	0.00000	0.0	0.0	0.0
				8.00000	16.00000	0.00000	0.0	0.0	0.0
				9.00000	16.00000	0.00000	0.0	0.0	0.0
				10.00000	16.00000	0.00000	0.0	0.0	0.0
				11.00000	16.00000	0.00000	0.0	0.0	0.0
				12.00000	16.00000	0.00000	0.0	0.0	0.0
				13.00000	16.00000	0.00000	0.0	0.0	0.0
				14.00000	16.00000	0.00000	0.078521	0.041333	0.037754
				15.00000	16.00000	0.00000	0.16195	0.11251	0.082156
				16.00000	16.00000	0.00000	0.20092	0.20092	0.17285
				17.00000	16.00000	0.00000	0.21507	0.34218	0.34537
				18.00000	16.00000	0.00000	0.18418	0.52671	0.56703
				19.00000	16.00000	0.00000	0.10752	0.74319	0.78086
				20.00000	16.00000	0.00000	0.0	0.95475	0.91618
				21.00000	16.00000	0.00000	0.0	1.4250	1.3674
				22.00000	16.00000	0.00000	0.0	1.4250	1.3674
				23.00000	16.00000	0.00000	0.0	1.4250	1.3674
				24.00000	16.00000	0.00000	0.0	1.4250	1.3674
				25.00000	16.00000	0.00000	0.0	1.4250	1.3674
				26.00000	16.00000	0.00000	0.0	1.4250	1.3674
				27.00000	16.00000	0.00000	0.0	1.4250	1.3674
				28.00000	16.00000	0.00000	0.0	1.4250	1.3674
				29.00000	16.00000	0.00000	0.0	1.4250	1.3674
				30.00000	16.00000	0.00000	0.0	1.4250	1.3674
				31.00000	16.00000	0.00000	0.0	1.4250	1.3674
				32.00000	16.00000	0.00000	0.0	1.4250	1.3674
				33.00000	16.00000	0.00000	0.0	1.4250	1.3674
				34.00000	16.00000	0.00000	0.0	1.4250	1.3674
				35.00000	16.00000	0.00000	0.0	1.4250	1.3674
				36.00000	16.00000	0.00000	0.0	1.4250	1.3674
				37.00000	16.00000	0.00000	0.0	1.4250	1.3674
				38.00000	16.00000	0.00000	-0.055944	0.85294	0.86264
				39.00000	16.00000	0.00000	-0.15109	0.63258	0.67928
				40.00000	16.00000	0.00000	-0.20557	0.42925	0.45306
				41.00000	16.00000	0.00000	-0.21322	0.26613	0.25048
				42.00000	16.00000	0.00000	-0.18775	0.15432	0.12047
				43.00000	16.00000	0.00000	-0.12506	0.075002	0.056649
				44.00000	16.00000	0.00000	-0.023601	0.011052	0.013669
				45.00000	16.00000	0.00000	0.0	0.0	0.0
				46.00000	16.00000	0.00000	0.0	0.0	0.0
				47.00000	16.00000	0.00000	0.0	0.0	0.0
				48.00000	16.00000	0.00000	0.0	0.0	0.0
				49.00000	16.00000	0.00000	0.0	0.0	0.0
				50.00000	16.00000	0.00000	0.0	0.0	0.0
				0.00000	17.00000	0.00000	0.0	0.0	0.0
				1.00000	17.00000	0.00000	0.0	0.0	0.0
				2.00000	17.00000	0.00000	0.0	0.0	0.0
				3.00000	17.00000	0.00000	0.0	0.0	0.0
				4.00000	17.00000	0.00000	0.0	0.0	0.0
				5.00000	17.00000	0.00000	0.0	0.0	0.0
				6.00000	17.00000	0.00000	0.0	0.0	0.0
				7.00000	17.00000	0.00000	0.0	0.0	0.0
				8.00000	17.00000	0.00000	0.0	0.0	0.0
				9.00000	17.00000	0.00000	0.0	0.0	0.0
				10.00000	17.00000	0.00000	0.0	0.0	0.0
				11.00000	17.00000	0.00000	0.0	0.0	0.0
				12.00000	17.00000	0.00000	0.0	0.0	0.0
				13.00000	17.00000	0.00000	0.031329	0.0089038	0.015757
				14.00000	17.00000	0.00000	0.17280	0.060424	0.060607
				15.00000	17.00000	0.00000	0.28133	0.12702	0.15920
				16.00000	17.00000	0.00000	0.34218	0.21507	0.34537
				17.00000	17.00000	0.00000	0.33350	0.33350	0.58490
				18.00000	17.00000	0.00000	0.29440	0.55927	0.92794
				19.00000	17.00000	0.00000	0.17812	0.86599	1.2640
				20.00000	17.00000	0.00000	0.0	1.2060	1.5075
				21.00000	17.00000	0.00000	0.0	1.8000	2.



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				37.00000	17.00000	0.00000	0.0	1.8000	2.2499
				38.00000	17.00000	0.00000	-0.093807	1.0380	1.4041
				39.00000	17.00000	0.00000	-0.24605	0.70366	1.1023
				40.00000	17.00000	0.00000	-0.32300	0.43596	0.75230
				41.00000	17.00000	0.00000	-0.34820	0.26985	0.46369
				42.00000	17.00000	0.00000	-0.31889	0.16787	0.24133
				43.00000	17.00000	0.00000	-0.23196	0.091495	0.10175
				44.00000	17.00000	0.00000	-0.10548	0.033090	0.042685
				45.00000	17.00000	0.00000	0.0	0.0	0.0
				46.00000	17.00000	0.00000	0.0	0.0	0.0
				47.00000	17.00000	0.00000	0.0	0.0	0.0
				48.00000	17.00000	0.00000	0.0	0.0	0.0
				49.00000	17.00000	0.00000	0.0	0.0	0.0
				50.00000	17.00000	0.00000	0.0	0.0	0.0
				0.00000	18.00000	0.00000	0.0	0.0	0.0
				1.00000	18.00000	0.00000	0.0	0.0	0.0
				2.00000	18.00000	0.00000	0.0	0.0	0.0
				3.00000	18.00000	0.00000	0.0	0.0	0.0
				4.00000	18.00000	0.00000	0.0	0.0	0.0
				5.00000	18.00000	0.00000	0.0	0.0	0.0
				6.00000	18.00000	0.00000	0.0	0.0	0.0
				7.00000	18.00000	0.00000	0.0	0.0	0.0
				8.00000	18.00000	0.00000	0.0	0.0	0.0
				9.00000	18.00000	0.00000	0.0	0.0	0.0
				10.00000	18.00000	0.00000	0.0	0.0	0.0
				11.00000	18.00000	0.00000	0.0	0.0	0.0
				12.00000	18.00000	0.00000	0.0	0.0	0.0
				13.00000	18.00000	0.00000	0.10161	0.017271	0.038696
				14.00000	18.00000	0.00000	0.27551	0.056666	0.10212
				15.00000	18.00000	0.00000	0.42246	0.10908	0.26731
				16.00000	18.00000	0.00000	0.52671	0.18418	0.56703
				17.00000	18.00000	0.00000	0.55927	0.29440	0.92794
				18.00000	18.00000	0.00000	0.46608	0.46608	1.1985
				19.00000	18.00000	0.00000	0.30793	0.88062	1.6170
				20.00000	18.00000	0.00000	0.0	1.4572	1.9896
				21.00000	18.00000	0.00000	0.0	2.1750	2.9695
				22.00000	18.00000	0.00000	0.0	2.1750	2.9695
				23.00000	18.00000	0.00000	0.0	2.1750	2.9695
				24.00000	18.00000	0.00000	0.0	2.1750	2.9695
				25.00000	18.00000	0.00000	0.0	2.1750	2.9695
				26.00000	18.00000	0.00000	0.0	2.1750	2.9695
				27.00000	18.00000	0.00000	0.0	2.1750	2.9695
				28.00000	18.00000	0.00000	0.0	2.1750	2.9695
				29.00000	18.00000	0.00000	0.0	2.1750	2.9695
				30.00000	18.00000	0.00000	0.0	2.1750	2.9695
				31.00000	18.00000	0.00000	0.0	2.1750	2.9695
				32.00000	18.00000	0.00000	0.0	2.1750	2.9695
				33.00000	18.00000	0.00000	0.0	2.1750	2.9695
				34.00000	18.00000	0.00000	0.0	2.1750	2.9695
				35.00000	18.00000	0.00000	0.0	2.1750	2.9695
				36.00000	18.00000	0.00000	0.0	2.1750	2.9695
				37.00000	18.00000	0.00000	0.0	2.1750	2.9695
				38.00000	18.00000	0.00000	-0.16780	1.1599	1.8131
				39.00000	18.00000	0.00000	-0.40711	0.64769	1.4106
				40.00000	18.00000	0.00000	-0.53315	0.37036	1.0055
				41.00000	18.00000	0.00000	-0.55456	0.23355	0.74801
				42.00000	18.00000	0.00000	-0.48132	0.14355	0.40265
				43.00000	18.00000	0.00000	-0.35313	0.081084	0.16729
				44.00000	18.00000	0.00000	-0.19125	0.035604	0.064235
				45.00000	18.00000	0.00000	-0.0075442	0.0011794	0.0030579
				46.00000	18.00000	0.00000	0.0	0.0	0.0
				47.00000	18.00000	0.00000	0.0	0.0	0.0
				48.00000	18.00000	0.00000	0.0	0.0	0.0
				49.00000	18.00000	0.00000	0.0	0.0	0.0
				50.00000	18.00000	0.00000	0.0	0.0	0.0
				0.00000	19.00000	0.00000	0.0	0.0	0.0
				1.00000	19.00000	0.00000	0.0	0.0	0.0
				2.00000	19.00000	0.00000	0.0	0.0	0.0
				3.00000	19.00000	0.00000	0.0	0.0	0.0
				4.00000	19.00000	0.00000	0.0	0.0	0.0
				5.00000	19.00000	0.00000	0.0	0.0	0.0
				6.00000	19.00000	0.00000	0.0	0.0	0.0
				7.00000	19.00000	0.00000	0.0	0.0	0.0
				8.00000	19.00000	0.00000	0.0	0.0	0.0
				9.00000	19.00000	0.00000	0.0	0.0	0.0
				10.00000	19.00000	0.00000	0.0	0.0	0.0
				11.00000	19.00000	0.00000	0.0	0.0	0.0
				12.00000	19.00000	0.00000	0.0	0.0	0.0
				13.00000	19.00000	0.00000	0.16240	0.012346	0.052118
				14.00000	19.00000	0.00000	0.37458	0.033852	0.13944
				15.00000	19.00000	0.00000	0.57170	0.063641	0.37373
				16.00000	19.00000	0.00000	0.74319	0.10752	0.78086
				17.00000	19.00000	0.00000	0.86599	0.17812	1.2649
				18.00000	19.00000	0.00000	0.88062	0.30793	1.6170
				19.00000	19.00000	0.00000	0.59867	0.59867	1.5500
				20.00000	19.00000	0.00000	0.0	1.7085	2.0159
				21.00000	19.00000	0.00000	0.0	2.5500	3.0088
				22.00000	19.00000	0.00000	0.0	2.5500	3.0088
				23.00000	19.00000	0.00000	0.0	2.5500	3.0088
				24.00000	19.00000	0.00000	0.0	2.5500	3.0088
				25.00000	19.00000	0.00000	0.0	2.5500	3.0088
				26.00000	19.00000	0.00000	0.0	2.5500	3.0088
				27.00000	19.00000	0.00000	0.0	2.5500	3.0088
				28.00000	19.00000	0.00000	0.0	2.5500	3.0088
				29.00000	19.00000	0.00000	0.0	2.5500	3.0088
				30.00000	19.00000	0.00000	0.0	2.5500	3.0088
				31.00000	19.00000	0.00000	0.0	2.5500	3.0088
				32.00000	19.00000	0.00000	0.0	2.5500	3.0088
				33.00000	19.00000	0.00000	0.0	2.5500	3.0088
				34.00000	19.00000	0.00000	0.0	2.5500	3.0088
				35.00000	19.00000	0.00000	0.0	2.5500	3.0088
				36.00000	19.00000	0.00000	0.0	2.5500	3.0088
				37.00000	19.00000	0.00000	0.0	2.5500	3.0088
				38.00000	19.00000	0.00000	-0.36981	1.0576	1.7436
				39.00000	19.00000	0.00000	-0.79064	0.42093	1.6557
				40.00000	19.00000	0.00000	-0.89352	0.23198	1.4743
				41.00000	19.00000	0.00000	-0.81302	0.13819	1.0239
				42.00000	19.00000	0.00000	-0.66165	0.083270	0.55888
				43.00000	19.00000	0.00000	-0.47552	0.047442	0.23370
				44.00000	19.00000	0.00000	-0.26096	0.022294	0.083877
				45.00000	19.00000	0.00000	-0.052489	0.0036965	0.021457
				46.00000	19.00000	0.00000	0.0	0.0	0.0
				47.00000	19.00000	0.00000	0.0	0.0	0.0
				48.00000	19.00000	0.00000	0.0	0.0	0.0
				49.00000	19.00000	0.00000	0.0	0.0	0.0
				50.00000	19.00000	0.00000	0.0	0.0	0.0
				0.00000	20.00000	0.00000	0.0	0.0	0.0
				1.00000	20.00000	0.00000	0.0	0.0	0.0
				2.00000	20.00000	0.00000	0.0	0.0	0.0
				3.00000	20.00000	0.00000	0.0	0.0	0.0
				4.00000	20.00000	0.00000	0.0	0.0	0.0
				5.00000	20.00000	0.00000	0.0	0.0	0.0
				6.00000	20.00000	0.00000	0.0	0.0	0.0
				7.00000	20.00000	0.00000	0.0	0.0	0.0
				8.00000	20.00000	0.00000	0.0	0.0	0.0
				9.00000	20.00000	0.00000	0.0	0.0	



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by

Date
24-Feb-2022

Checked

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				25.00000	20.00000	0.00000	0.0	2.9250	1.6618
				26.00000	20.00000	0.00000	0.0	2.9250	1.6618
				27.00000	20.00000	0.00000	0.0	2.9250	1.6618
				28.00000	20.00000	0.00000	0.0	2.9250	1.6618
				29.00000	20.00000	0.00000	0.0	2.9250	1.6618
				30.00000	20.00000	0.00000	0.0	2.9250	1.6618
				31.00000	20.00000	0.00000	0.0	2.9250	1.6618
				32.00000	20.00000	0.00000	0.0	2.9250	1.6618
				33.00000	20.00000	0.00000	0.0	2.9250	1.6618
				34.00000	20.00000	0.00000	0.0	2.9250	1.6618
				35.00000	20.00000	0.00000	0.0	2.9250	1.6618
				36.00000	20.00000	0.00000	0.0	2.9250	1.6618
				37.00000	20.00000	0.00000	0.0	2.9250	1.6618
				38.00000	20.00000	0.00000	-1.8341	0.0	1.7152
				39.00000	20.00000	0.00000	-1.5829	0.0	2.0883
				40.00000	20.00000	0.00000	-1.3316	0.0	1.7809
				41.00000	20.00000	0.00000	-1.0804	0.0	1.2087
				42.00000	20.00000	0.00000	-0.82912	0.0	0.65337
				43.00000	20.00000	0.00000	-0.57787	0.0	0.27192
				44.00000	20.00000	0.00000	-0.32662	0.0	0.095204
				45.00000	20.00000	0.00000	-0.075375	0.0	0.027719
				46.00000	20.00000	0.00000	0.0	0.0	0.0
				47.00000	20.00000	0.00000	0.0	0.0	0.0
				48.00000	20.00000	0.00000	0.0	0.0	0.0
				49.00000	20.00000	0.00000	0.0	0.0	0.0
				50.00000	20.00000	0.00000	0.0	0.0	0.0
				0.00000	21.00000	0.00000	0.0	0.0	0.0
				1.00000	21.00000	0.00000	0.0	0.0	0.0
				2.00000	21.00000	0.00000	0.0	0.0	0.0
				3.00000	21.00000	0.00000	0.0	0.0	0.0
				4.00000	21.00000	0.00000	0.0	0.0	0.0
				5.00000	21.00000	0.00000	0.0	0.0	0.0
				6.00000	21.00000	0.00000	0.0	0.0	0.0
				7.00000	21.00000	0.00000	0.0	0.0	0.0
				8.00000	21.00000	0.00000	0.0	0.0	0.0
				9.00000	21.00000	0.00000	0.0	0.0	0.0
				10.00000	21.00000	0.00000	0.0	0.0	0.0
				11.00000	21.00000	0.00000	0.0	0.0	0.0
				12.00000	21.00000	0.00000	0.0	0.0	0.0
				13.00000	21.00000	0.00000	0.30000	0.0	0.087630
				14.00000	21.00000	0.00000	0.67500	0.0	0.24027
				15.00000	21.00000	0.00000	1.0500	0.0	0.65077
				16.00000	21.00000	0.00000	1.4250	0.0	1.3674
				17.00000	21.00000	0.00000	1.8000	0.0	2.2499
				18.00000	21.00000	0.00000	2.1750	0.0	2.9695
				19.00000	21.00000	0.00000	2.5500	0.0	3.0888
				20.00000	21.00000	0.00000	2.9250	0.0	1.6618
				21.00000	21.00000	0.00000	Point lies within an excavation.		
				22.00000	21.00000	0.00000	Point lies within an excavation.		
				23.00000	21.00000	0.00000	Point lies within an excavation.		
				24.00000	21.00000	0.00000	Point lies within an excavation.		
				25.00000	21.00000	0.00000	Point lies within an excavation.		
				26.00000	21.00000	0.00000	Point lies within an excavation.		
				27.00000	21.00000	0.00000	Point lies within an excavation.		
				28.00000	21.00000	0.00000	Point lies within an excavation.		
				29.00000	21.00000	0.00000	Point lies within an excavation.		
				30.00000	21.00000	0.00000	Point lies within an excavation.		
				31.00000	21.00000	0.00000	Point lies within an excavation.		
				32.00000	21.00000	0.00000	Point lies within an excavation.		
				33.00000	21.00000	0.00000	Point lies within an excavation.		
				34.00000	21.00000	0.00000	Point lies within an excavation.		
				35.00000	21.00000	0.00000	Point lies within an excavation.		
				36.00000	21.00000	0.00000	Point lies within an excavation.		
				37.00000	21.00000	0.00000	Point lies within an excavation.		
				38.00000	21.00000	0.00000	-2.7375	0.0	2.5600
				39.00000	21.00000	0.00000	-2.3625	0.0	3.1139
				40.00000	21.00000	0.00000	-1.9875	0.0	2.6580
				41.00000	21.00000	0.00000	-1.6125	0.0	1.8041
				42.00000	21.00000	0.00000	-1.2375	0.0	0.97518
				43.00000	21.00000	0.00000	-0.86250	0.0	0.40585
				44.00000	21.00000	0.00000	-0.48750	0.0	0.14210
				45.00000	21.00000	0.00000	-0.11250	0.0	0.041372
				46.00000	21.00000	0.00000	0.0	0.0	0.0
				47.00000	21.00000	0.00000	0.0	0.0	0.0
				48.00000	21.00000	0.00000	0.0	0.0	0.0
				49.00000	21.00000	0.00000	0.0	0.0	0.0
				50.00000	21.00000	0.00000	0.0	0.0	0.0
				0.00000	22.00000	0.00000	0.0	0.0	0.0
				1.00000	22.00000	0.00000	0.0	0.0	0.0
				2.00000	22.00000	0.00000	0.0	0.0	0.0
				3.00000	22.00000	0.00000	0.0	0.0	0.0
				4.00000	22.00000	0.00000	0.0	0.0	0.0
				5.00000	22.00000	0.00000	0.0	0.0	0.0
				6.00000	22.00000	0.00000	0.0	0.0	0.0
				7.00000	22.00000	0.00000	0.0	0.0	0.0
				8.00000	22.00000	0.00000	0.0	0.0	0.0
				9.00000	22.00000	0.00000	0.0	0.0	0.0
				10.00000	22.00000	0.00000	0.0	0.0	0.0
				11.00000	22.00000	0.00000	0.0	0.0	0.0
				12.00000	22.00000	0.00000	0.0	0.0	0.0
				13.00000	22.00000	0.00000	0.30000	0.0	0.087630
				14.00000	22.00000	0.00000	0.67500	0.0	0.24027
				15.00000	22.00000	0.00000	1.0500	0.0	0.65077
				16.00000	22.00000	0.00000	1.4250	0.0	1.3674
				17.00000	22.00000	0.00000	1.8000	0.0	2.2499
				18.00000	22.00000	0.00000	2.1750	0.0	2.9695
				19.00000	22.00000	0.00000	2.5500	0.0	3.0888
				20.00000	22.00000	0.00000	2.9250	0.0	1.6618
				21.00000	22.00000	0.00000	Point lies within an excavation.		
				22.00000	22.00000	0.00000	Point lies within an excavation.		
				23.00000	22.00000	0.00000	Point lies within an excavation.		
				24.00000	22.00000	0.00000	Point lies within an excavation.		
				25.00000	22.00000	0.00000	Point lies within an excavation.		
				26.00000	22.00000	0.00000	Point lies within an excavation.		
				27.00000	22.00000	0.00000	Point lies within an excavation.		
				28.00000	22.00000	0.00000	Point lies within an excavation.		
				29.00000	22.00000	0.00000	Point lies within an excavation.		
				30.00000	22.00000	0.00000	Point lies within an excavation.		
				31.00000	22.00000	0.00000	Point lies within an excavation.		
				32.00000	22.00000	0.00000	Point lies within an excavation.		
				33.00000	22.00000	0.00000	Point lies within an excavation.		
				34.00000	22.00000	0.00000	Point lies within an excavation.		
				35.00000	22.00000	0.00000	Point lies within an excavation.		
				36.00000	22.00000	0.00000	Point lies within an excavation.		
				37.00000	22.00000	0.00000	Point lies within an excavation.		
				38.00000	22.00000	0.00000	-2.7375	0.0	2.5600
				39.00000	22.00000	0.00000	-2.3625	0.0	3.1139
				40.00000	22.00000	0.00000	-1.9875	0.0	2.6580
				41.00000	22.00000	0.00000	-1.6125	0.0	1.8041
				42.00000	22.00000	0.00000	-1.2375	0.0	0.97518
				43.00000	22.00000	0.00000	-0.86250	0.0	0.40585
				44.00000	22.00000	0.00000	-0.48750	0.0	0.14210
				45.00000	22.00000	0.00000	-0.11250	0.0	0.041372
				46.00000	22.00000	0.00000	0.0	0.0	0.0
				47.00000	22.00000	0.00000	0.0	0.0	0.0
				48.00000	22.00000	0.00000	0.0	0.0	0.0
				49.00000	22.00000	0.00000	0.0	0.0	0.0
				50.00000	22.00000	0.00000	0.0	0.0	0.0
				0.00000	23.00000	0.00000	0.0	0.0	0.0
				1.00000	23.00000	0.00000	0.0	0.0	0.0
				2.00000	23.00000	0.00000	0.0	0.0	0.0
				3.00000	23.00000	0.00000	0.0	0.0	0.0
				4.00000	23.00000	0.00000	0.0	0.0	0.0
				5.00000	23.00000	0.00000	0.0	0.0	0.0
				6.00000	23.00000	0.00000	0.0	0.0	0.0
				7.00000	23.00000	0.00000	0.0	0.0	0.0
				8.00000	23.00000	0.00000	0.0	0.0	0.0
				9.00000	23.00000	0.00000	0.0	0.0	0.0
				10.00000	23.00000	0.00000	0.0	0.0	0.0
				11.00000	23.00000	0.00000	0.0	0.0	0.0
				12.00000	23.00000	0.00000	0.0	0.0	0.0



5mm Movement per Single Stage of Underpinning Tabular Inputs and Outputs

\$ ~~LTD~~ 377

Made by AT	Date 24-Feb-2022	Checked
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Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				13.00000	23.00000	0.00000	0.30900	0.0	0.087630
				14.00000	23.00000	0.00000	0.67500	0.0	0.24027
				15.00000	23.00000	0.00000	1.0500	0.0	0.65077
				16.00000	23.00000	0.00000	1.4250	0.0	1.36740
				17.00000	23.00000	0.0000	1.8000	0.0	2.2499
				18.00000	23.00000	0.0000	2.1750	0.0	2.9695
				19.00000	23.00000	0.0000	2.5500	0.0	3.0088
				20.00000	23.00000	0.00000	2.9250	0.0	1.6618
				21.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				22.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				23.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				24.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				25.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				26.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				27.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				28.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				29.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				30.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				31.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				32.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				33.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				34.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				35.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				36.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				37.00000	23.00000	0.00000	Point	lies within an excavation.	0.0
				38.00000	23.00000	0.00000	-2.7375	0.0	2.5600
				39.00000	23.00000	0.00000	-2.3625	0.0	3.1139
				40.00000	23.00000	0.00000	-1.9875	0.0	2.6580
				41.00000	23.00000	0.00000	-1.6125	0.0	1.8041
				42.00000	23.00000	0.00000	-1.2375	0.0	0.97518
				43.00000	23.00000	0.00000	-0.86250	0.0	0.40585
				44.00000	23.00000	0.00000	-0.48750	0.0	0.14219
				45.00000	23.00000	0.00000	-0.11250	0.0	0.041372
				46.00000	23.00000	0.00000	0.0	0.0	0.0
				47.00000	23.00000	0.00000	0.0	0.0	0.0
				48.00000	23.00000	0.00000	0.0	0.0	0.0
				49.00000	23.00000	0.00000	0.0	0.0	0.0
				50.00000	23.00000	0.00000	0.0	0.0	0.0
				0.00000	24.00000	0.00000	0.0	0.0	0.0
				1.00000	24.00000	0.00000	0.0	0.0	0.0
				2.00000	24.00000	0.00000	0.0	0.0	0.0
				3.00000	24.00000	0.00000	0.0	0.0	0.0
				4.00000	24.00000	0.00000	0.0	0.0	0.0
				5.00000	24.00000	0.00000	0.0	0.0	0.0
				6.00000	24.00000	0.00000	0.0	0.0	0.0
				7.00000	24.00000	0.00000	0.0	0.0	0.0
				8.00000	24.00000	0.00000	0.0	0.0	0.0



5mm Movement per Single Stage of Underpinning Tabular Inputs and Outputs

Made by	Date	Checked
AT	24-Feb-2022	

Stage: Ref.	Stage: Name	Disp. Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				1.00000	26.00000	0.00000	0.0	0.0	0.0
				2.00000	26.00000	0.00000	0.0	0.0	0.0
				3.00000	26.00000	0.00000	0.0	0.0	0.0
				4.00000	26.00000	0.00000	0.0	0.0	0.0
				5.00000	26.00000	0.00000	0.0	0.0	0.0
				6.00000	26.00000	0.00000	0.0	0.0	0.0
				7.00000	26.00000	0.00000	0.0	0.0	0.0
				8.00000	26.00000	0.00000	0.0	0.0	0.0
				9.00000	26.00000	0.00000	0.0	0.0	0.0
				10.00000	26.00000	0.00000	0.0	0.0	0.0
				11.00000	26.00000	0.00000	0.0	0.0	0.0
				12.00000	26.00000	0.00000	0.0	0.0	0.0
				13.00000	26.00000	0.00000	0.39000	0.0	0.087630
				14.00000	26.00000	0.00000	0.87500	0.0	0.24027
				15.00000	26.00000	0.00000	1.05000	0.0	0.65077
				16.00000	26.00000	0.00000	1.42500	0.0	1.3674
				17.00000	26.00000	0.00000	1.80000	0.0	2.2499
				18.00000	26.00000	0.00000	2.17500	0.0	2.9695
				19.00000	26.00000	0.00000	2.55000	0.0	3.0088
				20.00000	26.00000	0.00000	2.92500	0.0	1.6618
				21.00000	26.00000	0.00000	Point	lies within an excavation.	
				22.00000	26.00000	0.00000	Point	lies within an excavation.	
				23.00000	26.00000	0.00000	Point	lies within an excavation.	
				24.00000	26.00000	0.00000	Point	lies within an excavation.	
				25.00000	26.00000	0.00000	Point	lies within an excavation.	
				26.00000	26.00000	0.00000	Point	lies within an excavation.	
				27.00000	26.00000	0.00000	Point	lies within an excavation.	
				28.00000	26.00000	0.00000	Point	lies within an excavation.	
				29.00000	26.00000	0.00000	Point	lies within an excavation.	
				30.00000	26.00000	0.00000	Point	lies within an excavation.	
				31.00000	26.00000	0.00000	Point	lies within an excavation.	
				32.00000	26.00000	0.00000	Point	lies within an excavation.	
				33.00000	26.00000	0.00000	Point	lies within an excavation.	
				34.00000	26.00000	0.00000	Point	lies within an excavation.	
				35.00000	26.00000	0.00000	Point	lies within an excavation.	
				36.00000	26.00000	0.00000	Point	lies within an excavation.	
				37.00000	26.00000	0.00000	Point	lies within an excavation.	
				38.00000	26.00000	0.00000	-2.7375	0.0	2.5600
				39.00000	26.00000	0.00000	-2.3625	0.0	3.1139
				40.00000	26.00000	0.00000	-1.9875	0.0	2.6580
				41.00000	26.00000	0.00000	-1.6125	0.0	1.8041
				42.00000	26.00000	0.00000	-1.2375	0.0	0.97518
				43.00000	26.00000	0.00000	-0.86250	0.0	0.40585
				44.00000	26.00000	0.00000	-0.48750	0.0	0.14210
				45.00000	26.00000	0.00000	-0.11250	0.0	0.041372
				46.00000	26.00000	0.00000	0.0	0.0	0.0
				47.00000	26.00000	0.00000	0.0	0.0	0.0
				48.00000	26.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

2 Thurlow Road, London
5mm Movement per Single Stage of Underpinning
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				40.00000	28.00000	0.00000	-1.1113	-0.12371	1.6440
				41.00000	28.00000	0.00000	-0.95010	-0.072230	1.1310
				42.00000	28.00000	0.00000	-0.74955	-0.043223	0.61716
				43.00000	28.00000	0.00000	-0.53077	-0.024645	0.25798
				44.00000	28.00000	0.00000	-0.30208	-0.011737	0.091073
				45.00000	28.00000	0.00000	-0.067410	-0.0022515	0.025866
				46.00000	28.00000	0.00000	0.0	0.0	0.0
				47.00000	28.00000	0.00000	0.0	0.0	0.0
				48.00000	28.00000	0.00000	0.0	0.0	0.0
				49.00000	28.00000	0.00000	0.0	0.0	0.0
				50.00000	28.00000	0.00000	0.0	0.0	0.0
				0.00000	29.00000	0.00000	0.0	0.0	0.0
				1.00000	29.00000	0.00000	0.0	0.0	0.0
				2.00000	29.00000	0.00000	0.0	0.0	0.0
				3.00000	29.00000	0.00000	0.0	0.0	0.0
				4.00000	29.00000	0.00000	0.0	0.0	0.0
				5.00000	29.00000	0.00000	0.0	0.0	0.0
				6.00000	29.00000	0.00000	0.0	0.0	0.0
				7.00000	29.00000	0.00000	0.0	0.0	0.0
				8.00000	29.00000	0.00000	0.0	0.0	0.0
				9.00000	29.00000	0.00000	0.0	0.0	0.0
				10.00000	29.00000	0.00000	0.0	0.0	0.0
				11.00000	29.00000	0.00000	0.0	0.0	0.0
				12.00000	29.00000	0.00000	0.0	0.0	0.0
				13.00000	29.00000	0.00000	0.13394	-0.016154	0.046232
				14.00000	29.00000	0.00000	0.32650	-0.047236	0.12165
				15.00000	29.00000	0.00000	0.49740	-0.089753	0.32341
				16.00000	29.00000	0.00000	0.63258	-0.15109	0.67928
				17.00000	29.00000	0.00000	0.70366	-0.24605	1.1023
				18.00000	29.00000	0.00000	0.64769	-0.40711	1.4106
				19.00000	29.00000	0.00000	0.42093	-0.79964	1.6557
				20.00000	29.00000	0.00000	0.0	-1.5829	2.0863
				21.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				22.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				23.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				24.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				25.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				26.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				27.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				28.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				29.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				30.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				31.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				32.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				33.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				34.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				35.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				36.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				37.00000	29.00000	0.00000	0.0	-2.3625	3.1139
				38.00000	29.00000	0.00000	-0.23804	-1.1612	1.8642
				39.00000	29.00000	0.00000	-0.53238	-0.53238	1.4532
				40.00000	29.00000	0.00000	-0.69789	-0.31509	1.2847
				41.00000	29.00000	0.00000	-0.67888	-0.19294	0.89195
				42.00000	29.00000	0.00000	-0.57075	-0.11739	0.48495
				43.00000	29.00000	0.00000	-0.41533	-0.066713	0.20220
				44.00000	29.00000	0.00000	-0.23235	-0.005069	0.074578
				45.00000	29.00000	0.00000	-0.032061	-0.0035690	0.014141
				46.00000	29.00000	0.00000	0.0	0.0	0.0
				47.00000	29.00000	0.00000	0.0	0.0	0.0
				48.00000	29.00000	0.00000	0.0	0.0	0.0
				49.00000	29.00000	0.00000	0.0	0.0	0.0
				50.00000	29.00000	0.00000	0.0	0.0	0.0
				0.00000	30.00000	0.00000	0.0	0.0	0.0
				1.00000	30.00000	0.00000	0.0	0.0	0.0
				2.00000	30.00000	0.00000	0.0	0.0	0.0
				3.00000	30.00000	0.00000	0.0	0.0	0.0
				4.00000	30.00000	0.00000	0.0	0.0	0.0
				5.00000	30.00000	0.00000	0.0	0.0	0.0
				6.00000	30.00000	0.00000	0.0	0.0	0.0
				7.00000	30.00000	0.00000	0.0	0.0	0.0
				8.00000	30.00000	0.00000	0.0	0.0	0.0
				9.00000	30.00000	0.00000	0.0	0.0	0.0
				10.00000	30.00000	0.00000	0.0	0.0	0.0
				11.00000	30.00000	0.00000	0.0	0.0	0.0
				12.00000	30.00000	0.00000	0.0	0.0	0.0
				13.00000	30.00000	0.00000	0.066957	-0.015026	0.028999
				14.00000	30.00000	0.00000	0.22370	-0.061262	0.083062
				15.00000	30.00000	0.00000	0.34975	-0.12230	0.21095
				16.00000	30.00000	0.00000	0.42925	-0.20557	0.45306
				17.00000	30.00000	0.00000	0.43596	-0.32300	0.75230
				18.00000	30.00000	0.00000	0.37036	-0.53315	1.0855
				19.00000	30.00000	0.00000	0.23198	-0.89352	1.4743
				20.00000	30.00000	0.00000	0.0	-1.3316	1.7809
				21.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				22.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				23.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				24.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				25.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				26.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				27.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				28.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				29.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				30.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				31.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				32.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				33.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				34.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				35.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				36.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				37.00000	30.00000	0.00000	0.0	-1.9875	2.6580
				38.00000	30.00000	0.00000	-0.12371	-1.1113	1.6440
				39.00000	30.00000	0.00000	-0.31509	-0.69789	1.2847
				40.00000	30.00000	0.00000	-0.39979	-0.39979	0.88613
				41.00000	30.00000	0.00000	-0.44389	-0.25904	0.60222
				42.00000	30.00000	0.00000	-0.39666	-0.16054	0.31926
				43.00000	30.00000	0.00000	-0.29137	-0.089550	0.13274
				44.00000	30.00000	0.00000	-0.14845	-0.036632	0.053601
				45.00000	30.00000	0.00000	0.0	0.0	0.0
				46.00000	30.00000	0.00000	0.0	0.0	0.0
				47.00000	30.00000	0.00000	0.0	0.0	0.0
				48.00000	30.00000	0.00000	0.0	0.0	0.0
				49.00000	30.00000	0.00000	0.0	0.0	0.0
				50.00000	30.00000	0.00000	0.0	0.0	0.0
				0.00000	31.00000	0.00000	0.0	0.0	0.0
				1.00000	31.00000	0.00000	0.0	0.0	0.0
				2.00000	31.00000	0.00000	0.0	0.0	0.0
				3.00000	31.00000	0.00000	0.0	0.0	0.0
				4.00000	31.00000	0.00000	0.0	0.0	0.0
				5.00000	31.00000	0.00000	0.0	0.0	0.0
				6.00000	31.00000	0.00000	0.0	0.0	0.0
				7.00000	31.00000	0.00000	0.0	0.0	0.0
				8.00000	31.00000	0.00000	0.0	0.0	0.0
				9.00000	31.00000	0.00000	0.0	0.0	0.0
				10.00000	31.00000	0.00000	0.0	0.0	0.0
				11.00000	31.00000	0.00000	0.0	0.0	0.0
				12.00000	31.00000	0.00000	0.0	0.0	0.0
				13.00000	31.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				28.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				29.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				30.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				31.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				32.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				33.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				34.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				35.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				36.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				37.00000	31.00000	0.00000	0.0	-1.6125	1.8041
				38.00000	31.00000	0.00000	-0.072230	-0.95815	1.1339
				39.00000	31.00000	0.00000	-0.19294	-0.67888	0.89195
				40.00000	31.00000	0.00000	-0.25904	-0.44389	0.60222
				41.00000	31.00000	0.00000	-0.26721	-0.26721	0.33994
				42.00000	31.00000	0.00000	-0.24914	-0.16563	0.17399
				43.00000	31.00000	0.00000	-0.17624	-0.086644	0.076291
				44.00000	31.00000	0.00000	-0.063556	-0.024621	0.030306
				45.00000	31.00000	0.00000	0.0	0.0	0.0
				46.00000	31.00000	0.00000	0.0	0.0	0.0
				47.00000	31.00000	0.00000	0.0	0.0	0.0
				48.00000	31.00000	0.00000	0.0	0.0	0.0
				49.00000	31.00000	0.00000	0.0	0.0	0.0
				50.00000	31.00000	0.00000	0.0	0.0	0.0
				0.00000	32.00000	0.00000	0.0	0.0	0.0
				1.00000	32.00000	0.00000	0.0	0.0	0.0
				2.00000	32.00000	0.00000	0.0	0.0	0.0
				3.00000	32.00000	0.00000	0.0	0.0	0.0
				4.00000	32.00000	0.00000	0.0	0.0	0.0
				5.00000	32.00000	0.00000	0.0	0.0	0.0
				6.00000	32.00000	0.00000	0.0	0.0	0.0
				7.00000	32.00000	0.00000	0.0	0.0	0.0
				8.00000	32.00000	0.00000	0.0	0.0	0.0
				9.00000	32.00000	0.00000	0.0	0.0	0.0
				10.00000	32.00000	0.00000	0.0	0.0	0.0
				11.00000	32.00000	0.00000	0.0	0.0	0.0
				12.00000	32.00000	0.00000	0.0	0.0	0.0
				13.00000	32.00000	0.00000	0.0	0.0	0.0
				14.00000	32.00000	0.00000	0.036662	-0.023044	0.021956
				15.00000	32.00000	0.00000	0.11193	-0.093875	0.058211
				16.00000	32.00000	0.00000	0.15432	-0.18776	0.12047
				17.00000	32.00000	0.00000	0.16787	-0.31889	0.24133
				18.00000	32.00000	0.00000	0.14355	-0.48132	0.40265
				19.00000	32.00000	0.00000	0.083270	-0.66165	0.55888
				20.00000	32.00000	0.00000	0.0	-0.82912	0.65337
				21.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				22.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				23.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				24.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				25.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				26.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				27.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				28.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				29.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				30.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				31.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				32.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				33.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				34.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				35.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				36.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				37.00000	32.00000	0.00000	0.0	-1.2375	0.97518
				38.00000	32.00000	0.00000	-0.043223	-0.74955	0.61716
				39.00000	32.00000	0.00000	-0.11739	-0.57075	0.48495
				40.00000	32.00000	0.00000	-0.16054	-0.39666	0.31926
				41.00000	32.00000	0.00000	-0.16563	-0.24914	0.17399
				42.00000	32.00000	0.00000	-0.13463	-0.13463	0.081635
				43.00000	32.00000	0.00000	-0.078895	-0.056778	0.040957
				44.00000	32.00000	0.00000	0.0	0.0	0.0
				45.00000	32.00000	0.00000	0.0	0.0	0.0
				46.00000	32.00000	0.00000	0.0	0.0	0.0
				47.00000	32.00000	0.00000	0.0	0.0	0.0
				48.00000	32.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD 1377

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				16.00000	34.00000	0.00000	0.011052	-0.023601	0.013669
				17.00000	34.00000	0.00000	0.033090	-0.10548	0.042685
				18.00000	34.00000	0.00000	0.035604	-0.19125	0.064235
				19.00000	34.00000	0.00000	0.022294	-0.26996	0.083877
				20.00000	34.00000	0.00000	0.0	-0.32662	0.095204
				21.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				22.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				23.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				24.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				25.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				26.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				27.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				28.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				29.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				30.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				31.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				32.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				33.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				34.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				35.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				36.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				37.00000	34.00000	0.00000	0.0	-0.48750	0.14210
				38.00000	34.00000	0.00000	-0.011737	-0.30208	0.091073
				39.00000	34.00000	0.00000	-0.030569	-0.23235	0.074578
				40.00000	34.00000	0.00000	-0.036532	-0.14845	0.053601
				41.00000	34.00000	0.00000	-0.024621	-0.063556	0.030306
				42.00000	34.00000	0.00000	0.0	0.0	0.0
				43.00000	34.00000	0.00000	0.0	0.0	0.0
				44.00000	34.00000	0.00000	0.0	0.0	0.0
				45.00000	34.00000	0.00000	0.0	0.0	0.0
				46.00000	34.00000	0.00000	0.0	0.0	0.0
				47.00000	34.00000	0.00000	0.0	0.0	0.0
				48.00000	34.00000	0.00000	0.0	0.0	0.0
				49.00000	34.00000	0.00000	0.0	0.0	0.0
				50.00000	34.00000	0.00000	0.0	0.0	0.0
				0.00000	35.00000	0.00000	0.0	0.0	0.0
				1.00000	35.00000	0.00000	0.0	0.0	0.0
				2.00000	35.00000	0.00000	0.0	0.0	0.0
				3.00000	35.00000	0.00000	0.0	0.0	0.0
				4.00000	35.00000	0.00000	0.0	0.0	0.0
				5.00000	35.00000	0.00000	0.0	0.0	0.0
				6.00000	35.00000	0.00000	0.0	0.0	0.0
				7.00000	35.00000	0.00000	0.0	0.0	0.0
				8.00000	35.00000	0.00000	0.0	0.0	0.0
				9.00000	35.00000	0.00000	0.0	0.0	0.0
				10.00000	35.00000	0.00000	0.0	0.0	0.0
				11.00000	35.00000	0.00000	0.0	0.0	0.0
				12.00000	35.00000	0.00000	0.0	0.0	0.0
				13.00000	35.00000	0.00000	0.0	0.0	0.0
				14.00000	35.00000	0.00000	0.0	0.0	0.0
				15.00000	35.00000	0.00000	0.0	0.0	0.0
				16.00000	35.00000	0.00000	0.0	0.0	0.0
				17.00000	35.00000	0.00000	0.0	0.0	0.0
				18.00000	35.00000	0.00000	0.0011794	-0.0075442	0.0030579
				19.00000	35.00000	0.00000	0.0036905	-0.052489	0.021457
				20.00000	35.00000	0.00000	0.0	-0.075375	0.027719
				21.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				22.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				23.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				24.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				25.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				26.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				27.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				28.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				29.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				30.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				31.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				32.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				33.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				34.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				35.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				36.00000	35.00000	0.00000	0.0	-0.11250	0.041372
				37.00000	35.00000	0.00000	0.0	-0.11250	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				4.00000	37.00000	0.00000	0.0	0.0	0.0
				5.00000	37.00000	0.00000	0.0	0.0	0.0
				6.00000	37.00000	0.00000	0.0	0.0	0.0
				7.00000	37.00000	0.00000	0.0	0.0	0.0
				8.00000	37.00000	0.00000	0.0	0.0	0.0
				9.00000	37.00000	0.00000	0.0	0.0	0.0
				10.00000	37.00000	0.00000	0.0	0.0	0.0
				11.00000	37.00000	0.00000	0.0	0.0	0.0
				12.00000	37.00000	0.00000	0.0	0.0	0.0
				13.00000	37.00000	0.00000	0.0	0.0	0.0
				14.00000	37.00000	0.00000	0.0	0.0	0.0
				15.00000	37.00000	0.00000	0.0	0.0	0.0
				16.00000	37.00000	0.00000	0.0	0.0	0.0
				17.00000	37.00000	0.00000	0.0	0.0	0.0
				18.00000	37.00000	0.00000	0.0	0.0	0.0
				19.00000	37.00000	0.00000	0.0	0.0	0.0
				20.00000	37.00000	0.00000	0.0	0.0	0.0
				21.00000	37.00000	0.00000	0.0	0.0	0.0
				22.00000	37.00000	0.00000	0.0	0.0	0.0
				23.00000	37.00000	0.00000	0.0	0.0	0.0
				24.00000	37.00000	0.00000	0.0	0.0	0.0
				25.00000	37.00000	0.00000	0.0	0.0	0.0
				26.00000	37.00000	0.00000	0.0	0.0	0.0
				27.00000	37.00000	0.00000	0.0	0.0	0.0
				28.00000	37.00000	0.00000	0.0	0.0	0.0
				29.00000	37.00000	0.00000	0.0	0.0	0.0
				30.00000	37.00000	0.00000	0.0	0.0	0.0
				31.00000	37.00000	0.00000	0.0	0.0	0.0
				32.00000	37.00000	0.00000	0.0	0.0	0.0
				33.00000	37.00000	0.00000	0.0	0.0	0.0
				34.00000	37.00000	0.00000	0.0	0.0	0.0
				35.00000	37.00000	0.00000	0.0	0.0	0.0
				36.00000	37.00000	0.00000	0.0	0.0	0.0
				37.00000	37.00000	0.00000	0.0	0.0	0.0
				38.00000	37.00000	0.00000	0.0	0.0	0.0
				39.00000	37.00000	0.00000	0.0	0.0	0.0
				40.00000	37.00000	0.00000	0.0	0.0	0.0
				41.00000	37.00000	0.00000	0.0	0.0	0.0
				42.00000	37.00000	0.00000	0.0	0.0	0.0
				43.00000	37.00000	0.00000	0.0	0.0	0.0
				44.00000	37.00000	0.00000	0.0	0.0	0.0
				45.00000	37.00000	0.00000	0.0	0.0	0.0
				46.00000	37.00000	0.00000	0.0	0.0	0.0
				47.00000	37.00000	0.00000	0.0	0.0	0.0
				48.00000	37.00000	0.00000	0.0	0.0	0.0
				49.00000	37.00000	0.00000	0.0	0.0	0.0
				50.00000	37.00000	0.00000	0.0	0.0	0.0
				0.00000	38.00000	0.00000	0.0	0.0	0.0
				1.00000	38.00000	0.00000	0.0	0.0	0.0
				2.00000	38.00000	0.00000	0.0	0.0	0.0
				3.00000	38.00000	0.00000	0.0	0.0	0.0
				4.00000	38.00000	0.00000	0.0	0.0	0.0
				5.00000	38.00000	0.00000	0.0	0.0	0.0
				6.00000	38.00000	0.00000	0.0	0.0	0.0
				7.00000	38.00000	0.00000	0.0	0.0	0.0
				8.00000	38.00000	0.00000	0.0	0.0	0.0
				9.00000	38.00000	0.00000	0.0	0.0	0.0
				10.00000	38.00000	0.00000	0.0	0.0	0.0
				11.00000	38.00000	0.00000	0.0	0.0	0.0
				12.00000	38.00000	0.00000	0.0	0.0	0.0
				13.00000	38.00000	0.00000	0.0	0.0	0.0
				14.00000	38.00000	0.00000	0.0	0.0	0.0
				15.00000	38.00000	0.00000	0.0	0.0	0.0
				16.00000	38.00000	0.00000	0.0	0.0	0.0
				17.00000	38.00000	0.00000	0.0	0.0	0.0
				18.00000	38.00000	0.00000	0.0	0.0	0.0
				19.00000	38.00000	0.00000	0.0	0.0	0.0
				20.00000	38.00000	0.00000	0.0	0.0	0.0
				21.00000	38.00000	0.00000	0.0	0.0	0.0
				22.00000	38.00000	0.00000	0.0	0.0	0.0
				23.00000	38.00000	0.00000	0.0	0.0	0.0
				24.00000	38.00000	0.00000	0.0	0.0	0.0
				25.00000	38.00000	0.00000	0.0	0.0	0.0
				26.00000	38.00000	0.00000	0.0	0.0	0.0
				27.00000	38.00000	0.00000	0.0	0.0	0.0
				28.00000	38.00000	0.00000	0.0	0.0	0.0
				29.00000	38.00000	0.00000	0.0	0.0	0.0
				30.00000	38.00000	0.00000	0.0	0.0	0.0
				31.00000	38.				



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

U21377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				43.00000	39.00000	0.00000	0.0	0.0	0.0
				44.00000	39.00000	0.00000	0.0	0.0	0.0
				45.00000	39.00000	0.00000	0.0	0.0	0.0
				46.00000	39.00000	0.00000	0.0	0.0	0.0
				47.00000	39.00000	0.00000	0.0	0.0	0.0
				48.00000	39.00000	0.00000	0.0	0.0	0.0
				49.00000	39.00000	0.00000	0.0	0.0	0.0
				50.00000	39.00000	0.00000	0.0	0.0	0.0
				0.00000	40.00000	0.00000	0.0	0.0	0.0
				1.00000	40.00000	0.00000	0.0	0.0	0.0
				2.00000	40.00000	0.00000	0.0	0.0	0.0
				3.00000	40.00000	0.00000	0.0	0.0	0.0
				4.00000	40.00000	0.00000	0.0	0.0	0.0
				5.00000	40.00000	0.00000	0.0	0.0	0.0
				6.00000	40.00000	0.00000	0.0	0.0	0.0
				7.00000	40.00000	0.00000	0.0	0.0	0.0
				8.00000	40.00000	0.00000	0.0	0.0	0.0
				9.00000	40.00000	0.00000	0.0	0.0	0.0
				10.00000	40.00000	0.00000	0.0	0.0	0.0
				11.00000	40.00000	0.00000	0.0	0.0	0.0
				12.00000	40.00000	0.00000	0.0	0.0	0.0
				13.00000	40.00000	0.00000	0.0	0.0	0.0
				14.00000	40.00000	0.00000	0.0	0.0	0.0
				15.00000	40.00000	0.00000	0.0	0.0	0.0
				16.00000	40.00000	0.00000	0.0	0.0	0.0
				17.00000	40.00000	0.00000	0.0	0.0	0.0
				18.00000	40.00000	0.00000	0.0	0.0	0.0
				19.00000	40.00000	0.00000	0.0	0.0	0.0
				20.00000	40.00000	0.00000	0.0	0.0	0.0
				21.00000	40.00000	0.00000	0.0	0.0	0.0
				22.00000	40.00000	0.00000	0.0	0.0	0.0
				23.00000	40.00000	0.00000	0.0	0.0	0.0
				24.00000	40.00000	0.00000	0.0	0.0	0.0
				25.00000	40.00000	0.00000	0.0	0.0	0.0
				26.00000	40.00000	0.00000	0.0	0.0	0.0
				27.00000	40.00000	0.00000	0.0	0.0	0.0
				28.00000	40.00000	0.00000	0.0	0.0	0.0
				29.00000	40.00000	0.00000	0.0	0.0	0.0
				30.00000	40.00000	0.00000	0.0	0.0	0.0
				31.00000	40.00000	0.00000	0.0	0.0	0.0
				32.00000	40.00000	0.00000	0.0	0.0	0.0
				33.00000	40.00000	0.00000	0.0	0.0	0.0
				34.00000	40.00000	0.00000	0.0	0.0	0.0
				35.00000	40.00000	0.00000	0.0	0.0	0.0
				36.00000	40.00000	0.00000	0.0	0.0	0.0
				37.00000	40.00000	0.00000	0.0	0.0	0.0
				38.00000	40.00000	0.00000	0.0	0.0	0.0
				39.00000	40.00000	0.00000	0.0	0.0	0.0
				40.00000	40.00000	0.00000	0.0	0.0	0.0
				41.00000	40.00000	0.00000	0.0	0.0	0.0
				42.00000	40.00000	0.00000	0.0	0.0	0.0
				43.00000	40.00000	0.00000	0.0	0.0	0.0
				44.00000	40.00000	0.00000	0.0	0.0	0.0
				45.00000	40.00000	0.00000	0.0	0.0	0.0
				46.00000	40.00000	0.00000	0.0	0.0	0.0
				47.00000	40.00000	0.00000	0.0	0.0	0.0
				48.00000	40.00000	0.00000	0.0	0.0	0.0
				49.00000	40.00000	0.00000	0.0	0.0	0.0
				50.00000	40.00000	0.00000	0.0	0.0	0.0
				0.00000	41.00000	0.00000	0.0	0.0	0.0
				1.00000	41.00000	0.00000	0.0	0.0	0.0
				2.00000	41.00000	0.00000	0.0	0.0	0.0
				3.00000	41.00000	0.00000	0.0	0.0	0.0
				4.00000	41.00000	0.00000	0.0	0.0	0.0
				5.00000	41.00000	0.00000	0.0	0.0	0.0
				6.00000	41.00000	0.00000	0.0	0.0	0.0
				7.00000	41.00000	0.00000	0.0	0.0	0.0
				8.00000	41.00000	0.00000	0.0	0.0	0.0
				9.00000	41.00000	0.00000	0.0	0.0	0.0
				10.00000	41.00000	0.00000	0.0	0.0	0.0
				11.00000	41.00000	0.00000	0.0	0.0	0.0
				12.00000	41.00000	0.00000	0.0	0.0	0.0
				13.00000	41.00000	0.00000	0.0	0.0	0.0
				14.00000	41.00000	0.00000	0.0	0.0	0.0
				15.00000	41.00000	0.00000	0.0	0.0	0.0
				16.00000	41.00000	0.00000	0.0	0.0	0.0
				17.00000	41.00000	0.0000			



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				31.00000	42.00000	0.00000	0.0	0.0	0.0
				32.00000	42.00000	0.00000	0.0	0.0	0.0
				33.00000	42.00000	0.00000	0.0	0.0	0.0
				34.00000	42.00000	0.00000	0.0	0.0	0.0
				35.00000	42.00000	0.00000	0.0	0.0	0.0
				36.00000	42.00000	0.00000	0.0	0.0	0.0
				37.00000	42.00000	0.00000	0.0	0.0	0.0
				38.00000	42.00000	0.00000	0.0	0.0	0.0
				39.00000	42.00000	0.00000	0.0	0.0	0.0
				40.00000	42.00000	0.00000	0.0	0.0	0.0
				41.00000	42.00000	0.00000	0.0	0.0	0.0
				42.00000	42.00000	0.00000	0.0	0.0	0.0
				43.00000	42.00000	0.00000	0.0	0.0	0.0
				44.00000	42.00000	0.00000	0.0	0.0	0.0
				45.00000	42.00000	0.00000	0.0	0.0	0.0
				46.00000	42.00000	0.00000	0.0	0.0	0.0
				47.00000	42.00000	0.00000	0.0	0.0	0.0
				48.00000	42.00000	0.00000	0.0	0.0	0.0
				49.00000	42.00000	0.00000	0.0	0.0	0.0
				50.00000	42.00000	0.00000	0.0	0.0	0.0
				0.00000	43.00000	0.00000	0.0	0.0	0.0
				1.00000	43.00000	0.00000	0.0	0.0	0.0
				2.00000	43.00000	0.00000	0.0	0.0	0.0
				3.00000	43.00000	0.00000	0.0	0.0	0.0
				4.00000	43.00000	0.00000	0.0	0.0	0.0
				5.00000	43.00000	0.00000	0.0	0.0	0.0
				6.00000	43.00000	0.00000	0.0	0.0	0.0
				7.00000	43.00000	0.00000	0.0	0.0	0.0
				8.00000	43.00000	0.00000	0.0	0.0	0.0
				9.00000	43.00000	0.00000	0.0	0.0	0.0
				10.00000	43.00000	0.00000	0.0	0.0	0.0
				11.00000	43.00000	0.00000	0.0	0.0	0.0
				12.00000	43.00000	0.00000	0.0	0.0	0.0
				13.00000	43.00000	0.00000	0.0	0.0	0.0
				14.00000	43.00000	0.00000	0.0	0.0	0.0
				15.00000	43.00000	0.00000	0.0	0.0	0.0
				16.00000	43.00000	0.00000	0.0	0.0	0.0
				17.00000	43.00000	0.00000	0.0	0.0	0.0
				18.00000	43.00000	0.00000	0.0	0.0	0.0
				19.00000	43.00000	0.00000	0.0	0.0	0.0
				20.00000	43.00000	0.00000	0.0	0.0	0.0
				21.00000	43.00000	0.00000	0.0	0.0	0.0
				22.00000	43.00000	0.00000	0.0	0.0	0.0
				23.00000	43.00000	0.00000	0.0	0.0	0.0
				24.00000	43.00000	0.00000	0.0	0.0	0.0
				25.00000	43.00000	0.00000	0.0	0.0	0.0
				26.00000	43.00000	0.00000	0.0	0.0	0.0
				27.00000	43.00000	0.00000	0.0	0.0	0.0
				28.00000	43.00000	0.00000	0.0	0.0	0.0
				29.00000	43.00000	0.00000	0.0	0.0	0.0
				30.00000	43.00000	0.00000	0.0	0.0	0.0
				31.00000	43.00000	0.00000	0.0	0.0	0.0
				32.00000	43.00000	0.00000	0.0	0.0	0.0
				33.00000	43.00000	0.00000	0.0	0.0	0.0
				34.00000	43.00000	0.00000	0.0	0.0	0.0
				35.00000	43.00000	0.00000	0.0	0.0	0.0
				36.00000	43.00000	0.00000	0.0	0.0	0.0
				37.00000	43.00000	0.00000	0.0	0.0	0.0
				38.00000	43.00000	0.00000	0.0	0.0	0.0
				39.00000	43.00000	0.00000	0.0	0.0	0.0
				40.00000	43.00000	0.00000	0.0	0.0	0.0
				41.00000	43.00000	0.00000	0.0	0.0	0.0
				42.00000	43.00000	0.00000	0.0	0.0	0.0
				43.00000	43.00000	0.00000	0.0	0.0	0.0
				44.00000	43.00000	0.00000	0.0	0.0	0.0
				45.00000	43.00000	0.00000	0.0	0.0	0.0
				46.00000	43.00000	0.00000	0.0	0.0	0.0
				47.00000	43.00000	0.00000	0.0	0.0	0.0
				48.00000	43.00000	0.00000	0.0	0.0	0.0
				49.00000	43.00000	0.00000	0.0	0.0	0.0
				50.00000	43.00000	0.00000	0.0	0.0	0.0
				0.00000	44.00000	0.00000	0.0	0.0	0.0
				1.00000	44.00000	0.00000	0.0	0.0	0.0
				2.00000	44.00000	0.00000	0.0	0.0	0.0
				3.00000	44.00000	0.00000	0.0	0.0	0.0
				4.00000	44.00000	0.00000	0.0	0.0	0.0
				5.00000	44.00000	0.00000	0.0		



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				19.00000	45.00000	0.00000	0.0	0.0	0.0
				20.00000	45.00000	0.00000	0.0	0.0	0.0
				21.00000	45.00000	0.00000	0.0	0.0	0.0
				22.00000	45.00000	0.00000	0.0	0.0	0.0
				23.00000	45.00000	0.00000	0.0	0.0	0.0
				24.00000	45.00000	0.00000	0.0	0.0	0.0
				25.00000	45.00000	0.00000	0.0	0.0	0.0
				26.00000	45.00000	0.00000	0.0	0.0	0.0
				27.00000	45.00000	0.00000	0.0	0.0	0.0
				28.00000	45.00000	0.00000	0.0	0.0	0.0
				29.00000	45.00000	0.00000	0.0	0.0	0.0
				30.00000	45.00000	0.00000	0.0	0.0	0.0
				31.00000	45.00000	0.00000	0.0	0.0	0.0
				32.00000	45.00000	0.00000	0.0	0.0	0.0
				33.00000	45.00000	0.00000	0.0	0.0	0.0
				34.00000	45.00000	0.00000	0.0	0.0	0.0
				35.00000	45.00000	0.00000	0.0	0.0	0.0
				36.00000	45.00000	0.00000	0.0	0.0	0.0
				37.00000	45.00000	0.00000	0.0	0.0	0.0
				38.00000	45.00000	0.00000	0.0	0.0	0.0
				39.00000	45.00000	0.00000	0.0	0.0	0.0
				40.00000	45.00000	0.00000	0.0	0.0	0.0
				41.00000	45.00000	0.00000	0.0	0.0	0.0
				42.00000	45.00000	0.00000	0.0	0.0	0.0
				43.00000	45.00000	0.00000	0.0	0.0	0.0
				44.00000	45.00000	0.00000	0.0	0.0	0.0
				45.00000	45.00000	0.00000	0.0	0.0	0.0
				46.00000	45.00000	0.00000	0.0	0.0	0.0
				47.00000	45.00000	0.00000	0.0	0.0	0.0
				48.00000	45.00000	0.00000	0.0	0.0	0.0
				49.00000	45.00000	0.00000	0.0	0.0	0.0
				50.00000	45.00000	0.00000	0.0	0.0	0.0
				0.00000	46.00000	0.00000	0.0	0.0	0.0
				1.00000	46.00000	0.00000	0.0	0.0	0.0
				2.00000	46.00000	0.00000	0.0	0.0	0.0
				3.00000	46.00000	0.00000	0.0	0.0	0.0
				4.00000	46.00000	0.00000	0.0	0.0	0.0
				5.00000	46.00000	0.00000	0.0	0.0	0.0
				6.00000	46.00000	0.00000	0.0	0.0	0.0
				7.00000	46.00000	0.00000	0.0	0.0	0.0
				8.00000	46.00000	0.00000	0.0	0.0	0.0
				9.00000	46.00000	0.00000	0.0	0.0	0.0
				10.00000	46.00000	0.00000	0.0	0.0	0.0
				11.00000	46.00000	0.00000	0.0	0.0	0.0
				12.00000	46.00000	0.00000	0.0	0.0	0.0
				13.00000	46.00000	0.00000	0.0	0.0	0.0
				14.00000	46.00000	0.00000	0.0	0.0	0.0
				15.00000	46.00000	0.00000	0.0	0.0	0.0
				16.00000	46.00000	0.00000	0.0	0.0	0.0
				17.00000	46.00000	0.00000	0.0	0.0	0.0
				18.00000	46.00000	0.00000	0.0	0.0	0.0
				19.00000	46.00000	0.00000	0.0	0.0	0.0
				20.00000	46.00000	0.00000	0.0	0.0	0.0
				21.00000	46.00000	0.00000	0.0	0.0	0.0
				22.00000	46.00000	0.00000	0.0	0.0	0.0
				23.00000	46.00000	0.00000	0.0	0.0	0.0
				24.00000	46.00000	0.00000	0.0	0.0	0.0
				25.00000	46.00000	0.00000	0.0	0.0	0.0
				26.00000	46.00000	0.00000	0.0	0.0	0.0
				27.00000	46.00000	0.00000	0.0	0.0	0.0
				28.00000	46.00000	0.00000	0.0	0.0	0.0
				29.00000	46.00000	0.00000	0.0	0.0	0.0
				30.00000	46.00000	0.00000	0.0	0.0	0.0
				31.00000	46.00000	0.00000	0.0	0.0	0.0
				32.00000	46.00000	0.00000	0.0	0.0	0.0
				33.00000	46.00000	0.00000	0.0	0.0	0.0
				34.00000	46.00000	0.00000	0.0	0.0	0.0
				35.00000	46.00000	0.00000	0.0	0.0	0.0
				36.00000	46.00000	0.00000	0.0	0.0	0.0
				37.00000	46.00000	0.00000	0.0	0.0	0.0
				38.00000	46.00000	0.00000	0.0	0.0	0.0
				39.00000	46.00000	0.00000	0.0	0.0	0.0
				40.00000	46.00000	0.00000	0.0	0.0	0.0
				41.00000	46.00000	0.00000	0.0	0.0	0.0
				42.00000	46.00000	0.00000	0.0	0.0	0.0
				43.00000	46.00000	0.00000	0.0	0.0	0.0
				44.00000	46.00000				



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

5mm Movement per Single Stage of Underpinning

Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				7.00000	48.00000	0.00000	0.0	0.0	0.0
				8.00000	48.00000	0.00000	0.0	0.0	0.0
				9.00000	48.00000	0.00000	0.0	0.0	0.0
				10.00000	48.00000	0.00000	0.0	0.0	0.0
				11.00000	48.00000	0.00000	0.0	0.0	0.0
				12.00000	48.00000	0.00000	0.0	0.0	0.0
				13.00000	48.00000	0.00000	0.0	0.0	0.0
				14.00000	48.00000	0.00000	0.0	0.0	0.0
				15.00000	48.00000	0.00000	0.0	0.0	0.0
				16.00000	48.00000	0.00000	0.0	0.0	0.0
				17.00000	48.00000	0.00000	0.0	0.0	0.0
				18.00000	48.00000	0.00000	0.0	0.0	0.0
				19.00000	48.00000	0.00000	0.0	0.0	0.0
				20.00000	48.00000	0.00000	0.0	0.0	0.0
				21.00000	48.00000	0.00000	0.0	0.0	0.0
				22.00000	48.00000	0.00000	0.0	0.0	0.0
				23.00000	48.00000	0.00000	0.0	0.0	0.0
				24.00000	48.00000	0.00000	0.0	0.0	0.0
				25.00000	48.00000	0.00000	0.0	0.0	0.0
				26.00000	48.00000	0.00000	0.0	0.0	0.0
				27.00000	48.00000	0.00000	0.0	0.0	0.0
				28.00000	48.00000	0.00000	0.0	0.0	0.0
				29.00000	48.00000	0.00000	0.0	0.0	0.0
				30.00000	48.00000	0.00000	0.0	0.0	0.0
				31.00000	48.00000	0.00000	0.0	0.0	0.0
				32.00000	48.00000	0.00000	0.0	0.0	0.0
				33.00000	48.00000	0.00000	0.0	0.0	0.0
				34.00000	48.00000	0.00000	0.0	0.0	0.0
				35.00000	48.00000	0.00000	0.0	0.0	0.0
				36.00000	48.00000	0.00000	0.0	0.0	0.0
				37.00000	48.00000	0.00000	0.0	0.0	0.0
				38.00000	48.00000	0.00000	0.0	0.0	0.0
				39.00000	48.00000	0.00000	0.0	0.0	0.0
				40.00000	48.00000	0.00000	0.0	0.0	0.0
				41.00000	48.00000	0.00000	0.0	0.0	0.0
				42.00000	48.00000	0.00000	0.0	0.0	0.0
				43.00000	48.00000	0.00000	0.0	0.0	0.0
				44.00000	48.00000	0.00000	0.0	0.0	0.0
				45.00000	48.00000	0.00000	0.0	0.0	0.0
				46.00000	48.00000	0.00000	0.0	0.0	0.0
				47.00000	48.00000	0.00000	0.0	0.0	0.0
				48.00000	48.00000	0.00000	0.0	0.0	0.0
				49.00000	48.00000	0.00000	0.0	0.0	0.0
				50.00000	48.00000	0.00000	0.0	0.0	0.0
				0.00000	49.00000	0.00000	0.0	0.0	0.0
				1.00000	49.00000	0.00000	0.0	0.0	0.0
				2.00000	49.00000	0.00000	0.0	0.0	0.0
				3.00000	49.00000	0.00000	0.0	0.0	0.0
				4.00000	49.00000	0.00000	0.0	0.0	0.0
				5.00000	49.00000	0.00000	0.0	0.0	0.0
				6.00000	49.00000	0.00000	0.0	0.0	0.0
				7.00000	49.00000	0.00000	0.0	0.0	0.0
				8.00000	49.00000	0.00000	0.0	0.0	0.0
				9.00000	49.00000	0.00000	0.0	0.0	0.0
				10.00000	49.00000	0.00000	0.0	0.0	0.0
				11.00000	49.00000	0.00000	0.0	0.0	0.0
				12.00000	49.00000	0.00000	0.0	0.0	0.0
				13.00000	49.00000	0.00000	0.0	0.0	0.0
				14.00000	49.00000	0.00000	0.0	0.0	0.0
				15.00000	49.00000	0.00000	0.0	0.0	0.0
				16.00000	49.00000	0.00000	0.0	0.0	0.0
				17.00000	49.00000	0.00000	0.0	0.0	0.0
				18.00000	49.00000	0.00000	0.0	0.0	0.0
				19.00000	49.00000	0.00000	0.0	0.0	0.0
				20.00000	49.00000	0.00000	0.0	0.0	0.0
				21.00000	49.00000	0.00000	0.0	0.0	0.0
				22.00000	49.00000	0.00000	0.0	0.0	0.0
				23.00000	49.00000	0.00000	0.0	0.0	0.0
				24.00000	49.00000	0.00000	0.0	0.0	0.0
				25.00000	49.00000	0.00000	0.0	0.0	0.0
				26.00000	49.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

2 Thurlow Road, London
5mm Movement per Single Stage of Underpinning
Tabular Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				46.00000	50.00000	0.00000	0.0	0.0	0.0
				47.00000	50.00000	0.00000	0.0	0.0	0.0
				48.00000	50.00000	0.00000	0.0	0.0	0.0
				49.00000	50.00000	0.00000	0.0	0.0	0.0
				50.00000	50.00000	0.00000	0.0	0.0	0.0

Specific Building Damage Results - Horizontal Displacements

Stage: Ref.	Stage: Name	Specific Building: Ref.	Specific Building: Name	Sub-building Name	Dist.	x	y	z	δx	δy	δH//	δHperp.
						[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0	Base Model	1	No 1 Thurlow Road	Wall 1	0.0	36.00000	27.60000	-0.50000	0.0	-2.8875	-2.8875	0.0
						1.0429	36.00000	28.64286	-0.50000	0.0	-2.4964	-2.4964
						2.0857	36.00000	29.68571	-0.50000	0.0	-2.1054	-2.1054
						3.1286	36.00000	30.72857	-0.50000	0.0	-1.7143	-1.7143
						4.1714	36.00000	31.77143	-0.50000	0.0	-1.3232	-1.3232
						5.2143	36.00000	32.81429	-0.50000	0.0	-0.93214	-0.93214
						6.2571	36.00000	33.85714	-0.50000	0.0	-0.54107	-0.54107
						7.3000	36.00000	34.90000	-0.50000	0.0	-0.15000	-0.15000
						8.0	36.00000	35.00000	0.00000	0.0	0.11250	0.11250
						1.0000	35.00000	35.00000	-0.50000	0.0	-0.11250	0.0
						2.0000	34.00000	35.00000	-0.50000	0.0	-0.11250	0.0
						3.0000	33.00000	35.00000	-0.500			



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
5mm Movement per Single Stage of Underpinning
Tabular Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage Ref.	Stage Name	Specific Building Ref.	Specific Building Name	Sub-building Name	Vertical Offset	Dist.	x	y	z	8z
					[m]	[m]	[m]	[m]	[m]	[mm]
5	No 3 Thurlow Road	Wall 2	0.0	7.3000	36.00000	15.20000	-0.50000	0.77139	0.0	0.83636
6	No 3 Thurlow Road	Wall 3	0.0	0.85000	35.15000	15.30000	-0.50000	0.83636	1.7000	0.83636
7	No 3 Thurlow Road	Wall 4	0.0	1.7000	34.30000	15.30000	-0.50000	0.83636	0.76667	0.98433
8	No 3 Thurlow Road	Wall 5	0.0	0.76667	34.30000	16.16667	-0.50000	1.5095	1.5333	2.1915
9	No 3 Thurlow Road	Wall 6	0.0	2.3000	30.30000	15.40000	-0.50000	0.98433	0.0	0.83636
10	No 3 Thurlow Road	Wall 7	0.0	1.0000	29.30000	15.30000	-0.50000	0.83636	2.0000	0.83636
11	No 3 Thurlow Road	Wall 8	0.0	3.0000	26.30000	15.30000	-0.50000	0.83636	4.0000	0.83636

Specific Building Damage Results - Detail

Stage Category Ref.	Stage Name	Specific Building Ref.	Specific Building Name	Sub-building Name	Vertical Offset	Segment	Start	Length	Curvature	Deflection	Average	Max	Max Gradient	Max Gradient	Min	Damage
					from Line for Vertical Movement Calculations [m]		[m]	[m]		Ratio	Horizontal Strain	Tensile Strain	of Horizontal Displacement Curve	of Vertical Displacement Curve	Radius of Curvature	
0	Base Model	1	No 1 Thurlow Road	Wall 1	0.0	1	0.0	3.5681	Sagging	0.034994	0.037500	0.056154	-374.86E-6	-0.0011375	689.60	1 (Very Slight)
(Negligible)		2	No 1 Thurlow Road	Wall 2	0.0	2	3.5681	2.6890	Hogging	0.0096318	0.037500	0.039467	-374.86E-6	863.16E-6	3874.3	0
(Negligible)		3	No 1 Thurlow Road	Wall 3	0.0	1	0.0	3.5681	Sagging	0.034994	0.037500	0.056154	-374.86E-6	-0.0011375	689.60	1 (Very Slight)
(Negligible)		4	No 3 Thurlow Road	Wall 1	0.0	1	6.2571	1.0419	Hogging	0.0	0.037500	0.037500	-374.86E-6	-466.95E-6	3074.4	0
(Negligible)		5	No 3 Thurlow Road	Wall 2	0.0	1	0.0	1.7000	None	0.0	0.0	35.763E-9	0.0	0.0	-	0
(Negligible)		6	No 3 Thurlow Road	Wall 3	0.0	1	0.0	1.1554	Hogging	0.0022145	0.037500	0.037636	-374.86E-6	-889.23E-6	5119.2	0
(Negligible)		7	No 3 Thurlow Road	Wall 4	0.0	1	0.0	3.9990	None	0.0	0.0	35.763E-9	0.0	0.0	-	0
(Negligible)		8	No 3 Thurlow Road	Wall 5	0.0	1	0.0	1.1439	Sagging	0.0021682	0.037500	0.037763	-374.86E-6	889.23E-6	5170.7	0
(Negligible)		9	No 3 Thurlow Road	Wall 6	0.0	1	0.0	7.0000	None	0.0	0.0	35.763E-9	0.0	0.0	-	0
(Negligible)		10	No 3 Thurlow Road	Wall 7	0.0	1	0.0	1.0429	None	0.0	0.037500	0.037500	-374.86E-6	466.95E-6	3075.7	0
(Negligible)		11	No 3 Thurlow Road	Wall 8	0.0	0.0	All vertical displacements are less than the limit sensitivity.									

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

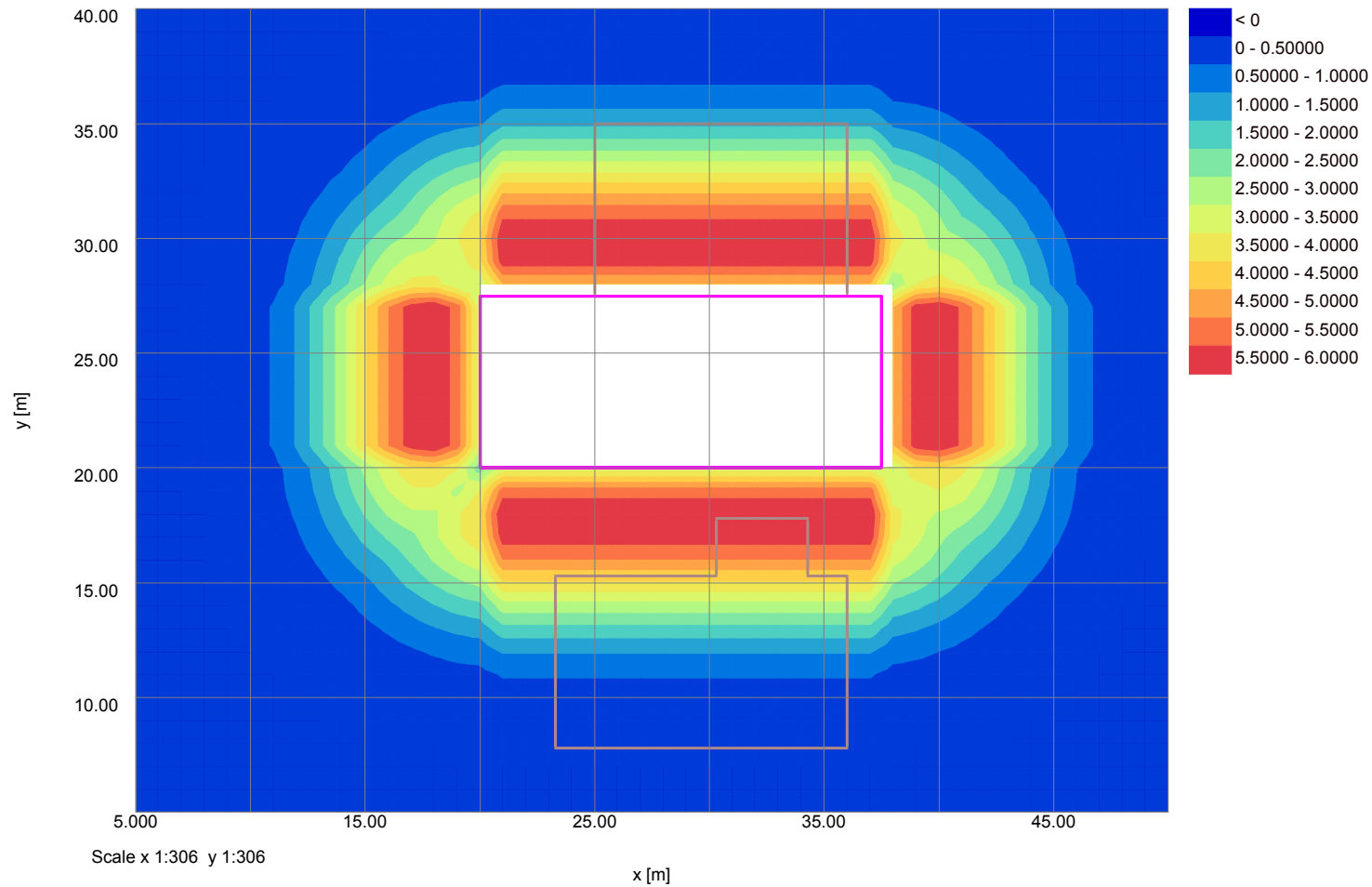
Stage:	Stage:	Name	Specific	Specific	Building:	Sub-building	Vertical	Deflection	Average	Max Slope	Max	Max	Max	Max Gradient	of	Max Gradient	of	Min Radius	Min Radius	Damage
Category	Ref.	Building:	Name	Name	Offset from			Ratio	Horizontal		Settlement	Tensile	Horizontal	Vertical	Curvature	Curvature				
		Ref.			Line for				Strain			Strain	Displacement	Displacement	of	of				
					Vertical								Curve	Curve	(Hogging)	(Sagging)				
					Movement															
					Calculations															
					[m]			[%]	[%]		[mm]	[%]			[m]	[m]				
0	Base Model	1	No 1	Thurlow	Road	Wall 1	0.0	0.034994	0.037500	-0.0011375	3.0691	0.056154	-374.86E-6	-0.0011375	3874.3	689.60	1	(Very Sli		
		3	No 1	Thurlow	Road	Wall 3	0.0	0.034994	0.037500	-0.0011375	3.0691	0.056154	-374.86E-6	-0.0011375	3874.3	689.60	1	(Very Sli		
		4	No 3	Thurlow	Road	Wall 1	0.0	0.0	0.037500	-466.95E-6	0.77992	0.037500	-374.86E-6	-466.95E-6	3074.4	-	0	(Negligib		
		5	No 3	Thurlow	Road	Wall 2	0.0	0.0	0.0	0.0	0.83636	35.763E-9	0.0	0.0	-	-	0	(Negligib		
		6	No 3	Thurlow	Road	Wall 3	0.0	0.0022145	0.037500	-889.23E-6	2.7971	0.037763	-374.86E-6	-889.23E-6	5119.2	5169.6	0	(Negligib		
		7	No 3	Thurlow	Road	Wall 4	0.0	0.0	0.0	0.0	2.8608	35.763E-9	0.0	0.0	-	-	0	(Negligib		
		8	No 3	Thurlow	Road	Wall 5	0.0	0.0022162	0.037500	889.23E-6	2.7979	0.037763	-374.86E-6	889.23E-6	5118.1	5170.7	0	(Negligib		
		9	No 3	Thurlow	Road	Wall 6	0.0	0.0	0.0	0.0	0.83636	35.763E-9	0.0	0.0	-	-	0	(Negligib		
		10	No 3	Thurlow	Road	Wall 7	0.0	0.0	0.037500	466.95E-6	0.77139	0.037500	-374.86E-6	466.95E-6	-	-	0	(Negligib		

Specific Building Damage Results - Critical Segments within Each Building

Stage Ref.	Stage Name	Specific Building Ref.	Specific Building Name	Parameter	Critical Sub-Building	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]	
0	Base Model	0	No 1 Thurlow Road	Max Slope	Wall 1	1	0.0	3.5681	Sagging	0.0011375	3.0691	0.056154	-	689.60	1 (Very Slight)
				Max Settlement	Wall 1	1	0.0	3.5681	Sagging	0.0011375	3.0691	0.056154	-	689.60	1 (Very Slight)
				Max Tensile Strain	Wall 1	1	0.0	3.5681	Sagging	0.0011375	3.0691	0.056154	-	689.60	1 (Very Slight)
				Min Radius of Curvature (Hogging)	Wall 1	2	3.5681	6.2571	Hogging	863.16E-6	1.6682	0.039467	3874.3	-	0 (Negligible)
				Min Radius of Curvature (Sagging)	Wall 1	1	0.0	3.5681	Sagging	0.0011375	3.0691	0.056154	-	689.60	1 (Very Slight)
		0	No 3 Thurlow Road	Max Slope	Wall 5	1	0.0	1.1439	Sagging	889.23E-6	2.7979	0.037763	-	5170.7	0 (Negligible)
				Max Settlement	Wall 4	1	0.0	3.9990	Sagging	0.0	2.8608	35.763E-9	-	-	0 (Negligible)
				Max Tensile Strain	Wall 3	2	1.1554	2.2990	Sagging	889.23E-6	2.7971	0.037763	-	5169.6	0 (Negligible)
				Min Radius of Curvature (Hogging)	Wall 1	1	6.2571	7.2990	Hogging	466.95E-6	0.7792	0.037500	3074.4	-	0 (Negligible)
				Min Radius of Curvature (Sagging)	Wall 3	2	1.1554	2.2990	Sagging	889.23E-6	2.7971	0.037763	-	5169.6	0 (Negligible)

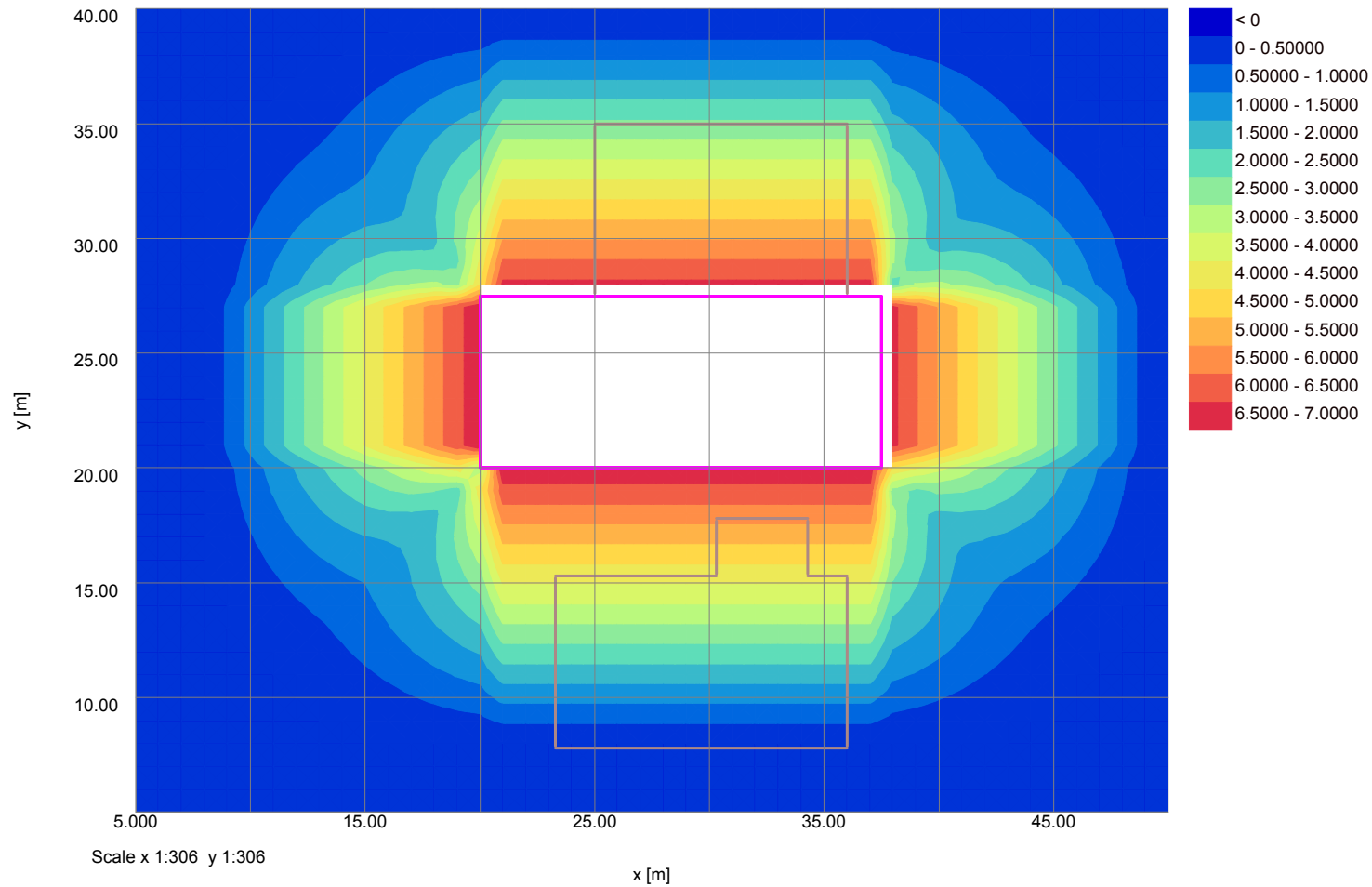
Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Vertical Settlement Contours: Grid 1 (level 0.000m) (Interval 0.5mm)



Job No.	Sheet No.	Rev.
J21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Horizontal Displacement Contours: Grid 1 (level 0.000m) Interval 0.5mm





GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES

Job No. Sheet No. Rev.

LJ21377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Titles

Job No.: J21377
Job Title: 2 Thurlow Road, London
Sub-title: 6 mm Movements per Single Stage of Underpin
Calculation Heading: Inputs and Outputs
Initials: AT
Checker:
Date Saved: 24-Feb-2022
Date Checked:
Notes:
File Name: XDisp - Overall Term - 6 mm movement Curves.xdd
File Path: Z:\PROJECTS\2021\J21377 - 2 Thurlow Road\GMA

History

Date	Time	By	Notes
23-Feb-2022	13:22	Alex Taylor	New
23-Feb-2022	15:08	Alex Taylor	
23-Feb-2022	15:38	Alex Taylor	
23-Feb-2022	16:44	Alex Taylor	
24-Feb-2022	10:18	Alex Taylor	

Displacement Lines

Ref.	Name	x1	y1	z1	x2	y2	z2	Intervals	Calculate	Surface type for tunnels
		[m]	[m]	[m]	[m]	[m]	[m]	[No.]		
1	No 1 Thurlow Road - Wall 1	36.00000	27.60000	-0.50000	36.00000	34.90000	-0.50000	7	Surface	Yes
2	No 1 Thurlow Road - Wall 2	36.00000	35.00000	-0.50000	25.00000	35.00000	-0.50000	11	Surface	Yes
3	No 1 Thurlow Road - Wall 3	25.00000	27.60000	-0.50000	25.00000	34.90000	-0.50000	7	Surface	Yes
4	No 3 Thurlow Road - Wall 1	36.00000	7.90000	-0.50000	36.00000	15.20000	-0.50000	7	Surface	Yes
5	No 3 Thurlow Road - Wall 2	36.00000	15.30000	-0.50000	34.30000	15.30000	-0.50000	2	Surface	Yes
6	No 3 Thurlow Road - Wall 3	34.30000	15.40000	-0.50000	34.30000	17.70000	-0.50000	3	Surface	Yes
7	No 3 Thurlow Road - Wall 4	34.30000	17.80000	-0.50000	30.30000	17.80000	-0.50000	4	Surface	Yes
8	No 3 Thurlow Road - Wall 5	30.30000	17.70000	-0.50000	30.30000	15.40000	-0.50000	3	Surface	Yes
9	No 3 Thurlow Road - Wall 6	30.30000	15.30000	-0.50000	23.30000	15.30000	-0.50000	7	Surface	Yes
10	No 3 Thurlow Road - Wall 7	23.30000	15.20000	-0.50000	23.30000	7.90000	-0.50000	7	Surface	Yes
11	No 3 Thurlow Road - Wall 8	23.30000	7.80000	-0.50000	36.00000	7.80000	-0.50000	13	Surface	Yes

Displacement Grids

Ref.	Name	Extrusion: Direction	Base line start: X [m]	Base line start: Y [m]	Base line start: Z(level) [m]	Base line end: X [m]	Base line end: Y [m]	Base line end: Z(level) [m]	Base line: Intervals [No.]	Extrusion: Distance [m]	Extrusion: Intervals [No.]	Surface type for tunnels	Calculate
1	Grid 1	Global X	0.00000	0.00000	0.00000	-	50.00000	0.00000	50	50.00000	50	Surface	Yes

Polygonal Excavations

Ref. 1
Excavation Name: Lower Ground Floor Excavation
Surface level [m]: 0.0
Contribution: Positive
Surface movement curves which are selected are applied between surface and [m]: -3.0000

Corner	x	y	Base Level	Arc Enabled	Stiffened	Prev. Side: d	Prev. Side: p1	Prev. Side: p2*	Next Side: d	Next Side: p1	Next Side: p2*
	[m]	[m]	[m]			[m]	[%]	[%]	[m]	[%]	[%]
1	20.000	20.000	-3.0000	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
2	20.000	27.500	-3.0000	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
3	37.500	27.500	-3.0000	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
4	37.500	20.000	-3.0000	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000

Side	x1	y1	x2	y2	G.M. Curve: Vertical	G.M. Curve: Horizontal
	[m]	[m]	[m]	[m]		
1	20.000	20.000	20.000	27.500	0.20 (6mm/3000mm) Movement Ratio Curve	0.20 (6mm/3000mm) Movement Curve
2	20.000	27.500	37.500	27.500	0.20 (6mm/3000mm) Movement Ratio Curve	0.20 (6mm/3000mm) Movement Curve
3	37.500	27.500	37.500	20.000	0.20 (6mm/3000mm) Movement Ratio Curve	0.20 (6mm/3000mm) Movement Curve
4	37.500	20.000	20.000	20.000	0.20 (6mm/3000mm) Movement Ratio Curve	0.20 (6mm/3000mm) Movement Curve

Ref. 2
Excavation Name: Retaining Wall Installation
Surface level [m]: 0.0
Contribution: Positive
Surface movement curves which are selected are applied between surface and [m]: -1.9500

Corner	x	y	Base Level	Arc Enabled	Stiffened	Prev. Side: d	Prev. Side: p1	Prev. Side: p2*	Next Side: d	Next Side: p1	Next Side: p2*
	[m]	[m]	[m]			[m]	[%]	[%]	[m]	[%]	[%]
1	20.000	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
2	20.000	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
3	37.500	27.500	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000
4	37.500	20.000	-1.9500	Yes	Yes	0.0	67.000	25.000	0.0	67.000	25.000

Side	x1	y1	x2	y2	G.M. Curve: Vertical	G.M. Curve: Horizontal
	[m]	[m]	[m]	[m]		
1	20.000	20.000	20.000	27.500	No vertical ground movement	No horizontal ground movement
2	20.000	27.500	37.500	27.500	No vertical ground movement	No horizontal ground movement
3	37.500	27.500	37.500	20.000	No vertical ground movement	No horizontal ground movement
4	37.500	20.000	20.000	20.000	No vertical ground movement	No horizontal ground movement

Circular Excavations

Vertical Ground Movement Curves

Curve Name: No vertical ground movement
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)(%)]
[0.000,0.000,0.000][1.000,0.000,0.000][0.000,1.000,0.000][1.000,1.000,0.000]
Curve Fitting Method: Polynomial
x Order: 1
y Order: 0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London
6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Side	x1 [m]	y1 [m]	x2 [m]	y2 [m]	G.M. Curve: Vertical	G.M. Curve: Horizontal
Polynomial: z = 0.0x + 0.0						
Coeff. of Determination:						
Curve Name: 0.20 (6mm/3000mm) Movement Ratio Curve						
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)(%)]						
[0.000,0.000,0.107][0.100,0.000,0.134][0.200,0.000,0.153][0.300,0.000,0.170]						
[0.400,0.000,0.184][0.500,0.000,0.192][0.600,0.000,0.197][0.700,0.000,0.200]						
[0.800,0.000,0.200][0.900,0.000,0.197][1.000,0.000,0.192][1.100,0.000,0.186]						
[1.200,0.000,0.178][1.300,0.000,0.167][1.400,0.000,0.159][1.500,0.000,0.148]						
[1.600,0.000,0.137][1.700,0.000,0.126][1.800,0.000,0.115][1.900,0.000,0.104]						
[2.000,0.000,0.093][2.100,0.000,0.082][2.200,0.000,0.074][2.300,0.000,0.063]						
[2.400,0.000,0.055][2.500,0.000,0.047][2.600,0.000,0.038][2.700,0.000,0.033]						
[2.800,0.000,0.027][2.900,0.000,0.022][3.000,0.000,0.019][3.100,0.000,0.014]						
[3.200,0.000,0.011][3.300,0.000,0.011][3.400,0.000,0.008][3.500,0.000,0.005]						
[3.600,0.000,0.005][3.700,0.000,0.005][3.800,0.000,0.003][3.900,0.000,0.003]						
[4.000,0.000,0.000]						
Curve Fitting Method: Polynomial						
x Order: 4						
y Order: 0						
Polynomial: z = -7.2252E-3x ⁴ + 7.7894E-2x ³ - 2.7494E-1x ² + 2.8923E-1x + 1.0686E-1						
Coeff. of Determination: 9.9990E-1						

Horizontal Ground Movement Curves

Curve Name: No horizontal ground movement	
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)(%)]	
[0.000,0.000,0.000][1.000,0.000,0.000][0.000,1.000,0.000][1.000,1.000,0.000]	
Curve Fitting Method: Polynomial	
x Order: 0	
y Order: 0	
Polynomial: z = 0.0	
Coeff. of Determination:	
Curve Name: 0.20 (6mm/3000mm) Movement Curve	
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)(%)]	
[0.000,0.000,0.230][4.000,0.000,0.000]	
Curve Fitting Method: Polynomial	
x Order: 1	
y Order: 0	
Polynomial: z = -5.75E-2x + 2.30E-1	
Coeff. of Determination: 1.00	

Damage Category Strains

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

Specific Buildings - Geometry

Ref.	Building Name	Sub-Building Name	Displacement Line	Distance Along Line: Start	Distance Along Line: End	Vertical Offsets from Line for Vertical Movement Calculations	Vertical Displacement Limit Sensitivity	Damage Category Strains	Poisson's Ratio	E/G
				[m]	[m]	[m]	[mm]			
1	No 1 Thurlow Road	Wall 1	No 1 Thurlow Road - Wall 1	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
2	No 1 Thurlow Road	Wall 2	No 1 Thurlow Road - Wall 2	0.00000	11.00000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
3	No 1 Thurlow Road	Wall 3	No 1 Thurlow Road - Wall 3	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
4	No 3 Thurlow Road	Wall 1	No 3 Thurlow Road - Wall 1	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
5	No 3 Thurlow Road	Wall 2	No 3 Thurlow Road - Wall 2	0.00000	1.70000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
6	No 3 Thurlow Road	Wall 3	No 3 Thurlow Road - Wall 3	0.00000	2.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
7	No 3 Thurlow Road	Wall 4	No 3 Thurlow Road - Wall 4	0.00000	3.99900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
8	No 3 Thurlow Road	Wall 5	No 3 Thurlow Road - Wall 5	0.00000	2.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
9	No 3 Thurlow Road	Wall 6	No 3 Thurlow Road - Wall 6	0.00000	7.00000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
10	No 3 Thurlow Road	Wall 7	No 3 Thurlow Road - Wall 7	0.00000	7.29900	0.0	0.10000	Burland Strain Limits	0.20000	2.6000
11	No 3 Thurlow Road	Wall 8	No 3 Thurlow Road - Wall 8	0.00000	12.70000	0.0	0.10000	Burland Strain Limits	0.20000	2.6000

Specific Buildings - Bending Parameters

Ref.	Building Name	Sub-Building Name	Height Default	Hogging:	Hogging:	Hogging:	Sagging:	Sagging:	Sagging:
				2nd Mom. of Area (per unit width)	Dist. of Bending Strain from N.A.	Dist. of N.A. from Edge of Beam in Tension	2nd Mom. of Area (per unit width)	Dist. of Bending Strain from N.A.	Dist. of N.A. from Edge of Beam in Tension
				[m ³]	[m]	[m]	[m ³]	[m]	[m]
1	No 1 Thurlow Road	Wall 1	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
2	No 1 Thurlow Road	Wall 2	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
3	No 1 Thurlow Road	Wall 3	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
4	No 3 Thurlow Road	Wall 1	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
5	No 3 Thurlow Road	Wall 2	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
6	No 3 Thurlow Road	Wall 3	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
7	No 3 Thurlow Road	Wall 4	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
8	No 3 Thurlow Road	Wall 5	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
9	No 3 Thurlow Road	Wall 6	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
10	No 3 Thurlow Road	Wall 7	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500
11	No 3 Thurlow Road	Wall 8	14.500	Yes	1016.2	14.500	14.500	254.05	7.2500

Warnings

1	Multiple excavations have been specified. Displacements resulting from each excavation are summed with no account taken of the interactions between excavations (e.g. overlapping zones of influence or 'shielding' of one excavation by another).
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Errors

None

Displacement Results - Displacement Lines

Stage Ref.	Stage Name	Disp. Line: Ref.	Disp. Line: Name	Chainage	x	y	z	δx	δy	δz	δH//	δHperp.	Angle
					[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]
0	Base Model 1	No 1 Thurlow Road - Wall 1		0.0	36.00000	27.60000	-0.50000	0.0	-6.8425	3.4858	-6.8425	0.0	90.000
				1.0429	36.00000	28.64286	-0.50000	0.0	-6.2429	5.4388	-6.2429	0.0	90.000
				2.0857	36.00000	29.68571	-0.50000	0.0	-5.6432	5.9918	-5.6432	0.0	90.000
				3.1286	36.00000	30.72857	-0.50000	0.0	-5.0436	5.6125	-5.0436	0.0	90.000
				4.1714	36.00000	31.77143	-0.50000	0.0	-4.4439	4.6930	-4.4439	0.0	90.000
				5.2143	36.00000	32.81429	-0.50000	0.0	-3.8443	3.5487	-3.8443	0.0	90.000
				6.2571	36.00000	33.85714	-0.50000	0.0	-3.2446	2.4197	-3.2446	0.0	90.000
				7.3000	36.00000	34.90000	-0.50000	0.0	-2.6450	1.4698	-2.6450	0.0	90.000
				8.3429	36.00000	35.94286	-0.50000	0.0	-2.0453	0.4700	-2.0453	0.0	90.000
				9.3857	36.00000	36.98571	-0.50000	0.0	-1.4456	-0.5293	-1.4456	0.0	90.000
2	No 1 Thurlow Road - Wall 2			0.0	36.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875	180.000



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Line: Ref.	Disp. Line: Name	Chainage	x	y	z	δx	δy	δz	δH//	δHperp.	Angle
					[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]
					1.0000	35.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					2.0000	34.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					3.0000	33.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					4.0000	32.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					5.0000	31.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					6.0000	30.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					7.0000	29.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					8.0000	28.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					9.0000	27.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					10.0000	26.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
					11.0000	25.00000	35.00000	-0.50000	0.0	-2.5875	1.3919	0.0	2.5875 180.00
3	No 1 Thurlow Road - Wall 3				0.0	25.00000	27.60000	-0.50000	0.0	-6.8425	3.4858	-6.8425	0.0 90.000
					1.0429	25.00000	28.64286	-0.50000	0.0	-6.2429	5.4388	-6.2429	0.0 90.000
					2.0857	25.00000	29.68571	-0.50000	0.0	-5.6432	5.9918	-5.6432	0.0 90.000
					3.1286	25.00000	30.72857	-0.50000	0.0	-5.0436	5.6126	-5.0436	0.0 90.000
					4.1714	25.00000	31.77143	-0.50000	0.0	-4.4439	4.6930	-4.4439	0.0 90.000
					5.2143	25.00000	32.81429	-0.50000	0.0	-3.8443	3.5487	-3.8443	0.0 90.000
					6.2571	25.00000	33.85714	-0.50000	0.0	-3.2446	2.4197	-3.2446	0.0 90.000
					7.3000	25.00000	34.90000	-0.50000	0.0	-2.6450	1.4698	-2.6450	0.0 90.000
4	No 3 Thurlow Road - Wall 1				0.0	30.00000	17.00000	-0.50000	0.0	0.0	0.0	0.0	0.0 90.000
					1.0429	30.00000	8.94286	-0.50000	0.0	0.54214	0.13854	0.54214	0.0 90.000
					2.0857	30.00000	9.98571	-0.50000	0.0	1.1418	0.26725	1.1418	0.0 90.000
					3.1286	30.00000	11.02857	-0.50000	0.0	1.7414	0.54947	1.7414	0.0 90.000
					4.1714	30.00000	12.07143	-0.50000	0.0	2.3411	1.0877	2.3411	0.0 90.000
					5.2143	30.00000	13.11429	-0.50000	0.0	2.9407	1.9085	2.9407	0.0 90.000
					6.2571	30.00000	14.15714	-0.50000	0.0	3.5404	2.9625	3.5404	0.0 90.000
					7.3000	30.00000	15.20000	-0.50000	0.0	4.1400	4.1242	4.1400	0.0 90.000
5	No 3 Thurlow Road - Wall 2				0.0	30.00000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					0.85900	35.15000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					1.7090	34.30000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
6	No 3 Thurlow Road - Wall 3				0.0	34.30000	15.40000	-0.50000	0.0	4.2550	4.3438	4.2550	0.0 90.000
					0.76667	34.30000	16.16667	-0.50000	0.0	4.6958	5.1231	4.6958	0.0 90.000
					1.5333	34.30000	16.93333	-0.50000	0.0	5.1367	5.7159	5.1367	0.0 90.000
					2.3000	34.30000	17.70000	-0.50000	0.0	5.5775	5.9880	5.5775	0.0 90.000
7	No 3 Thurlow Road - Wall 4				0.0	30.00000	17.00000	-0.50000	0.0	5.6350	5.9919	0.0	-5.6350 180.00
					1.0000	33.30000	17.00000	-0.50000	0.0	5.6350	5.9919	0.0	-5.6350 180.00
					2.0000	32.30000	17.00000	-0.50000	0.0	5.6350	5.9919	0.0	-5.6350 180.00
					3.0000	31.30000	17.00000	-0.50000	0.0	5.6350	5.9919	0.0	-5.6350 180.00
					4.0000	30.30000	17.00000	-0.50000	0.0	5.6350	5.9919	0.0	-5.6350 180.00
8	No 3 Thurlow Road - Wall 5				0.0	30.00000	17.00000	-0.50000	0.0	5.5775	5.9880	-5.5775	0.0 270.00
					0.76667	30.30000	16.93333	-0.50000	0.0	5.1367	5.7159	-5.1367	0.0 270.00
					1.5333	30.30000	16.16667	-0.50000	0.0	4.6958	5.1231	-4.6958	0.0 270.00
					2.3000	30.30000	15.40000	-0.50000	0.0	4.2550	4.3438	-4.2550	0.0 270.00
9	No 3 Thurlow Road - Wall 6				0.0	30.00000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					1.0000	29.30000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					2.0000	28.30000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					3.0000	27.30000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					4.0000	26.30000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					5.0000	25.30000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					6.0000	24.30000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
					7.0000	23.30000	15.30000	-0.50000	0.0	4.1975	4.2345	0.0	-4.1975 180.00
10	No 3 Thurlow Road - Wall 7				0.0	23.00000	15.20000	-0.50000	0.0	4.1400	4.1242	-4.1400	0.0 270.00
					1.0429	23.00000	14.15714	-0.50000	0.0	3.5404	2.9625	-3.5404	0.0 270.00
					2.0857	23.00000	13.11429	-0.50000	0.0	2.9407	1.9085	-2.9407	0.0 270.00
					3.1286	23.00000	12.07143	-0.50000	0.0	2.3411	1.0877	-2.3411	0.0 270.00
					4.1714	23.00000	11.02857	-0.50000	0.0	1.7414	0.54947	-1.7414	0.0 270.00
					5.2143	23.00000	9.98571	-0.50000	0.0	1.1418	0.26725	-1.1418	0.0 270.00
					6.2571	23.00000	8.94286	-0.50000	0.0	0.54214	0.13854	-0.54214	0.0 270.00
					7.3000	23.00000	7.90000	-0.50000	0.0	0.0	0.0	0.0	0.0 270.00
11	No 3 Thurlow Road - Wall 8				0.0	23.00000	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					0.97692	24.27692	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					1.9538	25.25385	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					2.9308	26.23077	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					3.9077	27.20769	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					4.8846	28.18462	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					5.8615	29.16154	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					6.8385	30.13846	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					7.8154	31.11538	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					8.7923	32.09231	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					9.7692	33.06923	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					10.746	34.04615	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					11.723	35.02308	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0
					12.700	36.00000	7.80000	-0.50000	0.0	0.0	0.0	0.0	0.0 0.0

Displacement Results - Displacement Grids

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
0	Base Model 1	Grid 1		0.00000	0.00000	0.00000	0.0	0.0	0.0
				1.00000	0.00000	0.00000	0.0	0.0	0.0
				2.00000	0.00000	0.00000	0.0	0.0	0.0
				3.00000	0.00000	0.00000	0.0	0.0	0.0
				4.00000	0.00000	0.00000	0.0	0.0	0.0
				5.00000	0.00000	0.00000	0.0	0.0	0.0
				6.00000	0.00000	0.00000	0.0	0.0	0.0
			</						



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin

Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				7.00000	1.00000	0.00000	0.0	0.0	0.0
				8.00000	1.00000	0.00000	0.0	0.0	0.0
				9.00000	1.00000	0.00000	0.0	0.0	0.0
				10.00000	1.00000	0.00000	0.0	0.0	0.0
				11.00000	1.00000	0.00000	0.0	0.0	0.0
				12.00000	1.00000	0.00000	0.0	0.0	0.0
				13.00000	1.00000	0.00000	0.0	0.0	0.0
				14.00000	1.00000	0.00000	0.0	0.0	0.0
				15.00000	1.00000	0.00000	0.0	0.0	0.0
				16.00000	1.00000	0.00000	0.0	0.0	0.0
				17.00000	1.00000	0.00000	0.0	0.0	0.0
				18.00000	1.00000	0.00000	0.0	0.0	0.0
				19.00000	1.00000	0.00000	0.0	0.0	0.0
				20.00000	1.00000	0.00000	0.0	0.0	0.0
				21.00000	1.00000	0.00000	0.0	0.0	0.0
				22.00000	1.00000	0.00000	0.0	0.0	0.0
				23.00000	1.00000	0.00000	0.0	0.0	0.0
				24.00000	1.00000	0.00000	0.0	0.0	0.0
				25.00000	1.00000	0.00000	0.0	0.0	0.0
				26.00000	1.00000	0.00000	0.0	0.0	0.0
				27.00000	1.00000	0.00000	0.0	0.0	0.0
				28.00000	1.00000	0.00000	0.0	0.0	0.0
				29.00000	1.00000	0.00000	0.0	0.0	0.0
				30.00000	1.00000	0.00000	0.0	0.0	0.0
				31.00000	1.00000	0.00000	0.0	0.0	0.0
				32.00000	1.00000	0.00000	0.0	0.0	0.0
				33.00000	1.00000	0.00000	0.0	0.0	0.0
				34.00000	1.00000	0.00000	0.0	0.0	0.0
				35.00000	1.00000	0.00000	0.0	0.0	0.0
				36.00000	1.00000	0.00000	0.0	0.0	0.0
				37.00000	1.00000	0.00000	0.0	0.0	0.0
				38.00000	1.00000	0.00000	0.0	0.0	0.0
				39.00000	1.00000	0.00000	0.0	0.0	0.0
				40.00000	1.00000	0.00000	0.0	0.0	0.0
				41.00000	1.00000	0.00000	0.0	0.0	0.0
				42.00000	1.00000	0.00000	0.0	0.0	0.0
				43.00000	1.00000	0.00000	0.0	0.0	0.0
				44.00000	1.00000	0.00000	0.0	0.0	0.0
				45.00000	1.00000	0.00000	0.0	0.0	0.0
				46.00000	1.00000	0.00000	0.0	0.0	0.0
				47.00000	1.00000	0.00000	0.0	0.0	0.0
				48.00000	1.00000	0.00000	0.0	0.0	0.0
				49.00000	1.00000	0.00000	0.0	0.0	0.0
				50.00000	1.00000	0.00000	0.0	0.0	0.0
				0.00000	2.00000	0.00000	0.0	0.0	0.0
				1.00000	2.00000	0.00000	0.0	0.0	0.0
				2.00000	2.00000	0.00000	0.0	0.0	0.0
				3.00000	2.00000	0.00000	0.0	0.0	0.0
				4.00000	2.00000	0.00000	0.0	0.0	0.0
				5.00000	2.00000	0.00000	0.0	0.0	0.0
				6.00000	2.00000	0.00000	0.0	0.0	0.0
				7.00000	2.00000	0.00000	0.0	0.0	0.0
				8.00000	2.00000	0.00000	0.0	0.0	0.0
				9.00000	2.00000	0.00000	0.0	0.0	0.0
				10.00000	2.00000	0.00000	0.0	0.0	0.0
				11.00000	2.00000	0.00000	0.0	0.0	0.0
				12.00000	2.00000	0.00000	0.0	0.0	0.0
				13.00000	2.00000	0.00000	0.0	0.0	0.0
				14.00000	2.00000	0.00000	0.0	0.0	0.0
				15.00000	2.00000	0.00000	0.0	0.0	0.0
				16.00000	2.00000	0.00000	0.0	0.0	0.0
				17.00000	2.00000	0.00000	0.0	0.0	0.0
				18.00000	2.00000	0.00000	0.0	0.0	0.0
				19.00000	2.00000	0.00000	0.0	0.0	0.0
				20.00000	2.00000	0.00000	0.0	0.0	0.0
				21.00000	2.00000	0.00000	0.0	0.0	0.0
				22.00000	2.00000	0.00000	0.0	0.0	0.0
				23.00000	2.00000	0.00000	0.0	0.0	0.0
				24.00000	2.00000	0.00000	0.0	0.0	0.0
				25.00000	2.00000	0.00000	0.0	0.0	0.0
				26.00000	2.00000	0.00000	0.0	0.0	0.0
				27.00000	2.00000	0.00000	0.0	0.0	0.0
				28.00000	2.00000	0.00000	0.0	0.0	0.0
				29.00000	2.00000	0.00000	0.0	0.0	0.0
				30.00000	2.00000	0.00000	0.0	0.0	0.0
				31.00000	2.00000	0.00000	0.0	0.0	0.0
				32.00000	2.00000	0.00000	0.0	0.0	0.0
				33.00000	2.00000	0.00000	0.0	0.0	0.0
				34.00000	2.00000	0.00000	0.0	0.0	0.0
				35.00000	2.00000	0.00000	0.0	0.0	0.0
				36.00000	2.00000	0.00000	0.0	0.0	0.0
				37.00000	2.00000	0.00000	0.0	0.0	0.0
				38.00000	2.00000	0.00000	0.0	0.0	0.0
				39.00000	2.00000	0.00000	0.0	0.0	0.0
				40.00000	2.00000	0.00000	0.0	0.0	0.0
				41.00000	2.00000	0.00000	0.0	0.0	0.0
				42.00000	2.00000	0.00000	0.0	0.0	0.0
				43.00000	2.00000	0.00000	0.0	0.0	0.0
				44.00000	2.00000	0.00000	0.0	0.0	0.0
				45.00000	2.00000	0.00000	0.0	0.0	0.0
				46.00000	2.00000	0.00000	0.0	0.0	0.0
				47.00000	2.00000	0.00000	0.0	0.0	0.0
				48.00000	2.00000	0.00000	0.0	0.0	0.0
				49.00000	2.00000	0.00000	0.0	0.0	0.0
				50.00000	2.00000	0.00000	0.0	0.0	0.0
				0.00000	3.00000	0.00000	0.0	0.0	0.0
				1.00000	3.00000	0.00000	0.0	0.0	0.0
				2.00000	3.00000	0.00000	0.0	0.0	0.0
				3.00000	3.00000	0.00000	0.0	0.0	0.0
				4.00000	3.00000	0.00000	0.0	0.0	0.0
				5.00000	3.00000	0.00000	0.0	0.0	0.0
				6.00000	3.00000	0.00000	0.0	0.0	0.0
				7.00000	3.00000	0.00000	0.0	0.0	0.0
				8.00000	3.00000	0.00000	0.0	0.0	0.0
				9.00000	3.00000	0.00000	0.0	0.0	0.0
				10.00000	3.00000	0.00000	0.0	0.0	0.0
				11.00000	3.00000	0.00000	0.0	0.0	0.0
				12.00000	3.00000	0.00000	0.0	0.0	0.0
				13.00000	3.00000	0.00000	0.0	0.0	0.0
				14.00000	3.00000	0.00000	0.0	0.0	0.0
				15.00000	3.00000	0.00000	0.0	0.0	0.0
				16.00000	3.00000	0.00000	0.0	0.0	0.0
				17.00000	3.00000	0.00000	0.0	0.0	0.0
				18.00000	3.00000	0.00000	0.0	0.0	0.0
				19.00000	3.00000	0.00000	0.0	0.0	0.0
				20.00000	3.00000	0.00000	0.0	0.0	0.0
				21.00000	3.00000	0.00000	0.0	0.0	0.0
				22.00000	3.00000	0.00000	0.0	0.0	0.0
				23.00000	3.00000	0.00000	0.0	0.0	0.0
				24.00000	3.00000	0.00000	0.0	0.0	0.0
				25.00000	3.00000	0.00000	0.0	0.0	0.0
				26.00000	3.00000	0.00000	0.0	0.0	0.0
				27.00000	3.00000	0.00000	0.0	0.0	0.0
				28.00000	3.00000	0.00000	0.0	0.0	0.0
				29.00000	3.00000	0.00000	0.0	0.0	0.0
				30.00000	3.00000	0.00000	0.0	0.0	0.0
				31.00000	3.00000	0.00000	0.0	0.0	0.0
				32.00000	3.00000	0.00000	0.0	0.0	0.0
				33.00000	3.00000	0.00000	0.0	0.0	0.0
				34.00000	3.00000	0.00000	0.0	0.0	0.0
				35.00000	3.00000	0.00000	0.0	0.0	0.0
				36.00000	3.00000	0.00000	0.0	0.0	0.0
				37.00000	3.00000	0.00000	0.0	0.0	0.0
				38.00000	3.00000	0.00000	0.0	0.0	0.0
				39.00000	3.00000	0.00000	0.0	0.0	0.0
				40.00000	3.00000	0.00000	0.0	0.0	0.0
				41.00000	3.00000	0.00000	0.0	0.0	0.0
				42.00000	3.00000	0.00000	0.0	0.0	0.0
				43.00000	3.00000	0.00000	0.0	0.0	0.0
				44.00000	3.00000	0.00000	0.0	0.0	0.0
				45.00000	3.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin

Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				46.00000	3.00000	0.00000	0.0	0.0	0.0
				47.00000	3.00000	0.00000	0.0	0.0	0.0
				48.00000	3.00000	0.00000	0.0	0.0	0.0
				49.00000	3.00000	0.00000	0.0	0.0	0.0
				50.00000	3.00000	0.00000	0.0	0.0	0.0
				0.00000	4.00000	0.00000	0.0	0.0	0.0
				1.00000	4.00000	0.00000	0.0	0.0	0.0
				2.00000	4.00000	0.00000	0.0	0.0	0.0
				3.00000	4.00000	0.00000	0.0	0.0	0.0
				4.00000	4.00000	0.00000	0.0	0.0	0.0
				5.00000	4.00000	0.00000	0.0	0.0	0.0
				6.00000	4.00000	0.00000	0.0	0.0	0.0
				7.00000	4.00000	0.00000	0.0	0.0	0.0
				8.00000	4.00000	0.00000	0.0	0.0	0.0
				9.00000	4.00000	0.00000	0.0	0.0	0.0
				10.00000	4.00000	0.00000	0.0	0.0	0.0
				11.00000	4.00000	0.00000	0.0	0.0	0.0
				12.00000	4.00000	0.00000	0.0	0.0	0.0
				13.00000	4.00000	0.00000	0.0	0.0	0.0
				14.00000	4.00000	0.00000	0.0	0.0	0.0
				15.00000	4.00000	0.00000	0.0	0.0	0.0
				16.00000	4.00000	0.00000	0.0	0.0	0.0
				17.00000	4.00000	0.00000	0.0	0.0	0.0
				18.00000	4.00000	0.00000	0.0	0.0	0.0
				19.00000	4.00000	0.00000	0.0	0.0	0.0
				20.00000	4.00000	0.00000	0.0	0.0	0.0
				21.00000	4.00000	0.00000	0.0	0.0	0.0
				22.00000	4.00000	0.00000	0.0	0.0	0.0
				23.00000	4.00000	0.00000	0.0	0.0	0.0
				24.00000	4.00000	0.00000	0.0	0.0	0.0
				25.00000	4.00000	0.00000	0.0	0.0	0.0
				26.00000	4.00000	0.00000	0.0	0.0	0.0
				27.00000	4.00000	0.00000	0.0	0.0	0.0
				28.00000	4.00000	0.00000	0.0	0.0	0.0
				29.00000	4.00000	0.00000	0.0	0.0	0.0
				30.00000	4.00000	0.00000	0.0	0.0	0.0
				31.00000	4.00000	0.00000	0.0	0.0	0.0
				32.00000	4.00000	0.00000	0.0	0.0	0.0
				33.00000	4.00000	0.00000	0.0	0.0	0.0
				34.00000	4.00000	0.00000	0.0	0.0	0.0
				35.00000	4.00000	0.00000	0.0	0.0	0.0
				36.00000	4.00000	0.00000	0.0	0.0	0.0
				37.00000	4.00000	0.00000	0.0	0.0	0.0
				38.00000	4.00000	0.00000	0.0	0.0	0.0
				39.00000	4.00000	0.00000	0.0	0.0	0.0
				40.00000	4.00000	0.00000	0.0	0.0	0.0
				41.00000	4.00000	0.00000	0.0	0.0	0.0
				42.00000	4.00000	0.00000	0.0	0.0	0.0
				43.00000	4.00000	0.00000	0.0	0.0	0.0
				44.00000	4.00000	0.00000	0.0	0.0	0.0
				45.00000	4.00000	0.00000	0.0	0.0	0.0
				46.00000	4.00000	0.00000	0.0	0.0	0.0
				47.00000	4.00000	0.00000	0.0	0.0	0.0
				48.00000	4.00000	0.00000	0.0	0.0	0.0
				49.00000	4.00000	0.00000	0.0	0.0	0.0
				50.00000	4.00000	0.00000	0.0	0.0	0.0
				0.00000	5.00000	0.00000	0.0	0.0	0.0
				1.00000	5.00000	0.00000	0.0	0.0	0.0
				2.00000	5.00000	0.00000	0.0	0.0	0.0
				3.00000	5.00000	0.00000	0.0	0.0	0.0
				4.00000	5.00000	0.00000	0.0	0.0	0.0
				5.00000	5.00000	0.00000	0.0	0.0	0.0
				6.00000	5.00000	0.00000	0.0	0.0	0.0
				7.00000	5.00000	0.00000	0.0	0.0	0.0
				8.00000	5.00000	0.00000	0.0	0.0	0.0
				9.00000	5.00000	0.00000	0.0	0.0	0.0
				10.00000	5.00000	0.00000	0.0	0.0	0.0
				11.00000	5.00000	0.00000	0.0	0.0	0.0
				12.00000	5.00000	0.00000	0.0	0.0	0.0
				13.00000	5.00000	0.00000	0.0	0.0	0.0
				14.00000	5.00000	0.00000	0.0	0.0	0.0
				15.00000	5.00000	0.00000	0.0	0.0	0.0
				16.00000	5.00000	0.00000	0.0	0.0	0.0
				17.00000	5.00000	0.00000	0.0	0.0	0.0
				18.00000	5.00000	0.00000	0.0	0.0	0.0
				19.00000	5.00000	0.00000	0.0	0.0	0.0
				20.00000	5.00000	0.00000	0.0	0.0	0.0
				21.00000	5.00000	0.00000	0.0	0.0	0.0
				22.00000	5.00000	0.00000	0.0	0.0	0.0
				23.00000	5.00000	0.00000	0.0	0.0	0.0
				24.00000	5.00000	0.00000	0.0	0.0	0.0
				25.00000	5.00000	0.00000	0.0	0.0	0.0
				26.00000	5.00000	0.00000	0.0	0.0	0.0
				27.00000	5.00000	0.00000	0.0	0.0	0.0
				28.00000	5.00000	0.00000	0.0	0.0	0.0
				29.00000	5.00000	0.00000	0.0	0.0	0.0
				30.00000	5.00000	0.00000	0.0	0.0	0.0
				31.00000	5.00000	0.00000	0.0	0.0	0.0
				32.00000	5.00000	0.00000	0.0	0.0	0.0
				33.00000	5.00000	0.00000	0.0	0.0	0.0
				34.00000	5.00000	0.00000	0.0	0.0	0.0
				35.00000	5.00000	0.00000	0.0	0.0	0.0
				36.00000	5.00000	0.00000	0.0	0.0	0.0
				37.00000	5.00000	0.00000	0.0	0.0	0.0
				38.00000	5.00000	0.00000	0.0	0.0	0.0
				39.00000	5.00000	0.00000	0.0	0.0	0.0
				40.00000	5.00000	0.00000	0.0	0.0	0.0
				41.00000	5.00000	0.00000	0.0	0.0	0.0
				42.00000	5.00000	0.00000	0.0	0.0	0.0
				43.00000	5.00000	0.00000	0.0	0.0	0.0
				44.00000	5.00000	0.00000	0.0	0.0	0.0
				45.00000	5.00000	0.00000	0.0	0.0	0.0
				46.00000	5.00000	0.00000	0.0	0.0	0.0
				47.00000	5.00000	0.00000	0.0	0.0	0.0
				48.00000	5.00000	0.00000	0.0	0.0	0.0
				49.00000	5.00000	0.00000	0.0	0.0	0.0
				50.00000	5.00000	0.00000	0.0	0.0	0.0
				0.00000	6.00000	0.00000	0.0	0.0	0.0
				1.00000	6.00000	0.00000	0.0	0.0	0.0
				2.00000	6.00000	0.00000	0.0	0.0	0.0
				3.00000	6.00000	0.00000	0.0	0.0	0.0
				4.00000	6.00000	0.00000	0.0	0.0	0.0
				5.00000	6.00000	0.00000	0.0	0.0	0.0
				6.00000	6.00000	0.00000	0.0	0.0	0.0
				7.00000	6.00000	0.00000	0.0	0.0	0.0
				8.00000	6.00000	0.00000	0.0	0.0	0.0
				9.00000	6.00000	0.00000	0.0	0.0	0.0
				10.00000	6.00000	0.00000	0.0	0.0	0.0
				11.00000	6.00000	0.00000	0.0	0.0	0.0
				12.00000	6.00000	0.00000	0.0	0.0	0.0
				13.00000	6.00000	0.00000	0.0	0.0	0.0
				14.00000	6.00000	0.00000	0.0	0.0	0.0
				15.00000	6.00000	0.00000	0.0	0.0	0.0
				16.00000	6.00000	0.00000	0.0	0.0	0.0
				17.00000	6.00000	0.00000	0.0	0.0	0.0
				18.00000	6.00000	0.00000	0.0	0.0	0.0
				19.00000	6.00000	0.00000	0.0	0.0	0.0
				20.00000	6.00000	0.00000	0.0	0.0	0.0
				21.00000	6.00000	0.00000	0.0	0.0	0.0
				22.00000	6.00000	0.00000	0.0	0.0	0.0
				23.00000	6.00000	0.00000	0.0	0.0	0.0
				24.00000	6.00000	0.00000	0.0	0.0	0.0
				25.00000	6.00000	0.00000	0.0	0.0	0.0
				26.00000	6.00000	0.00000	0.0	0.0	0.0
				27.00000	6.00000	0.00000	0.0	0.0	0.0
				28.00000	6.00000	0.00000	0.0	0.0	0.0
				29.00000	6.00000	0.00000	0.0	0.0	0.0
				30.00000	6.00000	0.00000	0.0	0.0	0.0
				31.00000	6.00000	0.00000	0.0	0.0	0.0
				32.00000	6.00000	0.00000	0.0	0.0	0.0
				33.00000	6.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

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AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin

Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				34.00000	6.00000	0.00000	0.0	0.0	0.0
				35.00000	6.00000	0.00000	0.0	0.0	0.0
				36.00000	6.00000	0.00000	0.0	0.0	0.0
				37.00000	6.00000	0.00000	0.0	0.0	0.0
				38.00000	6.00000	0.00000	0.0	0.0	0.0
				39.00000	6.00000	0.00000	0.0	0.0	0.0
				40.00000	6.00000	0.00000	0.0	0.0	0.0
				41.00000	6.00000	0.00000	0.0	0.0	0.0
				42.00000	6.00000	0.00000	0.0	0.0	0.0
				43.00000	6.00000	0.00000	0.0	0.0	0.0
				44.00000	6.00000	0.00000	0.0	0.0	0.0
				45.00000	6.00000	0.00000	0.0	0.0	0.0
				46.00000	6.00000	0.00000	0.0	0.0	0.0
				47.00000	6.00000	0.00000	0.0	0.0	0.0
				48.00000	6.00000	0.00000	0.0	0.0	0.0
				49.00000	6.00000	0.00000	0.0	0.0	0.0
				50.00000	6.00000	0.00000	0.0	0.0	0.0
				0.00000	7.00000	0.00000	0.0	0.0	0.0
				1.00000	7.00000	0.00000	0.0	0.0	0.0
				2.00000	7.00000	0.00000	0.0	0.0	0.0
				3.00000	7.00000	0.00000	0.0	0.0	0.0
				4.00000	7.00000	0.00000	0.0	0.0	0.0
				5.00000	7.00000	0.00000	0.0	0.0	0.0
				6.00000	7.00000	0.00000	0.0	0.0	0.0
				7.00000	7.00000	0.00000	0.0	0.0	0.0
				8.00000	7.00000	0.00000	0.0	0.0	0.0
				9.00000	7.00000	0.00000	0.0	0.0	0.0
				10.00000	7.00000	0.00000	0.0	0.0	0.0
				11.00000	7.00000	0.00000	0.0	0.0	0.0
				12.00000	7.00000	0.00000	0.0	0.0	0.0
				13.00000	7.00000	0.00000	0.0	0.0	0.0
				14.00000	7.00000	0.00000	0.0	0.0	0.0
				15.00000	7.00000	0.00000	0.0	0.0	0.0
				16.00000	7.00000	0.00000	0.0	0.0	0.0
				17.00000	7.00000	0.00000	0.0	0.0	0.0
				18.00000	7.00000	0.00000	0.0	0.0	0.0
				19.00000	7.00000	0.00000	0.0	0.0	0.0
				20.00000	7.00000	0.00000	0.0	0.0	0.0
				21.00000	7.00000	0.00000	0.0	0.0	0.0
				22.00000	7.00000	0.00000	0.0	0.0	0.0
				23.00000	7.00000	0.00000	0.0	0.0	0.0
				24.00000	7.00000	0.00000	0.0	0.0	0.0
				25.00000	7.00000	0.00000	0.0	0.0	0.0
				26.00000	7.00000	0.00000	0.0	0.0	0.0
				27.00000	7.00000	0.00000	0.0	0.0	0.0
				28.00000	7.00000	0.00000	0.0	0.0	0.0
				29.00000	7.00000	0.00000	0.0	0.0	0.0
				30.00000	7.00000	0.00000	0.0	0.0	0.0
				31.00000	7.00000	0.00000	0.0	0.0	0.0
				32.00000	7.00000	0.00000	0.0	0.0	0.0
				33.00000	7.00000	0.00000	0.0	0.0	0.0
				34.00000	7.00000	0.00000	0.0	0.0	0.0
				35.00000	7.00000	0.00000	0.0	0.0	0.0
				36.00000	7.00000	0.00000	0.0	0.0	0.0
				37.00000	7.00000	0.00000	0.0	0.0	0.0
				38.00000	7.00000	0.00000	0.0	0.0	0.0
				39.00000	7.00000	0.00000	0.0	0.0	0.0
				40.00000	7.00000	0.00000	0.0	0.0	0.0
				41.00000	7.00000	0.00000	0.0	0.0	0.0
				42.00000	7.00000	0.00000	0.0	0.0	0.0
				43.00000	7.00000	0.00000	0.0	0.0	0.0
				44.00000	7.00000	0.00000	0.0	0.0	0.0
				45.00000	7.00000	0.00000	0.0	0.0	0.0
				46.00000	7.00000	0.00000	0.0	0.0	0.0
				47.00000	7.00000	0.00000	0.0	0.0	0.0
				48.00000	7.00000	0.00000	0.0	0.0	0.0
				49.00000	7.00000	0.00000	0.0	0.0	0.0
				50.00000	7.00000	0.00000	0.0	0.0	0.0
				0.00000	8.00000	0.00000	0.0	0.0	0.0
				1.00000	8.00000	0.00000	0.0	0.0	0.0
				2.00000	8.00000	0.00000	0.0	0.0	0.0
				3.00000	8.00000	0.00000	0.0	0.0	0.0
				4.00000	8.00000	0.00000	0.0	0.0	0.0
				5.00000	8.00000	0.00000	0.0	0.0	0.0
				6.00000	8.00000	0.00000	0.0	0.0	0.0
				7.00000	8.00000	0.00000	0.0	0.0	0.0
				8.00000	8.00000	0.00000	0.0	0.0	0.0
				9.00000	8.00000	0.00000	0.0	0.0	0.0
				10.00000	8.00000	0.00000	0.0	0.0	0.0
				11.00000	8.00000	0.00000	0.0	0.0	0.0
				12.00000	8.00000	0.00000	0.0	0.0	0.0
				13.00000	8.00000	0.00000	0.0	0.0	0.0
				14.00000	8.00000	0.00000	0.0	0.0	0.0
				15.00000	8.00000	0.00000	0.0	0.0	0.0
				16.00000	8.00000	0.00000	0.0	0.0	0.0
				17.00000	8.00000	0.00000	0.0	0.0	0.0
				18.00000	8.00000	0.00000	0.0	0.0	0.0
				19.00000	8.00000	0.00000	0.0	0.0	0.0
				20.00000	8.00000	0.00000	0.0	0.0	0.0047769
				21.00000	8.00000	0.00000	0.0	0.0	0.0071297
				22.00000	8.00000	0.00000	0.0	0.0	0.0071297
				23.00000	8.00000	0.00000	0.0	0.0	0.0071297
				24.00000	8.00000	0.00000	0.0	0.0	0.0071297
				25.00000	8.00000	0.00000	0.0	0.0	0.0071297
				26.00000	8.00000	0.00000	0.0	0.0	0.0071297
				27.00000	8.00000	0.00000	0.0	0.0	0.0071297
				28.00000	8.00000	0.00000	0.0	0.0	0.0071297
				29.00000	8.00000	0.00000	0.0	0.0	0.0071297
				30.00000	8.00000	0.00000	0.0	0.0	0.0071297
				31.00000	8.00000	0.00000	0.0	0.0	0.0071297
				32.00000	8.00000	0.00000	0.0	0.0	0.0071297
				33.00000	8.00000	0.00000	0.0	0.0	0.0071297
				34.00000	8.00000	0.00000	0.0	0.0	0.0071297
				35.00000	8.00000	0.00000	0.0	0.0	0.0071297
				36.00000	8.00000	0.00000	0.0	0.0	0.0071297
				37.00000	8.00000	0.00000	0.0	0.0	0.0071297
				38.00000	8.00000	0.00000	0.0	0.0	0.0
				39.00000	8.00000	0.00000	0.0	0.0	0.0
				40.00000	8.00000	0.00000	0.0	0.0	0.0
				41.00000	8.00000	0.00000	0.0	0.0	0.0
				42.00000	8.00000	0.00000	0.0	0.0	0.0
				43.00000	8.00000	0.00000	0.0	0.0	0.0
				44.00000	8.00000	0.00000	0.0	0.0	0.0
				45.00000	8.00000	0.00000	0.0	0.0	0.0
				46.00000	8.00000	0.00000	0.0	0.0	0.0
				47.00000	8.00000	0.00000	0.0	0.0	0.0
				48.00000	8.00000	0.00000	0.0	0.0	0.0
				49.00000	8.00000	0.00000	0.0	0.0	0.0
				50.00000	8.00000	0.00000	0.0	0.0	0.0
				0.00000	9.00000	0.00000	0.0	0.0	0.0
				1.00000	9.00000	0.00000	0.0	0.0	0.0
				2.00000	9.00000	0.00000	0.0	0.0	0.0
				3.00000	9.00000	0.00000	0.0	0.0	0.0
				4.00000	9.00000	0.00000	0.0	0.0	0.0
				5.00000	9.00000	0.00000	0.0	0.0	0.0
				6.00000	9.00000	0.00000	0.0	0.0	0.0
				7.00000	9.00000	0.00000	0.0	0.0	0.0
				8.00000	9.00000	0.00000	0.0	0.0	0.0
				9.00000	9.00000	0.00000	0.0	0.0	0.0
				10.00000	9.00000	0.00000	0.0	0.0	0.0
				11.00000	9.00000	0.00000	0.0	0.0	0.0
				12.00000	9.00000	0.00000	0.0	0.0	0.0
				13.00000	9.00000	0.00000	0.0	0.0	0.0
				14.00000	9.00000	0.00000	0.0	0.0	0.0
				15.00000	9.00000	0.00000	0.0	0.0	0.0
				16.00000	9.00000	0.00000	0.018850	0.082096	0.036015
				17.00000	9.00000	0.00000	0.029153	0.18150	0.062127
				18.00000	9.00000	0.00000	0.026982	0.27044	0.079474
				19.00000	9.00000	0.00000	0.015841	0.34116	0.090876
				20.00000	9.00000	0.00000	0.0	0.38525	0.096667
				21.00000	9.00000	0.00000	0.0	0.57500	0.14428



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				22.00000	9.00000	0.00000	0.0	0.57500	0.14428
				23.00000	9.00000	0.00000	0.0	0.57500	0.14428
				24.00000	9.00000	0.00000	0.0	0.57500	0.14428
				25.00000	9.00000	0.00000	0.0	0.57500	0.14428
				26.00000	9.00000	0.00000	0.0	0.57500	0.14428
				27.00000	9.00000	0.00000	0.0	0.57500	0.14428
				28.00000	9.00000	0.00000	0.0	0.57500	0.14428
				29.00000	9.00000	0.00000	0.0	0.57500	0.14428
				30.00000	9.00000	0.00000	0.0	0.57500	0.14428
				31.00000	9.00000	0.00000	0.0	0.57500	0.14428
				32.00000	9.00000	0.00000	0.0	0.57500	0.14428
				33.00000	9.00000	0.00000	0.0	0.57500	0.14428
				34.00000	9.00000	0.00000	0.0	0.57500	0.14428
				35.00000	9.00000	0.00000	0.0	0.57500	0.14428
				36.00000	9.00000	0.00000	0.0	0.57500	0.14428
				37.00000	9.00000	0.00000	0.0	0.57500	0.14428
				38.00000	9.00000	0.00000	-0.0082193	0.36707	0.094497
				39.00000	9.00000	0.00000	-0.022280	0.30860	0.085862
				40.00000	9.00000	0.00000	-0.029429	0.22774	0.071637
				41.00000	9.00000	0.00000	-0.025744	0.13266	0.058500
				42.00000	9.00000	0.00000	-0.0081831	0.030608	0.017555
				43.00000	9.00000	0.00000	0.0	0.0	0.0
				44.00000	9.00000	0.00000	0.0	0.0	0.0
				45.00000	9.00000	0.00000	0.0	0.0	0.0
				46.00000	9.00000	0.00000	0.0	0.0	0.0
				47.00000	9.00000	0.00000	0.0	0.0	0.0
				48.00000	9.00000	0.00000	0.0	0.0	0.0
				49.00000	9.00000	0.00000	0.0	0.0	0.0
				50.00000	9.00000	0.00000	0.0	0.0	0.0
				0.00000	10.00000	0.00000	0.0	0.0	0.0
				1.00000	10.00000	0.00000	0.0	0.0	0.0
				2.00000	10.00000	0.00000	0.0	0.0	0.0
				3.00000	10.00000	0.00000	0.0	0.0	0.0
				4.00000	10.00000	0.00000	0.0	0.0	0.0
				5.00000	10.00000	0.00000	0.0	0.0	0.0
				6.00000	10.00000	0.00000	0.0	0.0	0.0
				7.00000	10.00000	0.00000	0.0	0.0	0.0
				8.00000	10.00000	0.00000	0.0	0.0	0.0
				9.00000	10.00000	0.00000	0.0	0.0	0.0
				10.00000	10.00000	0.00000	0.0	0.0	0.0
				11.00000	10.00000	0.00000	0.0	0.0	0.0
				12.00000	10.00000	0.00000	0.0	0.0	0.0
				13.00000	10.00000	0.00000	0.0	0.0	0.0
				14.00000	10.00000	0.00000	0.033442	0.074069	0.037090
				15.00000	10.00000	0.00000	0.009557	0.190927	0.071730
				16.00000	10.00000	0.00000	0.085638	0.32986	0.098416
				17.00000	10.00000	0.00000	0.083202	0.46109	0.12413
				18.00000	10.00000	0.00000	0.065103	0.58483	0.14899
				19.00000	10.00000	0.00000	0.035575	0.69152	0.16932
				20.00000	10.00000	0.00000	0.0	0.77050	0.18074
				21.00000	10.00000	0.00000	0.0	1.1500	0.26975
				22.00000	10.00000	0.00000	0.0	1.1500	0.26975
				23.00000	10.00000	0.00000	0.0	1.1500	0.26975
				24.00000	10.00000	0.00000	0.0	1.1500	0.26975
				25.00000	10.00000	0.00000	0.0	1.1500	0.26975
				26.00000	10.00000	0.00000	0.0	1.1500	0.26975
				27.00000	10.00000	0.00000	0.0	1.1500	0.26975
				28.00000	10.00000	0.00000	0.0	1.1500	0.26975
				29.00000	10.00000	0.00000	0.0	1.1500	0.26975
				30.00000	10.00000	0.00000	0.0	1.1500	0.26975
				31.00000	10.00000	0.00000	0.0	1.1500	0.26975
				32.00000	10.00000	0.00000	0.0	1.1500	0.26975
				33.00000	10.00000	0.00000	0.0	1.1500	0.26975
				34.00000	10.00000	0.00000	0.0	1.1500	0.26975
				35.00000	10.00000	0.00000	0.0	1.1500	0.26975
				36.00000	10.00000	0.00000	0.0	1.1500	0.26975
				37.00000	10.00000	0.00000	0.0	1.1500	0.26975
				38.00000	10.00000	0.00000	-0.018173	0.73516	0.17637
				39.00000	10.00000	0.00000	-0.051453	0.64096	0.16001
				40.00000	10.00000	0.00000	-0.075076	0.52446	0.13085
				41.00000	10.00000	0.00000	-0.086589	0.39588	0.11126
				42.00000	10.00000	0.00000	-0.080037	0.26394	0.085437
				43.00000	10.00000	0.00000	-0.054051	0.13545	0.056200
				44.00000	10.00000	0.00000	-0.0077157	0.015215	0.011971
				45.00000	10.00000	0.00000	0.0	0.0	0.0
				46.00000	10.00000	0.00000	0.0	0.0	0.0
				47.00000	10.00000	0.00000	0.0	0.0	0.0
				48.00000	10.00000	0.00000	0.0	0.0	0.0
				49.00000	10.00000	0.00000	0.0	0.0	0.0
				50.00000	10.00000	0.00000	0.0	0.0	0.0
				0.00000	11.00000	0.00000	0.0	0.0	0.0
				1.00000	11.00000	0.00000	0.0	0.0	0.0
				2.00000	11.00000	0.00000	0.0	0.0	0.0
				3.00000	11.00000	0.00000	0.0	0.0	0.0
				4.00000	11.00000	0.00000	0.0	0.0	0.0
				5.00000	11.00000	0.00000	0.0	0.0	0.0
				6.00000	11.00000	0.00000	0.0	0.0	0.0
				7.00000	11.00000	0.00000	0.0	0.0	0.0
				8.00000	11.00000	0.00000	0.0	0.0	0.0
				9.00000	11.00000	0.00000	0.0	0.0	0.0
				10.0000	11.0000	0.00000	0.0	0.0	0.0
				11.00000	11.00000	0.00000	0.0	0.0	0.0
				12.00000	11.00000	0.00000	0.0	0.0	0.0
				13.00000	11.00000	0.00000	0.072381	0.10687	0.053458
				14.00000	11.00000	0.00000	0.12735	0.24193	0.088311
				15.00000	11.00000	0.00000	0.15819	0.39085	0.12520
				16.00000	11.00000	0.00000	0.16466	0.55209	0.17281
				17.00000	11.00000	0.00000	0.14800	0.71956	0.22969
				18.00000	11.00000	0.00000	0.11128	0.88422	0.28748
				19.00000	11.00000	0.00000	0.059638	1.0342	0.33475
				20.00000	11.00000	0.00000	0.0	1.1558	0.36088
				21.00000	11.00000	0.00000	0.0	1.7250	0.53862
				22.00000	11.00000	0.00000	0.0	1.7250	0.53862
				23.00000	11.00000	0.00000	0.0	1.7250	0.53862
				24.00000	11.00000	0.00000	0.0	1.7250	0.53862
				25.00000	11.00000	0.00000	0.0	1.7250	0.53862
				26.00000	11.00000	0.00000	0.0	1.7250	0.53862
				27.00000	11.00000	0.00000	0.0	1.7250	0.53862
				28.00000	11.00000	0.00000	0.0	1.7250	0.53862
				29.00000	11.00000	0.00000	0.0	1.7250	0.53862
				30.00000	11.00000	0.00000	0.0	1.7250	0.53862
				31.00000	11.00000	0.00000	0.0	1.7250	0.53862
				32.00000	11.00000	0.00000	0.0	1.7250	0.53862
				33.00000	11.00000	0.00000	0.0	1.7250	0.53862
				34.00000	11.00000	0.00000	0.0	1.7250	0.53862
				35.00000	11.00000	0.00000	0.0	1.7250	0.53862
				36.00000	11.00000	0.00000	0.0	1.7250	0.53862
				37.00000	11.00000	0.00000	0.0	1.7250	0.53862
				38.00000	11.00000	0.00000	-0.030332	1.00994	0.35099
				39.00000	11.00000	0.00000	-0.086928	0.96188	0.31316
				40.00000	11.00000	0.00000	-0.13187	0.80292	0.25916
				41.00000	11.00000	0.00000	-0.15908	0.63554	0.20050
				42.00000	11.00000	0.00000	-0.16443	0.47025	0.14755
				43.00000	11.00000	0.00000	-0.14583	0.31458	0.10500
				44.00000	11.00000	0.00000	-0.10283	0.17328	0.071649
				45.00000	11.00000	0.00000	-0.036192	0.048849	0.030616
				46.00000	11.00000	0.00000	0.0	0.0	0.0
				47.00000	11.00000	0.00000	0.0	0.0	0.0
				48.00000	11.00000	0.00000	0.0	0.0	0.0
				49.00000	11.00000	0.00000	0.0	0.0	0.0
				50.00000	11.00000	0.00000	0.0	0.0	0.0
				0.00000	12.00000	0.00000	0.0	0.0	0.0
				1.00000	12.00000	0.00000	0.0	0.0	0.0
				2.00000	12.00000	0.00000	0.0	0.0	0.0
				3.00000	12.00000	0.00000	0.0	0.0	0.0
				4.00000	12.00000	0.00000	0.0		



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
10.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
11.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
12.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.098654	0.098654	0.055786
13.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.18023	0.22496	0.093830
14.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.23556	0.37476	0.14316
15.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.26235	0.54781	0.21800
16.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.25931	0.74158	0.31898
17.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.22694	0.95017	0.43590
18.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.16831	1.1634	0.55132
19.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.089625	1.3664	0.64484
20.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	1.5410	0.69795
21.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
22.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
23.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
24.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
25.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
26.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
27.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
28.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
29.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
30.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
31.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
32.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
33.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
34.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
35.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
36.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
37.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.3000	1.0417
38.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.045519	1.4585	0.67740
39.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.13097	1.2673	0.60208
40.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.20060	1.0570	0.49506
41.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.24667	0.84455	0.37641
42.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.26458	0.64238	0.26564
43.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.25263	0.45848	0.17707
44.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.21133	0.29690	0.11585
45.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.14255	0.15891	0.074878
46.00000	12.00000	0.00000		0.00000	0.00000	0.00000	-0.050111	0.045246	0.033163
47.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
48.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
49.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
50.00000	12.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
0.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
1.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
2.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
3.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
4.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
5.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
6.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
7.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
8.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
9.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
10.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
11.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.10887	0.072381	0.053458
12.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.22496	0.18023	0.093830
13.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.30195	0.30195	0.14414
14.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.36062	0.46533	0.23852
15.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.38571	0.66095	0.37916
16.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.37416	0.88843	0.55916
17.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.32490	1.1432	0.76000
18.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.24042	1.4144	0.95511
19.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.12801	1.6838	1.1144
20.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	1.9263	1.2098
21.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
22.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
23.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
24.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
25.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
26.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
27.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
28.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
29.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
30.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
31.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
32.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
33.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
34.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
35.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
36.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
37.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	2.8750	1.8057
38.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.065024	1.8101	1.1716
39.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.18704	1.5508	1.0411
40.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.28673	1.2777	0.86013
41.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.35419	1.0129	0.65849
42.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.38465	0.77087	0.46516
43.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.37759	0.55906	0.30318
44.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.33525	0.37969	0.18565
45.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.26870	0.23927	0.11600
46.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.17144	0.12466	0.074560
47.00000	13.00000	0.00000		0.00000	0.00000	0.00000	-0.037917	0.023196	0.023976
48.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
49.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
50.00000	13.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
0.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
1.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
2.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
3.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
4.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
5.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
6.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
7.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
8.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
9.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.0	0.0	0.0
10.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.074069	0.033442	0.037090
11.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.24193	0.12735	0.068311
12.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.37476	0.23556	0.14316
13.00000	14.00000	0.00000		0.00000	0.00000	0.00000	0.46533	0	



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
49.00000	14.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
50.00000	14.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
0.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
1.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
2.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
3.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
4.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
5.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
6.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
7.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
8.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
9.00000	15.00000	0.00000		0.0	0.0	0.0	0.0	0.0	0.0
10.00000	15.00000	0.00000		0.19892	0.069557	0.071738			
11.00000	15.00000	0.00000		0.39085	0.15819	0.12520			
12.00000	15.00000	0.00000		0.54781	0.26235	0.21808			
13.00000	15.00000	0.00000		0.66095	0.38571	0.37916			
14.00000	15.00000	0.00000		0.71907	0.53275	0.60634			
15.00000	15.00000	0.00000		0.70853	0.70853	0.87160			
16.00000	15.00000	0.00000		0.69120	0.99499	1.2434			
17.00000	15.00000	0.00000		0.61019	1.3515	1.6455			
18.00000	15.00000	0.00000		0.46068	1.7744	2.0387			
19.00000	15.00000	0.00000		0.24933	2.2397	2.3776			
20.00000	15.00000	0.00000		0.0	2.6968	2.6140			
21.00000	15.00000	0.00000		0.0	4.0250	3.9014			
22.00000	15.00000	0.00000		0.0	4.0250	3.9014			
23.00000	15.00000	0.00000		0.0	4.0250	3.9014			
24.00000	15.00000	0.00000		0.0	4.0250	3.9014			
25.00000	15.00000	0.00000		0.0	4.0250	3.9014			
26.00000	15.00000	0.00000		0.0	4.0250	3.9014			
27.00000	15.00000	0.00000		0.0	4.0250	3.9014			
28.00000	15.00000	0.00000		0.0	4.0250	3.9014			
29.00000	15.00000	0.00000		0.0	4.0250	3.9014			
30.00000	15.00000	0.00000		0.0	4.0250	3.9014			
31.00000	15.00000	0.00000		0.0	4.0250	3.9014			
32.00000	15.00000	0.00000		0.0	4.0250	3.9014			
33.00000	15.00000	0.00000		0.0	4.0250	3.9014			
34.00000	15.00000	0.00000		0.0	4.0250	3.9014			
35.00000	15.00000	0.00000		0.0	4.0250	3.9014			
36.00000	15.00000	0.00000		0.0	4.0250	3.9014			
37.00000	15.00000	0.00000		0.0	4.0250	3.9014			
38.00000	15.00000	0.00000		-0.12724	2.4734	2.5117			
39.00000	15.00000	0.00000		-0.36167	2.0043	2.2179			
40.00000	15.00000	0.00000		-0.54394	1.5556	1.8459			
41.00000	15.00000	0.00000		-0.65914	1.1644	1.4429			
42.00000	15.00000	0.00000		-0.70727	0.84328	1.0516			
43.00000	15.00000	0.00000		-0.72352	0.61673	0.73675			
44.00000	15.00000	0.00000		-0.69769	0.45597	0.48572			
45.00000	15.00000	0.00000		-0.61050	0.32137	0.28950			
46.00000	15.00000	0.00000		-0.47421	0.20812	0.16408			
47.00000	15.00000	0.00000		-0.29679	0.11213	0.09669			
48.00000	15.00000	0.00000		-0.092055	0.030120	0.041183			
49.00000	15.00000	0.00000		0.0	0.0	0.0			
50.00000	15.00000	0.00000		0.0	0.0	0.0			
0.00000	16.00000	0.00000		0.0	0.0	0.0			
1.00000	16.00000	0.00000		0.0	0.0	0.0			
2.00000	16.00000	0.00000		0.0	0.0	0.0			
3.00000	16.00000	0.00000		0.0	0.0	0.0			
4.00000	16.00000	0.00000		0.0	0.0	0.0			
5.00000	16.00000	0.00000		0.0	0.0	0.0			
6.00000	16.00000	0.00000		0.0	0.0	0.0			
7.00000	16.00000	0.00000		0.0	0.0	0.0			
8.00000	16.00000	0.00000		0.0	0.0	0.0			
9.00000	16.00000	0.00000		0.082096	0.018850	0.036015			
10.00000	16.00000	0.00000		0.32986	0.085638	0.098416			
11.00000	16.00000	0.00000		0.55209	0.16466	0.177201			
12.00000	16.00000	0.00000		0.74158	0.25931	0.31898			
13.00000	16.00000	0.00000		0.88843	0.37416	0.55916			
14.00000	16.00000	0.00000		0.97907	0.51539	0.88116			
15.00000	16.00000	0.00000		0.99499	0.69120	1.2434			
16.00000	16.00000	0.00000		0.91183	0.91183	1.5333			
17.00000	16.00000	0.00000		0.82445	1.3117	2.0705			
18.00000	16.00000	0.00000		0.63882	1.8269	2.5530			
19.00000	16.00000	0.00000		0.35318	2.4412	2.9886			
20.00000	16.00000	0.00000		0.0	3.0820	3.3268			
21.00000	16.00000	0.00000		0.0	4.6000	4.9654			
22.00000	16.00000	0.00000		0.0	4.6000	4.9654			
23.00000	16.00000	0.00000		0.0	4.6000	4.9654			
24.00000	16.00000	0.00000		0.0	4.6000	4.9654			
25.00000	16.00000	0.00000		0.0	4.6000	4.9654			
26.00000	16.00000	0.00000		0.0	4.6000	4.9654			
27.00000	16.00000	0.00000		0.0	4.6000	4.9654			
28.00000	16.00000	0.00000		0.0	4.6000	4.9654			
29.00000	16.00000	0.00000		0.0	4.6000	4.9654			
30.00000	16.00000	0.00000		0.0	4.6000	4.9654			
31.00000	16.00000	0.00000		0.0	4.6000	4.9654			
32.00000	16.00000	0.00000		0.0	4.6000	4.9654			
33.00000	16.00000	0.00000		0.0	4.6000	4.9654			
34.00000	16.00000	0.00000		0.0	4.6000	4.9654			
35.00000	16.00000	0.00000		0.0	4.6000	4.9654			
36.00000	16.00000	0.00000		0.0	4.6000	4.9654			
37.00000	16.00000	0.00000		0.0	4.6000	4.9654			
38.00000	16.00000	0.00000		-0.18138	2.7653	3.1736			
39.00000	16.00000	0.00000		-0.50746	2.1247	2.7795			
40.00000	16.00000	0.00000		-0.74461	1.5548	2.3149			
41.00000	16.00000	0.00000		-0.87951	1.0078	1.8250			
42.00000	16.00000	0.00000		-0.96753	0.79521	1.4205			
43.00000	16.00000	0.00000		-0.99776	0.59837	1.0608			
44.00000	16.00000	0.00000		-0.94181	0.44101	0.71192			
45.00000	16.00000	0.00000		-0.82108	0.31387	0.42732			
46.00000	16.00000	0.00000		-0.65147	0.20978	0.23468			
47.00000	16.00000	0.00000		-0.44457	0.12343	0.12947			
48.00000	16.00000	0.00000		-0.20880	0.050890	0.070973			
49.00000	16.00000	0.00000		0.0	0.0	0.0			
50.00000	16.00000	0.00000		0.0	0.0	0.0			
0.00000	17.00000	0.00000		0.0	0.0	0.0			
1.00000	17.00000	0.00000		0.0	0.0	0.0			
2.00000	17.00000	0.00000		0.0	0.0	0.0			
3.00000	17.00000	0.00000		0.0	0.0	0.0			
4.00000	17.00000	0.00000		0.0	0.0	0.0			
5.00000	17.00000	0.00000		0.0	0.0	0.0			
6.00000	17.00000	0.00000		0.0	0.0	0.0			
7.00000	17.00000	0.00000		0.0	0.0	0.0			
8.00000	17.00000	0.00000		0.0	0.0	0.0			
9.00000	17.00000	0.00000		0.18150	0.029153	0.062127			
10.00000	17.00000	0.00000		0.46109	0.083202	0.12413			
11.00000	17.00000	0.00000		0.71956	0.14800	0.22969			
12.00000	17.00000	0.00000		0.95017	0.22694	0.43590			
13.00000	17.00000	0.00000		1.1432	0.32490	0.76000			
14.00000	17.00000	0.00000		1.2842	0.44906	1.1814			
15.00000	17.00000	0.00000		1.3515	0.61019	1.6455			
16.00000	17.00000	0.00000		1.3117	0.82445	2.0705			
17.00000	17.00000	0.00000		1.1151	1.1151	2.3613			
18.00000	17.00000	0.00000		0.90342	1.7162	2.8897			
19.00000	17.00000	0.00000		0.52045	2.5304	3.3959			
20.00000	17.00000	0.00000		0.0	3.4673	3.8554			
21.00000	17.00000	0.00000		0.0	5.1750	5.7544			
22.00000	17.00000	0.00000		0.0	5.1750	5.7544			
23.00000	17.00000	0.00000		0.0	5.1750	5.7544			
24.00000	17.00000	0.00000		0.0	5.1750	5.7544			
25.00000	17.00000	0.00000		0.0	5.1750	5.7544			
26.00000	17.00000	0.00000		0.0	5.1750	5.7544			
27.00000	17.00000	0.00000		0.0	5.1750	5.7544			
28.00000	17.00000	0.00000		0.0	5.1750	5.7544			



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				37.00000	17.00000	0.00000	0.0	5.1750	5.7544
				38.00000	17.00000	0.00000	-0.27079	2.9964	3.6348
				39.00000	17.00000	0.00000	-0.73370	2.0982	3.1465
				40.00000	17.00000	0.00000	-1.0293	1.3893	2.6273
				41.00000	17.00000	0.00000	-1.2368	0.95850	2.2386
				42.00000	17.00000	0.00000	-1.3476	0.70940	1.8688
				43.00000	17.00000	0.00000	-1.3288	0.52415	1.4127
				44.00000	17.00000	0.00000	-1.2214	0.38314	0.96122
				45.00000	17.00000	0.00000	-1.0521	0.27316	0.58364
				46.00000	17.00000	0.00000	-0.83087	0.18544	0.31822
				47.00000	17.00000	0.00000	0.59333	0.11407	0.16695
				48.00000	17.00000	0.00000	-0.32360	0.055003	0.092847
				49.00000	17.00000	0.00000	-0.035322	0.0053775	0.018419
				50.00000	17.00000	0.00000	0.0	0.0	0.0
				0.00000	18.00000	0.00000	0.0	0.0	0.0
				1.00000	18.00000	0.00000	0.0	0.0	0.0
				2.00000	18.00000	0.00000	0.0	0.0	0.0
				3.00000	18.00000	0.00000	0.0	0.0	0.0
				4.00000	18.00000	0.00000	0.0	0.0	0.0
				5.00000	18.00000	0.00000	0.0	0.0	0.0
				6.00000	18.00000	0.00000	0.0	0.0	0.0
				7.00000	18.00000	0.00000	0.0	0.0	0.0
				8.00000	18.00000	0.00000	0.0	0.0	0.0
				9.00000	18.00000	0.00000	0.27044	0.026982	0.079474
				10.00000	18.00000	0.00000	0.58483	0.065193	0.14899
				11.00000	18.00000	0.00000	0.88422	0.11128	0.28748
				12.00000	18.00000	0.00000	1.1634	0.16831	0.55132
				13.00000	18.00000	0.00000	1.4144	0.24042	0.95511
				14.00000	18.00000	0.00000	1.6250	0.33422	1.4726
				15.00000	18.00000	0.00000	1.7744	0.46068	2.0387
				16.00000	18.00000	0.00000	1.8269	0.63882	2.5530
				17.00000	18.00000	0.00000	1.7162	0.98342	2.8897
				18.00000	18.00000	0.00000	1.3184	1.3184	2.9208
				19.00000	18.00000	0.00000	0.82857	2.3696	3.4130
				20.00000	18.00000	0.00000	0.0	3.8525	4.0025
				21.00000	18.00000	0.00000	0.0	5.7500	5.9740
				22.00000	18.00000	0.00000	0.0	5.7500	5.9740
				23.00000	18.00000	0.00000	0.0	5.7500	5.9740
				24.00000	18.00000	0.00000	0.0	5.7500	5.9740
				25.00000	18.00000	0.00000	0.0	5.7500	5.9740
				26.00000	18.00000	0.00000	0.0	5.7500	5.9740
				27.00000	18.00000	0.00000	0.0	5.7500	5.9740
				28.00000	18.00000	0.00000	0.0	5.7500	5.9740
				29.00000	18.00000	0.00000	0.0	5.7500	5.9740
				30.00000	18.00000	0.00000	0.0	5.7500	5.9740
				31.00000	18.00000	0.00000	0.0	5.7500	5.9740
				32.00000	18.00000	0.00000	0.0	5.7500	5.9740
				33.00000	18.00000	0.00000	0.0	5.7500	5.9740
				34.00000	18.00000	0.00000	0.0	5.7500	5.9740
				35.00000	18.00000	0.00000	0.0	5.7500	5.9740
				36.00000	18.00000	0.00000	0.0	5.7500	5.9740
				37.00000	18.00000	0.00000	0.0	5.7500	5.9740
				38.00000	18.00000	0.00000	-0.44562	3.0801	3.6915
				39.00000	18.00000	0.00000	-1.1189	1.7891	3.1611
				40.00000	18.00000	0.00000	-1.5641	1.0866	2.9502
				41.00000	18.00000	0.00000	-1.7979	0.75719	2.7519
				42.00000	18.00000	0.00000	-1.8160	0.54161	2.3097
				43.00000	18.00000	0.00000	-1.7091	0.39243	1.7551
				44.00000	18.00000	0.00000	-1.5258	0.28406	1.2028
				45.00000	18.00000	0.00000	-1.2931	0.20214	0.73642
				46.00000	18.00000	0.00000	-1.0267	0.13822	0.40185
				47.00000	18.00000	0.00000	-0.73668	0.087036	0.20510
				48.00000	18.00000	0.00000	-0.42926	0.045171	0.11078
				49.00000	18.00000	0.00000	-0.10879	0.010318	0.041424
				50.00000	18.00000	0.00000	0.0	0.0	0.0
				0.00000	19.00000	0.00000	0.0	0.0	0.0
				1.00000	19.00000	0.00000	0.0	0.0	0.0
				2.00000	19.00000	0.00000	0.0	0.0	0.0
				3.00000	19.00000	0.00000	0.0	0.0	0.0
				4.00000	19.00000	0.00000	0.0	0.0	0.0
				5.00000	19.00000	0.00000	0.0	0.0	0.0
				6.00000	19.00000	0.00000	0.0	0.0	0.0
				7.00000	19.00000	0.00000	0.0	0.0	0.0
				8.00000	19.00000	0.00000	0.0	0.0	0.0
				9.00000	19.00000	0.00000	0.34116	0.015841	0.090876
				10.00000	19.00000	0.00000	0.69152	0.035575	0.16932
				11.00000	19.00000	0.00000	1.0342	0.059638	0.33475
				12.00000	19.00000	0.00000	1.3664	0.089625	0.64484
				13.00000	19.00000	0.00000	1.6838	0.12801	1.1144
				14.00000	19.00000	0.00000	1.9791	0.17886	1.7155
				15.00000	19.00000	0.00000	2.2397	0.24933	2.3776
				16.00000	19.00000	0.00000	2.4412	0.35318	2.9886
				17.00000	19.00000	0.00000	2.5304	0.52045	3.3959
				18.00000	19.00000	0.00000	2.3696	0.82857	3.4130
				19.00000	19.00000	0.00000	1.5217	1.5217	2.8486
				20.00000	19.00000	0.00000	0.0	4.2378	3.5278
				21.00000	19.00000	0.00000	0.0	6.3250	5.2654
				22.00000	19.00000	0.00000	0.0	6.3250	5.2654
				23.00000	19.00000	0.00000	0.0	6.3250	5.2654
				24.00000	19.00000	0.00000	0.0	6.3250	5.2654
				25.00000	19.00000	0.00000	0.0	6.3250	5.2654
				26.00000	19.00000	0.00000	0.0	6.3250	5.2654
				27.00000	19.00000	0.00000	0.0	6.3250	5.2654
				28.00000	19.00000	0.00000	0.0	6.3250	5.2654
				29.00000	19.00000	0.00000	0.0	6.3250	5.2654
				30.00000	19.00000	0.00000	0.0	6.3250	5.2654
				31.00000	19.00000	0.00000	0.0	6.3250	5.2654
				32.00000	19.00000	0.00000	0.0	6.3250	5.2654
				33.00000	19.00000	0.00000	0.0	6.3250	5.2654
				34.00000	19.00000	0.00000	0.0	6.3250	5.2654
				35.00000	19.00000	0.00000	0.0	6.3250	5.2654
				36.00000	19.00000	0.00000	0.0	6.3250	5.2654
				37.00000	19.00000	0.00000	0.0	6.3250	5.2654
				38.00000	19.00000	0.00000	-0.92345	2.6409	3.0821
				39.00000	19.00000	0.00000	-2.0848	1.0974	2.2130
				40.00000	19.00000	0.00000	-2.4967	0.64820	3.4658
				41.00000	19.00000	0.00000	-2.5053	0.42583	3.2287
				42.00000	19.00000	0.00000	-2.3502	0.29578	2.6982
				43.00000	19.00000	0.00000	-2.1149	0.21100	2.0450
				44.00000	19.00000	0.00000	-1.8348	0.15153	1.4019
				45.00000	19.00000	0.00000	-1.5273	0.10756	0.86043
				46.00000	19.00000	0.00000	-1.2019	0.073763	0.46978
				47.00000	19.00000	0.00000	-0.86398	0.046981	0.23655
				48.00000	19.00000	0.00000	-0.51716	0.025243	0.12451
				49.00000	19.00000	0.00000	-0.16373	0.0072488	0.054510
				50.00000	19.00000	0.00000	0.0	0.0	0.0
				0.00000	20.00000	0.00000	0.0	0.0	0.0
				1.00000	20.00000	0.00000	0.0	0.0	0.0
				2.00000	20.00000	0.00000	0.0	0.0	0.0
				3.00000	20.00000	0.00000	0.0	0.0	0.0
				4.00000	20.00000	0.00000	0.0	0.0	0.0
				5.00000	20.00000	0.00000	0.0	0.0	0.0
				6.00000	20.00000	0.00000	0.0	0.0	0.0
				7.00000	20.00000	0.00000	0.0	0.0	0.0
				8.00000	20.00000	0.00000	0.0	0.0	0.0047769
				9.00000	20.00000	0.00000	0.38525	0.0	0.096667
				10.00000	20.00000	0.00000	0.77050	0.0	0.18074
				11.00000	20.00000	0.00000	1.1558	0.0	0.36088
				12.00000	20.00000	0.00000	1.5410	0.0	0.69795
				13.00000	20.00000	0.00000	1.9263	0.0	1.20998
				14.00000	20.00000	0.00000	2.3115	0.0	1.8712
				15.00000	20.00000	0.00000	2.6968	0.0	2.6140
				16.00000	20.00000	0.00000	3.0820	0.0	3.3268
				17.00000	20.00000	0.00000	3.4673	0.0	3.8554



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				25.00000	20.00000	0.00000	0.0	6.9000	3.2057
				26.00000	20.00000	0.00000	0.0	6.9000	3.2057
				27.00000	20.00000	0.00000	0.0	6.9000	3.2057
				28.00000	20.00000	0.00000	0.0	6.9000	3.2057
				29.00000	20.00000	0.00000	0.0	6.9000	3.2057
				30.00000	20.00000	0.00000	0.0	6.9000	3.2057
				31.00000	20.00000	0.00000	0.0	6.9000	3.2057
				32.00000	20.00000	0.00000	0.0	6.9000	3.2057
				33.00000	20.00000	0.00000	0.0	6.9000	3.2057
				34.00000	20.00000	0.00000	0.0	6.9000	3.2057
				35.00000	20.00000	0.00000	0.0	6.9000	3.2057
				36.00000	20.00000	0.00000	0.0	6.9000	3.2057
				37.00000	20.00000	0.00000	0.0	6.9000	3.2057
				38.00000	20.00000	0.00000	-4.4304	0.0	2.9703
				39.00000	20.00000	0.00000	-4.0451	0.0	3.8596
				40.00000	20.00000	0.00000	-3.6599	0.0	3.9907
				41.00000	20.00000	0.00000	-3.2746	0.0	3.6255
				42.00000	20.00000	0.00000	-2.8894	0.0	2.9828
				43.00000	20.00000	0.00000	-2.5041	0.0	2.2384
				44.00000	20.00000	0.00000	-2.1189	0.0	1.5251
				45.00000	20.00000	0.00000	-1.7336	0.0	0.93259
				46.00000	20.00000	0.00000	-1.3484	0.0	0.50767
				47.00000	20.00000	0.00000	-0.96313	0.0	0.25398
				48.00000	20.00000	0.00000	-0.57788	0.0	0.13218
				49.00000	20.00000	0.00000	-0.19263	0.0	0.059874
				50.00000	20.00000	0.00000	0.0	0.0	0.0
				0.00000	21.00000	0.00000	0.0	0.0	0.0
				1.00000	21.00000	0.00000	0.0	0.0	0.0
				2.00000	21.00000	0.00000	0.0	0.0	0.0
				3.00000	21.00000	0.00000	0.0	0.0	0.0
				4.00000	21.00000	0.00000	0.0	0.0	0.0
				5.00000	21.00000	0.00000	0.0	0.0	0.0
				6.00000	21.00000	0.00000	0.0	0.0	0.0
				7.00000	21.00000	0.00000	0.0	0.0	0.0
				8.00000	21.00000	0.00000	0.0	0.0	0.0071297
				9.00000	21.00000	0.00000	0.57500	0.0	0.14428
				10.00000	21.00000	0.00000	1.1500	0.0	0.26975
				11.00000	21.00000	0.00000	1.7250	0.0	0.53862
				12.00000	21.00000	0.00000	2.3000	0.0	1.0417
				13.00000	21.00000	0.00000	2.8750	0.0	1.8057
				14.00000	21.00000	0.00000	3.4500	0.0	2.7928
				15.00000	21.00000	0.00000	4.0250	0.0	3.9014
				16.00000	21.00000	0.00000	4.6000	0.0	4.9654
				17.00000	21.00000	0.00000	5.1750	0.0	5.7544
				18.00000	21.00000	0.00000	5.7500	0.0	5.9740
				19.00000	21.00000	0.00000	6.3250	0.0	5.2654
				20.00000	21.00000	0.00000	6.9000	0.0	3.2057
				21.00000	21.00000	0.00000	Point lies within an excavation.		
				22.00000	21.00000	0.00000	Point lies within an excavation.		
				23.00000	21.00000	0.00000	Point lies within an excavation.		
				24.00000	21.00000	0.00000	Point lies within an excavation.		
				25.00000	21.00000	0.00000	Point lies within an excavation.		
				26.00000	21.00000	0.00000	Point lies within an excavation.		
				27.00000	21.00000	0.00000	Point lies within an excavation.		
				28.00000	21.00000	0.00000	Point lies within an excavation.		
				29.00000	21.00000	0.00000	Point lies within an excavation.		
				30.00000	21.00000	0.00000	Point lies within an excavation.		
				31.00000	21.00000	0.00000	Point lies within an excavation.		
				32.00000	21.00000	0.00000	Point lies within an excavation.		
				33.00000	21.00000	0.00000	Point lies within an excavation.		
				34.00000	21.00000	0.00000	Point lies within an excavation.		
				35.00000	21.00000	0.00000	Point lies within an excavation.		
				36.00000	21.00000	0.00000	Point lies within an excavation.		
				37.00000	21.00000	0.00000	Point lies within an excavation.		
				38.00000	21.00000	0.00000	-6.6125	0.0	4.4333
				39.00000	21.00000	0.00000	-6.0375	0.0	5.7606
				40.00000	21.00000	0.00000	-5.4625	0.0	5.9563
				41.00000	21.00000	0.00000	-4.8875	0.0	5.4112
				42.00000	21.00000	0.00000	-4.3125	0.0	4.4519
				43.00000	21.00000	0.00000	-3.7375	0.0	3.3408
				44.00000	21.00000	0.00000	-3.1625	0.0	2.2762
				45.00000	21.00000	0.00000	-2.5875	0.0	1.3919
				46.00000	21.00000	0.00000	-2.0125	0.0	0.75772
				47.00000	21.00000	0.00000	-1.4375	0.0	0.37908
				48.00000	21.00000	0.00000	-0.86250	0.0	0.19728
				49.00000	21.00000	0.00000	-0.28750	0.0	0.089364
				50.00000	21.00000	0.00000	0.0	0.0	0.0
				0.00000	22.00000	0.00000	0.0	0.0	0.0
				1.00000	22.00000	0.00000	0.0	0.0	0.0
				2.00000	22.00000	0.00000	0.0	0.0	0.0
				3.00000	22.00000	0.00000	0.0	0.0	0.0
				4.00000	22.00000	0.00000	0.0	0.0	0.0
				5.00000	22.00000	0.00000	0.0	0.0	0.0
				6.00000	22.00000	0.00000	0.0	0.0	0.0
				7.00000	22.00000	0.00000	0.0	0.0	0.0
				8.00000	22.00000	0.00000	0.0	0.0	0.0071297
				9.00000	22.00000	0.00000	0.57500	0.0	0.14428
				10.00000	22.00000	0.00000	1.1500	0.0	0.26975
				11.00000	22.00000	0.00000	1.7250	0.0	0.53862
				12.00000	22.00000	0.00000	2.3000	0.0	1.0417
				13.00000	22.00000	0.00000	2.8750	0.0	1.8057
				14.00000	22.00000	0.00000	3.4500	0.0	2.7928
				15.00000	22.00000	0.00000	4.0250	0.0	3.9014
				16.00000	22.00000	0.00000	4.6000	0.0	4.9654
				17.00000	22.00000	0.00000	5.1750	0.0	5.7544
				18.00000	22.00000	0.00000	5.7500	0.0	5.9740
				19.00000	22.00000	0.00000	6.3250	0.0	5.2654
				20.00000	22.00000	0.00000	6.9000	0.0	3.2057
				21.00000	22.00000	0.00000	Point lies within an excavation.		
				22.00000	22.00000	0.00000	Point lies within an excavation.		
				23.00000	22.00000	0.00000	Point lies within an excavation.		
				24.00000	22.00000	0.00000	Point lies within an excavation.		
				25.00000	22.00000	0.00000	Point lies within an excavation.		
				26.00000	22.00000	0.00000	Point lies within an excavation.		
				27.00000	22.00000	0.00000	Point lies within an excavation.		
				28.00000	22.00000	0.00000	Point lies within an excavation.		
				29.00000	22.00000	0.00000	Point lies within an excavation.		
				30.00000	22.00000	0.00000	Point lies within an excavation.		
				31.00000	22.00000	0.00000	Point lies within an excavation.		
				32.00000	22.00000	0.00000	Point lies within an excavation.		
				33.00000	22.00000	0.00000	Point lies within an excavation.		
				34.00000	22.00000	0.00000	Point lies within an excavation.		
				35.00000	22.00000	0.00000	Point lies within an excavation.		
				36.00000	22.00000	0.00000	Point lies within an excavation.		
				37.00000	22.00000	0.00000	Point lies within an excavation.		
				38.00000	22.00000	0.00000	-6.6125	0.0	4.4333
				39.00000	22.00000	0.00000	-6.0375	0.0	5.7606
				40.00000	22.00000	0.00000	-5.4625	0.0	5.9563
				41.00000	22.00000	0.00000	-4.8875	0.0	5.4112
				42.00000	22.00000	0.00000	-4.3125	0.0	4.4519
				43.00000	22.00000	0.00000	-3.7375	0.0	3.3408
				44.00000	22.00000	0.00000	-3.1625	0.0	2.2762
				45.00000	22.00000	0.00000	-2.5875	0.0	1.3919
				46.00000	22.00000	0.00000	-2.0125	0.0	0.75772
				47.00000	22.00000	0.00000	-1.4375	0.0	0.37908
				48.00000	22.00000	0.00000	-0.86250	0.0	0.19728
				49.00000	22.00000	0.00000	-0.28750	0.0	0.089364
				50.00000	22.00000	0.00000	0.0	0.0	0.0
				0.00000	23.00000	0.00000	0.0	0.0	0.0
				1.00000	23.00000	0.00000	0.0	0.0	0.0
				2.00000	23.00000	0.00000	0.0	0.0	0.0
				3.00000	23.00000	0.00000	0.0	0.0	0.0
				4.00000	23.00000	0.00000	0.0	0.0	0.0
				5.00000	23.00000	0.00000	0.0	0.0	0.0
				6.00000	23.00000	0.00000	0.0	0.0	0.0
				7.00000	23.00000	0.00000	0.0	0.0	0.0
				8.00000	23.00000	0.00000	0.0	0.0	0.0071297
				9.00000	23.00000	0.00000	0.57500	0.0	0.14428
				10.00000	23.00000	0.00000	1.1500	0.0	0.26975
				11.00000	23.00000	0.00000	1.7250	0.0	0.53862
				12.00000	23.00000	0.00000	2.3000	0.0	1.0417



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				13.00000	23.00000	0.00000	2.8750	0.0	1.8057
				14.00000	23.00000	0.00000	3.4500	0.0	2.7928
				15.00000	23.00000	0.00000	4.0250	0.0	3.9014
				16.00000	23.00000	0.00000	4.6000	0.0	4.9654
				17.00000	23.00000	0.00000	5.1750	0.0	5.7544
				18.00000	23.00000	0.00000	5.7500	0.0	5.9740
				19.00000	23.00000	0.00000	6.3250	0.0	5.2654
				20.00000	23.00000	0.00000	6.9000	0.0	3.2057
				21.00000	23.00000	0.00000	Point lies within an excavation.		
				22.00000	23.00000	0.00000	Point lies within an excavation.		
				23.00000	23.00000	0.00000	Point lies within an excavation.		
				24.00000	23.00000	0.00000	Point lies within an excavation.		
				25.00000	23.00000	0.00000	Point lies within an excavation.		
				26.00000	23.00000	0.00000	Point lies within an excavation.		
				27.00000	23.00000	0.00000	Point lies within an excavation.		
				28.00000	23.00000	0.00000	Point lies within an excavation.		
				29.00000	23.00000	0.00000	Point lies within an excavation.		
				30.00000	23.00000	0.00000	Point lies within an excavation.		
				31.00000	23.00000	0.00000	Point lies within an excavation.		
				32.00000	23.00000	0.00000	Point lies within an excavation.		
				33.00000	23.00000	0.00000	Point lies within an excavation.		
				34.00000	23.00000	0.00000	Point lies within an excavation.		
				35.00000	23.00000	0.00000	Point lies within an excavation.		
				36.00000	23.00000	0.00000	Point lies within an excavation.		
				37.00000	23.00000	0.00000	Point lies within an excavation.		
				38.00000	23.00000	0.00000	-6.6125	0.0	4.4333
				39.00000	23.00000	0.00000	-6.0375	0.0	5.7606
				40.00000	23.00000	0.00000	-5.4625	0.0	5.9563
				41.00000	23.00000	0.00000	-4.8875	0.0	5.4112
				42.00000	23.00000	0.00000	-4.3125	0.0	4.4519
				43.00000	23.00000	0.00000	-3.7375	0.0	3.3408
				44.00000	23.00000	0.00000	-3.1625	0.0	2.2762
				45.00000	23.00000	0.00000	-2.5875	0.0	1.3919
				46.00000	23.00000	0.00000	-2.0125	0.0	0.75772
				47.00000	23.00000	0.00000	-1.4375	0.0	0.37908
				48.00000	23.00000	0.00000	-0.86250	0.0	0.19728
				49.00000	23.00000	0.00000	-0.28750	0.0	0.089364
				50.00000	23.00000	0.00000	0.0	0.0	0.0
				0.00000	24.00000	0.00000	0.0	0.0	0.0
				2.00000	24.00000	0.00000	0.0	0.0	0.0
				3.00000	24.00000	0.00000	0.0	0.0	0.0
				4.00000	24.00000	0.00000	0.0	0.0	0.0
				5.00000	24.00000	0.00000	0.0	0.0	0.0
				6.00000	24.00000	0.00000	0.0	0.0	0.0
				7.00000	24.00000	0.00000	0.0	0.0	0.0
				8.00000	24.00000	0.00000	0.0	0.0	0.0071297
				9.00000	24.00000	0.00000	0.57500	0.0	0.14428
				10.00000	24.00000	0.00000	1.1500	0.0	0.26975
				11.00000	24.00000	0.00000	1.7250	0.0	0.53862
				12.00000	24.00000	0.00000	2.3000	0.0	1.0417
				13.00000	24.00000	0.00000	2.8750	0.0	1.8057
				14.00000	24.00000	0.00000	3.4500	0.0	2.7928
				15.00000	24.00000	0.00000	4.0250	0.0	3.9014
				16.00000	24.00000	0.00000	4.6000	0.0	4.9654
				17.00000	24.00000	0.00000	5.1750	0.0	5.7544
				18.00000	24.00000	0.00000	5.7500	0.0	5.9740
				19.00000	24.00000	0.00000	6.3250	0.0	5.2654
				20.00000	24.00000	0.00000	6.9000	0.0	3.2057
				21.00000	24.00000	0.00000	Point lies within an excavation.		
				22.00000	24.00000	0.00000	Point lies within an excavation.		
				23.00000	24.00000	0.00000	Point lies within an excavation.		
				24.00000	24.00000	0.00000	Point lies within an excavation.		
				25.00000	24.00000	0.00000	Point lies within an excavation.		
				26.00000	24.00000	0.00000	Point lies within an excavation.		
				27.00000	24.00000	0.00000	Point lies within an excavation.		
				28.00000	24.00000	0.00000	Point lies within an excavation.		
				29.00000	24.00000	0.00000	Point lies within an excavation.		
				30.00000	24.00000	0.00000	Point lies within an excavation.		
				31.00000	24.00000	0.00000	Point lies within an excavation.		
				32.00000	24.00000	0.00000	Point lies within an excavation.		
				33.00000	24.00000	0.00000	Point lies within an excavation.		
				34.00000	24.00000	0.00000	Point lies within an excavation.		
				35.00000	24.00000	0.00000	Point lies within an excavation.		
				36.00000	24.00000	0.00000	Point lies within an excavation.		
				37.00000	24.00000	0.00000	Point lies within an excavation.		
				38.00000	24.00000	0.00000	-6.6125	0.0	4.4333
				39.00000	24.00000	0.00000	-6.0375	0.0	5.7606
				40.00000	24.00000	0.00000	-5.4625	0.0	5.9563
				41.00000	24.00000	0.00000	-4.8875	0.0	5.4112
				42.00000	24.00000	0.00000	-4.3125	0.0	4.4519
				43.00000	24.00000	0.00000	-3.7375	0.0	3.3408
				44.00000	24.00000	0.00000	-3.1625	0.0	2.2762
				45.00000	24.00000	0.00000	-2.5875	0.0	1.3919
				46.00000	24.00000	0.00000	-2.0125	0.0	0.75772
				47.00000	24.00000	0.00000	-1.4375	0.0	0.37908
				48.00000	24.00000	0.00000	-0.86250	0.0	0.19728
				49.00000	24.00000	0.00000	-0.28750	0.0	0.089364
				50.00000	24.00000	0.00000	0.0	0.0	0.0
				0.00000	25.00000	0.00000	0.0	0.0	0.0
				2.00000	25.00000	0.00000	0.0	0.0	0.0
				3.00000	25.00000	0.00000	0.0	0.0	0.0
				4.00000	25.00000	0.00000	0.0	0.0	0.0
				5.00000	25.00000	0.00000	0.0	0.0	0.0
				6.00000	25.00000	0.00000	0.0	0.0	0.0
				7.00000	25.00000	0.00000	0.0	0.0	0.0
				8.00000	25.00000	0.00000	0.0	0.0	0.0071297
				9.00000	25.00000	0.00000	0.57500	0.0	0.14428
				10.00000	25.00000	0.00000	1.1500	0.0	0.26975
				11.00000	25.00000	0.00000	1.7250	0.0	0.53862
				12.00000	25.00000	0.00000	2.3000	0.0	1.0417
				13.00000	25.00000	0.00000	2.8750	0.0	1.8057
				14.00000	25.00000	0.00000	3.4500	0.0	2.7928
				15.00000	25.00000	0.00000	4.0250	0.0	3.9014
				16.00000	25.00000	0.00000	4.6000	0.0	4.9654
				17.00000	25.00000	0.00000	5.1750	0.0	5.7544
				18.00000	25.00000	0.00000	5.7500	0.0	5.9740
				19.00000	25.00000	0.00000	6.3250	0.0	5.2654
				20.00000	25.00000	0.00000	6.9000	0.0	3.2057
				21.00000	25.00000	0.00000	Point lies within an excavation.		
				22.00000	25.00000	0.00000	Point lies within an excavation.		
				23.00000	25.00000	0.00000	Point lies within an excavation.		
				24.00000	25.00000	0.00000	Point lies within an excavation.		
				25.00000	25.00000	0.00000	Point lies within an excavation.		
				26.00000	25.00000	0.00000	Point lies within an excavation.		
				27.00000	25.00000	0.00000	Point lies within an excavation.		
				28.00000	25.00000	0.00000	Point lies within an excavation.		
				29.00000	25.00000	0.00000	Point lies within an excavation.		
				30.00000	25.00000	0.00000	Point lies within an excavation.		
				31.00000	25.00000	0.00000	Point lies within an excavation.		
				32.00000	25.00000	0.00000	Point lies within an excavation.		
				33.00000	25.00000	0.00000	Point lies within an excavation.		
				34.00000	25.00000	0.00000	Point lies within an excavation.		
				35.00000	25.00000	0.00000	Point lies within an excavation.		
				36.00000	25.00000	0.00000	Point lies within an excavation.		
				37.00000	25.00000	0.00000	Point lies within an excavation.		
				38.00000	25.00000	0.00000	-6.6125	0.0	4.4333
				39.00000	25.00000	0.00000	-6.0375	0.0	5.7606
				40.00000	25.00000	0.00000	-5.4625	0.0	5.9563
				41.00000	25.00000	0.00000	-4.8875	0.0	5.4112
				42.00000	25.00000	0.00000	-4.3125	0.0	4.4519
				43.00000	25.00000	0.00000	-3.7375	0.0	3.3408
				44.00000	25.00000	0.00000	-3.1625	0.0	2.2762
				45.00000	25.00000	0.00000	-2.5875	0.0	1.3919
				46.00000	25.00000	0.00000	-2.0125	0.0	0.75772
				47.00000	25.00000	0.00000	-1.4375	0.0	0.37908
				48.00000	25.00000	0.00000	-0.86250	0.0	0.19728
				49.00000	25.00000	0.00000	-0.28750	0.0	0.089364
				50.00000	25.00000	0.00000	0.0	0.0	0.0
				0.00000	26.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				1.00000	26.00000	0.00000	0.0	0.0	0.0
				2.00000	26.00000	0.00000	0.0	0.0	0.0
				3.00000	26.00000	0.00000	0.0	0.0	0.0
				4.00000	26.00000	0.00000	0.0	0.0	0.0
				5.00000	26.00000	0.00000	0.0	0.0	0.0
				6.00000	26.00000	0.00000	0.0	0.0	0.0
				7.00000	26.00000	0.00000	0.0	0.0	0.0
				8.00000	26.00000	0.00000	0.0	0.0	0.0
				9.00000	26.00000	0.00000	0.57500	0.0	0.14428
				10.00000	26.00000	0.00000	1.15000	0.0	0.26975
				11.00000	26.00000	0.00000	1.72500	0.0	0.53862
				12.00000	26.00000	0.00000	2.30000	0.0	1.04170
				13.00000	26.00000	0.00000	2.87500	0.0	1.80570
				14.00000	26.00000	0.00000	3.45000	0.0	2.79280
				15.00000	26.00000	0.00000	4.02500	0.0	3.90140
				16.00000	26.00000	0.00000	4.60000	0.0	4.96540
				17.00000	26.00000	0.00000	5.17500	0.0	5.75440
				18.00000	26.00000	0.00000	5.75000	0.0	5.97400
				19.00000	26.00000	0.00000	6.32500	0.0	5.26540
				20.00000	26.00000	0.00000	6.90000	0.0	3.20570
				21.00000	26.00000	0.00000	Point lies within an excavation.		
				22.00000	26.00000	0.00000	Point lies within an excavation.		
				23.00000	26.00000	0.00000	Point lies within an excavation.		
				24.00000	26.00000	0.00000	Point lies within an excavation.		
				25.00000	26.00000	0.00000	Point lies within an excavation.		
				26.00000	26.00000	0.00000	Point lies within an excavation.		
				27.00000	26.00000	0.00000	Point lies within an excavation.		
				28.00000	26.00000	0.00000	Point lies within an excavation.		
				29.00000	26.00000	0.00000	Point lies within an excavation.		
				30.00000	26.00000	0.00000	Point lies within an excavation.		
				31.00000	26.00000	0.00000	Point lies within an excavation.		
				32.00000	26.00000	0.00000	Point lies within an excavation.		
				33.00000	26.00000	0.00000	Point lies within an excavation.		
				34.00000	26.00000	0.00000	Point lies within an excavation.		
				35.00000	26.00000	0.00000	Point lies within an excavation.		
				36.00000	26.00000	0.00000	Point lies within an excavation.		
				37.00000	26.00000	0.00000	Point lies within an excavation.		
				38.00000	26.00000	0.00000	-6.6125	0.0	4.4333
				39.00000	26.00000	0.00000	-6.0375	0.0	5.7606
				40.00000	26.00000	0.00000	-5.4625	0.0	5.9563
				41.00000	26.00000	0.00000	-4.8875	0.0	5.4112
				42.00000	26.00000	0.00000	-4.3125	0.0	4.4519
				43.00000	26.00000	0.00000	-3.7375	0.0	3.3408
				44.00000	26.00000	0.00000	-3.1625	0.0	2.2762
				45.00000	26.00000	0.00000	-2.5875	0.0	1.3919
				46.00000	26.00000	0.00000	-2.0125	0.0	0.75772
				47.00000	26.00000	0.00000	-1.4375	0.0	0.37908
				48.00000	26.00000	0.00000	-0.86250	0.0	0.19728
				49.00000	26.00000	0.00000	-0.28750	0.0	0.089364
				50.00000	26.00000	0.00000	0.0	0.0	0.0
				0.00000	27.00000	0.00000	0.0	0.0	0.0
				1.00000	27.00000	0.00000	0.0	0.0	0.0
				2.00000	27.00000	0.00000	0.0	0.0	0.0
				3.00000	27.00000	0.00000	0.0	0.0	0.0
				4.00000	27.00000	0.00000	0.0	0.0	0.0
				5.00000	27.00000	0.00000	0.0	0.0	0.0
				6.00000	27.00000	0.00000	0.0	0.0	0.0
				7.00000	27.00000	0.00000	0.0	0.0	0.0
				8.00000	27.00000	0.00000	0.0	0.0	0.0
				9.00000	27.00000	0.00000	0.57500	0.0	0.14428
				10.00000	27.00000	0.00000	1.15000	0.0	0.26975
				11.00000	27.00000	0.00000	1.72500	0.0	0.53862
				12.00000	27.00000	0.00000	2.30000	0.0	1.04170
				13.00000	27.00000	0.00000	2.87500	0.0	1.80570
				14.00000	27.00000	0.00000	3.45000	0.0	2.79280
				15.00000	27.00000	0.00000	4.02500	0.0	3.90140
				16.00000	27.00000	0.00000	4.60000	0.0	4.96540
				17.00000	27.00000	0.00000	5.17500	0.0	5.75440
				18.00000	27.00000	0.00000	5.75000	0.0	5.97400
				19.00000	27.00000	0.00000	6.32500	0.0	5.26540
				20.00000	27.00000	0.00000	6.90000	0.0	3.20570
				21.00000	27.00000	0.00000	Point lies within an excavation.		
				22.00000	27.00000	0.00000	Point lies within an excavation.		
				23.00000	27.00000	0.00000	Point lies within an excavation.		
				24.00000	27.00000	0.00000	Point lies within an excavation.		
				25.00000	27.00000	0.00000	Point lies within an excavation.		
				26.00000	27.00000	0.00000	Point lies within an excavation.		
				27.00000	27.00000	0.00000	Point lies within an excavation.		
				28.00000	27.00000	0.00000	Point lies within an excavation.		
				29.00000	27.00000	0.00000	Point lies within an excavation.		
				30.00000	27.00000	0.00000	Point lies within an excavation.		
				31.00000	27.00000	0.00000	Point lies within an excavation.		
				32.00000	27.00000	0.00000	Point lies within an excavation.		
				33.00000	27.00000	0.00000	Point lies within an excavation.		
				34.00000	27.00000	0.00000	Point lies within an excavation.		
				35.00000	27.00000	0.00000	Point lies within an excavation.		
				36.00000	27.00000	0.00000	Point lies within an excavation.		
				37.00000	27.00000	0.00000	Point lies within an excavation.		
				38.00000	27.00000	0.00000	-6.6125	0.0	4.4333
				39.00000	27.00000	0.00000	-6.0375	0.0	5.7606
				40.00000	27.00000	0.00000	-5.4625	0.0	5.9563
				41.00000	27.00000	0.00000	-4.8875	0.0	5.4112
				42.00000	27.00000	0.00000	-4.3125	0.0	4.4519
				43.00000	27.00000	0.00000	-3.7375	0.0	3.3408
				44.00000	27.00000	0.00000	-3.1625	0.0	2.2762
				45.00000	27.00000	0.00000	-2.5875	0.0	1.3919
				46.00000	27.00000	0.00000	-2.0125	0.0	0.75772
				47.00000	27.00000	0.00000	-1.4375	0.0	0.37908
				48.00000	27.00000	0.00000	-0.86250	0.0	0.19728
				49.00000	27.00000	0.00000	-0.28750	0.0	0.089364
				50.00000	27.00000	0.00000	0.0	0.0	0.0
				0.00000	28.00000	0.00000	0.0	0.0	0.0
				1.00000	28.00000	0.00000	0.0	0.0	0.0
				2.00000	28.00000	0.00000	0.0	0.0	0.0
				3.00000	28.00000	0.00000	0.0	0.0	0.0
				4.00000	28.00000	0.00000	0.0	0.0	0.0
				5.00000	28.00000	0.00000	0.0	0.0	0.0
				6.00000	28.00000	0.00000	0.0	0.0	0.0
				7.00000	28.00000	0.00000	0.0	0.0	0.0
				8.00000	28.00000	0.00000	0.0	0.0	0.0
				9.00000	28.00000	0.00000	0.36787	-0.0082193	0.094497
				10.00000	28.00000	0.00000	0.73516	-0.018173	0.17637
				11.00000	28.00000	0.00000	1.0994	-0.030332	0.35099
				12.00000	28.00000	0.00000	1.4585	-0.045519	0.67740
				13.00000	28.00000	0.00000	1.8181	-0.065924	1.1716
				14.00000	28.00000	0.00000	2.1506	-0.090987	1.8065
				15.00000	28.00000	0.00000	2.4734	-0.12724	2.5117
				16.00000	28.00000	0.00000	2.7653	-0.18138	3.1736
				17.00000	28.00000	0.00000	2.9964	-0.27079	3.6348
				18.00000	28.00000	0.00000	3.0801	-0.44562	3.6915
				19.00000	28.00000	0.00000	2.6409	-0.92345	3.0821
				20.00000	28.00000	0.00000	0.0	-4.4304	2.9703
				21.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				22.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				23.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				24.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				25.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				26.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				27.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				28.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				29.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				30.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				31.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				32.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				33.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				34.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				35.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				36.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				37.00000	28.00000	0.00000	0.0	-6.6125	4.4333
				38.00000	28.00000	0.00000	-1.2334	-0.12334	2.4113
				39.00000	28.00000	0.00000	-2.9831	-0.61356	3.4899



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by AT

Date 24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				40.00000	28.00000	0.00000	-3.0672	-0.34144	3.7284
				41.00000	28.00000	0.00000	-2.8916	-0.21983	3.4409
				42.00000	28.00000	0.00000	-2.6245	-0.15134	2.8569
				43.00000	28.00000	0.00000	-2.3148	-0.10748	2.1564
				44.00000	28.00000	0.00000	-1.9821	-0.077813	1.4746
				45.00000	28.00000	0.00000	-1.6354	-0.054624	0.90421
				46.00000	28.00000	0.00000	-1.2797	-0.037481	0.49321
				47.00000	28.00000	0.00000	-0.91785	-0.023934	0.24739
				48.00000	28.00000	0.00000	-0.55152	-0.012960	0.12921
				49.00000	28.00000	0.00000	-0.18190	-0.0038900	0.058110
				50.00000	28.00000	0.00000	0.0	0.0	0.0
				0.00000	29.00000	0.00000	0.0	0.0	0.0
				1.00000	29.00000	0.00000	0.0	0.0	0.0
				2.00000	29.00000	0.00000	0.0	0.0	0.0
				3.00000	29.00000	0.00000	0.0	0.0	0.0
				4.00000	29.00000	0.00000	0.0	0.0	0.0
				5.00000	29.00000	0.00000	0.0	0.0	0.0
				6.00000	29.00000	0.00000	0.0	0.0	0.0
				7.00000	29.00000	0.00000	0.0	0.0	0.0
				8.00000	29.00000	0.00000	0.0	0.0	0.0
				9.00000	29.00000	0.00000	0.30860	-0.022280	0.085862
				10.00000	29.00000	0.00000	0.64096	-0.051453	0.16001
				11.00000	29.00000	0.00000	0.96188	-0.086928	0.31316
				12.00000	29.00000	0.00000	1.2673	-0.13097	0.60208
				13.00000	29.00000	0.00000	1.5508	-0.18704	1.0411
				14.00000	29.00000	0.00000	1.8023	-0.26075	1.6026
				15.00000	29.00000	0.00000	2.0043	-0.36167	2.2179
				16.00000	29.00000	0.00000	2.1247	-0.50746	2.7795
				17.00000	29.00000	0.00000	2.0982	-0.73370	3.1465
				18.00000	29.00000	0.00000	1.7801	-1.1189	3.1611
				19.00000	29.00000	0.00000	1.0974	-2.0848	3.2130
				20.00000	29.00000	0.00000	0.0	-4.0451	3.8596
				21.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				22.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				23.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				24.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				25.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				26.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				27.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				28.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				29.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				30.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				31.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				32.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				33.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				34.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				35.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				36.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				37.00000	29.00000	0.00000	0.0	-6.0375	5.7606
				38.00000	29.00000	0.00000	-0.61356	-2.9831	3.4899
				39.00000	29.00000	0.00000	-1.4201	-1.4201	2.9945
				40.00000	29.00000	0.00000	-1.9902	-0.89857	3.2073
				41.00000	29.00000	0.00000	-2.1361	-0.60709	2.9971
				42.00000	29.00000	0.00000	-2.0777	-0.42734	2.5136
				43.00000	29.00000	0.00000	-1.9110	-0.30697	1.9094
				44.00000	29.00000	0.00000	-1.6814	-0.22122	1.3099
				45.00000	29.00000	0.00000	-1.4123	-0.15721	0.80358
				46.00000	29.00000	0.00000	-1.1168	-0.10770	0.43876
				47.00000	29.00000	0.00000	-0.80307	-0.068283	0.22216
				48.00000	29.00000	0.00000	-0.47601	-0.036188	0.11827
				49.00000	29.00000	0.00000	-0.13904	-0.0095571	0.049009
				50.00000	29.00000	0.00000	0.0	0.0	0.0
				0.00000	30.00000	0.00000	0.0	0.0	0.0
				1.00000	30.00000	0.00000	0.0	0.0	0.0
				2.00000	30.00000	0.00000	0.0	0.0	0.0
				3.00000	30.00000	0.00000	0.0	0.0	0.0
				4.00000	30.00000	0.00000	0.0	0.0	0.0
				5.00000	30.00000	0.00000	0.0	0.0	0.0
				6.00000	30.00000	0.00000	0.0	0.0	0.0
				7.00000	30.00000	0.00000	0.0	0.0	0.0
				8.00000	30.00000	0.00000	0.0	0.0	0.0
				9.00000	30.00000	0.00000	0.22774	-0.029429	0.071637
				10.00000	30.00000	0.00000	0.52446	-0.075876	0.13685
				11.00000	30.00000	0.00000	0.80292	-0.13187	0.25916
				12.00000	30.00000	0.00000	1.0570	-0.20060	0.49500
				13.00000	30.00000	0.00000	1.2777	-0.28673	0.86013
				14.00000	30.00000	0.00000	1.4512	-0.39742	1.3306
				15.00000	30.00000	0.00000	1.5556	-0.54394	1.8459
				16.00000	30.00000	0.00000	1.5548	-0.74461	2.3149
				17.00000	30.00000	0.00000	1.3893	-1.0293	2.6277
				18.00000	30.00000	0.00000	1.0866	-1.5641	2.9502
				19.00000	30.00000	0.00000	0.64820	-2.4967	3.4658
				20.00000	30.00000	0.00000	0.0	-3.6599	3.9907
				21.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				22.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				23.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				24.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				25.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				26.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				27.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				28.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				29.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				30.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				31.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				32.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				33.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				34.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				35.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				36.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				37.00000	30.00000	0.00000	0.0	-5.4625	5.9563
				38.00000	30.00000	0.00000	-0.34144	-3.0672	3.7284
				39.00000	30.00000	0.00000	-0.89857	-1.9902	3.2073
				40.00000	30.00000	0.00000	-1.2168	-1.2168	2.6912
				41.00000	30.00000	0.00000	-1.4977	-0.87480	2.4977
				42.00000	30.00000	0.00000	-1.5714	-0.63597	2.0929
				43.00000	30.00000	0.00000	-1.5139	-0.46527	1.5877
				44.00000	30.00000	0.00000	-1.3715	-0.33842	1.0851
				45.00000	30.00000	0.00000	-1.1723	-0.24111	0.66203
				46.00000	30.00000	0.00000	-0.93349	-0.16440	0.36099
				47.00000	30.00000	0.00000	-0.66630	-0.10251	0.18636
				48.00000	30.00000	0.00000	-0.37898	-0.051615	0.10226
				49.00000	30.00000	0.00000	-0.073915	-0.0090660	0.031410
				50.00000	30.00000	0.00000	0.0	0.0	0.0
				0.00000	31.00000	0.00000	0.0	0.0	0.0
				1.00000	31.00000	0.00000	0.0	0.0	0.0
				2.00000	31.00000	0.00000	0.0	0.0	0.0
				3.00000	31.00000	0.00000	0.0	0.0	0.0
				4.00000	31.00000	0.00000	0.0	0.0	0.0
				5.00000	31.00000	0.00000	0.0	0.0	0.0
				6.00000	31.00000	0.00000	0.0	0.0	0.0
				7.00000	31.00000	0.00000	0.0	0.0	0.0
				8.00000	31.00000	0.00000	0.0	0.0	0.0
				9.00000	31.00000	0.00000	0.13266	-0.025744	0.050500
				10.00000	31.00000	0.00000	0.39588	-0.006589	0.11126
				11.00000	31.00000	0.00000	0.63554	-0.15908	0.20050
				12.00000	31.00000	0.00000	0.84455	-0.24667	0.37641
				13.00000	31.00000	0.00000	1.0129	-0.35419	0.65849
				14.00000	31.00000	0.00000	1.1264	-0.48846	1.0301
				15.00000	31.00000	0.00000	1.1644	-0.65914	1.4429
				16.00000	31.00000	0.00000	1.0978	-0.87951	1.8250
				17.00000	31.00000	0.00000	0.95850	-1.2368	2.2386
				18.00000	31.00000	0.00000	0.75719	-1.7979	2.7519
				19.00000	31.00000	0.00000	0.42583	-2.5953	3.2287



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				28.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				29.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				30.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				31.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				32.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				33.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				34.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				35.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				36.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				37.00000	31.00000	0.00000	0.0	-4.8875	5.4112
				38.00000	31.00000	0.00000	-0.21983	-2.8916	3.4409
				39.00000	31.00000	0.00000	-0.60709	-2.1361	2.9971
				40.00000	31.00000	0.00000	-0.87400	-1.4977	2.4977
				41.00000	31.00000	0.00000	-1.0135	-1.0135	1.9788
				42.00000	31.00000	0.00000	-1.1464	-0.76213	1.6429
				43.00000	31.00000	0.00000	-1.1564	-0.56851	1.2354
				44.00000	31.00000	0.00000	-1.0776	-0.41745	0.83545
				45.00000	31.00000	0.00000	-0.93458	-0.29757	0.50441
				46.00000	31.00000	0.00000	-0.74442	-0.20672	0.27552
				47.00000	31.00000	0.00000	-0.51904	-0.12119	0.14775
				48.00000	31.00000	0.00000	-0.26685	-0.054887	0.082519
				49.00000	31.00000	0.00000	0.0	0.0	0.0
				50.00000	31.00000	0.00000	0.0	0.0	0.0
				0.00000	32.00000	0.00000	0.0	0.0	0.0
				1.00000	32.00000	0.00000	0.0	0.0	0.0
				2.00000	32.00000	0.00000	0.0	0.0	0.0
				3.00000	32.00000	0.00000	0.0	0.0	0.0
				4.00000	32.00000	0.00000	0.0	0.0	0.0
				5.00000	32.00000	0.00000	0.0	0.0	0.0
				6.00000	32.00000	0.00000	0.0	0.0	0.0
				7.00000	32.00000	0.00000	0.0	0.0	0.0
				8.00000	32.00000	0.00000	0.0	0.0	0.0
				9.00000	32.00000	0.00000	0.039608	-0.0081831	0.017555
				10.00000	32.00000	0.00000	0.26394	-0.080037	0.085437
				11.00000	32.00000	0.00000	0.47025	-0.16443	0.14755
				12.00000	32.00000	0.00000	0.64238	-0.26458	0.26564
				13.00000	32.00000	0.00000	0.77087	-0.38465	0.46517
				14.00000	32.00000	0.00000	0.84322	-0.53000	0.73872
				15.00000	32.00000	0.00000	0.84328	-0.70727	1.0516
				16.00000	32.00000	0.00000	0.79521	-0.96753	1.4205
				17.00000	32.00000	0.00000	0.70940	-1.3476	1.8688
				18.00000	32.00000	0.00000	0.54161	-1.8160	2.3097
				19.00000	32.00000	0.00000	0.29578	-2.3502	2.6982
				20.00000	32.00000	0.00000	0.0	-2.8894	2.9828
				21.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				22.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				23.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				24.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				25.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				26.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				27.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				28.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				29.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				30.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				31.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				32.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				33.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				34.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				35.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				36.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				37.00000	32.00000	0.00000	0.0	-4.3125	4.4519
				38.00000	32.00000	0.00000	-0.15134	-2.6245	2.8569
				39.00000	32.00000	0.00000	-0.42734	-2.0777	2.5136
				40.00000	32.00000	0.00000	-0.63597	-1.5714	2.0929
				41.00000	32.00000	0.00000	-0.76213	-1.1464	1.6429
				42.00000	32.00000	0.00000	-0.81018	-0.81018	1.2064
				43.00000	32.00000	0.00000	-0.85344	-0.61419	0.89326
				44.00000	32.00000	0.00000	-0.81498	-0.45378	0.59429
				45.00000	32.00000	0.00000	-0.71279	-0.32182	0.35497
				46.00000	32.00000	0.00000	-0.56112	-0.21230	0.19719
				47.00000	32.00000	0.00000	-0.37087	-0.12049	0.11248
				48.00000	32.00000	0.00000	-0.15028	-0.042711	0.057559
				49.00000	32.00000	0.00000	0.0	0.0	0.0
				50.00000	32.00000	0.00000	0.0	0.0	0.0
				0.00000	33.00000	0.00000	0.0	0.0	0.0
				1.00000	33.00000	0.00000	0.0	0.0	0.0
				2.00000	33.00000	0.00000	0.0	0.0	0.0
				3.00000	33.00000	0.00000	0.0	0.0	0.0
				4.00000	33.00000	0.00000	0.0	0.0	0.0
				5.00000	33.00000	0.00000	0.0	0.0	0.0
				6.00000	33.00000	0.00000	0.0	0.0	0.0
				7.00000	33.00000	0.00000	0.0	0.0	0.0
				8.00000	33.00000	0.00000	0.0	0.0	0.0
				9.00000	33.00000	0.00000	0.0	0.0	0.0
				10.00000	33.00000	0.00000	0.13545	-0.054051	0.056200
				11.00000	33.00000	0.00000	0.31458	-0.14583	0.10568
				12.00000	33.00000	0.00000	0.45848	-0.25263	0.17707
				13.00000	33.00000	0.00000	0.55906	-0.37759	0.30318
				14.00000	33.00000	0.00000	0.60654	-0.52426	0.48692
				15.00000	33.00000	0.00000	0.61673	-0.72332	0.73675
				16.00000	33.00000	0.00000	0.59837	-0.99776	1.06078
				17.00000	33.00000	0.00000	0.52415	-1.3288	1.4127
				18.00000	33.00000	0.00000	0.39243	-1.7091	1.7551
				19.00000	33.00000	0.00000	0.21100	-2.1149	2.0450
				20.00000	33.00000	0.00000	0.0	-3.5041	2.2384
				21.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				22.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				23.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				24.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				25.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				26.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				27.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				28.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				29.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				30.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				31.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				32.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				33.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				34.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				35.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				36.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				37.00000	33.00000	0.00000	0.0	-3.7375	3.3408
				38.00000	33.00000	0.00000	-0.10748	-2.3148	2.1564
				39.00000	33.00000	0.00000	-0.30697	-1.9110	1.9094
				40.00000	33.00000	0.00000	-0.46527	-1.5139	1.5877
				41.00000	33.00000	0.00000	-0.56851	-1.1564	1.2354
				42.00000	33.00000	0.00000	-0.61419	-0.85344	0.89326
				43.00000	33.00000	0.00000	-0.60689	-0.60689	0.59449
				44.00000	33.00000	0.00000	-0.59011	-0.44798	0.38089
				45.00000	33.00000	0.00000	-0.51475	-0.31263	0.23246
				46.00000	33.00000	0.00000	-0.39140	-0.19717	0.13583
				47.00000	33.00000	0.00000	-0.22898	-0.098238	0.081544
				48.00000	33.00000	0.00000	-0.034758	-0.012958	0.002020
				49.00000	33.00000	0.00000	0.0	0.0	0.0
				50.00000	33.00000	0.00000	0		



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD 377

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				16.00000	34.00000	0.00000	0.44101	-0.94181	0.71192
				17.00000	34.00000	0.00000	0.38314	-1.2214	0.96122
				18.00000	34.00000	0.00000	0.28406	-1.5258	1.2028
				19.00000	34.00000	0.00000	0.15153	-1.8348	1.4019
				20.00000	34.00000	0.00000	0.0	-2.1189	1.5251
				21.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				22.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				23.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				24.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				25.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				26.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				27.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				28.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				29.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				30.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				31.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				32.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				33.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				34.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				35.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				36.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				37.00000	34.00000	0.00000	0.0	-3.1625	2.2762
				38.00000	34.00000	0.00000	-0.077013	-1.9821	1.4748
				39.00000	34.00000	0.00000	-0.22122	-1.6814	1.3099
				40.00000	34.00000	0.00000	-0.33842	-1.3715	1.0851
				41.00000	34.00000	0.00000	-0.41745	-1.0776	0.83545
				42.00000	34.00000	0.00000	-0.45378	-0.81498	0.59429
				43.00000	34.00000	0.00000	-0.44798	-0.59011	0.38869
				44.00000	34.00000	0.00000	-0.40359	-0.40359	0.23530
				45.00000	34.00000	0.00000	-0.34382	-0.27124	0.14612
				46.00000	34.00000	0.00000	-0.23977	-0.15528	0.092415
				47.00000	34.00000	0.00000	-0.098990	-0.053720	0.047512
				48.00000	34.00000	0.00000	0.0	0.0	0.0
				49.00000	34.00000	0.00000	0.0	0.0	0.0
				50.00000	34.00000	0.00000	0.0	0.0	0.0
				0.00000	35.00000	0.00000	0.0	0.0	0.0
				1.00000	35.00000	0.00000	0.0	0.0	0.0
				2.00000	35.00000	0.00000	0.0	0.0	0.0
				3.00000	35.00000	0.00000	0.0	0.0	0.0
				4.00000	35.00000	0.00000	0.0	0.0	0.0
				5.00000	35.00000	0.00000	0.0	0.0	0.0
				6.00000	35.00000	0.00000	0.0	0.0	0.0
				7.00000	35.00000	0.00000	0.0	0.0	0.0
				8.00000	35.00000	0.00000	0.0	0.0	0.0
				9.00000	35.00000	0.00000	0.0	0.0	0.0
				10.00000	35.00000	0.00000	0.0	0.0	0.0
				11.00000	35.00000	0.00000	0.048849	-0.036192	0.030616
				12.00000	35.00000	0.00000	0.15891	-0.14255	0.074878
				13.00000	35.00000	0.00000	0.23927	-0.26870	0.11690
				14.00000	35.00000	0.00000	0.29581	-0.42583	0.18465
				15.00000	35.00000	0.00000	0.32137	-0.61050	0.28950
				16.00000	35.00000	0.00000	0.31387	-0.82108	0.42732
				17.00000	35.00000	0.00000	0.27316	-1.0521	0.58364
				18.00000	35.00000	0.00000	0.20214	-1.2931	0.73642
				19.00000	35.00000	0.00000	0.10756	-1.5273	0.86043
				20.00000	35.00000	0.00000	0.0	-1.7336	0.93259
				21.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				22.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				23.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				24.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				25.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				26.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				27.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				28.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				29.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				30.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				31.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				32.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				33.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				34.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				35.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				36.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				37.00000	35.00000	0.00000	0.0	-2.5875	1.3919
				38.00000	35.00000	0.00000	-0.054624	-1.6354	0.90421
				39.00000	35.00000	0.00000	-0.15721	-1.4123	0.80358
				40.00000	35.00000	0.00000	-0.24111	-1.1723	0.66203
				41.00000	35.00000	0.00000	-0.29757	-0.93458	0.50441
				42.00000	35.00000	0.00000	-0.32182	-0.71279	0.35497
				43.00000	35.00000	0.00000	-0.31263	-0.51475	0.23246
				44.00000	35.00000	0.00000	-0.27124	-0.34382	0.14612
				45.00000	35.00000	0.00000	-0.20030	-0.20030	0.092505
				46.00000	35.00000	0.00000	-0.10823	-0.087893	0.056019
				47.00000	35.00000	0.00000	0.0	0.0	0.0
				48.00000	35.00000	0.00000	0.0	0.0	0.0
				49.00000	35.00000	0.00000	0.0	0.0	0.0
				50.00000	35.00000	0.00000	0.0	0.0	0.0
				0.00000	36.00000	0.00000	0.0	0.0	0.0
				1.00000	36.00000	0.00000	0.0	0.0	0.0
				2.00000	36.00000	0.00000	0.0	0.0	0.0
				3.00000	36.00000	0.00000	0.0	0.0	0.0
				4.00000	36.00000	0.00000	0.0	0.0	0.0
				5.00000	36.00000	0.00000	0.0	0.0	0.0
				6.00000	36.00000	0.00000	0.0	0.0	0.0
				7.00000	36.00000	0.00000	0.0	0.0	0.0
				8.00000	36.00000	0.00000	0.0	0.0	0.0
				9.00000	36.00000	0.00000	0.0	0.0	0.0
				10.00000	36.00000	0.00000	0.0	0.0	0.0
				11.00000	36.00000	0.00000	0.0	0.0	0.0
				12.00000	36.00000	0.00000	0.045246	-0.050111	0.033163
				13.00000	36.00000	0.00000	0.124866	-0.17144	0.074569
				14.00000	36.00000	0.00000	0.17951	-0.31315	0.11225
				15.00000	36.00000	0.00000	0.20812	-0.47421	0.16408
				16.00000	36.00000	0.00000	0.20978	-0.65147	0.23468
				17.00000	36.00000	0.00000	0.18544	-0.83887	0.31822
				18.00000	36.00000	0.00000	-0.13822	-1.0267	0.40185
				19.00000	36.00000	0.00000	0.073763	-1.2019	0.46978
				20.00000	36.00000	0.00000	0.0	-1.3484	0.50767
				21.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				22.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				23.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				24.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				25.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				26.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				27.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				28.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				29.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				30.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				31.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				32.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				33.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				34.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				35.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				36.00000	36.00000	0.00000	0.0	-2.0125	0.75772
				37.00000	36.00000	0.00000	0.0</		



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				4.00000	37.00000	0.00000	0.0	0.0	0.0
				5.00000	37.00000	0.00000	0.0	0.0	0.0
				6.00000	37.00000	0.00000	0.0	0.0	0.0
				7.00000	37.00000	0.00000	0.0	0.0	0.0
				8.00000	37.00000	0.00000	0.0	0.0	0.0
				9.00000	37.00000	0.00000	0.0	0.0	0.0
				10.00000	37.00000	0.00000	0.0	0.0	0.0
				11.00000	37.00000	0.00000	0.0	0.0	0.0
				12.00000	37.00000	0.00000	0.0	0.0	0.0
				13.00000	37.00000	0.00000	0.0	0.0	0.0
				14.00000	37.00000	0.00000	0.0	0.0	0.0
				15.00000	37.00000	0.00000	0.0	0.0	0.0
				16.00000	37.00000	0.00000	0.0	0.0	0.0
				17.00000	37.00000	0.00000	0.0	0.0	0.0
				18.00000	37.00000	0.00000	0.0	0.0	0.0
				19.00000	37.00000	0.00000	0.0	0.0	0.0
				20.00000	37.00000	0.00000	0.0	0.0	0.0
				21.00000	37.00000	0.00000	0.0	0.0	0.0
				22.00000	37.00000	0.00000	0.0	0.0	0.0
				23.00000	37.00000	0.00000	0.0	0.0	0.0
				24.00000	37.00000	0.00000	0.0	0.0	0.0
				25.00000	37.00000	0.00000	0.0	0.0	0.0
				26.00000	37.00000	0.00000	0.0	0.0	0.0
				27.00000	37.00000	0.00000	0.0	0.0	0.0
				28.00000	37.00000	0.00000	0.0	0.0	0.0
				29.00000	37.00000	0.00000	0.0	0.0	0.0
				30.00000	37.00000	0.00000	0.0	0.0	0.0
				31.00000	37.00000	0.00000	0.0	0.0	0.0
				32.00000	37.00000	0.00000	0.0	0.0	0.0
				33.00000	37.00000	0.00000	0.0	0.0	0.0
				34.00000	37.00000	0.00000	0.0	0.0	0.0
				35.00000	37.00000	0.00000	0.0	0.0	0.0
				36.00000	37.00000	0.00000	0.0	0.0	0.0
				37.00000	37.00000	0.00000	0.0	0.0	0.0
				38.00000	37.00000	0.00000	0.0	0.0	0.0
				39.00000	37.00000	0.00000	0.0	0.0	0.0
				40.00000	37.00000	0.00000	0.0	0.0	0.0
				41.00000	37.00000	0.00000	0.0	0.0	0.0
				42.00000	37.00000	0.00000	0.0	0.0	0.0
				43.00000	37.00000	0.00000	0.0	0.0	0.0
				44.00000	37.00000	0.00000	0.0	0.0	0.0
				45.00000	37.00000	0.00000	0.0	0.0	0.0
				46.00000	37.00000	0.00000	0.0	0.0	0.0
				47.00000	37.00000	0.00000	0.0	0.0	0.0
				48.00000	37.00000	0.00000	0.0	0.0	0.0
				49.00000	37.00000	0.00000	0.0	0.0	0.0
				50.00000	37.00000	0.00000	0.0	0.0	0.0
				0.00000	38.00000	0.00000	0.0	0.0	0.0
				1.00000	38.00000	0.00000	0.0	0.0	0.0
				2.00000	38.00000	0.00000	0.0	0.0	0.0
				3.00000	38.00000	0.00000	0.0	0.0	0.0
				4.00000	38.00000	0.00000	0.0	0.0	0.0
				5.00000	38.00000	0.00000	0.0	0.0	0.0
				6.00000	38.00000	0.00000	0.0	0.0	0.0
				7.00000	38.00000	0.00000	0.0	0.0	0.0
				8.00000	38.00000	0.00000	0.0	0.0	0.0
				9.00000	38.00000	0.00000	0.0	0.0	0.0
				10.00000	38.00000	0.00000	0.0	0.0	0.0
				11.00000	38.00000	0.00000	0.0	0.0	0.0
				12.00000	38.00000	0.00000	0.0	0.0	0.0
				13.00000	38.00000	0.00000	0.0	0.0	0.0
				14.00000	38.00000	0.00000	0.0	0.0	0.0
				15.00000	38.00000	0.00000	0.0	0.0	0.0
				16.00000	38.00000	0.00000	0.0	0.0	0.0
				17.00000	38.00000	0.00000	0.0	0.0	0.0
				18.00000	38.00000	0.00000	0.0	0.0	0.0
				19.00000	38.00000	0.00000	0.0	0.0	0.0
				20.00000	38.00000	0.00000	0.0	0.0	0.0
				21.00000	38.00000	0.00000	0.0	0.0	0.0
				22.00000	38.00000	0.00000	0.0	0.0	0.0
				23.00000	38.00000	0.00000	0.0	0.0	0.0
				24.00000	38.00000	0.00000	0.0	0.0	0.0
				25.00000	38.00000	0.00000	0.0	0.0	0.0
				26.00000	38.00000	0.00000	0.0	0.0	0.0
				27.00000	38.00000	0.00000	0.0	0.0	0.0
				28.00000	38.00000	0.00000	0.0	0.0	0.0
				29.00000	38.00000	0.00000	0.0	0.0	0.0
				30.00000	38.00000	0.00000	0.0	0.0	0.0
				31.00000	38.00000	0.00000	0.0	0.0	0.0
				32.00000	38.00000	0.00000	0.0	0.0	0.0
				33.00000	38.00000	0.00000	0.0	0.0	0.0
				34.00000	38.00000	0.00000	0.0	0.0	0.0
				35.00000	38.00000	0.00000	0.0	0.0	0.0
				36.00000	38.00000	0.00000	0.0	0.0	0.0
				37.00000	38.00000	0.00000	0.0	0.0	0.0
				38.00000	38.00000	0.00000	0.0	0.0	0.0
				39.00000	38.00000	0.00000	0.0	0.0	0.0
				40.00000	38.00000	0.00000	0.0	0.0	0.0
				41.00000	38.00000	0.00000	0.0	0.0	0.0
				42.00000	38.00000	0.00000	0.0	0.0	0.0
				43.00000	38.00000	0.00000	0.0	0.0	0.0
				44.00000	38.00000	0.00000	0.0	0.0	0.0
				45.00000	38.00000	0.00000	0.0	0.0	0.0
				46.00000	38.00000	0.00000	0.0	0.0	0.0
				47.00000	38.00000	0.00000	0.0	0.0	0.0
				48.00000	38.00000	0.00000	0.0	0.0	0.0
				49.00000	38.00000	0.00000	0.0	0.0	0.0
				50.00000	38.00000	0.00000	0.0	0.0	0.0
				0.00000	39.00000	0.00000	0.0	0.0	0.0
				1.00000	39.00000	0.00000	0.0	0.0	0.0
				2.00000	39.00000	0.00000	0.0	0.0	0.0
				3.00000	39.00000	0.00000	0.0	0.0	0.0
				4.00000	39.00000	0.00000	0.0	0.0	0.0
				5.00000	39.00000	0.00000	0.0	0.0	0.0
				6.00000	39.00000	0.00000	0.0	0.0	0.0
				7.00000	39.00000	0.00000	0.0	0.0	0.0
				8.00000	39.00000	0.00000	0.0	0.0	0.0
				9.00000	39.00000	0.00000	0.0	0.0	0.0
				10.00000	39.00000	0.00000	0.0	0.0	0.0
				11.00000	39.00000	0.00000	0.0	0.0	0.0
				12.00000	39.00000	0.00000	0.0	0.0	0.0
				13.00000	39.00000	0.00000	0.0	0.0	0.0
				14.00000	39.00000	0.00000	0.0	0.0	0.0
				15.00000	39.00000	0.00000	0.0	0.0	0.0
				16.00000	39.00000	0.00000	0.0	0.0	0.0
				17.00000	39.00000	0.00000	0.0	0.0	0.0
				18.00000	39.00000	0.00000	0.0	0.0	0.0
				19.00000	39.00000	0.00000	0.0	0.0	0.0
				20.00000	39.00000	0.00000	0.0	0.0	0.0
				21.00000	39.00000	0.00000	0.0	0.0	0.0
				22.00000	39.00000	0.00000	0.0	0.0	0.0
				23.00000	39.00000	0.00000	0.0	0.0	0.0
				24.00000	39.00000	0.00000	0.0	0.0	0.0
				25.00000	39.00000	0.00000	0.0	0.0	0.0
				26.00000	39.00000	0.00000	0.0	0.0	0.0
				27.00000	39.00000	0.00000	0.0	0.0	0.0
				28.00000	39.00000	0.00000	0.0	0.0	0.0
				29.00000	39.00000	0.00000	0.0	0.0	0.0
				30.00000	39.00000	0.00000	0.0	0.0	0.0
				31.00000	39.00000	0.00000	0.0	0.0	0.0
				32.00000	39.00000	0.00000	0.0	0.0	0.0
				33.00000	39.00000	0.00000	0.0	0.0	0.0
				34.00000	39.00000	0.00000	0.0	0.0	0.0
				35.00000	39.00000	0.00000	0.0	0.0	0.0
				36.00000	39.00000	0.00000	0.0	0.0	0.0
				37.00000	39.00000	0.00000	0.0	0.0	0.0
				38.00000	39.00000	0.00000	0.0	0.0	0.0
				39.00000	39.00000	0.00000	0.0	0.0	0.0
				40.00000	39.00000	0.00000	0.0	0.0	0.0
				41.00000	39.00000	0.00000	0.0	0.0	0.0
				42.00000	39.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin

Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				43.00000	39.00000	0.00000	0.0	0.0	0.0
				44.00000	39.00000	0.00000	0.0	0.0	0.0
				45.00000	39.00000	0.00000	0.0	0.0	0.0
				46.00000	39.00000	0.00000	0.0	0.0	0.0
				47.00000	39.00000	0.00000	0.0	0.0	0.0
				48.00000	39.00000	0.00000	0.0	0.0	0.0
				49.00000	39.00000	0.00000	0.0	0.0	0.0
				50.00000	39.00000	0.00000	0.0	0.0	0.0
				0.00000	40.00000	0.00000	0.0	0.0	0.0
				1.00000	40.00000	0.00000	0.0	0.0	0.0
				2.00000	40.00000	0.00000	0.0	0.0	0.0
				3.00000	40.00000	0.00000	0.0	0.0	0.0
				4.00000	40.00000	0.00000	0.0	0.0	0.0
				5.00000	40.00000	0.00000	0.0	0.0	0.0
				6.00000	40.00000	0.00000	0.0	0.0	0.0
				7.00000	40.00000	0.00000	0.0	0.0	0.0
				8.00000	40.00000	0.00000	0.0	0.0	0.0
				9.00000	40.00000	0.00000	0.0	0.0	0.0
				10.00000	40.00000	0.00000	0.0	0.0	0.0
				11.00000	40.00000	0.00000	0.0	0.0	0.0
				12.00000	40.00000	0.00000	0.0	0.0	0.0
				13.00000	40.00000	0.00000	0.0	0.0	0.0
				14.00000	40.00000	0.00000	0.0	0.0	0.0
				15.00000	40.00000	0.00000	0.0	0.0	0.0
				16.00000	40.00000	0.00000	0.0	0.0	0.0
				17.00000	40.00000	0.00000	0.0	0.0	0.0
				18.00000	40.00000	0.00000	0.0	0.0	0.0
				19.00000	40.00000	0.00000	0.0	0.0	0.0
				20.00000	40.00000	0.00000	0.0	0.0	0.0
				21.00000	40.00000	0.00000	0.0	0.0	0.0
				22.00000	40.00000	0.00000	0.0	0.0	0.0
				23.00000	40.00000	0.00000	0.0	0.0	0.0
				24.00000	40.00000	0.00000	0.0	0.0	0.0
				25.00000	40.00000	0.00000	0.0	0.0	0.0
				26.00000	40.00000	0.00000	0.0	0.0	0.0
				27.00000	40.00000	0.00000	0.0	0.0	0.0
				28.00000	40.00000	0.00000	0.0	0.0	0.0
				29.00000	40.00000	0.00000	0.0	0.0	0.0
				30.00000	40.00000	0.00000	0.0	0.0	0.0
				31.00000	40.00000	0.00000	0.0	0.0	0.0
				32.00000	40.00000	0.00000	0.0	0.0	0.0
				33.00000	40.00000	0.00000	0.0	0.0	0.0
				34.00000	40.00000	0.00000	0.0	0.0	0.0
				35.00000	40.00000	0.00000	0.0	0.0	0.0
				36.00000	40.00000	0.00000	0.0	0.0	0.0
				37.00000	40.00000	0.00000	0.0	0.0	0.0
				38.00000	40.00000	0.00000	0.0	0.0	0.0
				39.00000	40.00000	0.00000	0.0	0.0	0.0
				40.00000	40.00000	0.00000	0.0	0.0	0.0
				41.00000	40.00000	0.00000	0.0	0.0	0.0
				42.00000	40.00000	0.00000	0.0	0.0	0.0
				43.00000	40.00000	0.00000	0.0	0.0	0.0
				44.00000	40.00000	0.00000	0.0	0.0	0.0
				45.00000	40.00000	0.00000	0.0	0.0	0.0
				46.00000	40.00000	0.00000	0.0	0.0	0.0
				47.00000	40.00000	0.00000	0.0	0.0	0.0
				48.00000	40.00000	0.00000	0.0	0.0	0.0
				49.00000	40.00000	0.00000	0.0	0.0	0.0
				50.00000	40.00000	0.00000	0.0	0.0	0.0
				0.00000	41.00000	0.00000	0.0	0.0	0.0
				1.00000	41.00000	0.00000	0.0	0.0	0.0
				2.00000	41.00000	0.00000	0.0	0.0	0.0
				3.00000	41.00000	0.00000	0.0	0.0	0.0
				4.00000	41.00000	0.00000	0.0	0.0	0.0
				5.00000	41.00000	0.00000	0.0	0.0	0.0
				6.00000	41.00000	0.00000	0.0	0.0	0.0
				7.00000	41.00000	0.00000	0.0	0.0	0.0
				8.00000	41.00000	0.00000	0.0	0.0	0.0
				9.00000	41.00000	0.00000	0.0	0.0	0.0
				10.00000	41.00000	0.00000	0.0	0.0	0.0
				11.00000	41.00000	0.00000	0.0	0.0	0.0
				12.00000	41.00000	0.00000	0.0	0.0	0.0
				13.00000	41.00000	0.00000	0.0	0.0	0.0
				14.00000	41.00000	0.00000	0.0	0.0	0.0
				15.00000	41.00000	0.00000	0.0	0.0	0.0
				16.00000	41.00000	0.00000	0.0	0.0	0.0
				17.00000	41.00000	0.00000	0.0	0.0	0.0
				18.00000	41.00000	0.00000	0.0	0.0	0.0
				19.00000	41.00000	0.00000	0.0	0.0	0.0
				20.00000	41.00000	0.00000	0.0	0.0	0.0
				21.00000	41.00000	0.00000	0.0	0.0	0.0
				22.00000	41.00000	0.00000	0.0	0.0	0.0
				23.00000	41.00000	0.00000	0.0	0.0	0.0
				24.00000	41.00000	0.00000	0.0	0.0	0.0
				25.00000	41.00000	0.00000	0.0	0.0	0.0
				26.00000	41.00000	0.00000	0.0	0.0	0.0
				27.00000	41.00000	0.00000	0.0	0.0	0.0
				28.00000	41.00000	0.00000	0.0	0.0	0.0
				29.00000	41.00000	0.00000	0.0	0.0	0.0
				30.00000	41.00000	0.00000	0.0	0.0	0.0
				31.00000	41.00000	0.00000	0.0	0.0	0.0
				32.00000	41.00000	0.00000	0.0	0.0	0.0
				33.00000	41.00000	0.00000	0.0	0.0	0.0
				34.00000	41.00000	0.00000	0.0	0.0	0.0
				35.00000	41.00000	0.00000	0.0	0.0	0.0
				36.00000	41.00000	0.00000	0.0	0.0	0.0
				37.00000	41.00000	0.00000	0.0	0.0	0.0
				38.00000	41.00000	0.00000	0.0	0.0	0.0
				39.00000	41.00000	0.00000	0.0	0.0	0.0
				40.00000	41.00000	0.00000	0.0	0.0	0.0
				41.00000	41.00000	0.00000	0.0	0.0	0.0
				42.00000	41.00000	0.00000	0.0	0.0	0.0
				43.00000	41.00000	0.00000	0.0	0.0	0.0
				44.00000	41.00000	0.00000	0.0	0.0	0.0
				45.00000	41.00000	0.00000	0.0	0.0	0.0
				46.00000	41.00000	0.00000	0.0	0.0	0.0
				47.00000	41.00000	0.00000	0.0	0.0	0.0
				48.00000	41.00000	0.00000	0.0	0.0	0.0
				49.00000	41.00000	0.00000	0.0	0.0	0.0
				50.00000	41.00000	0.00000	0.0	0.0	0.0
				0.00000	42.00000	0.00000	0.0	0.0	0.0
				1.00000	42.00000	0.00000	0.0	0.0	0.0
				2.00000	42.00000	0.00000	0.0	0.0	0.0
				3.00000	42.00000	0.00000	0.0	0.0	0.0
				4.00000	42.00000	0.00000	0.0	0.0	0.0
				5.00000	42.00000	0.00000	0.0	0.0	0.0
				6.00000	42.00000	0.00000	0.0	0.0	0.0
				7.00000	42.00000	0.00000	0.0	0.0	0.0
				8.00000	42.00000	0.00000	0.0	0.0	0.0
				9.00000	42.00000	0.00000	0.0	0.0	0.0
				10.00000	42.00000	0.00000	0.0	0.0	0.0
				11.00000	42.00000	0.00000	0.0	0.0	0.0
				12.00000	42.00000	0.00000	0.0	0.0	0.0
				13.00000	42.00000	0.00000	0.0	0.0	0.0
				14.00000	42.00000	0.00000	0.0	0.0	0.0
				15.00000	42.00000	0.00000	0.0	0.0	0.0
				16.00000	42.00000	0.00000	0.0	0.0	0.0
				17.00000	42.00000	0.00000	0.0	0.0	0.0
				18.00000	42.00000	0.00000	0.0	0.0	0.0
				19.00000	42.00000	0.00000	0.0	0.0	0.0
				20.00000	42.00000	0.00000	0.0	0.0	0.0
				21.00000	42.00000	0.00000	0.0	0.0	0.0
				22.00000	42.00000	0.00000	0.0	0.0	0.0
				23.00000	42.00000	0.00000	0.0	0.0	0.0
				24.00000	42.00000	0.00000	0.0	0.0	0.0
				25.00000	42.00000	0.00000	0.0	0.0	0.0
				26.00000	42.00000	0.00000	0.0	0.0	0.0
				27.00000	42.00000	0.00000	0.0	0.0	0.0
				28.00000	42.00000	0.00000	0.0	0.0	0.0
				29.00000	42.00000	0.00000	0.0	0.0	0.0
				30.00000	42.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin

Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				31.00000	42.00000	0.00000	0.0	0.0	0.0
				32.00000	42.00000	0.00000	0.0	0.0	0.0
				33.00000	42.00000	0.00000	0.0	0.0	0.0
				34.00000	42.00000	0.00000	0.0	0.0	0.0
				35.00000	42.00000	0.00000	0.0	0.0	0.0
				36.00000	42.00000	0.00000	0.0	0.0	0.0
				37.00000	42.00000	0.00000	0.0	0.0	0.0
				38.00000	42.00000	0.00000	0.0	0.0	0.0
				39.00000	42.00000	0.00000	0.0	0.0	0.0
				40.00000	42.00000	0.00000	0.0	0.0	0.0
				41.00000	42.00000	0.00000	0.0	0.0	0.0
				42.00000	42.00000	0.00000	0.0	0.0	0.0
				43.00000	42.00000	0.00000	0.0	0.0	0.0
				44.00000	42.00000	0.00000	0.0	0.0	0.0
				45.00000	42.00000	0.00000	0.0	0.0	0.0
				46.00000	42.00000	0.00000	0.0	0.0	0.0
				47.00000	42.00000	0.00000	0.0	0.0	0.0
				48.00000	42.00000	0.00000	0.0	0.0	0.0
				49.00000	42.00000	0.00000	0.0	0.0	0.0
				50.00000	42.00000	0.00000	0.0	0.0	0.0
				0.00000	43.00000	0.00000	0.0	0.0	0.0
				1.00000	43.00000	0.00000	0.0	0.0	0.0
				2.00000	43.00000	0.00000	0.0	0.0	0.0
				3.00000	43.00000	0.00000	0.0	0.0	0.0
				4.00000	43.00000	0.00000	0.0	0.0	0.0
				5.00000	43.00000	0.00000	0.0	0.0	0.0
				6.00000	43.00000	0.00000	0.0	0.0	0.0
				7.00000	43.00000	0.00000	0.0	0.0	0.0
				8.00000	43.00000	0.00000	0.0	0.0	0.0
				9.00000	43.00000	0.00000	0.0	0.0	0.0
				10.00000	43.00000	0.00000	0.0	0.0	0.0
				11.00000	43.00000	0.00000	0.0	0.0	0.0
				12.00000	43.00000	0.00000	0.0	0.0	0.0
				13.00000	43.00000	0.00000	0.0	0.0	0.0
				14.00000	43.00000	0.00000	0.0	0.0	0.0
				15.00000	43.00000	0.00000	0.0	0.0	0.0
				16.00000	43.00000	0.00000	0.0	0.0	0.0
				17.00000	43.00000	0.00000	0.0	0.0	0.0
				18.00000	43.00000	0.00000	0.0	0.0	0.0
				19.00000	43.00000	0.00000	0.0	0.0	0.0
				20.00000	43.00000	0.00000	0.0	0.0	0.0
				21.00000	43.00000	0.00000	0.0	0.0	0.0
				22.00000	43.00000	0.00000	0.0	0.0	0.0
				23.00000	43.00000	0.00000	0.0	0.0	0.0
				24.00000	43.00000	0.00000	0.0	0.0	0.0
				25.00000	43.00000	0.00000	0.0	0.0	0.0
				26.00000	43.00000	0.00000	0.0	0.0	0.0
				27.00000	43.00000	0.00000	0.0	0.0	0.0
				28.00000	43.00000	0.00000	0.0	0.0	0.0
				29.00000	43.00000	0.00000	0.0	0.0	0.0
				30.00000	43.00000	0.00000	0.0	0.0	0.0
				31.00000	43.00000	0.00000	0.0	0.0	0.0
				32.00000	43.00000	0.00000	0.0	0.0	0.0
				33.00000	43.00000	0.00000	0.0	0.0	0.0
				34.00000	43.00000	0.00000	0.0	0.0	0.0
				35.00000	43.00000	0.00000	0.0	0.0	0.0
				36.00000	43.00000	0.00000	0.0	0.0	0.0
				37.00000	43.00000	0.00000	0.0	0.0	0.0
				38.00000	43.00000	0.00000	0.0	0.0	0.0
				39.00000	43.00000	0.00000	0.0	0.0	0.0
				40.00000	43.00000	0.00000	0.0	0.0	0.0
				41.00000	43.00000	0.00000	0.0	0.0	0.0
				42.00000	43.00000	0.00000	0.0	0.0	0.0
				43.00000	43.00000	0.00000	0.0	0.0	0.0
				44.00000	43.00000	0.00000	0.0	0.0	0.0
				45.00000	43.00000	0.00000	0.0	0.0	0.0
				46.00000	43.00000	0.00000	0.0	0.0	0.0
				47.00000	43.00000	0.00000	0.0	0.0	0.0
				48.00000	43.00000	0.00000	0.0	0.0	0.0
				49.00000	43.00000	0.00000	0.0	0.0	0.0
				50.00000	43.00000	0.00000	0.0	0.0	0.0
				0.00000	44.00000	0.00000	0.0	0.0	0.0
				1.00000	44.00000	0.00000	0.0	0.0	0.0
				2.00000	44.00000	0.00000	0.0	0.0	0.0
				3.00000	44.00000	0.00000	0.0	0.0	0.0
				4.00000	44.00000	0.00000	0.0	0.0	0.0
				5.00000	44.00000	0.00000	0.0	0.0	0.0
				6.00000	44.00000	0.00000	0.0	0.0	0.0
				7.00000	44.00000	0.00000	0.0	0.0	0.0
				8.00000	44.00000	0.00000	0.0	0.0	0.0
				9.00000	44.00000	0.00000	0.0	0.0	0.0
				10.00000	44.00000	0.00000	0.0	0.0	0.0
				11.00000	44.00000	0.00000	0.0	0.0	0.0
				12.00000	44.00000	0.00000	0.0	0.0	0.0
				13.00000	44.00000	0.00000	0.0	0.0	0.0
				14.00000	44.00000	0.00000	0.0	0.0	0.0
				15.00000	44.00000	0.00000	0.0	0.0	0.0
				16.00000	44.00000	0.00000	0.0	0.0	0.0
				17.00000	44.00000	0.00000	0.0	0.0	0.0
				18.00000	44.00000	0.00000	0.0	0.0	0.0
				19.00000	44.00000	0.00000	0.0	0.0	0.0
				20.00000	44.00000	0.00000	0.0	0.0	0.0
				21.00000	44.00000	0.00000	0.0	0.0	0.0
				22.00000	44.00000	0.00000	0.0	0.0	0.0
				23.00000	44.00000	0.00000	0.0	0.0	0.0
				24.00000	44.00000	0.00000	0.0	0.0	0.0
				25.00000	44.00000	0.00000	0.0	0.0	0.0
				26.00000	44.00000	0.00000	0.0	0.0	0.0
				27.00000	44.00000	0.00000	0.0	0.0	0.0
				28.00000	44.00000	0.00000	0.0	0.0	0.0
				29.00000	44.00000	0.00000	0.0	0.0	0.0
				30.00000	44.00000	0.00000	0.0	0.0	0.0
				31.00000	44.00000	0.00000	0.0	0.0	0.0
				32.00000	44.00000	0.00000	0.0	0.0	0.0
				33.00000	44.00000	0.00000	0.0	0.0	0.0
				34.00000	44.00000	0.00000	0.0	0.0	0.0
				35.00000	44.00000	0.00000	0.0	0.0	0.0
				36.00000	44.00000	0.00000	0.0	0.0	0.0
				37.00000	44.00000	0.00000	0.0	0.0	0.0
				38.00000	44.00000	0.00000	0.0	0.0	0.0
				39.00000	44.00000	0.00000	0.0	0.0	0.0
				40.00000	44.00000	0.00000	0.0	0.0	0.0
				41.00000	44.00000	0.00000	0.0	0.0	0.0
				42.00000	44.00000	0.00000	0.0	0.0	0.0
				43.00000	44.00000	0.00000	0.0	0.0	0.0
				44.00000	44.00000	0.00000	0.0	0.0	0.0
				45.00000	44.00000	0.00000	0.0	0.0	0.0
				46.00000	44.00000	0.00000	0.0	0.0	0.0
				47.00000	44.00000	0.00000	0.0	0.0	0.0
				48.00000	44.00000	0.00000	0.0	0.0	0.0
				49.00000	44.00000	0.00000	0.0	0.0	0.0
				50.00000	44.00000	0.00000	0.0	0.0	0.0
				0.00000	45.00000	0.00000	0.0	0.0	0.0
				1.00000	45.00000	0.00000	0.0	0.0	0.0
				2.00000	45.00000	0.00000	0.0	0.0	0.0
				3.00000	45.00000	0.00000	0.0	0.0	0.0
				4.00000	45.00000	0.00000	0.0	0.0	0.0
				5.00000	45.00000	0.00000	0.0	0.0	0.0
				6.00000	45.00000	0.00000	0.0	0.0	0.0
				7.00000	45.00000	0.00000	0.0	0.0	0.0
				8.00000	45.00000	0.00000	0.0	0.0	0.0
				9.00000	45.00000	0.00000	0.0	0.0	0.0
				10.00000	45.00000	0.00000	0.0	0.0	0.0
				11.00000	45.00000	0.00000	0.0	0.0	0.0
				12.00000	45.00000	0.00000	0.0	0.0	0.0
				13.00000	45.00000	0.00000	0.0	0.0	0.0
				14.00000	45.00000	0.00000	0.0	0.0	0.0
				15.00000	45.00000	0.00000	0.0	0.0	0.0
				16.00000	45.00000	0.00000	0.0	0.0	0.0
				17.00000	45.00000	0.00000	0.0	0.0	0.0
				18.00000	45.00000	0.00000	0.0	0.0	0.0



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No. Sheet No. Rev.

121377

Drg. Ref.

Made by
AT

Date
24-Feb-2022

Checked

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin

Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				19.00000	45.00000	0.00000	0.0	0.0	0.0
				20.00000	45.00000	0.00000	0.0	0.0	0.0
				21.00000	45.00000	0.00000	0.0	0.0	0.0
				22.00000	45.00000	0.00000	0.0	0.0	0.0
				23.00000	45.00000	0.00000	0.0	0.0	0.0
				24.00000	45.00000	0.00000	0.0	0.0	0.0
				25.00000	45.00000	0.00000	0.0	0.0	0.0
				26.00000	45.00000	0.00000	0.0	0.0	0.0
				27.00000	45.00000	0.00000	0.0	0.0	0.0
				28.00000	45.00000	0.00000	0.0	0.0	0.0
				29.00000	45.00000	0.00000	0.0	0.0	0.0
				30.00000	45.00000	0.00000	0.0	0.0	0.0
				31.00000	45.00000	0.00000	0.0	0.0	0.0
				32.00000	45.00000	0.00000	0.0	0.0	0.0
				33.00000	45.00000	0.00000	0.0	0.0	0.0
				34.00000	45.00000	0.00000	0.0	0.0	0.0
				35.00000	45.00000	0.00000	0.0	0.0	0.0
				36.00000	45.00000	0.00000	0.0	0.0	0.0
				37.00000	45.00000	0.00000	0.0	0.0	0.0
				38.00000	45.00000	0.00000	0.0	0.0	0.0
				39.00000	45.00000	0.00000	0.0	0.0	0.0
				40.00000	45.00000	0.00000	0.0	0.0	0.0
				41.00000	45.00000	0.00000	0.0	0.0	0.0
				42.00000	45.00000	0.00000	0.0	0.0	0.0
				43.00000	45.00000	0.00000	0.0	0.0	0.0
				44.00000	45.00000	0.00000	0.0	0.0	0.0
				45.00000	45.00000	0.00000	0.0	0.0	0.0
				46.00000	45.00000	0.00000	0.0	0.0	0.0
				47.00000	45.00000	0.00000	0.0	0.0	0.0
				48.00000	45.00000	0.00000	0.0	0.0	0.0
				49.00000	45.00000	0.00000	0.0	0.0	0.0
				50.00000	45.00000	0.00000	0.0	0.0	0.0
				0.00000	46.00000	0.00000	0.0	0.0	0.0
				1.00000	46.00000	0.00000	0.0	0.0	0.0
				2.00000	46.00000	0.00000	0.0	0.0	0.0
				3.00000	46.00000	0.00000	0.0	0.0	0.0
				4.00000	46.00000	0.00000	0.0	0.0	0.0
				5.00000	46.00000	0.00000	0.0	0.0	0.0
				6.00000	46.00000	0.00000	0.0	0.0	0.0
				7.00000	46.00000	0.00000	0.0	0.0	0.0
				8.00000	46.00000	0.00000	0.0	0.0	0.0
				9.00000	46.00000	0.00000	0.0	0.0	0.0
				10.00000	46.00000	0.00000	0.0	0.0	0.0
				11.00000	46.00000	0.00000	0.0	0.0	0.0
				12.00000	46.00000	0.00000	0.0	0.0	0.0
				13.00000	46.00000	0.00000	0.0	0.0	0.0
				14.00000	46.00000	0.00000	0.0	0.0	0.0
				15.00000	46.00000	0.00000	0.0	0.0	0.0
				16.00000	46.00000	0.00000	0.0	0.0	0.0
				17.00000	46.00000	0.00000	0.0	0.0	0.0
				18.00000	46.00000	0.00000	0.0	0.0	0.0
				19.00000	46.00000	0.00000	0.0	0.0	0.0
				20.00000	46.00000	0.00000	0.0	0.0	0.0
				21.00000	46.00000	0.00000	0.0	0.0	0.0
				22.00000	46.00000	0.00000	0.0	0.0	0.0
				23.00000	46.00000	0.00000	0.0	0.0	0.0
				24.00000	46.00000	0.00000	0.0	0.0	0.0
				25.00000	46.00000	0.00000	0.0	0.0	0.0
				26.00000	46.00000	0.00000	0.0	0.0	0.0
				27.00000	46.00000	0.00000	0.0	0.0	0.0
				28.00000	46.00000	0.00000	0.0	0.0	0.0
				29.00000	46.00000	0.00000	0.0	0.0	0.0
				30.00000	46.00000	0.00000	0.0	0.0	0.0
				31.00000	46.00000	0.00000	0.0	0.0	0.0
				32.00000	46.00000	0.00000	0.0	0.0	0.0
				33.00000	46.00000	0.00000	0.0	0.0	0.0
				34.00000	46.00000	0.00000	0.0	0.0	0.0
				35.00000	46.00000	0.00000	0.0	0.0	0.0
				36.00000	46.00000	0.00000	0.0	0.0	0.0
				37.00000	46.00000	0.00000	0.0	0.0	0.0
				38.00000	46.00000	0.00000	0.0	0.0	0.0
				39.00000	46.00000	0.00000	0.0	0.0	0.0
				40.00000	46.00000	0.00000	0.0	0.0	0.0
				41.00000	46.00000	0.00000	0.0	0.0	0.0
				42.00000	46.00000	0.00000	0.0	0.0	0.0
				43.00000	46.00000	0.00000	0.0	0.0	0.0
				44.00000	46.00000	0.00000	0.0	0.0	0.0
				45.00000	46.00000	0.00000	0.0	0.0	0.0
				46.00000	46.00000	0.00000	0.0	0.0	0.0
				47.00000	46.00000	0.00000	0.0	0.	



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

2 Thurlow Road, London

6 mm Movements per Single Stage of Underpin

Inputs and Outputs

Job No.	Sheet No.	Rev.
U21377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				7.00000	48.00000	0.00000	0.0	0.0	0.0
				8.00000	48.00000	0.00000	0.0	0.0	0.0
				9.00000	48.00000	0.00000	0.0	0.0	0.0
				10.00000	48.00000	0.00000	0.0	0.0	0.0
				11.00000	48.00000	0.00000	0.0	0.0	0.0
				12.00000	48.00000	0.00000	0.0	0.0	0.0
				13.00000	48.00000	0.00000	0.0	0.0	0.0
				14.00000	48.00000	0.00000	0.0	0.0	0.0
				15.00000	48.00000	0.00000	0.0	0.0	0.0
				16.00000	48.00000	0.00000	0.0	0.0	0.0
				17.00000	48.00000	0.00000	0.0	0.0	0.0
				18.00000	48.00000	0.00000	0.0	0.0	0.0
				19.00000	48.00000	0.00000	0.0	0.0	0.0
				20.00000	48.00000	0.00000	0.0	0.0	0.0
				21.00000	48.00000	0.00000	0.0	0.0	0.0
				22.00000	48.00000	0.00000	0.0	0.0	0.0
				23.00000	48.00000	0.00000	0.0	0.0	0.0
				24.00000	48.00000	0.00000	0.0	0.0	0.0
				25.00000	48.00000	0.00000	0.0	0.0	0.0
				26.00000	48.00000	0.00000	0.0	0.0	0.0
				27.00000	48.00000	0.00000	0.0	0.0	0.0
				28.00000	48.00000	0.00000	0.0	0.0	0.0
				29.00000	48.00000	0.00000	0.0	0.0	0.0
				30.00000	48.00000	0.00000	0.0	0.0	0.0
				31.00000	48.00000	0.00000	0.0	0.0	0.0
				32.00000	48.00000	0.00000	0.0	0.0	0.0
				33.00000	48.00000	0.00000	0.0	0.0	0.0
				34.00000	48.00000	0.00000	0.0	0.0	0.0
				35.00000	48.00000	0.00000	0.0	0.0	0.0
				36.00000	48.00000	0.00000	0.0	0.0	0.0
				37.00000	48.00000	0.00000	0.0	0.0	0.0
				38.00000	48.00000	0.00000	0.0	0.0	0.0
				39.00000	48.00000	0.00000	0.0	0.0	0.0
				40.00000	48.00000	0.00000	0.0	0.0	0.0
				41.00000	48.00000	0.00000	0.0	0.0	0.0
				42.00000	48.00000	0.00000	0.0	0.0	0.0
				43.00000	48.00000	0.00000	0.0	0.0	0.0
				44.00000	48.00000	0.00000	0.0	0.0	0.0
				45.00000	48.00000	0.00000	0.0	0.0	0.0
				46.00000	48.00000	0.00000	0.0	0.0	0.0
				47.00000	48.00000	0.00000	0.0	0.0	0.0
				48.00000	48.00000	0.00000	0.0	0.0	0.0
				49.00000	48.00000	0.00000	0.0	0.0	0.0
				50.00000	48.00000	0.00000	0.0	0.0	0.0
				0.00000	49.00000	0.00000	0.0	0.0	0.0
				1.00000	49.00000	0.00000	0.0	0.0	0.0
				2.00000	49.00000	0.00000	0.0	0.0	0.0
				3.00000	49.00000	0.00000	0.0	0.0	0.0
				4.00000	49.00000	0.00000	0.0	0.0	0.0
				5.00000	49.00000	0.00000	0.0	0.0	0.0
				6.00000	49.00000	0.00000	0.0	0.0	0.0
				7.00000	49.00000	0.00000	0.0	0.0	0.0
				8.00000	49.00000	0.00000	0.0	0.0	0.0
				9.00000	49.00000	0.00000	0.0	0.0	0.0
				10.00000	49.00000	0.00000	0.0	0.0	0.0
				11.00000	49.00000	0.00000	0.0	0.0	0.0
				12.00000	49.00000	0.00000	0.0	0.0	0.0
				13.00000	49.00000	0.00000	0.0	0.0	0.0
				14.00000	49.00000	0.00000	0.0	0.0	0.0
				15.00000	49.00000	0.00000	0.0	0.0	0.0
				16.00000	49.00000	0.00000	0.0	0.0	0.0
				17.00000	49.00000	0.00000	0.0	0.0	0.0
				18.00000	49.00000	0.00000	0.0	0.0	0.0
				19.00000	49.00000	0.00000	0.0	0.0	0.0
				20.00000	49.00000	0.00000	0.0	0.0	0.0
				21.00000	49.00000	0.00000	0.0	0.0	0.0
				22.00000	49.00000	0.00000	0.0	0.0	0.0
				23.00000	49.00000	0.00000	0.0	0.0	0.0
				24.00000	49.00000	0.00000	0.0	0.0	0.0
				25.00000	49.00000	0.00000	0.0	0.0	0.0
				26.00000	49.00000	0.00000	0.0	0.0	0.0
				27.00000	49.00000	0.00000	0.0	0.0	0.0
				28.00000	49.00000	0.00000	0.0	0.0	0.0
				29.00000	49.00000	0.00000	0.0	0.0	0.0
				30.00000	49.00000	0.00000	0.0	0.0	0.0
				31.00000	49.00000	0.00000	0.0	0.0	0.0
				32.00000	49.00000	0.00000	0.0	0.0	0.0
				33.00					



GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

Job No.	Sheet No.	Rev.
121377		
Drg. Ref.		
Made by AT	Date 24-Feb-2022	Checked

2 Thurlow Road, London
6 mm Movements per Single Stage of Underpin
Inputs and Outputs

Stage: Ref.	Stage: Name	Disp. Grid: Ref.	Disp. Grid: Name	x	y	z	δx	δy	δz
				[m]	[m]	[m]	[mm]	[mm]	[mm]
				46.00000	50.00000	0.00000	0.0	0.0	0.0
				47.00000	50.00000	0.00000	0.0	0.0	0.0
				48.00000	50.00000	0.00000	0.0	0.0	0.0
				49.00000	50.00000	0.00000	0.0	0.0	0.0
				50.00000	50.00000	0.00000	0.0	0.0	0.0

Specific Building Damage Results - Horizontal Displacements

Stage: Ref.	Stage: Name	Specific Building: Ref.	Specific Building: Name	Sub-building Name	Dist.	x	y	z	δx	δy	δH//	δHperp.
						[m]	[m]	[m]	[mm]	[mm]	[mm]	[mm]
0	Base Model	1	No 1 Thurlow Road	Wall 1	0.0	36.00000	27.60000	-0.50000	0.0	-6.8425	-6.8425	0.0
					1.0429	36.00000	28.64286	-0.50000	0.0	-6.2429	-6.2429	0.0
					2.0857	36.00000	29.68571	-0.50000	0.0	-5.6432	-5.6432	0.0
					3.1286	36.00000	30.72857	-0.50000	0.0	-5.0436	-5.0436	0.0
					4.1714	36.00000	31.77143	-0.50000	0.0	-4.4439	-4.4439	0.0
					5.2143	36.00000	32.81429	-0.50000	0.0	-3.8443	-3.8443	0.0
					6.2571	36.00000	33.85714	-0.50000	0.0	-3.2446	-3.2446	0.0
					7.3000	36.00000	34.90000	-0.50000	0.0	-2.6450	-2.6450	0.0
					8.0	36.00000	35.00000	-0.50000	0.0	-2.5875	0.0	2.5875
					1.0000	35.00000	35.00000	-0.50000	0.0	-2.5875	0.0	2.5875
		2	No 1 Thurlow Road	Wall 2	2.0000	34.00000	35.00000					

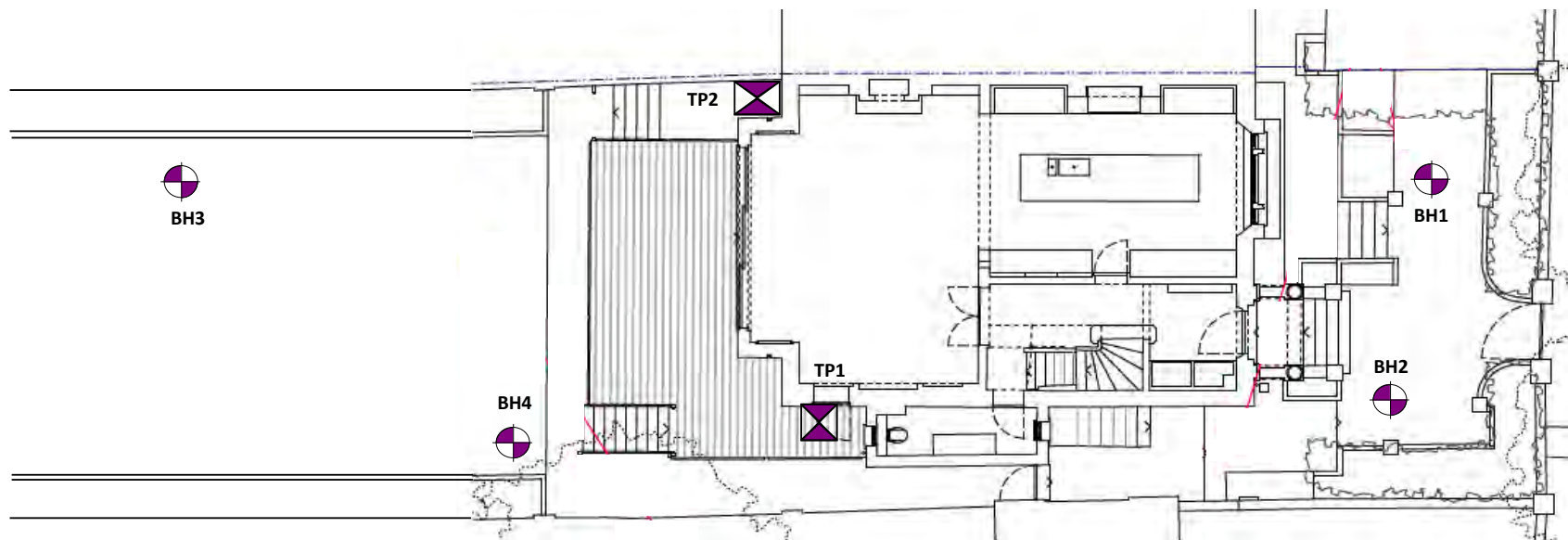
Site 2 Thurlow Road, London NW3 5PJ

Client Mr Philippe Bodereau

Engineer Momentum

Job Number
J21377

Sheet
1 / 1



Approximate scale in metres





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