

8a Fawley Road  
Ground Movement Assessment

### Titles

Job No.: 134910  
 Job Title: 8a Fawley Road  
 Sub-title: Ground Movement Assessment  
 Calculation Heading:  
 Initials: RT  
 Checker:  
 Date Saved: 03 Jan 2020  
 Date Checked:  
 Notes:  
 File Name: 01 ST unloading - TJ (10kPa under stairwell).pdd  
 File Path: \\Lonsrvr05.london.fairhurst.local\users\A\_PROJECTS\134910\_Fawley Road\Geotech\09 Ground Movement Assessment\Data\FDisp

### History

Date	Time	By	Notes
25-Oct-2019	14:05	rturner	New
25-Oct-2019	17:01	rturner	
03-Jan-2020	10:27	rturner	
03-Jan-2020	11:08	rturner	
03-Jan-2020	11:16	rturner	
13-Jan-2020	10:36	tjanusz	
13-Jan-2020	11:17	tjanusz	
13-Jan-2020	11:43	tjanusz	
13-Jan-2020	12:11	tjanusz	
14-Jan-2020	12:02	tjanusz	
14-Jan-2020	17:18	tjanusz	
14-Jan-2020	17:25	tjanusz	
06-Aug-2020	19:56	tjanusz	Open

### Analysis Options

#### General

Global Poisson's ratio: 0.20  
 Maximum allowable ratio between values of E: 1.5  
 Horizontal rigid boundary level: -25.00 [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 Profiles BH1 & BH2

Layer ref.	Name	Level at top	Number of intermediate displacement levels	Youngs Modulus : Top	Youngs Modulus : Btm.	Poissons ratio	Non-linear curve
1	London Clay weathered	0.0	44	38000.	56000.	0.45000	None
2	London Clay	-11.000	28	56000.	56000.	0.45000	None

### Soil Zones

Zone	Name	X min [m]	X max [m]	Y min [m]	Y max [m]	Profile
1	1	-10.000	50.000	-10.000	40.000	BH1 & BH2

### Rectangular Load Data

Load ref.	Name	Orientation of Plane	Centre (Global) : x	Centre (Global) : y	Centre (Global) : z	Position of local x from [Degrees]	Position : Angle of local x or Radius [m]	Position : Width x [m]	Position : Length y [m]	Value : Normal [kN/m <sup>2</sup> ]	Value : Tangential (local x) [kN/m <sup>2</sup> ]	Value : Tangential (local y) [kN/m <sup>2</sup> ]
1	Rect Load #	Horizontal	17.11858	14.22478	0.00000	0.0	2.5345	5.0513	-10.000	0.0	0.0	

### Polygonal Load Data

Load ref.	Name	Position : Level	Polygon : Coords. [m]	Position : Polygon : Rect. tolerance [%]	No. of Rectangles	Value : Normal (local z) [kN/m <sup>2</sup> ]
1	Poly Load #	0.00000	(15.9,21.2) (22.9,21.3) (22.9,20.5) (25.4,20.4) (25.5,17.2) (22.9,17.2) (23,15.1) (25.5,15.1) (25.4,12.3) (23.2,12.3) (23.2,11.6) (18.5,11.6) (18.4,16.7) (15.9,16.8) (15.8,21.2)	10.000	7	-65.000

### Polygonal Loads' Rectangles

No.	Centre : x	Centre : y	Angle of local x from global X [Degrees]	Width x [m]	Depth y [m]
1	17.15860	18.98803	0.47091	2.5072	4.4639
2	20.66813	16.42415	0.47091	4.4695	9.6567
3	23.09028	13.36751	0.47091	0.20482	3.5038
4	24.30516	13.68285	0.47091	2.1415	2.8348
5	25.41427	14.37822	0.47091	0.088043	1.4090
6	24.16090	18.83281	0.47091	2.4787	3.1919
7	25.43952	18.01226	0.47091	0.064930	1.5767

### Displacement Grids

Name	Extrusion: Direction	X1 [m]	Y1 [m]	Z1 [m]	X2 [m]	Y2 [m]	Z2 [m]	Intervals Along Line [No.]	Extrusion: Distance [m]	Extrusion: Intervals Along [No.]	Calculate Results	Detailed Results
Grid 1	Global Y	-13.30614	-11.48477	0.00000	51.45379	-	0.00000	100	53.17398	100	Yes	Yes

### Warnings

- (1)The displacement location of Grid 1 at (-13.306, -11.485, 0.000)m lies wide of all soil zones. The first soil profile will be used. There are more displacement locations for which this warning applies. Only one is detailed here.
- (2)The load at (17.119, 14.225, 0.000)m lies wide of all soil zones. Displacements at its centre have been requested. The first soil profile will be used.
- (3)The load at (20.861, 16.833, 0.000)m lies wide of all soil zones. Displacements at its centre have been requested. The first soil profile will be used.