

Determination of One Dimensional Consolidation Properties of Soil

Our Job No: CGL6162

Site : 5 Templewood Avenue, NW3 7UY

Sample Ref: BH1

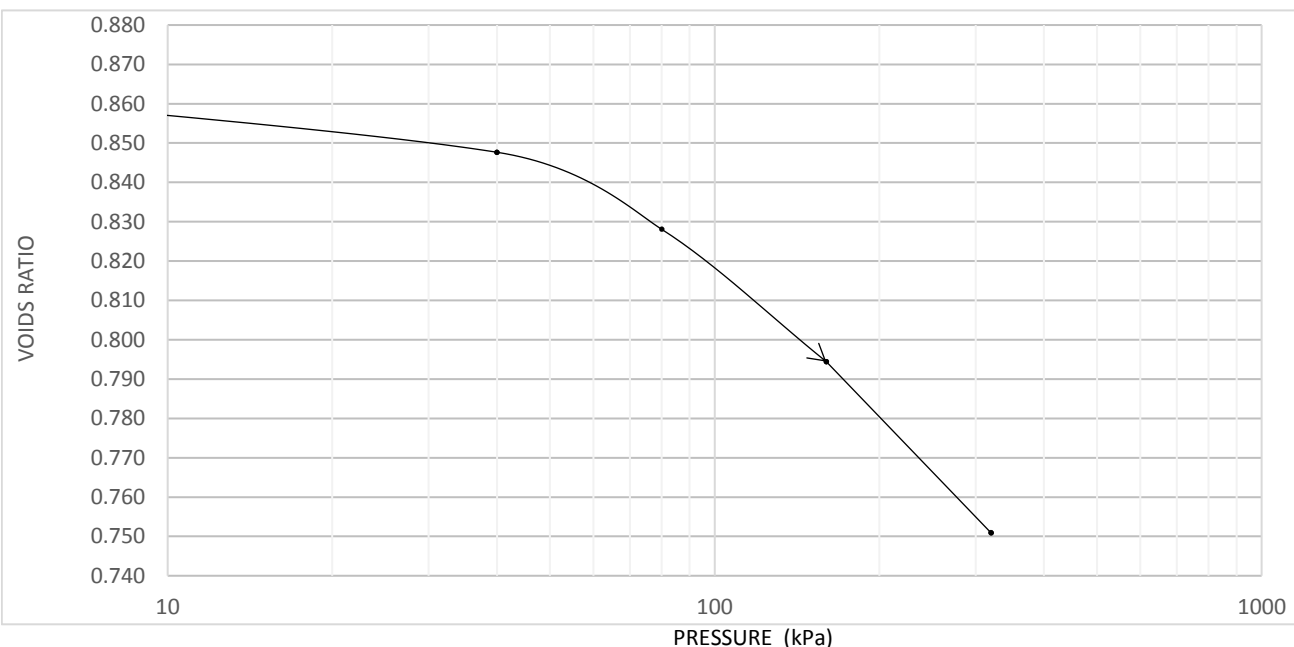
Sample ID: 69450

Depth: 2.00 2.45m

Date: 12/02/2016

Description:

Brown/orange silty CLAY.



Initial Conditions

Height (mm)	19	Moisture content (%)	Initial
Diameter (mm)	74.89	Voids Ratio	0.870
Area (mm ²)	4404.9	Bulk Density (Mg/m ³)	1.90
Saturation (%)	97.9	Dry Density (Mg/m ³)	1.44
Lab. Temperature °C	20	Particle Density (Mg/m ³)	2.75 (Assumed)

Pressure Range (kPa)	Coefficients		Time Fitting Method	Void Ratio
	Mv (m ² /MN)	Cv (m ² /year)		
0 - 40	0.196	9.5	t90	0.8477
40 - 80	0.204	5.59	t90	0.8281
80 - 160	0.195	5.26	t90	0.7944
160 - 320	0.133	4.71	t90	0.7509

Cv - Coefficient of Consolidation

Mv - Coefficient of Volume Compressibility

Sv - Coefficient of Swelling

Comments :

Checked By : MC

Date Checked: 17/02/2016

Determination of One Dimensional Consolidation Properties of Soil

Our Job No: CGL6162

Site : 5 Templewood Avenue, NW3 7UY

Sample Ref: BH1

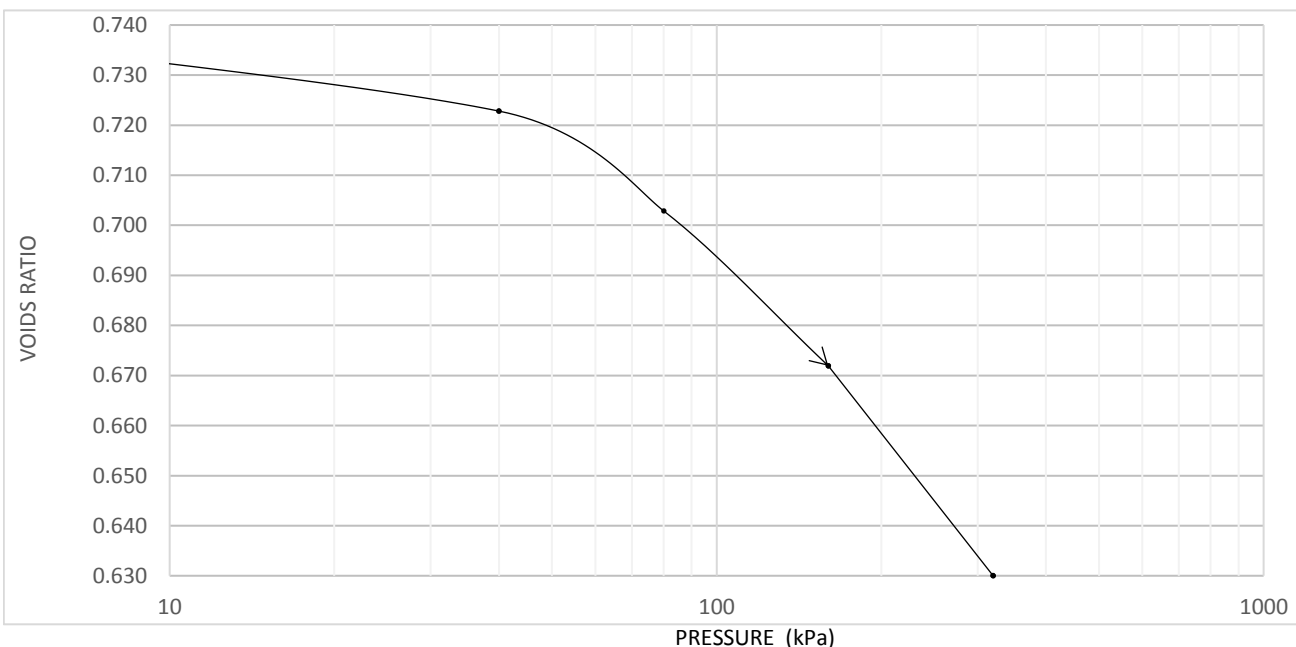
Sample ID: 69452

Depth: 4.00 4.45m

Date: 12/02/2016

Description:

Grey silty CLAY with crystals.



Initial Conditions

Height (mm)	19	Moisture content (%)	Initial
Diameter (mm)	74.87	Voids Ratio	26.66
Area (mm ²)	4402.6	Bulk Density (Mg/m ³)	0.745
Saturation (%)	98.4	Dry Density (Mg/m ³)	2.00
Lab. Temperature °C	20	Particle Density (Mg/m ³)	1.58
			2.75 (Assumed)

Pressure Range (kPa)	Coefficients		Time Fitting Method	Void Ratio
	Mv (m ² /MN)	Cv (m ² /year)		
0 - 40	0.159	12.97	t90	0.7228
40 - 80	0.145	6.2	t90	0.7029
80 - 160	0.113	5.78	t90	0.6719
160 - 320	0.078	6.25	t90	0.6301

Cv - Coefficient of Consolidation

Mv - Coefficient of Volume Compressibility

Sv - Coefficient of Swelling

Comments :

Checked By : MC

Date Checked: 17/02/2016



8284



This report is personal to the client, confidential and non assignable. It is issued with no admission of liability to any third party.

This report shall not be reproduced, except in full, without the written approval of Chelmer Site Investigations Laboratories Ltd.

Where our involvement consists exclusively of testing samples, the results and comments (if provided) relate only to the samples tested.

Any samples that are deemed to be subject to deviation will be recorded as such within the test summary.

REPORT NOTES

Equipment Used

Hand tools, Mechanical Concrete Breaker and Spade, Hand Augers, 100mm/150mm diameter Mechanical Flight Auger Rig, GEO205 Flight Auger Rig, Window Sampling Rig, and Large or Limited Access Shell & Auger Rig upon request and/or access permitting.

On Site Tests

By Pilcon Shear-Vane Tester (kN/m²) in clay soils, and/or Mackintosh Probe in granular soils or made ground and/or upon request Continuous Dynamic Probe Testing and Standard Penetration Testing.

Note:

Details reported in trial-pits and boreholes relate to positions investigated only as instructed by the client or engineer on the date shown.

We are therefore unable to accept any responsibility for changes in soil conditions not investigated i.e. variations due to climate, season, vegetation and varying ground water levels.

Full terms and conditions are available upon request.

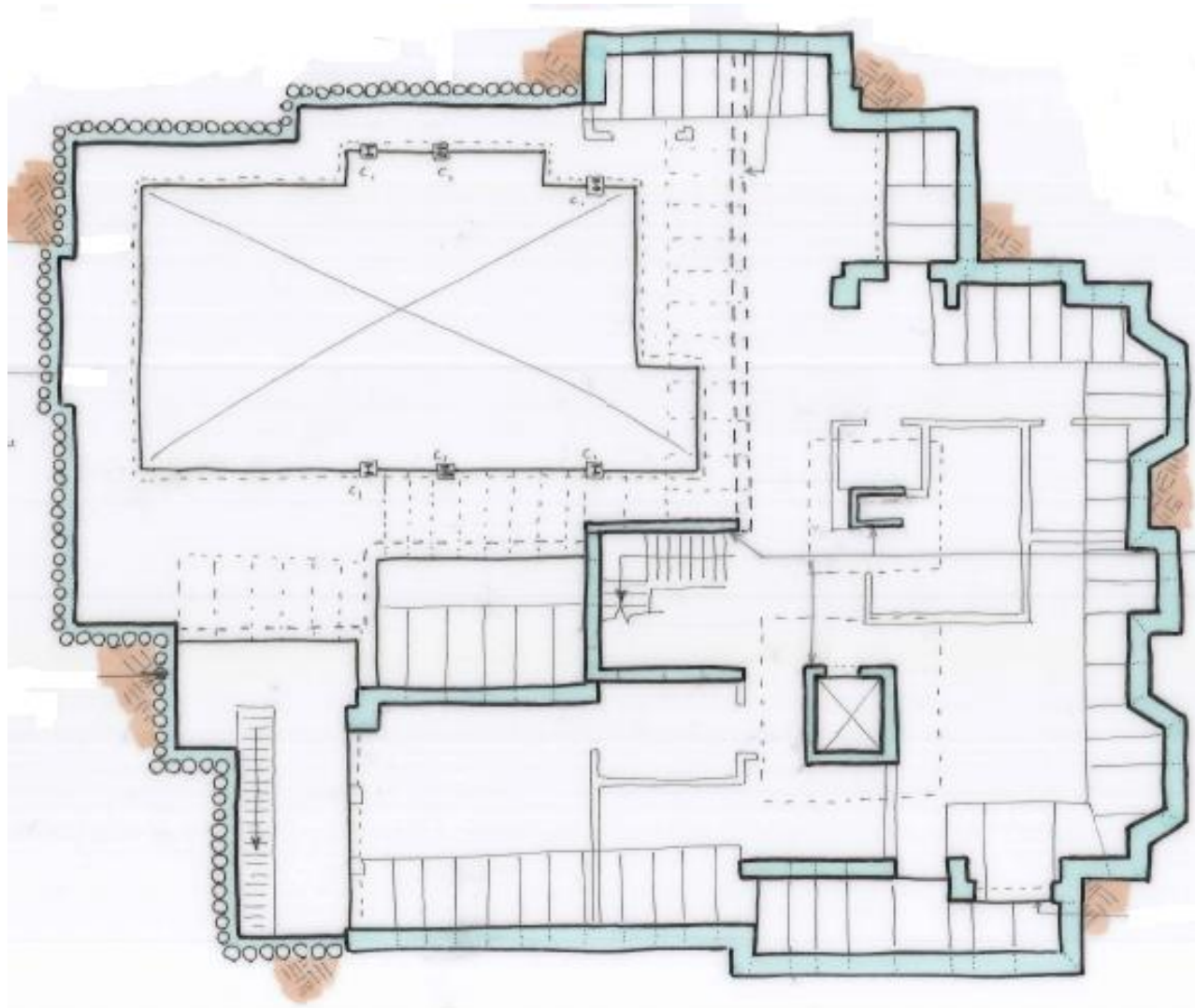


Figure D1. Layout of the proposed basement structure

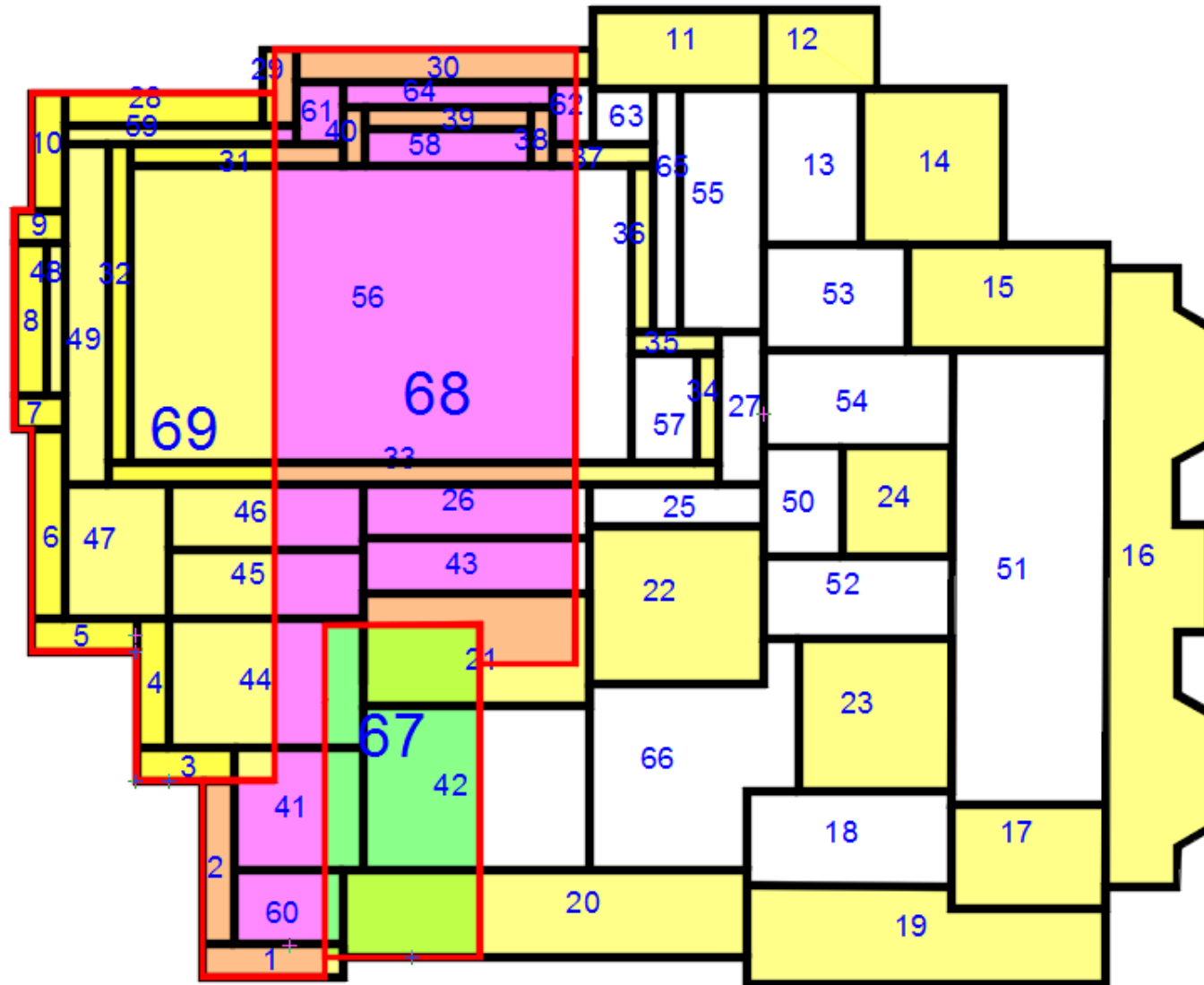


Figure D2. Detail of geometry introduced to PDISP

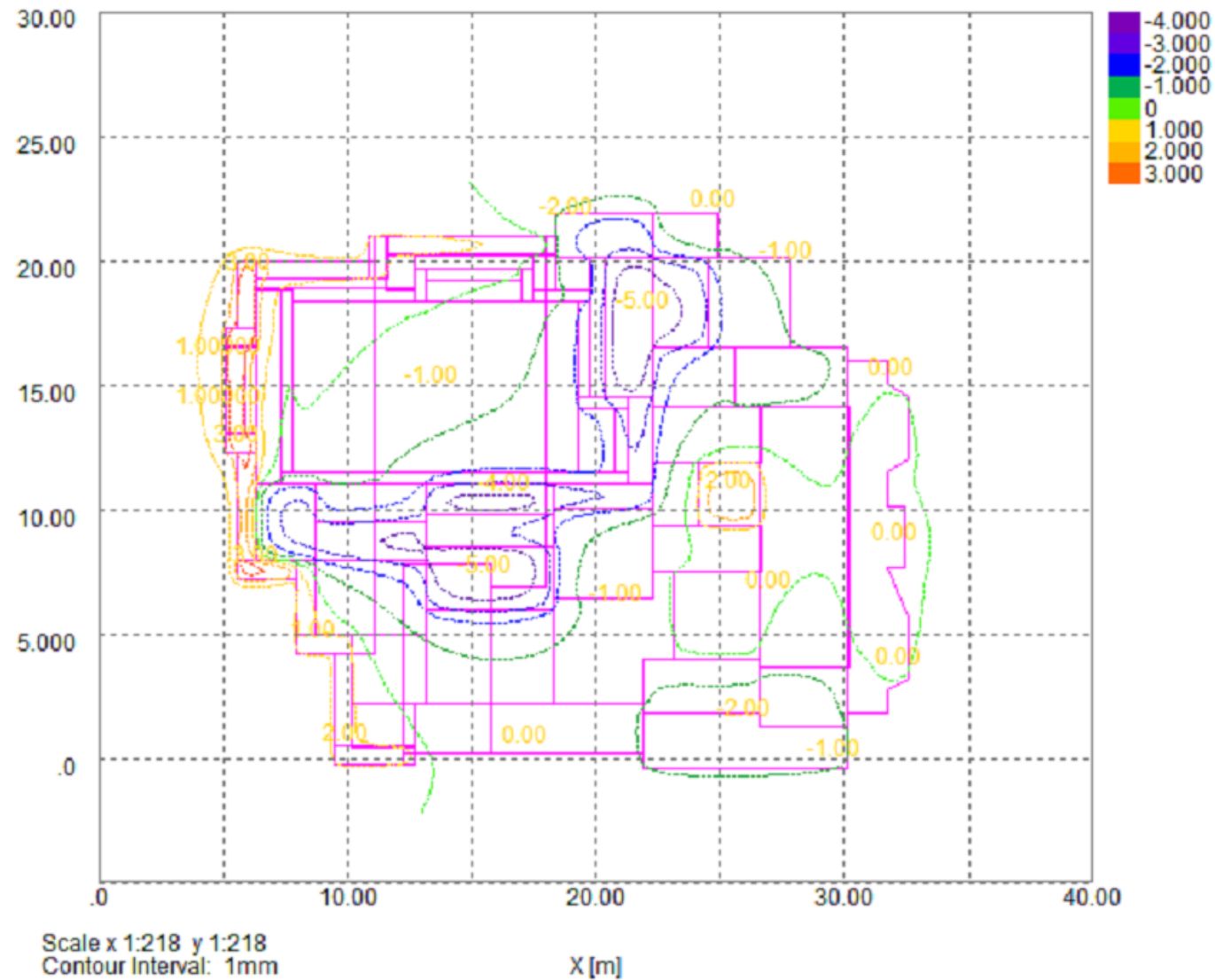


Figure D3. Short term (Stage 1) heave assessment contour

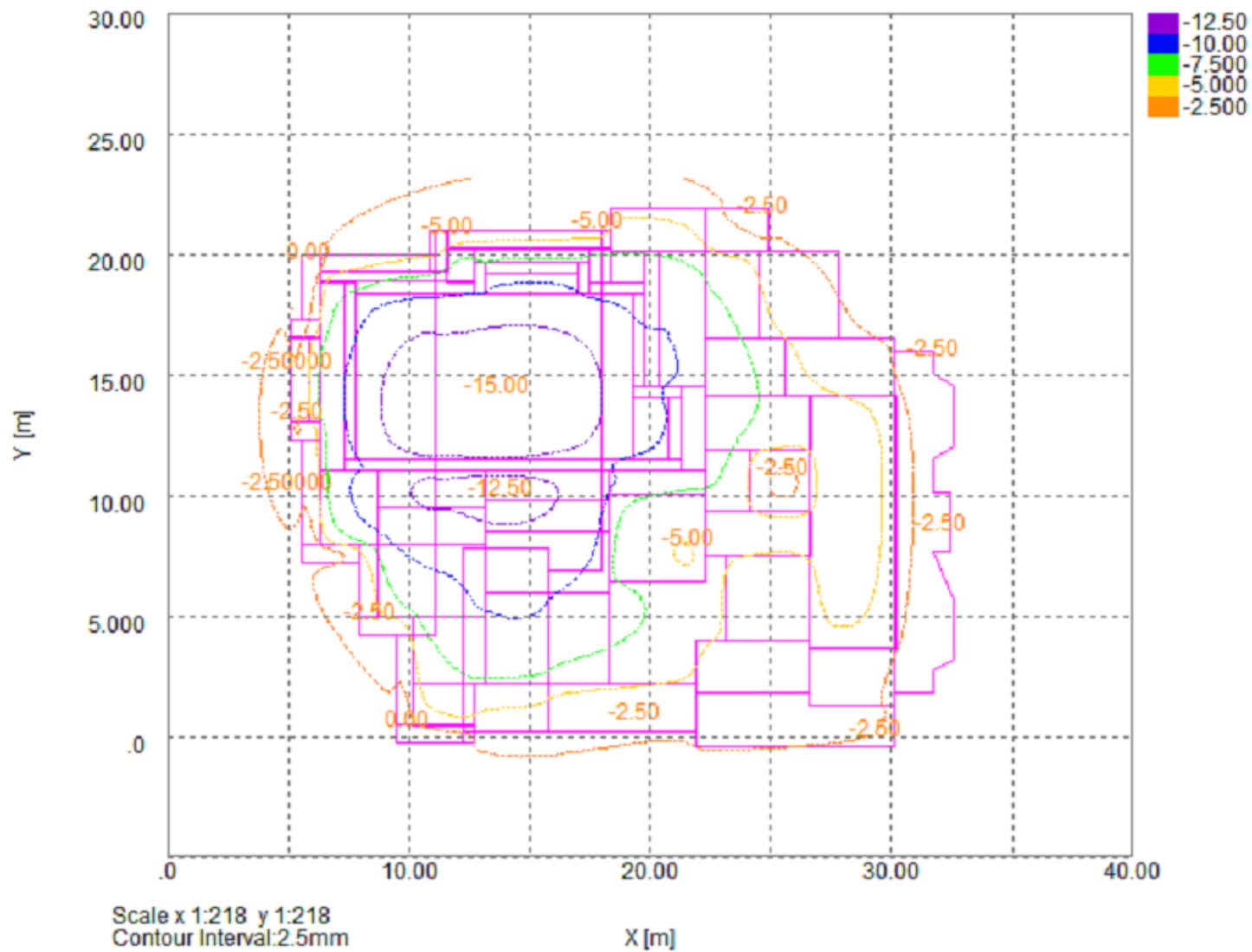


Figure D4. Short term (Stage 2) heave assessment contour

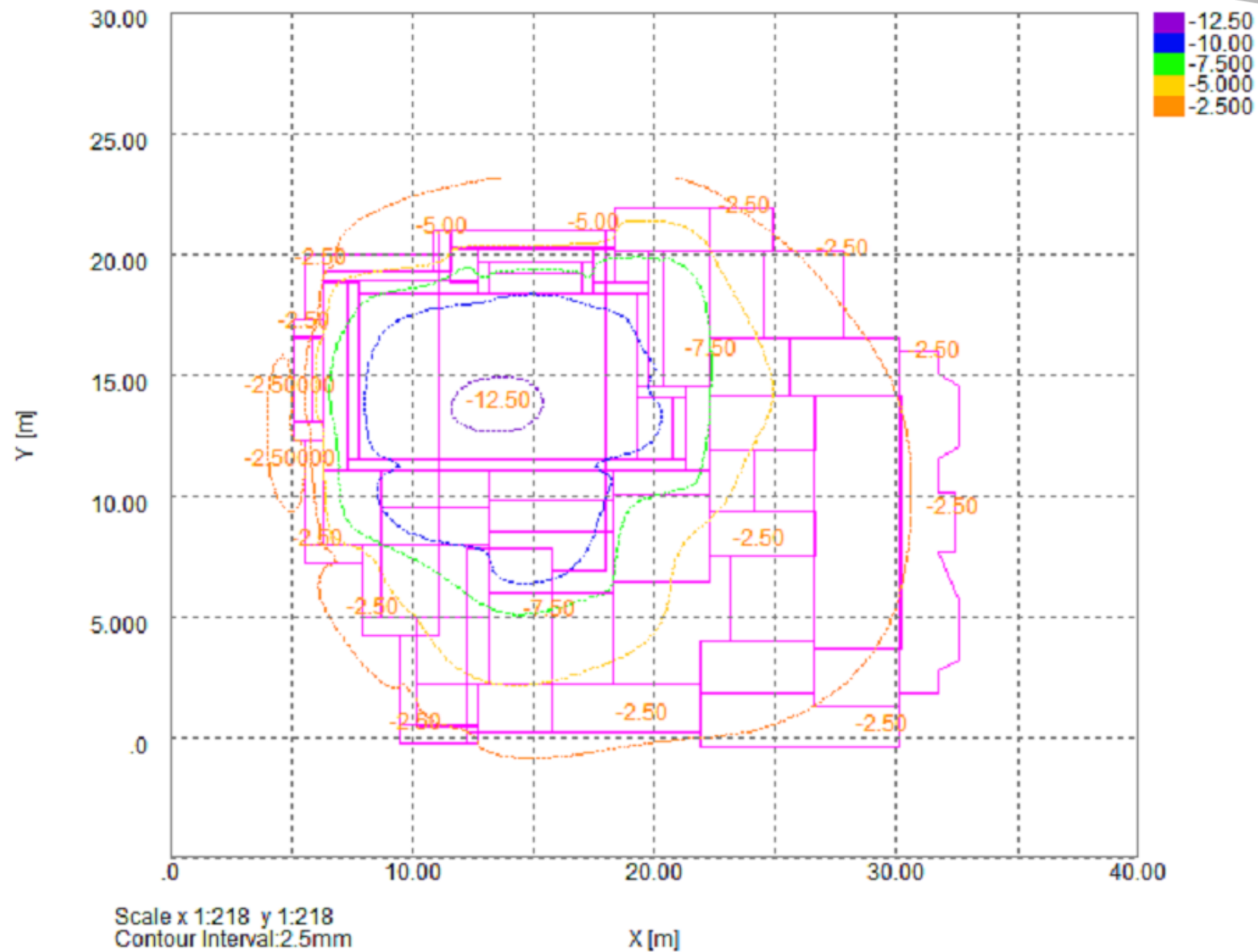


Figure D5. Short term (Stage 3) heave assessment contour

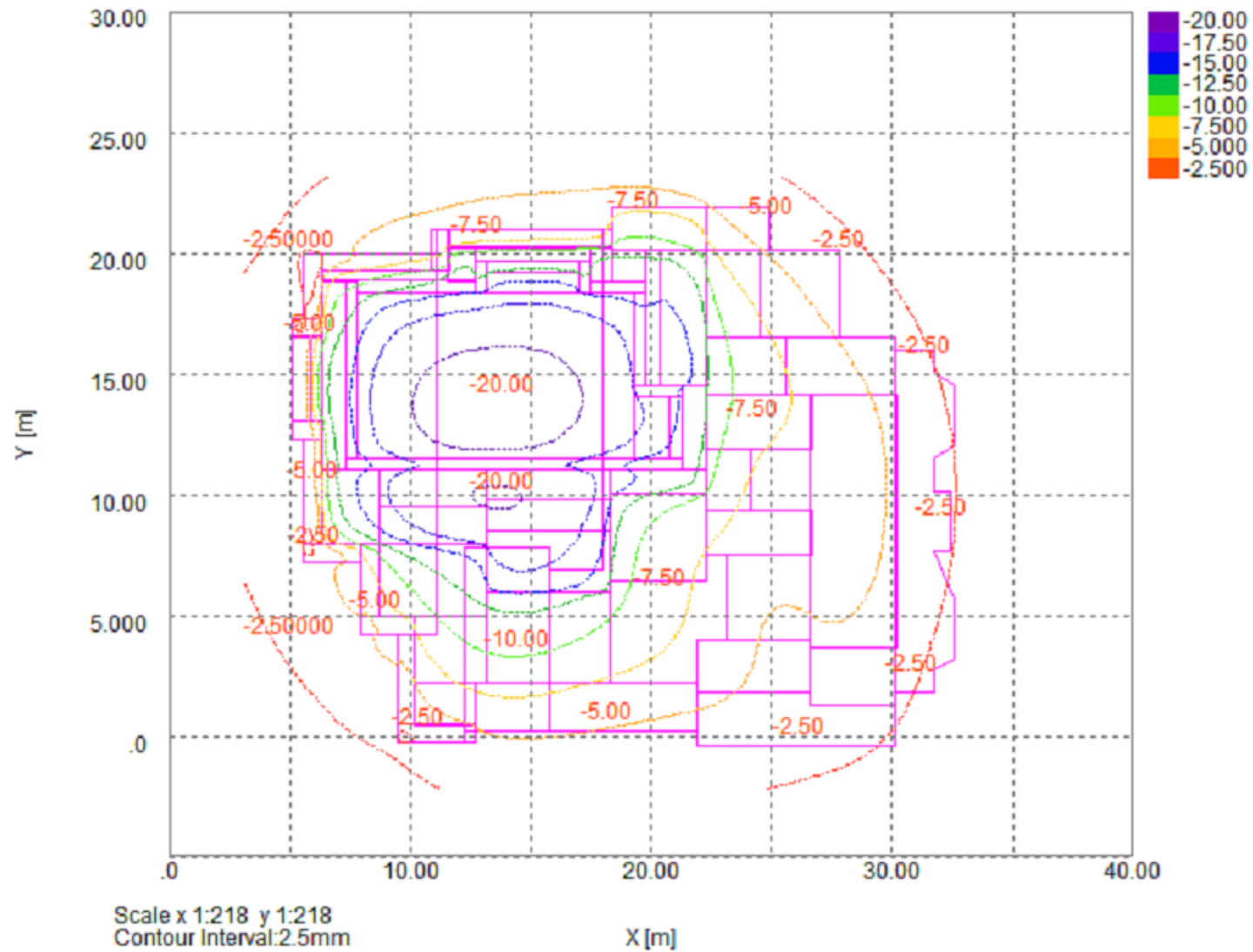


Figure D6. Long term (Stage 4) heave assessment contour