

Project: Ivy Mill, Whitehaven
Bearing strata: Firm Clay (75kN/m.sq. Allowable bearing pressure)
Volume change potential: Medium
Ground investigation: Geo Environmental Engineering, 2019-3886, 10.12.2019

Project Ref: cgc199
Revision: 8
Rev date: 02.06.22

Plot No.	Type	FFL (m)	Adj TP/BH	Extg. GL at corners (m)				Tree influence (Y/N)	Min. Depth of foundation from EGL required at corners (m)				Min. Depth of foundation from FFL required at corners (m)				Ave excav depth (m)	Ave. cut/fill (m)	Heave protection (Y/N)	Gas Protection (Y/N)	Foundation type	Reinf. Req'd (Y/N)	Ground floor const.	Comments
				1 (Front L)	2 (Rear L)	3 (Rear R)	4 (Front R)		1	2	3	4	1	2	3	4								
1	303	117.50	BH1	117.35	117.40	117.00	116.20	N	1.85	1.90	1.50	1.50	2.00	2.05	1.85	2.65	2.14	0.51	N	N	Trenchfill	N	Suspended	Adj. BH1 noted made ground to 1.4m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay. 8H level taken as 117.00 from topo
2	303	117.50	BH1	116.20	117.00	116.65	116.55	N	1.50	1.50	1.50	1.50	2.65	1.85	2.20	2.30	2.25	0.90	N	N	Trenchfill	N	Suspended	Adj. BH1 noted made ground to 1.4m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay. 8H level taken as 117.00 from topo
3	353	116.20	BH1 & TPH	115.50	115.50	115.60	115.60	N	0.90	0.90	0.90	0.90	1.45	1.45	1.35	1.35	1.40	0.65	N	N	Trenchfill	N	Suspended	Adj. BH1 and TPH noted varying made ground depths. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
3	GAR	116.05	TPH	115.65	115.70	115.70	115.65	N	0.90	0.90	0.90	0.90	1.15	1.10	1.10	1.15	1.12	0.37	N	N	strip	N	Suspended	TPH noted made ground at approx. 0.4m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
4	353	116.20	TPH	115.60	115.75	115.75	115.70	N	0.90	0.90	0.90	0.90	1.35	1.20	1.20	1.25	1.25	0.50	N	N	Trenchfill	N	Suspended	TPH noted made ground at approx. 0.4m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
4	GAR	116.05	TPH	115.75	115.75	115.75	115.75	N	0.90	0.90	0.90	0.90	1.05	1.05	1.05	1.05	1.05	0.30	N	N	Strip	N	Suspended	TPH noted made ground at approx. 0.4m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
5	358	116.15	TPJ	115.50	115.55	115.00	115.00	N	0.90	0.90	0.90	0.90	1.40	1.35	1.90	1.90	1.64	0.89	N	N	Trenchfill	N	Suspended	TPJ noted made ground at approx. 0.6m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
5	GAR	116.00	TPJ	115.50	115.50	115.45	115.45	N	0.90	0.90	0.90	0.90	1.25	1.25	1.30	1.30	1.28	0.53	N	N	Trenchfill	N	Suspended	TPJ noted made ground at approx. 0.6m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
6	353	116.55	TPJ	115.00	115.70	115.70	115.00	N	0.90	0.90	0.90	0.90	2.30	1.60	1.60	2.30	1.95	1.20	N	N	Trenchfill	N	Suspended	TPJ noted made ground at approx. 0.6m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
6	GAR	116.40	TPJ & TPI	115.70	115.70	115.70	115.70	N	0.90	0.90	0.90	0.90	1.45	1.45	1.45	1.45	1.45	0.70	N	N	Trenchfill	N	Suspended	TPJ noted made ground at approx. 0.6m depth & TPI 0.3m. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
7	450	117.15	TPI	115.00	115.60	115.60	115.00	N	0.90	0.90	0.90	0.90	2.90	2.30	2.30	2.90	2.60	1.85	N	N	Trenchfill	N	Suspended	TPI noted made ground at approx. 0.3m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
7	GAR	117.00	TPI	115.60	115.75	116.00	115.85	N	0.90	0.90	0.90	0.90	2.15	2.00	1.75	1.90	1.95	1.20	N	N	Trenchfill	N	Suspended	TPI noted made ground at approx. 0.3m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
8	301	118.30	TPI	115.60	116.00	116.75	115.75	N	0.90	0.90	0.90	0.90	3.45	3.05	2.30	3.30	3.03	2.27	N	N	Trenchfill	N	Suspended	TPI noted made ground at approx. 0.3m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
9	301	118.30	TPI	115.75	116.75	117.40	116.00	N	0.90	0.90	0.90	0.90	3.30	2.30	1.65	3.05	2.58	1.83	N	N	Trenchfill	N	Suspended	TPI noted made ground at approx. 0.3m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
10	450	118.90	TPI & TPE	118.00	117.00	117.75	118.25	N	0.90	0.90	0.90	0.90	1.65	2.65	1.90	1.40	1.90	1.15	N	N	Trenchfill	N	Suspended	TPI noted made ground at approx. 0.3m depth. TPE noted made ground at 0.5-1.5m thickness. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
10	GAR	118.75	TPI & TPE	116.50	115.75	115.75	116.50	N	0.90	0.90	0.90	0.90	3.00	3.75	3.75	3.00	3.38	2.63	N	N	Trenchfill	N	Suspended	TPI noted made ground at approx. 0.3m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
11	301	119.35	TPI & TPE	118.30	118.00	118.30	118.30	N	0.90	0.90	1.20	1.20	1.80	2.10	2.10	2.10	2.03	1.12	N	N	Trenchfill	N	Suspended	TPI noted made ground at approx. 0.3m depth. TPE noted made ground at 0.5-1.5m thickness. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
12	211	119.35	TPE	118.30	118.30	118.30	118.30	N	1.20	1.20	1.50	1.50	2.10	2.10	2.40	2.40	2.25	1.05	N	N	Trenchfill	N	Suspended	TPE noted made ground at 0.5-1.5m thickness. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
12	301	119.35	TPE	118.30	118.30	118.30	118.30	N	0.90	0.90	0.90	0.90	1.80	1.80	1.80	1.80	1.80	1.05	N	N	Trenchfill	N	Suspended	TPE noted made ground at 0.5-1.5m thickness. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
13	211	119.80	TPE	118.50	118.50	118.50	118.50	Y	1.50	1.50	1.80	1.80	2.65	2.65	2.95	2.95	2.80	1.30	Y	N	Trenchfill	N	Suspended	TPE noted made ground at 0.5-1.5m thickness. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
14	301	119.80	TPE	118.50	118.50	118.50	118.50	Y	1.80	1.80	2.00	2.25	2.95	2.95	3.15	3.40	3.11	1.30	Y	N	Trenchfill	N	Suspended	TPE noted made ground at 0.5-1.5m thickness. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.
15	301	120.75	TPD	121.00	121.60	121.40	121.00	Y	2.90	3.50	2.80	2.40	3.05	3.65	2.95	2.55	3.05	-0.50	Y	N	TF/PILE	N	Suspended	TPD noted made ground TO 0.4m thickness. Foundations to extend min. 100mm in to stiff brown gravelly clay.
16	211	120.75	TPD	121.00	121.40	121.40	120.80	Y	2.00	2.20	1.80	1.70	2.15	2.35	1.95	1.85	2.08	-0.40	Y	N	Trenchfill	N	Suspended	TPD noted made ground TO 0.4m thickness. Foundations to extend min. 100mm in to stiff brown gravelly clay.
17	353	120.30	TPC	120.70	121.40	121.30	120.60	Y	1.80	1.80	1.50	1.65	1.95	1.95	1.65	1.80	1.84	-0.70	Y	N	Trenchfill	N	Suspended	TPC noted made ground TO 0.9m thickness. Foundations to extend min. 500mm in to firm brown clay.
17	GAR	120.30	TPC	121.20	121.40	121.40	121.20	Y	1.50	1.70	1.50	1.40	1.65	1.85	1.65	1.55	1.68	-1.00	Y	N	Trenchfill	N	Suspended	TPC noted made ground TO 0.9m thickness. Foundations to extend min. 500mm in to firm brown clay.
18	303	120.10	BH3	120.40	120.80	120.60	120.00	Y	1.40	1.40	2.00	2.00	1.55	1.55	2.15	2.15	1.85	-0.35	N	N	Trenchfill	N	Suspended	BH3 noted made ground to 0.4m. Foundations to extend min. 100mm in to underlying firm light grey brown clay
19	303	120.10	BH3	120.00	120.60	120.60	120.20	Y	2.00	2.00	2.00	2.00	2.15	2.15	2.15	2.15	2.15	-0.25	N	N	Trenchfill	N	Suspended	BH3 noted made ground to 0.4m. Foundations to extend min. 100mm in to underlying firm light grey brown clay
20	358	119.40	TPG	118.50	119.00	120.25	119.60	Y	2.50	2.50	2.50	2.50	3.25	2.75	2.65	2.65	2.83	0.06	N	N	Trenchfill To be confirmed	N	Suspended	TPG noted deep made ground to 2.4m depth below which a concrete slab was found and trial pit terminated. Foundations to be confirmed after further excavation and breaking out
20	GAR	119.25	TPG	119.50	119.80	119.80	119.50	Y	2.50	2.50	2.50	2.50	2.65	2.65	2.65	2.65	2.65	-0.40	N	N	Trenchfill To be confirmed	N	Suspended	TPG noted deep made ground to 2.4m depth below which a concrete slab was found and trial pit terminated. Foundations to be confirmed after further excavation and breaking out
21	358	121.60	TPB & BH2	121.60	121.60	122.00	122.00	Y	2.00	2.00	2.00	2.00	2.15	2.15	2.15	2.15	2.15	-0.20	Y	N	Trenchfill	N	Suspended	TPB noted deep made ground to 0.9m depth below which firm orange brown clay observed. BH3 made ground to 0.4m on firm clay. All foundations to extend min 100mm in to firm natural clay
21	GAR	120.70	TPB	121.20	121.20	121.20	121.20	N	0.90	0.90	0.90	0.90	1.05	1.05	1.05	1.05	1.05	-0.50	N	N	strip	N	Suspended	TPB noted deep made ground to 0.9m depth below which firm orange brown clay observed. BH3 made ground to 0.6m on firm clay. All foundations to extend min 100mm in to firm natural clay
22	301	122.45	BH2	122.15	121.80	121.80	122.15	Y	1.20	1.20	1.60	1.60	1.35	1.70	2.10	1.75	1.72	0.48	Y	N	Trenchfill	N	Suspended	BH2 found firm clay to 0.6m on firm clay. All foundations to extend min 100mm in to firm natural clay
23	301	122.45	BH2	122.15	121.80	121.90	122.30	Y	1.60	1.60	1.90	1.90	1.75	2.10	2.30	2.05	2.05	0.41	Y	N	Trenchfill	N	Suspended	BH2 found firm clay to 0.6m on firm clay. All foundations to extend min 100mm in to firm natural clay
24	450	122.70	BH2	122.40	122.00	122.20	122.50	Y	2.10	2.10	2.50	2.50	2.25	2.65	2.85	2.55	2.57	0.42	Y	N	Trenchfill	N	Suspended	BH2 found firm clay to 0.6m on firm clay. Engineer to inspect when excavated, if clay is desiccated take consult for further advice
24	GAR	122.50	BH2	121.90	121.75	121.75	122.00	Y	1.80	1.80	1.90	1.90	2.25	2.40	2.50	2.25	2.35	0.65	Y	N	Trenchfill	N	Suspended	BH2 found firm clay to 0.6m on firm clay. Engineer to inspect when excavated, if clay is desiccated take consult for further advice
25	353	123.00	TPA & BH2	122.80	123.20	123.30	122.80	Y	2.00	2.50	2.00	1.70	2.05	2.65	2.15	1.75	2.15	-0.03	Y	N	Trenchfill	N	Suspended	BH2 found firm clay to 0.6m on firm clay. Engineer to inspect when excavated, if clay is desiccated take consult for further advice

25	GAR	123.10	TPA	123.75	124.20	124.20	123.75	Y	2.50	2.50	2.50	2.50	2.65	2.65	2.65	2.65	2.65	-0.88	Y	N	Trenchfill	N	Suspended	BH2 found firm clay to 0.6m on firm clay. Engineer to inspect when excavated, if clay is dessicated take consult for further advice
26	450	123.75	TPA	123.10	123.90	124.10	123.50	Y	1.70	2.50	2.50	1.50	2.20	2.65	2.65	1.60	2.28	0.10	Y	N	Trenchfill	N	Suspended	TPA noted made ground at approx. 0.4m depth. Foundations to extend min. 100mm in to underlying firm brown mottled grey clay.Engineer to inspect when excavated, if clay is dessicated take consult for further advice