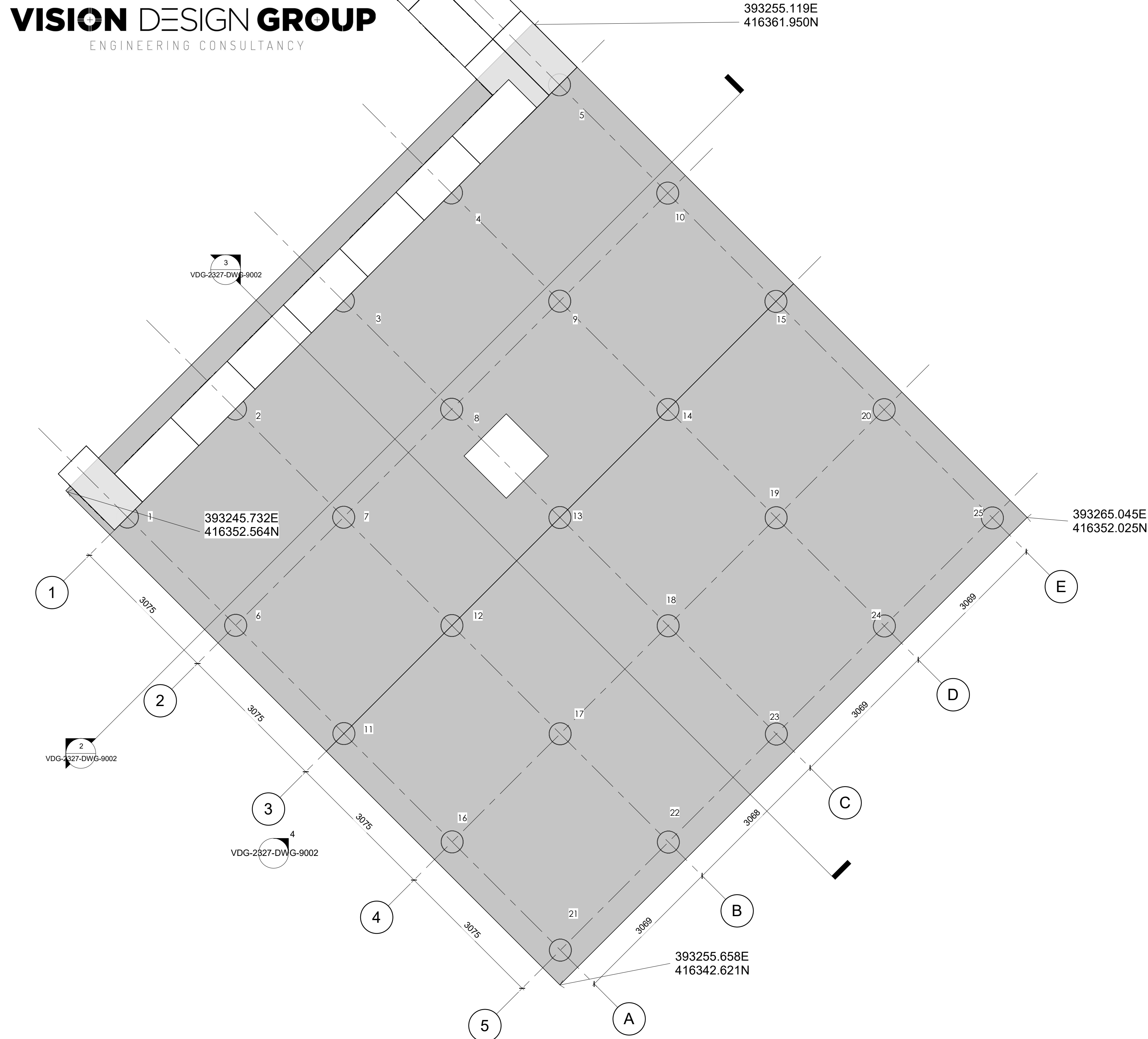




PILE NUMBER	LOADS (kN) (SLS)				CUT OF LEVEL FROM FFL (mm)
	PERMANENT Gk	VARIABLE Gk	SHEAR Wk	TENSION Wk	
1	175	625	125	100kN	151.125
2	175	625	125	100kN	151.125
3	175	625	125	100kN	151.125
4	175	625	125	100kN	151.125
5	175	625	125	100kN	151.125
6	175	625	125	100kN	151.125
7	175	625	125	100kN	151.125
8	175	625	125	100kN	151.125
9	175	625	125	100kN	151.125
10	175	625	125	100kN	151.125
11	175	625	125	100kN	151.125
12	175	625	125	100kN	151.125
13	175	625	125	100kN	151.125
14	175	625	125	100kN	151.125
15	175	625	125	100kN	151.125
16	175	625	125	100kN	151.125
17	175	625	125	100kN	151.125
18	175	625	125	100kN	151.125
19	175	625	125	100kN	151.125
20	175	625	125	100kN	151.125
21	175	625	125	100kN	151.125
22	175	625	125	100kN	151.125
23	175	625	125	100kN	151.125
24	175	625	125	100kN	151.125
25	175	625	125	100kN	151.125

PILES HAVE PRELIMINARY DESIGNED ON THE BASIS ON 450MM CFA PILES. PILING CONTRACTOR TO CONFIRM DESIGN AND LENGTH OF PILES. WE ESTIMATE THE PILE LENGTH TO BE CIRCA 15- 20M INTO THE GLACIAL TILL/ WEATHERED PENNINE LOWER COAL. THIS WILL PROVIDE A 12M CLEARANCE FROM THE COAL SEAM.

Table 1 - Summary of Ground Conditions underlying the site						
Stratum group	Stratum Subgroup	Depth Top m bgl	Depth Base m bgl	Thickness m	Locations	Generalised Description
Surface Cover	Reworked Topsoil	GL	0.10	0.10	BH01	Grass over dark brown slightly gravelly slightly clayey fine to coarse organic SAND. Gravel is angular to subangular, fine to coarse of mixed natural lithologies, rare brick, concrete and plastic. Frequent fine rootlets throughout.
	Hardstanding	GL	0.20	0.20	BH02	Comprising a strong grey CONCRETE with 10mm reinforcement bars.
Made Ground	All Made Ground	0.10 - 0.20	1.0 - 1.8	0.8-1.7	All	Made Ground soils.
	Granular Made Ground	0.10	1.8	1.7	BH01	Grey and dark grey slightly sandy to sandy slightly clayey angular to subangular fine to coarse GRAVEL of brick, concrete, sandstone and siltstone. Sand is fine to coarse.
	Subbase	0.2	1.0	0.8	BH02	Brownish grey to grey slightly clayey sandy locally very sandy angular to subangular fine to coarse GRAVEL of predominantly siltstone and sandstone.
Superficial Deposits	All Superficial Deposits	1.0 - 1.8	18.7 - 20.0	17.9 - 19.0	All	Natural soils.
	Cohesive Glacial Till	1.0 - 1.8	13 - 20	11.2 - 19.0	All	Firm rarely stiff brown locally mottled bluish grey, becoming reddish brown and brown slightly sandy to sandy slightly gravelly to gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular to rounded, fine to coarse of sandstone, siltstone, mudstone and coal occasional subangular cobbles of sandstone and siltstone throughout. Locally frequent sand bands were noted within BH02 from 10.45m bgl.
	Granular Glacial Till	13.0	19.7	6.7	BH01	Brown and reddish brown slightly gravelly slightly to very silty fine to coarse SAND. Gravel is subangular to subrounded, fine to medium of sandstone and siltstone. Occasional thin bands of very clayey sand (<55mm). Rare thin black interlaminae throughout.
Bedrock	All Bedrock	19.7 - 20	51.0	31.0 - 31.30	All	Pennine Lower Coal Measure Formation - Base not proven in any location.
	Weathered Pennine Lower Coal	19.7	21.0	1.30	BH01	Grey to dark grey SLTSTONE. Recovered as slightly sandy to sandy clayey to very clayey gravel. Gravel is angular to subangular, fine to
Stratum Group	Stratum SubGroup	Depth Top m bgl	Depth Base m bgl	Thickness m	Locations	Generalised Description
	Pennine Lower Coal Measures Formation	20 - 21	51.0 Base Not Proven	31.0 - 31.3 Base Not Proven	All	coarse predominantly interlocking fragments of siltstone and mudstone within a clay matrix. Completely weathered. Weak to moderately weak dark grey clayey SLTSTONE with frequent dark grey silty MUDSTONE. Moderately locally highly weathered. Occasional to frequent thin bands of very strong greyish brown iron-rich siltstone throughout overlying dark grey siltstone and light grey mudstone to a depth of 51m bgl. An intact coal seam was encountered at BH01 only, from 35.00 - 36.20m bgl.

GROUND WATER

THE SITE INVESTIGATION SUGGEST PERCHED GROUND WATER WITHIN THE MADE GROUND. AN ALLOWANCE FOR DEWATERING TO BE MADE BY CONTRACTOR TO CONSTRUCT PIT, BASE AND WALLS.

Mass Concrete/ Foundations Notes:-

- 1) THE BASE SPECIFICATION FOR CONCRETE SHALL BE BS EN 1992 EUROCODE 2 'DESIGN OF CONCRETE STRUCTURES' AND THE NATIONAL STRUCTURAL CONCRETE SPECIFICATION FOR BUILDING CONSTRUCTION.
- 2) THE FOLLOWING CONCRETE MIXES ARE TO BE USED (IN ACCORDANCE WITH BS8500) :-
B. **GROUND SLABS** - GRADE C32/40 WITH A MINIMUM CEMENT CONTENT 325KG/M³ AND MAXIMUM WATER CEMENT RATIO 0.55. CONCRETE TO BE AIR-ENTRAINED TO SUIT EXTERNAL CONDITIONS

Rev	Description	Date
1	PRICING	04/06/25
2	STAGE 4 ISSUE	20/10/25
3	SETTING OUT PROVIDED	24/11/25

CODE
I

SUITABILITY DESCRIPTION
TENDER

STATUS
S2

PURPOSE OF ISSUE
TENDER

PROJECT

SILO'S INSTALLATION

TITLE

PROPOSED PILE LAYOUT - SILO'S BASE

CLIENT

LANCASHIRE FARM DAIRIES

DRAWN BY
F.R

CHECKED BY
M.W

DATE
05/06/25

SCALE (@ A1)
1 : 50

PROJECT NUMBER
MCS2185

DRAWING NUMBER
VDG-2327-DWG-9000

REV
3

PROPOSED PILE LAYOUT - SILO 1 : 50

EXISTING SERVICES

MAIN CONTRACTOR TO UNDERTAKE CAT SCAN OF THE SITE AND RECORD ALL EXISTING SERVICE ROUTES, INCLUDING ABOVE GROUND SERVICE RUNS. WHERE SERVICE ROUTES ARE IDENTIFIED, A SAFE DIGGING PRACTICE TECHNIQUE IS TO BE USED TO LOCATE, EXPOSE AND / OR AVOID SERVICES.

WORKING IN EXCAVATIONS

GROUNDWORK SUBCONTRACTOR TO ENSURE SIDES OF EXCAVATIONS ARE STABLE AT ALL TIMES DURING DIGGING ON NEW FOUNDATIONS AND POURING THE CONCRETE. CONTRACTOR SHOULD LIMIT TIME WORKING IN EXCAVATIONS

BELOW GROUND STRATA

FOR A DETAILED ACCOUNT OF THE BELOW GROUND STRATA AND ENVIRONMENTAL ASSESSMENT OF THE SITE PLEASE REFER TO THE 'PHASE 2 GEO-ENVIRONMENTAL SITE ASSESSMENT' UNDERTAKEN BY 'GROUND RISK' GR000192-GI-1.0

BURIED CONCRETE

FROM THE GROUND RISK REPORT 'A REVIEW OF THE PH AND SULPHATE CONCENTRATIONS INDICATES THAT ALL CONCRETE USED IN THE FOUNDATIONS AT THIS SITE SHOULD BE DESIGNED TO:

MADE GROUND AND GLACIAL TILL HAVE BEEN DETERMINED DS-1 AC-1.

PENNINE LOWER COAL MEASURES HAVE BEEN DETERMINED AS DS-3 AC-3; HOWEVER, IF PILING THROUGH COAL ADDITIONAL TESTING WILL BE REQUIRED.