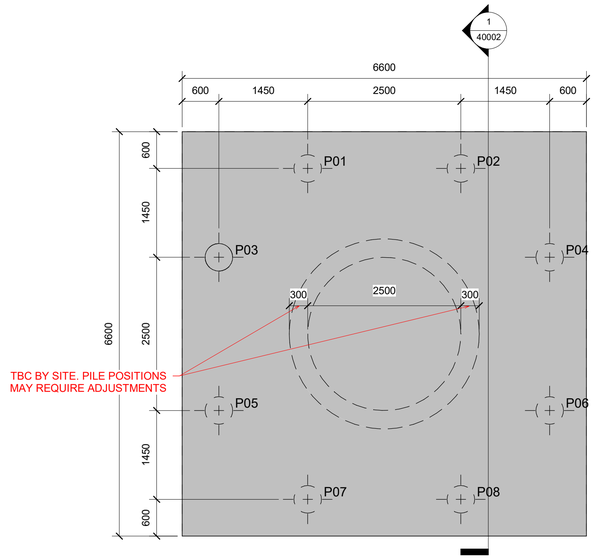


MINE SHAFT 1 TCA REF: 386339-01

EXISTING TCA DETAILS:

GROUND LEVEL	= 58.400m
DEPTH TO SHAFT TOP	= 5.5m BGL
SHAFT DIA	= 2.5m
SHAFT WALL THICKNESS	= 300mm (ASSUMED)
COORDINATES	= E: 386048.6 N: 399533.6
SHAFT DEPTH	= UNKNOWN
SHAFT TREATED	= NO

NEW CAPPING DETAILS:

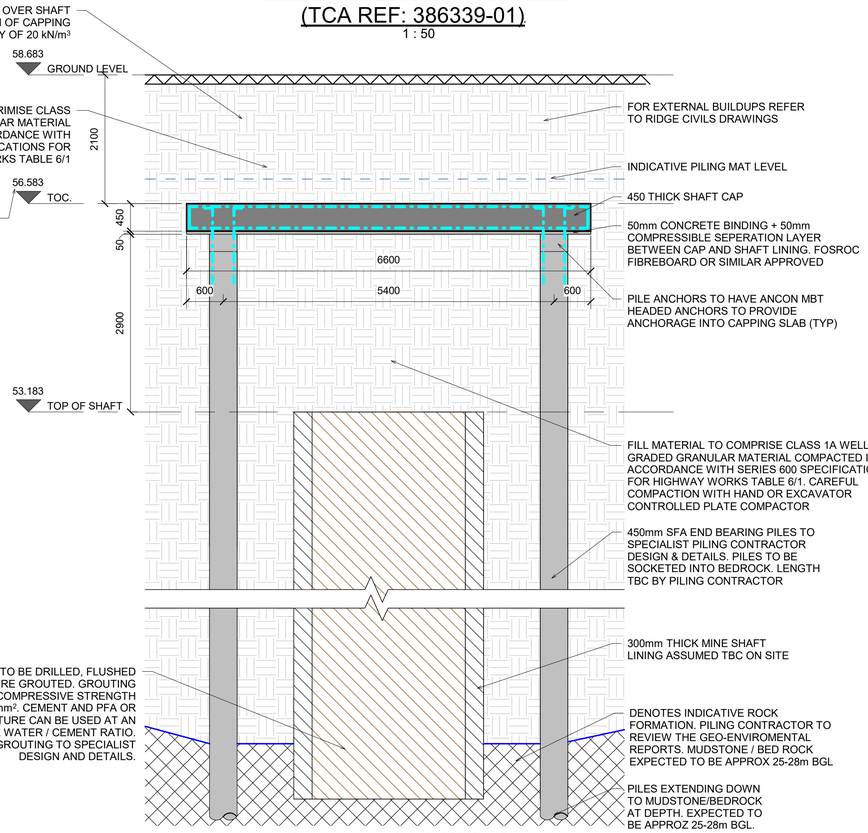
CAPPING SIZE	= 6.6x6.6m
CAPPING THICKNESS	= 0.45m
CLEAR SPAN	= 5.4m (2.15 Dia)
CONCRETE GRADE	= C40/50
REINFORCEMENT	= H40 @ 200c/c (T) BOTH WAYS H40 @ 200c/c (B) BOTH WAYS H25 U-BARS AT 200c/c TO PERIMETER
CONCRETE COVER	= 75mm
DESIGN LIFE	= 100 YEARS
SULPHATE/ACEC	= DS-1 / AC-1

SHAFT TREATEMENT DETAILS:

METHOD	= BORE & HIGH PRESSURE PUMPED GROUT OR AGGREGATE CONCRETE WHERE LARGE VOIDS ENCOUNTERED
MIXTURE	= 10:1 FLY ASH/OFC OR PFA/OPC
TREATMENT DEPTH	= 74m (DEPTH OF SHAFT)

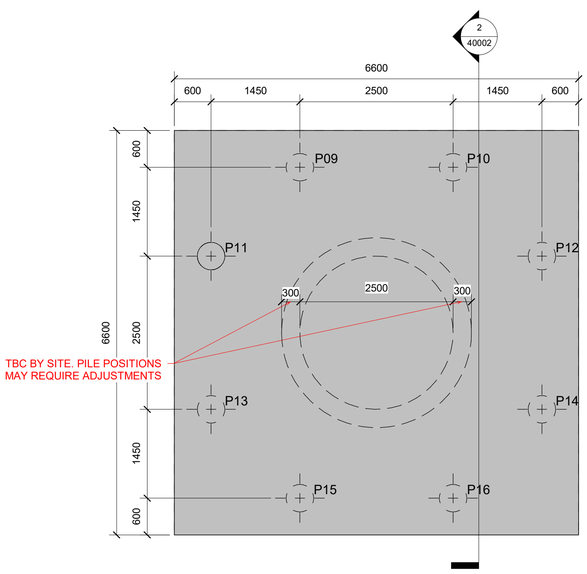
SHAFT 1 PROPOSED MINESHAFT CAPPING PLAN - (TCA REF: 386339-01)

1 : 50



SHAFT 1 PROPOSED MINESHAFT ELEVATION (TCA REF: 386339-01)

1 : 50



MINE SHAFT 2 TCA REF: 386389-016

EXISTING TCA DETAILS:

GROUND LEVEL	= 59.540m
DEPTH TO SHAFT TOP	= 2.6m BGL
SHAFT DIA	= 2.5m
SHAFT WALL THICKNESS	= 300mm (ASSUMED)
COORDINATES	= E: 386108.2 N: 399546.0
SHAFT DEPTH	= 74m
SHAFT TREATED	= YES

NEW CAPPING DETAILS:

CAPPING SIZE	= 6.6x6.6m
CAPPING THICKNESS	= 0.45m
CLEAR SPAN	= 5.4m (2.15 Dia)
CONCRETE GRADE	= C40/50
REINFORCEMENT	= H40 @ 200c/c (T) BOTH WAYS H40 @ 200c/c (B) BOTH WAYS H25 U-BARS AT 200c/c TO PERIMETER
CONCRETE COVER	= 75mm
DESIGN LIFE	= 100 YEARS
SULPHATE/ACEC	= DS-1 / AC-1

SHAFT TREATEMENT DETAILS:

METHOD	= BORE & HIGH PRESSURE PUMPED GROUT OR AGGREGATE CONCRETE WHERE LARGE VOIDS ENCOUNTERED
MIXTURE	= 10:1 FLY ASH/OFC OR PFA/OPC
TREATMENT DEPTH	= 74m (DEPTH OF SHAFT)

SHAFT 2 PROPOSED MINESHAFT CAPPING PLAN - (TCA REF: 386339-016)

1 : 50

SHAFT 2 PROPOSED MINESHAFT CAPPING ELEVATION (TCA REF: 386339-016)

1 : 50

Structural Piling Schedule

REF	PILE DIA (mm)	Gk (kN)	Qk (kN)	Wk (+/- kN)	EHF GK (+/- kN)	EHF QK (+/- kN)	SHEAR (W)	AD (kN)	PILE CUT-OFF LEVEL (m)
P01	450	575	575	-	-	-	15	-	56.208
P02	450	575	575	-	-	-	15	-	56.208
P03	450	575	575	-	-	-	15	-	56.208
P04	450	575	575	-	-	-	15	-	56.208
P05	450	575	575	-	-	-	15	-	56.208
P06	450	575	575	-	-	-	15	-	56.208
P07	450	575	575	-	-	-	15	-	56.208
P08	450	575	575	-	-	-	15	-	56.208
P09	450	575	575	-	-	-	15	-	56.633
P10	450	575	575	-	-	-	15	-	56.633
P11	450	575	575	-	-	-	15	-	56.633
P12	450	575	575	-	-	-	15	-	56.633
P13	450	575	575	-	-	-	15	-	56.633
P14	450	575	575	-	-	-	15	-	56.633
P15	450	575	575	-	-	-	15	-	56.633
P16	450	575	575	-	-	-	15	-	56.633

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION BOX

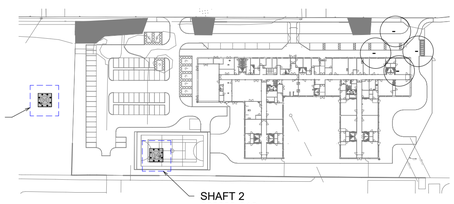
Construction Risks	Maintenance/Cleaning Risks	Demolition/Adaptation Risks
1. THE EXISTING MINE SHAFTS MAY BE IN POOR CONDITION. NO PLANT IS TO TRACK DIRECTLY OVER THE SHAFT DURING THE CONSTRUCTION WORKS. PILING RIG IS TO INSTALL PILES SO THE MAST IS THE CLOSEST TO THE SHAFT. 2. DURING THE MINE SHAFT WORKS, THE MAIN CONTRACTOR IS TO HAVE REVIEWED THE RECOMMENDATIONS OF THE COAL MINING RISK ASSESSMENT AND HAVE GROUND MONITORING METHODS IN PLACE. 3. UNCHARTERED SERVICES MAY BE PRESENT LOCAL TO THE MINE SHAFTS. FOR EXISTING SERVICES, REFER TO VAR-RDG-XX-XX-DR-C-00600.	1. CHAMBERS ARE LOCATED CENTRALLY (APPROX) TO THE MINE SHAFT AND MINE SHAFT CAPPING TO FACILITATE ACCESS FOR INSPECTION OF THE MINE SHAFT VIA A 500X500 PENETRATION THROUGH THE CAPPING SLAB. THE CHAMBER COVER LOCAL TO THE FOOTBALL PITCH IS CONCEALED BELOW THE FINISHES (APPROX -600MM). CARE TO BE TAKEN WHEN LOCATING ON SITE.	1. DEMOLITION CONTRACTOR TO NOTE THAT IN ADDITION TO THE SHAFT CAPS SELFWEIGHT, THE MINE SHAFT CAPCS HAVE BEEN DESIGNED FOR A PERMANENT LOAD OF 95kN/m2 (SOIL & BUILDUPS) AND A VARIABLE LOAD OF 70kN/m2 (SURCHARGES) AT SERVICE LIMIT STATE. ALL LOADINGS MUST SIT WITHIN THESE BOUNDS.
IN ADDITION TO THE HAZARDS / RISKS NORMALLY ASSOCIATED WITH THE TYPE OF WORK DETAILED ON THIS DRAWING - THE CONTRACTOR IS TO TAKE NOTE OF THE ABOVE & ALSO THE HAZARDS IDENTIFIED IN THE RISK ASSESSMENT DOCUMENT. IT IS ASSUMED THAT ALL WORKS DETAILED ON THIS DRAWING WILL BE PERFORMED BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.		

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVENT ARCHITECTURAL, ENGINEERING DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE FROM THIS DRAWING. ANY AMBIGUITIES OR ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINERS ATTENTION IMMEDIATELY. ALL DIMENSIONS TO BE CHECKED/VERIFIED ON SITE.
3. ALL LEVELS IN METERS, ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE MINE SHAFT CAPPING PHILOSOPHY AND CALCULATIONS. CCL REF: VAR-CCL-XX-XX-RP-S-40001.
5. FOR GROUND CONDITIONS AND GEO-ENVIRONMENTAL ASSESSMENT REFER TI TGE FOLLOWING REPORTS
   a. ENVIRO SOLUTION PHASE 1 ENVIRONMENTAL SITE ASSESSMENT REPORT (REF: CL101 DATED 02.03.22).
   b. ENVIRO SOLUTION PHASE 2 GEO-ENVIRONMENTAL SITE ASSESSMENT REPORT (REF. CL102 V1 DATED 02.03.22).
6. FOR COAL MINING RISK AND MINE
   a. ENVIRO SOLUTION COAL MINING RISK ASSESSMENT REPORT (REF: CL101b DATED 15.03.22).
   b. LK GROUP SHALLOW MINING SITE INVESTIGATION WORKS REPORT (REF: LKG 22 1670 DATED JUNE 2023).

PILING NOTES

1. PILES ARE TO BE DESIGNED BY THE SPECIALIST SUBCONTRACTOR. DESIGN IS TO BE BASED ON THE UNFACTORED VERTICAL LOADS AND SHEARS SHOWN IN THE PILE SCHEDULE INCLUDED ON THIS DRAWING.
2. PILE TYPE AND DIAMETER TO BE CONFIRMED BY THE SPECIALIST PILING CONTRACTOR. THE PILE LAYOUT HAS BEEN DEVELOPED ON THE BASIS OF 450MM DIAMETER CFA SLEEVED PILES. HOWEVER, PILE SIZE, TYPE AND LENGTHS ARE SUBJECT TO DESIGN CONFIRMATION BY THE PILING CONTRACTOR TO THE PERFORMANCE SPECIFICATION/REQUIREMENT BY CLANCY.
3. PILING SHALL COMPLY WITH THE CURRENT EDITION OF 'SPECIFICATION FOR PILING AND EMBEDDED RETAINING WALLS' (SPERW).
4. THE FOLLOWING SITE INVESTIGATIONS ARE PROVIDED FOR DESIGN: PHASE 2 GEO-ENVIRONMENTAL SITE ASSESSMENT REPORT BY ENVIRO SOLUTION (REF: CL02 V1 02/03/22).
5. PERMITTED PILE SETTLEMENT AT DVL = 10mm.
6. PILES SHALL BE DESIGNED IN ACCORDANCE WITH BS EN 1997-1& BS EN 1992:1.
7. DESIGN FACTOR OF SAFETY IN ACCORDANCE WITH BS EN 1997-1 AND THE U.K NATIONAL ANNEX.
8. FOR BURIED CONCRETE THE SULPHATE AND PH TESTING REQUIRE DESIGN SULPHATE CLASS OF DS-1 AND AN ACEC CLASSIFICATION OF AC-1 BASED ON SAMPLING CARRIED OUT OVER PART OF THE SITE TO DATE.
9. THE SPECIALIST CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFYING STARTER BARS. PILES TO BE DESIGNED WITH A PINNED HEAD CONNECTION USING A MINIMUM SINGLE 16mm DIAMETER BAR TO BE PROVIDED FROM THE HEAD OF EACH PILE. THE SPECIALIST CONTRACTOR SHALL ALSO SPECIFY THE TENSION BAR IN ANY PILES REQUIRING TENSILE CAPACITY.
10. SUBMISSION OF INFORMATION AS REQUIRED BY SPERW, TABLE B1.1 AND ELSEWHERE, AS APPROPRIATE FOR THE PILE TYPE, MATERIALS AND TESTS SPECIFIED.
11. THE PILING CONTRACTOR SHALL DEMONSTRATE THE ADEQUACY OF THE PILES BY CALCULATION AND TESTING TO THE SATISFACTION OF BOTH THE ENGINEER AND BUILDING CONTROL.
12. WHERE PILE DESIGN IS TO BE JUSTIFIED BY TESTING, THE PILING CONTRACTOR SHALL SUBMIT THEIR TESTING PROPOSAL FOR ACCEPTANCE. A MINIMUM OF 1 WORKING TEST PILE TO BE UNDERTAKEN.
13. UNLESS AGREED OTHERWISE, ALL PILES SHALL BE INTEGRITY TESTED USING AN APPROVED METHOD. PILES SHALL BE PREPARED TO SUIT THE TEST METHOD. THE RESULTS OF THE INTEGRITY TESTING AND SUMMARY STATEMENT CONFIRMING ADEQUACY OF THE PILING SHALL BE PROVIDED TO THE ENGINEER WITHIN 7 DAYS OF TESTING PRIOR TO UNDERTAKING THE CAPPING WORKS.
14. CONCRETE SHALL BE IN ACCORDANCE WITH BS EN 1992 AND SPERW, SECTION B19AND IN ACCORDANCE WITH THE CONCRETE CLASSIFICATION REQUIREMENTS FROM THE SITE INVESTIGATIONS.
15. COMPRESSIVE STRENGTH TESTING OF CONCRETE REQUIRED AS SPERW, CLAUSE B19.8.
16. STEEL REINFORCEMENT TO BE IN ACCORDANCE WITH BS 4449, RIBBED BAR, GRADE B500B, SUPPLIED BY A COMPANY HOLDING A VALID CERTIFICATE OF APPROVAL ISSUED UNDER A PRODUCT CERTIFICATION SCHEME OPERATED BY A THIRD PARTY CERTIFICATION BODY WITH APPROPRIATE CATEGORY 2 ACCREDITATION FROM THE UNITED KINGDOM ACCREDITATION SERVICE (UKAS) SUCH AS CARES.
17. REINFORCEMENT THAT IS MORE THAN 50mm ABOVE CUT-OFF LEVEL SHALL BE DEBONDED AND THE DEBONDING AGENT CLEANED OFF WHEN PILE IS TRIMMED.
18. COVER SHALL MEET THE REQUIREMENTS OF BS 8500 FOR A DESIGN WORKING LIFE OF 120 YEARS AND THE GROUND CONDITIONS IN THE SI REPORT. THE CONTRACTOR SHALL ENSURE THAT THE COVER IS MAINTAINED USING A SUITABLE INSTALLATION METHOD.
19. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES AND INFORMING THE MAIN CONTRACTOR OF ANY CLASHES WITH THE PILING WORKS.
20. THE CONTRACTOR IS TO ENSURE ACCESS TO THE SITE IS ADEQUATE FOR PLANT AND MATERIALS. METHOD OF PILE TESTING IS TO BE AGREED WITH THE ENGINEER. ALL PILES TO BE INTEGRITY TESTED AND AT LEAST 1 PRELIMINARY PILE TEST AND AT LEAST 1 WORKING PILE TEST TO BE UNDERTAKEN. THE PILING SHALL BE GUARANTEED FOR A MINIMUM PERIOD OF 12 YEARS FROM COMPLETION. THIS SHALL BE AN INSURANCE BACKED GUARANTEE, ADMINISTERED BY AN INDEPENDENT INSURANCE PROTECTION COMPANY. PROVIDE CERTIFICATES/ GUARANTEES AT COMPLETION OF PILING WORKS



KEY PLAN

1 : 1500

REV	DATE	DESCRIPTION	BY	Chk	App
P02	30.11.23	INCORPORATING MAIN CONTRACTOR COMMENTS	ZB	CB	CB
P01	26.10.23	PRELIMINARY ISSUE	ZB	CB	CB

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Client

ISG LTD

Project	VARLEY STREET SEN SCHOOL
Office	MANCHESTER
Title	MINESHAFT CAPPING SLAB & PILE GA
Scale @ A1	As indicated
Status	PRELIMINARY

clancy consulting

CCL Project No. 1-21628 www.clancy.co.uk

Project Ref	Originator	Volume	Level
VAR	CCL	ZZ	00
File Type	Discipline	Drawing No.	Revision
DR	S	40002	P02