



NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS TOGETHER WITH RELEVANT SPECIFICATIONS.
- DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.
- FOR GENERAL NOTES, ABBREVIATIONS AND SYMBOL LEGEND REFER TO DRAWING CMBS-LT520-BB-TXB-ZZ-DET-S-0001.

KEY TO HEALTH & SAFETY SYMBOLS

- WARNING RISK**
INDICATES A RESIDUAL RISK AS A WARNING.
- COMPULSORY RISK**
INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
- PROHIBITIVE RISK**
INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
- INFORMATION RISK**
INDICATES A RESIDUAL RISK FOR INFORMATION.

DESIGNED CONCRETE WATER-RESISTANT BUNDS / TANKS - TRANSFORMER BUNDS

EMBEDDED METAL - CARBON STEEL REINFORCEMENT.
COMPRESSIVE STRENGTH CLASS (CYLINDER / CUBE MINIMUM) - C32/40.
TARGET DENSITY (OVEN DRY) - NORMAL.
FIBRES - NOT REQUIRED.

AGGREGATES:

- SIZE (MAXIMUM) - 20mm
- TYPE / DENSITY - NORMAL WEIGHT
- COARSE RECYCLED AGGREGATES - NOT PERMITTED.
- ADDITIONAL AGGREGATE REQUIREMENTS: LIMESTONE WITH A LOW COEFFICIENT OF THERMAL EXPANSION. FREEZE THAW RESISTANT AGGREGATE - CONTRACTOR TO CONFIRM COEFFICIENT OF THERMAL EXPANSION FOR REVIEW AND COMMENT.
- DESIGN CHEMICAL CLASS - DC-1, XC4, XF2
- LIMITING VALUES FOR COMPOSITION:
 - WATER - CEMENT RATIO (MAXIMUM) - 0.40
 - CEMENT / COMBINATION CONTENT (MINIMUM) - 380kg/m³
 - CEMENT / COMBINATION CONTENT (MAXIMUM) - TO BS8500 AND CIRIA C766, TABLE 4.2
 - AIR CONTENT IN SITU (MINIMUM) - NO REQUIREMENT.
- PERMITTED CEMENT / COMBINATIONS - SUBMIT PROPOSALS TO CA.
- CHLORIDE CLASS - C1 0.40
- ADDITIONAL MIX REQUIREMENTS - NONE.

DESIGNED CONCRETE STRUCTURAL SCREED

EMBEDDED METAL - A303 MESH WITH 50mm COVER.
COMPRESSIVE STRENGTH CLASS (CYLINDER / CUBE MINIMUM) - C32/40.
LOCATIONS - AS SHOWN ON STRUCTURAL DRAWINGS.
TARGET DENSITY (OVEN DRY) - NORMAL.
FIBRES - NOT REQUIRED.

AGGREGATES:

- SIZE (MAXIMUM) - 475mm SINGLE SIZE CONFORMING TO BS EN 12620
- TYPE / DENSITY - NORMAL WEIGHT
- COARSE RECYCLED AGGREGATES - NOT PERMITTED.
- ADDITIONAL AGGREGATE REQUIREMENTS: FREEZE THAW RESISTANT AGGREGATE - CONTRACTOR TO CONFIRM COEFFICIENT OF THERMAL EXPANSION FOR REVIEW AND COMMENT.
- DESIGN CHEMICAL CLASS - DC-1, XC4, XF2
- LIMITING VALUES FOR COMPOSITION:
 - WATER - CEMENT RATIO (MAXIMUM) - 0.40
 - CEMENT / COMBINATION CONTENT (MINIMUM) - 380kg/m³
 - CEMENT / COMBINATION CONTENT (MAXIMUM) - TO BS8500 AND CIRIA C766, TABLE 4.2
 - AIR CONTENT IN SITU (MINIMUM) - NO REQUIREMENT.
- PERMITTED CEMENT / COMBINATIONS - SUBMIT PROPOSAL TO SUIT REQUIREMENT LISTED ABOVE.
- CHLORIDE CLASS - C1 0.40
- ADDITIONAL MIX REQUIREMENTS - NONE.

RISK ITEMS - COSTS TO BE ALLOWED FOR BY BALFOUR BEATTY:

- DEPTH OF FOUNDATIONS BELOW GROUND LEVEL.
- CONTAMINATION & GROUND GAS.
- BURIED OBSTRUCTIONS.
- EXISTING DRAINAGE SERVICES/SEWERS.
- DEEP EXCAVATIONS.
- GROUND WATER.
- UNEXPLODED ORDNANCE.
- CONCRETE MIXES.
- SLAB DESIGN, A BESPOKE SI REPORT IDENTIFYING GROUND CONDITIONS IS REQUIRED & PROVISION OF CONSTRUCTION STAGE DESIGN LOADING AND FIXINGS APPLIED TO FLOORS.
- TANKING & WATERPROOFING.
- ELECTROMAGNETIC INTERFERENCE (CLOSED METALLIC LOOPS), EPOXY COATED REINFORCEMENT
- POSSIBLE DRAINAGE CHANNELS TO BE ALLOWED FOR, TO BE CONFIRMED.
- EARTHING REQUIREMENTS

EXCLUSIONS - TO BE ALLOWED FOR BY BALFOUR BEATTY:

- ALL FACES TO BE SHUTTERED FINISH
- MAKE ALLOWANCE FOR VARIED LEVEL SCREED (MIN THICKNESS 75mm, APPROX 300mm MAX), ALLOW FOR A303 MESH IN TOP OF SCREED.

REINFORCEMENT LAPS AND DESIGN DEVELOPMENT:

- ALLOW ADDITIONAL 20% OF REBAR FOR EC2 LAPS
- ALLOW ADDITIONAL 20% REBAR FOR DESIGN DEVELOPMENT.

RC REQUIREMENTS

TRANSFORMER / COOLER PLINTHS - B25-150 (EF, EW)
BUND WALLS - B16-150 (EF, EW)
BUND BASE SLAB - B25-150 (EF, EW)
WALL THICKENING FOR SURGE ARRESTOR - B20-150 (EF, EW)

NOTES:

- ALL REINFORCEMENT TO BE GRADE B500B IN ACCORDANCE WITH BS4449.
- MAKE ALLOWANCE FOR 75mm (MIN) GEN3 BLINDING CONCRETE TO FOUNDATIONS & SLABS.
- ALL FOUNDATIONS TO HAVE SHUTTERED SIDES.
- ALL STEELWORK GRADE S355.

NOTES:

- BUND DETAILS PRELIMINARY - SIZE AND DEPTH TO BE FINALISED ONCE FINAL TRANSFORMER EQUIPMENT DETAILS ARE SUPPLIED.

ALL SUBJECT TO SITE INVESTIGATION RESULTS FOR CONCRETE CLASSIFICATION.

NOTE

FOUNDATION SIZES & REINFORCEMENT ARE PRELIMINARY AND WILL BE FINALISED IN THE DESIGN STAGE.

CONCRETE WORKS ARE TO BE IN ACCORDANCE WITH SP-NET-CIV-506.

NOTE

THIS DRAWING IS BASED ON BALFOUR BEATTY SITE PLAN CMBS-BB-MCB-ZZ-LAY-E-0007 AND OIL QUANTITY ADVISED BY JL VIA EMAIL ON 02-01-2024. FINAL BUND LAYOUT TO BE DETERMINED TO SUIT TRANSFORMER ARRANGEMENT ONCE AVAILABLE.

NOTE:

THIS DRAWING SHOWS STRICTLY PROVISIONAL CIVIL PRICING DESIGN DETAILS ONLY. NO BESPOKE ELECTRICAL LOADINGS OR SWITCHGEAR INFORMATION IS AVAILABLE SO ALL CIVIL WORK SHOWN IS SUBJECT TO CONFIRMATION IN THE DETAILED DESIGN STAGE.

BALFOUR BEATTY TO MAKE ALLOWANCE IN THE CIVIL PRELIMINARY STAGE RISK REGISTERS AND QUALIFICATIONS TO COVER THE RELATED COMMERCIAL AND PROGRAMME RISKS.

DRAWN	PB	REVISED			
CHKD	BF	SCALE BAR ADDED			
DESIGN	NA	STATUS	SS	DATE	06/05/25
APPD	GV	FOR ACCEPTANCE		REV	P05
DRAWN	PB	REVISED			
CHKD	RM	XC FINAL ECE			
DESIGN	RM	STATUS	SS	DATE	19/07/24
APPD	GV	FOR ACCEPTANCE		REV	P04
DRAWN	PB	REVISED			
CHKD	RM	XC ISSUE			
DESIGN	RM	STATUS	SS	DATE	03/05/24
APPD	GV	FOR ACCEPTANCE		REV	P03
DRAWN	PB	REVISED			
CHKD	RM	28 ISSUE			
DESIGN	RM	STATUS	SS	DATE	22/03/24
APPD	GV	FOR ACCEPTANCE		REV	P02
DRAWN	JD	REVISED			
CHKD	RM	FIRST ISSUE			
DESIGN	HA	STATUS	SS	DATE	19/01/24
APPD	GV	FOR ACCEPTANCE		REV	P01

Scottish & Southern
Electricity Networks

Balfour Beatty

PROJECT NAME:
ASTI - ECE

LOCATION:
CAMBUSHINNIE 400KV S/S

SITE:
CMBS

CAMBUSHINNIE 400KV S/S
SGT1 TRANSFORMER BUND
SECTIONS & DETAILS

SIZE	SCALE	FORMAT	SHEET NO.
A0	1:50 1:20	RVT	01 OF 01
DRAWING NO.	CMBS-LT520-BB-TXB-ZZ-DET-S-0003		

REFERENCE DRAWINGS			
DRAWING No.		DRAWING TITLE	
CMBS-LT520-BB-TXB-ZZ-DET-S-0003	CAMBUSHINNIE 400KV S/S	SGT1 TRANSFORMER BUND	SECTIONS & DETAILS
CMBS-LT520-BB-TXB-ZZ-LAY-E-0007	CAMBUSHINNIE 400KV S/S	SGT1 TRANSFORMER BUND	GENERAL ARRANGEMENT
CMBS-LT520-BB-TXB-ZZ-M-S-0004	CAMBUSHINNIE 400KV S/S	SGT1 TRANSFORMER BUND	3D VIEWS