

GENERAL NOTES

- ALL DIMENSIONS ARE IN mm.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS AND SPECIFICATIONS.
 - ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR AND ANY DISCREPANCIES BROUGHT TO THE ENGINEERS & ARCHITECTS ATTENTION IN ACCORDANCE WITH THE SPECIFICATION.
 - FOR THE PURPOSES OF CONSTRUCTION, THIS DRAWING MUST NOT BE SCALED AND ONLY WRITTEN OR CALCULATED DIMENSIONS USED.
 - ALL PROPRIETARY PRODUCTS TO BE USED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION AND DETAILS.
 - GENERALLY ONLY HOLES, POCKETS, RECESSES ETC WITH ANY DIMENSION GREATER THAN 200mm ARE SHOWN ON THE DRAWINGS. FOR CONFIRMATION OF THESE AND FOR DETAILS OF SMALLER HOLES, INSERTS, FIXINGS ETC, REFERENCE SHOULD BE MADE TO THE ARCHITECTS, SERVICES ENGINEERS AND OTHER RELEVANT CONSULTANTS BUILDERS WORK DRAWINGS.
 - ALL TEMPORARY WORKS ARE TO BE DESIGNED AND INSTALLED BY THE CONTRACTOR.
 - ALTHOUGH EVERY EFFORT HAS BEEN TAKEN TO CHECK SURVEY/SITE INFORMATION USED ON THIS DRAWING, RAMBOLL ARE NOT RESPONSIBLE FOR ITS ACCURACY.
- ALL SETTING OUT IS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.
- ALL COLUMNS AND BASES ARE SET OUT CENTRALLY ON GRIDLINES, UNLESS NOTED OTHERWISE.
 - FOR DETAILS OF LIGHTNING PROTECTION REFER TO SERVICES ENGINEERS DRAWINGS.
 - REFER TO ARCHITECTS DRAWINGS FOR WATERPROOFING DETAILS.

DESIGN GUIDES

THE FOLLOWING BRITISH STANDARDS, CODES OF PRACTICE AND REFERENCES HAVE BEEN USED:

BS EN 1990 BASIS OF STRUCTURAL DESIGN
 BS EN 1991 ACTIONS ON STRUCTURES
 BS EN 1992 DESIGN OF CONCRETE STRUCTURES
 BS EN 1993 DESIGN OF STEEL STRUCTURES
 BS EN 1994 DESIGN OF STEEL AND CONCRETE COMPOSITE STRUCTURES
 BS EN 1995 DESIGN OF TIMBER STRUCTURES
 BS EN 1996 DESIGN OF MASONRY STRUCTURES
 BS EN 1997 GEOTECHNICAL DESIGN

BS 8500-1 CONCRETE - COMPLEMENT TO BS EN 206-1
 (PART 1: METHOD OF SPECIFYING AND GUIDANCE FOR SPECIFIER)

STRUCTURAL NOTATIONS

REINFORCEMENT ABBREVIATIONS:

B: DENOTES BOTTOM LAYER
 T: DENOTES TOP LAYER
 EF: DENOTES EACH FACE
 EW: DENOTES EACH WAY
 NF: DENOTES NEAR FACE
 FF: DENOTES FAR FACE
 AL: DENOTES ALTERNATE BARS
 STG: DENOTES STAGGERED BARS
 UB: DENOTES U-BARS
 LL: DENOTES LONG LEG

FOUNDATION PREFIXES:

CP: DENOTES CONCRETE PILE
 SP: DENOTES STEEL PILE
 PF: DENOTES PAD FOOTING
 SF: DENOTES STRIP FOOTING
 PC: DENOTES PILE CAP
 RW: DENOTES RETAINING WALL
 GB: DENOTES GROUND BEAM

STRUCTURE PREFIXES:

CC: DENOTES COLUMN CONCRETE
 CS: DENOTES COLUMN STEEL
 CT: DENOTES COLUMN TIMBER
 WP: DENOTES WIND POST
 BC: DENOTES BEAM CONCRETE
 BS: DENOTES BEAM STEEL
 PB: DENOTES POST TENSIONED CONCRETE BEAM
 PG: DENOTES PLATE GIRDER
 FB: DENOTES FABSEC BEAM
 WB: DENOTES WESTOK BEAM
 TR: DENOTES TRUSS
 W: DENOTES WALL
 S: DENOTES SLAB
 PT: DENOTES POST TENSIONED SLAB
 MD: DENOTES METAL DECKED SLAB
 RS: DENOTES ROOF SHEET
 PP: DENOTES PRECAST PLATE (OMNIDECK, ETC)
 MS: DENOTES MILD STEEL FLOOR PLATE
 MJ: DENOTES MOVEMENT JOINT
 BR: DENOTES BRACE
 BP: DENOTES BASEPLATE
 J: DENOTES JOIST
 R: DENOTES RAFTER
 L: DENOTES LINTEL
 ST: DENOTES STAIR
 ND: DENOTES NODE

STRUCTURE SUFFIXES:

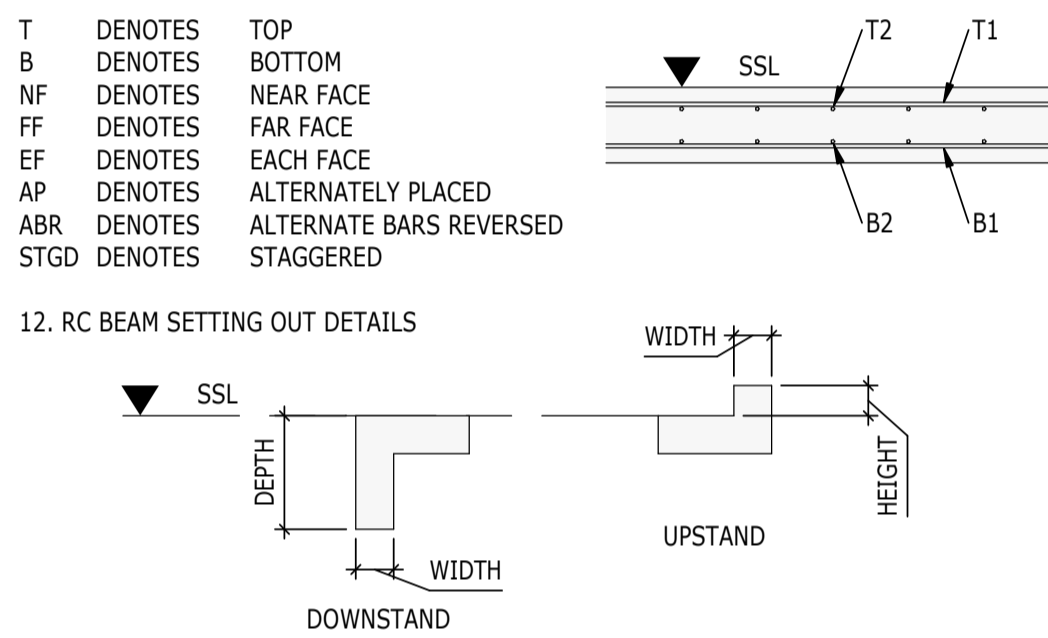
C: DENOTES CAMBERED
 SS: DENOTES SHEAR STUDS
 PC: DENOTES PRECAST CONCRETE ELEMENT
 G: DENOTES GALVANISED
 P: DENOTES PAINTED

STRUCTURE PREFIXES (AMERICAN CODE):

LB: DENOTES LINK BEAM
 SW: DENOTES SHEAR WALL
 WS: DENOTES WALL SEGMENT

CONCRETE NOTES

- FOR DETAILS OF CONCRETE MIXES, REFER TO RAMBOLL SPECIFICATION.
 - NO CHASING OF CONCRETE WILL BE PERMITTED.
 - CONTRACTOR TO ALLOW FOR CO-ORDINATION OF BUILDERS WORK REQUIREMENTS FOR SERVICES SO THAT HOLES SLEEVES ETC. CAN BE CAST INTO ALL NEW CONCRETE WORK.
 - NO POST-DRILLING OF CONCRETE FOR SERVICE HOLES GREATER THAN 200mm WILL BE PERMITTED.
 - BEFORE CONCRETING THE CONTRACTOR SHALL SUBMIT A LAYOUT SHOWING THE LOCATION OF ALL PROPOSED CONSTRUCTION JOINTS. THE SPACING AND SEQUENCE OF POURS SHALL NOT EXCEED THOSE GIVEN IN THE SPECIFICATION.
 - FOR WATERTIGHT CONSTRUCTION, WATER BARS ARE TO BE PROVIDED IN ALL CONSTRUCTION JOINTS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
 - ALL COVERS TO BE IN ACCORDANCE WITH BS EN 1992-1-1.
 - NOMINAL COVER TO ALL REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS :
- | | | |
|----------------|-----------------|------------------------------|
| FOUNDATIONS | UNFORMED | = 75mm |
| | INTERNAL FORMED | = 40mm |
| | EXTERNAL FORMED | = 50mm (NON WATER RESISTING) |
| | EXTERNAL | = 40mm (WATER RESISTING) |
| SUPERSTRUCTURE | FORMED INTERNAL | = 25mm |
| | FORMED EXTERNAL | = 40mm |
- ALL LAPS TO REINFORCEMENT TO BE IN ACCORDANCE WITH RELEVANT SPECIFICATION AND DESIGN CODE.
 - REINFORCEMENT GRADES TO BE:
- TYPE H -TYPE 2 DEFORMED BARS, GRADE 500 TO BS4449 REINFORCEMENT.
 - RC DETAILING ABBREVIATIONS USED:



- FOR DETAILS OF CONCRETE MIXES, REFER TO RAMBOLL SPECIFICATION.

RC BASEMENT RAFT SLAB AND WALLS = DESIGNATED MIX 01. SPECIAL MIX TO SUIT ADMIXTURE.

MASS CONCRETE UNDERPINNING = TBC (FOLLOWING SI).

RC SLABS ON PERMANENT METAL DECK = DESIGNATED MIX RC 25/30.

POUR SEQUENCE OF RC BASEMENT SLAB AND WALLS TBC TO CONTROL SHRINKAGE CRACKING.

CONCRETE FINISHES

- CONCRETE FORMED FINISHES TO BE AS BELOW:

i) BASEMENT RC SLABS AND WALLS: ORDINARY FINISH
 ii) PRECAST STAIRS: TO ARCHITECTS SPECIFICATION

PRECAST STAIRS

- ALL STAIR FLIGHTS SHOWN ON RAMBOLL DRAWINGS ARE TO BE PRECAST CONCRETE UNLESS NOTED OTHERWISE.
- ALL P.C. STAIRS ARE TO BE SUB-CONTRACTOR DESIGNED IN ACCORDANCE WITH SPECIFICATION CLAUSE E60/210.
- STAIRS ARE TO BE DESIGNED FOR A IMPOSED LOAD OF 4.0 kN/m².
- SETTING OUT OF TREADS, SHADOW GAPS AND OTHER ARCHITECTURAL FEATURES SHOULD BE TAKEN FROM THE ARCHITECTS DRAWINGS.
- ALL PRECAST STAIRS ARE TO HAVE ROBUSTNESS FIXING SUITABLE FOR THE BUILDING CLASS, DESIGNED BY THE PRECAST STAIR SUPPLIER.

STEELWORK NOTES

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE STRUCTURAL SPECIFICATION FOR STEELWORK AND THE RELEVANT BRITISH STANDARDS.

- GENERALLY

VERTICAL CROSS BRACING DENOTED THUS BRACED BAY TO BE LOCATED CENTRALLY TO ALL BEAM AND COLUMN CENTRELINES U.N.O.

STEEL BEAM LINES SHOWN ON PLAN ARE AT THE CENTRE OF THE SECTION OR THE BACK EDGE OF CHANNELS U.N.O.

ALL BASEPLATES TO HAVE MINIMUM 4 No. HOLDING DOWN BOLTS.

- MEMBER SIZES

SIZE OF MEMBERS ARE SCHEDULED ON THE DRAWINGS.

TOP OF COLUMN IS AS TOS UNLESS NOTED OTHERWISE.

- STEEL GRADES (BS EN 10025 AND BS EN 1993).

GRADES OF STEELWORK/BOLTS ARE TO BE AS FOLLOWS (UNLESS NOTED OTHERWISE ON THE DRAWINGS)

ALL STEELWORK

ALL INTERNAL STEELWORK: S355JR OR S355J0H
 ALL EXTERNAL STEELWORK: S355JO OR S355J0H

ALL BOLTS

GRADE 8.8 UNLESS NOTED OTHERWISE

ALL STAINLESS STEEL

GRADE 1.4401 (316) UNLESS NOTED OTHERWISE

- CORROSION PROTECTION

CORROSION PROTECTION OF STEELWORK IS TO BE IN ACCORDANCE WITH THE RAMBOLL STEELWORK SPECIFICATION. CLAUSE G10 AND M61. COLOUR TO ARCHITECTS SPECIFICATION

- FIRE PROTECTION

FIRE PROTECTION REQUIREMENTS TO BE IN ACCORDANCE WITH THE FIRE ENGINEERS REPORT AND ARCHITECTS SPECIFICATION. FOR COSTING PURPOSES ALLOW FOR INTUMESCENT COATING TO ALL STEELWORK.

- PAINTING

PAINT TO ALL NEW STEELWORK TO BE IN ACCORDANCE WITH THE SPECIFICATION, WITH THE EXCEPTION OF THE TOP FLANGE OF COMPOSITE BEAMS WHICH ARE TO BE LEFT UNPAINTED.

PAINTED OR GALVANIZED AREAS DAMAGED DURING TRANSIT OR CONSTRUCTION SHALL BE MADE GOOD IN ACCORDANCE WITH THE SPECIFICATION.

- HOLES

NO HOLES ARE TO BE FORMED THROUGH STEEL BEAMS OR COLUMNS OTHER THAN THOSE SHOWN ON THE ENGINEER'S DRAWINGS WITHOUT PRIOR APPROVAL OF THE ARCHITECTS/ENGINEERS.

- COLUMN SPLICES

COLUMN SPLICES GENERALLY 1000mm ABOVE TOS LEVEL TYPICAL U.N.O.

- MISCELLANEOUS

ALL END PLATES/CAPPING PLATES ARE TO BE PROFILED TO SHAPE OF SECTION U.N.O.

ALL END PLATES/CAPPING PLATES ARE TO BE LAMINAR FREE.

- DIMENSIONS ARE GIVEN TO THE FOLLOWING POINTS FOR VARIOUS SECTIONS:

UB CENTRELINE
 uc CENTRELINE
 RSJ CENTRELINE
 TEE CENTRELINE
 RHS CENTRELINE
 SHS CENTRELINE
 CHS CENTRELINE
 PFC BACK FACE OF WEB
 RSA BACK OF VERTICAL LEG

COMPOSITE SLAB NOTES

- THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE RAMBOLL STEELWORK SPECIFICATION

2. DESIGN OF METAL DECKING, EDGE TRIMS AND ASSOCIATED FITTINGS BY THE CONTRACTOR.

3. LAYOUT AND FIXING OF DECKING AND EDGE TRIMS TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

4. DECKING LAYOUT TO BE ARRANGED TO ACHIEVE SHEAR STUD CENTRES INDICATED ON DRAWINGS.

5. ALL METAL DECKING IS TO SPAN 2 BAYS MINIMUM BETWEEN SUPPORTING BEAMS WHEREVER POSSIBLE.

6. JUNCTION BETWEEN SHEETS ARE TO BE FORMED TO AVOID GROUND LOSS.

7. METAL DECKING TO EXTEND OVER THE FLOOR AREAS WITH EDGE DIMENSIONS AS NOTED ON DRAWINGS. METAL DECKING TO HAVE 50MM MINIMUM END BEARING ON STEEL BEAMS, DECKING TO BE CONTINUOUS OVER BEAM OF FLANGE WIDTH LESS THAN 140MM.

8. METAL DECKING MUST BE PROVIDED WITH ADEQUATE FIXINGS TO TOP FLANGES OF SUPPORTING BEAMS TO RESTRAIN THE BEAMS DURING ERECTION, PRIOR TO AND DURING THE CONCRETE SLAB BEING POURED.

9. ALL SHEAR STUDS TO BE 19mm DIAMETER X 105mm LONG (95mm AFTER WELDING) U.N.O. CHARACTERISTIC YIELD STRENGTH = 350N/mm² AND MINIMUM ULTIMATE TENSILE STRENGTH = 450 N/mm². ALL STUDS TO BE THROUGH DECK WELDED.

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NOTES

- DO NOT SCALE FROM THIS DRAWING.
- ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.
- ALL LEVELS ARE IN METRES ABOVE ORDINANCE DATUM U.N.O.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.

P02	PLANNING & LBC ISSUE	16/12	JC	PM
P01	PRELIMINARY DRAFT ISSUE	2022	AC	PM
		02/12	JC	PM
Rev	Description	Date	By	App
			Chk	

S3 - FOR REVIEW AND COMMENT

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GENERAL NOTES SHEET 1

Project No:	Scale (@ A1):	Date:	Drawn:
1620014217	N/A	NOV'22	JC
Drawing No:		Rev:	
4217-RAM-ZZ-XX-DR-S-00010		P02	