221142 - MIDSOMER NORTON TOWN HALL
KB2 BRIEF SPECIFICATION NOTES

1.00 GENERAL

- THIS DRAWING IS TO BE READ WITH ALL OTHER STRUCTURAL DRAWINGS, ARCHITECT'S DRAWINGS AND SPECIFICATIONS. THIS DRAWING SHOULD BE REGARDED AS A CONTRACT DOCUMENT. THE NOTES ARE INTENDED AS A SUMMARY OF KEY STRUCTURAL REQUIREMENTS HOWEVER REFERENCE SHOULD ALSO BE MADE TO THE DRAWINGS AND TO THE SPECIFICATION.
- ALL STRUCTURAL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE BUILDING INSPECTOR.
- WHERE DIMENSIONS OR ANY OTHER INFORMATION IS FOUND TO CONFLICT BETWEEN ENGINEERS' OR OTHER CONSULTANT'S DRAWINGS, THIS IS TO BE REPORTED TO THE ENGINEER AS SOON AS DISCOVERED.
- WHERE WORKS ARE NOT CONSTRUCTED IN CONFORMANCE WITH THE SPECIFICATION OR DRAWINGS THE CONTRACTOR MUST PROVIDE ANY TESTING REQUIRED TO DEMONSTRATE CONFORMITY OR PROVIDE PROPOSALS FOR REMEDIAL WORKS TO BE AGREED BY ENGINEER. REMEDIAL WORKS TO BE CARRIED OUT TO ENGINEER'S SATISFACTION.

2.00 STRUCTURAL PRINCIPLES

- THE EXISTING BUILDING CONSISTS OF LOAD-BEARING MASONRY WALLS AND SUSPENDED TIMBER FLOOR AND ROOF STRUCTURE. CAST IRON COLUMNS ARE ALSO PRESENT IN THE FOUR STOREY ANCILLARY SPACE AT THE REAR OF THE BUILDING. ADDITIONAL STEEL FRAMING IS BEING ADDED AS PART OF THE REFURBISHMENT WORKS.
- SUSPENDED TIMBER ROOF AND FLOOR STRUCTURES ARE SUPPORTED ON LOAD-BEARING MASONRY WALLS WHICH HAVE STRIP FOUNDATIONS. ADDITIONAL STEEL FRAMING IS BEING INSERTED WHICH WILL BE SUPPORTED ON PAD FOUNDATIONS ON THE NATURAL CLAYS
- HORIZONTAL WIND LOADING IS RESISTED BY HEAVY MASONRY SHEAR WALLS IN ORTHOGONAL DIRECTIONS
- THE GROUND FLOOR WILL BE BEAM + BLOCK SUPPORTED ON STRIP FOUNDATIONS/GALVANISED STEEL BEAMS WITH A 150mm VOID BELOW
- IN REFERENCE TO APPROVED DOCUMENT PART A3, THE BUILDING IS CLASSIFIED AS CLASS 2B WHEN CONSIDERING REQUIREMENTS FOR RESISTANCE TO DISPROPORTIONATE COLLAPSE. THE ALTERATIONS INCLUDE INTERNAL RE-MODELLING ONLY AND THERE WILL BE NO CHANGE IN USE OF THE BUILDING. THE EXISTING STRUCTURE CONSISTS OF SUSPENDED TIMBER FLOORS SUPPORTED ON MASONRY WALLS. ADDITIONAL STEEL FRAMING IS BEING ADDED TO THE BUILDING AS PART OF THE INTERNAL ALTERATIONS WHICH IMPROVES THE STRENGTH AND ROBUSTNESS OF THE EXISTING FLOOR STRUCTURES.

3.00 FOUNDATIONS AND GROUND WORKS

- NO SITE INVESTIGATION HAS BEEN CARRIED OUT. A TRIAL PIT HAS BEEN CARRIED OUT ON SITE.
- THE GEOLOGY OF THE SITE COMPRISES: STIFF CLAYS UNDER MADE GROUND
- NO GROUNDWATER WAS ENCOUNTERED
  THE SITE IS WITHIN AN HIGH PROBABILITY RADON AREA. A REQUIREMENT FOR FULL RADON PROTECTION MEASURES IS IDENTIFIED AS NECESSARY.
- THE EXISTING BUILDING FEATURES STRIP FOUNDATIONS TERMINATING AT 600MM - 1000MM BGL (GROUND LEVELS VARY BY 600MM AROUND THE BUILDING AND THEREFORE THE FOUNDATION DEPTH WILL ALSO VARY).
- IT SHOULD BE EXPECTED THAT SOME BURIED SERVICES COULD BE LOCATED ACROSS THE FOOTPRINT OF THE PROPOSED BUILDING AND THE GROUNDWORKER SHOULD ENSURE THAT ANY BELOW GROUND ASSETS THAT ARE TO BE RETAINED ARE PROTECTED DURING CONSTRUCTION.
- CONFIRM ALL GROUND CONDITIONS TO THE ENGINEER PRIOR TO POURING FOOTINGS. GIVE MINIMUM 24 HOURS NOTICE FOR THE INSPECTION PRIOR TO POURING CONCRETE. FORMATIONS ARE TO BE PREPARED FOR THE INSPECTION BY THE BUILDING INSPECTOR.
- WHERE THE STATED STRATA IS NOT ENCOUNTERED THE ADVICE OF THE ENGINEER MUST BE SOUGHT.
- TEMPORARY EXCAVATIONS SHOULD GENERALLY STAND UNSUPPORTED IN THE SHORT TERM AT GRADIENTS OF 1 IN 1.5. EXCAVATIONS BELOW APPROXIMATELY 1M DEPTH WILL REQUIRE CLOSE SHEETING AND SHORING, PARTICULARLY IF PERSONNEL ARE TO ENTER. INFORM ENGINEER WHERE HORIZONTAL DISTANCE TO ADJACENT EXISTING STRUCTURES IS LESS THAN THE REQUIRED DEPTH OF EXCAVATION. REFER TO GEOTECHNICAL SITE INVESTIGATION FOR FURTHER INFORMATION REGARDING EXCAVATIONS.
- EXCAVATED MATERIAL MAY BE USED AS FILL TO MAKE UP LEVELS TO OTHER AREAS OF THE SITE OUTSIDE THE STRUCTURE.

4.00 STRUCTURAL CONCRETE

ALLOW FOR THE FOLLOWING DESIGNATED CONCRETE MIXES TO BE USED CONFORMING TO BS8500:

PADSTONES	GEN3
REINFORCED GROUND BEAMS/SLAB	RC 40
MASS CONCRETE/TRENCH FILL FOUNDATIONS	GEN 3

- TOLERANCES AND WORKMANSHIP OF STRUCTURAL CONCRETE IS TO BE IN ACCORDANCE WITH THE NATIONAL STRUCTURAL CONCRETE SPECIFICATION (NSCS) 4TH EDITION
- REINFORCEMENT (DENOTED H) TO BE HIGH YIELD (FY = 500N/MM2) DEFORMED TYPE 2 BARS TO BS4449, DUCTILITY GRADE B
- MESH REINFORCEMENT TO BE HIGH YIELD (FY = 500N/MM2) TO BS 4483, DUCTILITY GRADE B. CUT AND BEND REINFORCEMENT TO BS8668. (DO NOT CUT OR RE-BEND WITHOUT APPROVAL FROM ENGINEER). ALL REINFORCEMENT TO BE SUPPLIED WITH CARES CERTIFICATE.
- PRIOR TO CONCRETE PLACEMENT ENSURE REINFORCEMENT IS CLEAN AND FREE FROM OIL, LOOSE RUST AND OTHER SUBSTANCES THAT MAY IMPAIR THE BOND WITH THE CONCRETE.
- DESIGN SULPHATE CLASS OF DS-3 AND ACEC CLASS OF AC-2S SHOULD BE USED FOR DESIGN OF CONCRETE IN THE GROUND. THIS EQUATES TO A DESIGNED CONCRETE CLASS OF DC-1 FOR CONCRETE IN THE GROUND FOR A 50 YEAR DESIGN LIFE, IN ACCORDANCE WITH BS8500:1.
- LAP LENGTHS FOR MESH = 400MM (AVOID 4 LAYER BUILD UP - USE NESTED ENDS AS NECESSARY). COLUMN LAP LENGTH: 46 X BAR DIAMETER, WALL LAP LENGTH: 51 X BAR DIAMETER. FOR ALL OTHER REINFORCEMENT LAPS TO BE 40 X BAR DIAMETER MINIMUM AND 52 X BAR DIAMETER AT TOPS OF BEAMS IN ACCORDANCE WITH BS EN 1992.
- MAXIMUM PERMISSIBLE DEVIATION OF CONCRETE FLOORS/SCREED: SR1 TO BS 8204
- ALL CONSTRUCTION JOINTS MUST BE CONFIRMED BY STRUCTURAL ENGINEER.
- SEQUENCING AND ASPECT RATIO OF POURS TO BE AGREED WITH CONCRETE SUB-CONTRACTOR AND ENGINEER WHO WILL CONFIRM THE DETAILED DESIGN OF MIX, INCLUDING ANY ADDITIONAL ADMIXTURES REQUIRED DUE TO ANY POSSIBLE TEMPERATURE VARIATIONS.
- CONCRETE FINISH: TYPE A. BS8110-1 SECTION 6.2-7.3. SEE NBS E20/635
- TRANSPORTATION, PLACEMENT AND CURING:
  PLACE CONCRETE WITHIN THE TEMPERATURE RANGE 5°C TO 30°C. DO NOT PLACE ON FROZEN SURFACES. ENSURE WORKS FREE FROM OBSTRUCTIONS/WATER. AVOID CONTAMINATION, DO NOT ADD ADDITIONAL WATER, PREVENT SEGREGATION AND LOSS OF INGREDIENTS, PLACE IN ONE CONTINUOUS OPERATION UP TO CONSTRUCTION JOINTS. FULLY COMPACT CONCRETE TO FULL DEPTH TO REMOVE ENTRAPPED AIR UNTIL BUBBLES CEASE TO APPEAR AT TOP SURFACE. DO NOT USE POKERS TO MAKE CONCRETE FLOW HORIZONTALLY INTO POSITION. REVIBRATE CONCRETE TO REMOVE PLASTIC SETTLEMENT CRACKS.
  CURING: PREVENT LOSS OF MOISTURE ON ALL SURFACES. RETAIN FORMWORK FOR SPECIFIED CURING PERIOD. COVER TOP SURFACES IMMEDIATELY AFTER PLACING WITH SUITABLE SHEETING OR CURING COMPOUNDS AT NO IMPEDIMENT TO SUBSEQUENT FINISH FOR SPECIFIED CURING PERIOD (ALLOW FOR SUBSEQUENT LIGHT SAND BLASTING PRIOR TO APPLYING SURFACE FINISHES). CURING PERIOD = 5 DAYS.

5.00 STRUCTURAL STEELWORK

- STRUCTURAL STEELWORK IS TO BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL STRUCTURAL STEELWORK SPECIFICATION (NSSS) / BS EN 1090-1 AND BS EN 1090-2 IN ACCORDANCE WITH EXECUTION CLASS 2.
- ALL STEELWORK HAS BEEN DESIGNED IN ACCORDANCE WITH BS EN 1993-1-1:2005. THE CONTRACTOR IS TO DETAIL/DESIGN ALL CONNECTIONS (UNO) IN ACCORDANCE WITH BS EN 1993-1-8:2005 AND BCSA RECOMMENDATIONS TO SAFELY TRANSMIT THE FORCES SHOWN ON THE DRAWINGS.
- THE CONTRACTOR IS TO PRODUCE AND MAKE AVAILABLE ALL SHOP DRAWINGS TO FABRICATE AND ERECT THE STEELWORK.
- ALL STEEL TO BE GRADE S355J0 TO BS EN 100025: 1993 EXCEPT HOLLOW SECTIONS WHICH ARE TO BE GRADE S355JOH TO BS EN 10210 AND UNLESS NOTED OTHERWISE ON THE DRAWINGS OR AGREED WITH THE ENGINEER - PLATES, TEE'S AND RSA'S TO BE S275JO.
- ALL BOLTS TO BE GRADE 8.8 TO BS3692:1967/BS EN ISO898-1, MINIMUM 16MM DIAMETER, UNLESS NOTED OTHERWISE. BOLT ASSEMBLIES FOR STEELWORK IN DRY INTERNAL ENVIRONMENTS ARE TO BE ZINC PLATED TO BS EN ISO 4042, ALL OTHER STEELWORK TO HAVE BOLTS GALVANISED TO BS 7371-6. ALL BOLTED CONNECTIONS TO BE MINIMUM 4 X M16 GRADE 8.8 BOLTS U.N.O.
- PLATES TO BE MINIMUM 10MM THICK U.N.O.
- WELDS TO BE MINIMUM 6MM CONTINUOUS FILLET WELD U.N.O.
- ALL BUTT WELDS TO BE ULTRASONIC TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NSSS.
- PAINT SYSTEMS TO STEELWORK IN ACCORDANCE WITH BS EN ISO 12944 TO PROVIDE 20 YEARS LIFE TO FIRST MAJOR MAINTENANCE:
  1) TYPE AND LOCATION TO BE AGREED WITH ARCHITECT, CONTRACTOR AND PAINT SPECIALIST
  2) ALL PAINTING SHALL BE CARRIED OUT IN ACCORDANCE WITH BS EN 12944, SECTION 10 OF BS EN1090-2 AND THE PAINT MANUFACTURER'S INSTRUCTIONS.
  3) AFTER PREPARATION BY BLAST CLEANING TO SA 2 $\frac{1}{2}$ TO BS 7079: PART A1, ALL SURFACES, WHICH SHALL BE DRY, SHALL BE PAINTED WITH ONE COAT OF ZINC PHOSPHATE PRIMER (100 MICRONS DRY FILM THICKNESS (DFT) SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS PAINTS MACROPOXY C400V3J). THIS COAT SHOULD BE APPLIED IN THE WORKS WITH ANY SUBSEQUENT DAMAGE MADE GOOD ON SITE. STEELWORK IN CAVITIES TO PAINTED, IN ADDITION, WITH TWO COATS OF EXPOXY COATING: SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS 'MACROPOXY L524' OR EQUAL APPROVED. A SIMILAR COMPATIBLE PAINT SPECIFICATION MAY BE SUBMITTED BY THE CONTRACTOR IF APPROVED BY THE ENGINEER.
- ALL STEELWORK BELOW GROUND, INCLUDING BOLTS AND BASEPLATES, SHALL BE ENCASED IN MIN. 50MM CONCRETE. WHERE STEELWORK IS PARTIALLY EMBEDDED IN CONCRETE, THE STEELWORK/CONCRETE JUNCTION SHALL BE LOCALLY OVERCOATED WITH TWO COATS OF SHERWIN WILLIAMS MACROPOXY L254
- WHERE INDICATED ON THE DRAWINGS THE STEELWORK AND FIXINGS SHALL BE PREPARED AND HOT DIPPED GALVANISED IN ACCORDANCE WITH BS EN ISO 1461 TO GIVE A MINIMUM MEAN COATING THICKNESS OF 85 MICROMETRES, THEN TREATED AS FOLLOWS:
  1) DE-GREASE WITH AN EMULSIFYING AGENT, (WASHING-UP DETERGENT), RINSE WITH FRESH WATER AND ALLOW TO DRY BEFORE APPLYING A MODANT WASH (SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINTS L703). ALTERNATIVELY, BLAST CLEAN USING NON-METALLIC ABRASIVE TO GIVE A SURFACE PROFILE OF BETWEEN 20 AND 30 MICRONS.
  2) PAINT WITH ONE COAT OF PRIMER (SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS MACROPOXY K267) TO 100 MICRONS DFT.
  3) A MINIMUM OF 4 HOURS LATER AND A MAXIMUM OF 48 HOURS LATER, PAINT WITH ONE FINISH COAT OF SHEEN FINISH - SHERWIN-WILLANS PROTECTIVE & MARINE COATINGS ACROLON C237 TO 50 MICRONS DFT. NOTE: SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS, TEL: 01204521771, WWW.PROTECTIVE.SHERWIN-WILLIAMS.COM
- ALL EXPOSED STEELWORK TO BE PROTECTED WITH INTUMESCENT PAINT WITH SPECIFICATION TO MATCH ARCHITECT DESIGN FIRE PERIODS. FINISH PAINT SPECIFICATION TO BE AGREED WITH ARCHITECT PRIOR TO FABRICATION
- ADDITIONAL REQUIREMENTS FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEELWORKS: REMOVE ALL WELD SPLUTTER AND GRIND WELDS FLUSH TO THE SATISFACTION OF THE ENGINEER AND ARCHITECT. PROVIDE CONNECTION DETAIL TO BE APPROVED BY ARCHITECT.
- SHOP DRAWINGS SHALL BE SUBMITTED IN A TIMELY FASHION TO THE ENGINEER FOR APPROVAL. TWO FULL WEEKS SHALL BE ALLOWED FOR REVIEW BY THE ENGINEER. THE PURPOSE OF THE REVIEW IS TO NOTE THAT DETAILS HAVE BEEN DEVELOPED IN ACCORDANCE WITH THE DESIGN INTENTIONS AS SHOWN IN

6.00 MASONRY

- BRICKWORK TO BE F1 OR F2 CLASS BELOW DPC. BLOCK MANUFACTURER TO BE APPROVED.
- ALL BLOCK WALLS TO BE FORMED IN CONCRETE BLOCKS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 7N/MM2.
- BLOCKS TO LIFT SHAFT TO BE 140MM THICK DENSE BLOCKS OR MIDI BLOCKS. ALL INTERNAL BLOCKS TO BE 140MM MEDIUM-DENSE UNLESS ACOUSTIC REQUIREMENTS ADVISE.
- BLOCKWORK TO HAVE 25MM SOFT JOINT WITH HEAD RESTRAINT TO TOP OF WALL.
- ALL BLOCK UNITS TO BE LESS THAN 20KG.
- MASONRY LAID TYPE M4 MORTAR ABOVE DPC AND TYPE M6 BELOW DPC.
- BLOCKS TO CONFORM TO THE "SPECIAL CATEGORY OF MANUFACTURING CONTROL" IN ACCORDANCE WITH BS 5628. SITE INSPECTION AND TESTING OF MORTAR TO CONFORM TO THE "NORMAL CATEGORY OF CONSTRUCTION CONTROL" IN ACCORDANCE WITH BS5628.
- DAMP PROOF COURSE TO BE SELECTED AND INSTALLED TO THE RECOMMENDATIONS OF BS5628-3 CL21.4 & 21.5 AND APPROVED BY THE ENGINEER.
- TEMPORARY STABILITY OF WALLS AND STRUCTURE DURING CONSTRUCTION TO BE CONSIDERED BY CONTRACTOR. CONTRACTOR TO PROVIDE ALL TEMPORARY SUPPORT REQUIREMENTS.
- LINTELS PROVIDE MINIMUM 150MM BEARING (OR AS OTHERWISE SPECIFIED ON DRAWINGS) ON FULL BED OF MORTAR ON FULL BLOCK. DO NOT FIX JOISTS OR APPLY OTHER LOADS DIRECTLY TO STEEL LINTELS - PROVIDE MINIMUM 150MM OF MASONRY BETWEEN FLANGE AND LOAD. COMPLY WITH REQUIREMENTS OF BS5977 AND MANUFACTURERS GUIDELINES.
- FOR HEAD RESTRAINT AND MOVEMENT JOINTS, REFER TO ARCHITECT DRAWINGS. ALTERNATIVE SHEAR TIES AND HEAD RESTRAINTS TO BE APPROVED BY ENGINEER/ARCHITECT. ALL FIXINGS INTO BLOCKWORK TO COMPLY WITH MANUFACTURERS GUIDELINES.

7.00 TIMBER

- TRUSSED RAFTERS TO BE DESIGNED AND DETAILED BY SUPPLIER. DETAILS TO BE PROVIDED TO DESIGN TEAM FOR COMMENT/REVIEW.
- UNLESS NOTED OTHERWISE ON DRAWINGS, ALL TIMBER IS TO BE GRADE C24 TO BS5268:PT2.
- ALL BOLTS TO BE GRADE 8.8 ZINC PLATED WITH WASHER NOT LESS THAN 3 TIMES THE BOLT DIAMETER AND THICKNESS NOT LESS THAN 0.25 TIMES THE BOLT DIAMETER.
- ALL JOISTS OVER 2.5M TO HAVE STRUTTING OR NOGGINS AT LEAST 0.75 TIMES JOIST DEPTH RUNNING ACROSS FULL WIDTH OF JOISTED AREA AT THE FOLLOWING FREQUENCY:
  JOIST SPANS OF 2.5 TO 4.5M: ONE ROW AT CENTRE SPAN
  JOIST SPANS OVER 4.5M: TWO ROWS EQUALLY SPACED
- TYPICAL JOIST SUPPORT DETAILS WHERE NOT DETAILED OTHERWISE:
  1) WHERE JOISTS ARE FIXED TO WALL, PROVIDE 50MM WIDE TIMBER WALL PLATE BOLTED TO WALL, DEPTH TO MATCH JOIST AND HANGER.
  2) WHERE TIMBER JOISTS ARE SUPPORTED ON STEEL BEAMS, NOTCH INTO WEBS AND TIMBER BLOCKING PACKED TIGHT BETWEEN JOIST ENDS.
  3) WHERE TIMBER JOISTS ARE SUPPORTED ON TIMBER TRIMMERS, USE JOIST HANGERS.
- WHERE NEW PLY DECKS ARE SPECIFIED, THESE ACT AS DIAPHRAGMS PROVIDING HORIZONTAL STABILITY TO FLOOR PLATE. ACCORDINGLY IT MUST BE SCREW FIXED TO ALL JOISTS AND PERIMETER WALL PLATES VIA NO. 6 SCREWS @ 300C/C. PLY TO BE LAID IN HALF BONDED PATTERN ON PLAN. ANY FREE EDGES TO BE SUPPORTED WITH NOGGINS ON JOIST HANGERS FIXED TO JOISTS.
- EXTERNAL JOISTS TO BE PRESSURE TREATED TO SUIT EXTERNAL ENVIRONMENT.
- WALL PLATES FOR ROOFS ARE TO BE TIED DOWN USING 1200MM LONG 30 X 2.5MM GALVANISED MILD STEEL STRAPS AT 1200MM CENTRES WITH 100MM BOB END. STRAPS ARE TO BE NAILED TO THE TOP PLATE AND PLUGGED AND SCREWED TO THE INTERNAL FACE OF THE WALL IF MASONRY (OR FIXED TO TIMBER STUDS IF WALLS ARE OF TIMBER CONSTRUCTION).

8.00 SUBCONTRACTOR DESIGNED ITEMS

THE FOLLOWING STRUCTURAL ELEMENTS ARE TO BE DESIGNED AND DETAILED BY THE CONTRACTOR OR PROPRIETARY SUPPLIER IN ACCORDANCE WITH THIS DRAWING AND NBS SPECIFICATION:

- ALL STEELWORK CONNECTIONS INCLUDING BASE PLATES, HOLDING DOWN BOLTS AND THERMAL BREAK DETAILS.
- TIMBER ROOF TRUSSES
- PRECAST CONCRETE UNITS (TO SUIT THE TYING REQUIREMENTS FOR DISPROPORTIONATE COLLAPSE AND FOR THE FLOORS SLABS TO ACT AS DIAPHRAGMS.)
- REFER TO M&E DRAWINGS FOR BWIC INFORMATION. VOIDS IN SLAB AND ROOF SET OUT BY ARCHITECT BASED ON M&E STAGE 3 MODEL.
- PRECAST CONCRETE STAIRCASES INCLUDING CONNECTIONS BACK TO PRIMARY STRUCTURE
- STEEL STAIRCASES INCLUDING CONNECTIONS BACK TO THE PRIMARY STRUCTURE
- ARCHITECTURAL METALWORK AND BALUSTRADING
- EXTERNAL CLADDING INCLUDING ANY HOT ROLLED STEEL MEMBERS
- EXTERNAL ARCHITECTURAL BOLT-ON CLADDING TO FIX BACK TO THE PRIMARY STEEL FRAME, INCLUDING ANY HOT ROLLED STEEL MEMBERS
- TANKING WATERPROOFING DETAILS.
- LINTELS
- WINDPOSTS
- TEMPORARY WORKS
- PILING

DESIGN CALCULATIONS TO BE SUBMITTED FOR TECHNICAL REVIEW ALLOWING FOR A PERIOD OF TWO WEEKS FOR RETURN OF COMMENTS PRIOR TO COMMENCEMENT OF FABRICATION DRAWINGS WITHOUT ADVERSELY AFFECTING CONSTRUCTION PROGRAMME.

9.00 PRECAST STRUCTURAL PLANKS - PERFORMANCE SPECIFICATION NOTES

- ALL MATERIALS AND FINISHED PRODUCTS ARE TO BE IN ACCORDANCE WITH THE APPROPRIATE BRITISH STANDARDS.
- ANY ADMIXTURES MUST COMPLY WITH BS EN 934-2: 2009
- THE DESIGN OF FLOOR UNITS MUST BE IN ACCORDANCE WITH THE REQUIREMENTS AND RECOMMENDATIONS OF BS 8110:1997 “THE STRUCTURAL USE OF CONCRETE”.
- THE DESIGN OF FLOOR UNITS IS TO SERVICEABILITY CLASSIFICATION, CLASS 3 WITH A LIMITING CRACK WIDTH OF 0.1MM, UNLESS AGREED OTHERWISE.
- THE FLOOR UNITS MUST BE DESIGNED TO COMPLY WITH THE DURABILITY REQUIREMENTS OF BS 8500: 2006.
- THE FLOOR UNITS MUST BE DESIGNED TO ACHIEVE AT LEAST A 60 MINUTE FIRE RATING.
- ALTHOUGH THE FLOOR UNITS ARE NOT REQUIRED TO BE TIED TO SATISFY THE REQUIREMENTS OF ACCIDENTAL DAMAGE, ALL PLANKS ARE TO BE TIED AS PER OUR DETAILS.
- THE SCREED FINISH IS NON-STRUCTURAL AND NO COMPOSITE ACTION CAN BE ALLOWED FOR WITHIN THE DESIGN.
- MANUFACTURING TOLERANCES MUST ADHERE TO THOSE SET OUT IN CLAUSE 6.2.8.3 OF BS 8110:1997. LENGTH TOLERANCES ARE + 20MM.
- CONCRETE SURFACE FINISH TO SOFFITS MUST BE AGREED WITH THE ARCHITECT.
- WHERE SLABS ARE TO BE NOTCHED AROUND COLUMN ETC, IT IS THE PLANK DESIGNERS RESPONSIBILITY TO ENSURE SUFFICIENT BEARING AND SUPPORT IS REQUIRED AND HIGHLIGHT AREAS WHERE ANY ADDITIONAL SUPPORT IS NECESSARY.
- IT IS RECOMMENDED THAT LIGHT MESH IS PROVIDED IN THE INSITU SCREED OVER ALL SUPPORTING STEEL BEAMS, IN ORDER TO MINIMISE THE POSSIBILITY OF LATENT CRACKING IN FINISHES.
- WHERE POSSIBLE, PLANKS ARE TO BE INSTALLED IN A LOGICAL AND BALANCED SEQUENCE TO AVOID THE REQUIREMENT FOR TEMPORARY PROPPING OR INDUCING TORSION INTO THE SUPPORTING BEAM. WHERE PLANKS ARE SUPPORTED ON EDGE BEAMS WITH SHELF ANGLES, TEMPORARY PROPPING WILL BE REQUIRED PRIOR TO GROUTING UP THE CONNECTION.
- JOINTS BETWEEN UNITS SHOULD BE GROUTED WITH 30N/MM2 CONCRETE USING A 6-10 MM NOMINAL AGGREGATE SIZE. THESE JOINTS SHOULD BE “DOUBLE” BRUSHED AND TAMPERED DOWN TO ENSURE GOOD COMPACTION.
- ALL SOCKETS FORMED FOR LIFTING PURPOSES OR ANY RAISED AREAS OF DISPLACED CONCRETE ARE TO BE FILLED AND MADE GOOD / REMOVED, WHEN ERECTION IS COMPLETE.
- MANUFACTURING FACILITIES MUST BE MEMBERS OF THE BSI. REGISTERED FIRM SCHEME FOR QUALITY ASSURANCE TO BS EN ISO 9001:2008 FOR THE DESIGN, MANUFACTURE AND ERECTION OF PRECAST HOLLOWCORE FLOORS.
- THE SPECIALIST SUB-CONTRACTOR AND DESIGNER MUST DEVELOP THE DESIGN AND DETAILS IN ACCORDANCE WITH ARCHITECT'S AND RISE DETAILS.
- THE SPECIALIST SUB-CONTRACTOR MUST PREPARE A METHOD STATEMENT AND RISK ASSESSMENTS AS DEEMED NECESSARY FOR THE SAFE ERECTION OF THE PRECAST PLANKS.
- THE SPECIALIST SUB-CONTRACTOR/DESIGNER MUST SUBMIT ALL CALCULATIONS, DRAWINGS, METHOD STATEMENTS AND SPECIFICATIONS TO RISE AND THE ARCHITECT FOR RESPONSE ACCORDING TO AN “A, B, C” STATUS OF APPROVAL, ALLOWING AT LEAST TEN DAYS FOR TECHNICAL REVIEW.

9. BUILDER'S WORK NOTES

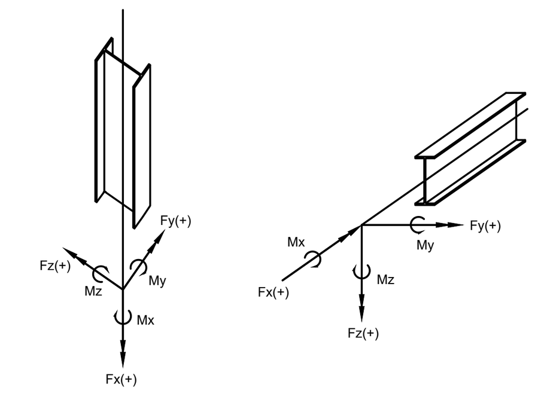
- FORMING OPENINGS IN NEW WORK:
  1) HOLES LESS THAN 300MM SQUARE ARE GENERALLY NOT SHOWN ON STRUCTURAL DRAWINGS. REFER TO SERVICES ENGINEER'S /CONTRACTOR'S DRAWINGS.
  2) HOLES GREATER THAN 200MM SQUARE IN WALLS AND SLABS NOT SHOWN ON STRUCTURAL DRAWINGS MUST BE AGREED WITH THE ENGINEER.
  3) HOLES GREATER THEN 50MM DIA. IN ANY BEAM NOT SHOWN ON STRUCTURAL DRAWINGS MUST BE AGREED WITH THE ENGINEER.
- FORMING OPENINGS IN EXISTING STRUCTURE
  1) NO BUILDER'S WORK OPENINGS ARE TO BE CUT WITHOUT FIRST OBTAINING AGREEMENT TO PROCEED FROM THE CONTRACT ADMINISTRATOR (CA).
  2) OPENINGS IN BEAMS AND LOAD BEARING WALLS WILL GENERALLY NOT BE ALLOWED, UNLESS APPROVED BY THE ENGINEER.
- HOLES IN SLABS:
  1) NO HOLES OF ANY SIZE CAN BE FORMED IN POST TENSIONED SLAB WITHOUT AGREEMENT IN WRITING FROM THE ENGINEER AND THE CONTRACT ADMINISTRATOR (CA).
  2) HOLES LESS THAN 300MM WIDE ARE TO BE DIAMOND CORED.
  3) HOLES GREATER THAN 300MM WIDE WILL GENERALLY NOT BE ALLOWED.
- INFILLING OF OPENINGS AROUND SERVICES TO ARCHITECT'S OR SERVICES ENGINEER'S REQUIREMENTS. WHERE A LOAD BEARING INFILL IS REQUIRED THIS IS TO BE DESIGNED BY THE CONTRACTOR. DETAILS TO BE SUBMITTED TO THE CA FOR COMMENT.
- CONCRETE PLINTHS ARE TO BE PROVIDED TO ACT AS BASES FOR MECHANICAL PLANT WHERE REQUIRED BY SERVICES ENGINEER. DIMENSIONS OF PLINTHS ARE TO SUIT THE MECHANICAL PLANT USED. DRAWINGS ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR CHECKING OF PLANT WEIGHTS ON FLOORS.

10.00 CDM

- BURIED SERVICES MAY EXIST ACROSS THE FOOTPRINT OF THE PROPOSED BUILDING AND THE GROUNDWORK SHOULD BE MINDFUL OF ANY ASSETS THAT ARE TO BE RETAINED AND PROTECTED DURING GROUNDWORKS IF NOT REDUNDANT AND REMOVED.
- UNKNOWN BASEMENTS OR STRUCTURES IN THE GROUND. ENGINEER TO BE NOTIFIED IF DISCOVERED.

12.00 DRAINAGE

- ALL CONSTRUCTION SHALL BE TO CURRENT RELEVANT CODES OF PRACTICE INCLUDING BS EN 752, BS EN 12056, SEWERS FOR ADOPTION 6TH EDITION, BUILDING REGULATIONS AND MANUFACTURERS RECOMMENDATIONS.
- THE LOCATION SIZE AND DEPTH OF ALL EXISTING DRAINS/SEWERS AND SERVICES SHALL BE ESTABLISHED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS ON SITE. ANY DISCREPANCIES FROM THE INFORMATION INDICATED ON THESE DRAWINGS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- THE CONTRACTOR SHALL ALLOW FOR THE TEMPORARY AND PERMANENT SUPPORT AND DIVERSION WORKS AS NECESSARY, TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE PUBLIC UTILITIES. THE CONTRACTOR SHALL ALLOW FOR DEALING WITH SURFACE WATER RUN-OFF INTO EXCAVATIONS AND FROM GROUNDWATER BY MEANS OF SUMPS, PUMPING AND DE-WATERING AS APPROPRIATE IN ORDER TO KEEP THE EXCAVATION AS REASONABLY DRY AS POSSIBLE DURING THE CONSTRUCTION OF THE WORKS.
- ALL LEVELS AND DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ANY DISCREPANCIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- TO PROTECT THE MODULAR ATTENUATION / STORAGE TANK FROM CONSTRUCTION SITE DEBRIS, THE CONTRACTOR SHALL ENSURE THAT STOPPERS ARE SECURELY PLACED IN ALL CONNECTIONS IMMEDIATELY UPSTREAM OF THE TANKS UNITS, ONLY TO BE REMOVED ONCE THE FINAL CLEANING OF THE ROADS / DRAINAGE HAS BEEN COMPLETED
- CONTRACTOR SHALL CONFIRM PUMP SELECTION AND CONSTRUCTION DRAWINGS WITH MANUFACTURER PRIOR TO PURCHASE. PUMP CHAMBER ELECTRIC SUPPLY TO BE CONFIRMED BY M&E ENGINEER. PUMPS TO BE CONNECTED TO UNINTERRUPTED ELECTRICAL SUPPLY.
- ALL PIPES WITHIN 300MM OF UNDERSIDE OF SLAB TO BE CAST IN CLASS 'Y' CONCRETE BEDDING. ALL PIPES WITH COVER GREATER THAN 300MM TO UNDERSIDE OF SLAB TO BE BEDDED IN CLASS 'W' GRANULAR SURROUND. ALL SVPS, SS, FG, YG, RWPS, FG'S AND FWP'S SHOWN ARE INDICATIVE ONLY, TO BE SET OUT BY OTHERS. COVER LEVELS INDICATIVE ONLY TO BE CONFIRMED BY LANDSCAPE ARCHITECT AND ARCHITECT.
- ALL RWPS AND GULLIES TO BE TRAPPED AND RODDABLE. ALL BELOW GROUND BRANCH FOUL PIPES TO MAIN RUNS SHALL BE 100MM DIAMETER UNLESS NOTED OTHERWISE. INITIAL BELOW GROUND 100MM DIAMETER FOUL WATER LATERAL PIPES SHALL BE LAID NO FLATTER THAN 1:40 UNLESS NOTED OTHERWISE.
- ALL DRAINAGE PIPES TO BE CAST IN CONCRETE WHEN PASSING THROUGH NEW FOUNDATIONS. ALL BENDS IN PIPEWORK SHALL BE LONG RADIUS. PIPE CONNECTIONS NOT TO INSPECTION CHAMBERS SHALL BE TO 'Y' BRANCHES SWEPT IN THE DIRECTION OF FLOW. ALL INTERNAL MANHOLES TO HAVE DOUBLE SEALED AND BOLTED COVERS TO STOP THE EGRESS OF ODOURS.
- ALL MANHOLES WITHIN ROAD AND CARPARK TO BE CAST IRON COVERS LOAD CLASS D400. SIZE AND POSITION OF SOAKAGE TRENCH TO BE CONFIRMED UPON RECIEPT OF THE SOAKAGE TEST RESULTS. SOAKAGE TEST TO BE AS PER BRE365 SPECIFICATION. SOAKAWAYS AND SEWAGE TREATMENT TANKS MUST BE AT LEAST 7.0M FROM BUILDINGS.
- WHEN GEN3 IS NOTED FOR CONCRETE, ST4 MAY BE USED AS AN ALTERNATIVE. ALL SURFACE WATER PIPES TO BE Ø150MM UNLESS NOTED OTHERWISE. ALL FOUL AND SURFACE WATER BELOW GROUND PIPES TO BE VITRIFIED CLAY UNLESS NOTED OTHERWISE. ALL INTERNAL MANHOLE COVERS TO BE DOUBLE SEALED.



COLUMNS BEAMS

SIGN CONVENTION FOR LOAD TABLES

Execution Class BS EN 1090-2[9] Any discrepancies, contact the Engineer immediately. Refer Execution Class Table below to BS EN 1090-2[10].

Consequence classes		CC1		CC2		CC3	
Service categories		SC1	SC2	SC1	SC2	SC1	SC2
Production categories	PC1	EXC1	EXC2	EXC2	EXC3	EXC3*	EXC3*
	PC2	EXC2	EXC2	EXC2	EXC3	EXC3*	EXC4

EXC4* should be applied to special structures or structures with extreme consequences of a structural failure as required by national provisions.

Rev	Date	Cad	Chkd	Description
T1	08.02.22		TP	TENDER

Status:

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Scale: NTS Date: FEB '22

Cad: Eng: Checked: TP

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