

1.0 GENERAL

1.1 DRAWINGS SHALL BE REFERRED TO FOR STRUCTURAL WORK ONLY, UNLESS OTHERWISE STATED AND READ IN CONJUNCTION WITH THE MAIN STRUCTURAL AND CIVIL SPECIFICATION AND ARCHITECT'S SERVICE ENGINEER'S AND SUB-CONTRACTOR'S DRAWINGS AND ANY OTHER RELEVANT CONTRACT DOCUMENTATION.

1.2 MATERIALS AND WORKMANSHIP SHALL NOT BE INFERIOR TO THE REQUIREMENTS OF THE RELEVANT BRITISH STANDARD, THE NHBC BUILDING REGULATIONS AND/OR OTHER RELEVANT DOCUMENTATION REFERRED TO IN THE SPECIFICATION AND AS INDICATED IN BS 8000: "WORKMANSHIP IN CONSTRUCTION".

1.3 CONSTRUCTION TOLERANCES ARE TO BE IN ACCORDANCE WITH BS 5606: "GUIDE TO ACCURACY IN BUILDING", UNLESS NOTED OTHERWISE ON THIS DRAWING OR MATERIAL DESIGN SPECIFICATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT SUFFICIENT TOLERANCES ARE PROVIDED AND INTEGRATED THROUGHOUT ALL ELEMENTS OF THE WORKS.

1.4 REFERENCE MADE TO BRITISH STANDARD SPECIFICATIONS, CODE OF PRACTICE OR OTHER DOCUMENTS SHALL BE TAKEN TO REFER TO THE EDITION CURRENT ON THE DATE OF ISSUE OF THIS DRAWING, UNLESS ANOTHER EDITION IS SPECIFICALLY REFERRED TO.

1.5 THE CONTRACTOR SHALL CHECK ALL LEVELS AND DIMENSIONS, AND ANY ERRORS OR OMISSIONS ARE TO BE REPORTED AT ONCE TO THE ENGINEER.

1.6 THE CONTRACTOR TAKE ALL NECESSARY SITE MEASUREMENTS PRIOR TO UNDERTAKING ANY OFFSITE FABRICATION, OR MAKING PREFORMED AND PROPRIETARY ELEMENTS, INCLUDING, BUT NOT LIMITED TO: STEELWORK BALCONIES, JULIETTE BALCONIES, SPECIAL LINTELS, STEELWORK, PRECAST CONCRETE, MASONRY SUPPORT, WIND-POSTS, ETC.

1.7 THE DRAWINGS, DESIGN AND ALL INFORMATION CONTAINED HEREIN ARE THE SOLE COPYRIGHT OF RIDGE AND PARTNERS AND REPRODUCTION IN ANY FORM IS FORBIDDEN UNLESS PERMISSION IS OBTAINED IN WRITING.

1.8 ANY DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE ENGINEER BEFORE THE AFFECTED WORKS PROCEED.

1.9 WORK TO STATED DIMENSIONS ONLY. DO NOT SCALE FROM THE DRAWINGS.

1.10 DIMENSIONS NOTED THUS [...] ARE SUBJECT TO CONFIRMATION BY SITE MEASUREMENT BEFORE CONSTRUCTION PROCEEDS.

1.11 NO HOLES, CHASES, CUT-OUTS OR THE LIKE MAY BE FORMED IN ANY STRUCTURAL ELEMENT UNLESS NOTED ON THE DRAWINGS, OR BY WRITTEN CONFIRMATION PROVIDED BY THE ENGINEER.

1.12 HOLES SMALLER THAN 300MM X 300MM THROUGH SLABS ARE NOT NECESSARILY SET-OUT ON THE ENGINEER'S DRAWINGS.

1.13 FIRE PROTECTION OF ALL ELEMENTS TO ACHIEVE 90 MINUTES, UNLESS OTHERWISE NOTED.

1.14 ALL DIMENSIONS ARE GIVEN IN MILLIMETRES (MM), AND LEVELS IN METRES (M) ABOVE ORDNANCE DATUM (AOD), UNLESS OTHERWISE NOTED.

1.15 BEFORE ANY NEW CONSTRUCTION COMMENCES, THE CONTRACTOR IS TO SET OUT THE MAJOR CONTROL GRIDLINES ON THE SITE AS SHOWN WITHIN THE ARCHITECT'S DRAWINGS. THE STRUCTURAL ENGINEER AND ARCHITECT SHALL BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES, TO ALLOW FOR REVIEW AND RE-DESIGN, SHOULD IT BE NECESSARY.

1.16 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SITE SETTING-OUT DIMENSIONS AND LEVELS BEFORE COMMENCING THE WORK.

1.17 ALL DIMENSIONS ARE GIVEN TO STRUCTURAL SURFACES OR MEMBER CENTRELINES, UNLESS NOTED OTHERWISE.

1.18 THE CONTRACTOR IS ENTIRELY RESPONSIBLE FOR MAINTAINING THE STABILITY OF THE STRUCTURE WITHIN AND ADJACENT TO THE WORKS, FROM THE DATE OF POSSESSION OF THE SITE UNTIL HAND-OVER OF THE WORKS TO THE CLIENT. HE SHALL DESIGN, INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY WORKS TO COMPLY WITH THE THIS REQUIREMENT.

1.19 WHERE THE TERM CONTRACTOR IS USED ON THESE DRAWINGS IT SHALL APPLY TO THE MAIN (OR PRINCIPAL) CONTRACTOR, AND ANY OF HIS APPOINTED SUB-CONTRACTORS.

1.20 THE DESIGN LIFE OF THE STRUCTURE TO THE BUILDING IS 60 YEARS.

5.0 CONCRETE-INSITU

5.1 ALL CONCRETE FRAMEWORK IS TO BE IN ACCORDANCE WITH BS EN 1992 "EUROCODE 2: DESIGN OF CONCRETE STRUCTURES", THE NATIONAL STRUCTURAL CONCRETE SPECIFICATION FOR BUILDING CONSTRUCTION, AND AS NOTED BELOW.

5.2 ALL CONCRETE TO BE QUALITY CONTROLLED DESIGNATED MIXES AND SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, BS EN 206 "CONCRETE SPECIFICATION: PERFORMANCE, PRODUCTION AND CONFORMITY" AND BS 8500 "CONCRETE – COMPLEMENTARY BRITISH STANDARD TO BS EN 206-1", IN ADDITION TO THIS, ALL BURED CONCRETE SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF BRE DIGEST Sd1 AND BS 8500 PT.1

5.3 MASS CONCRETE BLINDING 50MM MIN. THICKNESS SHALL BE QUALITY CONTROLLED CONCRETE AS NOTE 5.2, PLACED UNDER REINFORCED CONCRETE IN CONTACT WITH THE GROUND, AND SHALL BE LAID ONTO FOUNDATION EXCAVATIONS AS SOON AFTER THE REQUED DIG IS COMPLETE OR SOON AS IS REASONABLY PRACTICABLE TO PREVENT DETERIORATION OF THE SOILS.

5.4 FOR INFORMATION REGARDING FIXINGS, POCKETS OR HOLES THROUGH CONCRETE MEMBERS SEE REINFORCEMENT DETAILS AND/OR ARCHITECT'S AND SUB-CONTRACTOR'S DRAWINGS. NO HOLES OTHER THAN THOSE INDICATED ON THE ENGINEER'S DRAWINGS SHALL BE FORMED WITHOUT PRIOR PERMISSION OF THE ENGINEER. FIXINGS FOR BRICKWORK ARE TO CAST INTO CONCRETE MEMBERS AS DETAILED ON THE STRUCTURAL DRAWINGS.

5.5 REINFORCED CONCRETE SHALL BE COMPACTED BY MEANS OF MECHANICAL VIBRATOR POKER AND THE WORKABILITY SHALL BE SUCH THAT, WHEN COMPACTED, A DENSE CONCRETE FREE FROM VOIDS SHALL BE PRODUCED.

5.6 UNLESS SPECIAL PRECAUTIONS ARE UNDERTAKEN, CONCRETING SHALL NOT PROCEED WHEN THE AIR TEMPERATURE IS, OR LIKELY TO FALL, BELOW 20 C. FROZEN MATERIAL SHALL NOT BE USED. CONCRETE SHOULD NOT BE PLACED IN ANY EXCAVATION IF THE GROUND OR OVERSITE IS FROZEN. ALL SURFACES WHICH COME INTO CONTACT WITH FRESH CONCRETE (FORMWORK, REINFORCEMENT, SOIL, ETC) AND OTHER CONCRETE SURFACES SHALL BE FREE OF SNOW, ICE AND FROST.

5.7 WHERE CONCRETING IS EXPECTED TO BE CARRIED OUT DURING COLD WEATHER, THE CONTRACTOR IS TO PROVIDE THE ENGINEER THEIR PROCEDURES FOR SUCH, WHICH SHALL BE REVIEWED BY THE ENGINEER AND ANY COMMENTS ADHERED TO BY THE CONTRACTOR.

5.8 THEN MINIMUM TEMPERATURE OF READY-MIXED CONCRETE WHEN DELIVERED SHALL BY 50C.

5.9 FRESH CONCRETE SHALL BE PROTECTED FROM FROST, SNOW, RAIN AND SUN, AND CURED AS RECOMMENDED IN BS EN 13670 "EXECUTION OF CONCRETE STRUCTURES".

5.10 ALL STRUCTURAL CONCRETE TO BE PRODUCED FROM A READY-MIXED PLANT WITH A THIRD PARTY QUALITY ASSURANCE SCHEME ACCREDITED BY UKAS (QS/RMC OR BSI).

5.11 CONCRETE CUBE TESTING FOR COMPRESSIVE STRENGTH COMPLIANCE TO BE CARRIED OUT FOR EACH DAY OF CONCRETE POURING AND FOR EACH MIX USED ON THAT DAY.

5.12 THE TYPE AND GRADE OF ALL STEEL REINFORCEMENT SHALL BE IN ACCORDANCE WITH BS 4449.

5.13 STEEL REINFORCEMENT WILL BE SCHEDULED IN STEEL IN ACCORDANCE WITH BS 8666.

5.14 AGGREGATES SHALL COMPLY WITH BS 8500 PT 2.

5.15 CANTILEVER BEAMS AND SLABS SHALL REMAIN PROPPED UNTIL INSTRICTED BY THE ENGINEER. ALL CANTILEVER BALCONIES WITH THERMAL BREAKS TO BE CAST WITH A 1:100 UPWARD FALL AWAY FROM THE BUILDING.

5.16 INTERNAL AND EXPOSED CONCRETE FINISHES SHALL BE AS PER THE EMPLOYERS REQUIREMENTS, AND CONTRACT TEST PANELS SHALL BE PROVIDED AND AGREED. SURFACE FINISHES SHALL BE IN ACCORDANCE WITH THE QUALITY OF FINISHES AND TYPE OF SURFACE FINISH DEFINED IN BS 8000-2.

5.17 CEMENTS USED SHALL COMPLY WITH BS 8500 PT 2.

5.18 ALL HORIZONTAL HOLES DRILLED INTO CONCRETE FOR THE GROUTING OF ANCHORS OR DOWEL BARS TO BE INCLINED SLIGHTLY DOWNWARD TO FACIATE THE RETENTION OF THE ANCHOR GROUT. NO REINFORCEMENT IS TO BE CUT OR DRILLED WITHOUT THE EXPRESS PERMISSION OF THE STRUCTURAL ENGINEER.

5.19 CONCRETE COVER TO REINFORCEMENT SHALL BE AS NOTED ON DETAIL DRAWINGS WITH A MIN. OF 50MM TO ALL REINFORCEMENT ON CONCRETE SURFACES EXPOSED TO THE ELEMENTS – FOR CONCRETE CAST AGAINST SOIL, FACES A MIN. COVER OF 75MM SHALL BE USED.

7.0 STEELWORK

7.1 ALL STRUCTURAL STEELWORK IS TO BE DRAWN, FABRICATED, ERECTED, ETC. IN ACCORDANCE WITH THE NATIONAL STRUCTURAL STEELWORK SPECIFICATION FOR BUILDING CONSTRUCTION, AND AS NOTED BELOW.

7.2 ALL STEELWORK HAS BEEN DESIGNED IN ACCORDANCE WITH BS EN 1993 "EUROCODE 3: DESIGN OF STEEL STRUCTURES". ALL STEELWORK IS TO BE TO BS EN 10025, EXCLUDING HOLLOW BOX SECTIONS WHICH ARE TO BE TO BS EN 10210. STEEL GRADES TO BE: • INTERNAL BEAMS AND COLUMNS – S275JR • EXTERNAL BEAMS AND COLUMNS – S275JO • HOLLOW SECTIONS – S355JOH

7.3 ALL STEELWORK IS TO BE DRAWN, FABRICATED, ERECTED, ETC. IN ACCORDANCE WITH THE NATIONAL STRUCTURAL STEELWORK SPECIFICATION FOR BUILDING CONSTRUCTION (NSSF) AND TO BE CE MARKED IN ACCORDANCE WITH BS EN10001-1 & BS EN10902 AS NOTED BELOW.

7.4 HAVING DETERMINED THE CONSEQUENCES CLASS FOR A BUILDING, THE REQUIRED EXECUTION CLASS IS TO BE DERIVED FROM TABLE NA.4 OF THE NATIONAL ANNEX TO BS EN1993-1-1 (SEE BELOW), ASSUMING CONSEQUENCE CLASS 2, THE REQUIRED QUALITY OF WORKS ARE TO BE CARRIED OUT TO A MINIMUM QUALITY AS SET OUT BELOW, UNLESS NOTED OTHERWISE. THE WORKS AS A WHOLE – EXC2 'AN INDIVIDUAL COMPONENT – EXC22 'A DETAIL OF A COMPONENT – EXC2

7.5 STEELWORK SHALL BE CORROSION AND/OR FIRE PROTECTED IN ACCORDANCE WITH THE CLASSIFICATION OF ENVIRONMENT REFERENCED IN BS EN ISO 12944 AND TREATED AS FOLLOWS: WHEN FINISHING, REMOVE SURFACE LAMINATIONS, SHELLING, CRACKS, INCLUSIONS AND OTHER SURFACE FLAWS BY CHIPPING AND/OR GRINDING. DO NOT EXCEED THE LIMITS SPECIFIED IN CURRENT STANDARDS. REMOVE BURRS AND SHARP EDGES BY GRINDING. CAREFULLY DRESS WELDS TO REMOVE SLAG AND REMOVE SPOT WELD SPLATTER BY GRINDING.

7.6 WHERE STEEL BEAMS BEAR ONTO PADSTONES, THEY SHALL BE MECHANICALLY FASTENED (UNLESS OTHERWISE NOTED) WITH M20, M10 CHEMICAL ANCHORS, ONE AT EACH END ON ALTERNATIVE SIDES TO PREVENT OVER-TURNING.

7.7 ALL STEELWORK CONNECTIONS ARE TO COMPLY WITH THE FOLLOWING, AND AS DETAILED THE DRAWINGS, UNLESS NOTED OTHERWISE:  
a) BOLTS TO BE GRADE 8.8 AND NOT LESS THAN M16, UNLESS SPECIFICALLY NOTED OTHERWISE.  
b) H.S.F.G BOLTS MAY BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.  
c) MINIMUM WELD SIZE TO BE 6MM CONTINUOUS FILLET WELD TO BS EN 1011.  
d) ALL BUTT WELDS TO HAVE FULL PENETRATION  
e) SITE WELDING IS NOT PERMITTED UNLESS SPECIFICALLY AGREED WITH THE ENGINEER.  
f) SEAL ENDS OF ALL HOLLOW SECTIONS, ENSURING THAT THE INSIDE FACES OF THE SECTIONS ARE DRY AND CLEAR OF DEBRIS BEFORE SEALING ENDS AND OPENINGS.

7.8 ALL MEMBERS TO BE MARKED AS PART OF THE FABRICATION SO THAT POSITIONS CAN BE CHECKED AFTER ERECTION.

7.9 BEFORE COMMENCING ERECTION, CHECK FABRICATION AND OTHER STRUCTURES TO WHICH STEELWORK WILL BE ATTACHED, FOR ACCURACY OF SETTING-OUT AND HOLDING DOWN BOLTS FOR POSITION, PROTRUDING LENGTH, CONDITION AND SLACKNESS. REPORT ANY INACCURACIES AND DEFECTS WITHOUT DELAY.

7.10 SET OUT AND ERECT STEELWORK TO BS EN 1090. DESIGN AND PROVIDE ALL TEMPORARY BRACING NECESSARY TO ENSURE STABILITY OF THE STEEL FRAME AND THE STRUCTURE UPON WHICH THE STEELWORK IS TO BE ERECTED AT ALL TIMES DURING ERECTION.

7.11 WHERE STEEL TO STEEL CONNECTIONS ARE INDICATED ON THE STRUCTURAL DRAWINGS, THESE SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR IN ACCORDANCE WITH THE ULTIMATE FACTORED LOADS AS INDICATED ON THE DRAWINGS. DESIGN AND FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND ARCHITECT A MINIMUM OF TWO WEEKS PRIOR TO FABRICATION COMMENCEMENT FOR THEIR COMMENT. WHEN INSTRUCTED, SUBMIT CALCULATIONS BEFORE PREPARING DETAILED FABRICATION DRAWINGS. THE FOLLOWING FORCES ARE THE MINIMUM ULTIMATE VALUES FOR WHICH ALL STEEL TO STEEL CONNECTIONS SHOULD BE DESIGNED, UNLESS GREATER VALUES ARE SPECIFIED ON THE DRAWINGS: VERTICAL SHEAR = 100kN HORIZONTAL SHEAR = 20kN AXIAL TENSION = 50kN

7.12 STEELWORK IS TO BE CASED/FIRE PROTECTED IN ACCORDANCE WITH THE ARCHITECT'S DETAILS. UNLESS NOTED OTHERWISE ON THESE OR ARCHITECT'S/SPECIALIST'S DRAWINGS, ALL STEELWORK IS TO BE BOARD PROTECTED TO ACHIEVE A MINIMUM FIRE RESISTANCE OF ONE HOUR.

7.13 BEFORE COMMENCING FABRICATION DRAWINGS, ENSURE ALL RELEVANT SITE LEVELS AND DIMENSIONS HAVE BEEN VERIFIED.

7.14 ALL STEELWORK BELOW DPC LEVEL TO BE ENCASED IN 50MM CONCRETE.

7.15 ALL STEELWORK ENCASED IN MASONRY TO BE GIVEN TWO COATS OF BITUMINOUS PAINT AFTER ERECTION IN ADDITION TO THE PROTECTION PROVIDED AS SET OUT IN 7.3 ABOVE.

8.0 TIMBER

8.1 GENERAL

THE STRUCTURAL TIMBER SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL RELEVANT BRITISH STANDARDS AND CODES OF PRACTICE AND IN ACCORDANCE WITH THE RECOMMENDATIONS OF TRADA (TIMBER RESEARCH AND DEVELOPMENT ASSOCIATION). IN GENERAL ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH EUROCODE 5 BS EN 1995-1-1:2004+AL:2008. IN RELATION TO TIMBER FRAMED STRUCTURES DESIGNED BY THE TRADE SUPPLIER, THESE ARE TO BE DESIGNED, MANUFACTURED AND INSTALLED IN ACCORDANCE WITH EUROCODE 5: DESIGN OF TIMBER STRUCTURES.

8.2 STRENGTH GRADING

ALL STRUCTURAL TIMBER SHALL BE STRENGTH GRADED AND CLEARLY MARKED WITH THE GRADE AND/OR THE STRENGTH CLASS. STRUCTURAL TIMBER COMPOSITES OR ENGINEERED STRUCTURAL COMPONENTS ARE TO COMPLY WITH THE RELEVANT STANDARD. THIS TO INCLUDE GLULAMINATED TIMBER BEAMS, CROSS-LAMINATED TIMBER (CLT), LAMINATED VENEER LUMBER (LVL), PARALLEL STRAND LUMBER, LAMINATED STRAND LUMBER AND I-BEAMS MANUFACTURED WITH THE FLANGES OF SOFTWOOD OR LVL AND THE WEBS OF PLYWOOD, OSB OR HARDBOARD, AND OTHER CONFIGURATIONS WHICH COMBINE TIMBER FLANGES WITH METAL STRUTTING WEBS.

8.3 WALL FRAMING

SOFTWOOD FOR STRUCTURAL FRAMING SHALL BE SELECTED FROM THE SPECIES LISTED IN BS 5268-2. WALL FRAMING WILL NORMALLY BE OF STRENGTH CLASS C16 UNLESS NOTED OTHERWISE ON DRAWINGS.

8.4 TIMBER SIZES

TARGET SIZES FOR STRUCTURAL SOFTWOODS AT A MOISTURE CONTENT OF 20% ARE TO BE IN ACCORDANCE WITH BS EN 336 STRUCTURAL TIMBER. CONIFEROUS AND POPLAR SIZES – PERMISSIBLE DEVIATIONS, THE SIZES AND ALLOWABLE TOLERANCES ARE AS LISTED IN THE NATIONAL ANNEX AND IN ACCORDANCE WITH TRADA WOOD INFORMATION SHEET SOFTWOOD SIZES.

8.5 DIMENSIONING

TIMBER FOR WALL FRAMING SHALL BE SURFACED ON ALL FOUR SIDES, WITH ROUNDED ARRISSES.

8.6 FLOOR JOISTS

IN PLATFORM FRAME, FLOOR JOISTS SHALL NORMALLY BE THE SAME NOMINAL DEPTH THROUGHOUT IN ORDER TO STANDARDISE WALL PANEL HEIGHTS. JOIST DEPTHS SHALL GENERALLY BE MADE UNIFORM BY MACHINING THE TOP AND/OR BOTTOM FACES TO PROVIDE AN EVEN SURFACE FOR FLOOR AND CEILING FINISHES. ALS/CLS SURFACED TIMBER MAY BE SPECIFIED FOR JOISTS. I-BEAMS MAY BE USED FOR FLOOR JOISTS TO COMBINE LARGER SPAN CAPABILITIES WITH LOW MOISTURE CONTENT. SELECTION INSTALLATION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT BS EN CODE AND THE RESPECTIVE MANUFACTURERS' LITERATURE.

8.7 MOISTURE CONTENT OF FRAMING TIMBER

STRUCTURAL SOFTWOOD FOR USE IN BUILDINGS (I.E. IN SERVICE CLASSES 1 AND 2 TO BS 5268-2 AND EUROCODE 5) SHALL BE STRENGTH GRADED AT AN AVERAGE MOISTURE CONTENT OF 20% AND MARKED DRY OR KD. THESE TIMBERS ARE TO BE PROTECTED FROM WETTING AND HIGH HUMIDITY DURING STORAGE. TIMBER OVER 100 MM THICK MAY BE GRADED AND MARKED WET, WHERE THE CONTRACTOR IS RESPONSIBLE FOR DESIGN CALCULATIONS SHALL BE BASED ON WET STRESSES.

8.8 SHRINKAGE

WHERE DESIGNED BY THE CONTRACTOR, THE TIMBER FRAME DESIGN IS TO ALLOW FOR SHRINKAGE IN SOLID TIMBER OF 1% CHANGE IN DIMENSION FOR EVERY 4% CHANGE IN MOISTURE CONTENT AND IN ACCORDANCE WITH TIMBER FRAME: STANDARD DETAILS FOR HOUSES AND FLATS AND THE TRADA TIMBER FRAME CONSTRUCTION BOOK. SPECIAL ATTENTION IS TO BE PAID TO THE MOISTURE CONTENT OF TIMBER USED IN MULTI-STOREY TIMBER FRAME BUILDINGS TO ENSURE THAT BY MINIMISING THE USE OF HORIZONTAL CROSS-GRAIN TIMBER, SHRINKAGE WILL BE MAINTAINED AT MANAGEABLE LEVELS.

9.0 MASONRY

9.1 ALL STRUCTURAL MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH BS EN 1996 "EUROCODE 6: DESIGN OF MASONRY STRUCTURES".

9.2 ONLY STRUCTURAL LOADBEARING MASONRY WALLS ARE INCLUDED IN THE DRAWINGS. NON-STRUCTURAL WALLS, WHERE SHOWN, ARE SHOWN FAINT.

9.3 NON-LOADBEARING WALLS AND PARTITIONS AS NOTED ON THE ARCHITECT'S DRAWINGS SHALL BE SEPARATED FROM THE CONSTRUCTION ABOVE THEM TO ENSURE THEY DO NOT PROVIDE OR TRANSMIT LOADS.

9.4 MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE RECOMMENDATIONS OF BS EN 1996.

THE NATIONAL STRUCTURAL MASONRY SPECIFICATION FOR BUILDING CONSTRUCTION (NMSF) IS TO BE CE MARKED IN ACCORDANCE WITH BS EN10001-1 & BS EN10902 AS NOTED BELOW.

9.5 CLAY BRICKS SHALL COMPLY WITH ALL RELEVANT PARTS OF BS EN 771 & 772 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 20N/mm² ABOVE DPC, AND A MINIMUM COMPRESSIVE STRENGTH OF 38kN/m2 BELOW DPC. ALL BRICKS TO BE F2 DURABILITY AND AN ACTIVE SOLUBLE SALT CATEGORY OF S1, IN ADDITION TO ANY REQUIREMENTS IN THE ARCHITECT'S SPECIFICATION FOR FACEWORK.

9.6 CONCRETE BLOCKS SHALL COMPLY WITH ALL RELEVANT PARTS OF BS EN 771 & 772 AND SHALL HAVE THE FOLLOWING PERFORMANCE REQUIREMENTS:

UNLESS NOTED OTHERWISE, THE STRUCTURAL DRAWINGS, ALL BLOCKWORK WITHIN THE BUILDING ENVELOPE SHALL HAVE A MINIMUM CRUSHING STRENGTH AS DETAILED BELOW:  
BLOCK STRENGTHS (MIN. VALUES) LOADBEARING WALLS.

FIRST FLOOR SLEEPER WALLS  
CAVITY WALLS (100THK INNER LEAF) 7.3 N/mm²  
PARTY WALLS (100THK X2) 7.3 N/mm²  
INTERNAL WALLS (100THK) 7.3 N/mm²

UNLESS NOTED OTHERWISE, ALL BLOCKWORK WITHIN THE BUILDING ENVELOPE SHALL HAVE A MINIMUM STRENGTH OF 7.3N/mm²

a) BLOCKWORK BELOW DPC LEVEL SHALL BE OF SUITABLE QUALITY TO DESIGN SULPHATES CLASS DS-1.

b) SEE ARCHITECT'S DRAWINGS/DETAILS FOR SOUND AND THERMAL REQUIREMENTS TO ALL WALL TYPES.

c) 100mm AND 140MM BLOCKS SHALL NOT BE LAID FLAT TO FORM PARTY WALLS UNLESS THESE BLOCKS HAVE BEEN TESTED BY THE MANUFACTURER FOR THIS SPECIFIC PURPOSE. WALLS CONSTRUCTED WITH BLOCKS NOT SUPPORTED BY TEST DATA SHALL BE LIABLE TO REJECTION.

NON-LOADBEARING PARTITIONS – TO ARCHITECT'S SPECIFICATION.

e) REFER TO ARCHITECT'S DRAWINGS FOR BLOCKWORK DENSITY REQUIREMENTS ALONG WITH DESIGN REQUIREMENTS NOTED ABOVE.

f) THE MAXIMUM WEIGHT OF ANY INDIVIDUAL MASONRY SHALL NOT EXCEED 20kg.

9.7 MASONRY BELOW DPC TO BE SET IN 1:3 (CLASS M12) CEMENT/SAND MORTAR, ABOVE DPC TO BE 1:1:6 (CLASS M4) CEMENT/LIME/SAND MORTAR, IN ACCORDANCE WITH BS EN 998.

9.8 WALL TIES TO COMPLY WITH BS EN 845-1. PROVIDE STAINLESS STEEL WALL TIES AS PER DRAWING DETAIL J ON DRAWING K170184-S(0)0007. TIES FOR EXTERNAL WALLS TO BE TYPE B ACOUSTIC PERFORMANCE IN ACCORDANCE WITH THE REQUIREMENTS OF BUILDING REGULATIONS PT E.

9.9 MASONRY SUPPORT ANGLES AND WINDPOSTS IN GRADE 304 (1.4301) STAINLESS STEEL. ANGLE DESIGN AND FIXINGS BY THE SPECIALIST MANUFACTURER TO CARRY LOADS SPECIFIED ON THE DRAWINGS.

9.10 ALL PADSTONES OVER 20kg SHALL HAVE A THREADED SOCKET TO RECEIVE A LIFTING EYE TO ALLOW FOR MECHANICAL LIFTING INTO POSITION.

9.11 WHERE ENGINEERING BRICKS ARE SPECIFIED ON THE DRAWINGS, THEY SHALL COMPLY WITH ALL RELEVANT PARTS OF BS EN 771-1: TABLE NA.6 WITH THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS:  
CLASS A – 125N/mm²  
CLASS B – 75N/mm²

9.12 STACK BONDED FEATURE BLOCKWORK TO HAVE STAINLESS STEEL BED JOINT REINFORCEMENT TO EVERY COURSE IN ACCORDANCE WITH BS EN 845 PT 3. PROVIDE BEKAERT BF40 OR SIMILAR APPROVED. WALL TIE SPACING TO BE REDUCED TO 450mm HORIZONTALLY AND VERTICALLY AT AREAS OF STACK BONDED MASONRY.

9.13 MOVEMENT JOINTS (MJ) TO BE LOCATED A MAXIMUM OF 12.0m CENTRES IN BRICKWORK, AND 6.0m CENTRES IN BLOCKWORK. FINAL LOCATIONS TO ARCHITECT'S DETAILS.

9.14 MASONRY WALLS PARALLEL TO PRECAST UNIT SPANS SHALL BE RESTRAINED WITH GALVANISED 30x5mm STRAPS, HAVING A SIZE NOT LESS THAN 100x900mm AT NO MORE THAN 2.0m CENTRES IN HOUSES AND 1.25m CENTRES IN FLATS.

9.15 PRECAST ELEMENTS SHOULD NOT BE PLACED ONTO SUPPORTING MASONRY UNTIL SAID MASONRY HAS BEEN CONSTRUCTED FOR AT LEAST 7 DAYS.

9.16 FOR HELIBAR INSTALLATION, DEPTH OF SLOT IN HORIZONTAL MORTAR JOINT TO BE 25mm-35mm FOR CAVITY WALL, & 45mm FOR A SOLID WALL.

12.0 TEMPORARY WORKS

12.1 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF ALL TEMPORARY WORKS, WHETHER OR NOT THE NEED FOR SAID TEMPORARY WORKS IS INDICATED ON THE DRAWINGS, AND FOR THE SAFETY AND STABILITY OF THE NEW WORKS AND ANY ADJOINING EXISTING STRUCTURE.

12.2 THE DESIGN EXCLUDES ANY LOADING FROM TEMPORARY WORKS PLATFORMS OR FROM CAST-IN INSERTS TO THE TOPS OF COLUMN FOR RESTRAINT HARNESS FRAMES. IF THE CONTRACTOR PROPOSES TO USE THE ABOVE, THEN THE ENGINEER MUST BE INFORMED. ADDITIONAL REINFORCEMENT OR PROPPING MAY BE REQUIRED.

12.3 THE CONTRACTOR IS TO PROVIDE TO THE ENGINEER HIS PROPOSALS FOR ALL TEMPORARY WORKS, INCLUDING METHOD STATEMENTS WHERE NECESSARY, A MINIMUM OF 14 DAYS BEFORE ANY SUCH PROPOSALS ARE TO BE INSTALLED. ANY DELAY ARISING OUT OF THE LATE RECEIPT OF THE INFORMATION BY THE ENGINEER CANNOT BE ATTRIBUTED TO THE ENGINEER.

12.4 THE INSTALLATION OF ANY PRECAST CONCRETE ELEMENTS IS TO BE UNDERTAKEN IN A SEQUENCE TO ENSURE THAT THERE IS NO ADVERSE EFFECT UPON THE PERMANENT FORM OF THE STRUCTURAL FRAME.

15.0 HEALTH AND SAFETY/CDM REGULATIONS 2015

15.1 ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE HEALTH & SAFETY PLAN AND ALL RISK ASSESSMENTS.

15.2 THE DRAWINGS AND SPECIFICATION OF THE WORKS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECT AND THIRD PARTY DRAWINGS AND THE FOLLOWING DOCUMENTATION:  
a) GEOTECHNICAL INVESTIGATION REPORT  
b) ELECTRO DETECTION SURVEY  
c) TOPOGRAPHICAL SURVEY  
d) SEWER RECORDS  
e) ALL OTHER UTILITY SUPPLIERS

15.3 PRIOR TO COMMENCEMENT OF FOUNDATION WORKS, THE CONTRACTOR SHALL UNDERTAKE TRIAL PITS TO ACQUAINT THEMSELVES WITH THE SOIL INVESTIGATION AND GROUND CONDITIONS, AND WHERE NECESSARY, PROVIDE TEMPORARY SHORING WHERE DEEP EXCAVATIONS ARE UNDERTAKEN.

15.4 IT IS ASSUMED THAT ONLY COMPETENT CONTRACTORS AND THEIR SPECIALIST SUB-CONTRACTORS WITH SIMILAR CONSTRUCTION EXPERIENCE, AND WITH ADEQUATE RESOURCES, SHOULD BE USED TO UNDERTAKE THE WORKS. THE HEALTH & SAFETY RISKS NOTED ARE THEREFORE THOSE WHICH ARE CONSIDERED TO BE SPECIAL OR ABNORMAL TO ANY STANDARD CONSTRUCTION SITE.

15.5 A REVIEW OF THE PROPOSED SCHEME HAS HIGHLIGHTED THE FOLLOWING ABNORMAL RISKS POSED DURING CONSTRUCTION: NONE NOTED FURTHER ABNORMAL RISKS ARE HIGHLIGHTED ON THE DRAWINGS.

15.6 WHIST NOT CONSIDERED ABNORMAL, THE FOLLOWING RISKS ARE HIGHLIGHTED:  
- THE STABILITY OF THE BUILDING IS ONLY COMPLETE ONCE THE WHOLE STRUCTURE HAS BEEN CONSTRUCTED.  
- THE CONTRACTOR SHOULD NOTE THAT TEMPORARY BRACING IS LIKELY TO BE REQUIRED ON THE STEEL FRAME DURING ERECTION.  
- THE CONTRACTOR SHOULD NOTE THAT THE CONCRETE SLABS ARE NOT DESIGNED FOR ANY CANTILEVER LOADING PLATFORMS.  
- THE BUILDING IS MULTI-STOREY AND AS SUCH, HIGH LEVEL PLATFORMS ARE LIKELY TO BE UTILISED.  
- THE BUILDING CONTAINS FLAMMABLE MATERIALS. PRECAUTIONS SHOULD BE UNDERTAKEN TO ENSURE THE RISK IN THE CASE OF TIMBER FRAMES, EACH FLOOR SHOULD ONLY BE ERECTED ONCE THE FRAME OF FIRE IS ELIMINATED. BELOW HAS BEEN CLAD WITH ITS REQUIRED FIRE PROTECTION.

15.7 ALL TEMPORARILY PROTRUDING ENDS OF REINFORCEMENT BARS ARE TO BE ADEQUATELY PROTECTED DURING THE WORKS BY CAPPING THE ENDS. ANY REINFORCEMENT BARS OF 10MM DIAMETER OR LESS ARE TO EITHER BE REPLACED WITH HOOKS ON THEIR ENDS OR PROTECTED BY SECURELY FIXED RIGID BOARDING. ALL TEMPORARY PROTECTIVE MEASURES ARE TO BE REMOVED PRIOR TO THE CASTING OF THE CONCRETE.

15.8 THE INSTALLATION OF ANY PRECAST CONCRETE ELEMENTS IS TO BE UNDERTAKEN TO ENSURE THAT THERE IS NO ADVERSE EFFECTS OF THE STRUCTURAL FRAME. THIS IS OF PARTICULAR CONCERN IN STEEL FRAMES WHERE ADDITIONAL SWAY MAY BE INDUCED BY UNEVEN LOADING OF THE STEEL MEMBERS.

15.9 MANUAL HANDLING OF MATERIALS WHEN MANUAL HANDLING MATERIALS, THE KEY FACTORS TO CONSIDER ARE:  
a) THE TASK – DOES THE ACTIVITY INVOLVE TWISTING, STOOPING, BENDING, EXCESSIVE TRAVEL, PUSHING, PULLING, OR PRECISE POSITIONING OF THE LOAD. SUDDEN MOVEMENT, INADEQUATE REST OR RECOVERY PERIODS, TEAM HANDLING OR SEATED WORKS?  
b) THE INDIVIDUAL – DOES THE INDIVIDUAL REQUIRE UNUSUAL STRENGTH OR HEIGHT FOR THE ACTIVITY, ARE THEY PREGNANT, DISABLED OR SUFFERING FROM A HEALTH PROBLEM? IS SPECIALIST KNOWLEDGE OR TRAINING REQUIRED?  
c) THE LOAD – IS THE LOAD HEAVY, UNWIELDY, DIFFICULT TO GRASP, SHARP, HOT, COLD, DIFFICULT TO GRIP, ARE THE CONTENTS LIKELY TO MOVE OR SHIFT?  
d) THE ENVIRONMENT – ARE THERE SPACE CONSTRAINTS, UNEVEN, SLIPPERY OR UNSTABLE FLOORS, VARIATIONS IN FLOOR LEVELS, EXTREMELY HOT, COLD OR HUMID CONDITIONS, POOR LIGHTING, POOR VENTILATION, GUSTY WINDS, CLOTHING OR PERSONAL PROTECTIVE EQUIPMENT THAT RESTRICTS MOVEMENT?

19.0 UNDERPINNING

19.1 ALL DIMENSIONS ARE IN MILLIMETRES (MM)

19.2 DO NOT SCALE THIS DRAWING WORK TO FIGURED DIMENSIONS ONLY

19.3 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS' DRAWINGS AND THE SPECIFICATION

19.4 ALL WORK IS TO COMPLY WITH THE RELEVANT EUROCODES, BRITISH STANDARDS, CODES OF PRACTICE AND THE BUILDING REGULATIONS

19.5 UNDERPINNING IS TO BE CARRIED OUT IN THE SEQUENCE SHOWN ON THE PLAN. ANY CHANGE IN THE SEQUENCE IS TO BE AGREED WITH THE ENGINEER BEFORE WORK COMMENCES.

19.6 NO SECTION OF UNDERPINNING SHALL BE COMMENCED UNTIL THE PREVIOUSLY SEQUENCED NUMBERED SECTION HAS BEEN TOTALLY COMPLETED.

19.7 24 HOURS MUST ELAPSE BETWEEN CONCRETING A SECTION AND DRY PACKING THE SAME SECTION BETWEEN UNDERPINNING AND EXISTING.

19.8 12 HOURS MUST ELAPSE BETWEEN COMPLETION OF THE DRY PACKING OF A SECTION AND STARTING THE EXCAVATION OF THE NEXT SEQUENCED NUMBERED SECTION.

19.9 THE UNDERSIDE OF EXISTING FOOTING OR BASE IS TO BE THOROUGHLY CLEANED AND ALL LOOSE MATERIAL REMOVED PRIOR TO DRY PACKING.

19.10 EACH UNDERPINNING SECTION IS TO BE LINKED TO THE NEXT SECTION USING 4 NO. H20 DOWEL BARS, MINIMUM LENGTH TO BE 600, WITH 300 EMBEDMENT.

19.11 WIDTH OF UNDERPINNING TO BE AS SHOWN ON DETAILS.

19.12 THE DRY PACK IS TO BE A 1:3 CEMENT/SHARP SAND MIX WITH A MOISTURE CONTENT SUFFICIENT ONLY TO BIND THE MATERIAL UNDER HAND PRESSURE. THE DRY PACK SHOULD BE WELL RAMMED INTO PLACE AND SHOULD FULLY FILL THE GAP BETWEEN THE NEW UNDERPINNING AND THE UNDERSIDE OF EXISTING FOOTING/BASE.

19.13 CONCRETE MIX FOR UNDERPINNING TO BE C32/40 CONCRETE

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T2 NOTE 9.16 ADDED

T1 FOR TENDER

REV/DESCRIPTION

DATE

BY

CHKD

05/07/22

20/12/21

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