

GENERAL NOTES

DO NOT SCALE OFF THIS DRAWING

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL AND ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR / FABRICATOR PRIOR TO COMMENCEMENT OF WORKS. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. ALL WORKS TO BE CARRIED OUT IN STRICT ACCORDANCE WITH THE ENGINEER'S SPECIFICATIONS, RELEVANT BRITISH STANDARDS AND WHERE APPLICABLE LOCAL AUTHORITIES REQUIREMENTS. FOR FINAL SETTING OUT INFORMATION RELATING TO GRID LINES AND WALL POSITIONS REFER TO THE ARCHITECT'S DRAWINGS.

STRUCTURAL STEELWORK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS, MECHANICAL & ELECTRICAL ARCHITECTS DRAWINGS AND SPECIFICATIONS. ALL GRID AND SETTING OUT DIMENSIONS AND LEVELS TO BE CROSS-CHECKED AGAINST ARCHITECT'S DRAWINGS. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH STATUTORY HEALTH AND SAFETY/C.O.M. REGULATIONS, RELEVANT CODES OF PRACTICE AND THE CURRENT EDITION OF THE BUILDING REGULATIONS.

ALL STRUCTURAL STEELWORK SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH BS 5950, NISS (5TH EDITION), THE PROJECT SPECIFICATION AND BS 5950-2:2001.

NOTES TO SUB CONTRACTORS

THE STEELWORK SUPPLIER IS TO SUBMIT DUPLICATE COPIES OF ALL FABRICATION DRAWINGS TO THE ENGINEER FOR EXAMINATION AND COMMENT WELL IN ADVANCE OF FABRICATION (MIN. 5 WORKING DAYS).

THE STEELWORK SUB CONTRACTOR SHOULD ALLOW IN HIS TENDER FOR USING WITH THE CHOSEN SUPPLIER OF MASONRY SUPPORT SYSTEMS AND WINDPROTS/RAILS (BE ANCON OR SIMILAR APPROVED) TO DETERMINE THE FIXING REQUIREMENTS OF SUCH ITEMS BACK TO THE MAIN FRAME STEELWORK.

THE STEELWORK FABRICATOR SHOULD MAKE PROVISION FOR FIXING POINTS etc FOR THE CONNECTION OF SAFETY HARNESSES WHERE NECESSARY TO SUIT THE PROPOSED ERECTION PROCEDURE IN ACCORDANCE WITH THE RELEVANT HEALTH AND SAFETY GUIDELINES.

THE STEELWORK FABRICATOR SHOULD ALSO INCLUDE IN HIS TENDER FOR THE PROVISION OF ERECTION LIFTING POINTS FOR THE SAFE ERECTION OF STEELWORK.

ALL STEEL LEVELING AND PACKING SHIMS TO BE PROVIDED BY STEELWORK SUPPLIER.

**STEELWORK GRADES:** ALL STEELWORK HOT ROLLED UNLESS NOTED OTHERWISE. COLUMNS TO BE GRADE S355 BEAMS TO BE GRADE S355. ALL RHS, RSA AND SHS TO BE GRADE S355. ALL PLATES AND FLATS TO BE GRADE S355.

**STITCH WELDING:** FOR ALL PLATES OR ANGLES SHOWN IN SECTIONS TO BE WELDED TO STEELWORK, STITCH WELD 150mm HIT / 150mm MISS UNLESS NOTED OTHERWISE.

**CORROSION PROTECTION:** 100 MICRON OF EPIGRIP C400 ZINC PHOSPHATE PRIMER THROUGHOUT. CAVITIES OR VOIDS UNPROTECTED BY A VAPOUR BARRIER OR LOCATIONS WHERE CONDENSATION MAY BE PRESENT EPIGRIP C400 ZINC PHOSPHATE PRIMER TO BE INCREASED TO 250 MICRON.

ALL STRUCTURAL EXPOSED STEELWORK SECTIONS AND STEELWORK SECTIONS LOCATED BELOW GROUND LEVEL SHALL BE HOT DIPPED GALVANISED OR SURROUNDED IN CONCRETE TO GIVE 100mm MINIMUM COVER.

**CONNECTIONS:** INCLUDING THE COLUMN BASEPLATES SHALL BE DESIGNED BY THE STEELWORK SUBCONTRACTOR. ALL BEAM CONNECTIONS TO HAVE FULL BEAM DEPTH FIN PLATES. MINIMUM CONNECTION TO BE 4 M16 GRADE 8.8 BOLTS OR THE EQUIVALENT IN WELD. FIRE PROTECTION TO ARCHITECT'S DETAILS.

ALL BOLTS ARE TO BE GRADE 8.8 TO BS 3692-2001, UNLESS NOTED OTHERWISE, AND HOT DIP SPUN GALVANISED TO BS EN ISO 1461:1999.

ALL WELDING SHALL COMPLY WITH BS EN10111-2:2001 AND BS EN10111-1:1998 U.N.O. AND ALL FILLET WELDS SHALL HAVE A MIN THROAT THICKNESS OF 6mm U.N.O.

**STRUCTURAL FIRE PROTECTION (WHERE APPLICABLE):** THE STRUCTURAL FRAME, BEAMS, COLUMNS AND LOADBEARING WALLS SHALL BE RATED TO MIN. 60 MINUTES FIRE RESISTANCE. THIS DOES NOT INCLUDE MEMBERS THAT SUPPORT ONLY THE ROOF. REFER ALSO TO ARCHITECT'S SPECIFICATION.

ALL BEAMS THAT ARE CONCRETE ENCASED SHALL INCORPORATE A MINIMUM OF ONE LAYER D49 WRAPPING FABRIC AROUND BEAM. COVER TO WRAPPING FABRIC TO BE NOT LESS THAN 25mm U.N.O.

PLAIN CONCRETE

C16/C20 PLAN CONCRETE USED IN FOUNDATIONS TO HAVE:-  
MINIMUM CEMENT CONTENT OF 225kg/m<sup>3</sup>  
WATER/CEMENT RATIO OF 0.7.  
MAXIMUM SIZE OF AGGREGATE TO BE 20mm

GC TO ENSURE ALL GROUND EXCAVATIONS ARE STABLE AND SECURELY SHORED. ADVICE ON THIS MATTER MAY BE OBTAINED FROM THE STRUCTURAL ENGINEER.

REINFORCED CONCRETE

REINFORCED CONCRETE TO BE GRADE C28/35

MINIMUM CEMENT CONTENT 300 kg/m<sup>3</sup>  
WATER/CEMENT RATIO OF 0.6  
MAXIMUM AGGREGATE SIZE 20mm.

MINIMUM CONCRETE COVER TO BE 40mm TOP, 40mm BTM AND SIDES UNLESS NOTED OTHERWISE. ALL REINFORCEMENT TO BE GRADE B500B OR B500C AS BS4449 AND TO BE CUT AND BENT TO BS8666.

ALL REINFORCEMENT SHALL BE ACCURATELY PLACED, SECURED AND MAINTAINED IN POSITION. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY STOODS, CHAIRS AND SPACERS REQUIRED TO SUPPORT AND RESTRAIN REINFORCEMENT.

MESH REINFORCEMENT TO HAVE A MINIMUM LAP OF 460mm UNLESS NOTED OTHERWISE.

ALL CONCRETE TO BE ADEQUATELY VIBRO COMPACTED (ON PLACING) TO ENSURE THAT ALL VOIDS ARE REMOVED.

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH ALL THE RELEVANT BRITISH STANDARD CODES OF PRACTICE.

FOUNDATIONS

FOUNDATIONS TO BE TAKEN DOWN TO STRATA CAPABLE OF BEARING 100kN/m<sup>2</sup>. BEARING STRATA TO BE APPROVED BY THE ENGINEER. FINAL DEPTH OF FOUNDATIONS TO BE AGREED ON SITE WITH LOCAL BUILDING INSPECTOR.

GC TO ENSURE ALL GROUND EXCAVATIONS ARE STABLE AND SECURELY SHORED AND BRACED. ADVICE ON THIS MATTER MAY BE OBTAINED FROM THE STRUCTURAL ENGINEER.

T4	15.11.19	AP	DRAWING UPDATED AT LOCATIONS INDICATED.	EJH
T3	01.08.19	AP	DRAWING UPDATED AT LOCATIONS INDICATED.	EJH
T2	17.03.19	AP	DRAWING UPDATED AT LOCATIONS INDICATED.	EJH
T1	17.03.19	AP	TENDER ISSUE.	EJH
Rev	Date	Checked	Description	By

TENDER DRAWING



**Sutcliffe**  
Unit 5, Brewery Yard  
Deva Centre  
Salford, M37BB  
t: 0161 817 5180  
e: sutcliffe@sutcliffe.co.uk  
www.sutcliffe.co.uk



Client  
**MERSEYTRAVEL**

Project  
**KINGSWAY TUNNEL APPROACH WALLASEY**

Drawing title  
**CANOPY FOUNDATION AND ROOF PLANS**

Scale at A1	AS SHOWN @ A1	Drawing number	
Drawn by	EH	30015-300	
Date	FEB 19	Revision suffix	T4

