#### GENERAL NOTES:

#### 1.0 GENERAL

- 1.1 WHERE ISSUED, MORAN O'CONNOR CONSULTING ENGINEERS MASTER STRUCTURAL SPECIFICATION SHALL OVERRIDE THE SPECIFICATIONS ON THIS AND SUBSEQUENT DRAWINGS FOR THIS PROJECT.
- 1.2 NO DIMENSIONS SHALL BE SCALED FROM DRAWINGS. ALL DIMENSIONS SHALL BE ESTABLISHED ON SITE.
- 1.3 THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN (a) THE STRUCTURAL PLANS AND THE SECTIONS AND (b) THE STRUCTURAL DRAWINGS AND THOSE OF THE ARCHITECT BEFORE IMPLEMENTING THE WORK
- 1.4 THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND THE ENGINEER OF ANY DISCREPANCIES BETWEEN MORAN O'CONNOR CONSULTING ENGINEERS DRAWINGS AND SITE CONDITIONS REFORE IMPLEMENTING THE
- 1.5 THIS DRAWING SHALL BE READ WITH ALL ARCHITECTS DRAWINGS FOR CONSTRUCTION DETAILS. PLUMBING, DRAINAGE, ELECTRICAL WORK, HEATING WORK, INSULATION, DAMP PROOF DETAILS, VENTILATION FINISHES, JOINERY ETC.
- 1.6 ANY TEMPORARY WORKS NECESSARY SHALL BE THE SOLE RESPONSIBILITY OF THE MAIN CONTRACTOR
- 1.7 ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH TGD PARTS A-M
- 1.8 ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE 'CODE OF PRACTICE FOR INSPECTING AND CERTIFYING BUILDINGS AND WORKS AND S.I. No. 9 OF 2014, BOTH PUBLISHED BY THE DEPARTMENT OF THE ENVIRONMENT, COMMUNITY AND LOCAL GOVERNMENT
- 1.9 ALL WORKS TO BE CARRIED OUT IN COMPLIANCE WITH CURRENT HEALTH & SAFETY AUTHORITY
- 1.10 ALL WORKS TO BE CARRIED OUT IN COMPLIANCE WITH THE SAFETY, HEALTH & WELFARE AT WORK (CONSTRUCTION) REGULATIONS 2013.

#### 2.0 FOUNDATIONS

- 2.1 ALL FOUNDATIONS ARE SUBJECT TO SITE CONDITIONS AND MAY BE VARIED AS THE WORKS PROCEED.
- 2.2 ALL FOUNDATIONS ARE SUBJECT TO THE APPROVAL OF THE LOCAL AUTHORITY AND THE ENGINEER. THE ENGINEER MAY REQUIRE TO INSPECT THE FORMATION OF ANY BASE PRIOR TO THE BLINDING OR CONCRETE WORK
- 2.3 FOLLOWING APPROVAL OF THE FOLINDING SURFACE THE EXCAVATION SHALL BE BOTTOMED OUT AS NECESSARY AND FOUNDATION CAST IMMEDIATELY OR BLINDED IMMEDIATELY WITH GRADE C12/15 DMAX

#### 3.0 CONCRETE

- 3.1 CONCRETE SHALL BE GRADE C30/37 Dmax 20 LINLESS NOTED OTHERWISE
- 3.2 LEAN MIX CONCRETE SHALL BE GRADE C12/15 Dmax 20 UNLESS NOTED OTHERWISE
- 3.3 READY MIXED CONCRETE MAY BE USED PROVIDED THAT IT SHALL BE PRODUCED AT AN APPROVED DEPOT. ALL CONSTITUENTS FOR EACH MIX SHALL BE ADDED AT THE MANUFACTURERS DEPOT. NO EXTRA NATER OR OTHER MATERIAL SHALL BE ADDED AFTER THE CONCRETE HAS LEFT THE DEPOT
- 3.4 CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE WILL NOT BE PERMITTED.
- 3.5 ACCEPTABLE SAFE LOAD TABLES MUST BE PROVIDED BY THE SUPPLIER OF ANY CONCRETE LINTELS.
- 3.6 STEEL MESH REINFORCEMENT FABRIC SHALL COMPLY WITH BS 4482 AND BS 4483 AND SHALL BE GRADE 500B, ALL LAPS TO BE MIN 400mm
- 3.7 ALL REINFORCED CONCRETE SHALL BE WELL VIBRATED IN ITS FORMWORK LISING MECHANICAL POKERS OF APPROPRIATE TYPE.
- 3.8 ALL STEEL REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH EN 1992-1-1:2005.
- 3.9 ALL CHAIRS AND SPACERS TO BE PROVIDED BY MAIN CONTRACTOR.
- 3.10 ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH IS EN 1992-1-1:2005 EUROCODE 2: DESIGN
- 3.11 APPROVAL MUST BE OBTAINED FOR THE POSITION OF ANY CONSTRUCTION JOINT REQUIRED BY THE CONTRACTOR AND FOR THE METHODS OF FORMING AND PREPARING THE JOINTS BEFORE THE WORK STARTS ON SITE.
- 3.12 WHEN DIRECTED ALL TESTS ON WET OR HARDENED CONCRETE SHALL BE CARRIED OUT IN ACCORDANCE WITH BS 1881.
- 3.13 REBAR QUANTITIES TO BE TAKEN AS 325kg/m³ OF CONCRETE UNLESS NOTED OTHERWISE.

#### 4.0 HARDCORE

- 4.1 HARDCORE BENEATH GROUND SUPPORTED FLOORS SHOULD BE T1 STRUCTURAL CRUSHED ROCK 0/31.5 IS EN 1993-1-1:2005 EUROCODE 3: DESIGN OF STEEL STRUCTURES UNBOUND GRANULAR FILL AT LEAST 200MM IN THICKNESS. HARDCORE SHALL BE PLACED AND COMPACTED, IN LAYERS NOT EXCEEDING 225MM, IN ACCORDANCE WITH THE BUILDING REGULATIONS (TGD C 'SITE PREPARATION & RESISTANCE TO MOISTURE') AND SHALL CONFORM TO ANNEX F OF S.R.21-2014 + A1-2016 'GUIDANCE ON THE USE OF I.S. EN13242:2002 - AGGREGATES FOR UNBOUND AND HYDRAULICALLY BOUND MATERIALS FOR USE IN CIVIL ENGINEERING WORK AND ROAD CONSTRUCTION (INCORPORATING AMENDMENT 1.2016)
- 4.2 GENERAL RULES FOR USE OF THE DIFFERENT TYPES OF S.R.21 ANNEX E MATERIALS IS AS FOLLOWS:
- T3 BLIND LISED IN ALL CASES TO BLIND OFF THE TOP LAYER OF THE HARDCORE AND SO IS LISED MMEDIATELY BELOW THE RADON BARRIER / DPM TO MITIGATE THE RISK OF PLINCTLIRE
- T2 PERM GAS PERMEABLE MATERIAL AND MUST BE USED BENEATH THE BLINDING LAYER AND WHEREVER A RADON SUMP IS PRESENT. THE LAYER MUST NOT BE LESS THAN 200mm IN DEPTH. FOR RESIDENTIAL LOADING, "T2 PREM" MAY BE USED AS THE SOLE FILL MATERIAL UP TO A MAXIMUM OF 900mm OR "T1 STRUC" MAY BE USED BENEATH IT.

T1 STRUC - CAN BE USED BENEATH BLINDING LAYER WHERE GAS PERMEABLE LAYER (T2 PERM) IS NOT REOUIRED OR CAN BE USED UNDER 200mm OF "T2 PERM" TO ANY DEPTH.

TO STRUC - MAY BE USED UP TO A LEVEL NOT CLOSER THAN 900mm BELOW THE RADON BARRIER/DPM. THEREAFTER "T1 STRUC" AND/OR "T2 PERM" IS LISED TO MAKE UP THE 900mm TO RADON BARRIER/DPM

#### 5.0 STRUCTURAL STEELWORK

- 5.1 ALL STRUCTURAL STEELWORK SHALL BE MANUFACTURED FROM STEEL COMPLYING WITH THE FOLLOWING CRITERIA:
- A) HOT ROLLED SECTIONS I.E. UNIVERSAL BEAMS, UNIVERSAL COLUMNS, ASYMMETRIC STEEL BEAMS, ROLLED 7.0 BRICKWORK AND BLOCKWORK STEEL JOISTS, STRUCTURAL TEES, ROLLED STEEL CHANNELS, PARALLEL FLANGE CHANNELS, ROLLED STEEL ANGLES, AND PLATES SHALL BE GENERALLY GRADE \$275 or \$355 (WHERE NOTED ON THE DRAWINGS)
- B) STEEL SUB GRADES SHALL BE:
- i) BASE PLATES: S275 JR
- iii) EXTERNAL STEELWORK ii) INTERNAI STEELWORK
- T < 22.5mm, = BS EN 10025-2-S275 JR +AR T < 40mm, = BS EN 10025-2-S275 JR +AR T > 40mm, = BS EN 10025-2-S275 JO +AR T > 22.5mm, = BS EN 10025-2-S275 JO +AR T < 225mm = RS EN 10025-2-S355 IR + ART < 12.5mm. = BS FN 10025-2-S355 JR +AR T > 22.5mm. = BS EN 10025-2-S355 JO +AR T > 12.5mm, = BS EN 10025-2-S355 JO +AR
- iv) STRUCTURAL HOLLOW SECTIONS:

INTERNAL & EXTERNAL STEELWORK = BS EN 10025-1-S355 JOH

- C) ALL SECTIONS SHALL COMPLY WITH THE FOLLOWING STANDARDS: UKB'S + UKC'S BS EN 10025-2; BS4-1 UKPFC'S BS FN 10025-2: BS4-1
- UKA'S BS FN 10025-2: BS FN 10056-1 STRUCTURAL TEE'S BS EN 10025-2; BS4-1  $\mathsf{HR}\ \mathsf{SHS'S},\ \mathsf{CHS'S},\ \mathsf{RHS'S}$ BS EN 10210-1; BS EN 10210-2
- D) STRUCTURAL HOLLOW SECTIONS LE. SOLIARE, RECTANGULAR AND CIRCULAR HOLLOW SECTIONS SHALL BE GENERALLY GRADE S355, SUBGRADE JOH UNLESS NOTED OTHERWISE ON THE DRAWINGS. COLD FORMED SECTIONS ARE NOT PERMITTED FOR USE ON THE MAIN FRAME
- E) STEEL GRATING FOR OPEN TYPE FLOORING SHALL BE GALVANIZED GRADE \$275 TO BS EN 10025 UNLESS NOTED OTHERWISE ON THE DRAWINGS. OPEN GRID FLOORING PATTERN TO BE 41/100.
- F) STRUCTURAL STAINLESS STEEL SECTIONS, PLATES AND GRATING SHALL BE GRADE 1.4307 (304L) OR 1.4404 (316L) TO BS EN 10088.
- DESIGN SHALL BE IN ACCORDANCE WITH THE STEEL CONSTRUCTION INSTITUTE'S PUBLICATION NO. SCI P291 PROCESS. STRUCTURAL DESIGN OF STAINLESS STEEL.
- 5.2 THE STRUCTURAL STEELWORK SUPPLIER SHALL TAKE ALL SITE DIMENSIONS NECESSARY PRODUCE SHOP FABRICATION DRAWINGS AND SUBMIT THEM TO THE ENGINEER FOR HIS INSPECTION. NO FABRICATION TO BE CARRIED OUT WITHOUT THE ENGINEERS AGREEMENT. UNI ESS OTHERWISE SHOWN ON THE DRAWINGS THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE CONNECTIONS TO SATISFY THE LOADS SHOWN ON THE DRAWINGS OR CALCULABLE FROM THE INFORMATION GIVEN.
- A) MAIN CONNECTION DETAILS ARE GIVEN ON THE DRAWINGS, WHERE CONNECTION DETAILS ARE NOT SPECIFIED USE A MINIMUM OF 4 NO. M20 GRADE 8.8 BOLTS WITH 12MM THICK END PLATES SHOP WELDED WITH 6MM FULL PROFILE FILLET WELD.
- B) THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS INCLUDING BASE PLATES. CONNECTIONS SHOWN ARE INDICATIVE ONLY. THE CONNECTIONS SHALL BE DESIGNED FOR THE FORCES & MOMENTS SHOWN ON THE DRAWINGS CALCULATIONS & JOINT DETAILS TO BE SUBMITTED FOR THE ENGINEER FOR REVIEW 7 DAYS PRIOR TO FABRICATION. BOLTS IN DIRECT TENSION TO BE FITTED WITH LOCK NUTS. ALL CONNECTIONS TO BE DESIGNED FOR 100KN (+ OR -) AXIAL & 100KN SHEAR MINIMUM (ULTIMATE LOADS), BASE PLATES CONNECTIONS TO BE DESIGNED FOR A LATERAL LOAD EQUAL TO 2.5% OF THE AXIAL COLUMN LOAD, FOR LARGE LATERAL LOAD SITUATIONS ON THE BASE PLATES THE BASE PLATE IS TO BE PROVIDED WITH A SHEAR KEY OR TO BE CAST INTO A SHALLOW POCKET IN THE FOUNDATION
- 5.3 ALL WELDING SHALL BE CARRIED OUT BY APPROPRIATELY CERTIFICATED WELDERS. NO SITE WELDING OF STEELWORK WILL BE PERMITTED. CONTRACTOR TO ALLOW FOR ALL STEEL CONNECTIONS TO BE BOLTED. ANY CAP, BASE OR END PLATE WELDING MUST BE SHOP-FABRICATED, ALL PLATES TO BE MIN. 12mm THICK U.N.O. ALL BOLTS TO BE M20Ø U.N.O.
- 5.4 ALL BOLTS SHALL BE GRADE 8.8 BOLTS UNLESS NOTED OTHERWISE.
- 5.5 ALL BEAMS WITH END CAST INTO CONCRETE SHALL BE SUPPLIED WITH 2 NO 50x 50 x 5 RSA END CLEATS WELDED TO THEIR WEBS.
- 5.6 ALL STRUCTURAL STEELWORK SHALL BE CLEANED OF ALL RUST, MILLSCALE, GREASE ETC.
- 5.7 ALL STRUCTURAL STEELWORK SHALL BE SHOT CLEANED TO SA  $2\frac{1}{2}$  AND SHALL BE PAINTED WITH 75 MICRONS OF ZINC RICH PHOSPHATE PRIMER OR SIMILAR APPROVED
- 5.8 ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH
- 5.9 UNLESS OTHERWISE NOTED ALL STRUCTURAL STEELWORK TO BE PAINTED WITH INTUMESCENT PAINT SYSTEM TO PROVIDE 1hr FIRE PROTECTION WITH PAINT SPECIFICATION TO BE AGREED WITH ENGINEER PRIOR TO APPLICATION WITH PAINT SUPPLIER CERTIFICATE PROVIDED
- 5.10 ALL STEEL COLUMNS TO BE PAINTED WITH TWO COATS OF BITUMINOUS PAINT ON SITE UP TO GROUND FLOOR LEVEL.

#### 6.0 LINTELS

- 6.1 LINTEL WIDTHS ARE TO MATCH THE THICKNESS OF THE MASONRY LEAFS THEY ARE SUPPORTING AND ARE TO HAVE MINIMUM END BEARINGS AS FOLLOWS:
- FOR CLEAR SPANS UP TO 2000mm Min. END BEARING = 225mm FOR CLEAR SPANS GREATER THAN 2000mm Min. END BEARING = 300mm.
- FOR CLEAR SPANS GREATER THAN 2000mm BEARING LENGTH TO BE DESIGNED TO ULTIMATE LIMIT STRESS IN 9.9 ALL DRAINAGE TO COMPLY WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE BLOCKWORK UNDER BEARING 1.2N/mm<sup>2</sup>.

- 6.2 CONTRACTOR TO CONFIRM WITH LINTEL SUPPLIER THAT ALL LINTELS ARE DESIGNED FOR SPECIFIC LOADINGS. ALL CLEAR OPENING DIMENSIONS ARE TO BE CONFIRMED BY ARCHITEC
- 6.3 LINTELS OVER OPENINGS IN 100 / 215 THICK SOLID BLOCKWORK WALLS TO BE 100 / 215 WIDE x 65 DEEP PRE-STRESSED, PRE-CAST CONCRETE LINTEL BY KILLESHAL OR SIMILAR APPROVED.
- 6.4 LINTELS OVER OPENINGS IN 100 / 215 THICK SOLID BLOCKWORK EXISTING WALLS TO BE 100 / 215 WIDE x 215 DEEP PRE-CAST CONCRETE LINTEL BY KILLESHAL OR SIMILAR APPROVED
- 6.5 PROVIDE HEAVY DUTY CATNIC STEEL LINTELS OVER DOOR AND WINDOW OPENINGS IN CAVITY WALLS WITH CAVITIES UP TO MAX. 150mm (BY STEELITE OR SIMILAR APPROVED) U.N.O.

- 7.1 NOMINAL MORTAR MIXES BY VOLUME ARE APPROPRIATE FOR SAND GRADED TO BS 1200
- 7.2 BRICKS SHALL BE 50/35 N/mm2 BRICKS IN 1:1:6 MORTAR U.N.O.
- 7.3 FACING BRICKS SHALL BE TO THE ARCHITECTS CHOICE AND SHALL BE SUITABLE FOR THE PURPOSE
- 7.4 BRICKS BELOW DPC LEVEL SHALL BE SUITABLE FOR THE PURPOSE
- 7.5 THE LAYING OF SINGLE FROG UNITS FROG DOWN SHALL NOT BE PERMITTED IN LOADBEARING WALLING. DOUBLE FROGGED UNITS SHALL BE LAID WITH THE LARGER FROG UPPERMOST
- 7.6 BLOCKS SHALL BE 7.5N/mm2 BLOCKS IN 1:1:6 MORTAR U.N.O
- 7.7 ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH EN 1996-1-1:2005 EUROCODE 6 - DESIGN OF MASONRY STRUCTURES
- 7.8 ALL AGGREGATE USED FOR NEW BLOCKWORK SUPPLIED TO SITE SHALL BE FREE OF PYRITES AND ANY OTHER DELETERIOUS OR SWELLING MATERIAL WITH CONFIRMATION LETTER PROVIDED BY BLOCK SUPPLIER AND ISSUED TO THE ARCHITECT AND ENGINEER
- 7.9 WALL TIES TO BE PLACED @ MAX. 450mm VERTICAL c/c. AND @ MAX. 450mm HORIZONTAL c/c. ADDITIONAL WALL TIES TO BE PLACED @ MAX. 225mm VERTICAL c/c EITHER SIDE OF WINDOW AND DOOR OPENINGS AND VERTICAL MOVEMENT JOINTS.

#### 8.0 TIMBER

- 8.1 ALL TIMBER SHALL BE MINIMUM GRADE C16 TO IS 444 UNLESS NOTED OTHERWISE. SERVICE MOISTURE CONTENT SHALL NOT EXCEED 18%. MOISTURE CONTENT ON ERECTION SHALL BE WITHIN 3% OF SERVICE MOISTLIRE CONTENT
- 8.2 ALL ROOF AND MANSARD TIMBERS SHALL BE TREATED WITH ORGANIC SOLVENT BY DOUBLE VACUUM
- 8.3 ALL TIMBER IN CONTACT WITH MASONRY EXTERNAL WALLS SHALL BE TREATED WITH ORGANIC SOLVENT
- 8.4 JOIST HANGERS BUILT INTO NEW BLOCKWORK SHALL BE CAVITY WALL TYPE HANGERS. ALL JOIST HANGERS SHALL BE HEAVY DUTY TYPE FABRICATED IN ACCORDANCE WITH BS 6178 PART 1: 1982 FROM 2.5mm MILD STEEL AND SHALL BE HOT DIP GALVANISED TO BS 729: 1971.
- 85. ALL DOUBLE JOISTS SHALL BE BOLTED TOGETHER WITH 12mm DIAMETER HOT DIP GALVANISED BOLTS. AT 450 CENTRES STAGGERED TOP AND BOTTOM.
- 8.6 ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH EN 1995-1-1;2005 EUROCODE 5 - DESIGN OF TIMBER STRUCTURES
- 8.7 ALL TIMBER TO BE STRAPPED TOGETHER AND DOWN TO MASONRY AS PER THE CURRENT BUILDING REGULATIONS AND TECHNICAL GUIDANCE DOCUMENT 'A'.

#### 9.0 DRAINAGE

- ADDITIONAL SERVICES NOT IDENTIFIED ON THIS DRAWING MAY BE PRESENT ON OR ADJOINING THE SITE. THE EXACT LOCATIONS AND LEVELS OF ALL EXISTING SERVICES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING THE WORKS
- 9.2 FOR EXACT LOCATION OF PROPOSED SERVICES, SERVICE OPENINGS, EXTERNAL DUCTING AND LIGHTING REFER TO BUILDING SERVICE ENGINEERS DRAWINGS
- 9.3 CONCRETE ENCASEMENT:
- ALL upvc pipework with less than 1200mm cover to have minimum 150mm grade c16/20 concrete FNCASEMENT CONCRETE SURROUND TO HAVE MINIMUM 25mm THICK MOVEMENT JOINT AT MAXIMUM
- 9.4 ALL PIPEWORK PASSING THROUGH FOUNDATIONS TO BE SLEEVED USING A 300mm SECTION OF PIPE CAST INTO THE FOUNDATION WITH ROCKER JOINTS PROVIDED WITHIN ONE METRE FROM FACE OF THE FOUNDATION.
- 9.5 ALL GUILLY TRAPS LOCATED IN TOPSOIL AREAS TO HAVE MINIMUM 100mm CONCRETE SURROUND.
- 9.6 LOCATION OF ALL BUILDING R.W.P.'s AND S.V.P.'s TO BE CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION.
- 9.7 THE CONTRACTOR SHOULD PAY PARTICULAR ATTENTION TO CLAUSES OF THE LM CONSULTING ENGINEERS SPECIFICATION REGARDING THE INCLUSION OF A C.C.T.V. SURVEY OF ALL UNDERGROUND DRAINAGE ON COMPLETION OF WORKS
- IN ADDITION THE CONTRACTOR IS TO PRESSURE TEST ALL CONSTRUCTED SEWERS & WATERMAINS PRIOR TO CONNECTION TO PUBLIC SERVICES. ALL TESTING TO BE TO THE SATISFACTION OF THE APPROPRIATE LOCAL ALITHORITY REPRESENTATIVE / LM CONSULTING ENGINEERS
- 9.8 MINIMUM COVER TO UNDERGROUND SERVICES TO BE IN ACCORDANCE WITH PLANNING CONDITIONS. ALL SEWERS TO BE LAID WITH A MINIMUM COVER OF 1.2 METRES IN ROADS & DRIVEWAYS, 0.9 METRES IN OPEN SPACES AND FOOTPATHS NOT ADJACENT TO CARRAIGEWAYS AND 0.6 METRES IN GARDENS/GRASSED AREAS. WHERE IT IS NOT POSSIBLE TO ACHIEVE THESE COVERS, PIPES SHALL BE BEDDED AND SURROUNDED IN CONCRETE 150mm THICK U.N.O.

#### 10 TEMPORARY WORKS NOTES

- 10.1 A FULLY DETAILED DELAPIDATION AND PHOTOGRAPHIC SURVEY ON EXISTING AND ADJOINING PROPERTIES ROADS FOOTPATHS SERVICES FTC SHALL BE CARRIED OLIT BY HTTE CONTRACTOR AND SUBMITTED TO THE ENGINEER AND ANY ADJOINING OWNERS/REPRESENTITIVES OR OTHER RELEVANT PARTIES. THE MAIN CONTRACTOR SHALL MONITOR ANY DISTRESS NOTED ON ADJOINING STRUCTURES ETC USING AN APPROVED METHOD I.E. TELL TALES OR SIMILAR.
- 10.2 ALL TEMPORARY WORKS TO BE FULLY INSTALLED PRIOR TO ANY DEMOLITION TAKING PLACE ANY EXPOSED ELEMENTS ON EXISTING BUILDINGS RETAINED/PARTY WALL TO BE WEATHER PROOFED DURING
- 10.3 TEMPORARY WORKS DESIGN AND CERTIFICATE PREPARED BY A SUITABLY OUALIFIED AND INSURED ENGINEER TO BE SUBMITTED FOR APPROVAL
- 10.4 TEMPORARY WORKS CONTRACTOR TO PLACE "TELL TALES" AT ALL MAJOR CRACKS AND OTHER LOCATIONS AS AGREED WITH MORAN O'CONNOR CONSULTING ENGINEERS.
- 10.5 METHOD OF DEMOLITION OF EXISTING BLIILDINGS TO BE SLICH THAT NO LINDLE DISTRESS IS CALISED. TO ADJOINING STRUCTURES BY VIBRATION OR OTHERWISE.
- 10.6 METHOD/PROGRAMME FOR DEMOLITION TO BE AGREED BETWEEN MAIN CONTRACTOR AND DEMOLITION
- 10.7 CONTRACTORS METHOD OF DEMOLITION TO BE IN COMPLIANCE WITH THE CURRENT HEALTH AND SAFETY REGULATIONS AND RELEVANT CODES OF PRACTICE.
- 10.8 ANY UNFORESEEN CIRCUMSTANCES ON SITE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER
- 10.9 ALL SERVICES ON SITE TO BE REPOUTED OR MADE REDUNDANT BY MAIN CONTRACTOR OR OTHERWISE IN CONJUNCTION WITH LOCAL AUTHORITIES AND RELEVANT SERVICE PROVIDERS.
- 10.10 ALL CORNERS OF BUILDINGS TO BE INSPECTED TO SEE IF THE WALLS ARE STRUCTURALLY BONDED TOGETHER, WALL WHERE CORNERS ARE NOT BONDED TO BE TIED INTERNALLY ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER
- 10.11 ALL WHALERS (i.e. HORIZONTAL UKC'S, PFC'S ETC.) TO COINCIDE WITH EXISING FLOOR LEVELS OF BUILDINGS BEING RETAINED.
- 10.12 ALL WHALERS AND OTHER STEEL FIXINGS TO RETAINED WALLS OR OTHERWISE TO BE PACKED TIGHTLY TO FACE OF THE WALL WITH WET MIX MORTAR. 10.13 ALL WHALERS TO BE BOLTED TO EXISTING WALLS WITH UPAT M12Ø UKA3 CHEMICAL ANCHORS
- @ 1.0m c/c. 10.14 WELDS TO BE 6mm FULL PROFILE FILLET WELDS UNLESS NOTED OTHERWISE
- 10.15 ALL STEEL TO BE GRADE \$275 JO. TIMBER TO BE GRADE C16 AND CONCRETE TO BE GRADE C35N20 UNLESS NOTED OTHERWISE

#### 11 CONSTRUCTION PRODUCTS

11.1 CONSTRUCTION PRODUCTS SUPPLIED ON THIS PROJECT ARE TO BE IN ACCORDANCE WITH THE FLI CONSTRUCTION REGULATION (No. 305/2011-CPR). PRODUCTS ARE TO BEAR THE CE MARKING LABEL AND ARE TO BE IN ACCORDANCE WITH THE HARMONISED EUROPEAN STANDARDS (hENs) OR, FOR PRODUCTS NOT COVERED BY THE BENS. ARE TO BE IN ACCORDANCE WITH THE FUROPEAN ASSESSMENT DOCUMENTS. (EADs). THE NATIONAL STANDARDS AUTHORITY OF IRELAND (NSAI) HAS PRODUCED ADDITIONAL GUIDANCE TO SOME HENS IN THE FORM OF NATIONAL ANNEXES OR STANDARD RECOMMENDATIONS (SRs) WHICH SET OUT APPROPRIATE MINIMUM PERFORMANCE LEVELS FOR SPECIFIC INTENDED LISES OF THE PRODUCT IN IRELAND NSAI HOST THIS INFORMATION AT WWW.NSAI.IE

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>
> Tet: 086-8128800 Email: contactus@mocaie

# GENERAL NOTES: THIS SPECIFICATION SHOULD BE READ IN CONJUNCTION WITH ALL DRAWINGS FOR Draft Issue



PROJECT TITLE Alterations and Extension to LOCATION No. 3 Hawthorn Avenue, East Wall, Dublin

DRAWING TITLE General Notes and Specification

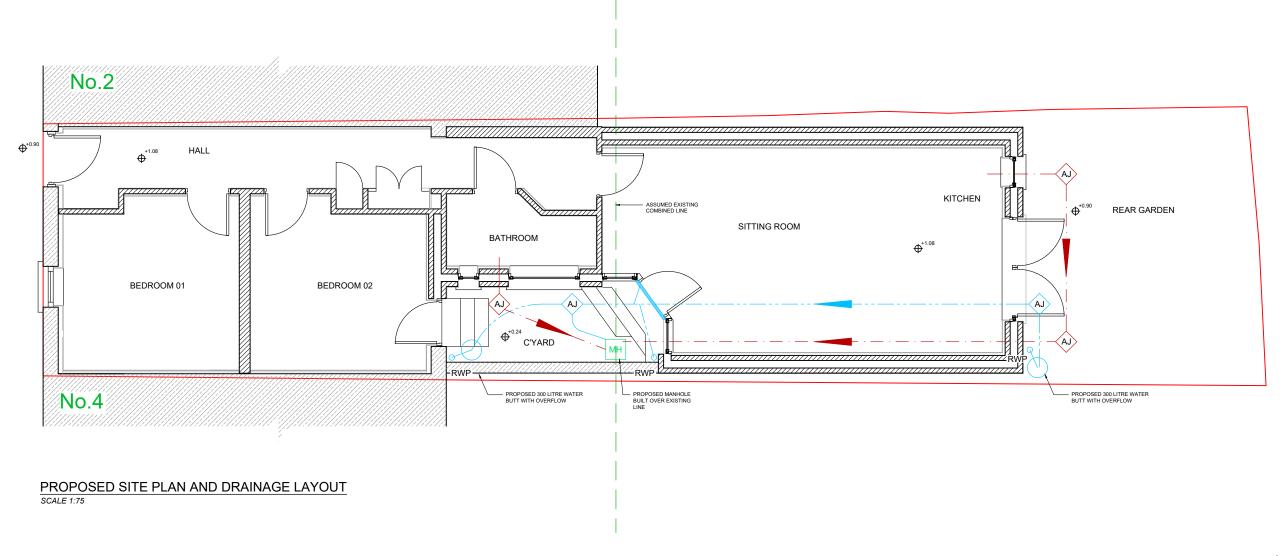
DRAWN BY COC CHKD BY DAM STATUS Draft

DATE 24/10/23 SCALE nts @ A3

DRG. No. S1084-001







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#### GENERAL NOTES:

1. REFER TO DRAWING No. S1084/001 FOR GENERAL NOTES & STRUCTURAL SPECIFICATION & BUILDERS WORKS ITEMS

2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL DRAWINGS FOR PROJECT \$1084.

3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

#### LEGEND:

SITE BOUNDARY

PROPOSED SURFACE WATER DRAINAGE (100Ø PVC PIPEWORK U.N.O.) PROPOSED SURFACE WATER ACCESS JUNCTION

EXISTING COMBINED WATER DRAINAGE

PROPOSED FOUL WATER DRAINAGE (100Ø PVC PIPEWORK U.N.O.)

PROPOSED FOUL WATER ACCESS JUNCTION



PROPOSED COMBINED WATER MANHOLE

COC DAM
drn by chkd by A 24/10/23 rev. date Draft Issue



CLIENT NAME Strange Ways Ltd. PROJECT TITLE Alterations and Extension to

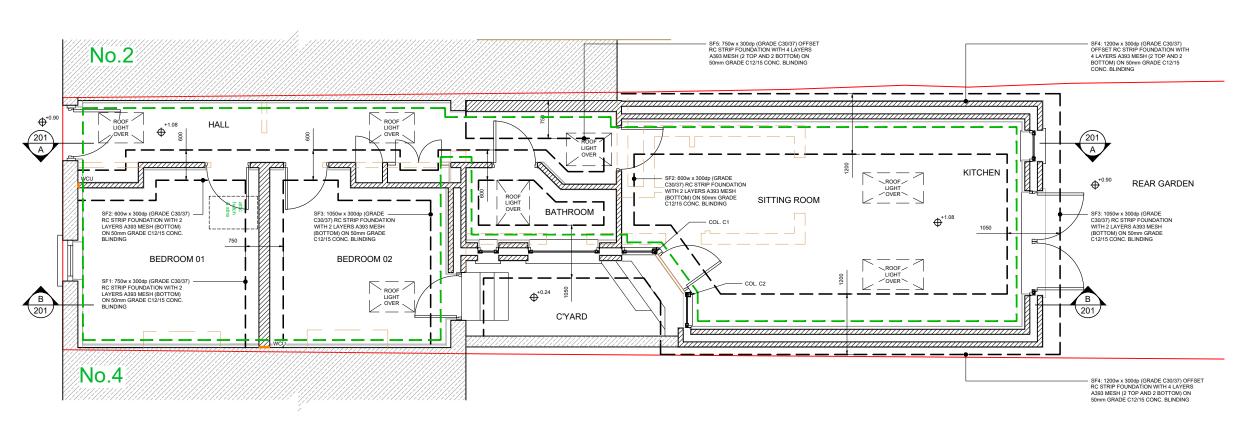
LOCATION No. 3 Hawthorn Avenue, East Wall, Dublin 3

DRAWING TITLE Proposed Drainage Layout

DRAWN BY COC CHKD BY DAM STATUS Draft

**DATE** 24/10/23 **SCALE** 1:75 @ A3

DRG. No. S1084-010 REV. A



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#### LEGEND:

EXISTING STRUCTURE

215/100 THICK SOLID BLOCKWORK

SP1 METAL STUD PARTITIONS TO MANUFACTURERS SPECIFICATION (SP1)

WA

WALL CONNECTOR UNITS

LINTELS: WHE 200:

WHERE LINTELS MEET COLUMNS ALLOW FOR 200 x 200 EA 12 FOR CONNECTION. REFER TO SECTION 6.0 OF GENERAL NOTES (DRAWING №. 001) FOR ALL LINTEL SPECS

150 GBS - GROUND BEARING SLAB:
FINISHES TO ARCHITECT'S DETAILS ON 50 THICK EASI SCREED ON INSULATION TO
ARCHITECT'S DETAILS ON 160 THICK GRADE C30:07 RC GROUND BEARING SLAB
WITH IND. LAYER A142 MESH (TOP) ON MIN. 1200 GAUGE DPM / RADON BARRIER ON
50 SAND BLINDING ON MIN. 1911CK WELL COMPACTED CLAUSE 809 GRANULAR
MATERIAL TO ANNEX E OF SR21.

COLUMNS: C1-C2: SEE SCHEDU

NOTE: \*\* 1hr INTUMESCENT PAINT REQUIRED

COLUMN SCHEDULE - GROUND FLOOR

COL. # COLUMN SIZE FINISH/COMMENTS

COL. C1 80 SHS 6.3 GRADE S355

COL. C2 80 SHS 6.3 GRADE S355

NOTE: ALL STEEL TO BE GRADE S275 U.N.O.

NOTE: ALL STEEL TO BE EXECUTION CLASS 2 U.N.O.

NOTE: ALL STEEL COLUMNS TO HAVE 12mm THICK STEEL CAP / BASE PLATES
WITH 4 No. M160 (GRADE 8.8) BOLTS

## PROPOSED FOUNDATIONS AND GROUND FLOOR PLAN

SCALE 1:75 @ A3

#### GENERAL NOTES:

HARDCORE SHALL COMPLY WITH ANNEXE E OF SR21 AND SHALL BE FREE OF PYRITES AND ANY OTHER DELETERIOUS OR SWELLING MATERIAL

DEPTH OF NEW FOUNDATIONS TO MATCH FORMATION LEVEL OF EXISTING 
SUILDING FOUNDATIONS. CONTRACTOR TO ALLOW FOR 1500mm DEPTH FROM 
XUSTING GROUND LEVEL DOWN TO EXISTING FOUNDATION LEVEL AT DRAFT 
STAGE. FINAL DEPTH OF EXISTING BUILDING FOUNDATIONS TO BE CONFIRMED 
ON SITE BY CONTRACTOR. IF FOUNDATIONS ARE DEEPER THEN CONTRACTOR 
S TO CONFIRM COSTS WITH CLIENT AND THEIR QS PRIOR TO 
COMMENCEMENT WITH FOUNDATIONS ON SITE

WHERE NEW FOUNDATIONS ARE POURED ALONGSIDE EXISTING FOUNDATIONS ALLOW FOR H20 BARS @ 300c/c DOWELLED MIN. 300mm INTO EXISTING

ALLOW FOR UNDERPINNING\* AS REQUIRED WHERE EXISTING FOUNDATION DEPTH IS INSUFFICIENT.
\*\*UNDERPINNING - 600w x 600dp , CAST IN 900 long SECTIONS WITH 4no. H16 600 LONG REBAR BETWEEN SECTIONS

ALL STRUCTURAL STEELWORK SHALL BE SHOT CLEANED TO SA 2½ AND SHALL BE PAINTED WITH 75 MICRONS OF ZINC RICH PHOSPHATE PRIMER OR SIMILAR APPROVED

ALL STEELWORK THAT IS AGREED TO BE INTUMESCENT PAINTED TO COMPLY WITH THE FIRE REQUIREMENTS OF THE PROJECT MUST BE SUPPORTED WITH THE FOLLOWING INFORMATION FOR AGREEMENT WITH MOCA

a. INTUMESCENT PAINT SYSTEM DESIGN FOR STEEL SECTION SIZE AND SPECIFIED FIRE RATING (1 HOUR etc.)

b. CONFIRMATION LETTER FROM PAINT SUPPLIER WITH INTUMESCENT PAINT DESIGN CONFIRMING MINIMUM WFT AND DFT THICKNESSES REQUIRED

c. WFT AND DFT READINGS MUST BE SUPPLIED ALONG WITH ASSOCIATED DRAWINGS AND MUST BE DETAILED AND COMPLY WITH THE ASFP YELLOW BOOK WITH REPORT ATTACHED NO SITE WELDING OF STEELWORK WILL BE PERMITTED. CONTRACTOR TO ALLOW FOR ALL STEEL CONNECTIONS TO BE BOLTED ANY CAP, BASE OR END PLATE WELDING MUST BE SHOP-FABRICATED. ALL PLATES TO BE MIN. 12mm THICK U.N.O. ALL BOLTS TO BE M200 U.N.O.

STRAPS MUST BE INSERTED IN BLOCKWORK WALLS AS THEY ARE CONSTRUCTED IN ORDER TO TIE INTO JOISTS AS PER PART 'A' OF THE CURRENT BUILDING REGULATIONS

NOTCHING OR DRILLING OF TIMBER JOISTS IS <u>NOT</u> PERMITTED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER

ALL UNDERGOUND DRAINAGE PIPEWORK OUTSIDE OF SITE BOUNDARIES TO BE WAY SPEC. SN8 (OR SIMILAR APPROVED) TO IRISH WATER CODE OF

#### N.B. PLEASE READ THIS NOTE !!!

THE STRUCTURAL STEELWORK SUPPLIER SHALL TAKE ALL SITE DIMENSIONS NECESSARY, PRODUCE SHOP FABRICATION DRAWINGS AND SUBMIT THEM TO THE ENGINEER FOR INSPECTION. NO FABRICATION TO BE CARRIED OUT WITHOUT AGREEMENT FROM MOCA.

STEELWORK FABRICATOR MUST BE A CE CERTIFIED COMPANY AND A LETTER CONFIRMING SAME MUST BE SUPPLIED PRIOR TO COMMENCEMENT. STRUCTURAL STEELWORK WILL NOT BE CERTIFIED BY MOCA UNLESS THIS CE CERTIFICATION IS PROVIDED. A COPY OF THE STEEL MILL CERTIFICATES MUST ALSO BE SUPPLIED.





CLIENT NAME Strange Ways Ltd.

PROJECT TITLE Alterations and Extension to

LOCATION No. 3 Hawthorn Avenue, East Wall, Dublin

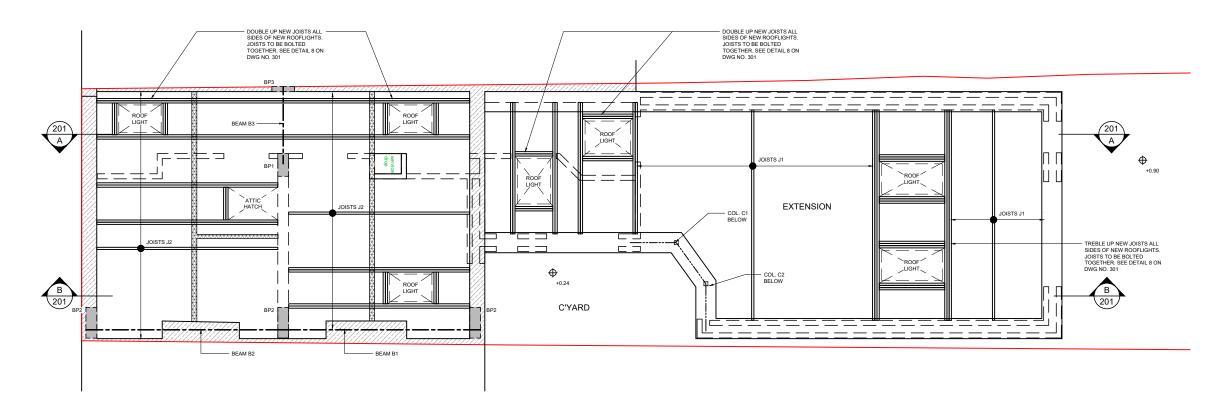
DRAWING TITLE Prop. Foundations & Ground Floor Plan

DRAWN BY COC CHKD BY DAM STATUS Draft

**DATE** 24/10/23 **SCALE** 1:75 @ A3

**DRG. No.** \$1084-100





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Tel: 086-8128800 Emalt: contactus@moca.ie

#### GENERAL NOTES:

1. REFER TO DRAWING No. S1084/001 FOR GENERAL NOTES & STRUCTURAL SPECIFICATION & BUILDERS WORKS ITEMS

2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL DRAWINGS FOR PROJECT \$1084.

3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

#### LEGEND:



WALLS BELOW

WHERE LINTELS MEET COLUMNS ALLOW FOR 200 x 200 EA 12 FOR CONNECTION. REFER TO SECTION 6.0 OF GENERAL NOTES (DRAWING No. 001) FOR ALL LINTEL SPECS

BEARING PADS:
BP1: 215mm WIDE x 440mm LONG x 225mm DEEP GRADE C30/37
MASS CONCRETE BEARING PAD
215mm WIDE x 600mm LONG x 225mm DEEP GRADE C30/37
MASS CONCRETE BEARING PAD
415mm WIDE x 600mm LONG x 225mm DEEP GRADE C30/37

BP3: 100mm WIDE x 440mm LONG x 225mm DEEP GRADE C30/37
MASS CONCRETE BEARING PAD

44 x 225 TIMBER JOISTS (MIN. C16) @ MAX. 400c/c WITH FULL DEPTH SOLID BRIDGING @ MAX. 1200c/c AND 19mm MARINE PLYWOOD SCREW FIXED TO TOP 44 x 225 TIMBER JOISTS (MIN. C16) @ MAX. 400c/c WITH FULL DEPTH SOLID BRIDGING @ MAX. 1200c/c

ALL JOISTS TO BE STRAPPED TO BLOCK WALLS AS PER CURRENT BUILDING REGULATIONS.

BEAMS: B1-B3:

STRAPS

BEAM SCHEDULE - FIRST FLOOR BEAM # BEAM SIZE BEAM B1 203 UKC 46 BEAM B2 203 UKC 46 BEAM B3 203 UKC 46

NOTE: ALL BEAMS TO HAVE MIN 200mm END BEARING ON MASONRY WALLS U.N. NOTE: STEEL BEAMS FIXED TO BEARING PADS WHERE REQUIRED WITH 2 No. M12Ø CHEMICAL ANCHOR BOLTS U.N.O.

NOTE: ALL STEEL TO BE EXECUTION CLASS 2 U.N.O.

#### PROPOSED ATTIC FLOOR PLAN SCALE 1:75 @ A3

#### GENERAL NOTES:

HARDCORE SHALL COMPLY WITH ANNEXE E OF SR21 AND SHALL BE FREE OF PYRITES AND ANY OTHER DELETERIOUS OR SWELLING MATERIAL

DEPTH OF NEW FOUNDATIONS TO MATCH FORMATION LEVEL OF EXISTING BUILDING FOUNDATIONS. CONTRACTOR TO ALLOW FOR 1500mm DEPTH FROM EXISTING GROUND LEVEL AT DRAFT STAGE, FINAL DEPTH OF EXISTING BUILDING FOUNDATIONS TO BE CONFIRMED ON SITE BY CONTRACTOR. IF FOUNDATIONS ARE DEEPER THEN CONTRACTOR IS TO CONFIRM COSTS WITH CLIENT AND THEIR OS PRIOR TO COMMENCEMENT WITH FOUNDATIONS ON SITE

ALLOW FOR UNDERPINNING\* AS REQUIRED WHERE EXISTING FOUNDATION

DEPTH IS INSUFFICIENT:
"UNDERPINNING - 600w x 600dp , CAST IN 900 long SECTIONS WITH 4no. H16 600 LONG REBAR BETWEEN SECTIONS

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WFT AND DFT READINGS MUST BE SUPPLIED ALONG WITH ASSOCIATED AWINGS AND MUST BE DETAILED AND COMPLY WITH THE ASFP YELLOW

NO SITE WELDING OF STEELWORK WILL BE PERMITTED. CONTRACTOR TO ALLOW FOR ALL STEEL CONNECTIONS TO BE BOLTED ANY CAP, BASE OR END PLATE WELDING MUST BE SHOP-FABRICATED. ALL PLATES TO BE MIN. 12mm THICK U.N.O. ALL BOLTS TO BE M200 U.N.O.

STRAPS MUST BE INSERTED IN BLOCKWORK WALLS AS THEY ARE CONSTRUCTED IN ORDER TO TIE INTO JOISTS AS PER PART 'A' OF THE CURRENT BUILDING REGULATIONS

NOTCHING OR DRILLING OF TIMBER JOISTS IS  $\underline{\text{NOT}}$  PERMITTED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER

ALL UNDERGOUND DRAINAGE PIPEWORK OUTSIDE OF SITE BOUNDARIES TO BE WAY SPEC. SN8 (OR SIMILAR APPROVED) TO IRISH WATER CODE OF PRACTICE.

#### N.B. PLEASE READ THIS NOTE !!!

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CLIENT NAME Strange Ways Ltd. PROJECT TITLE Alterations and Extension to No. 3 Hawthorn Avenue, East Wall, Dublin

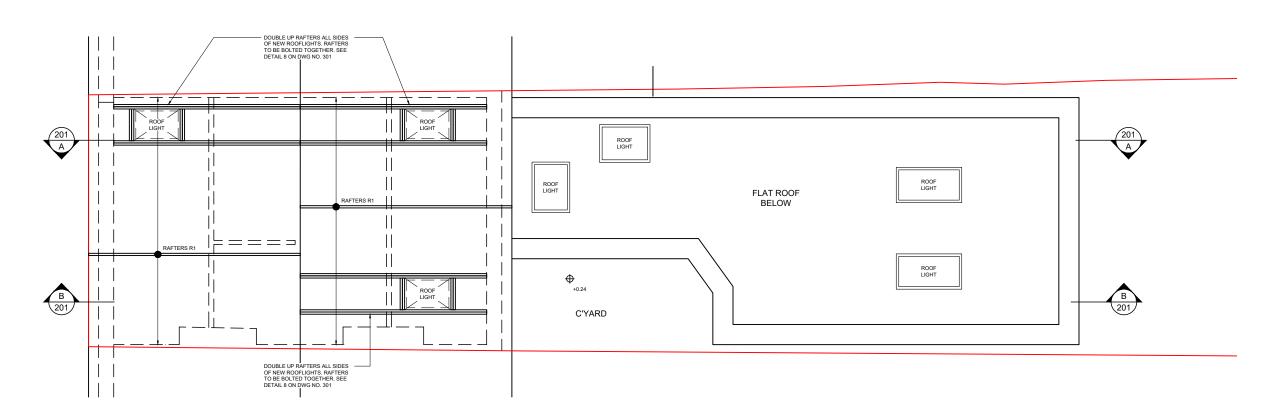
DRAWING TITLE Proposed Attic Floor Plan

DRAWN BY COC CHKD BY DAM STATUS Draft DATE 24/10/23 SCALE 1:75 @ A3

DRG. No.

S1084-101





#### PROPOSED ROOF PLAN

SCALE 1:75 @ A3

#### GENERAL NOTES:

HARDCORE SHALL COMPLY WITH ANNEXE E OF SR21 AND SHALL BE FREE OF PYRITES AND ANY OTHER DELETERIOUS OR SWELLING MATERIAL

DEPTH OF NEW FOUNDATIONS TO MATCH FORMATION LEVEL OF EXISTING BUILDING FOUNDATIONS. CONTRACTOR TO ALLOW FOR 1500mm DEPTH FROM EXISTING GROUND LEVEL DOWN TO EXISTING FOUNDATION LEVEL AT DRAFT STAGE, FINAL DEPTH OF EXISTING BUILDING FOUNDATIONS TO BE CONFIRMED ON SITE BY CONTRACTOR. IF FOUNDATIONS ARE DEEPER THEN CONTRACTOR IS TO CONFIRM COSTS WITH CLIENT AND THEIR OS PRIOR TO COMMENCEMENT WITH FOUNDATIONS ON SITE

ALLOW FOR UNDERPINNING\* AS REQUIRED WHERE EXISTING FOUNDATION

DEPTH IS INSUFFICIENT:
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NO SITE WELDING OF STEELWORK WILL BE PERMITTED. CONTRACTOR TO ALLOW FOR ALL STEEL CONNECTIONS TO BE BOLTED ANY CAP, BASE OR END PLATE WELDING MUST BE \$40P-FABRICATED. ALL PLATES TO BE MIN. 12mm THICK U.N.O. ALL BOLTS TO BE M200 U.N.O.

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3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

WALLS BELOW

RAFTERS R1:

LEGEND:

44 x 225 TIMBER RAFTERS (MIN. C16) @ MAX. 400c/c ALL JOISTS TO BE STRAPPED TO BLOCK WALLS AS PER CURRENT BUILDING REGULATIONS.

TIMBER STRAPPING - OSEE DRAWING No. S1084/301 FOR DETAILS

A 24/10/23 rev. date Draft Issue



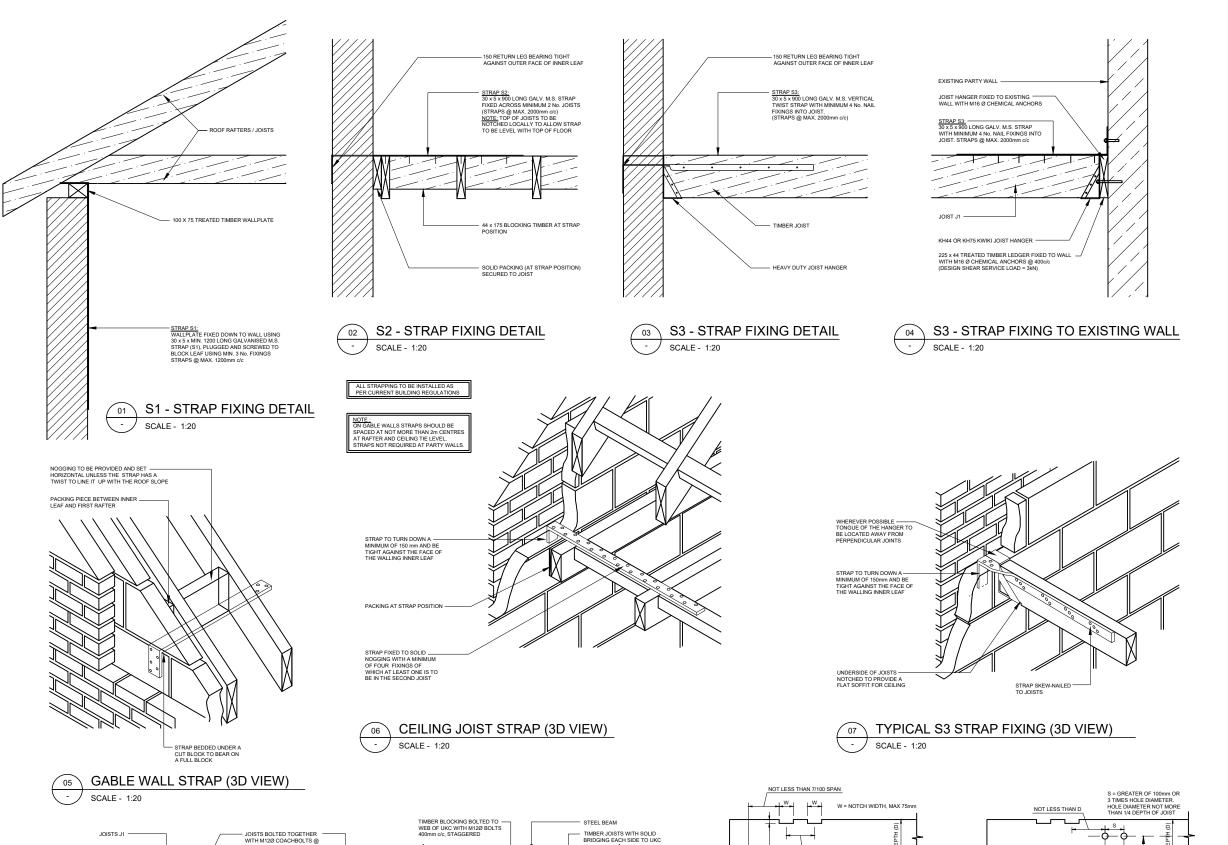
CLIENT NAME Strange Ways Ltd. PROJECT TITLE Alterations and Extension to No. 3 Hawthorn Avenue, East Wall, Dublin

DRAWING TITLE Proposed Roof Plan

DRAWN BY COC CHKD BY DAM STATUS Draft

DATE 24/10/23 SCALE 1:75 @ A3

DRG. No. S1084-102 REV. A

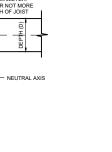


TYPICAL JOIST TO STEEL CONNECTION

SCALE - 1:20

TYPICAL DOUBLE / TREBLE UP JOISTS

SCALE - 1:20



NOT LESS THAN 1/4 SPAN NOT MORE THAN 4/10 SPAN L NEUTRAL AXIS SPAN MEASURED BETWEEN SUPPORTS

SCALE - 1:20

LIMITATIONS FOR NOTCHING SCALE - 1:20

150mm MIN BETWEEN CENTRES

LIMITATIONS FOR DRILLING

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GENERAL NOTES:

LEGEND:



consulting engineers

CLIENT NAME Strange Ways Ltd. PROJECT TITLE Alterations and Extension to LOCATION No. 3 Hawthorn Avenue, East Wall, Dublin

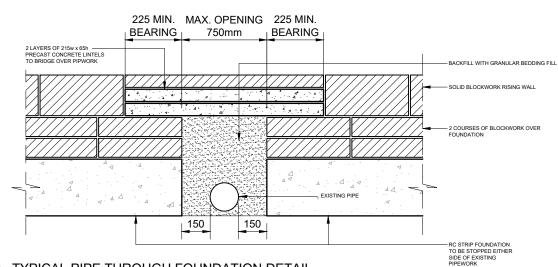
**DRAWING TITLE** Typical Strapping and Joist Details

DRAWN BY COC CHKD BY DAM STATUS Draft

DATE 24/10/23 SCALE 1:20 @ A3 DRG. No.

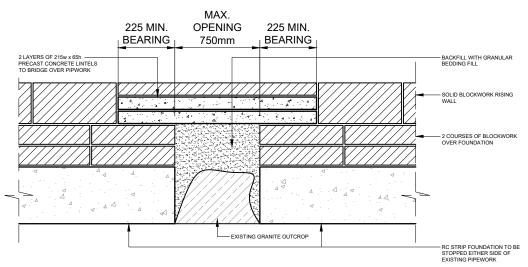
S1084-301

REV. A

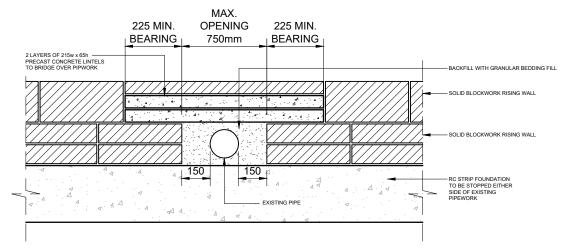


TYPICAL PIPE THROUGH FOUNDATION DETAIL

SCALE - 1:20

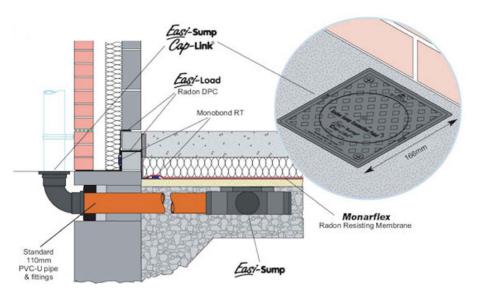


TYPICAL ROCK OUTCROP IN FOUNDATION DETAIL



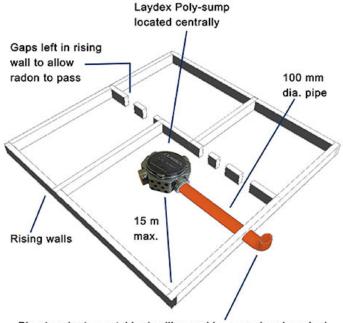
TYPICAL PIPE THROUGH RISING WALL DETAIL

SCALE - 1:20



TYPICAL SUMP DETAIL THRU' RISING WALL

SCALE - 1:20



Pipe terminates outside dwelling and is capped and marked to identify its function. Pipe can be extended and fan fitted should subsequent test readings require it

TYPICAL SUMP DETAILS

SCALE - 1:20

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LEGEND:





CLIENT NAME	Strange Ways Ltd.
PROJECT TITLE	Alterations and Extension to
LOCATION	No. 3 Hawthorn Avenue, East Wall, Dublin 3

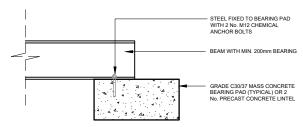
**DRAWING TITLE** Typical Pipe Thru' Foundation Details

DRAWN BY COC CHKD BY DAM STATUS Draft

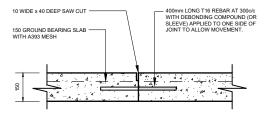
DATE 24/10/23 SCALE 1:20 @ A3

DRG. No. S1084-302

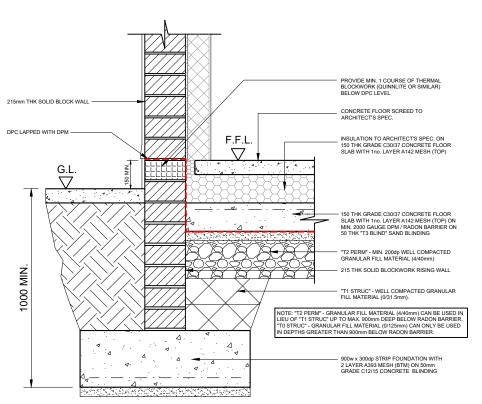




## TYPICAL BEAM TO BEARING PAD DETAIL



### 72 TYPICAL CONTRACTION JOINT IN SLAB SCALE - 1:20



TYPICAL EXTERNAL RISING WALL / FOUNDATION - SCALE - 1:20

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LEGEND:





CLIENT NAME	Strange ways Ltd.
PROJECT TITLE	Alterations and Extension to
LOCATION	No. 3 Hawthorn Avenue, East Wall, Dublin 3

DRAWING TITLE Typical Construction Details Sheet 1

DRAWN BY COC CHKD BY DAM STATUS Draft

DATE 24/10/23 SCALE 1:20 @ A3

CLIENT NAME Strange Ways Ltd

DRG. No. S1084-303 REV. A

