

COPYRIGHT AND OWNERSHIP OF THIS DRAWING IS VESTED IN DRA CONSULTING ENGINEERS. NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE WRITTEN PERMISSION OF DRA CONSULTING ENGINEERS AS COPYRIGHT HOLDER EXCEPT AS AGREED FOR USE ON THE PROJECT FOR WHICH THE DOCUMENT WAS ORIGINALLY ISSUED. ©

ALL RIGHT RESERVED BY THE LAW OF COPYRIGHT AND BY INTERNATIONAL COPYRIGHT CONVENTIONS ARE RESERVED TO DRA CONSULTING ENGINEERS. ©

NOTES:  
1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED OTHERWISE.  
2. USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. ALL DIMENSIONS TO BE CHECKED ON SITE AND CONFIRMED PRIOR TO COMMENCING WORKS. ANY ERROR OR DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER / ARCHITECT.  
3. DRAWINGS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SERVICE ENGINEERS DRAWINGS AND SPECIFICATIONS.  
4. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH PLANNING GRANT CONDITIONS, CURRENT BUILDING REGULATIONS AND GOOD BUILDING PRACTICE.

5. SUBSTRUCTURE  
A. FILL UNDER STRUCTURE:  
• 50mm T3 BLIND AGGREGATE BLINDING TO ANNEX E S.R.21  
• T2 PERM GRANULAR FILL MATERIAL (MIN 200mm) TO ANNEX E S.R. 21 (RADON SLIMP AS PER ARCHITECTS DETAILS)  
• T1 STRUCT GRANULAR FILL MATERIAL (MAX 900mm) TO ANNEX E S.R.21 COMPACTED IN 225mm LAYERS  
• T0 STRUCT GRANULAR FILL MATERIAL TO ANNEX E S.R.21 COMPACTED IN 225mm LAYERS  
B. MAIN CONTRACTOR TO MAKE FOUNDATION TRENCHES AVAILABLE FOR INSPECTION BY ENGINEER (2 DAYS NOTICE) TO ALLOW INSPECTION OF FORMATION CONDITIONS PRIOR TO PLACEMENT OF REINFORCEMENT.  
C. MAIN CONTRACTOR TO NOTIFY ENGINEER (2 DAYS NOTICE) TO ALLOW INSPECTION OF FOUNDATIONS PRIOR TO POURING OF CONCRETE.  
D. EXCAVATION CAN BE CARRIED OUT USING SMALL MACHINES BY SKILLED OPERATIVES, HOWEVER EXCAVATION CLOSE TO THE EXISTING STRUCTURE SHOULD BE CARRIED OUT BY HAND DIGGING.

6. UNDERPINNING  
A. SEE DRA SPECIFICATIONS  
B. CONCRETE WIDTH TO BE AT LEAST FULL THICKNESS OF WALL OR FOUNDATIONS.  
C. UNDERPINNING PARTY WALLS - AGREE DETAILS WITH ADJOINING PROPERTY OWNER

7. STRUCTURAL STEEL  
A. ALL STRUCTURAL STEEL & PLATES TO BE MINIMUM GRADE S275.  
B. ALL WELDS TO BE 6mm CFW UNLESS NOTED OTHERWISE.  
C. ALL BOLTS TO BE M16 G8 & BOLTS UNLESS NOTED OTHERWISE.  
D. FABRICATION DRAWINGS ALONG WITH 3D VIEW TO BE PROVIDED FOR COMMENT BY ENGINEER PRIOR TO STEEL FABRICATION. ALLOW 5 WORKING DAYS REVIEW PERIOD.  
E. DIMENSIONS AND LEVELS TO BE CONFIRMED ON SITE BY STEEL FABRICATOR / MAIN CONTRACTOR PRIOR TO STEEL FABRICATION.  
F. NON-SHRINK GROUT TO BE FOSROC COMBEXTRA GP OR SIMILAR APPROVED (CONTRACTOR TO AGREE ALTERNATIVE PROPOSAL PRIOR TO INSTALLATION). GROUT TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 70N/mm<sup>2</sup>.  
G. ALL EXTERNAL STEEL IN CAVITY ZONE TO BE GALVANIZED OR PAINTED (PAINT - SEE DRA SPECIFICATIONS).  
H. ALL OUTER LEAF SUPPORT ANGLES AND INSTALLATION BRACKETS TO BE STAINLESS STEEL.  
I. ALL STEEL BELOW GROUND IS TO BE CONCRETE ENCASED - MIN THICKNESS 150mm.  
J. ALL STEEL BEAMS SUPPORTED ON BLOCKWORK TO HAVE CONCRETE BEARING PADS - PAD DIMENSION 450mm LONG x 215mm HIGH x WALL THICKNESS UNLESS NOTED OTHERWISE.  
K. ALL BEAMS TO BE SURROUNDED IN CONCRETE WHERE BUILT INTO WALLS.  
L. MINIMUM BEARING ON MASONRY / CONCRETE:  
• 215mm THICK WALL - min 215mm BEARING  
• 100mm THICK WALL - min 100mm BEARING

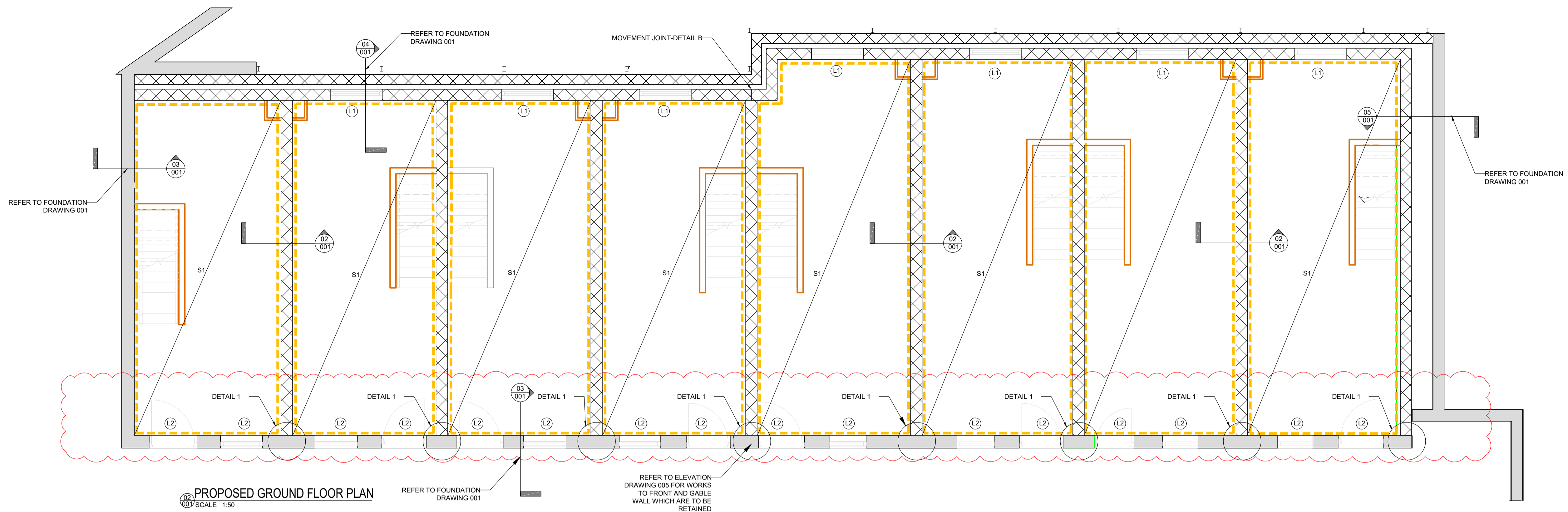
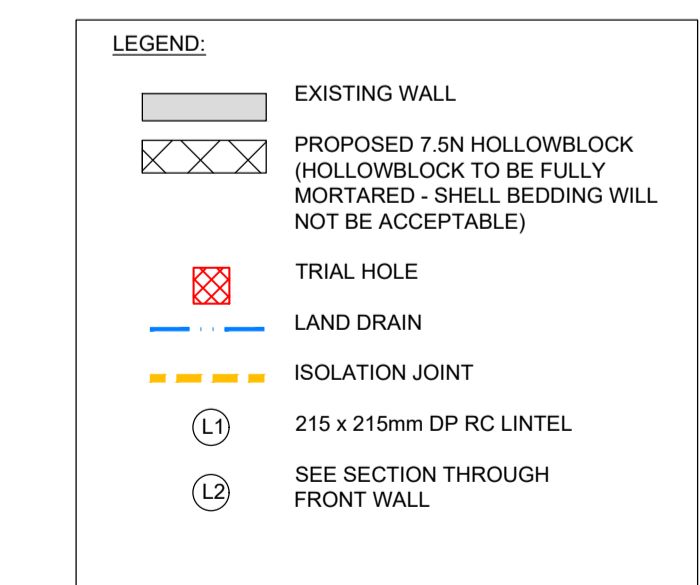
8. STRUCTURAL TIMBER  
A. ALL TIMBER TO BE MINIMUM GRADE C16.  
B. DOUBLE JOISTS TO BE UNDER STUD PARTITION WALLS.  
C. MINIMUM BEARING ON MASONRY / CONCRETE - 80mm.  
D. DPM TO BE INSTALLED BETWEEN TIMBER ELEMENTS AND BLOCKWORK/CONCRETE ELEMENTS.  
E. ALL EXISTING TIMBERS WHICH ARE TO BE RETAINED SHOULD BE TREATED BY A SPECIALIST TIMBER PRESERVATION CONTRACTOR FOR INSECT, DRY ROT AND FUNGUS INFESTATION.  
F. ALL TIMBER LINTELS TO BE REPLACED WITH CONCRETE LINTELS.  
G. CONCRETE & REINFORCING BARS  
A. CONCRETE MIX TO COMPLY WITH EN 206-1 AND REQUIREMENTS BELOW. MIX DESIGN TO BE PROVIDED FOR REVIEW PRIOR TO CONCRETE POUR (3 DAYS NOTICE).  
B. CONCRETE MIX REQUIREMENTS - SEE DRAWING 201 - TABLE - CONCRETE MIX DESIGN SPECIFICATIONS.  
C. MINIMUM COVER TO ALL REINFORCEMENT:  
• 50mm BELOW GROUND IF CAST AGAINST SHUTTERING  
• 75mm BELOW GROUND IF CAST AGAINST GROUND  
• 75mm TO TOP MESH IN GROUND FLOOR SLAB  
• 50mm ABOVE GROUND IF CAST AGAINST SHUTTERING  
D. REINFORCED CONCRETE STRUCTURES - COVER TO ALL REINFORCEMENT & LINKS TO BE IN ACCORDANCE WITH CLAUSE 3.3.7. D.S. 8110 PART 1: 1997.  
E. ALL REINFORCEMENT TO HAVE MINIMUM 500mm LAP LENGTH.  
F. ALL REINFORCING BARS ARE TO BE SECURELY WIRED TOGETHER & LOCATED WITH SUITABLY FIXED STOODS, SPACERS, COVER BLOCKS ETC. THESE ITEMS ARE NOT SCHEDULED.  
H. TYPE OF REINFORCING STEEL IS REFERRED TO BY THE FOLLOWING ABBREVIATIONS:  
• H - GRADE B500A, B OR C CONFORMING TO BS4499  
I. CHEMICAL ANCHORS TO BE:  
• RESIN - FISCHER INJECTION SYSTEM FIS V 360 S  
• ANCHOR THREAD - FISCHER FIS A M16 G8.8 ZINC PLATED STEEL  
• ANCHOR MINIMUM EMBEDMENT - 160mm

10. MASONRY  
A. FLOOR AND WALL FINISHES TO BE MADE GOOD AFTER DEMOLITION AND STRUCTURAL ALTERATION.  
B. ALL LINTELS TO BE AS PER LINTEL SCHEDULE.  
C. ISOLATED NON-STRUCTURAL TIMBERS BUILT INTO WALLS WHICH ARE ROTTEN ARE TO BE REMOVED AND THE WALL MADE GOOD WITH BRICK.  
D. BLOCKWORK JOINTS  
• LOCATION OF MOVEMENT JOINTS TO BE AGREED WITH ARCHITECT.  
• BRICK TO HAVE MOVEMENT JOINTS AT 9m C/C OR AT CLOSER CENTRES DEPENDING ON WALL PANEL DIMENSIONS.  
• BLOCKS TO HAVE MOVEMENT JOINTS AT 9m C/C OR AT CLOSER CENTRES DEPENDING ON WALL PANEL DIMENSIONS.  
• KEEP LENGTH TO HEIGHT RATIO AT 3:1.  
• ALTERNATIVELY USE BED JOINT REINFORCEMENT.  
E. PROPOSED JOINT REINFORCEMENT TO BE AGREED WITH ARCHITECT/ENGINEER.  
F. BRICK  
• BRICK REFURBISHMENT AND OR REPLACEMENT TO BE CARRIED OUT WHERE REQUIRED.  
• BRICK REPOINTING TO BE CARRIED OUT IF REQUIRED.

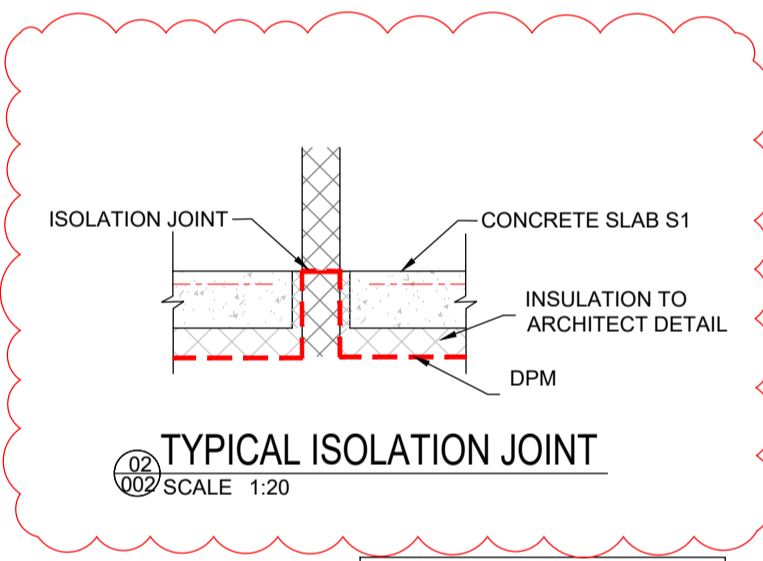
11. EXISTING BUILDING  
A. ALL EXISTING TIMBERS WHICH ARE TO BE RETAINED SHOULD BE TREATED BY A SPECIALIST TIMBER PRESERVATION CONTRACTOR FOR INSECT AND FUNGUS INFESTATION.  
B. EXISTING ROTTEN TIMBER LEFT IN PLACE TO BE TREATED AS PER ARCHITECTS RECOMMENDATIONS.  
C. EXISTING SUBFLOOR VENTS TO BE BLOCKED AND WALL MADE GOOD.  
D. ALL VEGETATION IS TO BE SPRAYED SO THAT IT HAS A CHANCE TO DIE AND BE REMOVED MORE EASILY AND WITHOUT FORCE.  
E. VIBRATION IS TO BE LIMITED OF 5 PPV.  
12. ALL IRONWORK TO ARCHITECTS DETAILS.  
13. EXTERNAL FINISHES TO ARCHITECTS DETAILS (INCLUDING GRANITE PAVES ETC).  
14. HEALTH & SAFETY  
A. ASBESTOS SURVEY HAS BEEN CARRIED OUT - SEE REPORT FOR RECOMMENDATION.  
B. THE FOLLOWING IS A NON-EXHAUSTIVE LIST OF ITEMS WHICH REQUIRE TEMPORARY WORKS DESIGN:  
• HOARDING, FENCING, GATES AND SIGNBOARDS  
• TEMPORARY PLATFORMS  
• PROPPING AND TEMPORARY MEASURES TO SECURE EXISTING STRUCTURE  
• PROPPING AND TEMPORARY MEASURES TO SECURE NEW STRUCTURE DURING CONSTRUCTION  
• PROPPING OF EXCAVATIONS  
• TEMPORARY SUPPORT BASES  
• FACADE RETENTION TEMPORARY WORKS IS REQUIRED.  
C. TEMPORARY WORKS MEASURES REQUIRED TO SECURE THE STRUCTURE TO FACILITATE REFURBISHMENT WORKS.

GENERAL NOTES  
WALLS  
• TIMBER LINTELS TO BE REPLACED WITH NEW CONCRETE LINTELS  
• NEW LINTELS TO BE PRECAST CONCRETE (KILLESHAL OR SIMILAR APPROVED)  
• ALTERNATIVELY USE 80x80x3.6mm STAINLESS-STEEL SQUARE HOLLOW SECTIONS IN GROUPS  
• ALL TIMBERS BUILT INTO WALLS TO BE CUT OUT IN SECTIONS. WALL TO BE MADE GOOD WITH BRICK AND LOW STRENGTH HYDRAULIC LIME MORTAR  
• LOW STRENGTH HYDRAULIC LIME MORTAR TO BE NATURAL HYDRAULIC LIME (NHL) 3.5 AND SHARP SAND (1MM DOWN)  
• EXTERNAL BRICK FINISH  
• REPOINT WITH LOW STRENGTH HYDRAULIC LIME MORTAR.  
• EXTERNAL RENDER FINISH  
• RENDER TO FRONT WALL TO BE REMOVED AND WALL TO BE RERENDERED WITH A LIME BASED RENDER.  
• ROTTEN TIMBER GROUNDS EACH SIDE OF WINDOW AND DOOR OPENINGS TO BE REMOVED AND REPLACED WITH CONCRETE / BRICK INFILL  
• CONCRETE LINTEL TO BE PROVIDED FOR ANY OPENING IN WALL WHICH IS LARGER THAN 100mm  
WALL CRACK STITCHING  
• EXISTING CRACKS TO BE "STITCHED" WITH HELIFIX HELIBARS (OR SIMILAR APPROVED) @ 450 C/C VERTICALLY. CHASED INTO WALL, CHEMICALLY ANCHORED. BARS TO EXTEND A MINIMUM OF 600mm PAST CRACK.

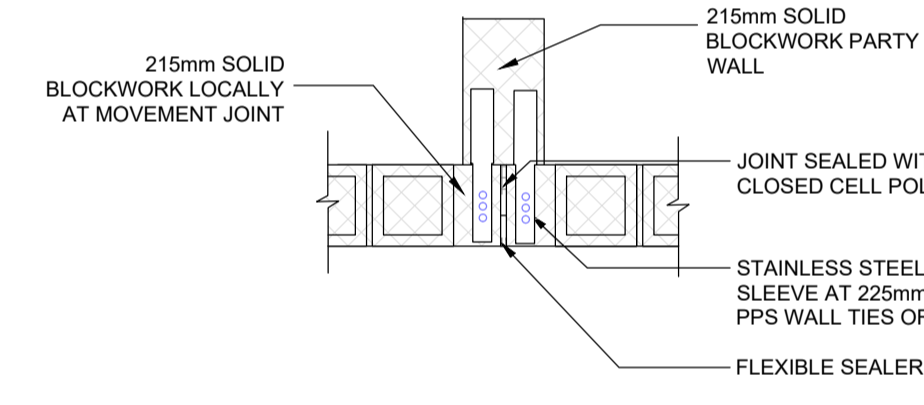
FLOOR SLAB  
S1 = 150mm THICK GRADE C28/35 RC SLAB WITH A163 MESH ON INSULATION AND RADON PROOF DPG TO ARCHITECT DETAIL  
TENDER STAGE ALLOW 80kg TIED REINFORCEMENT STEEL PER 1m<sup>2</sup> OF SLAB



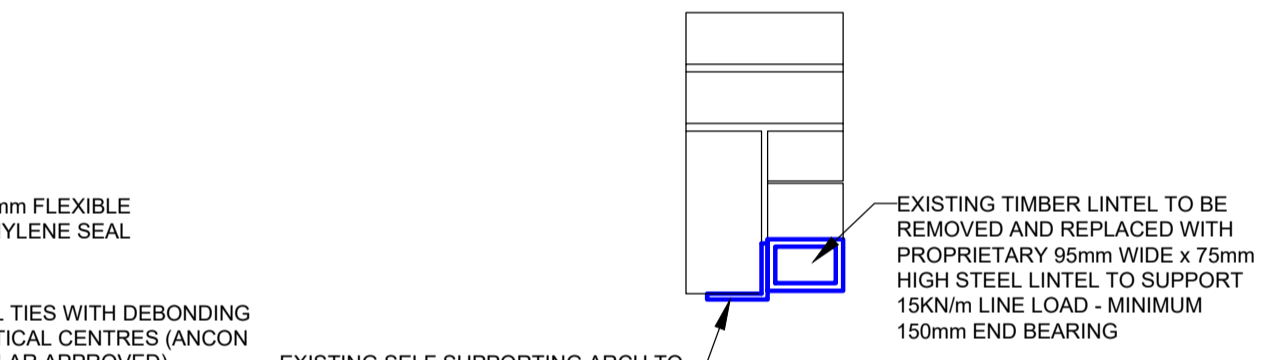
PROPOSED GROUND FLOOR PLAN  
SCALE 1:50



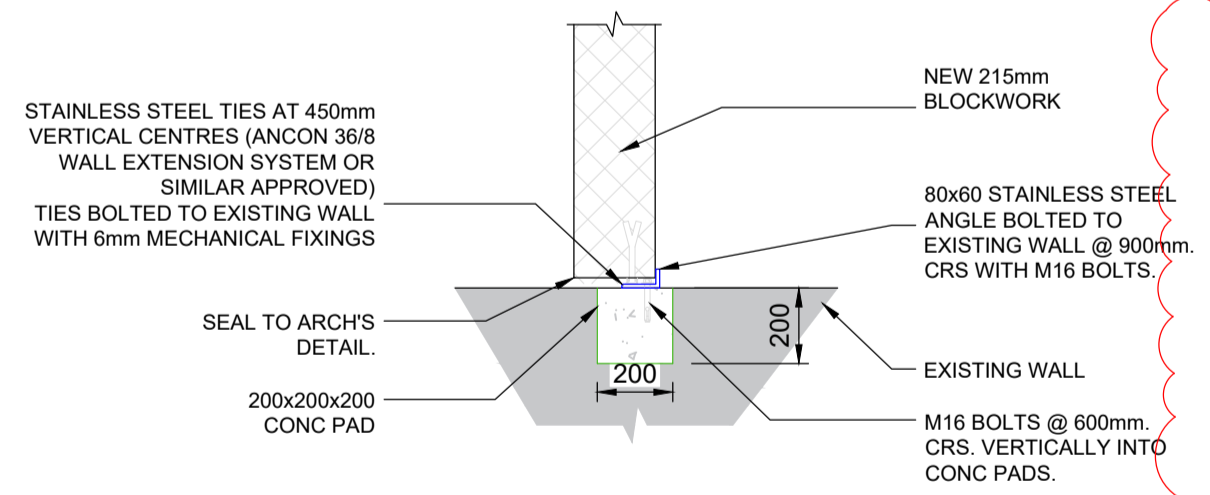
TYPICAL ISOLATION JOINT  
SCALE 1:20



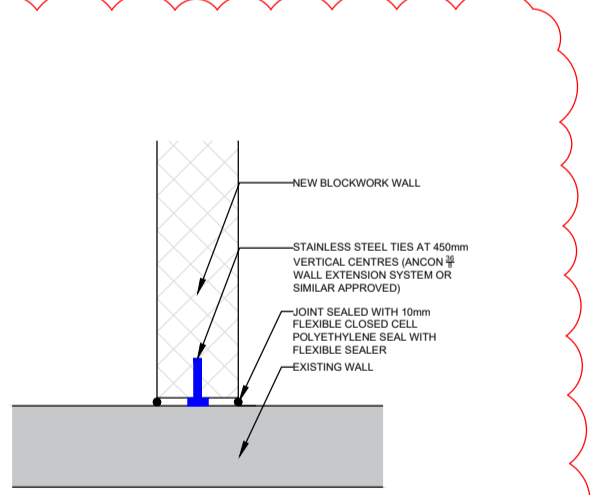
TYPICAL MOVEMENT JOINT  
SCALE 1:20



LINTEL L2 DETAIL  
SCALE 1:10



DETAIL 1 - OPTION 1  
SCALE 1:20



DETAIL 1 - OPTION 2  
SCALE 1:20

REV.	DESCRIPTION	ER	BMG	AD	DATE
B	TENDER ISSUE - DETAILS ADDED	ER	BMG	AD	29/03/22
A	TENDER ISSUE	CC	EF	EF	26/11/21

TENDER

**DRA**  
CONSULTING ENGINEERS

NSAI  
Member of the Institution of Structural Engineers

DUBLIN | LIMERICK | WEXFORD  
T: 01-216-2956 | 061-310-701 | 053-915-2814  
E: info@draconsulting.ie | W: www.draconsulting.ie

ARCHITECT: KENNETH HENNESSY ARCHITECTS

PROJECT: 1-8 TYRELL PLACE DUBLIN 1

TITLE: PROPOSED GROUND FLOOR PLAN

DATE:	25/11/2021	SCALE:	1:50 @ A1
DESIGNER:	EF	ORG. No.	
PRODUCER:	CC		
VERIFIER:	EF		
APPROVER:	EF		

21248-002

B