PROPOSED SECTIONS - BARN A_REV_C.

DWG. NO. 2430_028 SCALE. 1:100@A3

(FT) FLOOR TYPES

FT-01 GEOTEXTILE MEMBRANE - LAID DIRECTLY ON SUBSOIL, SEPARATES SOIL FROM SUB-BASE, ALLOWS VAPOUR TO MOVE UPWARDS FREELY
150MM LECA - FULLY BREATHABLE, ACTS AS INSULATION + SUB-BASE, COMPACT LIGHTLY (NOT LIKE HARDCORE), DEPTH VARIES (150–200 MM)
70MM LIMECRETE - NHL 3.5 LIME + POZZOLANIC ADDITIVES + LIGHTWEIGHT AGGREGATE, REINFORCED WITH GEOGRID (E.G., FIBREGLASS MESH) OR HEMP FIBRES, THIS IS YOUR MAIN STRUCTURAL FLOOR LAYER, FULLY VAPOUR PERMEABLE
50-100MM CORK INSULATION BOARDS - FULLY BREATHABLE GOOD COMPRESSIVE STRENGTH EXCELLENT FOR CONSERVATION OR 60–100MM FOAMED GLASS SLABS - GOOD IF YOU NEED MORE LOAD-BEARING STILL VAPOUR-OPEN (BUT SLIGHTLY LESS THAN CORK)
50-70MM LIMECRETE SCREED - LIME-BASED FINISHING SCREED, CAN INCLUDE REINFORCING MESH, VAPOUR PERMEABLE
60MM - STONE FLAGGS

FT-02 GEOTEXTILE MEMBRANE – LAID DIRECTLY ON SUBSOIL, ACTS AS A SEPARATION LAYER ONLY (NOT A CAPILLARY BREAK), ALLOWS VAPOUR TO MOVE UPWARDS FREELY, 300MM RECYCLED FOAM GLASS AGGREGATE (RFG) – (E.G. GLAPOR / GEOCELL), INSTALLED IN LAYERS AND MECHANICALLY COMPACTED USING VIBRATING PLATE/ROLLER, PROVIDES CAPILLARY BREAK + INSULATION + STRUCTURAL SUB-BASE, FULLY BREATHABLE, 100MM LIMECRETE SLAB – NHL 3.5 LIME + SUITABLE AGGREGATE, FORMS MAIN STRUCTURAL FLOOR LAYER, FULLY VAPOUR PERMEABLE, MAY INCLUDE LIGHT REINFORCEMENT (MESH / FIBRES), 25–30MM CORK PERIMETER STRIP – INSTALLED AT FLOOR/WALL JUNCTION ONLY TO PROVIDE THERMAL DECOUPLING, MAINTAINS BREATHABILITY (NO FULL-FLOOR CORK BOARDS), 50–70MM LIMECRETE SCREED (IF REQUIRED) – LIME-BASED LEVELLING SCREED, FULLY BREATHABLE, TO ACHIEVE FINISHED LEVELS, 60–80MM EXISTING STONE FLAGS – CAREFULLY LIFTED, STORED, AND RE-LAID IN SITU ON BREATHABLE LIME MORTAR BED; REPLACE ONLY WHERE NECESSARY WITH MATCHING RECLAIMED STONE, NOTE: NO LECA, MOT TYPE 1, OR IMPERMEABLE LAYERS PERMITTED. ALL MATERIALS TO MAINTAIN FULL VAPOUR PERMEABILITY. COMPACTION OF FOAM GLASS IS CRITICAL. RETAIN AND REUSE EXISTING HISTORIC FABRIC WHEREVER POSSIBLE.

(RT) ROOF TYPE

RT-01 2 × 12.5 MM TYPE F FIRE-RESISTANT PLASTERBOARD (STAGGERED JOINTS, TAPED AND FIRE-RATED SKIM; FIX AT 200 MM PERIMETER / 300 MM FIELD).
FIRE-RESISTANT LINING BATTENS (25–38 MM) FIXED TO RAFTERS WITH STAINLESS SCREWS; MAINTAIN SERVICES VOID.
INTUMESCENT SEALANT TO ALL BOARD PERIMETERS, ABUTMENTS, PENETRATIONS, AND AROUND ROOF JUNCTIONS.
MINERAL WOOL INSULATION (A1 CLASS, 35–60 KG/M³) FRICTION-FIT BETWEEN EXISTING RAFTERS (THICKNESS TO SUIT RAFTER DEPTH; AVOID COMPRESSION).
SECONDARY LAYER OF MINERAL WOOL CROSS-LAID BENEATH RAFTERS IF ADDITIONAL U-VALUE REQUIRED.
BREATHABLE MEMBRANE (VAPOUR-OPEN, NOT A VCL) INSTALLED TO UNDERSIDE OF EXISTING ROOF BOARDS WHERE REQUIRED TO ENSURE DUST AND FIBRE CONTROL WITHOUT TRAPPING MOISTURE.
MAINTAIN 50 MM VENTILATION PATH ABOVE INSULATION TO UNDERSIDE OF SARKING OR ROOF COVERING (CONTINUOUS FROM EAVES TO RIDGE).
FIRE-STOP BETWEEN RAFTERS WHERE THE FIRE WALL INTERSECTS THE ROOF USING MINERAL-WOOL FIRE BATTS AND INTUMESCENT MASTIC.
ALL SERVICE PENETRATIONS TO USE FIRE-RATED COLLARS/PUTTY PADS; NO RECESSED SPOTS UNLESS BOXED AND INDEPENDENTLY FIRE-RATED.
NO INSULATION OR BOARDING TO BRIDGE THE SEPARATION LINE BETWEEN PROPERTIES WITHOUT CONTINUATION OF FIRE BARRIER.

PERFORMANCE NOTE:
PROVIDES FD60 INTERNAL FIRE RESISTANCE WHEN COMBINED WITH MINERAL-WOOL-FILLED RAFTERS AND DOUBLE TYPE F BOARD LAYER.
THERMAL PERFORMANCE SUBJECT TO FINAL INSULATION THICKNESS (TYPICALLY 0.18–0.25 W/M²K ACHIEVABLE WITHOUT ALTERING EXTERNAL ROOF FABRIC).
FULLY REVERSIBLE; AVOIDS FIXING INTO HISTORIC EXTERNAL ROOF SURFACES.

CONSERVATION NOTES:
NO ALTERATION TO EXTERNAL ROOF APPEARANCE.
ALL WORKS REMAIN INTERNAL AND REVERSIBLE.
MAINTAIN BREATHABILITY OF ROOF BUILD-UP AND AVOID INTRODUCING IMPERMEABLE VCLS AGAINST HISTORIC TIMBER FABRIC.

(WT) WALL TYPES

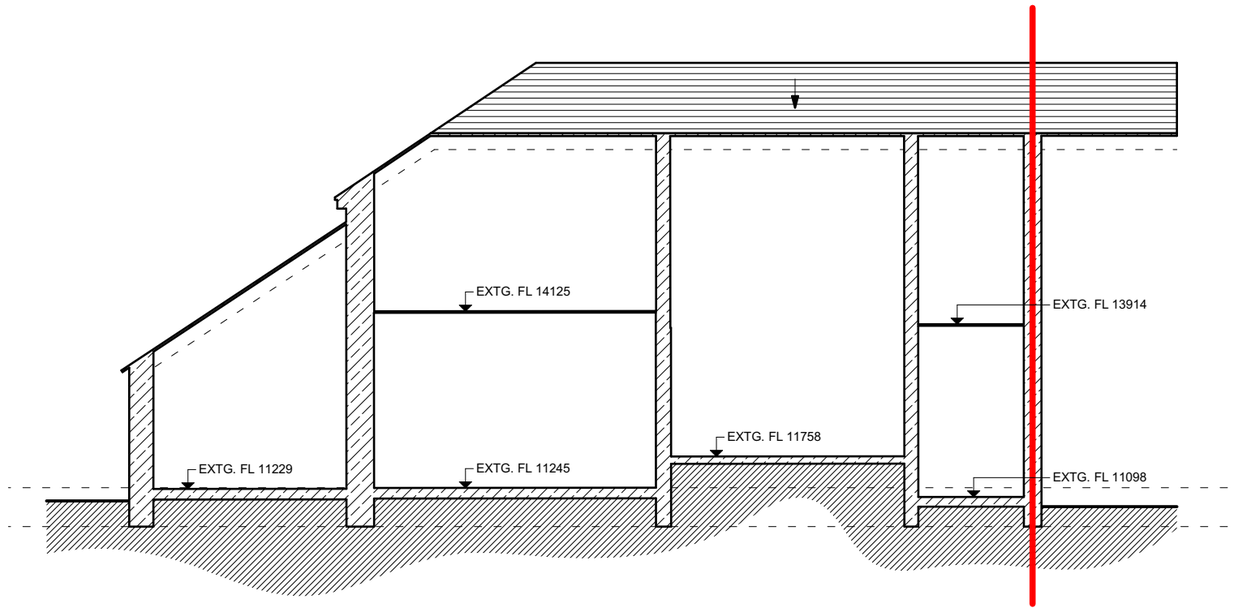
IW-01 IW-01 - EXPOSED INTERNAL WALL FINISH (BREATHABLE / CONSERVATION-GRADE)
RETAIN EXISTING EXPOSED MASONRY WITH NO CEMENTITIOUS COATINGS, GYPSUM PLASTER, OR IMPERMEABLE SURFACE TREATMENTS.
REMOVE LOOSE OR FRIABLE MATERIAL BY SOFT BRUSHING ONLY; NO ABRASIVE CLEANING, SANDBLASTING, OR CHEMICAL AGENTS.
REPOINT OPEN JOINTS USING NHL 2 OR NHL 3.5 LIME MORTAR (COLOUR AND AGGREGATE TO MATCH EXISTING).
APPLY BREATHABLE CONSOLIDATING TREATMENT WHERE DUSTING OCCURS:
1–2 COATS OF LIMEWASH, LIMEWATER, OR A VAPOUR-OPEN SILICATE STABILISER (KEIM FIXATIV OR EQUAL APPROVED).
TREATMENT MUST REMAIN FULLY VAPOUR PERMEABLE AND NON-FILM-FORMING.
NO SEALANTS, VARNISHES, PVA, ACRYLICS, OR SILICONE-BASED PRODUCTS PERMITTED, AS THESE TRAP MOISTURE AND RISK MASONRY DECAY.
FIRE BEHAVIOUR: EXPOSED STONE AND LIME FINISHES ARE INHERENTLY NON-COMBUSTIBLE; NO FURTHER FIRE TREATMENT REQUIRED UNLESS INSTRUCTED BY BUILDING CONTROL FOR SPECIFIC INTERFACES (E.G., AT FIRE WALL ABUTMENTS).
SALT MANAGEMENT: AREAS SHOWING EFFLORESCENCE TO RECEIVE LIMEWATER POULTICE OR DRY BRUSHING ONLY; NO CHEMICAL SEALERS.
BREATHABLE PERIMETER DETAILING: MAINTAIN SEPARATION BETWEEN NEW FLOOR BUILD-UPS (DPM/SCREED) AND EXPOSED WALL USING A 10–20 MM VENTILATED MARGIN WITH LIME MORTAR OR OPEN-JOINT SKIRTING DETAIL.
REVERSIBILITY: ALL TREATMENTS TO BE FULLY REMOVABLE WITHOUT DAMAGING ORIGINAL MASONRY.

NOTES:
IF HIGHER DUST CONTROL NEEDED, USE THIN LIMEWASH (3–5 COATS) RATHER THAN ANY ACRYLIC CONSOLIDATE.
COLOUR LIMEWASH CAN BE SPECIFIED IF REQUIRED BUT MUST REMAIN BREATHABLE. WHERE WALLS FORM PART OF A SEPARATING CONSTRUCTION, ENSURE FIRE WALL ABUTMENT IS INDEPENDENTLY SEALED (SEE WT-02).

WT-01 EXISTING STONE OUTER SKIN - ENSURE JOINTS ARE SOUND AND REPOINTED WITH LIME MORTAR, NOT CEMENT. REMOVE GYPSUM PLASTER IF PRESENT
20MM LIME PARGE COAT - LEVELS THE SURFACE, PROVIDES WIND-TIGHTNESS, REDUCES AIR LEAKAGE, HELPS MANAGE MOISTURE, USE: NHL 2 OR NHL 3.5 LIME-BASED PARGE (ALTERNATIVELY A LIME + SAND SCRATCH COAT)
100MM WOOD FIBRE OR CALCIUM SILICATE INSULATION
10MM LIME BASE COAT WITH MESH
5MM LIME FINISH COAT
LIMEWASH OR BREATHABLE PAINT ONLY (TBC)

WT-02 WT-02 – FR 90MIN - BARNS A & B
2 LAYERS 2X15MM FIRE RESISTANT PLASTERBOARD
100MM SFS/C-STUD METAL SYSTEM AT 600MM CENTRES HEAD AND BASE TRACK FIXED TO FLOOR AND CEILING
100MM MINERAL WOOL (CLASS A1) IN-BETWEEN STUDS
20MM CLEAR AIR GAP CAVITY TO EXISTING BLOCKWORK FACE

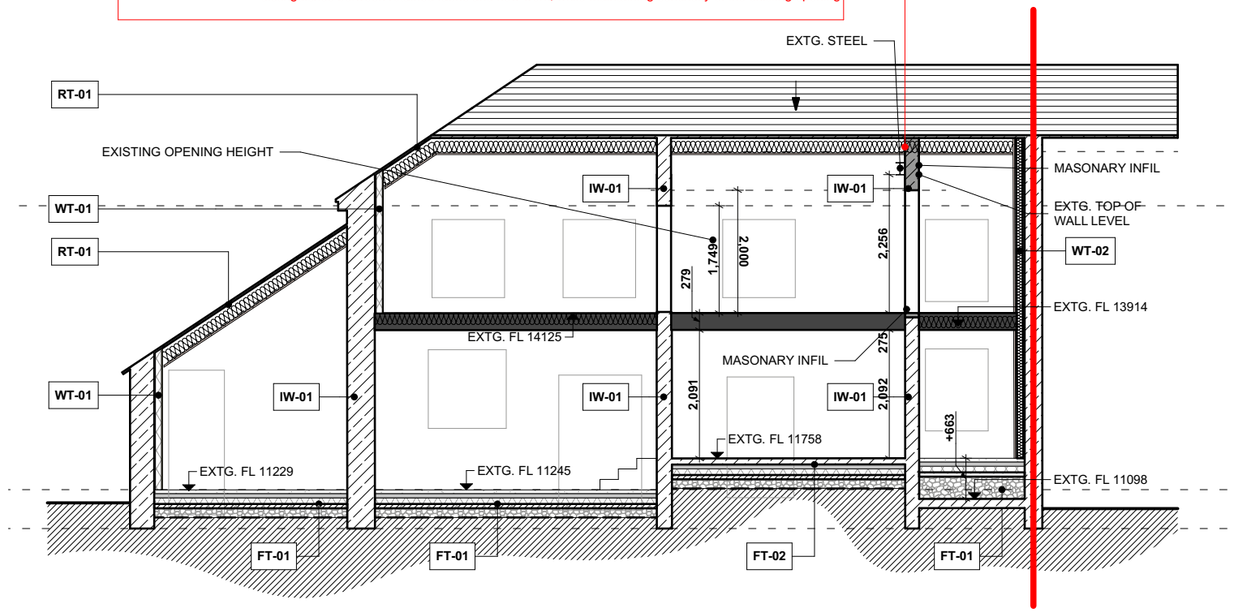
ADDITIONAL NOTES:
STUD WALL TO BE FULLY INDEPENDENT: NO FIXINGS OR TIES INTO EXISTING BLOCKWORK; MAINTAIN THE 20 MM SEPARATION CAVITY CONTINUOUSLY. FULL PERIMETER FIRE-STOPPING: INSTALL MINERAL-WOOL FIRE BATTS AND INTUMESCENT MASTIC AT HEAD, BASE, AND ABUTMENTS. EXTEND WALL FULL HEIGHT TO UNDERSIDE OF ROOF STRUCTURE/SARKING; PROVIDE FIRE BARRIER BETWEEN RAFTERS WHERE REQUIRED. JOIST/FF FLOOR JUNCTION: PROVIDE FIRE-STOPPED GAP AROUND JOIST ENDS/LEDGER PLATE; NO JOISTS TO BEAR INTO EXISTING BLOCK WALL. PENETRATIONS: AVOID WHERE POSSIBLE. ANY REQUIRED SERVICES TO USE INTUMESCENT COLLARS/PUTTY PADS; NO BACK-TO-BACK SOCKETS. BOARD FIXING: STAGGER JOINTS; FIX BOARDS AT 200 MM (EDGES) / 300 MM (FIELD). ALL JOINTS TAPED AND FIRE-RATED FILLED. ACOUSTIC REQUIREMENT: SEAL ALL PERIMETERS WITH ACOUSTIC + INTUMESCENT MASTIC TO MEET PART E AIRBORNE SOUND REDUCTION. MOVEMENT ALLOWANCE: PROVIDE 5–10 MM COMPRESSIBLE ALLOWANCE AT HEAD TRACK BEFORE FIRE-STOPPING.



SECTION A BARN A - EXISTING **1:100**

Opening to bathroom to be infilled with solid masonry and finished with plaster. Existing opening heights have been retained and are indicated, with the bathroom wall height clearly shown. No existing structure is present above this level.

Proposed infill to align with existing retained brickwork and finished flush with surrounding plaster. The intervention clearly distinguishes between retained fabric and new work, while maintaining continuity of the existing opening



SECTION A BARN A - PROPOSED **1:100**

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3. All work to be carried out in compliance with the requirements of the relevant statutory authorities and regulations.

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SCALE 1:100

Rev.	By.	Date.	Description.

DESIGN ARCHITECTS
01332 505238
jervisdesign.com
18 Duffield Rd, Derby DE1 3BB

CLIENT.
S&D SERVICES LTD

PROJECT.
FIRS FARM

DRAWING TITLE.
PROPOSED SECTIONS - BARN A_REV_C

DATE PUBLISHED.	SHEET SIZE.	DRAWN BY.	SCALE.
05/06/2026	A3	PJ	1:100

STATUS.
PLANNING

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