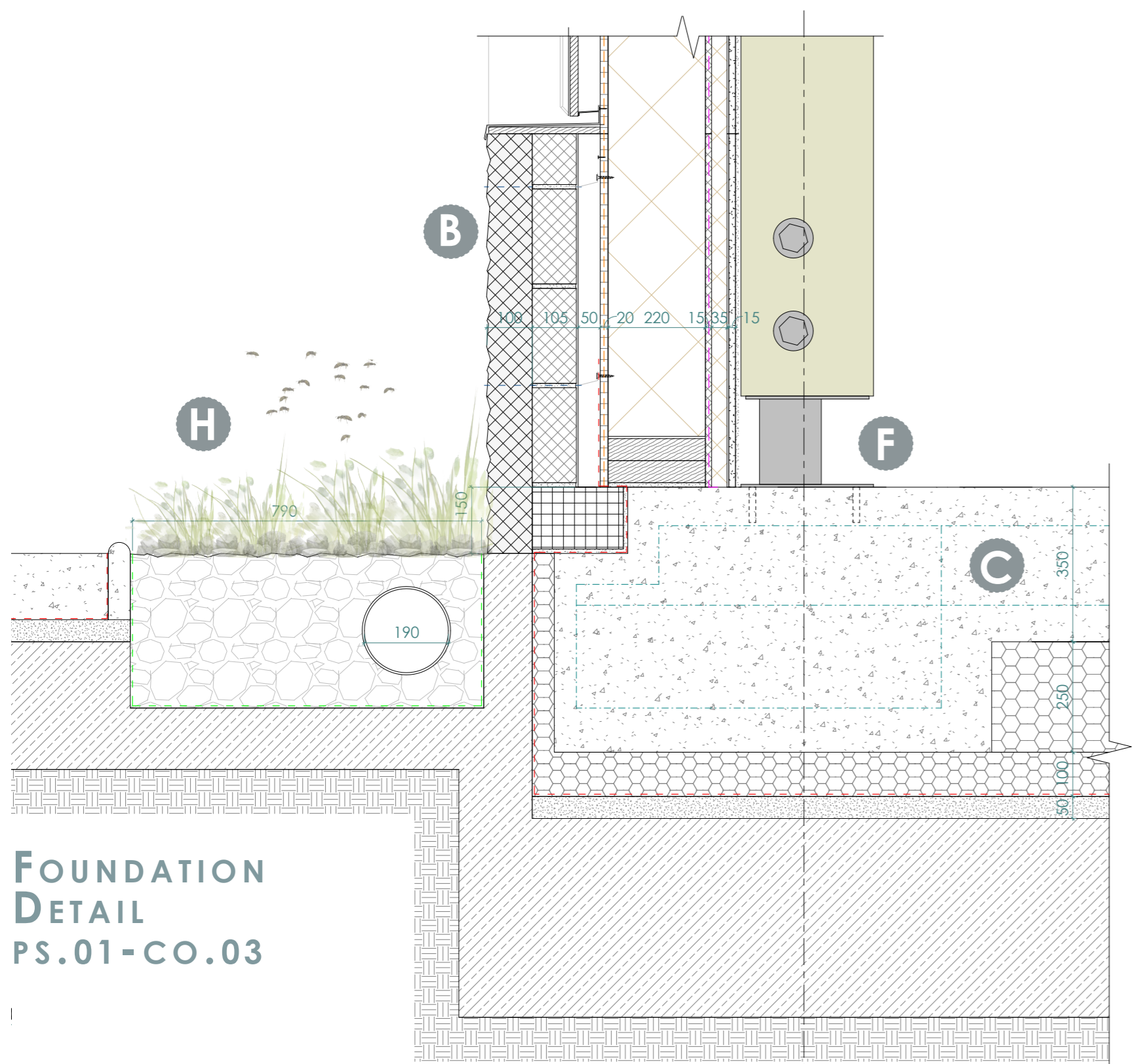
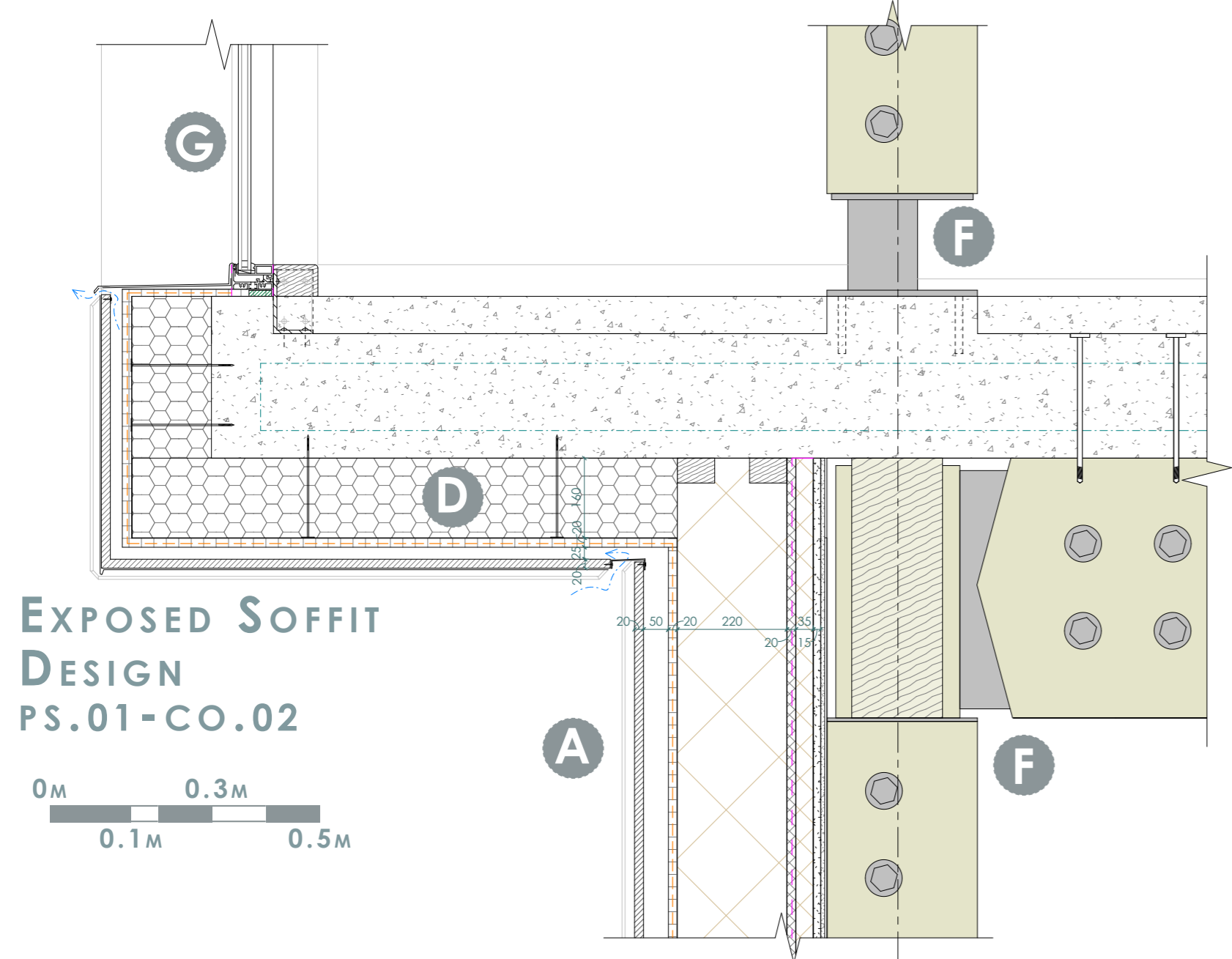
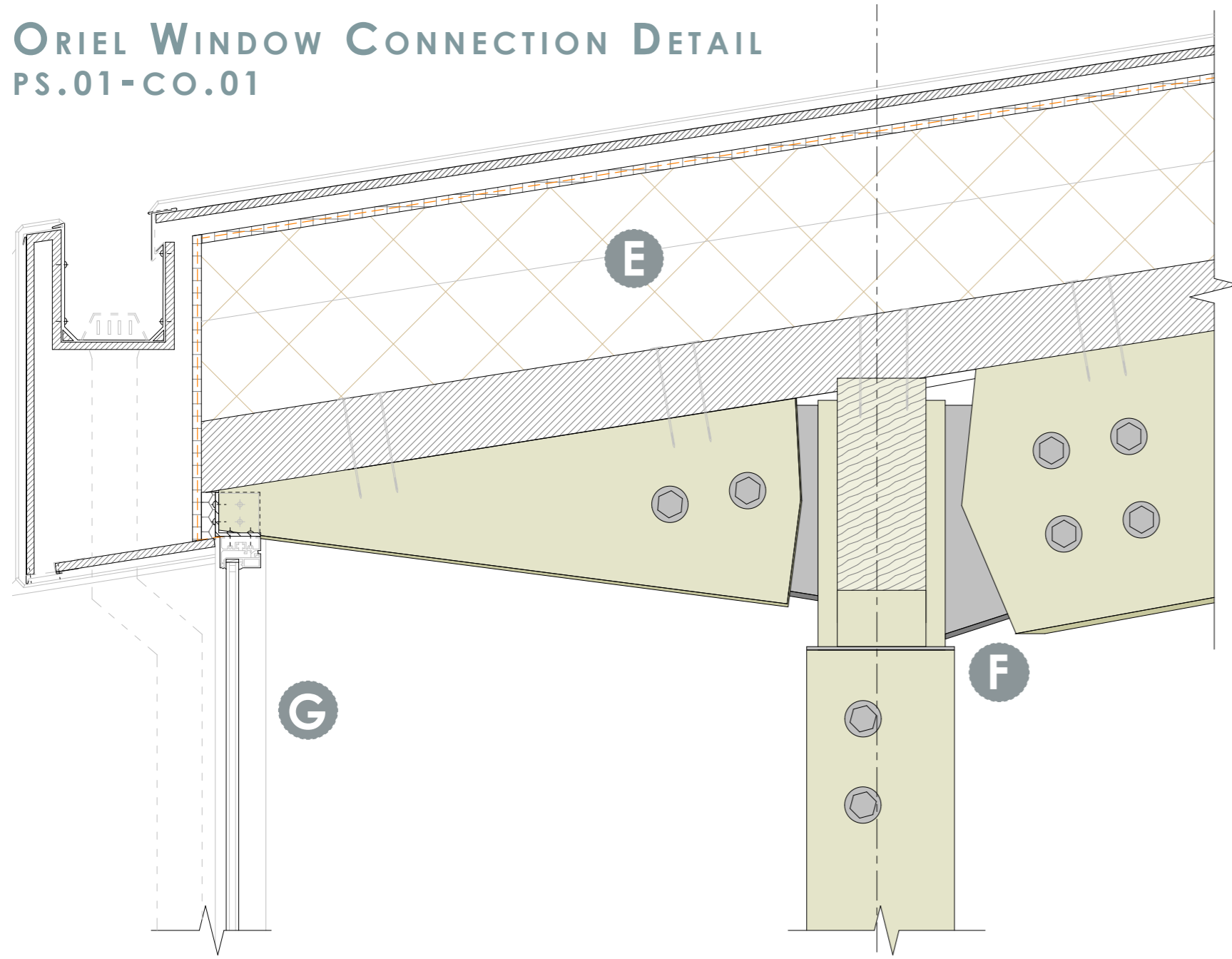


THE HIDE

CENTRE OF ENVIRONMENTAL SAFEGUARDING

ORIEL WINDOW CONNECTION DETAIL PS.01-CO.01



A - VMZINC PIGMENTO GREEN FACADE CLADDING

1MM THICK DOUBLE LOCK STANDING SEAM EXTERNAL FINISH SECURED USING MANUFACTURERS FIXING COMPONENTS TO 18MM PLYWOOD BOARD.
- MECHANICALLY FIXED TO TIMBER BATTERNS CONSTRUCTED TO CREATE 50MM VERTICAL VENTILATION CAVITY (AS SPECIFIED BY VMZINC).

//

B - 100MM LOCALLY SOURCED KNAPPED FLINT FINISH

TO BE INSTALLED BY LOCAL CRAFTS PEOPLE USING LOCALLY SOURCED FLINT WITH HIGHER CHALK CONTENT FOR A PALE APPEARANCE. BLUE CIRCLE SULFACRETE TO BE USED IN MORTAR MIX TO WITHSTAND SALINE WATER EXPOSURE.
- 100MM THERMALITE AIRCRETE SHIELD BLOCK

...
- BATTERNS FIXED BACK TO 18MM BENTON WOOD BITUMEN WOOD FIBRE WEATHER TIGHT BOARDING, ALL JOINTS TO BE CEALD WITH PRO CLIMA TESCON VANA MULTI-PURPOSE AIRTIGHT ADHESIVE TAPE
- BITUMINOUS BOARD TO FRONT THE 220MM DEEP TIMBER FRAME WALL - STUDS TO BE AT LEAST 38MM WIDE AND INSTALLED AT 600MM CENTRES TO MEET FINSA SUPERPAN AND BENTON WOOD SPECIFICATIONS. VOID TO BE FILLED WITH STEICO 360 WOOD WOOL INSULATION
- 18MM FINSA SUPERPAN VAPOURSTOP AIRTIGHT VAPOUR BARRIER RACKING BOARD INSTALLED ON THE INTERNAL FACE OF THE TIMBER STUD WALL WITH 3MM GAPS BETWEEN BOARDS. JOINTS CEALD WITH PRO CLIMA TESCON VANA MULTI-PURPOSE AIRTIGHT ADHESIVE TAPE
- 35MM SERVICE VOID CREATED WITH VERTICAL TIMBER BATTERNS TO BE FILLED WITH FULL-FILL STEICO 360 WOOD WOOL INSULATION - 1.35 m2K/W (R).
- 15MM CELENIT WOOD WOOL BOARD TO CONCEAL SERVICE VOID - 0.20 m2K/W (R)
- DOUBLE LAYER OF CLAYWORKS PRIMER APPLIED TO WOOD WOOL BOARD. CLAY BACKING COAT WITH MESH LAYER EMBEDDED WITHIN (8-10MM MESH HOLE SIZE). CLAYWORKS CLAY PLASTER TOPCOAT WITH GRE-04 PLASTER SKIM FINISH. FINISH TO BE CONCEALED WITH 2 COATS OF CLAYWORKS MICROPOROUS GLAZE.

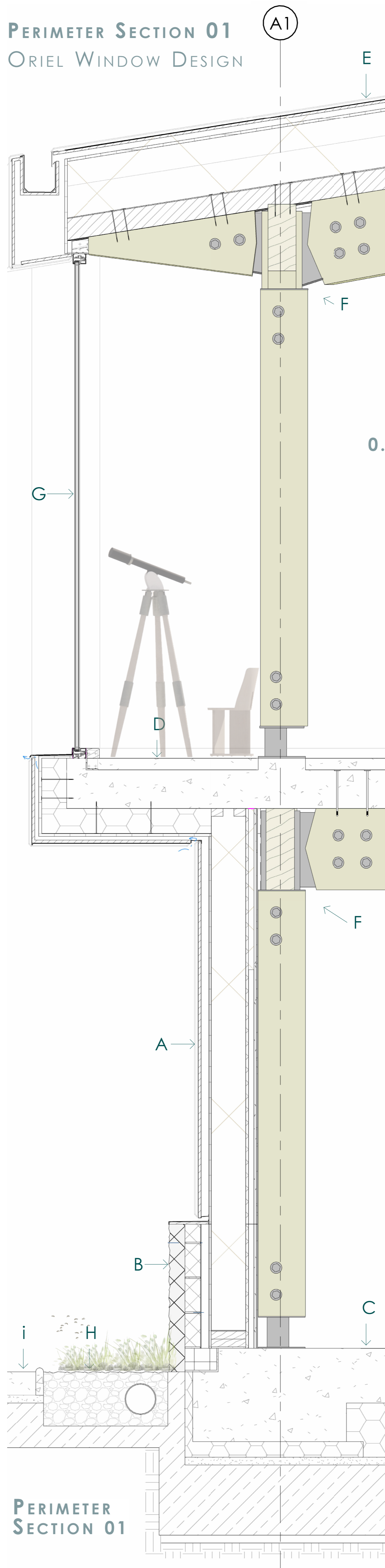
C - GGBS GROUND FLOOR SLAB

- 350MM REINFORCED GGBS INTEGRATED CONCRETE SLAB WITH DIAMOND GROUND SURFACE FINISH.
- WARMUP FORTE GRID UNDERFLOOR HEATING SYSTEM TO BE INSTALLED WITHIN CONCRETE SLAB TO MANUFACTURERS SPECIFICATION UTILISING SALINE WATER SOURCE HEAT PUMP.
- 250MM EPS100 INSULATION BELOW FLOOR SLAB
- 100MM EPS300 INSULATION TO WRAP AROUND RAFT EDGE.
- 50MM SAND BINDING LAYER BELOW EPS INSULATION LAYER
- T2 PERMEABLE ANNEX E COMPLIANT MATERIAL COMPACT TO 600MM DEEP (SEE ENGINEERS DRAWINGS FOR FURTHER SPECIFICATION AND DETAILING).

D - EXPOSED SOFFIT

- 75MM GGBS/SAND SCREED REINFORCED WITH FIBRATEC ALKALI-RESISTANT FIBRES TO PREVENT CRACKING IN INSTALLATION.
- WARMUP FORTE GRID UNDERFLOOR HEATING SYSTEM TO BE INSTALLED WITHIN SCREED A MINIMUM OF 25MM BELOW SCREED FINISH LEVEL.
- 250MM REINFORCED PRECAST GGBS SLABS.
- 160MM ROCKWOOL SOFFIT SLAB TO BE FIXED TO GGBS PANELS WITH EJOT DDS FIXINGS WITH THE EJOT DDT70 WASHER OR SIMILAR. RECOMMENDED NUMBER AND PATTERN OF FIXINGS FOR EACH SLAB SIZE CAN BE SEEN IN MANUFACTURERS INSTALLATION GUIDE. SOFFIT INSULATION TO WRAP VERTICAL FACE OF GGBS SLAB ALSO.
- WEATHER-TIGHT BITUMINOUS BOARD TO BE MECHANICALLY FIXED TO SOFFIT SLAB INSULATION AND TO WRAP AROUND TO CREATE WEATHER TIGHT LAYER WITH GLAZING SYSTEM. - 35MM MINIMUM VENTILATION GAP BATTENED OUT TO VMZINC MANUFACTURERS SPECIFICATION. - 18MM PLYBOARD TO FIX TO BATTERNS AND PROVIDE SURFACE FOR PIGMENTO GREEN VMZINC DOUBLE LOCK STANDING SEAM TO BE FIXED USING MANUFACTURERS SPECIFICATION.

PERIMETER SECTION 01 ORIEL WINDOW DESIGN



PERIMETER SECTION 01

0.09 W/m2K

0.84 W/m2K

0.17 W/m2K

0.12 W/m2K

0.104 W/m2K

0.102 W/m2K

E - CLT ROOF STRUCTURE -

- 1MM DOUBLE LOCK STANDING SEAM PIGMENTO GREEN VMZINC FIXED USING MANUFACTURERS SPECIFICATION TO 18MM PLYWOOD BOARD.
- MINIMUM OF 38MM VENTILATION GAP TO THE REAR OF PLYWOOD BOARD AS PER VMZINC MANUFACTURER SPECIFICATION.
- 18MM WEATHER TIGHT BENTON WOOD BITUMINOUS WOOD FIBRE BOARD
- WEATHER TIGHT BOARD TO CONCEAL 360MM STEICO FLEX 360 WOOD FIBRE INSULATION. - 145MM CROSS LAMINATE TIMBER SUPPORTING ROOF STRUCTURE. 1.2 m2K/W (R).

F - GLULAM STRUCTURE

GLULAM BEAMS AND COLUMNS CONNECTED USING STEEL CYLINDRICAL COLUMN CAPS AND FITCH PLATES, REFER TO STRUCTURAL ENGINEER DRAWINGS FOR COMPLETE STRUCTURAL ANALYSIS.

G - ORIEL WINDOW GLAZING SYSTEM - AULPROF MB-86

TRIPLE GLAZED CURTAIN WALL SYSTEM, TO BE INSTALLED TO MANUFACTURERS SPECIFICATIONS.

H - PERIMETER SPLASH STRIP

- GROUND PERIMETER DRAINAGE CHANNEL WITH 160MM DIAMETER PERFORATED PIPE SET WITHIN CLEAN GRAVEL TOPPED WITH SHINGLE SAND GROWING SUBSTRATE AND CONTEXTUALLY ACCURATE PLANTING SUCH AS YELLOW HORNED POPPY. SPLASH STRIP TO BE LINED WITH GEOTEXTILE MESH TO AID WITH DRAINAGE. DRAINAGE CHANNEL TO RUN TO SOAK AWAY FOR WATER TO BE DISPERSED INTO BELOW GROUND WATER SYSTEMS.

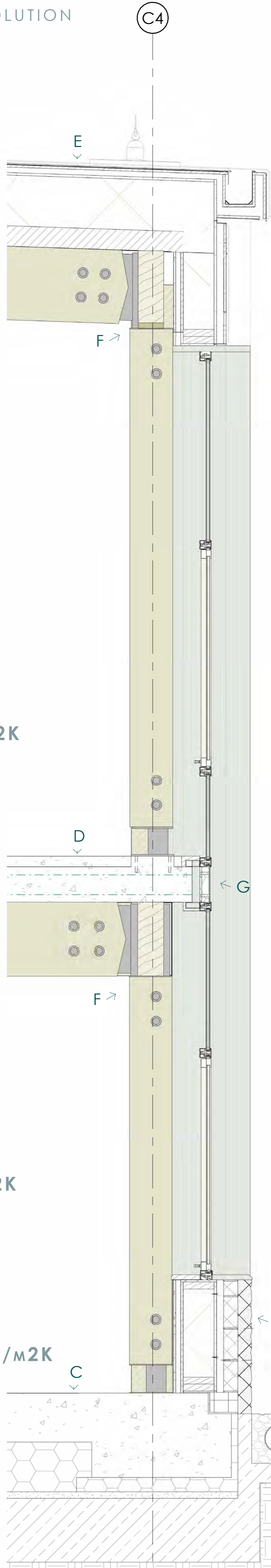
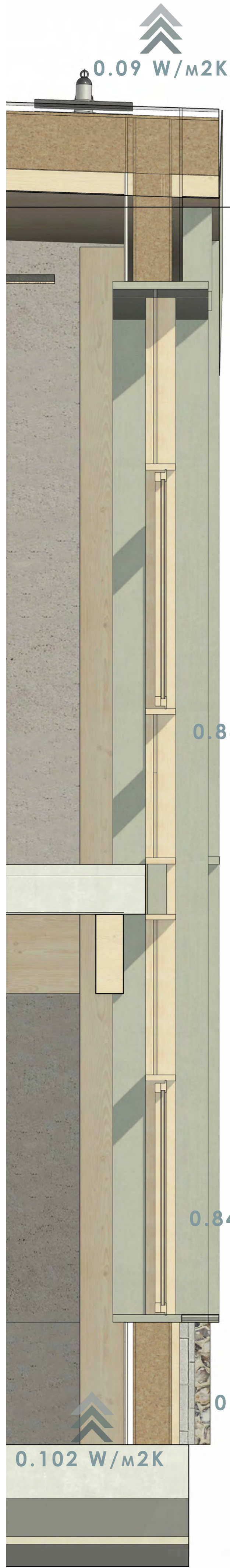
I - GGBS PERIMETER PAVING

150MM GGBS PAVING SLAB TO BE INSTALLED AROUND PERIMETER OF BUILDING TO BE LINED WITH DPM. PAVING TO BE EDGED AT EACH END WITH 100MM RAISED PROFILE CURBING.

THE HIDE

CENTRE OF ENVIRONMENTAL SAFEGUARDING

PERIMETER SECTION 02 - GLAZING TECHNICAL RESOLUTION



ManTech ManSafe Fall Arrest System (standing seam). Used in general maintenance and for solar panels. Access via boom lift or aerial work platform devices. (Shown indicatively - to be installed to ManTech Specification)

18mm ply wood board with manufacturer specified fixing clips to secure VmZinc cladding finish

38mm ventilation gap created using 38x50mm timber battens

18mm Benton Wood bituminous weatherlight wood fibre board to wrap roof, fascia and soffit - 6.10 m²K/W (R)

360mm SteicoFlex 360 wood fibre insulation (200mm layer below 160mm layer) - 9.95 m²K/W (R)

145mm Eurban cross laminate timber roof panel, underside left exposed as soffit finish material - 1.2 m²K/W (R)

Steel fitch plate for beam to column connections

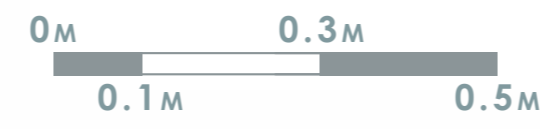
530mm x 180mm Glulam Beams to serve up to 8m spans - Further details provided in Structural Engineers drawings

Cylindrical steel column cap for beam fitch plates to be welded to concealed in glulam casing for aesthetic value

Fitch plates bolted to structural components similar to M12 x 120 Hexagon Bolt Grade 8.8 High Tensile. Check Structural Engineers details for further specification

Glulam columns to structural engineers specifications

GLAZING HEAD PS.02-CO.01



INTERMEDIATE FLOOR CONNECTION PS.02-CO.02

Glulam columns to structural engineers specifications. Base plate to be connected to GGBS raised plinth for accessible fixings

Fitch plates bolted to structural components similar to M12 x 120 Hexagon Bolt Grade 8.8 High Tensile. Check Structural Engineers details for further specification. Concrete base plinth raised to FF level for base fixings

250mm steel reinforced precast GGBS slab

WarmUp Forte Grid underfloor heating system to be installed 25mm below finish level

75mm GGBS/sand screed reinforced with Fibrotac Alkali-resistant fibres to prevent cracking in installation

01 - First Floor
7800

Beam Base
6950

530mm x 180mm Glulam Beams to serve up to 8m spans - Further details provided in Structural Engineers drawings

Fitch plates bolted to structural components similar to M12 x 120 Hexagon Bolt Grade 8.8 High Tensile. Check Structural Engineers details for further specification

Cylindrical steel column cap for beam fitch plates to be welded to.

Glulam columns to structural engineers specifications

WINDOW SILL DETAIL PS.02-CO.03

Timber window board with airtight mastic seal to all perimeters

Window frame fixing lugs to Aulprof manufacturing details

Glulam columns to structural engineers specifications. Base plate to be connected to GGBS panel below screed

18mm Finsa Superpan VapourStop airtight vapour barrier rocking board installed with 3mm gaps between boards. Joints sealed with Pro Clima Tescon Vana Multi-purpose airtight adhesive tape - 0.12 m²K/W (R)

35mm service void battered out using 35 x 50mm timber battens, filled with 35mm steicoflex wood wool insulation - 0.80 m²K/W (R)

Clayworks Gre-04 internal wall finish - Full specification available on perimeter section 02

Halfen Facade to Roof L shape fixing bracket

Folded Galvanized steel profiles wrapped to create water barriers and ventilation gaps

VmZinc Plus perforated sheet

VmZinc retention profile

Downpipe leaf gutter guard shown indicatively. To be located at the low points of roof. Will require annual maintenance via mansafe roof access

VmZinc hidden box gutter

1mm thick double track standing seam Pigmento Green VmZinc Roof finish to wrap Fascia

Plyboard boxing out substrate

Folded Galvanized steel profile

Perforated VmZinc Plus in Pigmento Green with screened insect mesh

Perforated VmZinc Plus in Pigmento Green with screened insect mesh

Stainless steel downpipe to run down the back facing side of or vertical zinc fin at roof low points. To drain to soakaways.

18mm Plywood board with VmZinc fixing clips securing standing seam double lock VmZinc in Pigmento Green finish to ply board

50mm ventilation gap created using 50x50mm timber battens

18mm Benton Wood bituminous weatherlight wood fibre board - 0.36 m²K/W (R)

220mm SteicoFlex 360 wood fibre insulation between timber stud framework - 6.10 m²K/W (R)

18mm Finsa Superpan VapourStop airtight vapour barrier rocking board installed with 3mm gaps between boards. Joints and corners coated with Pro Clima Tescon Vana Multi-purpose airtight adhesive tape - 0.12 m²K/W (R)

Clayworks Gre-04 internal wall finish - Full specification available on perimeter section 02

Perforated VmZinc Plus in Pigmento Green with screened insect mesh

Aulprof insulated casement to secure glazing head to CLT panel (fixing mechanism to manufacturers specification). Tracks vent to window frame head

Flexible airtight mastic seal

Timber window board with airtight mastic seal to all perimeters

Aulprof MB-70 Triple glazed top hung window casement fixed within curtain wall to manufacturers specification - opening limiter to be applied to all openings at first floor level. Automatic opening mechanism to be installed for night time purging to aid natural ventilation. Further explanation found in M&E consultant information

Aulprof MB-86 Triple glazed curtain wall system, to be installed to manufacturers specifications.

Timber window board with airtight mastic seal to all perimeters

Aulprof MB-86 Triple glazed curtain wall extended transom bracket mechanically fixed to GGBS slab

Halfen HCW Curtain Wall base anchor installed to manufacturers specification - to provide sufficient fixing to withstand coastal winds

Metalline Utility A1 non-combustible (A1 fire rated to EN 13501-1), solid aluminium cladding panel in GR04 to match Pigmento Green VmZinc.

Infill panel filled with 50mm rockwool Roxul Safe Mineral Wool Fireproofing insulation back to structural panel mechanically fixed to GGBS with helping hand bracket or similar slab to Metalline specification.

Aulprof MB-70 Triple glazed top hung window casement fixed within curtain wall to manufacturers specification. Automatic opening mechanism to be installed for night time purging to aid natural ventilation. Further details found in M&E consultant information

Flexible airtight mastic seal

Preformed window cill with stop ends on EPDM with continuous weatherlight mastic seal to underside - Finished in VmZinc plus pigmento green cladding system

Timber window board with airtight mastic seal to all perimeters

18mm Benton Wood bituminous weatherlight wood fibre board - 0.36 m²K/W (R)

220mm x 50mm timber top plate

220mm SteicoFlex 360 wood fibre insulation between timber stud framework - 6.10 m²K/W (R)

100mm Thermagite Aircrete Shield Block - 1.5m²K/W (R) fixed back to Bituminous boards through 50mm ventilation cavity using cavity clips at 450mm centres

100mm Locally sourced Knapped Flint finish installed by local crafts people using Blue Circle Sulphate mortar mix to withstand saline water exposure or similar product. Fixed to blockwork backing with Simpson C263 stone wall mortar joint brackets at 400mm centres

STRUCTURAL ASSESSMENT

GLULAM WAS USED AS THE MAIN STRUCTURAL FRAMING FOR 'THE HIDE' DUE TO ITS MANY ADVANTAGES IN SUSTAINABILITY, BUILD-ABILITY & AESTHETIC QUALITIES. DESIGNED IN CONJUNCTION WITH CAUTION ENGINEERING THE FRAME ACHIEVES THE FOLLOWING BRIEF REQUIREMENTS:

- SOURCED FROM THE LOCAL BRANDON SUSTAINABLE FORESTRY, THE TIMBER USED IS AN OMNIPRESENT RESOURCE THAT STORES LARGE QUANTITIES OF CARBON IN ITS GROWTH AND APPLICATION.

- GLULAM IS NOTICEABLY LIGHTER THAN OTHER FRAMING MATERIALS WHICH HELPS REDUCE TRANSPORTATION AND ON-SITE HANDLING.

- MINIMAL WASTE IS GENERATED IN ITS PRODUCTION AND ANY OFFCUTS OR FIBRES CAN BE USED IN THE WOOD FIBRE PRODUCTS AS STATED PREVIOUSLY.

- THE WARM APPEARANCE OF THE ENGINEERED TIMBER ADDS TO 'THE HIDE'S' NATURAL DESIGN AESTHETIC ECHOING THE BUILDINGS ENVIRONMENTAL PURPOSE.

