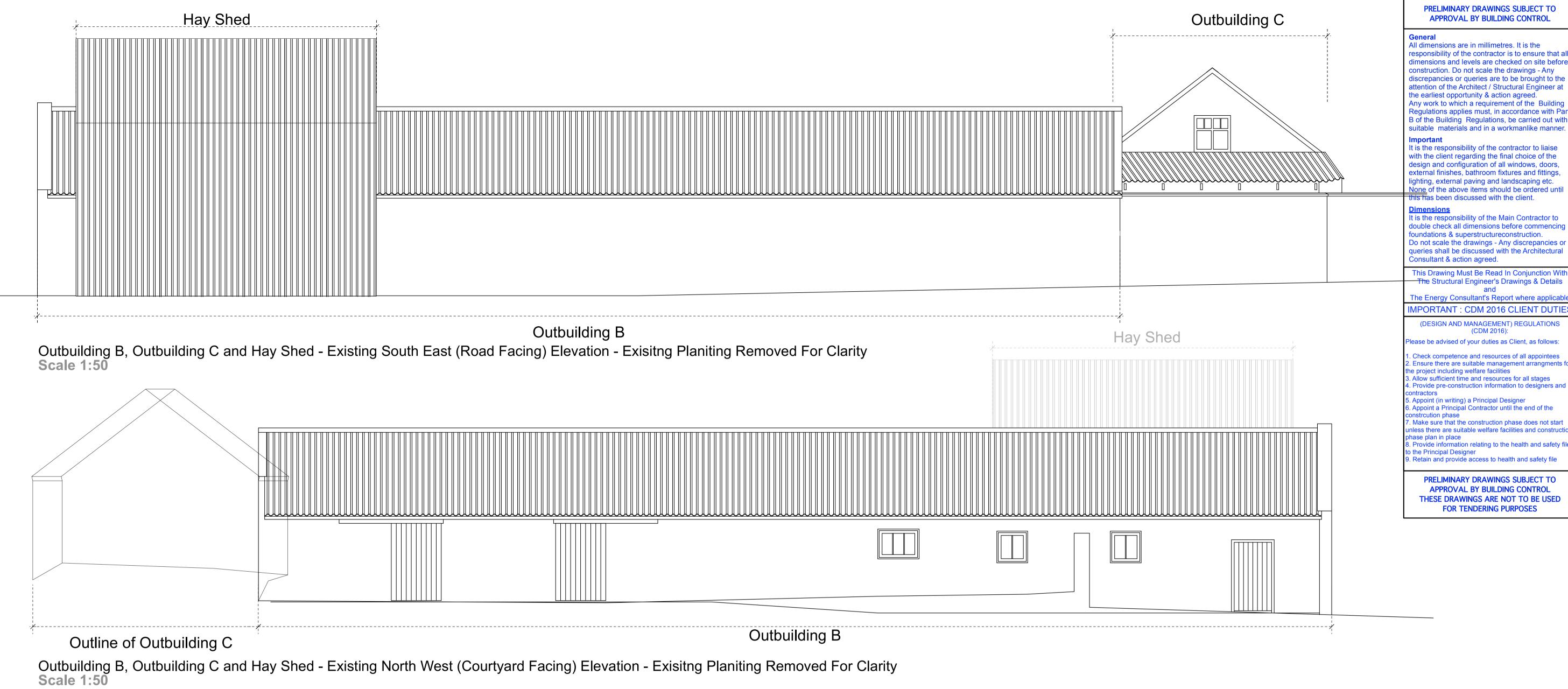
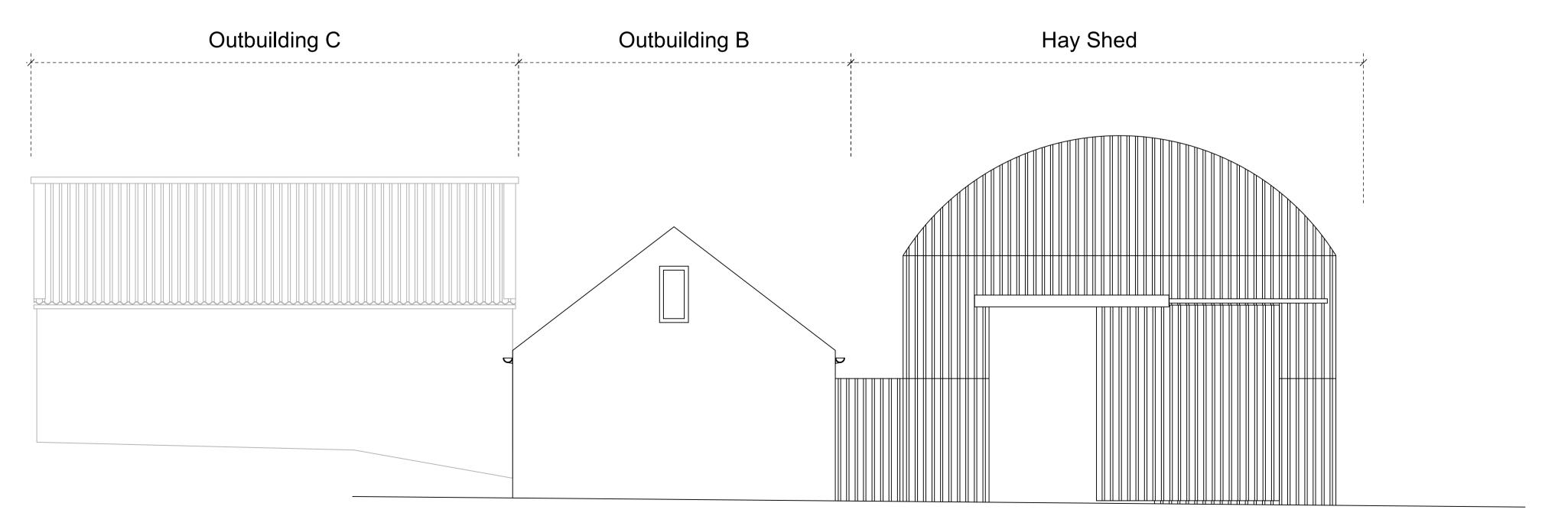


Scale 1:50

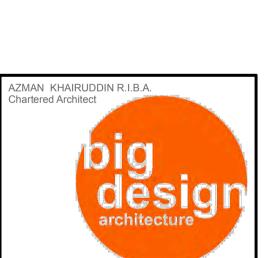
Scale 1:50

Scale 1:50





Outbuilding B, Outbuilding C and Hay Shed - Existing South West (Road Facing) Elevation - Exisitng Planiting Removed For Clarity Scale 1:50



Tel: (028) 944 88 258 Mob: 0781 586 2541

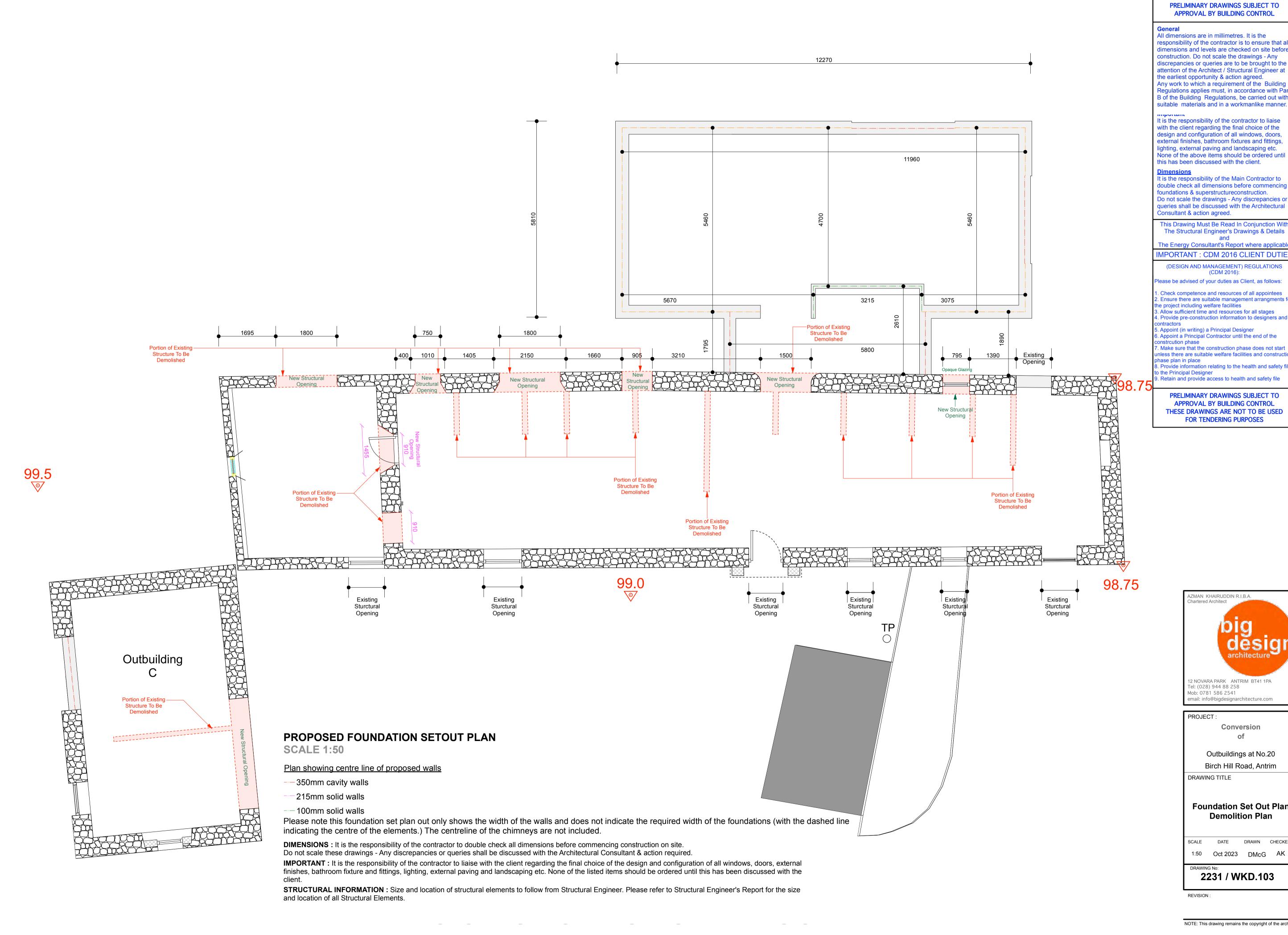
Conversion

Outbuildings at No.20 Birch Hill Road, Antrim

DRAWING TITLE

Existing Elevations

2231 / WKD.102



PRELIMINARY DRAWINGS SUBJECT TO APPROVAL BY BUILDING CONTROL

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> AZMAN KHAIRUDDIN R.I.B.A. hartered Architect

2 NOVARA PARK ANTRIM BT41 1PA el: (028) 944 88 258 Mob: 0781 586 2541

PROJECT:

Conversion

Outbuildings at No.20 Birch Hill Road, Antrim

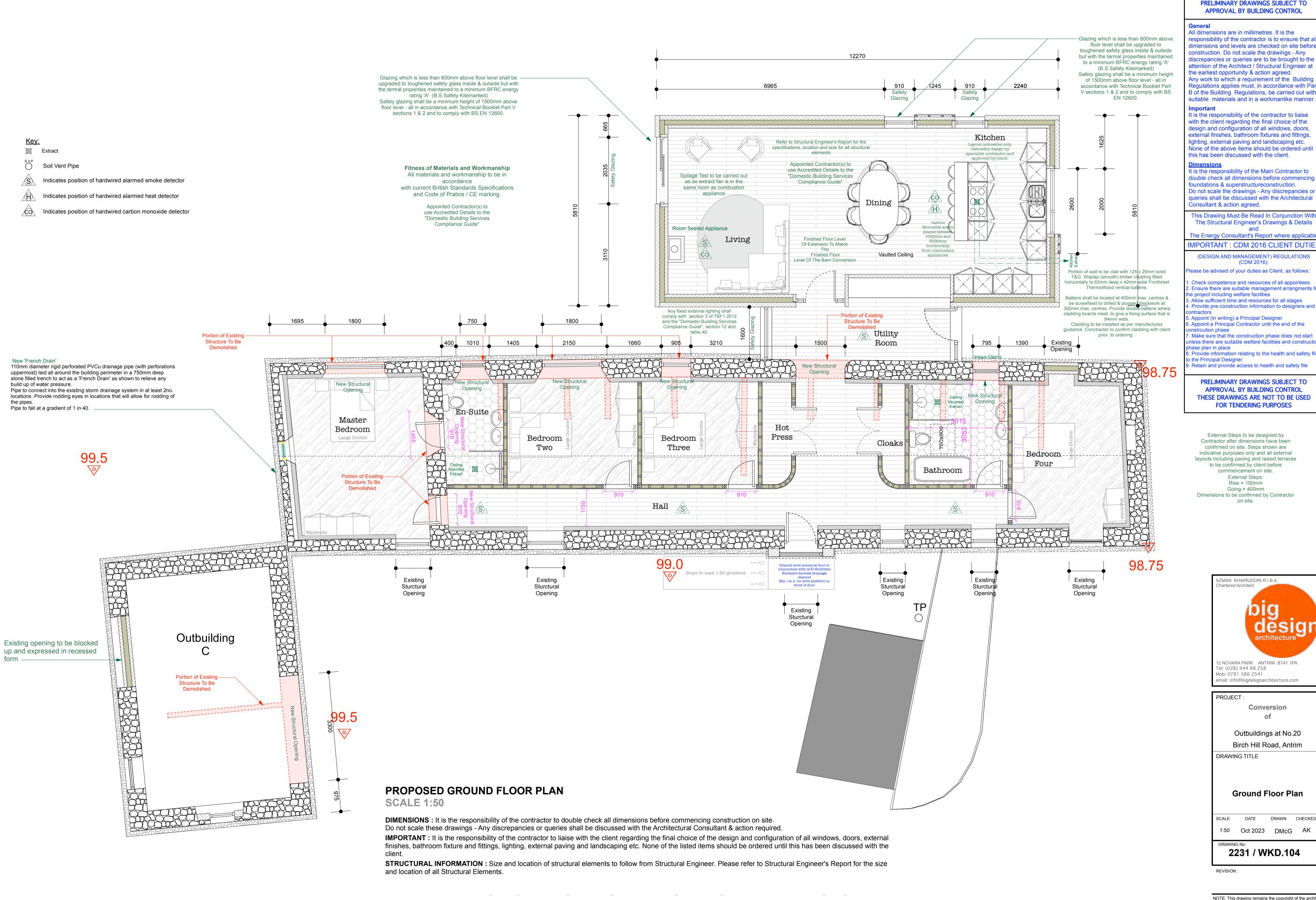
DRAWING TITLE

Foundation Set Out Plan Demolition Plan

DRAWN CHECKED 1:50 Oct 2023 DMcG AK

2231 / WKD.103

REVISION:



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External Steps to be designed by Contractor after dimensions have been confirmed on site. Steps shown are indicative purposes only and all external layouts including paving and raised terraces to be confirmed by client before commencement on site External Steps: Rise = 150mm Going = 400mm Dimensions to be confirmed by Contractor

on site.



PROJECT:

Conversion

email: info@bigdesignarchitecture.com

Outbuildings at No.20 Birch Hill Road, Antrim

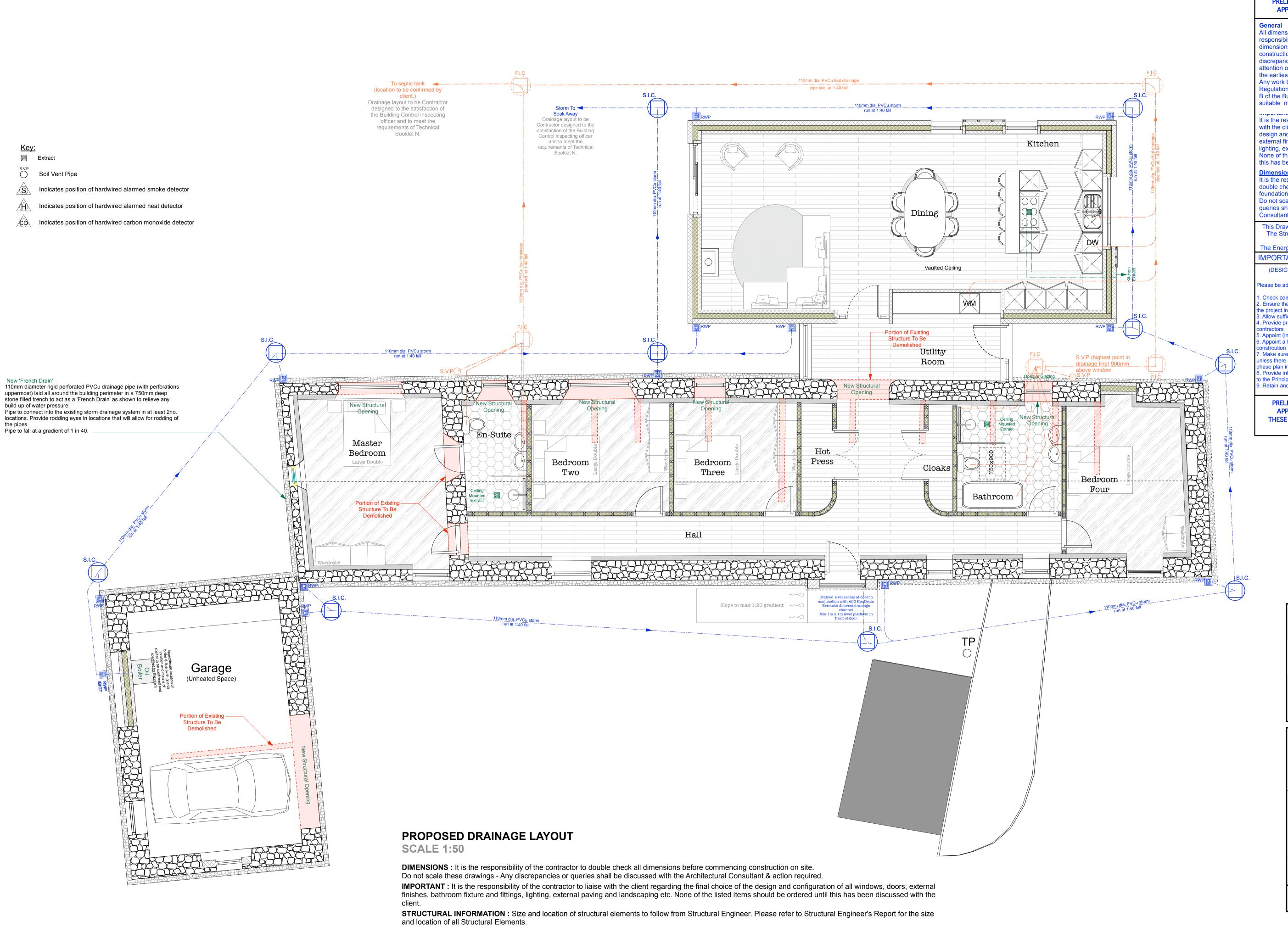
DRAWING TITLE

Ground Floor Plan

DRAWN CHECKED

1:50 Oct 2023 DMcG

2231 / WKD.104



PRELIMINARY DRAWINGS SUBJECT TO APPROVAL BY BUILDING CONTROL

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2 NOVARA PARK ANTRIM BT41 1PA Tel: (028) 944 88 258 Mob: 0781 586 2541 email: info@bigdesignarchitecture.com

PROJECT:

Conversion

Outbuildings at No.20 Birch Hill Road, Antrim

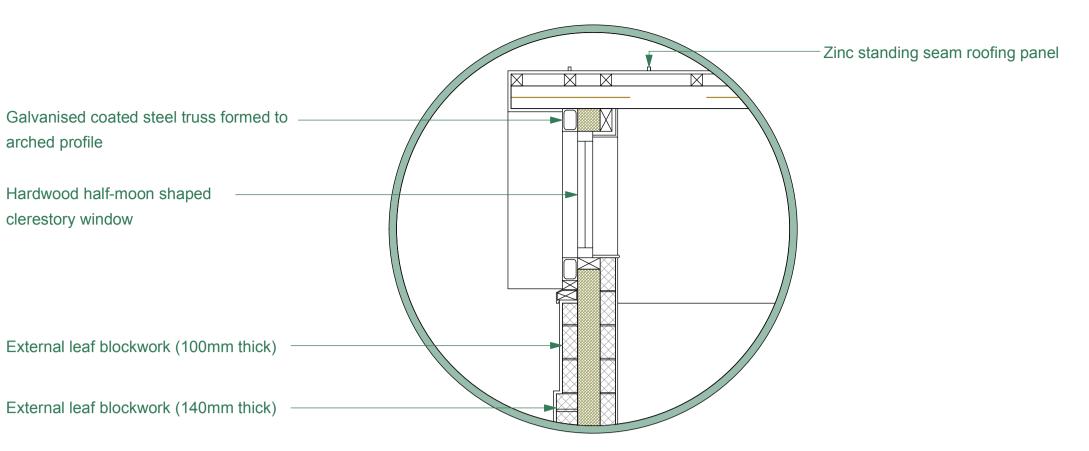
DRAWING TITLE

Ground Floor Plan Drainage Layout

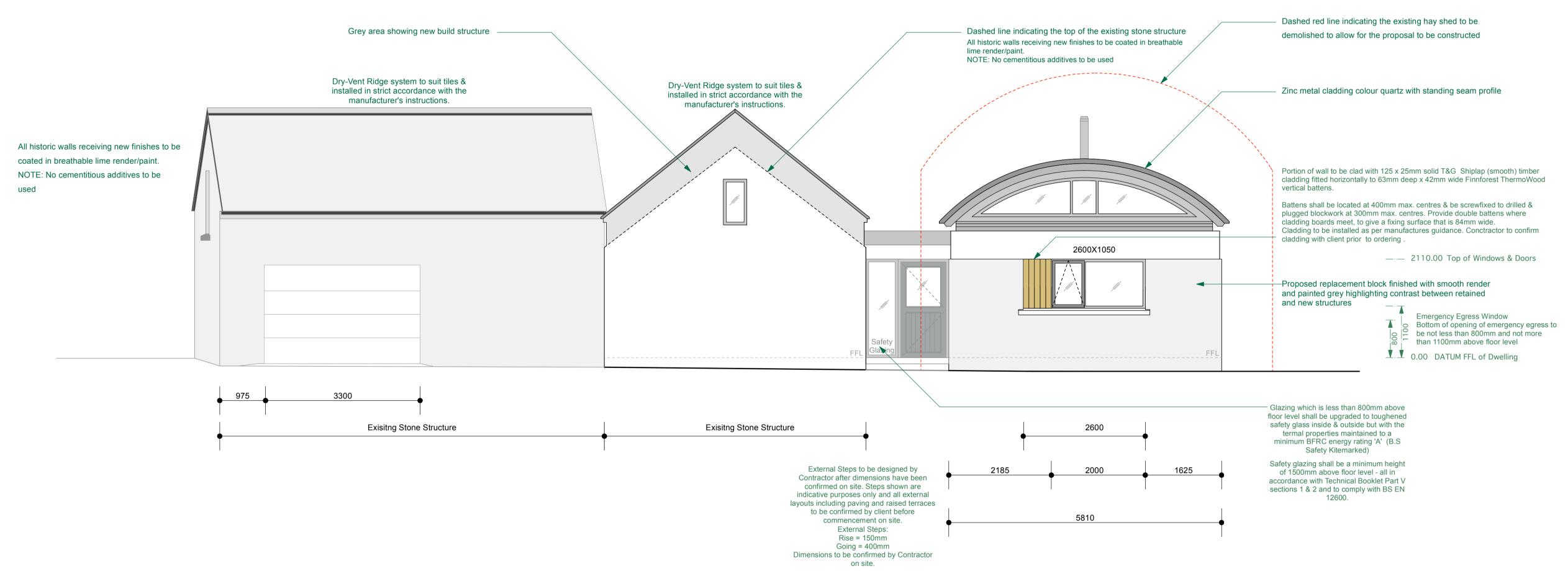
1:50 Oct 2023 DMcG AK

2231 / WKD.105

REVISION:



Celestory Light & Verge Detail



Proposed Side Elevation

SCALE 1:50

DIMENSIONS: It is the responsibility of the contractor to double check all dimensions before commencing construction on site.

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IMPORTANT: It is the responsibility of the contractor to liaise with the client regarding the final choice of the design and configuration of all windows, doors, external finishes, bathroom fixture and fittings, lighting, external paving and landscaping etc. None of the listed items should be ordered until this has been discussed with the

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 9. Retain and provide access to health and safety file

PRELIMINARY DRAWINGS SUBJECT TO APPROVAL BY BUILDING CONTROL

THESE DRAWINGS ARE NOT TO BE USED FOR TENDERING PURPOSES



PROJECT:

Mob: 0781 586 2541

Conversion

email: info@bigdesignarchitecture.com

Outbuildings at No.20 Birch Hill Road, Antrim

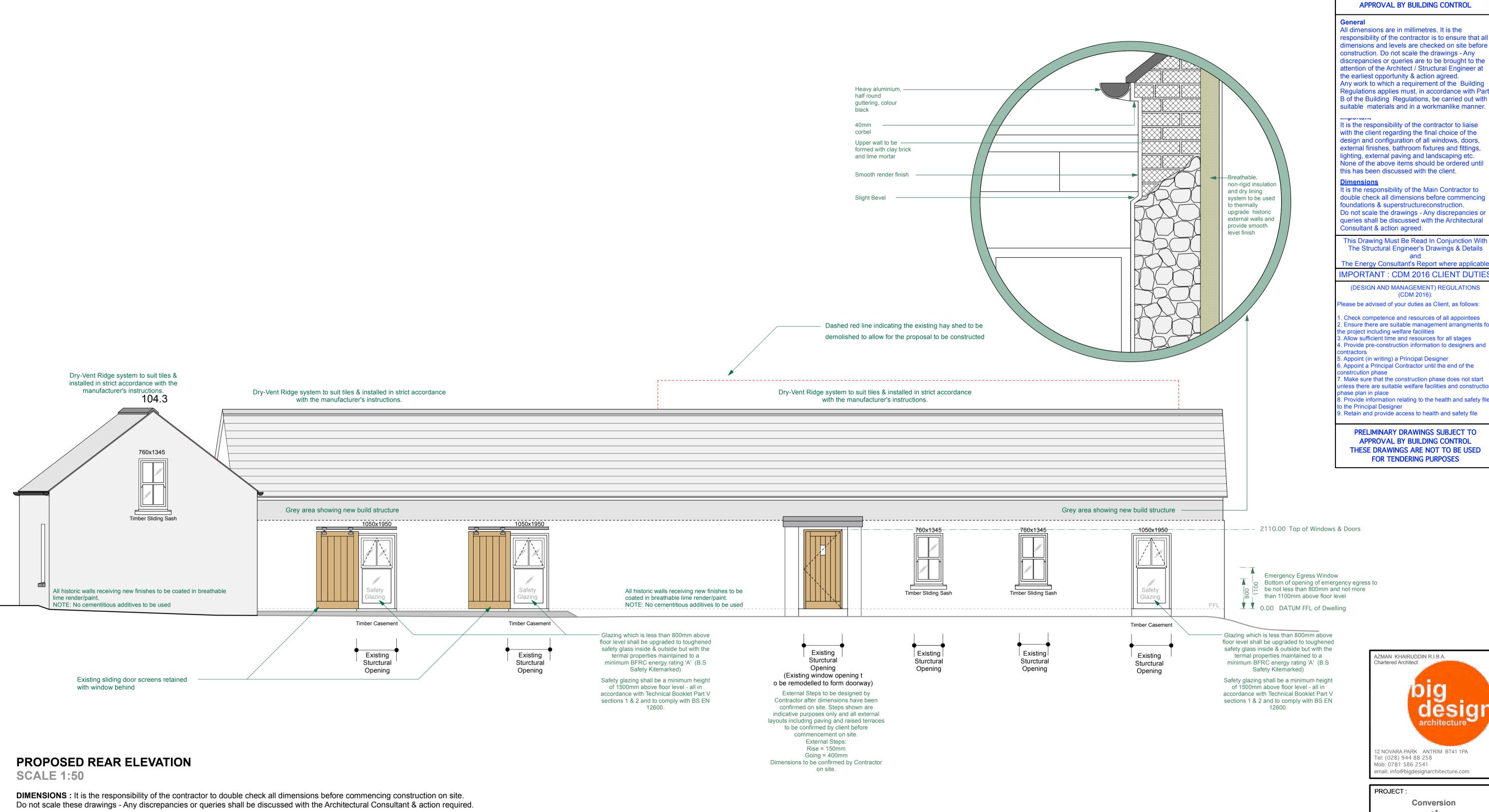
DRAWING TITLE

Proposed Side Elevation

SCALE DATE DRAWN CHECKED 1:50 Oct 2023 DMcG AK

2231 / WKD.106

REVISION:



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IMPORTANT: It is the responsibility of the contractor to liaise with the client regarding the final choice of the design and configuration of all windows, doors, external finishes, bathroom fixture and fittings, lighting, external paving and landscaping etc. None of the listed items should be ordered until this has been discussed with the

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PRELIMINARY DRAWINGS SUBJECT TO

12 NOVARA PARK ANTRIM BT41 1PA

Outbuildings at No.20

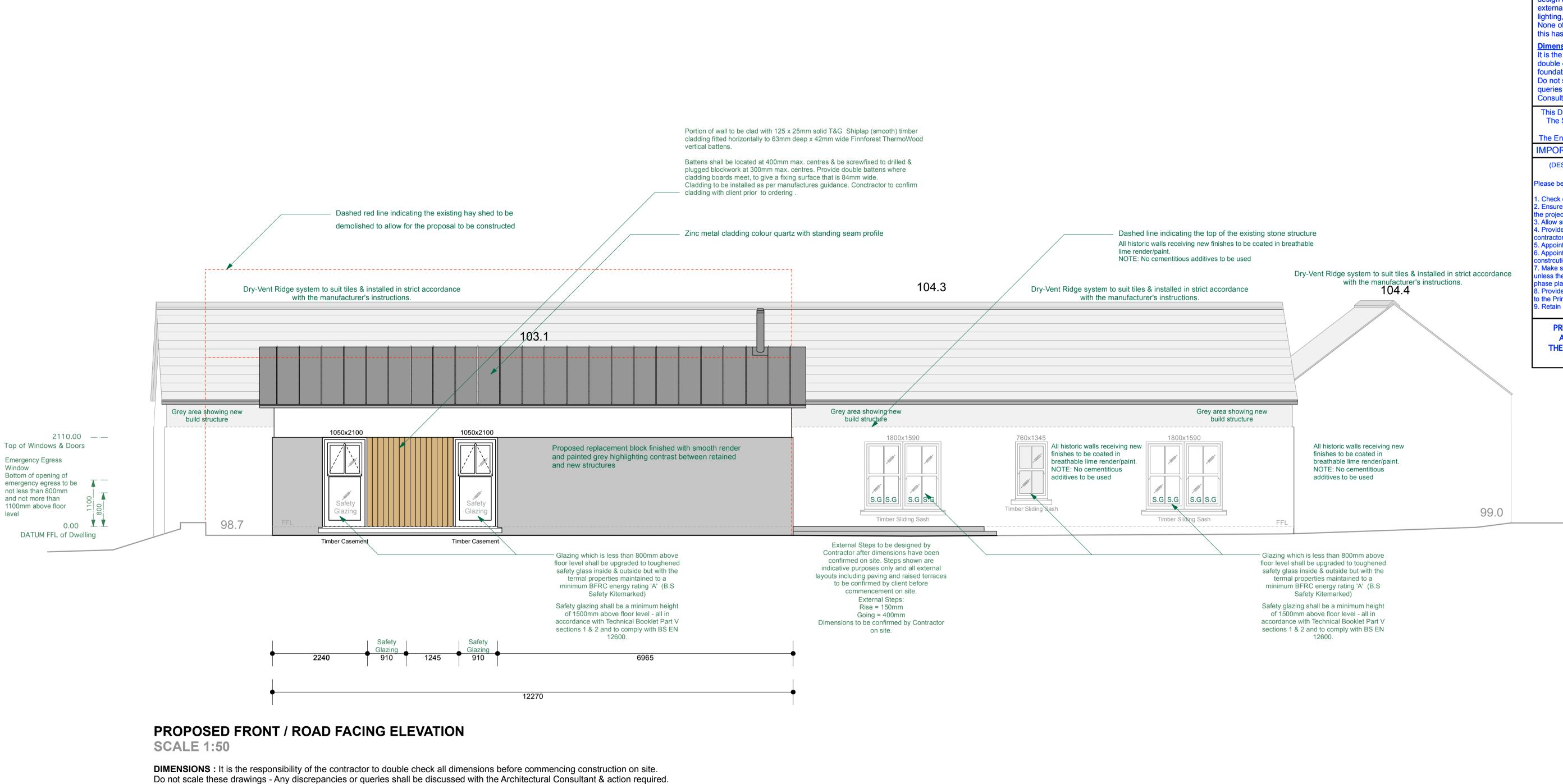
Birch Hill Road, Antrim DRAWING TITLE

Proposed Rear Elevation

SCALE DATE DRAWN CHECKED 1:50 Oct 2023 DMcG AK

2231 / WKD.107

REVISION:



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IMPORTANT: It is the responsibility of the contractor to liaise with the client regarding the final choice of the design and configuration of all windows, doors, external

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> AZMAN KHAIRUDDIN R.I.B.A. Chartered Architect 2 NOVARA PARK ANTRIM BT41 1PA

PROJECT:

Tel: (028) 944 88 258 Mob: 0781 586 2541

Conversion

email: info@bigdesignarchitecture.com

Outbuildings at No.20 Birch Hill Road, Antrim

DRAWING TITLE

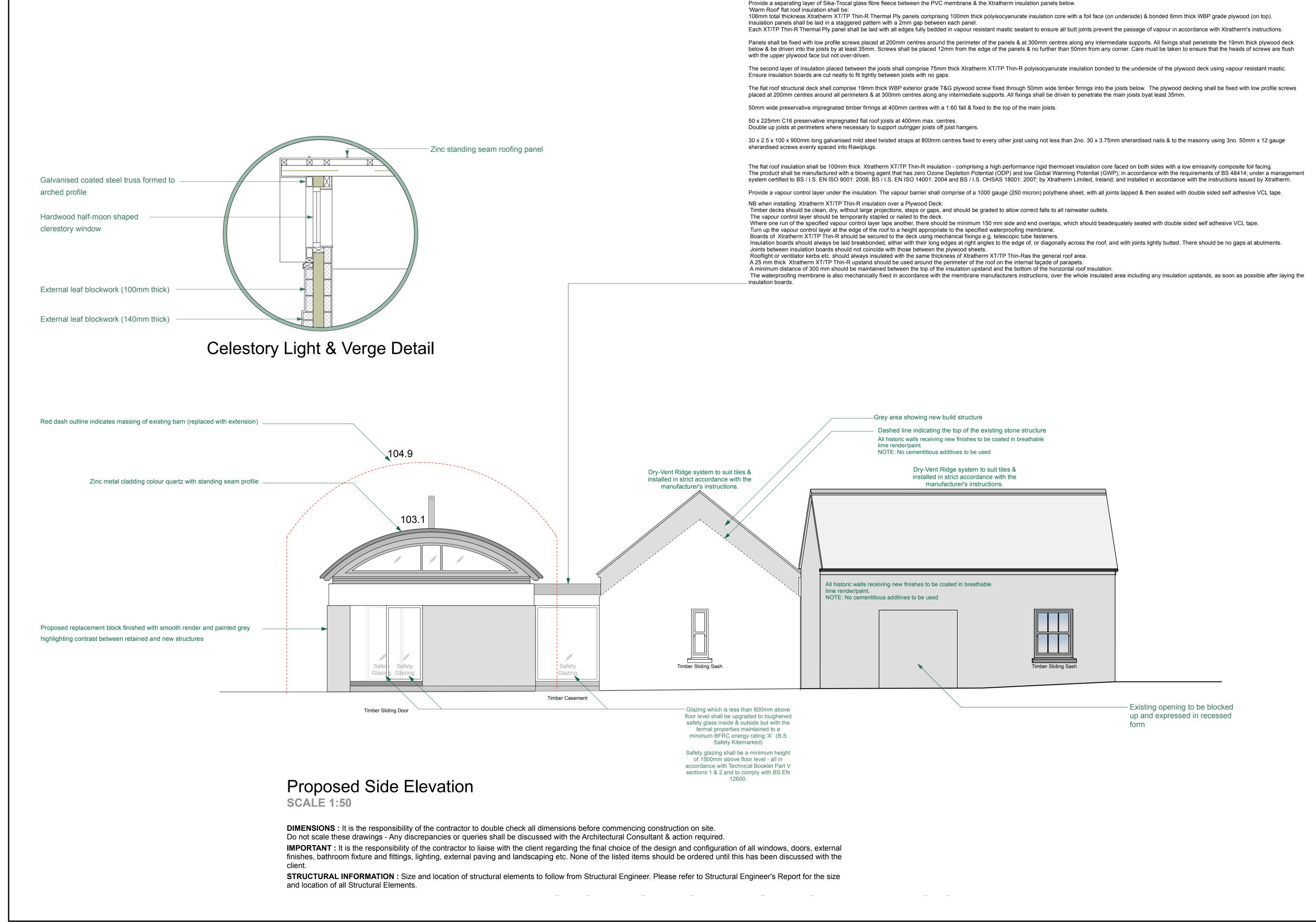
Proposed Friont Elervation

SCALE DATE DRAWN CHECKED

1:50 Oct 2023 DMcG AK

2231 / WKD.108

REVISION:



FLAT ROOF CONSTRUCTION:

instructions by an approved contractor.

Exact fixing type & frequency shall be determined by the Sika-Trocal technical specialist.

The fixing frequency, perimeter detailing etc. shall be discussed & agreed with the architectural consultant before commencing the installation.

RHEINZINK pre-weathered zinc alloy cladding with secret-fix, shadow joint detailing to fascia & soffit of flat roof. Continuous Trocal Metal upstand taken under the Zinc capping & down the front face of the fascia for fixing

Flat roof membrane & associated details shall be Sika-Trocal Type S 2mm thick single ply PVC (dark grey) fitted using the mechanical fixing & solvent welding method in strict accordance with Sika-Trocal's printed

The approved contractor shall utilise standard & bespoke Trocal Laminated Metal components for all detailing & perimeter work as necessary for a complete & proper installation in strict accordance with Sika-Trocal's

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ZMAN KHAIRUDDIN R.I.B.A.

12 NOVARA PARK ANTRIM BT41 1PA Tel: (028) 944 88 258 Mob: 0781 586 2541 email: info@bigdesignarchitecture.com

PROJECT:

Conversion

Outbuildings at No.20

Birch Hill Road, Antrim

DRAWING TITLE

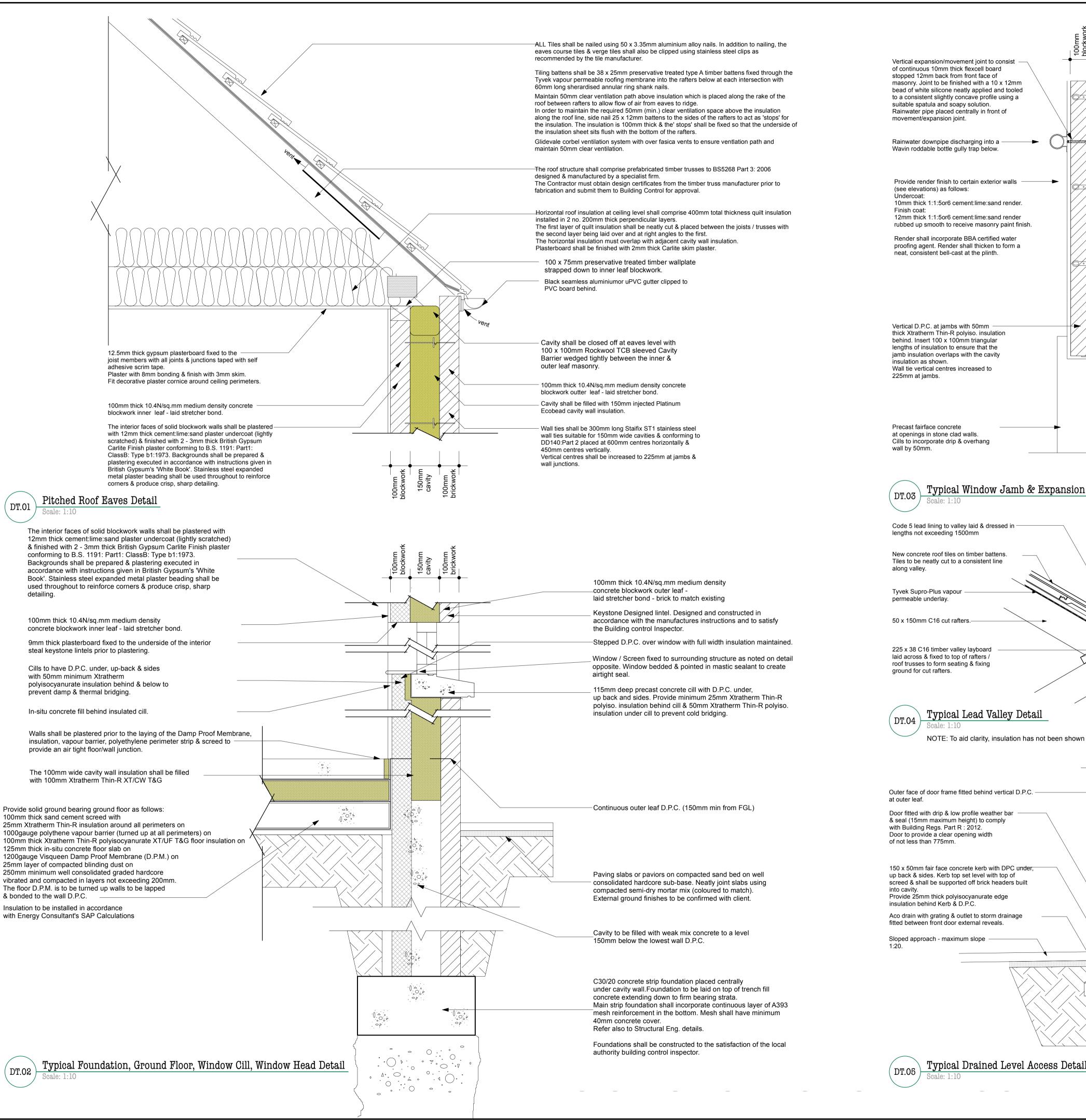
Proposed Site Elevation

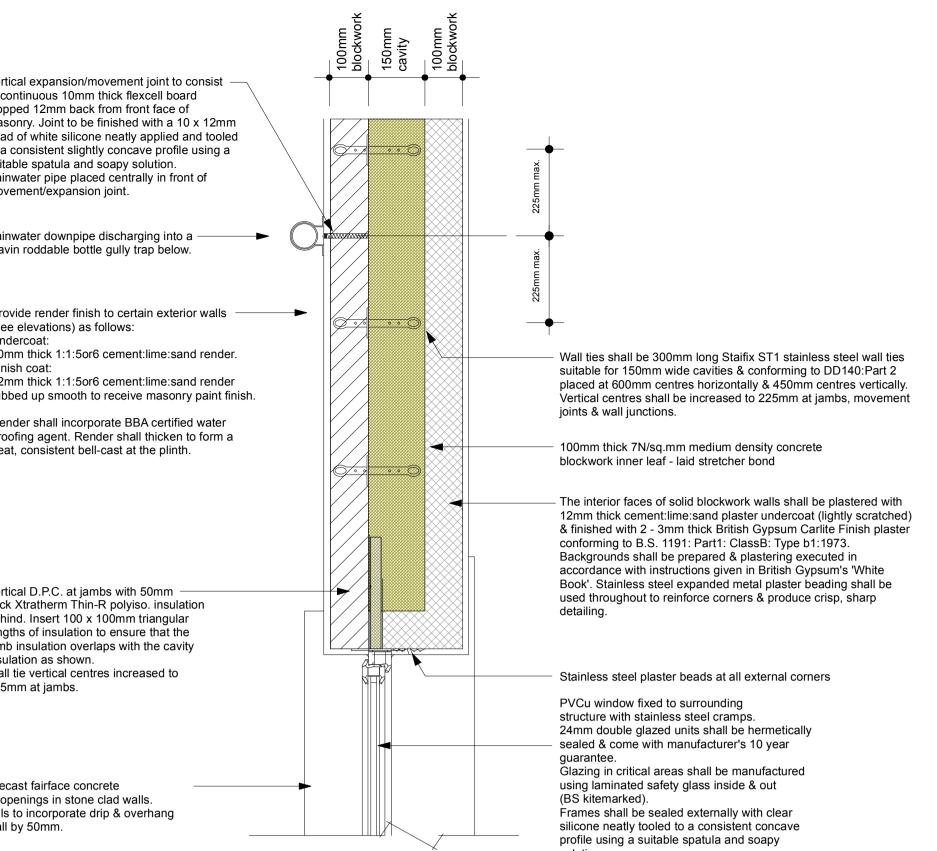
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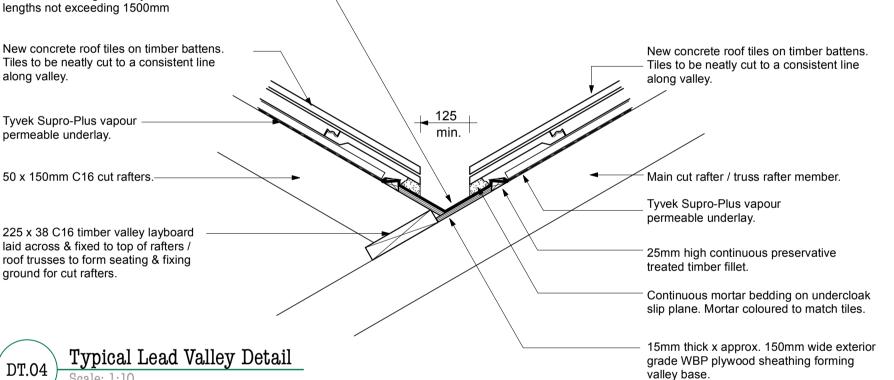
2231 / WKD.109

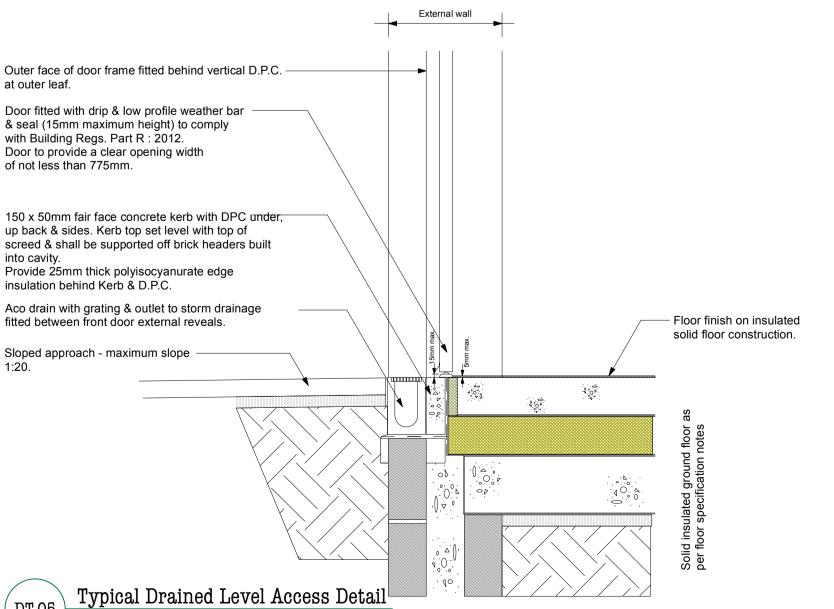
REVISION





Typical Window Jamb & Expansion Joint Detail - Rendered External Wall





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PROJECT:

Conversion

Outbuildings at No.20 Birch Hill Road, Antrim

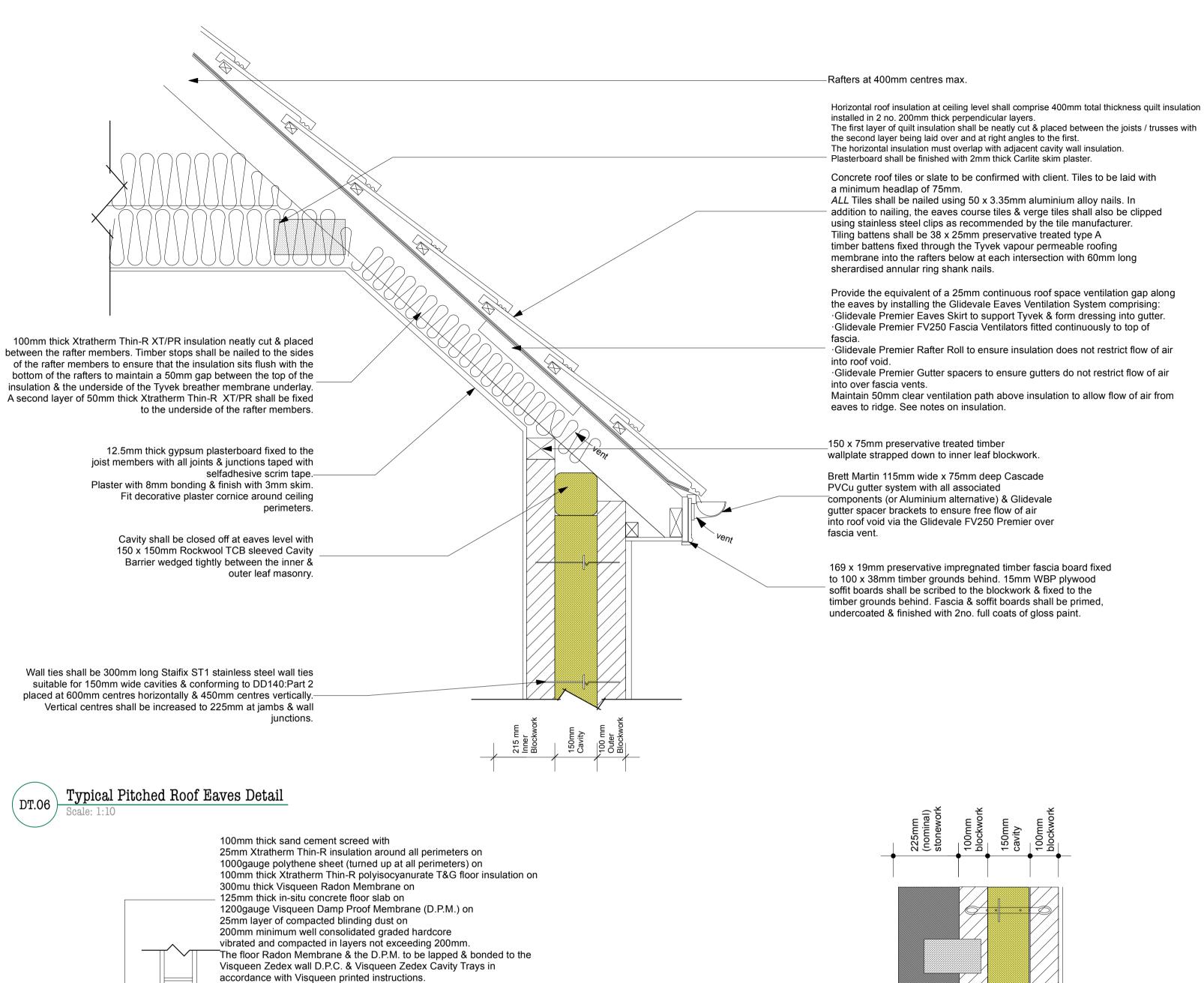
DRAWING TITLE

Proposed Construction Details

DATE DRAWN CHECKED 1:50 Oct 2023 DMcG AK

2231 / WKD.110

REVISION



solid wall.

Typical Detailed Vertical Section Through Ground Floor & Solid Internal Wall

_450 x 300mm C30/20 concrete strip

foundation placed centrally under 100mm

Foundation to be laid on top of trench fill

concrete extending down to firm bearing

Main strip foundation shall incorporate continuous layer of A393 mesh

reinforcement in the bottom. Mesh shall

Foundations shall be constructed to the

satisfaction of the local authority building

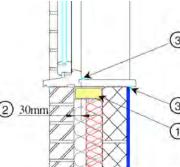
have minimum 40mm concrete cover.

. 4 . . .

MAL PERFORMANCE OF JUNCTION

closer and blockwork wall.

Install a proprietary cavity closer having a path of minimum thermal resistance path through the closer of not less than 0.45 m2K/W (manufacturers certified



Minimum frame overlap to be 30mm @ Ensure that partial fill insulation is secured firmly against the inner leaf of the

AIR BARRIER CONTINUITY

3 Ensure air barrier continuity between the window and the wall air barrier line. U If forming the air barrier to the walls with the blockwork inner leaf or a parge coat on blocks, a flexible sealant should be installed between the cavity

Flexible sealant should be applied to the junction between the plaster/plasterboard and cill board and between the cill board and window frame

Seal all penetrations through air barrier using a flexible sealant.

GENERAL NOTES

• Ensure that cavities are kept clean of mortar snots or other debris during construction.

MCI-WD-04 Windows and Doors. Cills.

THERMAL PERFORMANCE OF JUNCTION

Install a proprietary cavity closer or block of insulation having a path of minimum thermal resistance path through the closer of not less than 0.45_m²K/W (manufacturers certified data). ① Ensure that all gaps around and between lintels are filled with tightly packed

Minimum frame overlap to be 30mm ② Ensure that partial fill insulation is secured firmly against the inner leaf of the

AIR BARRIER CONTINUITY

(3) Apply flexible sealant to all interfaces between the internal air barrier and the window/ door frame members.@

If forming the air barrier to the walls with the blockwork inner leaf or a parge coat on blocks, a flexible sealant should be installed between the cavity closer and blockwork wall.

Seal all penetrations through air barrier using a flexible sealant.

GENERAL NOTES

. Ensure that cavities are kept clean of mortar snots or other debris during construction.

MCI-WD-02 Windows and Doors. Independent Lintels.

THERMAL PERFORMANCE OF JUNCTION

Ensure wall insulation is installed at least 150mm below the top of floor insu-

Floor insulation must tightly abut the blockwork wall.

Ensure that partial fill insulation is secured firmly against the inner leaf of the Complying with the above checklist items qualifies the builder to claim the Ψ

value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

AIR BARRIER CONTINUITY

Seal between the wall and floor air barrier with a flexible sealant @ OR seal the gap between the skirting board and the floor using a flexible sealant. Seal all penetrations through air barrier using a flexible sealant.

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

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PROJECT:

Tel: (028) 944 88 258 Mob: 0781 586 2541

> Conversion of

email: info@bigdesignarchitecture.com

MAN KHAIRUDDIN R.I.B.A.

Chartered Architect

Outbuildings at No.20

Birch Hill Road, Antrim

DRAWING TITLE

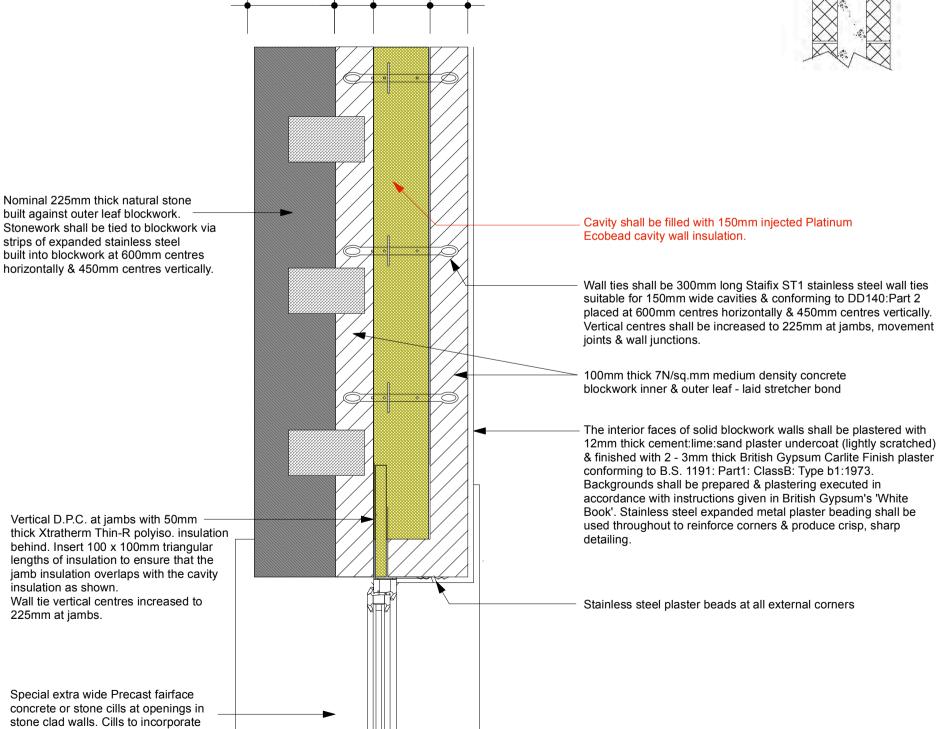
Proposed Construction Details

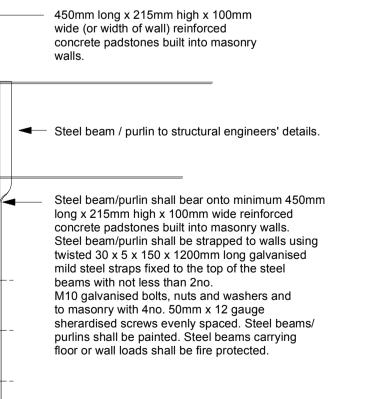
DATE DRAWN CHECKED 1:50 Oct 2023 DMcG AK

2231 / WKD.111

REVISION:



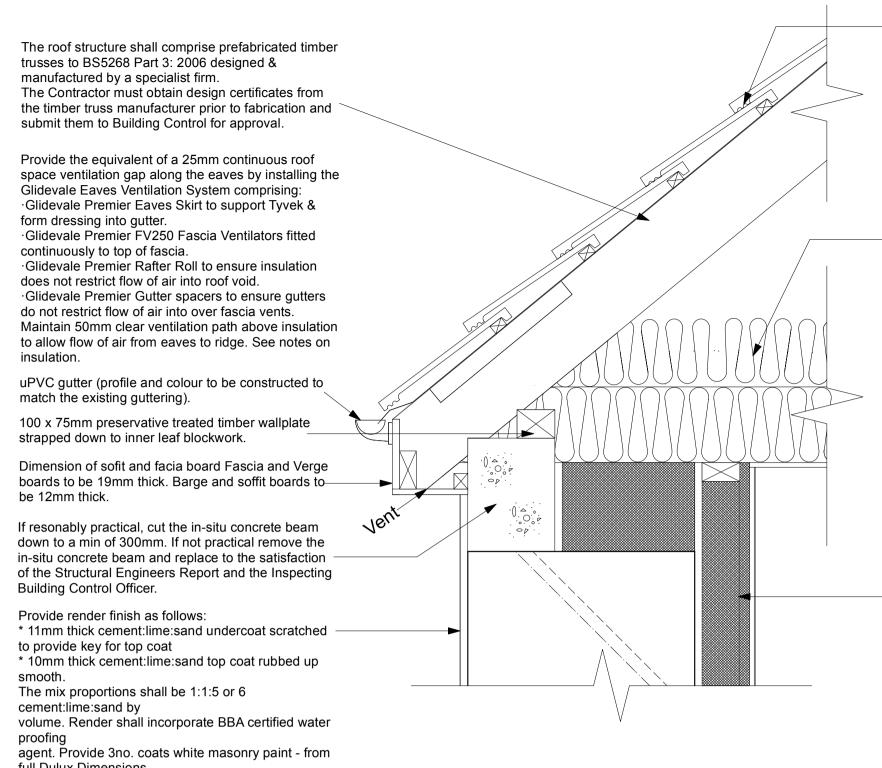




Solid masonry loadbearing wall (width varies - see plan).

Stonework Wall with Jamb Detail

drip & overhang wall by 50mm.



Roofing tile is to be Charcoal grey non-profiled x 3.35mm aluminium alloy nails. In addition to nailing, the eaves course tiles & verge tiles shall also be

the tile manufacturer. Tiling battens shall be 38 x 25mm preservative treated type A timber battens fixed through the Tyvek vapour

AIR BARRIER CONTINUITY permeable roofing membrane into the rafters below at each intersection with 60mm long sherardised annular Bed the wall plate on a continuous mortar bed. ring shank nails.

Horizontal roof insulation at ceiling level shall comprise 450mm total thickness Knauf Loft Roll 40 non-combustible inorganic glass wool insulation to BS 3533 laid in 2no. thick layers, consisting of 150mm &

The first (150mm) layer shall be neatly cut & placed between the joists / trusses with the second (300mm) MCI-RE-05 Pitched Roof. Between & Under Rafter Insulation layer being laid perpendicularly on top of the first. The horizontal insulation must overlap with adjacent cavity wall insulation or pitched roof insulation as appropriate to ensure that the integrity of the insulated envelope is maintained.

Existing walls stripped back to masonry in preparation

installation of insulated dry-lining system comprising 70mm Gyproc galvanised metal studs at 600mm centres with 70mm thick Kingspan KoolTherm K12 Framing insulation boards cut & neatly fitted between the studs.

The metal stud framework shall be faced with 1no.

of 12.5mm thick Gyproc Wallboards. Construction shall generally be in accordance with section a20 of The White Book 2001. Gyproc Wallboards shall be fixed using Gyproc Drywall Screws. Joints in boards shall be taped & filled in accordance with section n15 of The White Book 2001 to give a seamless finish ready to receive emulsion paint finish.

Floor & Ceiling Channels, Gyproc Drywall Screws,

GSF1 Fixing Straps, Gyproc 99FC90 Fixing Channel, Gyproc Sealant, Gyproc Beads, Glasroc Firestoppers,

for a complete installation.

Provide solid ground bearing ground

25mm Xtratherm Thin-R insulation

(turned up at all perimeters) on 100mm thick Xtratherm Thin-R polyisocyanurate T&G floor insulation

1000gauge polythene vapour barrier

125mm thick in-situ concrete floor slab

25mm layer of compacted blinding dust

1200gauge Visqueen Damp Proof

250mm minimum well consolidated

vibrated and compacted in layers not

The floor D.P.M. is to be turned up

& bonded to the wall D.P.C.

around all perimeters on

Membrane (D.P.M.) on

graded hardcore

exceeding 200mm.

walls to be lapped

100mm thick sand cement screed with

floor as follows:

Ensure the gap between the wall plate and the proprietary eaves ventilator is completely filled with insulation having a min. R-value across the thickness of the insulation Ensure continuity of the insulation throughout the junction.

conrete roof tiles. ALL Tiles shall be nailed using 50 Ensure that the full depth of insulation between and over the joists abuts the eaves

Ensure that the insulation is installed tightly between the rafters and is in contact with clipped using stainless steel clips as recommended by

Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall. If using partial fill insulation, tuck compressible insulation down into head of cav

Ventilated Rafter Void. Eaves

1)-

Fix ceiling first and seal all gaps between the ceiling and masonry wall with either plas-

Seal all penetrations through air barrier using a flexible sealant.

nstall a double, full depth timber nogging between the floor joists and seal between the nogging, ceiling and upper stud wall with a flexible sealant. (In the dotted blue line epicts the continuity of the air barrier through the noggings)

THERMAL PERFORMANCE OF JUNCTION

Continue cavity wall insulation across the floor abutment zone. Ensure that partial fill insulation is secured firmly against the inner leaf of the

Complying with the above checklist items qualifies the builder to claim the Ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

Ensure that cavities are kept clean of mortar snots or other debris during construction.

• If required by BS5250 use a vapour control plasterboard or a separate vapour control layer behind the plasterboard

• The use of over joist and under rafter insulation is considered best practice as it eliminates the cold bridge

The installation of the eaves insulation must not prevent free water drainage below the tiling battens.

Use a proprietary eaves ventilator to ensure ventilation in accordance with BS5250.

AIR BARRIER CONTINUITY

GENERAL NOTES

Mortar joints around built-in joists should be recessed or struck and carefully pointed with flexible sealant. Alternatively, joists may be fitted with proprietary shoes as they are installed. The shoe should be sealed to the face of the blockwork with a flexible sealant. (The dotted blue line depicts the continuity of the air barrier through the floor zone)

Seal between the wall air barrier and blockwork above and below the floor assembly, 2 Seal all penetrations through air barrier using a flexible sealant.

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

GENERAL NOTES

- Ensure that cavities are kept clean of mortar snots or other debris during construction.
- Suspended timber floors may be laid in joist hangers rather than built-in.
- For timber engineered joists, proprietary filler pieces must be fitted on both sides of the web between the top and bottom flanges. (See manufactures details.)

MCI-IF-02 Timber Intermediate Floor.

THERMAL PERFORMANCE OF JUNCTION

air permeability and may effect a reduced testing regime.

Ensure that the full depth of insulation between and over the joists extends over the head of the partition wall. Complying with the above checklist items qualifies the builder to claim the Ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005

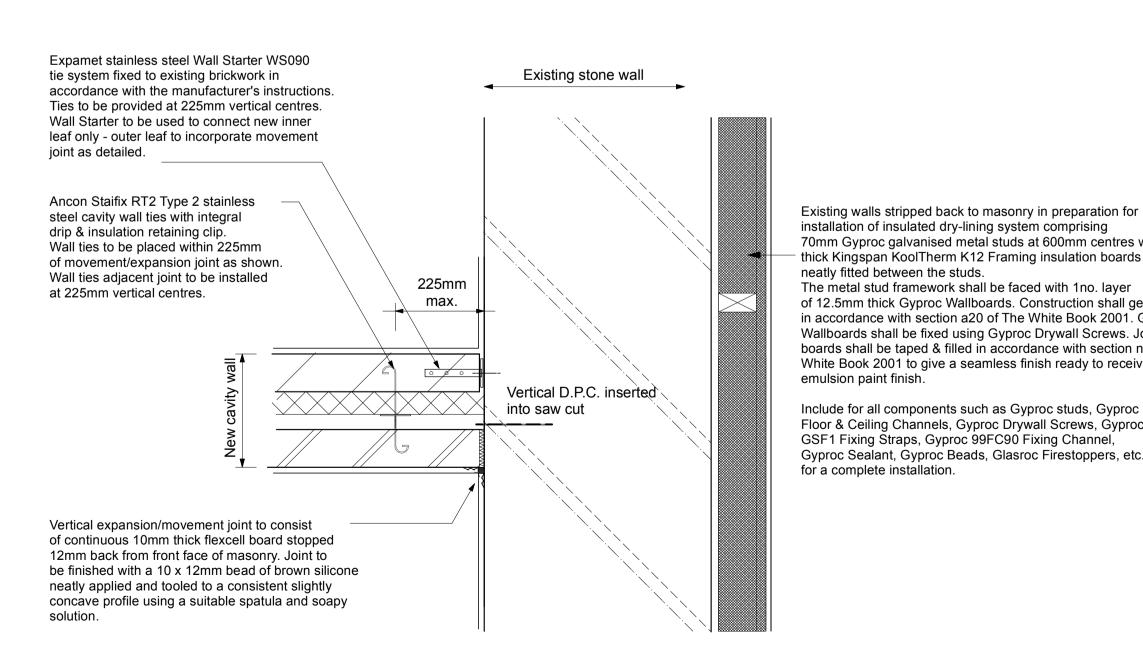
AIR BARRIER CONTINUITY

Fix ceiling first and seal all gaps between the ceiling and masonry wall with either plaster, adhesive or flexible sealant. (The dotted blue line depicts the continuity of the air barrier through the head of the partition blockwork) Seal all penetrations through air barrier using a flexible sealant. Complying with all of the above checklist items will help achieve the design

GENERAL NOTES

. This detail to be read in conjunction with detail No: MCI-IW-03.

MCI-IW-04 Masonry Partition Wall Head.



CAVITY WALL STARTER DETAIL

/ Scale 1:10

installation of insulated dry-lining system comprising 70mm Gyproc galvanised metal studs at 600mm centres with 70mm thick Kingspan KoolTherm K12 Framing insulation boards cut & neatly fitted between the studs. The metal stud framework shall be faced with 1no. layer of 12.5mm thick Gyproc Wallboards. Construction shall generally be in accordance with section a20 of The White Book 2001. Gyproc Wallboards shall be fixed using Gyproc Drywall Screws. Joints in boards shall be taped & filled in accordance with section n15 of The White Book 2001 to give a seamless finish ready to receive

Include for all components such as Gyproc studs, Gyproc Floor & Ceiling Channels, Gyproc Drywall Screws, Gyproc GSF1 Fixing Straps, Gyproc 99FC90 Fixing Channel, Gyproc Sealant, Gyproc Beads, Glasroc Firestoppers, etc. for a complete installation.

THERMAL PERFORMANCE OF JUNCTION Continue cavity wall insulation across the abutment zone.

Ensure that partial fill insulation is secured firmly against the inner leaf of the

Complying with the above checklist items qualifies the builder to claim the Ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

AIR BARRIER CONTINUITY

Seal between air barrier on external wall and the blockwork to the partition wall. ① (The dotted blue line depicts the continuity of the air barrier through the blockwork partition)

Seal all penetrations through air barrier using a flexible sealant.

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

GENERAL NOTES

· Ensure that cavities are kept clean of mortar snots or other debris during construction. This detail to be read in conjunction with detail No: MCI-IW-04.

MCI-IW-03 Masonry Partition Wall/ External Wall Abutment.

THERMAL PERFORMANCE OF JUNCTION Install a proprietary cavity closer having a path of minimum thermal resistance path through the closer of not less than 0.45_m²K/W (manufacturers certified

Minimum frame overlap to be 30mm ②

Ensure that partial fill insulation is secured firmly against the inner leaf of the

AIR BARRIER CONTINUITY

Apply flexible sealant to all interfaces between the internal air barrier and the window/ door frame members. 3

If forming the air barrier to the walls with the blockwork inner leaf or a parge coat on blocks, a flexible sealant should be installed between the cavity closer and blockwork wall.

Seal all penetrations through air barrier using a flexible sealant.

• Ensure that cavities are kept clean of mortar snots or other debris during construction. MCI-WD-05 Windows and Doors, Jambs.

GENERAL NOTES

responsibility of the contractor is to ensure that all dimensions and levels are checked on site before construction. Do not scale the drawings - Any discrepancies or queries are to be brought to the attention of the Architect / Structural Engineer at the earliest opportunity & action agreed. Any work to which a requirement of the Building Regulations applies must, in accordance with Part

All dimensions are in millimetres. It is the

B of the Building Regulations, be carried out with suitable materials and in a workmanlike manner.

PRELIMINARY DRAWINGS SUBJECT TO APPROVAL BY BUILDING CONTROL

It is the responsibility of the contractor to liaise with the client regarding the final choice of the design and configuration of all windows, doors, external finishes, bathroom fixtures and fittings, lighting, external paving and landscaping etc. None of the above items should be ordered until this has been discussed with the client.

It is the responsibility of the Main Contractor to double check all dimensions before commencing oundations & superstructureconstruction. Do not scale the drawings - Any discrepancies or queries shall be discussed with the Architectural Consultant & action agreed.

This Drawing Must Be Read In Conjunction With The Structural Engineer's Drawings & Details

The Energy Consultant's Report where applicable MPORTANT : CDM 2016 CLIENT DUTIE

(DESIGN AND MANAGEMENT) REGULATIONS (CDM 2016):

Please be advised of your duties as Client, as follows:

Check competence and resources of all appointees . Ensure there are suitable management arrangments for the project including welfare facilities . Allow sufficient time and resources for all stages

. Provide pre-construction information to designers and 5. Appoint (in writing) a Principal Designer

6. Appoint a Principal Contractor until the end of the instrcution phase 7. Make sure that the construction phase does not start unless there are suitable welfare facilities and constructio

phase plan in place . Provide information relating to the health and safety file to the Principal Designer

Retain and provide access to health and safety file PRELIMINARY DRAWINGS SUBJECT TO

APPROVAL BY BUILDING CONTROL THESE DRAWINGS ARE NOT TO BE USED FOR TENDERING PURPOSES



PROJECT:

Conversion

Outbuildings at No.20 Birch Hill Road, Antrim

DRAWING TITLE

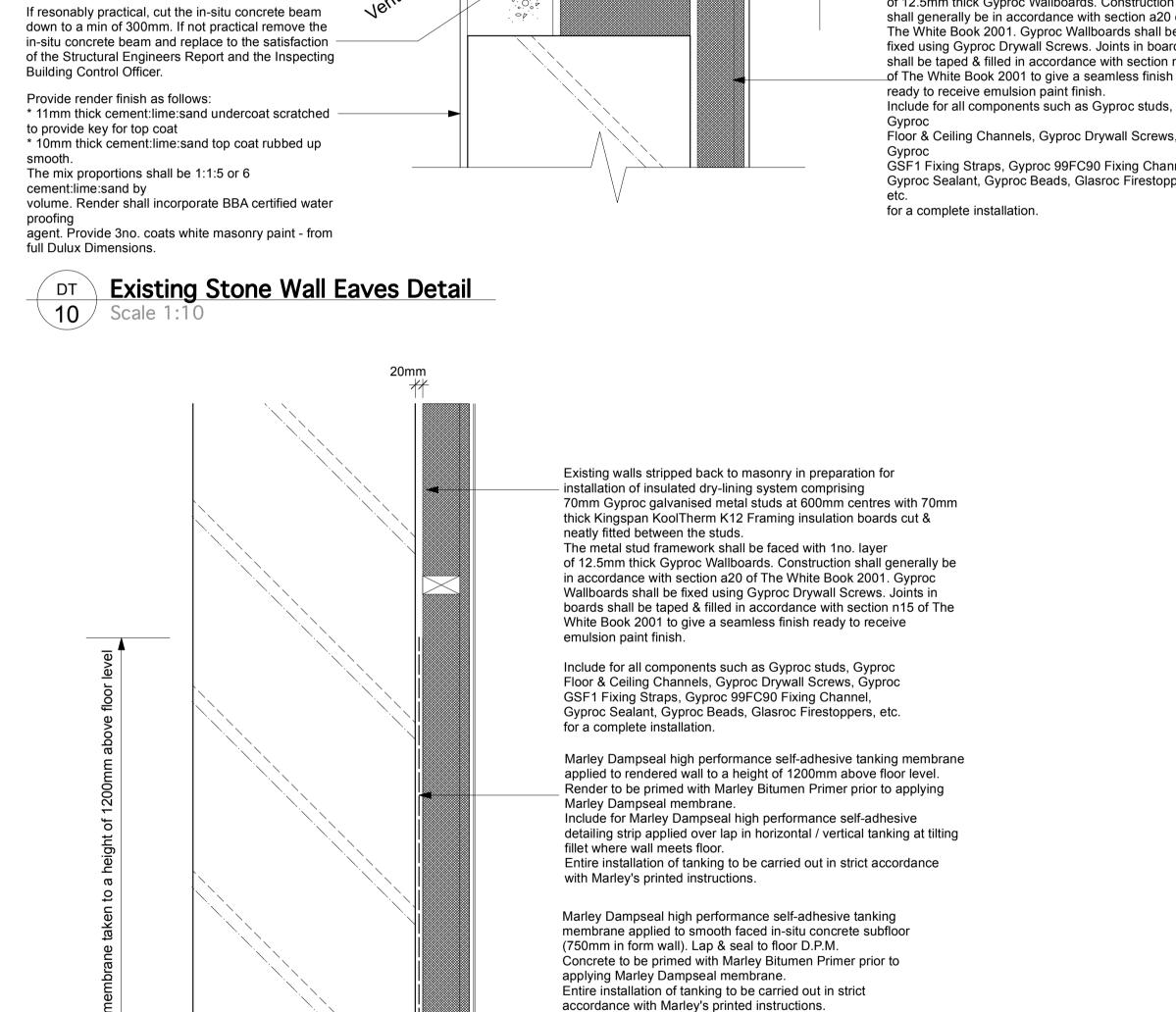
Proposed Construction Details

DATE DRAWN CHECKED

1:50 Oct 2023 DMcG AK

2231 / WKD.112

NOTE: This drawing remains the copyright of the architect.



Ground Floor / Existing Stone Wall Junction

C28/35 Concrete strip foundations shall be:

1000mm wide x 300mm deep under 575mm walls (wall make up of 350mm cavity & 225mm exterior stonework.)

1000mm wide x 300mm deep under 465mm cavity walls 750mm wide x 300mm deep under 350mm cavity walls. 600mm wide x 300mm deep under 215mm solid walls.

600mm wide x 300mm deep under 100mm solid walls. Concrete strip foundations shall be placed centrally under walls. Foundation to be laid on top of trench fill concrete extending down to firm bearing strata. Strip foundations shall incorporate continuous layer of A393 mesh reinforcement in the bottom. Mesh shall have minimum 40mm

concrete cover. Sizes and depths of all foundations required to be specified by the Structural Engineer and authorised by the Building Control Officer. It is the responsibility of the client/contractor to carry out these checks before

commencemnet on site. Foundations shall be constructed to the satisfaction of the local authority building control inspector.

The mass concrete used in the strip foundation should be – (a) in chemically aggressive soil conditions, an appropriate concrete mix as recommended in BS 8500: Par t 1 and BRE Special Digest 1; and (b) in chemically non-aggressive soils, composed of Portland Cement to BS EN 197-1 & 2 and fine and course aggregate conforming to BS EN 12620, the mix being -

(i) in the propor tion of 50 kg of cement to not more than 155 kg (0.11 m3) of fine aggregate and 240 kg (0.16 m3) of coarse aggregate; or (ii) Grade ST2 or Grade GEN 1 to BS 8500: Par t 2.

Open Fires / Woodburning Stoves & Flues & Masonry Chimney Construction

125mm thick in-situ concrete hearth laid on concrete sub-floor. Hearth shall project 500mm from chimney breast & at least 200mm beyond fireplace cheeks. Open living flame mains gas fires shall be fitted with minimum 125mm internal diameter twin-walled insulated metal flues complete with suitable fire-boxes to BS 715 & an approved roof terminal. Ensure flue is supported in accordance with manufacturer's instructions & that fire stops, floor sleeves & ceiling plates are fitted where flues run through floors & ceilings. Installation shall be carried out by an approved CORGI Registered engineer. Flue shall be located within masonry chimney & surrounded with minimum 50mm vermiculite. Bends in flue shall not make an angle of more than 45 degrees. Ensure timbers & any other combustible materials are kept 50mm clear of the chimney.

Permanent ventilation shall comply with paragraphs 2.12 - 2.15 and Diagram 2.3 in Technical Booklet L of the Building Regulations Northern Ireland 2012.

Commissioning of fire & flue to be carried out in accordance with BS 5440 Part 1 & a commissioning certificate shall be issued by an approved CORGI Registered engineer and comply with Part L of the Building Regulations 2012

A room containing an open-flued appliance must receive a continuous supply of air from outside. The volume of air required depends on the type and rating of the appliance. This normally means the installation of permanently open air vents into

A permanently open air vent should be non-adjustable and be positioned where it is unlikely to become blocked. It should be so installed that the building occupants are not provoked into sealing it against draughts or noise. It should not be positioned in a fire resisting wall other than an external wall that is not part of an external wall shielding a LPG or oil storage tank.

A permanently open air vent should not be located within a fireplace recess. A permanently open air vent should be sized so that the free area, or the equivalent free area of a more complex design, is sufficient for the appliance to be installed, taking account where necessary of obstructions such as grilles and anti vermin mesh. Any discomfort from cold draughts can be avoided by placing the air vent close to the appliance, drawing air from other parts of the building or by ensuring a good mix of the incoming cold air by placing the air vent close to the ceiling.

In a noisy area, it may be necessary to install proprietary noise attenuated air vents to limit the entry of noise into the building but these should not diminish the required air supply. The location of air vents should not breach the requirements of Part E of the Building Regulations.

The flues shall rise vertically & enter a masonry chimney. Install minimum 200mm internal diameter clay flue liners with minimum 50mm vermiculite cover all round. Flue liners shall be rebated & spigoted with rebates placed uppermost & the joints pointed with fire cement mortar. Bends in the flue shall not make an angle of more than 45 degrees with the vertical. Chimney to be built with code 4 lead trays, code 5 lead flashings & soakers where

Chimney flues must be checked at completion by the Contractorto ensure that they are free from obstructions, satisfactorily gas tight & are suitable for their intended

application. Notice Plates for Hearths & Flues

it penetrates the roof structure.

To satisfy the requirements of Regulation 74 in Part L, a durable notice should be (a) the location of the hearth, fireplace (or flue box) or the location of the beginning

of the flue: (b) the generic type(s) of combustion appliances that can be safely

accommodated; (c) the type and size of the flue (or its liner if it has been relined) and the manufacturer's name; and

(d) who installed the hearth, fireplace, flue or chimney and the date of

unobtrusive but obvious position within the building such as – (a) next to the electricity consumer unit; or (b) next to the chimney or hear th described Conservation of Fuel & Power - SAP 2005 Calculations

Notice plates should be robust, indelibly marked and securely fixed in an

Calculations on approved SAP 2005 software shall be provided at design stage to demonstrate that the dwelling 'Dwelling Emission Rate' (D.E.R.) complies with the 'Target Emission Rate' (T.E.R.) in accordance with Part F1 of The Building Regulations.

Further calculations on approved SAP 2005 software shall be provided at completion stage to confirm that the dwelling 'Dwelling Emission Rate' (D.E.R.) 'as built' complies with the 'Target Emission Rate' (T.E.R.) in accordance with Part F1 of The Building Regulations. The 'as built' calculations shall be delivered to Building Control within

5 days of completion of the dwelling. A permanent notice stating the 'as built' energy rating shall be fix mounted in the dwelling at completion.

Conservation of Fuel & Power - Air Pressure Testing Upon completion, the dwelling shall be air pressure tested in accordance with

the Air Tightness & Measurement Association's publication -'Measuring Air Permeability of Building Envelopes'. The results of the testing shall be forwarded to the Architectural Consultant & Building Control.

Certification for Building Services & Operation Manual Installation and commissioning certificates for all fixed building services shall be provided by each respective installer and copies shall be forwarded to the Architectural Consultant & Building Control. These certificates shall be included in the Building Operation Manual which the developer shall compile & formally deliver to each dwelling owner upon completion.

In addition to the certificates, the Building Operation Manual shall include readily understandable information relating to the safe and energy efficient operation & maintenance of all fixed building services.

Accredited Details

Automatic Fire Detection

wired to a circuit which:

also used by another circuit.

dwelling so that there is one

300mm from the ceiling.

(iv) easily and safely accessible.

allow the alarm to be heard more easily.

Client confirms floor finishes.

Goings at straight treads: 220mm.

2r + g at straight treads: 605mm.

Cavity Wall Construction

14 no. risers @ 192.8mm.

pass between them.

0.36kN/m.

insulation.

& wall junctions.

insulation panels.

Schedules.

cavity walls.

(within 225mm of the joints).

Carbon Monoxide Detection & Alarms

Stairs - Ground Floor to First Floor Level

Exact heights shall be confirmed by the contractor.

Clear width between wall & handrail: 1000mm.

Handrails on stairs: 950mm high above pitch line.

Handrails on Landing: 1000mm high above finished floor.

conditioning ventilator.

bounds;

The Contractor shall adopt a system of site management to ensure that the works are executed to comply with the accredited details. This shall include a signed copy of each accredited detail & construction checklist being submitted to Building Control upon completion to demonstrate satisfactory completion of

manufacturers' instructions) so that they all give an audible alarm when any smoke

Self contained smoke & heat alarms in dwelling and garage shall be permanently

(iii) where a residual current device is used - is not connected to a r.c.d. which is

A self contained alarmed smoke detector shall be located in the principal habitable

A self contained alarmed heat detector shall be located in every kitchen.

Self contained smoke alarms shall be located in the circulation routes of the

(ii) not more than 7 metres from every door to a living room or kitchen; and

(iii) where a circulation route on a storey is more than 15 metres long - not more

than 15 metres from another self contained smoke alarm on the same circulation

(i) either on a ceiling and not less than 300mm from a wall or light fitting, or where

designed for wall mounting on a wall and not less than 150mm, or more than

(iii) on a surface which is normally at the ambient temperature for the space it

A self contained smoke alarm shall not be located in a kitchen, garage or other

Where any storey in a a dwellinghouse is more than 200m2 in area & number of

- an automatic fire detection and fire alarm system complying with BS 5839-6 of

in the principal habitable room and a heat detector or detectors in every kitchen.

at least Grade B Category LD2 standard including a smoke detector or dectectors

If a new or replacement combustion appliance, is installed in a dwelling, a carbon monoxide

detector/alarm shall be provided in the room where the appliance is located. However, if the

room/cupboard, the detector /alarm shall be located just outside the room or space. This will

combustion appliance is installed in a room or space not normally used e.g. a boiler

Total ground floor to lower first floor rise: 2700mm (to be confirmed).

The going of any part of a tread shall be not less than 50mm

The floor levels shall be finally determined by the Contractor whenever

Space between balusters to be such that a 100mm diameter sphere cannot

Clear head height: 2000mm minimum above pitch line over width & length of

Balustrading and guarding to be constructed to resist a horizontal force of

thick 10.4N/sq.mm medium density concrete blockwork inner leaf - all laid

thick 10.4N/sq.mm medium density concrete blockwork inner leaf - all laid

The 150mm wide cavity shall be partially filled with 150mm platinum bead

stone built against the blockwork cavity walls - see plans & elevations.

Certain portions of the dwelling are to have 225mm nominal thickness natural

Wall ties shall be 300mm long Staifix ST1 stainless steel wall ties to DD140: Part 2

suitable for 150mm wide cavities and placed at 600mm centres horizontally &

450mm centres vertically. Vertical centres shall be increased to 225mm at jambs

Inner leaf blockwork shall be returned at jambs to close the cavity. Provide vertical

insulation panels behind the D.P.C. to prevent damp & thermal bridging at jambs.

The cavity shall be closed off at eaves level with Rockwool TCB sleeved Cavity

The cavity shall be filled with weak mix concrete to a level of 150mm below the

Provide fair-face precast concrete cills *OR* stone cills to windows. Cills to have

D.P.C. under, up-back & sides with 30mm minimum Xtratherm polyisocyanurate

Provide reinforced concrete lintels over openings in accordance with the Lintel

Provide stepped D.P.C. across cavity at all lintel types used over openings in the

Provide vertical expansion joints in discreet locations agreed with the consultant.

Expansion joints shall be 10mm wide filled to within 12mm of external face with

polyethylene strip and pointed with silicone (neatly tooled). Provide 2no. rows of

cavity wall ties at 225mm vertical centres up each side of each expansion joint

The reveal insulation shall extend 150mm into the cavity to overlap with the cavity

D.P.C. with 30mm minimum Xtratherm polyisocyanurate preformed reveal

Barriers wedged tightly between the inner & outer leaf masonry.

lowest wall D.P.C. Cavity fill to be struck towards outer leaf.

insulation behind & below to prevent damp & thermal bridging.

465mm wide cavity walls shall consist of 100mm thick 7N/sq.mm

350mm wide cavity walls shall consist of 100mm thick 10.4N/sq.mm

medium density concrete blockwork outer leaf with 100mm thick

medium density concrete blockwork outer leaf with 215mm

stretcher bond with full mortar beds & perpends.

stretcher bond with full mortar beds & perpends.

place where steam, condensation or other fumes could cause false alarms.

storeys is not more than 3 - the dwellinghouse should be provided with

(ii) not less than 300 mm from, and not directly above, a heater or an air

The dwelling shall be provided with a self contained smoke alarm system

5446: Part 2: 2003 installed in accordance with paragraphs 2.25 to 2.33 of

self contained alarms shall be interconnected (in accordance with the

detector detects smoke and any heat detector detects heat.

(i) is separately fused at the distribution board;

(ii) serves only self contained smoke alarms; and

(i) not more than 3 metres from every bedroom door;

A self contained smoke alarm shall be located so that it is -

300mu thick Visqueen Radon Membrane on 125mm thick in-situ concrete floor slab on 1200gauge Visqueen Damp Proof Membrane (D.P.M.) on 25mm layer of compacted blinding dust on complying with BS 5446: Part 1: 2000 and heat alarm system complying with BS 200mm minimum well consolidated graded hardcore vibrated and compacted in layers not exceeding 200mm. Technical Booklet E 2012 (Fire Safety) of the Building Regulations (N.I.). Individual The floor Radon Membrane & the D.P.M. to be lapped & bonded to the Visqueen Zedex wall D.P.C. & Visqueen Zedex Cavity Trays in

accordance with Visqueen printed instructions.

Provide solid ground bearing ground floors as follows:

25mm Xtratherm Thin-R insulation around all perimeters on

1000gauge polythene sheet (turned up at all perimeters) on

100mm thick Xtratherm Thin-R polyisocyanurate T&G floor insulation on

55mm thick RTU Ultraflo hemi-hydrate screed with

Ground Floor Construction (Ground Bearing)

Radon Protection - Floor Membrane, D.P.C. & Cavity Trays

Provide radon protection to dwelling & garage by the installation of the Visqueen Radon Membrane system The Visqueen Radon Membrane must be installed in accordance with the manufacturer's printed instructions, BRE Certificate no. 083/01 & BRE Report no. BR 211.

Great attention must be paid to the detailing in order to achieve effective sealing at all locations. The Visqueen Radon Membrane must be overlapped by at least 150mm & sealed using Visqueen Double-sided Jointing Tape. The joint should then be secured with Visqueen Girth Jointing Tape. The membrane must be clean & dry at the time of jointing.

In order to maintain a continuous barrier to radon across the cavity wall, the Visqueen Radon Membrane must be sealed to the Visqueen Zedex D.P.C. & Zedex Cavity Trays using the Visqueen Double-sided Jointing Tape. Special care must be taken to ensure continuity at corners - special preformed corner units are available from Visqueen.

Care must be taken to avoid puncturing / tearing of the membrane. Any tear / puncture must be repaired by covering with a patch of the membrane giving at least 150mm overlap & sealed using Visqueen Double-sided Jointing Tape. The joint should then be secured with Visqueen Girth Jointing Tape. The membrane must be clean & dry at the time of jointing.

Airtight seals must be formed around all service entry points, ducts & pipes using preformed Visqueen Top Hat Units sealed using Visqueen Double-sided Jointing Tape. The joint should then be secured with Visqueen Girth Jointing Tape. The membrane must be clean & dry at the time of jointing.

Pitched Roof Construction

Provide pitched roof as follows: Concrete non profile roof tiles (colour: to be confirmed) laid broke bond using standard half tiles in alternate courses at verges.]The interlocking concrete roof tiles shall be laid with a minimum headlap of 100mm. Tiles shall be nailed in alternate courses generally and fully nailed along eaves, verges, valleys, hips, etc. using 50 x 3.35mm aluminium alloy nails in conjunction with the appropriate manufacturer's eaves clips. Provide manufacturer's eaves tile profile fillers to prevent access by birds. Tiling battens shall be 38 x 25mm preservative treated tye A timber battens fixed through the vapour permeable membrane into the rafterss/trusses below at each intersection with 75mm long sherardised annular ring shank nails.

Sarking membrane shall be Tyvek SuproPlus vapour permeable membrane or other equal and approved, laid taught over the rafter/strusses in strict accordance with Tyvek's printed instructions.

The roof structure shall generally comprise prefabricated timber trusses designed and manufactured by a specialist firm. The Contractor must obtain detailed structural roof plans and designe certificates from the timber truss manufacturer prior to fabrication and submit them to Building Control for Approval.

All Structural timbers shall be stamped 'Dry' or 'KD' (Kiln Dried) together with the strength class of the timber.

The wall plates are to be strapped to the inner leaf of the cavity wall using 30 x 2.5 x 100 x 1000mm long galvanised mild steel straps at 1200mm centres fixed to the wall plate with not less than 2 No. 30 x 3.75mm sheradised nails and to plugged masonry with 4 No. 50 mm x 12 gauge sheradised screws evenly spaced.

Provide 30 x 5 x 150 x 1200 mm long galvanised mild steel lateral restraint straps at 1m centres along the gables with the cranked ends in tight contact with the cavity face of the inner leaf and the straps extending across and fixed to the first 3 No. rafter and joist members. Provide solid packing pieces under the straps. Fix straps to the joist and rafter members with 4 No. 50 mm x 8 gauge sherardised countersunk screws.

All trusses/rafters must comply with the Building Regulations Technical Booklet D and be pressure impregnated with preservative. Trusses / Rafters shall be spaced at 400mm maximum centres generally.

Double up rafters each side of any roof glazing, chimney opening, access hatch, etc. Rafters shall span from the steel ridge beam at the roof apex to the eaves wallplates. Rafters shall be cut, notched & spiked to timber plates at all bearing points. Should cold water storage be required, then water storage tank supports shall be in accordance with CP112 part 3: 1973.

Tank to sit on 19mm thick exterior grade plywood base on 150 x 50 mm timber bearers on 125 x 50 timber bearers spanning across at least 4 No. joists. Water tank to be insulated on top and sides but not on underside.

Rafters shall be spaced at 400mm maximum centres generally.

Double up rafters each side of any roof glazing, chimney opening, access hatch, etc. Diagonal bracing is to be inclined at approx 45 degress to the roofing battens and be repeated continuously along the roof.

Longitudinal bracing should run continuously through parallel trusses along the entire length of the building and be positioned at all joints (except bearings). The top braces should be located on webs and set down from rafters to allow space for diagonal bracing.

Web Chevron bracing is to be used only if required by trussed rafter designer. This bracing (if required) must be located in accordance with the instructions provided by the designer. Provide triple trusses to each side of roof openings to accommodate elements such as roof windows, chimneys, etc.

Pitched Roof Insulation (Horizontal)

Horizontal roof insulation at ceiling level shall comprise 450mm total thickness Knauf Loft Roll 40 non-combustible inorganic glass wool insulation to BS 3533 laid in 2no. thick layers, consisting of 150mm & 300mm. The first (150mm) layer shall be neatly cut & placed between the joists / trusses with the second (300mm) layer being laid perpendicularly on top of

The horizontal insulation must overlap with adjacent cavity wall insulation or pitched roof insulation as appropriate to ensure that the integrity of the insulated envelope is maintained.

Pitched Roof Insulation (Pitched)

Roof Insulation along the roofline shall comprise 100mm thick Xtratherm Thin-R XT/PR insulation neatly cut & placed between the rafter members. Timber stops shall be nailed to the sides of the rafter members to ensure that the insulation sits flush with the bottom of the rafters to maintain a 50mm gap between the top of the insulation & the underside of the Tyvek breather membrane underlay.

A second layer of 75mm thick Xtratherm Thin-R XT/PR shall be fixed to the underside of the rafter members.

A 500 gauge polythene vapour barrier shall be applied to all ceilings on the warm side of the insulation, prior to fixing the 12.5mm thick gypsum plasterboard and finishing with Carlite skim plaster.

Carport First Floor Construction

Please note it may be required for the the precast concrete slab to be at a different house than that of the main house depending on the make-up of the garage first floor construction. This construction is to be specified by the contractor to the satisfaction of the client. It is the responsibility of the Contractor to ensure the height of the ceiling in the carport and the thickness of the floor construction allows for adequate head height in the gym room upstairs and allows access from the main house via the storage area, which should both be designed to meet the standards of the Building Control regulations and the Building Control inspecting officer.

Continuty to Limit Thermal Bridging and Air Leakage - Building

The building fabric shall be constructed such that there are no readily avoidable thermal bridges in the insulation layers caused by gaps within the various elements, at joints between elements, and at the edges of elements such as those around door and window

The building fabric shall be constructed to minimise air leakage through the new or replacement parts of the thermal envelope. The building fabric shall be constructed for buildings of domestic type construction, to details given in the Department for Communities and Local Government (DCLG) publication "Accredited Construction Details

[Note that "Part L" in the title refers to the part in England & Wales that is equivalent to Part F in Northern Ireland.]

The builder shall demonstrate that an appropriate system of site inspection is in place to ensure that the construction standards achieve the required level of consistency. Where the accredited design details approach is adopted. A report shall be provided showing that the relevant construction checklists such as those given in the accredited design details publicationhave been completed and show satisfactory results and a copy shall be forwarded to the district council.

Low Level Glazing at First Floor Level

Where any part of a window, skylight or ventilator, when open, could project more than 100mm horizontally into a space less than 2000mm above the ground or floor it should

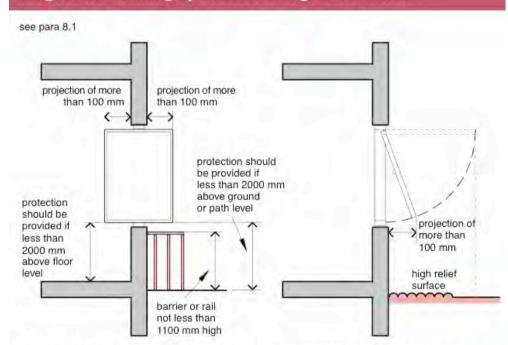
a) fitted with a suitable device to restrict the projection in normal use to not more than 100mm; or

b) marked by a suitable feature such as i) a distinguishable barrier or rail not less than 1100mm high;

ii) a high relief surface; or iii) a landscape feature.

which extends to at least the maximum projection of the window, skylight or ventilator (see Diagram 8.1).

Diagram 8.1 Marking by a barrier or high relief surface



(a) marking by a barrier (b) marking by a high relief surface

Cavity Wall Finishes The internal faces of cavity walls shall be plastered with 10mm thick sand/cement plaster (lightly scratched) & finished with 3mm Carlite skim finish plaster when the

scratch coat is completely dry. Provide render finish to certain exterior walls as shown on elevations as follows: Undercoat: 10mm thick 1:1:5or6 cement:lime:sand render.

Finish coat: 12mm thick 1:1:5or6 cement:lime:sand render rubbed up smooth to receive masonry paint finish. The render shall incorporate BBA certified water proofing agent.

Rendered walls shall incorporate smooth rendered plinths & smooth rendered

bands around openings & details where indicated on the elevations. Stainless steel expanded metal plaster beading & bell cast render stops shall be used to reinforce corners around reveals & to give crisp, sharp detailing. Do not use

External walls (as shown on elevations) shall be finished with stonework and shall be fitted to manufacturers instructions. Type and width of stonework to be confirmed by client (nominal width shown on floor plans, elevations & sections.)

Internal Stud Walls

beads to form exposed edges to render.

Insulated & uninsulated stud walls shall comprise 75 x 50mm C16 preserative impregnated timber studs at 400mm centres forming the core of the stud wall. Provide sole plates, headplates, bearers & noggins as necessary as fixing grounds for M&E items etc. Face both sides of the stud framework with 12.5mm thick gypsum plasterboard (10kg/m2). Apply scrim to all plasterboard joints & junctions. Stud walls shall be plastered with 8mm thick carlite bonding plaster & finished with 2 mm carlite skim finish. Rockwool insulation shall be placed between stud walls to reduce noise

The location of any structural stud walling to be confirmed with Structural Engineer Mark

Fascia, Barge, Verge and Soffits

to walls were appropriate.

All to external grade WBP Plywood paint finished with exterior quality paint colour to be

Fascia and Verge boards to be 19mm thick. Barge and soffit boards to be 12mm thick. All

joints to be splayed and pinned.

Barge and Soffit boards to be tongued and Fascia and Verge boards to be rebated to accept tongue of soffit boards. Soffit and Barge boards fixed to 50x50mm treated SW timber batten plugged and screwed

Internal Solid Loadbearing Walls

215mm thick internal solid loadbearing walls shall consist of medium density concrete blockwork built stretcher bond & plastered with 10mm thick sand/cement plaster (lightly scratched) & finished with 3mm Carlite skim finish plaster. D.P.C. to be level with and bonded to the floor D.P.M.

Internal Solid Non-Loadbearing Walls

100mm thick internal solid non-loadbearing walls shall consist of medium density concrete blockwork built stretcher bond & plastered with 10mm thick sand/cement plaster (lightly scratched) & finished with 3mm Carlite skim finish plaster. To be built of concrete slab which is to be thickened up to 150mm below and to the sides of each

All timber floor joists complying with Building Regulations Technical Booklet D and impregnated with preservative. All structural timbers shall be clearly marked 'DRY' or 'KD' (Kiln Dried) together with the strength class of the timber. Joists shall be spaced at 400mm maximum centres generally.

Where ceiling joists are built into blockwork walls they shall have a minimum 100mm end bearing & be liberally coated with non-toxic wood preservative.

Trimmer joists at opening for loft ladder, chimney breasts, etc. shall be doubled up.

Provide BAT galvanised steel or timber herringbone strutting between all joists along mid-span line to prevent lateral movement/buckling.

Provide galvanised mild steel lateral restraint straps at 2000mm maximum centres at joist level. Cranked ends shall be in tight contact with the cavity face of the inner leaf blockwork. The straps shall extend across and be fixed to the first 3no. joists using sherardised countersunk screws. Provide solid timber bridging pieces under the straps.

Ceilings shall be formed by fixing 12.5mm thick Gypsum plasterboard to the underside of structural timbers (joists or rafters) in accordance with British Gypsum's printed instructions. A 500 gauge polythene vapour barrier shall be installed above the plasterboard in each Bathroom, Ensuite, Kitchen, Utility, etc. and at roof level. Apply self adhesive scrim to all joints & junctions in the plasterboard before plastering with 8mm thick bonding & finishing with 3mm carlite skim.

Prevention of Excessive Domestic Hot Water Temperatures Where the operating temperature of domestic hot water in the storage vessel in the dwelling is capable of exceeding 80 °C under normal operating conditions (a situation that may occur in vessels used as heat stores and those connected to solar heat collectors or solid fuel boilers that do not have intervening controls between the boiler and the vessel containing the hot water) the outlet from the storage vessel should be fitted with a device, such as an in-line hot water supply tempering valve in accordance with BS EN 15092. The in-line hot water tempering valve should be set/adjusted to ensure that the temperature supplied to the domestic hot water distribution system does not exceed 60 °C.

Reducing the Risk of Scalding at a Bath

The hot water supply temperature to a bath should be limited to a maximum of 48 °C by the use of an in-line blending valve or other appropriate temperature control device, with a maximum temperature stop and a suitable arrangement of pipework. The acceptability of in-line blending valves can be demonstrated by compliance with the relevant harmonised European Standard such as BS EN 1111 or BS EN 1287 to demonstrate that the maximum temperature of 48 °C cannot be exceeded in operation and that the product will fail-safe (i.e. not discharge water above the maximum temperature). Such valves should not be easily altered by building users. In-line blending valves and composite thermostatic mixing valves (TMVs) should be compatible with the sources of hot and cold water that serve them.

The length of supply pipes between in-line blending valves and final outlets should be keptto a minimum in order to prevent colonisation by waterborne pathogens. Where intermittent use of a bath is anticipated, consideration should be given to high temperature flushing to allow for pasteurisation of the pipes and outlet fittings. This should be configured and operated in such a manner that prevents inadvertent high temperature use.

Guidance on the use of in-line blending valves can be found in BRE Information paper IP14/03 Preventing Hot Water Scalding in Bathrooms: using TMVs.

Windows & Glazing Generally

.All Glass must be fully protected during the construction phase by the contractor & be carefully cleaned by the contractor at Practical Completion in accordance with the glass manufacturer's details in order to avoid scratching. Scratched / damaged glazing units will be replaced at the contractor's expense. Windows shall be fully bedded in mastoc and foxed in postition using stainless stee fixing cramps at spacings appropriate to the size of window.

Glazing which is less than 800mm above floor level shall be upgraded to toughened safety glass inside & outside but with the thermal properties maintained to a minimum BFRC energy rating 'A' (B.S. Safety Kitemarked).

Glazing in a door or side panel within 300mm of a door shall be upgraded to toughened safety glass inside & outside but with the thermal properties maintained to a minimum BFRC energy rating 'A' Safety glazing shall be to a minimum height of 1500mm above floor level - all in accordance with

Technical Booklet Part V sections 1 & 2. Where appropriate, the glazing shall be obscured & to a pattern approved by the Employer from a set

Provide emergency escape windows where indicated. Opening sashes in escape windows shall have clear opening area of at least 0.33sq.metres with the height & width of the clear opening being at least 450mm. The lower edge of emergency escape windows shall be not less than 800mm and not more than 1100mm above finished floor level. Windows, & doors shall be manufactured & installed to achieve certification under BS7950 'Enhanced

Security'. External doors shall be uPVC or painted/varnished timber. All external door locks shall

operate with key on outside & thumbturn on the inside unless agreed otherwise with the Employer. Glazing which is less than 800mm above floor level shall be upgraded to toughened safety glass inside & outside but with the thermal properties maintained to a BFRC energy rating of 'A' (B.S. Safety Kitemarked).

Glazing in a door or side panel within 300mm of a door shall be upgraded to toughened safety glass inside & outside but with the thermal properties maintained to a BFRC energy rating of 'A' (B.S. Safety Kitemarked).

Safety glazing shall be to a minimum height of 1500mm above floor level - all in accordance with Technical Booklet Part V sections 1 & 2. Wiindows, screens & doors shall be manifactured & installed to achieve 'Enhanced Security' as would be expected under BS7950 - i.e. with shoot bolts, hook locks, Trojan hinges etc. All external doors shall operate with key on outside & thumbturn on the inside unless agreed otherwise by the

Employer. No tricklevents to be installed in windows. Windows shall be fitted with hinged or pivot windows that open 30 degrees or more. The 'height x width' of the total opening sash area in each room shall be at least 1/20th of the floor area of that

room to afford rapid ventilation in accordance with Technical Guidance Booklet K Appendix - Diagram All glazing shall be cleaned by a professional window cleaner, who shall use suitable access equipment and carry out the cleaning operations in a manner which is safe for himself, his employees

Guarding at to Low Level Glazing / Openable Doors Upstairs

& the occupants of the dwelling.

2m, the glazing below 800mm must act as guarding except where seperate guarding is provided. Where the difference in level between the floor and the ground outside the openable window is more than 2m, guarding with a minimum height of 800mm must be provided When the building or part of a building is likely to be used by children under 5 years old, the guarding must be constructed so that a sphere of 100mm in diameter cannot pass through any opening in it, other than a triangle opening formed by a tread, a rise and the bottom edge of the guarding if that bottom edge is not more tham 50mm above the pitch line. It must not be easy for a child to climb up it.

When the difference in level between the floor and the ground outside the glazing is more than

PRELIMINARY DRAWINGS SUBJECT TO APPROVAL BY BUILDING CONTROL

All dimensions are in millimetres. It is the responsibility of the contractor is to ensure that all dimensions and levels are checked on site before construction. Do not scale the drawings - Any discrepancies or queries are to be brought to the attention of the Architect / Structural Engineer at the earliest opportunity & action agreed. Any work to which a requirement of the Building Regulations applies must, in accordance with Part B of the Building Regulations, be carried out with suitable materials and in a workmanlike manner.

It is the responsibility of the contractor to liaise with the client regarding the final choice of the design and configuration of all windows, doors, external finishes, bathroom fixtures and fittings, lighting, external paving and landscaping etc. None of the above items should be ordered until this has been discussed with the client.

It is the responsibility of the Main Contractor to

double check all dimensions before commencing foundations & superstructureconstruction. Do not scale the drawings - Any discrepancies or queries shall be discussed with the Architectural Consultant & action agreed.

This Drawing Must Be Read In Conjunction With The Structural Engineer's Drawings & Details The Energy Consultant's Report where applicable

IMPORTANT: CDM 2016 CLIENT DUTIES

(DESIGN AND MANAGEMENT) REGULATIONS (CDM 2016):

lease be advised of your duties as Client, as follows: . Check competence and resources of all appointees Ensure there are suitable management arrangments for ne project including welfare facilities . Allow sufficient time and resources for all stages Provide pre-construction information to designers and

Appoint (in writing) a Principal Designer Appoint a Principal Contractor until the end of the

Make sure that the construction phase does not start nless there are suitable welfare facilities and construction hase plan in place Provide information relating to the health and safety file o the Principal Designer Retain and provide access to health and safety file

PRELIMINARY DRAWINGS SUBJECT TO APPROVAL BY BUILDING CONTROL THESE DRAWINGS ARE NOT TO BE USED FOR TENDERING PURPOSES

AZMAN KHAIRUDDIN R.I.B.A.

2 NOVARA PARK ANTRIM BT41 1PA Tel: (028) 944 88 258 Mob: 0781 586 2541 email: info@bigdesignarchitecture.com PROJECT:

Outbuildings at No.20 Birch Hill Road, Antrim DRAWING TITLE

Conversion

Construction Notes

DATE DRAWN CHECKED Oct 2023 DMcG AK

2231 / WKD.113

REVISION

Electrical Installation Generally

A new N.I.E. mains electrical supply with meter shall be installed in a robust & weather proof electric intake & meter cabinet. Provide a stepped D.P.C. over & thermal insulation behind the cabinet and all in accordance with N.I.E. requirements.

All electrical work shall be carried out in strict accordance with the latest edition of the I.E.E. Regulations (B.S. 7671:1992) by an approved certified electrical contractor.

The electrical sub-contractor shall be responsible for selecting the most appropriate consumer control units from the MK range to safely cope with the maximum electrical demand of the proposal. The consumer unit shall incorporate a residual current device (RCD), miniature circuit breakers (MCBs) & 6no. spare ways to enable possible future expansion of the system.

All cabling is to be accommodated safely in concealed runs in walls, floors & ceilings. Conduit for the works shall be white PVC conduit & fittings conforming to B.S. 6090& B.S. 4607. Cables shall be BASEC certified & the electrical contractor shall select types & sizes to suit operating conditions, ensuring compliance with B.S. 7671.

The electrical contractor shall install, test & commission the electrical work inaccordance with B.S. 7671, ensuring compliance with design & performance requirements, to provide a safe, well insulated, earth protected system capableof supplying the anticipated maximum demand. Fastenings, bushes, glands, terminals, connectors, clamps, clips & other minor accessories necessary for a complete installation shall be types recommended for the purpose by the relevant manufacturer.

The electrical contractor shall wire all items fitted by the heating & plumbing contractor that require a power supply.

During testing of the electrical installation, ensure that all labels required by the regulations are securely fixed in place. After satisfactory completion of tests the electrical contractor shall submit to the architectural consultant:

* 2no. copies of inspection & completion certificates.

The exact number, type & location of electrical fittings shall be confirmed with the employer & consultant prior to commencing electrical installation.

Wall mounted socket outlets & switches (other than isolators) shall be located not more than 1200mm or not less than 450mm above the finished floor level.

The cord of a pull cord switch shall terminate not more than 1200mm above f.f.l.

Energy Efficient Internal & External Lighting

Fixed energy efficient interior light fittings shall be to a minimum 75% installed in all rooms. Provide 100% low energy light fittings throughout (fixed lights or lighting units) that number not less than 3 per 4 of all the light fittings in the main dwelling space of those areas (excluding infrequently accessed spaces such as cupboards and wardrobes). Low evergy light fittings should have lamps with a luminous efficacy greater than 45 lamp

lumens per circuit-watt and a total ouput greater thn 400 lamp lumens. Light fittings whose supplied power is less than 5 circuit-watts are excluded from the overall count of the total number if light fittings.

Exterior lighting shall -

- (a) Either: (i) lamp capacity not greater than 100 lamp-watts per light fitting; and (ii) all lamps automatically controlled so as to switch off after the area lit by the fitting
- becomes unoccupied; and (iii) all lamps automatically controlled so as to switch off when daylight is sufficient.
- (i) lamp efficacy greater then 45 lumens per circuit-watt; and
- (ii) all lamps automatically controlled so as to switch off when daylight is sufficient; and
- (iii) light fittings controllable manually by occupants.
- To ensure proper compliance, the electrical contractor shall refer to and apply paragraphs 2.37 & 2.38 of Part F1 of the Building Regulations (NI) 2012.

All lighting to be deisgned and installed in accordance with the procedures given in DCLG publication "Domestic Building Services Compliance Guide" Section 12, Table 40.

Level Approach

- Provide a level approach from the point of entry to the dwelling site to the principal entrance i.e. the front door.
- The approach shall be suitable for use by disabled persons and shall have (a) a surface which is firm and even;
- (b) an unobstructed width not less than 900 mm; and (c) a slope not exceeding 1 in 20.
- Where the level approach has a crossfall it shall not exceed 1 in 40.

Principal Entrance

The principal entrance to the dwelling shall have a door with a minimum clear opening width of not less than 775 mm and a level threshold.

The access to the principal entrance to a dwelling shall be – level for a distance of not less than 900 mm; and at or about the level of the floor of the dwelling.

Windows / Glazing, Internal & External Doors

Windows shall be u.P.V.C. to BS7413 manufactured by a specialist agent to suit openings & designs indicated on the drawings. All window frames glazing etc. to be confirmed by client before ordering and fitting.

Double glazing units shall be 28.5mm thick (minimum) made up using: Inner pane: 6.5mm thick Low e Hard-Coat Glass (e.g. K-Glass) Gas Cavity: 18mm argon filled cavity. Spacer: Warm Edge Super Spacer Outer pane: 4mm thick Low Iron Float Glass (e.g. Optiwhite)

All Glass must be fully protected during the construction phase by the contractor & be carefully cleaned by the contractor at Practical Completion in accordance with the class manufacturer's details in order to avoid scratching. Scratched / damaged glazing units will be replaced at the contractor's expense. Windows shall be fully bedded in mastoc and foxed in postition using stainless stee fixing cramps at spacings appropriate to the size of window.

Glazing which is less than 800mm above floor level shall be upgraded to toughened safety glass inside & outside but with the thermal properties maintained to a minimum BFRC energy rating 'A' (B.S. Safety Kitemarked). The ability of the toughened safety glass should be adequately specified to account for glazing when subjected to impact loading to resist penetration and hence prevent people from falling through it. To be carried out at both ground floor and first floor level.

Glazing in a door or side panel within 300mm of a door shall be upgraded to toughened safety glass inside & outside but with the thermal properties maintained to a minimum BFRC energy rating 'A' (B.S. Safety Kitemarked).

Safety glazing shall be to a minimum height of 1500mm above floor level - all in accordance with Technical Booklet Part V sections 1 & 2.

Where appropriate, the glazing shall be obscured & to a pattern approved by the Employer from a set of samples.

Provide emergency escape windows where indicated. Opening sashes in escape windows shall have clear opening area of at least 0.33sq.metres with the height & width of the clear opening being at least 450mm. The lower edge of emergency escape windows shall be not less than 800mm and not more than 1100mm above finished floor level.

Windows, & doors shall be manufactured & installed to achieve certification under BS7950

External doors shall be uPVC or painted/varnished timber. All external door locks shall operate with key on outside & thumbturn on the inside unless agreed otherwise with the Employer. The Contractor shall provide a sample of the proposed window system (including ironmongery) for the client's approval prior to placing order.

All glazing shall be cleaned by a professional window cleaner, who shall use suitable access equipment and carry out the cleaning operations in a manner which is safe for himself, his employees & the occupants of the dwelling.

Gearing: New concealed espagnollette gearing supplied by window contractor. All tilt & turn gearing to be neatly concealed within the hinge cavity and located within the integral Euro Grooves extruded within the sections. All gearing to be provided by window manufacturer in strict accordance with their recommendations regarding vent sizes and weight. Any further recommendations by the ironmongery manufacturers to also be taken into consideration. Consult with window manufacturer for details on additional ironmongery options available.

Fixing: All fixings to be in strict accordance with Metal Technology's instructions and guidelines as detailed in their technical literature and in accordance with the relevant British Standards, including BS6262, and shall ensure the window is retained securely within the opening without incurring any damage or distortion to the window frame. Generally fixings to be positioned 150mm from each corner and each mullion/transom and at centres not exceed 300mm. Fixing lugs/straps only to be used where they can be suitably concealed to approval. All fixing of the windows to the building structure to be achieved using a suitable lug and/or frame anchor fixing method capable of accommodating all applicable loads, deflection, tolerances and expansion expected on site. Details of the proposed fixing method shall be submitted to the project engineer for approval prior to installation.

Cills/flashings: As indicated on drawings, detailed by Architectural Consultant, uPVC windows are to include a preformed, polyester powder coated cill. Sub-contractor is to propose design and setting prior to manufacture, and seek approval from the Architectural Consultant.

New controlled fittings to comply with Limiting U-value Standards as specified in Technical Booklet F1 2012. Windows/roof windows and rooflights to be U-value 1.6 W/m2.K or better. Doors to be 1.8W/m2.K or better.

Dwelling Ventilation Strategy

The dwelling shall be ventilated in accordance with Method 2 (i) - System 1 as outlined in Technical Guidance Book K of the Building Regulations (NI) 2012 - i.e. by using a combination of background ventilators & intermittent extract fans.

The dwelling shall be ventialted in accordance with Method 2 (i) -System 4 -Continuous mechanical supply and extract with heat recovery (MVHR) as outlineed in Technical Guidance Booklet K of the Building Regulations (NI) 2012.

MVHR system to be designed and installed by specilist contractor. Background ventilators shall be located to avoid draughts, typically 1.7 m above floor level. The proposed dwelling shall be fitted with hinged or pivot windows that open 30degrees or more. The "height x width" of the total opening sash area in each room shall be at least 1/20th of the total floor area of that room to afford rapid ventilation in accordance with Technical

There may be practical difficulties in achieving these provisions for habitable and wet rooms (e.g. if unable to open a window due to excessive noise from outside or where the window is fitted with opening restrictors). As an alternative a mechanical fan extracting at 4 ach to outside could be used.

Any device used for rapid ventilation should be manually controlled. The location of the device is not critical for ventilation. The whole dwelling ventilation rate for the supply of air to the habitable rooms in the dwelling shall be not less than 25 Litres per second.

Air Transfer Between Rooms

Booklet K Appendix B - Diagram B.1.

To ensure good transfer of air throughout the dwelling, there should be an undercut of minimum area 7600sq.mm in all doors within the dwelling above the floor finish. For example, this is equivalent to an undercut of 10 mm for a standard 760 mm width door. This should be achieved by making an undercut of 10 mm above the fitted floor finish, or by a 20 mm undercut above the floorboards, or other surface, if the finish has not been fitted. Windows in each habitable room shall be capable of extracting a minimum of 4 air changes per hour per room directly to outside.

Kitchen Extract Fan (Intermittent)

Install a cooker hood (650mm to 750mm above the hob) that incoroporates a mechnical extract fan capable of extracting at a rate of 30 litres per second. The fan shall be ducted to an external exhaust grille fitted with an anti-back draught flap. Kitchen shall also have:

Limiting Air Infiltration

In order to reduce the infiltration of cold air, leakage paths through the building shall be

limited by:

*rapid ventilation openings (windows) equal in area to 1/20 of the room floor area.

- * Fully sealing junctions between all frames fitted into openings in walls. * Fully draughtproofing all openable elements in windows, doors & rooflights.
- * Fully sealing hatches to unheated floor & roof voids.
- * Fully sealing around services penetrations.
- * Fully sealing around joist ends where joists are built into external walls.
- * Fully sealing vapour control barriers especially in timber frame construction. Refer to Building Regulations Technical Booklet F for details.

Bathroom, Toilet, Ensuite & Utility Extract fans (Intermittent)

Install ceiling or wall mounted mechnical extract fans, as appropriate in each location, capable of extracting at a rate of 30 litres per second, in the Utility, and 15 litres per second in the Bathrooms and Ensuite. The fans are to e ducted to an external wall mounted exhaust grille fitted with an anti-back draught flap or to a slate / tile vent as appropriate.

The fans shall be wired so that they are activated by operation of the room light swtch & shall have an overrun time of 15 minutes. The minimum performance requirements specified in System 1 for each ventilator, should

be measured using the test methods contained in the relevant clauses of the following (a) Intermittent extract fans :BS EN 13141-4 Clause 4 "Performance testing of

aerodynamic characteristics". All sub-clauses are relevant. (b) Range hoods :BS EN 13141-3 Clause 4 "Performance testing of aerodynamic characteristics". All sub-clauses are relevant.

(c) Background ventilators (non-Relative Humidity (RH) controlled) BS EN 13141-1 Clause 4 "Performance testing of aerodynamic characteristics". Only the following sub-clauses are relevant -

(i) 4.1 "Flow rate/pressure"; and (ii) 4.2 "Non-reverse flow ability"

The performance requirement should normally be met for both air flow from outside to inside the dwelling and for inside to outside. To ensure the installed performance of background ventilators is similar to the results achieved when they are tested to this Standard, background ventilators and associated components should be installed according to manufacturer 's instructions. This also applies to non-Relative Humidity controlled sound-attenuating background ventilators.

Heating System - Either Oil Boiler or Air Source Heat Pump System or combination of both systems

Central Heating Boiler Warmflow U150HE Oil-fired Boiler to be installed complete with the Warmflow HE Plastic Balanced Flue Kit complete with all accessories.

The oil fired central space & water heating boiler & flue shall be finally selected & sized by the heating system engineer on the basis of his heat loss calculations which shall take account of all aspects of the building including area, volume, ventilation & insulation

The output of the total heating surface in any space shall be near to, but not less than, the design heat loss for that space. The boiler output shall be not less than the total calculated heat loss, including emission from the system pipelines. Allow for intermittent

Joints shall not occur within the depth of the roof. Ensure the flue is not less than the required minimum distance from combustible materials such as timber. The outlet from a flue shall be so situated externally as to allow safe dispersal of the products of combustion, the correct operation of a natural draught flue and, if a balanced flue, the intake of air. The flue outlet shall be located as shown in Diagram 5.2 & Table 5.1 of Building Regulations (NI) 2012 Technical Booklet L

The flue outlet shall be protected by a guard where a person could easily come into contact with it; or it could be damaged.

The flue shall be designed & installed to prevent the entry of any matter that could obstruct the flow.

Circulating pumps shall be:

use when calculating the total heat loss.

(i) To B.S. 1394: Part 2 Kitemark certified

(ii) Adjustable to give the required temperature differential between flow & return & with the facility (iii) Duty sufficient to circulate maximum boiler output against the system resistance & to meet the

heating requirements (iv) Installed in readily accessible locations & in the manner recommended by the manufacturer with isolating valves to allow for removal without draining the system.

All water pipes shall be fitted with Armaflex pipe insulation (thermal conductivity less than 0.045W/mk) the thickness of which must not be less than 40mm or the diameter of the pipe,

The system designer & installer shall take due account of all requirements under Part F1 of The Building Regulations (NI) 2012 and ensure that the heating & hot water systems & controls shall be designed, installed & commissioned in accordance with the procedures given in the DCLG publication "Domestic Heating Compliance Guide".

Wood-burning stove without a back boiler to be installed in living room.

Certification for Building Services & Operation Manual

Installation and commissioning certificates for all fixed building services shall be provided by each respective installer and copies shall be forwarded to the architectural consultant & Building Control. These certificates shall be included in the Building Operation Manual which the developer shall compile & formally deliver to each dwelling owner upon completion

In addition to the certificates, the Building Operation Manual shall include readily understandable information relating to the safe and energy efficient operation &

maintenance of all fixed building services. **Domestic Cold Water System** All cold water supply points such as taps, cisterns, appliances etc. shall be served

directly from the cold water mains. Ensure all valves are capable of proper working undermains pressure. All water pipes shall be fitted with Armaflex pipe insulation (thermal conductivity less than 0.045W/mk) the thickness of which must not be less than 40mm or the diameter of the pipe, whichever is the least.

indicated on the plans are provisional.

The space heating system on the Ground Floor shall primarily be an underfloor heating Each steel radiator & towel radiator shall be fitted with a thermostatic valve. Manifolds are to be housed in an appropriate cabinet (supplied & installed by the heating system contractor) & in locations to be agreed with the employer and the architect. Positions

The system shall incorporate modulated weather compensating temperature control consisting of an electronic control box, immersion control thermostat, outside temperature

detector, motorised valves & back-up limit thermostat. The entire heating system shall be designed, installed & commissioned by a competent heating engineer who shall produce layouts and design calculations for the systems for discussion and agreement with the architectural consultant & client prior to commencement

The system designer & installer shall take due account of all requirements under Part F1 of The Building Regulations (NI) 2012 and ensure that the heating & hot water systems & controls shall be designed, installed & commissioned in accordance with the procedures given in the DCLG publication "Domestic Heating Compliance Guide.

Air Source Heat Pump (Air to Water) The new air source heat pump (ASHP) shall be a Grant HPID13R32 Aerona 13kW R32 Inverter Driven Air Source Heat Pump using R32 refrigerant. The ASHP shall have an ErP rating of A+++ and comply with Quiet Mark approval for low noise operation. The ASHP shall be coated with BlyGold protection during the manufacturing process. Grant HPID13R32 Aerona Size: 1418mm H x 1024mm W x 403mm D The air source heat pump (ASHP) shall be finally selected & sized by the heating system engineer in conjunction with the Grant Technical Department on the basis of actual heat loss

calculations which shall take account of all aspects of the building including area, volume, ventilation & insulation levels. The output of the total heating surface in any space shall be near to, but not less than, the design heat loss for that space. The ASHP output shall be not less than the total calculated neat loss, including emission from the system pipelines The Grant air source heat pump shall be installed complete with the: * Grant Sealed System

* Grant Expansion Vessel * Grant Flexi-Foot Kit & Fixings * Grant Through Wall Insulation Kit * Domestic Hot Water Boost Kit

* Grant Mag One Filter The air source heat pump & its associated accessories shall be installed & commissioned in strict accordance with the manufacturer's printed instructions by an engineer / installer approved by Grant NI (the ASHP manufacturer). Include for producing as installed drawings for inclusion in the Health & Safety File. The system designer & installer shall take due account of all requirements under Part F1 of

The Building Regulations (NI) 2012 and ensure that the heating & hot water systems & controls shall be designed, installed & commissioned in accordance with the procedures given in the DCLG publication "Domestic Building Services Compliance Guide". Air Source Heat Pump Location

The air source heat pump shall be located where indicated on the floor plan & mounted on a level 1350mm x 725mm x 150mm thick concrete base laid on a compacted sub-base in accordance with the Grant printed instructions. Leave a gap of 150mm xbetween the concrete base & the wall of the house / garage. The ASHP must be raised up from the base by 100mm on the Grant anti-vibration Flexi- Foot Kit.

The ASHP shall be mounted to provide the clearances stipulated in the Grant printed instructions to enable the unit to be commissioned, serviced & to allow adequate air flow in & out of the heat pump Domestic Hot Water Storage System All hot water supply points shall be served via an unvented hot water storage system

complying with the requirements of Building Regulations N.I. 2012 Technical Booklet P (see diagram 1.2 page 10). The system storage vessel shall be the Grant DuoWave Solar twin coil indirect stainless steel cylinder with a capacity of 300litres & a power input of not more than 45kW. The stored water (under regulated mains pressure)

The Grant DuoWave HPDUO/IND300 (1745mm high x 580mm dia.) insulated cylinder shall incorporate a remote expansion vessel, integral immersion heater, factory fitted cylinder Installation & commissioning shall be carried out in strict accordance with the printed instructions provided by Grant NI by a tradesman holding a current Registered Operative Identity Card for the installation of unvented hot water storage systems. Include for

shall be heated indirectly by a thermostatically controlled sealed primary heating circuit from

producing as installed drawings for inclusion in the Health & Safety File. Pipework shall comply with Clause 7 of B.S. 6700: 1987. All water pipes shall be fitted with Armaflex pipe insulation (thermal conductivity less than 0.045W/mk) the thickness of which must not be less than 40mm or the diameter of the pipe, whichever is the least. The storage vessel shall have a factory fitted thermal insulation

Photovoltaic Panels & Solar Electric System The Principal Contractor shall employ the services of BlueBuild Energy (or similar) to design /supply & install a solar energy capture system.
Contact: Will Logan, BlueBuild Energy, Newtownards. T: 028 9146 8222
The entire solar electric system shall be designed,

installed & commissioned by BlueBuild trained engineers. BlueBuild shall produce plant specifications, guarantee /warranty details, etc. - all for with the architectural consultant, principal contractor & client prior to commencement on site.

BlueBuild shall include for producing as installed drawings for inclusion in the Health & Electricity generated by the propsoed PV aray is an non-export connection.

The entire solar electric system shall be designed,

Concealed Precast Concrete Lintels

Concrete for reinforced precast lintels shall be to BS 5328, designated mix not less than RC30 or designed mix not less than C30, with 20mm maximum nominal size of aggregate.

Clear Span	Section	Bearing	Reinforcement
Up to	150mm deep x	150mm	2no. 12mm Ø mild
1500mm	100mm wide	both ends	steel bars
Up to	225mm deep x	225mm	2no. 12mm Ø mild
2000mm	100mm wide	both ends	steel bars
Up to	250mm deep x	225mm	2no. 16mm Ø mild
2400mm	100mm wide	both ends	steel bars
Up to	300mm deep x	225mm	2no. 20mm Ø mild steel bars
3000mm	100mm wide	both ends	

Reinforcement shall be placed in the bottom of the lintels described above. For spans of 1500mm & over, lintels shall also have 2no. 10mm dia. mild steel bars at the top with 6mm stirrups at 150mm centres.

Minimum nominal cover to reinforcement shall be 20mm. For greater spans and/or greater loadings see detailed drawings or obtain

instructions from the architectural consultant. Lintels carrying point loads shall be heavy duty 300mm deep x 100mm wide with 2no. 20mm dia. m.s. bars in bottom & 2no. 20mm dia. m.s. bars in top with 6mm m.s. stirrups at 150mm centres. Minimum cover shall be 20mm.

Proprietary Steel Lintels

Where specified, steel lintels over standard openings in cavity walls shall be HD/K-130 or HD/K-150 insulated steel lintels as manufactured by Keystone Lintels Ltd. Other special steel lintels for corners, bays, etc. shall be designed and manufactured

by Keystone Lintels Ltd. Tel. 028 8676 2184. **Proprietary Pre-stressed Reinforced Concrete Lintels**

Pre-stressed reinforced concrete lintels may be used for long spans, heavy loading conditions and where the depth of the lintel needs to be less than that possible with standard reinforced pre-cast lintels. Proprietary pre-stressed reinforced concrete lintels shall be manufactured by Creagh

Concrete Ltd. or other equal & approved manufacturer. Manufacturer's load tables & reinforcement details shall be provided by the contractor to satisfy Building Control.

Pitched Roof Void Ventilation

Provide a 25mm continuous roof space ventilation gap along the eaves by installing the Glidevale Eaves Ventilation System comprising:

Glidevale Premier Eaves Skirt to support underlay & form dressing into gutter. ·Glidevale Premier FV250 Fascia Ventilators fitted continuously to top of fascia. ·Glidevale Premier Gutter spacers to ensure gutters do not restrict flow of air into over fascia vents.

Provide the equivalent of a 5mm continuous roof space ventilation gap along the ridge by installing the Redland DryVent Ridge System in strict accordance with Redland printed instructions. The system shall incorporate the following

components: ·uPVC profile filler unit to suit profile of concrete tiles.

·PVC air flow control units.

·75 x 38mm ridge batten and associated stainless steel fixing straps & ring shank nails.

·Half round ridge tiles & associated polypropylene ridge to ridge seals. ·Stainless steel clamping plates.

·Stainless steel drive screws with neoprene washers & foam grommets.

(iv) The underlay membrane is cut back & airflow from the roof void is

(i) The top battens are 60mm from the apex.

(ii) All tiles in the top courses are mechanically fixed. (iii) Block-end ridge tiles are used at the gable ends.

Maintain 50mm clear ventilation path above insulation which is placed along the rake of the roof between rafters to allow

flow of air from eaves to ridge. Lead Lined Valleys

Provide 200 x 38mm SC3 valley lay boards fixed to the top of the rafters to afford support for ends of cut rafters/trusses

forming roof over return. Form valley lining support with 150mm wide lengths of 4mm thick WBP exterior grade plywood fixed to rafters & trusses

between 25mm high preservative treated timber tilting fillets. Line valley with code 4 lead laid & dressed in lengths not exceeding 1500mm. Lead to be dressed over tilting fillets & turned back in a continuous welt. Valley width to be 125mm (clear). Neatly cut & fix tiles along the valley & provide continuous mortar bedding complying with B.S. 5534 onto undercloak slip plane. Mortar

to be coloured to match tiles.

Open Fires / Woodburning Stoves & Flues & Masonry Chimney Construction 125mm thick in-situ concrete hearth laid on concrete sub-floor. Hearth shall project 500mm from chimney breast & at least 200mm beyond fireplace cheeks. Open living flame mains gas fires shall be fitted with minimum 125mm internal diameter twin-walled insulated metal flues complete with suitable fire-boxes to BS 715 & an approved roof terminal. Ensure flue is supported in accordance with manufacturer's instructions & that fire stops, floor sleeves & ceiling plates are fitted where flues run through floors & ceilings.

Installation shall be carried out by an approved CORGI Registered engineer.

be so installed that the building occupants are not provoked into sealing it against draughts or noise.

Flue shall be located within masonry chimney & surrounded with minimum 50mm vermiculite. Bends in flue shall not make an angle of more than 45 degrees. Ensure timbers & any other combustible materials are kept 50mm clear of the chimney. Permanent ventilation shall comply with paragraphs 2.12 - 2.15 and Diagram 2.3 in Technical Booklet L of the Building Regulations Northern Ireland 2012.

Commissioning of fire & flue to be carried out in accordance with BS 5440 Part 1 & a commissioning certificate shall be

A room containing an open-flued appliance must receive a continuous supply of air from outside. The volume of air required depends on the type and rating of the appliance. This normally means the installation of permanently open air vents into

issued by an approved CORGI Registered engineer and comply with Part L of the Building Regulations 2012

A permanently open air vent should not be located within a fireplace recess. A permanently open air vent should be sized so that the free area, or the equivalent free area of a more complex design, is sufficient for the appliance to be installed, taking account where necessary of obstructions such as grilles and anti vermin mesh. Any discomfort from cold draughts can be avoided by placing the air vent close to the appliance, drawing air from other parts of the building or by ensuring a good

A permanently open air vent should be non-adjustable and be positioned where it is unlikely to become blocked. It should

It should not be positioned in a fire resisting wall other than an external wall that is not part of an external wall shielding a

In a noisy area, it may be necessary to install proprietary noise attenuated air vents to limit the entry of noise into the building but these should not diminish the required air supply. The location of air vents should not breach the requirements of Part E of the Building Regulations.

The flues shall rise vertically & enter a masonry chimney. Install minimum 200mm internal diameter clay flue liners with minimum 50mm vermiculite cover all round. Flue liners shall be rebated & spigoted with rebates placed uppermost & the joints pointed with fire cement mortar. Bends in the flue shall not make an angle of more than 45 degrees with the vertical.

Chimney to be built with code 4 lead trays, code 5 lead flashings & soakers where

mix of the incoming cold air by placing the air vent close to the ceiling.

it penetrates the roof structure.

Chimney flues must be checked at completion by the Contractorto ensure that they are free from obstructions, satisfactorily gas tight & are suitable for their intended application.

In a building where it is intended to install an open-flued appliance which 'share' a space subject to mechanical air extraction, the combustion appliance should operate safely whether or not the fan is running. To minimise risk of spillage of flue gas for a solid fuel appliance a room extract fan should not be installed in the same room. If mechanical extraction is unavoidable, it is the responsibility of the Contractor to seek specialist advice frm a mechanical/services engineer to ensure safe operation of the appliance.

Provide a direct air feed into appliance for proposed stoves to dining and family room which 'share' a space subject to inical air extraction. A flue gas spillage test (as recommended in BS 5440: 1) should also be carried out.

PRELIMINARY DRAWINGS SUBJECT TO APPROVAL BY BUILDING CONTROL

All dimensions are in millimetres. It is the responsibility of the contractor is to ensure that all dimensions and levels are checked on site before construction. Do not scale the drawings - Any discrepancies or queries are to be brought to the attention of the Architect / Structural Engineer at the earliest opportunity & action agreed. Any work to which a requirement of the Building Regulations applies must, in accordance with Par B of the Building Regulations, be carried out with suitable materials and in a workmanlike manner.

It is the responsibility of the contractor to liaise

with the client regarding the final choice of the design and configuration of all windows, doors, external finishes, bathroom fixtures and fittings, lighting, external paving and landscaping etc. None of the above items should be ordered until this has been discussed with the client.

It is the responsibility of the Main Contractor to double check all dimensions before commencing foundations & superstructureconstruction. Do not scale the drawings - Any discrepancies or queries shall be discussed with the Architectural Consultant & action agreed.

This Drawing Must Be Read In Conjunction With The Structural Engineer's Drawings & Details

The Energy Consultant's Report where applicable IMPORTANT : CDM 2016 CLIENT DUTIE

(DESIGN AND MANAGEMENT) REGULATIONS (CDM 2016):

ease be advised of your duties as Client, as follows:

Check competence and resources of all appointees . Ensure there are suitable management arrangments f e project including welfare facilities

Allow sufficient time and resources for all stages

. Provide pre-construction information to designers and

. Appoint (in writing) a Principal Designer Appoint a Principal Contractor until the end of the

the Principal Designer

- Make sure that the construction phase does not start
- nless there are suitable welfare facilities and constructi hase plan in place . Provide information relating to the health and safety file

. Retain and provide access to health and safety file

PRELIMINARY DRAWINGS SUBJECT TO APPROVAL BY BUILDING CONTROL THESE DRAWINGS ARE NOT TO BE USED

FOR TENDERING PURPOSES

ZMAN KHAIRUDDIN R.I.B.A. 2 NOVARA PARK ANTRIM BT41 1PA el: (028) 944 88 258 Mob: 0781 586 2541 email: info@bigdesignarchitecture.com

PROJECT: Conversion

Outbuildings at No.20 Birch Hill Road, Antrim

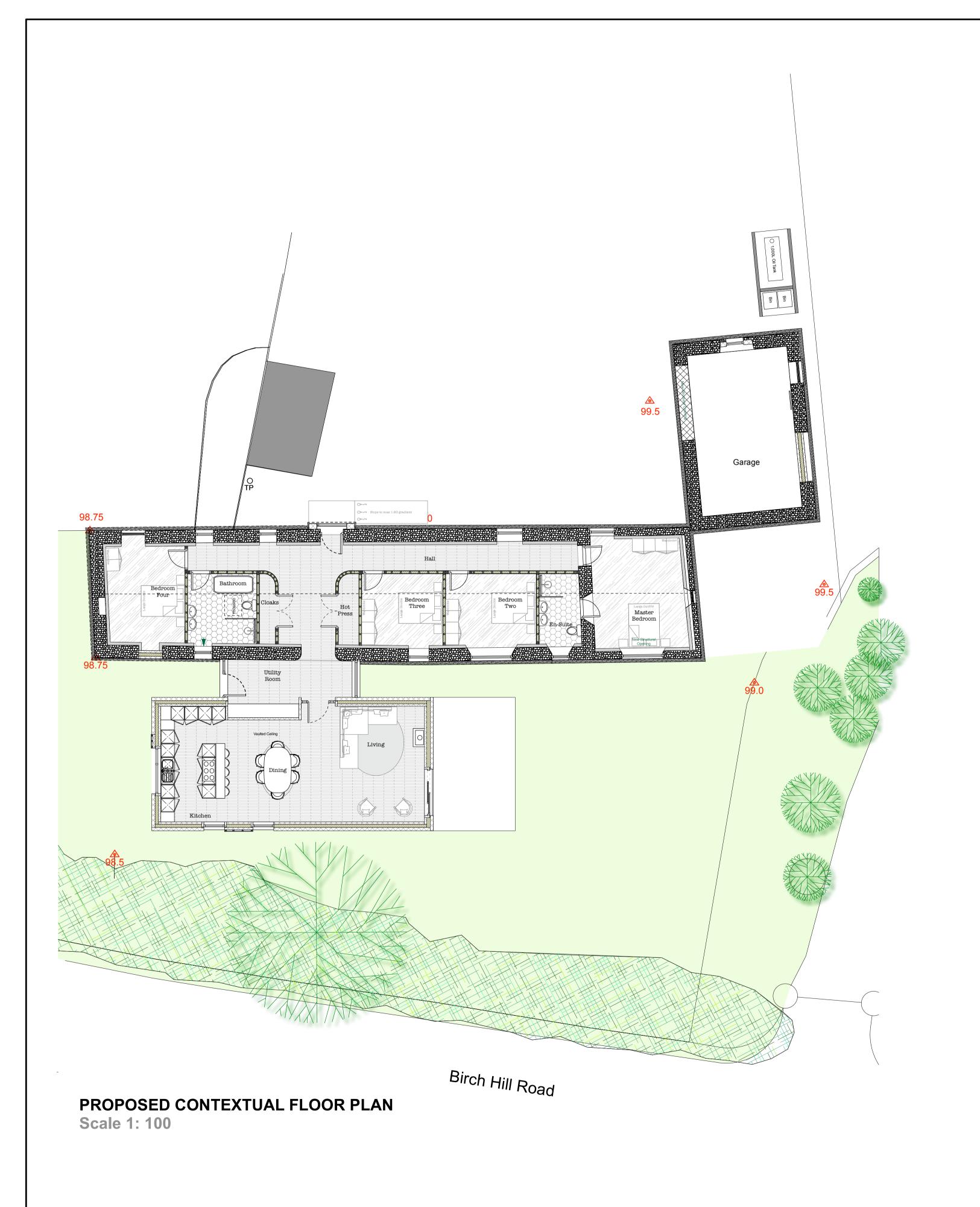
DRAWING TITLE

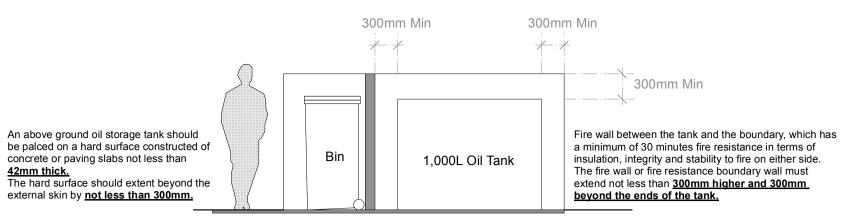
Construction Notes

DATE DRAWN CHECKED Oct 2023 DMcG AK

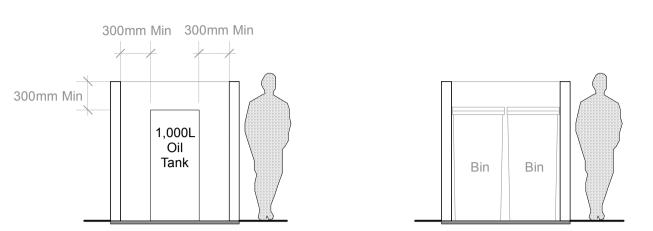
2231 / WKD.114

REVISION

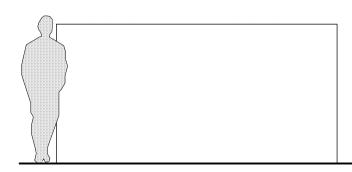




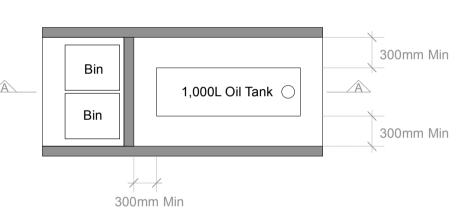
Section A- A Through Oil Tank and Bin Storage Area



Proposed Side Elevations of Oil Tank and Bin Storage Area



Proposed Front and Rear Elevation of Oil Tank and Bin Storage Area 1:50



Proposed Layout of Oil Tank and Bin Storage Area

Oil Storage Tank

Oil Tank Construction Proprietory medium density polyethylene oil storage tank shall be manufactured to comply with OFS T 100: 2008. (OFS T 200: 2010 for steel oil storage tanks).

Control of Oil Pollution

The tank shall be of the integrally bunded prefabricated type, with the bund having a capacity of 110% of the tank it contains.

The above ground oil storage tank shall be placed on a hard surface constructed of concrete or paving slabs not less than 42 mm thick. The hard surface shall extend beyond the perimeter of the tank, or its external skin if it is an integrally bunded type, by not less than 300 mm. The protection of the above ground or semi-buried oil tank from a fire, which may start in a building or beyond the site boundary, shall be in accordance with the provisions given in Table 6.1 of Technical Guidance Booklet L -Building Regulations (NI) 2012 and in this case the Bunded Oil Tankshall be located a minimum of 1000mm from the boundary and a minimum of 1800mm from any building.

The fuel pipework shall be resistant to the effects of fire and be fitted with a fire valve system where it enters the building, in accordance with the relevant recommendations in BS 5410: Part 1, Sections 8.2 and 8.3.

Location of oil tank to be confirmed to client.

300mm Min 1,000L Oil Tank 300mm Min

Proposed Layout of Oil Tank and Bin Storage Area

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Dimensions
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This Drawing Must Be Read In Conjunction With The Structural Engineer's Drawings & Details

The Energy Consultant's Report where applicable MPORTANT: CDM 2016 CLIENT DUTIE

(DESIGN AND MANAGEMENT) REGULATIONS (CDM 2016):

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3. Allow sufficient time and resources for all stages 4. Provide pre-construction information to designers and

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Provide information relating to the health and safety file the Principal Designer . Retain and provide access to health and safety file

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PROJECT: Conversion

> Outbuildings at No.20 Birch Hill Road, Antrim

DRAWING TITLE

Contextual FLoor Plan / Site Layout Oilt Tank Storage

1:100 1:50 Oct 2023 DMcG AK

2231 / WKD.115

REVISION: