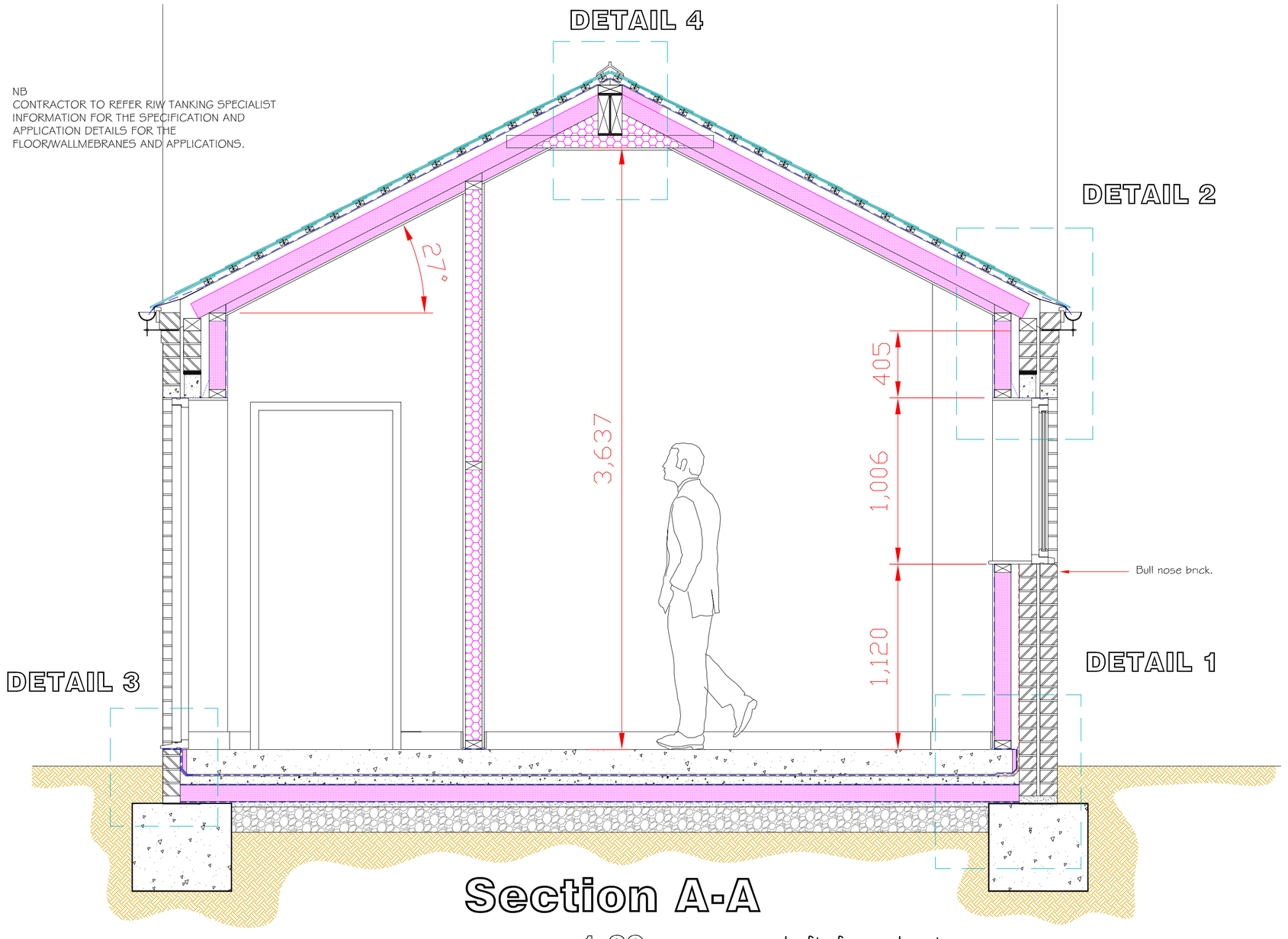
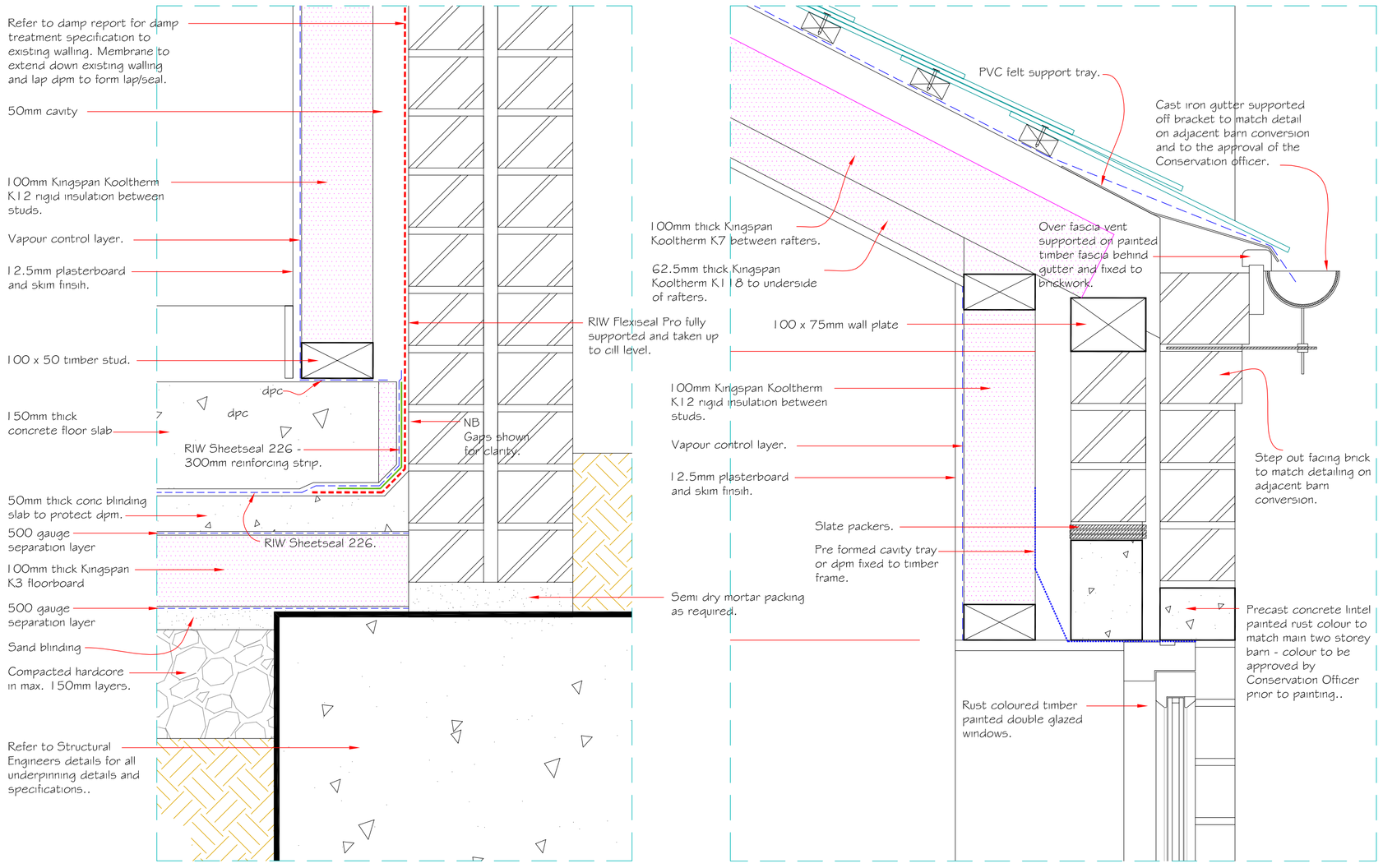
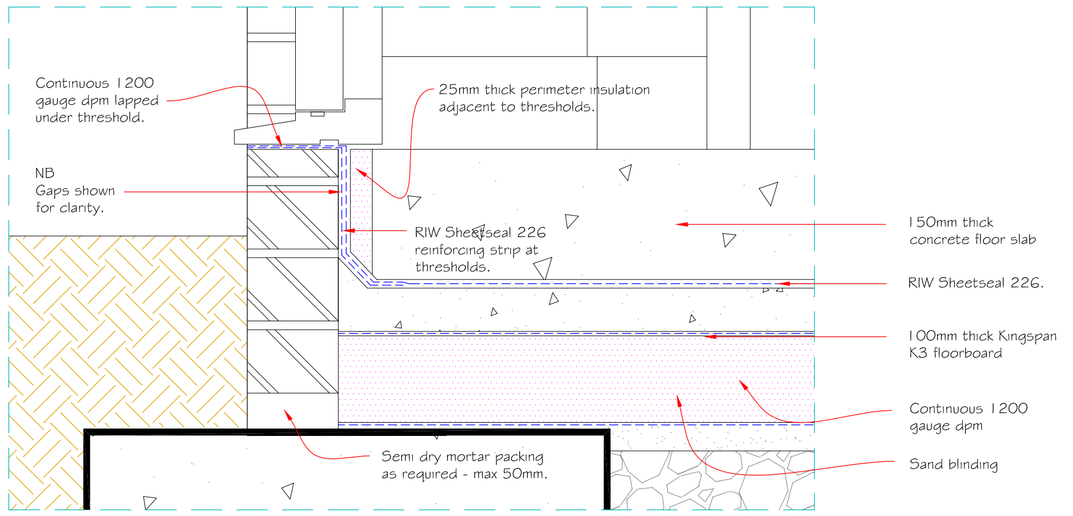
Red Hall, Commonwood.

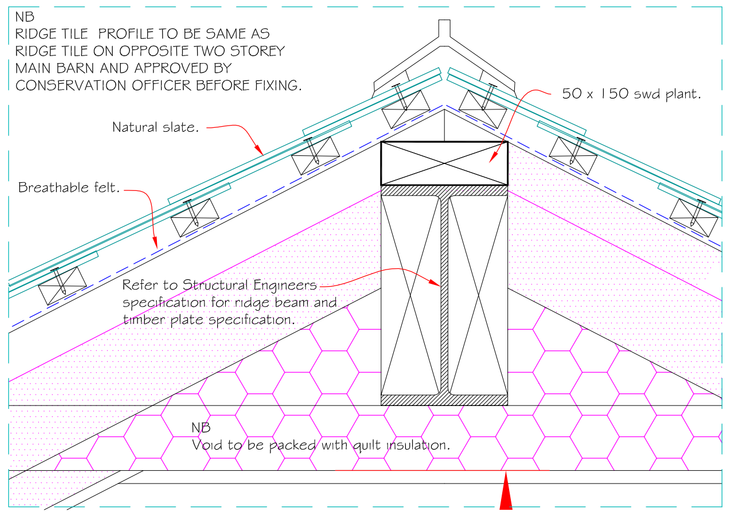


Section A-A

1:20 gaps left for clarity sprinkler system







SPECIFICATION

EXCAVATION
N.B. Positions of any existing services running through the site are to be located and marked by the contractor prior to any excavation.
Contractor to take extreme care whilst excavating for new underpinned foundations/drainage etc.
The use of a CAT is recommended.

FOUNDATIONS
Refer to Structural Engineers calculations for underpinning details.

GROUND FLOOR CONSTRUCTION
Self levelling compound on 150mm C20 grade concrete slab taken on 500 gauge separating layer on 100mm thick Kingspan Kooltherm K3 Floorboard, laid break-bonded with joints tightly butted, on 1200 gauge dpm laid over sand blinding on 150mm clean, dry, well consolidated hardcore, in maximum 150mm compacted layers.
Dpm joints should be well lapped and folded to prevent the passage of ground water and brought up to the same height as the damp proof course.
Where any services pass through the floor, contractor to allow for sealing the dpm.

WALL CONSTRUCTION GENERALLY
Existing 220mm solid brick walling with 50mm clear cavity, 100 x 50mm treated timber studs with 1000mm Kingspan K12 in the voids, vapour control layer and 12.5mm plasterboard with skim finish.
Allow for 18mm thick Gyproc ThermalineReveal board to all opening reveals.

Refer to Timberwise damp report for treatments to existing structure.

Client to provide copy of report to main contractor on request.

STUD PARTITIONS.
Stud framed partitions are to comprise 12.5mm Lafarge dBcheck plasterboard fixed both sides to 75mm x 50mm softwood stud framing set at 450mm c/c. Framework is to be formed on 75mm x 50mm swd soleplate.
Additional framing to be installed where required i.e., around openings. All joints in boards to be filled and skrimmed prior to application of skim plaster. Allow for 25mm thick Rockwool Acoustic Partition Slab to main partitions.

ROOF CONSTRUCTION GENERALLY

Refer to structural engineers specification for roof design including trimming details.

Provide and fix 150 x 50mm (to allow for min 50 air gap and rigid roof insulation) C16 grade timber rafters @ max 600 crs, spanning from wall plate to ridge beam (refer to structural engineers details and specification) 100 x 75mm wall plate to be anchored using 30 x 2.5mm galvanised ms vertical restraint straps at minimum 1m centres.
Lay and fix roofing felt to BS 8217 1994, (Tyvec Supro or Kingspan N4vent breathable roofing membrane or other equal and approved), parallel to eaves so that rainwater will drain away freely, with horizontal and vertical laps not less than 150mm wide coinciding with supports and carried well into gutters and secured with clout nails.
Roof felt to hang between rafters by min 25mm.
Fix new 50 x 50mm treated battens (Increased batten size due to rafter centres) in place with galvanised nails to BS 1202 part 1, to each timber support in straight horizontal lines ensuring no batten is less than 1200mm long, butt joints are centred on supports and do not occur more than once in any group of 4 battens on any one support. Fix additional battens where necessary to prevent felt being opened at laps by wind suction.
Lay natural slate to match existing, broken bonded, nailed and clipped in strict accordance with manufacturers recommendations.
Ceiling to receive 150mm thick (100mm + 50mm) rigid insulation by Kingspan or other equal and approved.
100mm thick Kingspan Kooltherm K7 between rafters and underlined with 62.5mm thick Kooltherm K118 Insulated dry lining board (comprising 12.5mm plasterboard and 60mm of insulation). Min 50mm air gap to be maintained.
Continuous through ventilation being provided by "Glidevale" continuous over fascia vents with tile vents or ventilated ridge tiles, to eliminate moisture in dead space roof. All roof ventilation to be in accordance with BS 5250: 1989

ELECTRICS
All electrical work to be carried out by Person or Firm registered with a Self Certification Scheme in accordance with Approved Document P. Commissioning Certificate to be provided on completion.
All electrical installations to be carried out by a specialist firm and must also be a full member of the N.I.C.E.I.C. and must produce their registration certificate of the said council.
The whole of the works shall be carried out in accordance with the 17th Edition of the I.E.E. Regulation, The I.E.E. On Site Guide, The I.E.E. Recommendations on Selection and Erection, Testing and Inspecting, The Electricity At Work Regulations 1989, The Health and Safety at Work Act 1974, together with the recommendations and requirements of M.A.N.W.E.B.

Exact locations of all lights, switches and sockets to be agreed on site with client.
All service controls, electrical sockets / switches etc to be set out between the heights of 450mm and 1200mm and at least 300mm away from any internal room corner.

SMOKE DETECTOR INSTALLATION
The work included in this specification is for the supply and fixing of smoke/heat detectors to comply with the Building Regulations of 1st June 1992 and linked.
The Contractor is to supply and fix detectors, which shall be a type from the mains with primary battery back. The detector shall be fitted to a mounting pattress, shall be of a photoelectric type and be interlinked.
All cables to be P.V.C. sheathed copper cable.

INSTALLATION OF DETECTORS
Detectors to be fixed to ceiling at least 300mm from any wall or light fitting. A central position is preferable.
The detectors should not be fixed to or directly above heaters or any other place where steam, condensation or fumes could give false alarms.
The Contractor shall on completion of the installation, ensure that the owner receives the manufacturer's instructions concerning the operation and maintenance of the alarm.

VENTILLATION
Provide mechanical ventillation to rooms as follows:-
Kitchen / cooker hood - 60l/s
Bathrooms - 15l/s

Ventillation from cooker hood to be agreed on site once exact location of cooker has been confirmed.

All mechanical ventilation to extract to the outside air, with adjacent fused spur and switched via light switch with 15min overrun timing device. Fans In bathrooms must be sited out of reach of a person using a fixed bath or shower.

Purge (natural) ventillation openings to habitable rooms to be typically 1.75m above floor level and all internal doors to have a 10mm gap under the door for air supply transfer.
Note: Fans must not be installed in rooms containing open flue appliances unless the Interaction of mechanical ventillation & open flue heating appliances is checked and certified by an approved method & suitably qualified person as contained in ADJ.

LEAD WORK
Allow for flashings to all wall / roof abutments. All lead flashings, soakers, saddles etc to be In code 4. All lead valleys to be in code 5.
All leadwork to be carried out in accordance with the Lead Association handbook.

CAVITY TRAYS
Where possible provide DPC/Cavity trays over lintels and to extend 150mm to side.

If possible contractor to allow for pre-formed propriety stepped cavity tray where single storey pitched roof meets two storey building (only If a cavity Is present) **– It is requested that this item be conditioned.**

LINTELS
Refer to structural engineers specification for all lintels.

DRAINAGE

All cover and invert levels to be calculated on site – It is requested that this Item be conditioned

All new drainage to be 100mm "Supersleeve" or other similar and approved bedded in 150mm pea gravel, laid to a fall of 1 in 40 minimum.
Drains passing under building or within 900mm of foundation to be encased in 150mm concrete, and have precast concrete lintel over where passing through walling.
Any water underground service to be taken around building and not underneath, other services to be ducted.

Proprietary UPVC 450mm diameter Inspection chambers to be provided at all changes of level and or direction and at 45m maximum spacing In straight runs up to 1.2m in depth. All gullies to be trapped and have rodding access where serving branches. Inspection chamber covers to be mechanically fixed and suitable for vehicular loads in drives and roads and proprietary bolt down double sealed covers and frames in buildings.
All inspection chambers to be fitted as per manufacturers recommendations and be complete with medium duty cover and frame.

All proposed drainage is to discharge to new treatment plant by Klargester or other equal and approved – **It is requested that this Item be conditioned until all the relevant information can be supplied to the BCO once work has commenced on site.**

SURFACE WATER
All surface water from proposed building to discharge to soakaways, via rwp's and gullies. (See proposed plan).
Soakaways to be min 1m3 deep filled with 50mm nominal size clean stone to within 300mm of finished ground level, covered with visqueen membrane and back filled with good quality topsoil. Where one or more outlets discharge to the same soakaway, it should be increased sufficiently in size.
Soakaways to be minimum 5m away from any structure.
Percolation test to be carried out by contractor to ascertain ground suitability.

RAINWATER GOODS
Fix new cast iron half round (profile and brackets to be approved by Conservation Officere) gutters with brackets at 1000mm centres and new 65mm dia. cast iron downpipe with brackets at maximum 1500mm c/c, all to discharge via gullies to soakaways.

PLUMBING

Kitchen
Kitchen sink to have 40mm P.V.C.u waste and 75mm deep seal trap discharging to stub stack as indicated on plan.
Dishwasher to be connected to stub stack (position to be agreed on site)

Bathroom
Toilet to have 100mm connection into to new stub stack to new inspection chamber 1, as indicated on drg.
Bath to have 40mm diam waste and 50mm deep seal trap with connection to stub stack.
Whb to have 32mm diam waste with 75mm deep seal trap with connection into stub stack.

NB All connections made to stub stack are to be on bossed socket adaptors and have 600mm radius bend at base. Rest bend to be set out with 400 x 400 x 150mm thick concrete pad.
Svp's and stub stacks to be fitted with rodding point at base and all svp's to terminate 900mm above nearest opening light within 3000mm and be fitted with wire cage.
Stub stacks to be fitted with external quality air admittance valve and be of a higher level than the whb.

WINDOWS AND DOORS

The existing building is listed and it is requested that some leeway be shown in terms of window openings.

Windows and doors (style and colour to clients specification, to comply with Part B and be approved by conservation officer prior to installation) to be double glazed units with 16mm air gap and soft low E coating achieving maximum U-value of 1.8w/mk and having a glass transmission factor of 0.6. Generall Contractor will be responsible for checking all dimensions on site prior to manufacture. All opening lights to be multipoint locking. All windows to habitable rooms to have purge ventilation equivalent to 5000mm squared and non-habitable to be equivalent to 2500mm squared. Ventilation via trickle vent located in window head.
All glazing less than 800mm above finished floor level and to doors and side lights 1500mm high to be laminated or toughened safety glass to BS6206. For rapid ventilation provide one or more ventilation openings with a total area of at least 1/20th of the floor area of the room. Some part of the opening to be at least 1.75m above floor level.
Contractor to ensure that the new windows should have an unobstructed openable area that is at least 0.33mm2 and at least 450mm wide and 750mm high. The bottom of the openable window to be not more than 1100mm above floor level, for fire escape purposes.

Rooflights to be conservation type and sized by client.

HEATING
Heating Engineer to provide details of proposed boiler to be used and submitt to Local Authority Building Control for approval prior to installation.
Radiators to be sited in each room (locations to be agreed on site between client and heating contractor and not to interfer with furniture or fittings) with the required kilowatt output as calculated by Gas Safe registered Plumbing & Heating Engineer or OFTEC qualified engineer if oil is present.
All radiators to be fitted with trv's.
All radiators to be Rettig Compact Convector radiators by Rettlg Heating Ltd, Hartlebury Trading Estate, Hartlebury, Nr Kidderminster, Worcestershire, DY10 4JB; Tel (01299) 250700, or to Client's specification.
Ensure all pipework susceptible to freezing is adequately lagged.

It is requested that this item be conditioned until such time that a full detailed specification is produced and approved by building control prior to installation.

Ensure all pipework susceptible to freezing is adequately lagged.

FLUE OUTLET
The outlet from a balanced flue or low-level discharge appliance should be:
So situated externally as to allow the dispersal of the products of combustion and, with a balanced flue, the free intake of air.
At least 600mm from any opening into the building and protected with a terminal guard if persons could come into contact with it or if it could be subject to damage, and designed so as to prevent the entry of any matter, which may restrict the flue.

LIGHTING
Include for energy efficient lighting to comply with Part 'L' of the Approved Documents.

75% of lighting to be energy efficient type.

ELECTRIC SUPPLY
Client to contact the supplier/shipper to arrange for the electric supply to the dwelling -Electric cupboards to be located internally. Electric split board (Crabtree Split-board) to be sited as per electricians proposals and be fitted with consumption read-out .

Sprinkler Sytem
The client is to allow for a sprinkler system installation to the entire dwelling and to fully comply with BS 9251:2005 'Sprinkler systems for Residential and Domestic Occupancies – Code of Practice' 3.

A new water connection application form must be completed which should clearly state that a connection is required for both a domestic supply and a domestic fire sprinkler supply.
A 32mm connection will be required to accommodate this request. This will be installed using a boundary box with a 32mm full flow plug.

It is requested that this item be conditioned.

NOTES

Contractor to refer to RIW (Tanking specialists) details for all specifications and fixing details for all wall and floor membrane treatments.
RIW - Technical department - 01344 397777.

New floor level to be set out from existing door opening as shown on Proposed Front Elevation drawing. Allow for reducing existing ground level to minimum I brick course below floor/dpc level.

Allow for lowering existing window opening on rear elevation to line through with proposed cill levels as shown on section. Allow also for bull nose brick to underside of cill.

Contractor to allow for preparing eaves height to ensure flat and level wall plate.

Client to carry out all necessary work required under the conditions for planning approval.

Contractor to submit samples of roofing slates, guttering/brackets, facing bricks, paviours etc and any other finish to Local Authority for approval prior to ordering.

Refer to structural engineers report for any remidial work in connection with cracking to walls.

Contractor to allow for facing any stud partitions, that are likely to have heavy fittings attached with ply screwed to face of stud, positions to be agreed on site by client.

Prior to and during works, persons carrying out the works are to liaise with and meet the requirements of the relevant services authorities, including the location and protection all all services as necessary.
Ground to be prepared for new works as described including location and alteration/modifications to all existing services as necessary, including sealing up, capping off, disconnecting and removing redundant services as necessary.

Rads set out between client and heating contractor.

All architrave's, door casings and skirting to clients choice.

All work to be carried out in strict accordance with good building practice relating to building work. Contractor to check & verify all dimensions on the site of the works, prior to commencement.

All plumbing, drainage, heating, electrical services etc to be carried out by suitably qualified and experienced specialists or registered competent persons, tested and appropriate certification issued where required.

All construction work shall be carried out in accordance with the latest Building Regulations, British Standards Institution standards and codes of practice.

All materials and products to be installed to manufacturer's details and specification.
All materials/products used should be "fit-for-purpose", both in terms of condition and specification.
Embedded timbers and battens to be CCA preservative treated to BS 4072.
All external joinery to be double vacuum pressure preservative Impregnated.

The contractor is to take all due care when handling heavy materials, when working overhead and when making connections to existing drainage. The works are to properly protected throughout.

The contractor is to be responsible for locating and protection of all services and drainage beneath or adjacent to the works and for the proper protection of for the duration of the works.

The site is to be left clear of all debris on completion.

THE STRUCTURAL ENGINEER IS ANDREW HANNET – 07761 346542.
ALL STRUCTURAL QUERIES OR ALTERATIONS TO BE APPROVED BY BRP PRIOR TO ANY WORK BEING CARRIED OUT.

THESES DRAWING HAVE BEEN SUPPLIED FOR PLANNING AND BUILDING REGULATION APPROVAL ONLY.

HEALTH & SAFETY / CDM 2015
Contractor, sub-contractors etc. to comply with Health and Safety Regulations during execution of the works.
Domestic client duties under CDM2015 MUST be undertaken by the contractor / or Pinciple Contractor should there be more than one contractor. Contractors must be aware of their client duties under CDM 2015 otherwise further guidance must be obtained.

In line with CDM 2015 steps have been taken to "Design Out" as many identifiable risk as possible, a competent contractor however should be fully aware of Normal / Reoccurring " risks involved in the construction process.

Significant residual risks that cannot be eliminated as part of the design process are as follows and action will need to be taken by the contractor to satsfy / eliminate potential risk.

1:- EXISTING SERVICES(below ground etc)
Plumbing, drainage, electrical services etc that will need to be altered, modified or re-sited to facilitate the new building works should be carried out by suitably qualified & experienced specialist / registered competent person. Existing services to be located, altered, relocated as required including sealing up, capping off, disconnecting, removing of redundant services where required.

2:- ASBESTOS (no asbestos survey has been carried out & therefore no report available, contractor to obtain).
ANY suspected asbestos / contaminated materials/soil/lead paint is to be inspected by a specialist. Asbestos if found is to be removed and disposed off site by a specialist licensed contractor as required under the Control of Asbestos Regulations 2012.
Further information regarding Health& Safety at Work Act 1974 & Construction (Design & Management) Regulations 2015 can be obtained from the Health & Safety Executive at www.hse.gov.uk

If any "Abnormal" risk is identified that has not been covered this is to be shared with the project team immediately.

Safe methods & systems of work are the full responsibility of the contractor & must be identified In the Construction Phase Health & Safety Plan which must be drawn up for this project by the contractor or Principal Contractor. NB CDM Wizard available as a free App for Androld and Apple is available to assist with this plan.

These drawings along with any other design working drawings I.e. structural calculations, specialist reports and the like are to part form the Health and Safety File. The Principal Contractor on site will be responsible for further developing the file gathering all relevant information so that this can be handed over to the client upon contract completion.

cad CULLIS-ARCHITECTURAL-DESIGN
partner LABC
25 Sunningdale Close
Wrexham
North Wales
LL13 9QU
T 01978 264376
M 07791 480768
E ajones540@btinternet.com

Client: **Mr. R. Davies.**

Drawing Title: **Section, Details & Specification.**

Job Title: **Proposed Barn Conversion at Red Hall, Commonwood, Wxm.**

Date:	Scale:	Rev:	Drg No:
Dec 2017.	1:20 & 1:5 at A1		PD138/03