



3D View 8

WINDOWS:

New windows to be a mixture of different materials and styles. The glazed elements within the new oak frame kitchen extension are to be powder coated aluminium frames set inside the oak framed structure. Full details to be agreed on site, for the purposes of pricing the glazed elements for the oak frame structure are to be priced as supplied and fitted by separate client nominated subcontractor. The first floor clerestory glazed element to both north and south elevations is to be a series of powder coated aluminium slim profile frames with purpose made specially designed aluminium cill detail sitting on top of the existing wall structure. The exact details of the frame profile and the opening elements for these windows are to be agreed with the specialist designer/manufacturer, for the purposes of pricing this glazing element is to be priced as supplied and fitted by a separate nominated subcontractor.

New traditional style windows and doors to be painted iron birch frames, these are to be purpose made to fit over the new openings or existing openings.

New windows to apply with the following general building regulations requirement notes:

Windows in each room to open a minimum of 25% of the respective floor area of each room, opening direction and hinge location of each window to be confirmed with client prior to ordering. The final opening elements are to be discussed and agreed prior to the installation of any of these above noted glass details.

All windows fitted with sealed glazing units, hidden trickle ventilators, weather stripping & friction hinges.

Top of all opening lights to be min. 1.800 above floor level.

New windows to be fitted with Catnic or IG lintels over openings. For the 4x new openings within the utility and reception area, the lintels over these openings are to be specialist purpose made three centre arch lintels, these are to be designed and constructed by a specialist nominated subcontractor. The subcontractor will arrive at site and with to take away a series of the bricks to be used for the arches, these will then be formed, trimmed and permanently formed into place on each of the 4x three centre arches which will then be delivered back to site assembled and ready to install. The main building contractor is to install these new arches within the openings as shown.

All lintels (either straight or the above noted three centre lintels) to be encased in 100mm wire binding, 13mm plaster and skim. Where oak external lintels are required these are not to be used for structural purposes, a separate galvanneal metal lintel is to be installed in the external skin under the oak lintel allowing the oak lintel to shrink and move without implications on load-bearing wall structure above.

New glazing:

All glazing within 1500mm of floor in windows in external walls and all glazing within 300mm of doors and also within 1500mm of floor, all to comply with BS 6206: 1981.

All above to be fitted with laminated safety glass.

Doors & windows containing glass panels that sizes does not exceed 2500mm and covering an area not more than 0.5m2 do not need to comply. However small panes to be of annealed glass and 6mm thick.

Fire escape windows.

All new first floor habitable rooms should be fitted with windows suitable for escape purposes, the window should have an opening min 450mm wide, 450mm high, but with an opening area of 0.33m2, therefore if the window is 450mm high then width needs to be 750mm and vice versa. The cill height should be no more than 1100mm off finished floor level.

The window should be fitted with a suitable emergency escape hinge and should not be fitted with a key lockable handle.

If cill height is below 800mm ensure a guard is fixed to the inside of the window for safety purposes, ensuring the means of escape is still satisfactory.

Rooflights.

Double rather to each side of the structural opening is required. All new rooflights to be from a rooflight company, these are contemporary modern rooflights with no visible framework externally. It is critical that these are fitted in exact accordance with the manufacturer's installation instructions and to finish flush with the surface of the roofing slate.

Critical note: the installation method of these rooflights varies from standard work, it is important to read the installation instructions for the particular type of roof like before construction of the roof structural opening.

For the purposes of pricing allowed to supply and install a total of 6x Neo S3 rooflights with structural opening size of 727 x 1472mm and a further 2x Neo S3 rooflights with structural opening size of 645 x 1100mm.

HEATING:

New heating system.

The proposed heating system for this new dwelling is to be a ground source heat pump. The ground source heat pump is to be installed within the proposed garage in the approximate area as indicated with schematic fitting locations.

Critical note: the design of the garage may change prior to construction of this element, the location of the plant and incoming services may well alter prior to commencement, this is to be discussed and agreed with the client and building control officer on site.

The design and install of the above noted system is to be the responsibility of the client is nominated subcontractor, this is suggested to be 'The Energy'.

The subcontractor will provide full details of the system and confirm its compliance with building regulations requirements, the client is willing to accept a conditional approval for this particular item.

New system to conform to the following performance specification:

Areas with differing heating needs (such as separate sleeping and living areas) shall have individual temperature control, by use of room thermostats or individual radiator valves.

Separate timing controls should be provided for space heating and hot water (except for combination boilers and solid fuel appliances).

The system design must allow for the provision of only space heating, only water heating, or both when required.

Boiler controls must include provision to prevent the boiler operating when neither the space heating system nor the hot water system requires heat.

The heating and hot water system needs to be fully commissioned to ensure they are operating at high efficiency, and all controls work as intended. The person who carries out the commissioning must provide a certificate confirming that it has been carried out properly to both the client and building control officer.

Proper instructions to the owners should be provided to inform them of how to operate the system efficiently, what routine maintenance is required and the benefits of conserving fuel and power.

Underfloor heating and radiators.

The entire ground floor area within the main barn and the single-story kitchen area is to be heated with underfloor heating pipework installed within the 70mm screed.

A detailed design for the above noted system is to be carried out by the client nominated subcontractor, a copy of this design will be provided to the building contractor, the nominated subcontractor is to carry out the full installation of the underfloor heating pipework with the main contractor then installing the screed in accordance with the specification provided by the nominated subcontractor.

New first floor to be heated by conventional radiators located in approximate positions shown and fitted with rad thermostats. In addition to radiators, heated thermostatically controlled towel rails are to be installed within the ground floor shower room, first floor bathroom and first floor ensuite.

The nominated subcontractor will provide full thermal calculations for each of the first floor rooms and confirm radiator sizes directly with the main contractor plumber.

Ground source heat pump trenches.

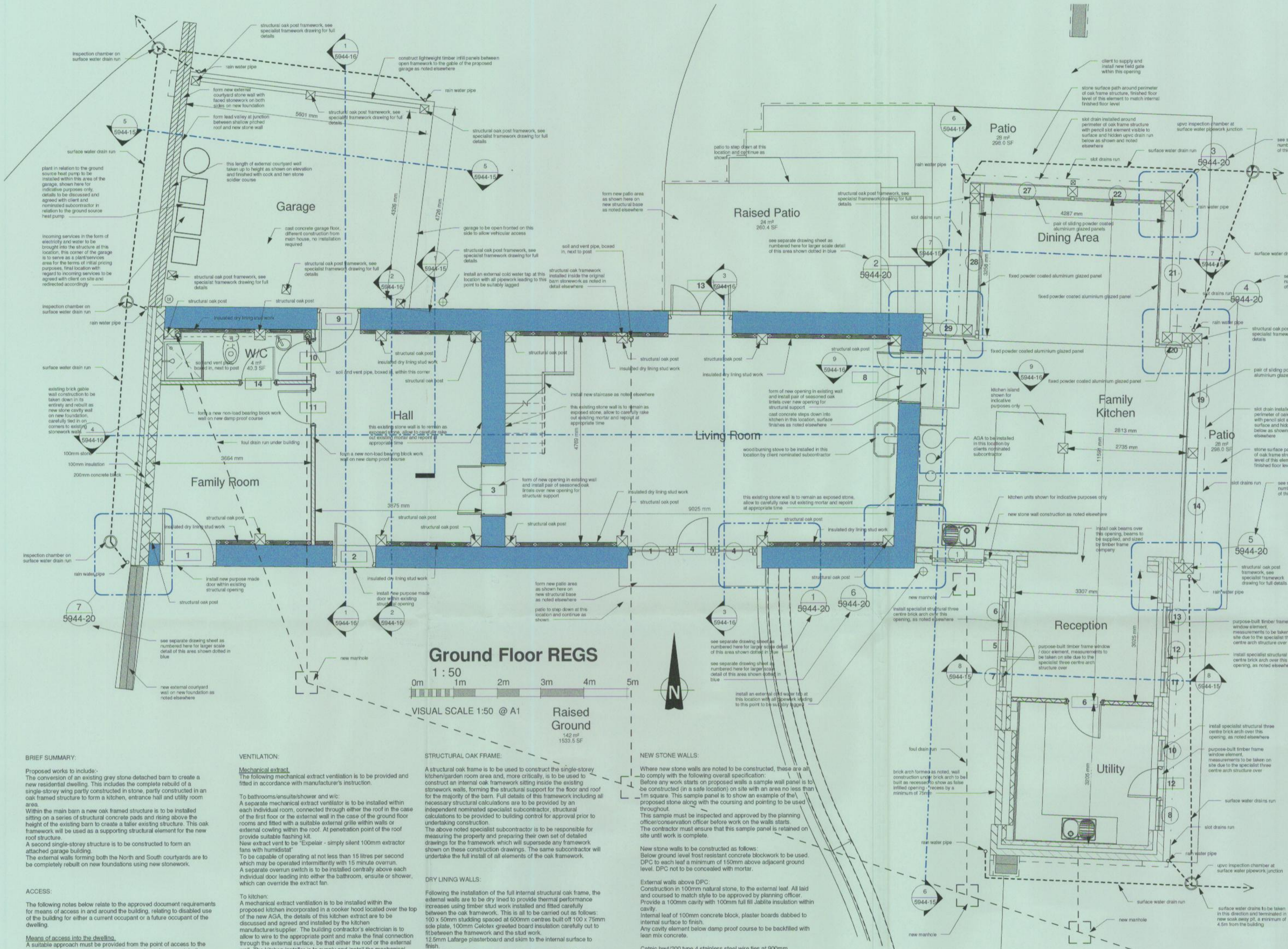
The main contractor is to excavate a series of trenches within the client's positions in the positions indicated on the proposed block plan. A service flow and return trench is to be provided from the proposed garage location to the site of the padlock trenches, this is noted as being approximately 20 m long.

All proposed trenches are to be excavated at 1 m wide to a depth of 1 m and are to be lined at the base with soft sand to a depth of approximately 200 mm.

Each trench is to be spaced at no less than 2.0m from one another, the ground is nominated subcontractor is to be responsible for installing the ground source heat pump pipework within the above noted trenches.

The main contractor is to be responsible for backfilling each of the trenches following the installation of the pipework.

It is strongly suggested the main contractor discusses the construction method in relation to the above noted trenches to prevent any collapse, backfilling or excessive work.



Ground Floor REGS

1 : 50
VISUAL SCALE 1:50 @ A1

Raised Ground
142 m²
1533.5 SF

BRIEF SUMMARY:

Proposed works to include:

- The conversion of an existing grey stone detached barn to create a new residential dwelling. This includes the complete rebuild of a single-storey wing partially constructed in stone, partly constructed in an oak framed structure to form a kitchen, entrance hall and utility room area.
- Within the main barn a new oak framed structure is to be installed sitting on a series of structural concrete pads and rising above the height of the existing barn to create a taller existing structure. This oak framework will be used as a supporting structural element for the new roof structure.
- A second single-storey structure is to be constructed to form an attached garage building.
- The external walls forming both the North and South courtyards are to be completely rebuilt on new foundations using new stonework.

ACCESS:

The following notes below relate to the approved document requirements for means of access in and around the building, relating to disabled use of the building for either a current occupant or a future occupant of the dwelling.

Means of access into the dwelling.

A suitable approach must be provided from the point of access to the entrance, therefore a new access to the new front door area into the reception hall is to be constructed as follows:

- The clarification purposes the reception/entrance area is within the single-storey element adjacent to the kitchen.
- Provide a shallow ramp from ground level to the main entrance door area.
- The point of access should be reasonably level and the approach should not have crossfalls greater than 1 in 40.
- The ramped approach must have:

 - A surface which is firm and even.
 - Flights whose unobstructed widths are at least 900mm.
 - Individual flights not longer than 10m for gradients not steeper than 1 in 15 or 5m for gradients not steeper than 1 in 12.
 - Has top and bottom landings and, if necessary, intermediate landings each of whose lengths is not less than 1.2m exclusive of the swing of any door or gate which opens on to it.
 - On the approach to the entrance to provide an accessible threshold at the entrance door.

Accessible switches and socket outlets in the dwelling.

All switches and socket outlets for lighting and other equipment in habitable rooms should be at appropriate heights between 450mm and 1200mm from finished floor level.

Door widths.

Ensure that the internal doors are a minimum of 750mm and doors to lounge/hall and rear hall/kitchen are a minimum of 775mm.

ENERGY CERTIFICATE:

The contractor is to arrange for an 'energy performance certificate' to be undertaken and provided to the Building Control Officer. This certificate will be required in order to issue a final completion certificate.

It is noted that this building is a barn conversion, rather than a new build structure.

VENTILATION:

Mechanical extract.

The following mechanical extract ventilation is to be provided and fitted in accordance with manufacturer's instruction:

- To bathrooms/ensuite/shower and w/c:

 - A separate mechanical extract ventilator is to be installed within each individual room, connected through either the roof in the case of the first floor or the external wall in the case of the ground floor rooms and fitted with a suitable external grille within walls or external coving within the roof.
 - At penetration point of the roof provide suitable flashing kit.
 - New extract vent to be "Expelair - simply silent 100mm extractor fans with humidistat"
 - To be capable of operating at not less than 15 litres per second which may be operated intermittently with 15 minute overrun.
 - A separate overrun switch is to be installed centrally above each individual door leading into either the bathroom, ensuite or shower, which can override the extract fan.

- To kitchen:

 - A mechanical extract ventilator is to be installed within the proposed kitchen incorporated in a cooker hood located over the top of the new AGA, the details of this kitchen extract are to be discussed and agreed and installed by the kitchen manufacturer/supplier. The building contractor's electrician is to allow to wire to the appropriate point and make the final connection through this external surface, be that either the roof or the external wall. The kitchen installer is to supply and install the mechanical extract vent.
 - The building regulations requirement for the above noted mechanical extract ventilation is a minimum of 30 ltr of air per second to be extracted.
 - To utility room:

 - A mechanical extract ventilator is to be installed within the utility room, connected through the external wall and fitted with a suitable external grille.
 - New extract vent to be "Expelair - simply silent 100mm extractor fans with humidistat"
 - To be capable of operating at not less than 30 litres per second which may be operated intermittently with 15 minute overrun.
 - A separate overrun switch is to be installed centrally above each individual door leading into the utility room which can override the extract fan.

Natural background ventilation.

Background ventilation to be as follows:

- Kitchen 4000mm sq.
- Bathroom 4000mm sq.
- Living room 8000mm sq.
- Bedrooms 8000mm sq.

EXISTING STONE WALLS:

On the entire existing external walls of the main barn, all pointing to be carefully raked out by hand.

Critical note: using the original stone taken from the carefully demolished courtyard walls, the existing internal gable and existing East gable of the main barn are to be carefully raised in height by adding new stonework onto the existing gable wall structures, taking the gable structure up to the slightly increased wall height.

Following the raising of the walls and the rebuilding of the gable wall to the West elevation, all of the existing external stonework walls are to be repaired using mortar to match the newly built stone walls.

In addition to the above noted works, the structural engineer, Andrew Baxter has prepared a sketch schedule of repair works to areas of the existing stonework, this schedule is to be followed during works on site to provide localised repairs to specific internal and external areas where the stonework has partially failed.

REBUILD WEST GABLE WALL:

The existing West gable wall construction is currently formed using a modern red brickwork having been rebuilt at some point in the past to replace a former stone wall that is assumed to have collapsed. The above noted West gable wall is to be carefully demolished with ground excavated to the external side and internal side allowing for construction of new foundation to be built as noted under the separate foundation heading.

New stonework to be constructed to the West gable using newly purchased stone, carefully sourced to match the existing stonework as best possible. This is to be constructed as noted under the new stonework heading with samples of stone provided to client prior to purchase/construction of this particular element.

STRUCTURAL OAK FRAME:

A structural oak frame is to be used to construct the single-storey kitchen/garden room area and, more critically, is to be used to construct an internal oak framework sitting inside the existing stonework walls, forming the structural support for the floor and roof for the majority of the barn. Full details of this framework including all necessary structural calculations are to be provided by an independent nominated specialist subcontractor, structural calculations to be provided to building control for approval prior to undertaking construction.

The above noted specialist subcontractor is to be responsible for measuring the property and preparing their own set of detailed drawings for the framework which will supersede any framework shown on these construction drawings. The same subcontractor will undertake the full install of all elements of the oak framework.

DRY LINING WALLS:

Following the installation of the full internal structural oak frame, the external walls are to be dry lined to provide thermal performance increases. AGA, the details of this kitchen extract are to be discussed and agreed and installed by the kitchen manufacturer/supplier. The building contractor's electrician is to allow to wire to the appropriate point and make the final connection through this external surface, be that either the roof or the external wall. The kitchen installer is to supply and install the mechanical extract vent.

The building regulations requirement for the above noted mechanical extract ventilation is a minimum of 30 ltr of air per second to be extracted.

TO UTILITY ROOM:

A mechanical extract ventilator is to be installed within the utility room, connected through the external wall and fitted with a suitable external grille.

New extract vent to be "Expelair - simply silent 100mm extractor fans with humidistat"

To be capable of operating at not less than 30 litres per second which may be operated intermittently with 15 minute overrun.

A separate overrun switch is to be installed centrally above each individual door leading into the utility room which can override the extract fan.

Natural background ventilation.

Background ventilation to be as follows:

- Kitchen 4000mm sq.
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On the entire existing external walls of the main barn, all pointing to be carefully raked out by hand.

Critical note: using the original stone taken from the carefully demolished courtyard walls, the existing internal gable and existing East gable of the main barn are to be carefully raised in height by adding new stonework onto the existing gable wall structures, taking the gable structure up to the slightly increased wall height.

Following the raising of the walls and the rebuilding of the gable wall to the West elevation, all of the existing external stonework walls are to be repaired using mortar to match the newly built stone walls.

In addition to the above noted works, the structural engineer, Andrew Baxter has prepared a sketch schedule of repair works to areas of the existing stonework, this schedule is to be followed during works on site to provide localised repairs to specific internal and external areas where the stonework has partially failed.

NEW STONE WALLS:

Where new stone walls are noted to be constructed, these are all to comply with the following overall specification:

- Before any work starts on proposed walls a sample wall panel is to be constructed in a safe location on site with an area no less than 1m square. This sample panel is to show an example of the proposed stone along with the coursing and pointing to be used throughout.
- This sample must be inspected and approved by the planning officer/conservation officer before work on the walls starts.
- The contractor must ensure that this sample panel is retained on site until work is complete.
- New stone walls to be constructed as follows:

 - Below ground level frost resistant concrete blockwork to be used.
 - DPC to each leaf a minimum of 150mm above adjacent ground level.
 - DPC not to be concealed with mortar.
 - External walls above DPC:

 - Construction in 100mm natural stone, to the external leaf. All laid and coursed to match style to be approved by planning officer.
 - Provide a 100mm cavity with 100mm full fill Jablite insulation within cavity.
 - Internal leaf of 100mm concrete block, plaster boards dabbed to internal surface to finish.
 - Any cavity element below damp proof course to be backfilled with lean mix concrete.

Catnic bw4200 type 4 stainless steel wire ties at 900mm horizontally and 450mm vertically staggered centres and doubled up at all openings. Ties to BS 1243, brick ties to BS 6073.

Top of cavities and around all openings to be closed with approved thermal cavity closer. Apply DPC to all vertical cavity closings.

Cavity trap provided above any beam/lintel supporting an external cavity wall.

NEW COURTYARD WALLS:

The existing walls currently forming the North and South courtyard are in poor condition and are to be completely removed with all existing stone carefully stored in appropriate location on site for reuse when extending the existing central and East gable stonework walls to the original barn.

New stonework to be purchased, this is to be carefully sourced to match the existing stonework as best possible in terms of coursing styles. Samples of this stone must be provided to the client prior to purchasing and construction.

New stone courtyard walls to be constructed as follows:

- Allow to construct a double skin of new stonework wall with pointed stonework to both faces, this construction is to be on a new foundation base as noted elsewhere.
- To the top of all courtyard walls, allow to supply and install traditional 'cock and hen' dry stone style wall capping as shown and indicated.
- For the purposes of pricing, these walls are to be all constructed to an approximate height of 2m from external ground level. It is noted that due to the variation in ground-level, wall heights may need to be stepped in various areas, or costing allowance to be adjusted if wall heights are increased due to no steps being included.

STAIRS:

The specification noted here provides a note that conforms to building regulations requirements, however, the details of the stairs are still to be decided/ordered, therefore the details of stairs are to be discussed and agreed on site and it must comply with the following minimum requirements:

- Stair clear width to be 900mm, this size could vary up to 1100mm depending on final choice of staircase.
- Stairs to comprise of equal risers of 200mm and 225mm going, these are to be adjusted as required to make sure the pitch does not exceed 42 degrees.
- A clear head room over all elements of the staircase of 2 m is to be allowed over any part of the staircase.
- Handrail to stairs to be a minimum height of 900mm above string, with spindles positioned to a 100mm spine cannot pass through any opening in the guarding.
- Foot joists to be cut to fit around staircase.
- Joists and trimmers provided around stairwell opening.

WOOD BURNER:

Within the proposed sitting room a wood burning stove is to be installed in the location as shown.

Provide and install a 125mm raised hearth, this is to be constructed as a cast concrete area to the height of 100mm with a 25mm stone slab laid over the surface to provide the actual hearth.

In accordance with building regulations, the minimum footprint of the wood burning stove hearth is to be no less than 850 x 850mm, however measured size on site may increase.

New wood burning stove to be supplied and installed by client specialist nominated subcontractor, including a stainless steel twin wall flue which is to be installed from the wood burning stove, running through the first floor and terminating at a minimum of 600mm above ridge level, or to building regulation requirements.

No metal roof fixings to be closer than 50mm to the flue.

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Rev.	Date	Revision Notes

Ground Floor Plan

STABLE ARCHITECTURE

- JEREMY DUNN -

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