FOUNDATIONS
All generally as existing, all confirmed by structural engineers assessment, any works/underpinning that may be required as directed by engineer, all to engineers design and specification.

BELOW GROUND DRAINAGE

Below ground drainage

- Drainage design is to achieve minimum gradients for foul water of 1:80 for 100mm diameter pipes and 1:100 for 150mm diameter pipes, and for surface water of 1:100 for 100mm diameter pipes
- All drains to be either 100mm diameter or 150mm diameter 'Hepworth PlastiDrain' flexible jointed pipes or similar approved system, surrounded in min 150mm granular material or where drains run closer than 1 metre to foundations, or less than 0.9m below the surface of a road or drive, to be surrounded in and backfilled with concrete. Concrete encased pipes to have movement joints of thick compressible board at each joint. Where flexible pipes are not under a road and have less than 0.6m cover they should, where necessary, have concrete paving slabs laid as bridging above the pipes, with a flexible filler under and at least 150mm of granular material between top of pipe and underside filler.
- A branch pipe from a ground floor WC should only discharge directly to a drain if the depth from the floor to drain is 1.3m or less. The minimum drain invert at the base of the stack shall be 450mm from the centre of the lowest connection.
- Manholes to be either:- Proprietary polypropylene manholes used up to a maximum depth of 900mm. Cast in concrete surround where depths are greater or use pre-cast concrete rings.
- Manholes subject to vehicular traffic should be suitably constructed and have covers suitable for such loadings.
- Internal manholes should be avoided but where provided these shall have double sealed screw down covers.
- Rodding access points shall be provided at all ends of new surface drain runs. Back inlet gullies shall be trapped and fully accessible. All installed in accordance with manufacturer's recommendations.
- Allow for carrying out testing of all existing and all new drains and manholes in accordance with BS 8301 (air and water test) and obtain building control approval on completion.
- Road gullies to be heavy duty type and discharge into SW drains.
- Paths, pavements and private drives to fall towards landscaped borders where possible or into the SW drainage system. Surface water run off from drives should not discharge onto the roads.

Generally where drains run closer than 1 metre to foundations to be surrounded in and backfilled with concrete up to a level with the underside of the foundations. Concrete encased pipes to have movement joints of thick compressible board at each joint. Where pipes pass through foundations a 50mm gap is to be provided around pipe (i.e. sleeved through in 200mm Ø pipe) with surrounding void filled with compressed mineral wool, and masked both sides of foundation with fibre cement sheet.

GROUND FLOOR
Existing concrete floor slabs broken out and removed,
Ground floor to dwelling to be 75mm minimum superflow sand / cement screed laid over building paper separating layer on 150mm Kingspan Kooltherm insulation (or similar approved) on an approved 'Radon Gas Membrane' or at minimum a 2000g visqueen membrane, laid with all joints lapped, taped and mastic sealed. The membrane must be taken up the walls and be lapped with the damp proof course and must cross the cavity by the provision of a 'tray' damp proof course - all such work to the complete satisfaction of the building control surveyor on 150mm concrete bearing slab, on DPC previously described. Include 50mm well compacted sand blinding on 150mm well compacted MOT type 1 hardcore. Provide 25mm Kingspan Kooltherm insulation (or similar approved) to screed perimeter. To achieve a U value of 0.13 (W/m²K).

EXTERNAL WALLS
Existing external wall to be thermally lined using
140mm timber studs using 50x50mm support fixing battens to form clear air space, all timber work fixed back to external masonry over damp membrane.
void filled using 90mm Kingspan KoolTherm K112 between timbers, over boarded with Kingspan KoolTherm K118 37.5mm insulated plasterboard and skim finish, all to give U Value 0.18 W/m²K

In fill timber frame party wall panel.
Reflex breather membrane on,10mm OSB board, over 140x38mm CLS timber studs, filled with 140mm acoustic insulation between studs, finished with 2No layers Gyproc SoundBloc F 15mm boards, joints staggered all with skim finish. Ensure all junctions are fully sealed and fire stopped.

INTERNAL WALLS AND PARTITIONS
Generally 38 x 89 mm studwork at 600mm centres with 12.5mm British Gypsum Wallboard (moisture resistant board used in all wet areas) and skim finish on both sides. Install 67mm 'Rockwool Partition Slab' acoustic insulation as indicated on the general arrangement drawings and provide moisture resistant plasterboard to en-suite.

WINDOWS AND DOORS
All windows are to be double glazed purpose made painted timber units, windows to achieve a maximum "U" value for 1.6W/m²K class B All glazing units (Pilkington K glass) are to be sealed to BS 5713. Glazing below 800mm above finished floor level in windows or below 1500mm in doors and sidelights are to be toughened or laminated as defined in BS 6202: 1981. Draught stripping to be provided in frames of all openable elements. Rapid ventilation is to be provided to all habitable rooms through the use of openable lights - minimum 1/20th of room of floor area.

RAINWATER GOODS
Existing upvc rainwater good taken down, replaced with new Cast Aluminum heritage range form Alutec all to match existing on R&F gutter brackets

ROOF CONSTRUCTION
Roof tiles to match existing / re used existing with compatible ridge, on generally 50 x 25mm treated s.w. battens on breathable untearable sarking felt, Kingspan Nilvent or similar approved fitted in accordance with manufacturers instructions, all on roof structure in accordance with engineers specification. proprietary eaves carrier and eaves & ridge ventilation to achieve equivalent 25mm continuous air gap at eaves and 5mm at ridge.

Flat ceiling Insulation to be 100mm Fibreglass laid between bottom chords with 2No lyers 150mm Fribreglass insulation layered over (total 400mm) Finished to underside with British Gypsum12.5mm Duplex plasterboard screw fixed to ceiling joists.
Construction achieves U-Value of 0.010W/m²K.

Pitched ceiling Insulation to be 175mm Kingspan KoolTherm K107 laid between rafters, under drawn with 62.5mm insulated plasterboard Kingspan KoolTherm K118 with skim finish
Construction achieves U-Value of 0.016W/m²K.

PLUMBING
All traps to be 75mm deep. Sink - 40mm ø UPVC trap and waste (maximum branch length 3.0m). Wash hand basin - 32mm ø UPVC trap and waste,. All to be fitted with 75mm deep seal traps(maximum branch length 1.7m). or 40mm ø UPVC trap and waste (maximum branch length 3.0m). Washing Machine - 40mm ø UPVC trap and waste (maximum branch length 3.0m). If any of the above branch lengths are exceeded then Hepworth HepvO waste valve is to be fitted replacing the standard trap, in accordance with the manufacturers instructions. W.C. - 110mm ø UPVC waste to connect in to stub stack with air admittance valve. Where required proprietary soil manifold system to be used for connecting branch pipes to stub stack.

HEATING
Any new radiators to be sized by heating engineer off existing system and include TRV,s. The person who carries out the commissioning of the system must provide a suitable certificate to Building Control confirming the work has been carried out correctly. Full operating instructions / maintenance requirements must be made available for the end user. Boilers may require an air supply which should be provided in accordance with manufacturers instructions. Note: fan assisted boiler flue outlets to be min 300 from any opening into building. All heating systems to be fully sealed.

LIGHTING
Lighting to be energy efficient lighting with a luminous efficiency of 40 lumens per circuit watt. External lighting must have the provision to extinguish automatically when there is enough daylight and when not required at night. Lighting to bathrooms or rooms containing a shower should be situated outside zoned areas where possible (i.e. a minimum of 600mm horizontally and 2250mm vertically away from the bath/shower).

SWITCHES AND SOCKET OUTLETS
All electrical work required to meet the requirements of part P (electrical safety) must be designed, constructed, inspected and tested by a person competent to do so prior to completion the council must be satisfied that an appropriate BS 7671 electrical installation certificate has been issued for the work, and that it has been signed by a person competent to do so.

GENERAL
All materials, fittings and workmanship must be to current British Standards and where applicable Agreement Certificates and used in accordance with all relevant Codes of Practice and manufacturers instructions. All components / products are to be fitted in a manner and location for which they are intended by the manufacturer. All work must be to the satisfaction of the Building Control Officer and Any variations to the approved plans to be to the satisfaction of the client and the local authority.

Steelwork and padstone design to structural engineers details and specification. 30 minutes fire resistance should be maintained to all elements of structure.

Check setting out dimensions to be confirmed back to the contract administrator prior to commencing works.
Contractor/Client to check and confirm all dimensions on site, prior to the commencement of work.
Any major discrepancies found by the Contractor are to be brought to the immediate attention of the Client.
Do not scale.

Provide safety glazing to all critical locations in accordance with BS 6206:1981. Critical locations include doors and side panels with glazing upto 1500mm above FFL and window glazing less than 800mm above FFL.

All second fix items such as architrave's, doors, skirting, electric's and decoration to be agreed with client. Contractor's electrician to agree electrical layout with client.
All insulation to be continuous as shown on sections in accordance with robust details to prevent cold bridging.
Check setting out dimensions to be confirmed back to the contract administrator prior to commencing works.

Contractors must be aware of their duties under 2015 CDM.

only one contractor, the contractor must carry out the client duties as well as the duties they already have as contractor In
practice, this should involve doing little more to manage the work to ensure health and safety;
more than one contractor, the principal contractor must carry out the client duties as well as the duties they already have as principal contractor. If the domestic client has not appointed a principal
contractor, the duties of the client must be carried out by the contractor in control of the construction work.
Where projects are notifiable…. If the contractor phase-
a) will be longer than 30 days; or
b) will be involve more than 500 person days of construction work
Manual Handling Operations are to be carried out in accordance with the Manual Handling Regulations (1992) imposing duties on employers to carry out risk assessment on all manual handling tasks and CDM (1994). The Health & Safety Executive (HSE) Construction Sheet 37 'Handling Building Blocks' gives guidance on meeting the requirements set out by the regulations. It advises that there is a high risk of injury in the single person repetitive handling of units heavier than 20kg. Units heavier than 20kg should be handled mechanically or by two man teams.

COMPLETION INFORMATION
The contractor is to provide the following practical completion information to building control:-
Confirmation that sufficient information has been provided to the owner about the ventilation system and its maintenance requirements so that the ventilation system can be operated in such a manner as to provide adequate means of ventilation.
Confirmation that sufficient information has been provided to the owner about the building, the fixed building services and their maintenance requirements so that the building can be operated in such a manner as to use no more fuel and power than is reasonable in the circumstances.
A copy of the BS7671 electrical certificate will be required.

Kingspan

Internal Wall Insulation (IWI) - Insulation Between Timbers

Manor Farm

01/07/2023

U Value
0.18 W/(m²·K)

Layer	Material	Thickness mm	Lambda W/(m·K)	R value m²·K/W
Internal Surface Resistance				0.130
Internal Finish	PLASTER SKIM	3	0.180	0.017
Insulated Plasterboard	KOOLTHERM K118 37.5mm (12.5mm plasterboard internal finish)	37.5		1.382
Insulation (Between Timbers)	KOOLTHERM K112 - (BETWEEN TIMBERS)	90	0.019	4.737
Timber Bridging	WALL TIMBER - 150mm TIMBER FRAME (15%)	150	0.120	1.250
Bridge percentage	15%			
Airspace	TIMBER STUD CAVITY; U/V. (LOW-E)	60		0.665
External Finish	BRICKWORK FACING	215	0.770	0.279
External Surface Resistance				0.040
			Total Construction Thickness	405.5 mm

Ventilation Strategy

Provide a minimum 5000mm² per habitable room and 2500mm² per wet room.
Allow and include for air bricks to provide additional background ventilation
Provide adequate air transfer within the dwelling by providing an undercut to the internal doors equivalent to 7600mm² per door.
Continious de-centralised mechanical extract to be provided as follows:-

Kitchen -	30l/s provided by cooker hood and ducted to outside air.
Utility -	30l/s through external wall to outside air.
WC -	6l/s through external wall to outside air.
Ensuite -	15l/s through external wall to outside air.

Windows to all habitable rooms to provide purge ventilation via opening windows equal to 1/20 of the floor area being served. Windows to be capable of opening between 15-30°.

dMEV Exract

Continuous de-centralised mechanic extract taken to new roof tile vent

AB

Ventilation Air Brick - Air brick to be decorative cast iron external grill, ducted through wall with adjustable internal decorative brass cover grill to provide required background ventilation

H

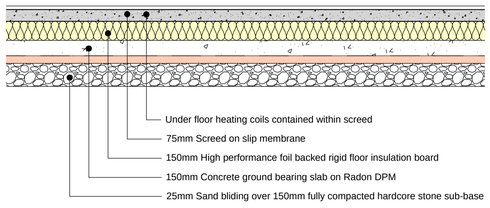
HEAT DETECTOR C/W SOUNDER

S

SMOKE DETECTOR C/W SOUNDER

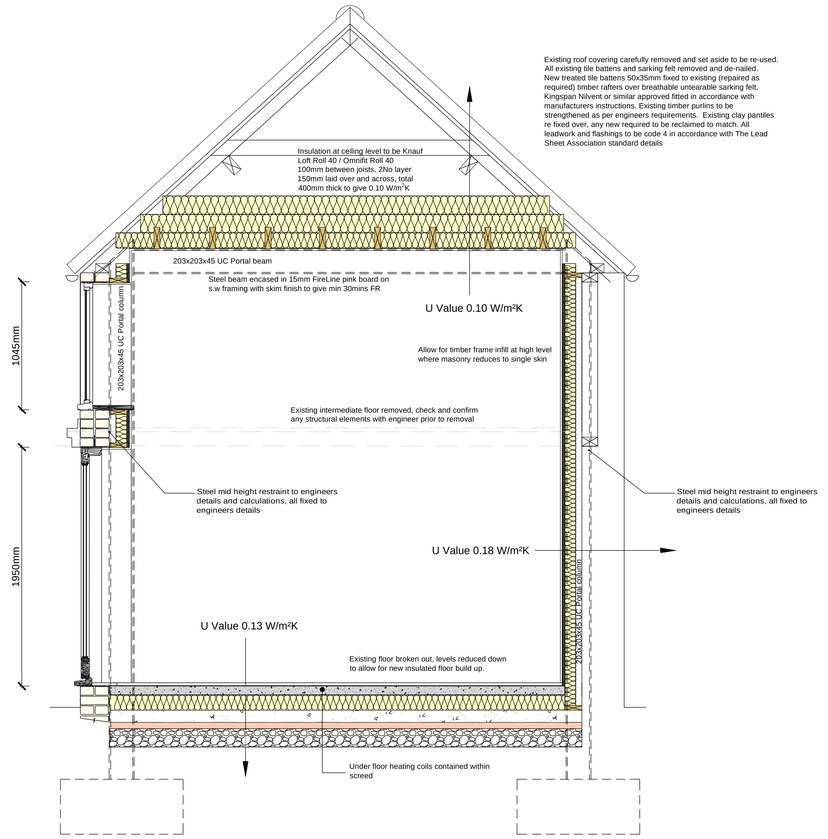
SMOKE / HEAT RISE DETECTORS AND ALARMS
Mains - operated smoke alarms to be positioned in hall circulation spaces between sleeping spaces, kitchens and living rooms and inter linked to one another in each unit. Provide heat detector in kitchen

Walls to be demolished



Proposed Floor Detail:

0m 200mm 400mm 1.0m 1:20 at A1



Proposed Annexe Section:

0m 500mm 1m 1:25 at A1

General Notes

Actual Size.
0 10mm

These drawings are for tender purposes only and are copyright of TF Architectural Services Ltd. Any anomolies must be reported to TF Architectural Services Ltd.

All measurements are deemed as approximate and must be checked on site prior to works starting.

All works to be carried out in accordance with the current Building Regulations, British Standards and Codes of Practice and to the satisfaction of the Building Inspector.

No.	Revision/Issue	Date
C05	Corbel detail raised to annexe, internal wall added to barn	12.2023
C04	Revised following comments received	060923
C03	Revised following comments received	170823
C02	Issued for information	240723

TF Architectural Services Ltd
[redacted]

PROJECT:
Proposed Barn & Annex Conversion

DRAWING TITLE:
Annex - Proposed Typical Section & Specification

PROJECT ADDRESS:
Old Manor Farm
Main Street
Farnsfield

CLIENT:
Mr & Mrs Heywood

DRG NO: 005_2023_8003 C05
DATE: June 2023
SCALE: 1:25 / 1:20
FORMAT: A1