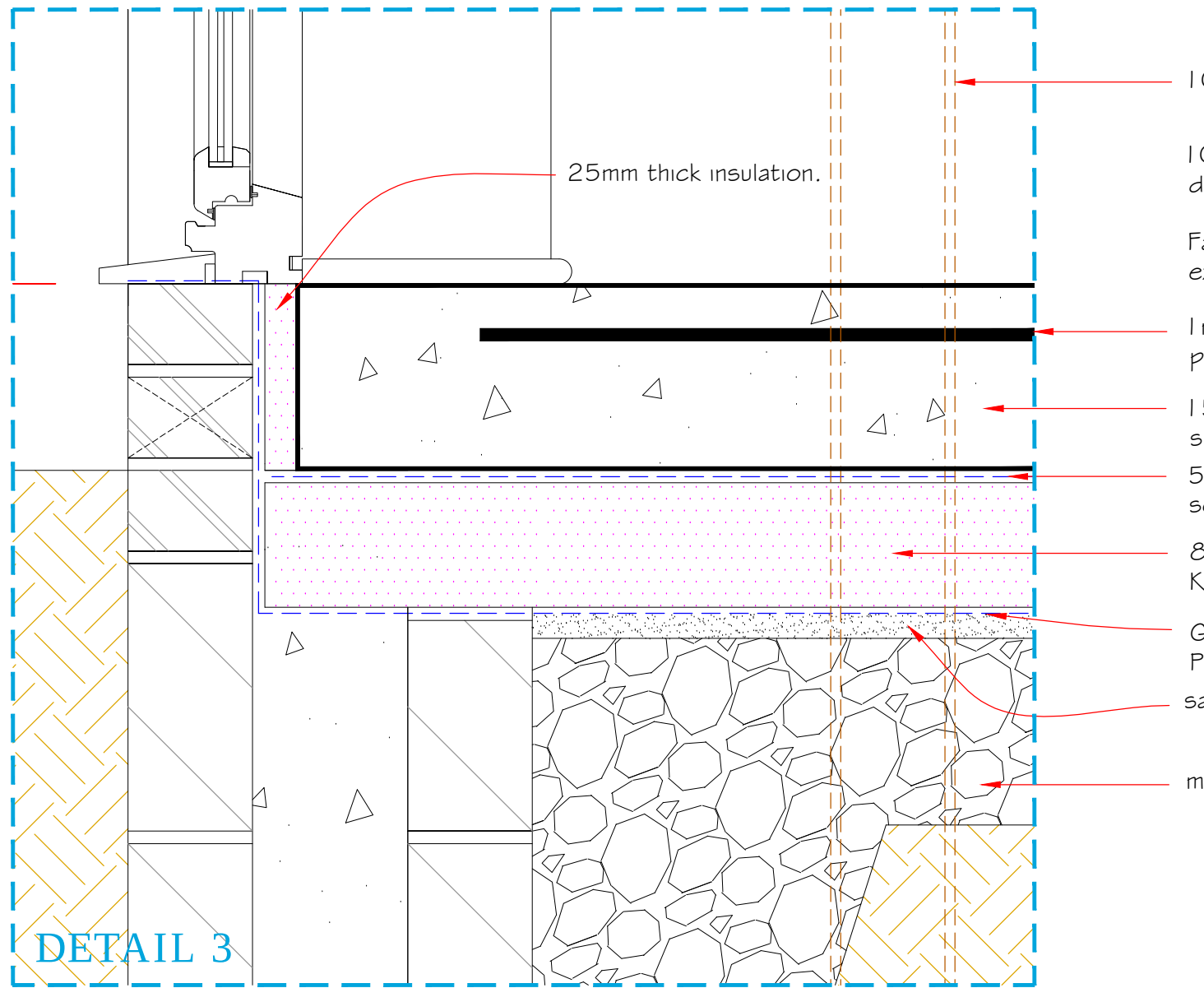
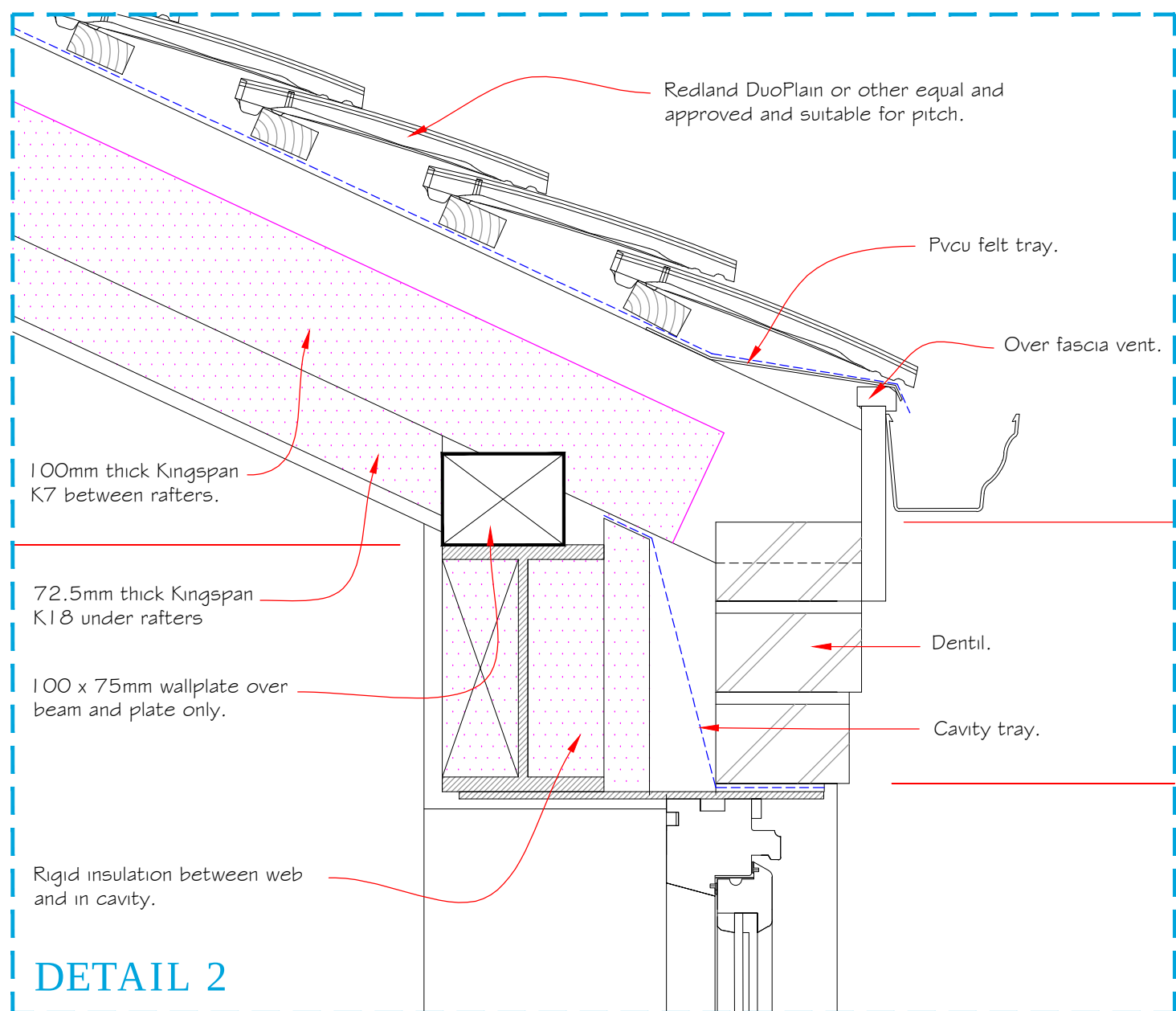
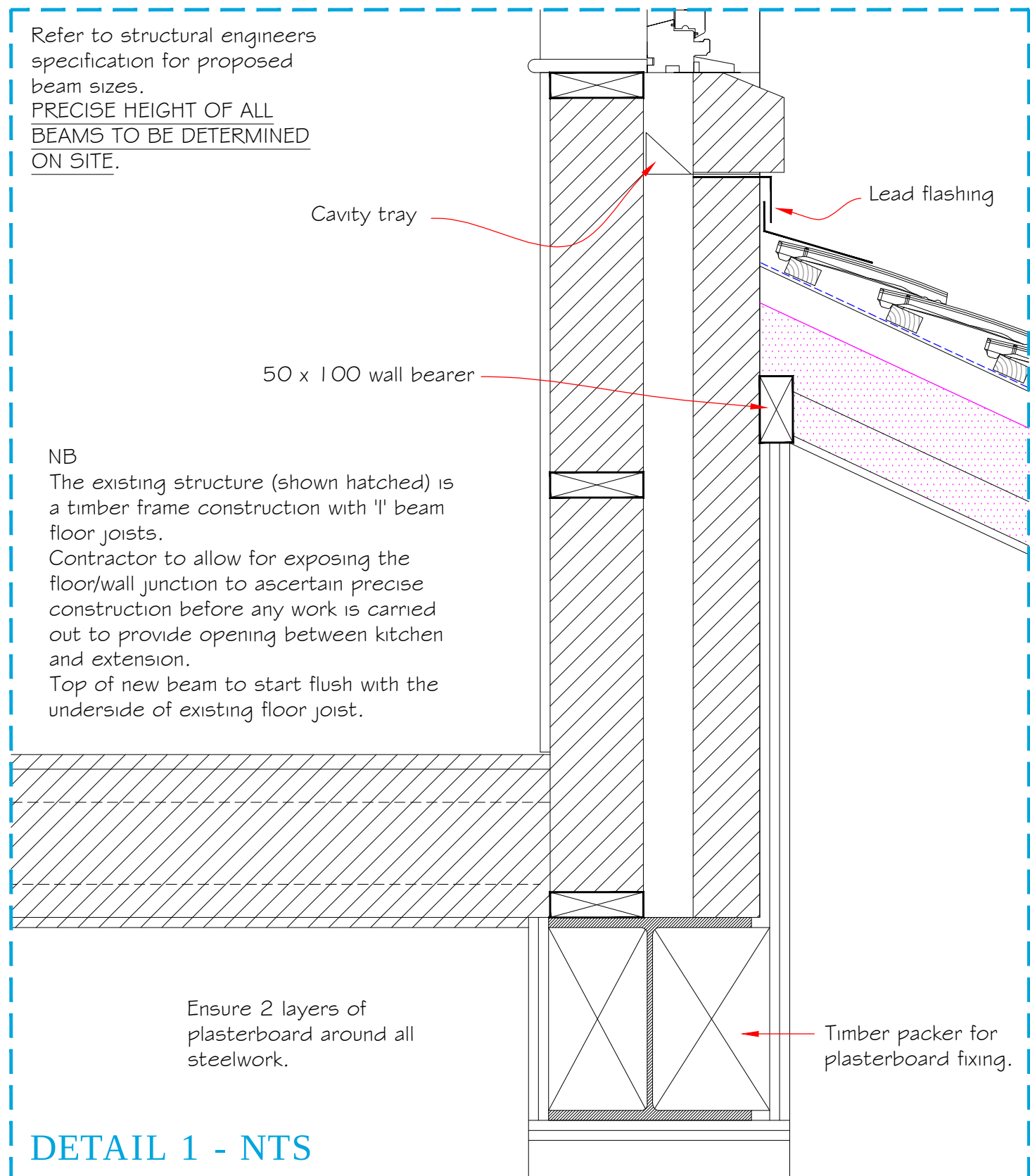




EXCAVATION
N.B. Positions of all existing services are unknown. Contractor to take extreme care whilst excavating in area of proposed extension, the use of a CAT is recommended.
Work adjacent to the existing footings to commence only after the existing wall foundations have been fully investigated and the new foundations then formed as not to impair the stability of the existing structure.

FOUNDATIONS
Cavity wall foundation to be min 600mm x 225mm thick plain C20 concrete to a minimum depth of 900mm.
N.B. If required, foundations stepped on elevation should overlap by twice the height of the step, by the thickness of the foundation, or 300mm whichever is the greater.
Any steps in the foundations should not be of greater height than the thickness of the foundation.

GROUND FLOOR CONSTRUCTION
Self levelling compound on 150mm C20 grade concrete slab on 500 gauge separating layer on minimum 80mm thick Kingspan Kooltherm K103 Floorboard, laid break-bonded with joints tightly butted, on GlideVale GDB10 PLUS gas/damp floor barrier (due to the presence of methane gas) 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 the surrounding foundation walls until it is sufficiently above the height of the wall damp proof course so that it will connect with or form the dpc.

Where any services pass through the floor, contractor to allow for sealing the dpm.

BLOCKWORK BELOW D.P.C.
Allow for min. 1no. facing brick below ground level. Contractor to allow for medium density blockwork or frost resisting concrete commons with a minimum compressive strength of 21n/mm to inner and outer leaves, with lean mix concrete cavity fill to ground level. Provide weepholes at 450mm centres in perpend in course under D.P.C.

EXTERNAL WALL CONSTRUCTION
New cavity walling to be 100mm thick facing brickwork to match existing as closely as possible (contractor to provide client with samples), 125mm cavity consisting 50mm clear cavity with, 75mm thick Kingspan Kooltherm K8 complete with ties that have restraint clips, 100mm thick medium density Hanson Fenitile blockwork inner leaf or other equal and approved.
Leaves tied together using wall ties to BS 1243 positioned at 750 horizontal centres, 450mm vertical centres and 225mm centres adjacent to all openings. Inner blockwork to receive 13mm plaster and skim finish.
New cavity walls bonded to existing walls using Furfix Profiles to manufacturers instructions and having a vertical D.P.C. inserted into a vertical sawcut in existing brickwork between the new inner and outer leaves for full height of walling, where a clear cavity cannot be achieved.
All openings in cavity wall to receive Kingspan Kooltherm cavity closers or other equal and approved suitable for 125mm cavity width.

ROOF CONSTRUCTION.
REFER TO STRUCTURAL ENGINEERS DETAILS FOR ALL SIZES OF TIMBERS AND STEEL BEAMS ETC.

Provide and fix 150 x 50mm (to allow for min 50 air gap and rigid roof insulation) C16 grade timber rafters @ max 600 c/s, spanning from wall plate to ridge beam or 50 x 100 wall bearer bolted into walling at max 450 c/s, allow for doubled up rafters around all rooflights.
100 x 50mm wall plate to be anchored using 30 x 2.5mm galvanised ms vertical restraint straps at minimum 1m centres.

Allow for 100 x 75 wall plate over beam/plate to enable sufficient birds mouth.

Lay and fix roofing felt to BS 8217 1994, (Supro or Kingspan Nilvent 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 25mm treated battens 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 Redland DuoPlain roof tiles broken bonded, 25 degree pitch and in strict accordance with manufacturers recommendations.
Ceiling to receive 160mm thick (100mm + 60mm) rigid insulation by Kingspan or other equal and approved.
100mm thick Kingspan Kooltherm K7 between rafters and underlined with 72.5mm thick Kooltherm K18 Insulated dry lining board (comprising 12.5mm plasterboard and 60mm of insulation). Min 50mm air gap to be maintained.
Allow for double rafters either side of allVelux rooflights.

Contractor to confirm rooflight size with client prior to ordering.

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.
Allow for in-line tile ventilators (obtainable from Glidevale or other equal and approved located adjacent to wall/roof junction higher up the pitch ensuring through ventilation.

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 Seventeenth 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 Inspection, 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.

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 manufacturers instructions concerning the operation and maintenance of the alarm.

VENTILATION
Provide mechanical ventilation to rooms as follows:-

Kitchen/Cooker Hood - 30/s otherwise 60/s

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) ventilation 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 ventilation & 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 and valleys etc to be in code 4. All leadwork to be laid in accordance with The Lead Association handbook.

CAVITY TRAYS
Provide DPC/Cavity trays to all openings in cavity walls and to extend 150mm either side of lintels. Allow for pre formed cavity trays to all wall/roof abutments where possible. Allow for building in as work proceeds or insertion of proprietary stepped/cavity tray dpc to follow line of new roof where it meets main dwelling 150mm above all roof/wall abutments as necessary using code 5 lead flashings.

LINTELS
To be read in conjunction with S. Eng details.
All lintels to be Keystone range (see proposed plan for locations and references). All lintels o be laid with minimum of 150mm at each end for end bearings, fully bedded on mortar, ensuring that the window/door frames are located so that the drip on the front of the lintel projects forward of the frame. All to be insulated as standard and fitted to manufacturer's recommendations.

DRAINAGE
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 beneath extension to be diverted around extension, 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.

It is requested that all invert levels be conditioned until this information has been ascertained once work has commenced.

SURFACE WATER
All surface water from proposed extensions to discharge to soakaway, 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.
Rain/surface water systems cannot be connected to foul water drains without the written permission of the relevant Water Authority.

RAINWATER GOODS
Fix new gutters in 100mm round U.P.V.C. with brackets at 1000mm centres and new 60mm dia. U.P.V.C. downpipes (colour and profile to match existing), with brackets at maximum 1500mm c/c, all to discharge via gullies to soakaways.

SANITARY ITEMS.
Refer to proposed plan for pipe runs.

Kitchen
Sink to have 40mm P.V.C.u waste and 75mm deep seal trap discharging to double trapped gully as indicated and connecting to existing inspection chamber 1.
DISH WASHER to be connected to double trapped gully, position to be confirmed by client.
Ensure all pipework susceptible to freezing is adequately lagged.

Bathroom.
All existing waste from first floor bathroom is to be taken into new svp.
SVP to be boxed in for entire length internally and enclosure filled with sound reducing quilt.

NB All connections made to svp's and stub stack's 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.
All internally boxed svp's to have screwed access and enclosure fitted with sound reducing insulation quilt.

WINDOWS AND DOORS
Windows and doors (style to clients choice to comply with Part B) to be double glazed units with 16mm air gap and soft low E coating achieving maximum U-value of 1.6w/mk. General 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.

Means of escape windows to be fitted with proprietary hinges to open to the minimum required clear width of 450mm. Escape windows must have minimum clear opening casement dimensions of 0.33m² and 450mm (typically 450mm wide x 750mm high), located within 800-1100mm above floor level to all bedrooms and habitable rooms at 1st floor level and inner habitable rooms on the ground floor.

HEATING
Heating Engineer to provide details of proposed boiler to be used and submit to Local Authority Building Control for approval prior to installation.
It is requested that this item be conditioned.

Radiators to be sited in each room (locations to be agreed on site between client and heating contractor) 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 tr.v's.
All radiators to be Rettig Compact Convactor radiators by Rettig 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.

LIGHTING
75% of lighting to be energy efficient type.

CONSEQUENTIAL IMPROVEMENTS
As the proposed extensions will increase the habitable area by more than 10m2, the following energy efficiency improvements should be undertaken:-

- If the dwelling has uninsulated or partially insulated cavity walls, fill with insulation where suitable.
- If there is no loft insulation, or it is less than 200mm thick, provide 250mm insulation or increase it to 250mm.
- Upgrade any hot water cylinder insulation as follows:-

If hot water cylinder is uninsulated, provide a 160mm insulated jacket:
or If the hot water cylinder has an uninsulated jacket less than 100mm thick, add a further insulated jacket to achieve a total thickness of 160mm: or If the hot water cylinder has factory fitted solid foam insulation less than 25mm thick, add an 80mm insulated jacket.

NOTES.

Contractor to ensure that all floor levels line through with existing, allowing for proposed finishes (contractor to liaise with client to ascertain floor finish and set heights accordingly)

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.

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.

External paths, drives, patios, walls, fences and gardens etc, to be taken up and relayed/extended as necessary to accommodate the new works as described. Any new paving to be minimum 150 below floor/dpc level.

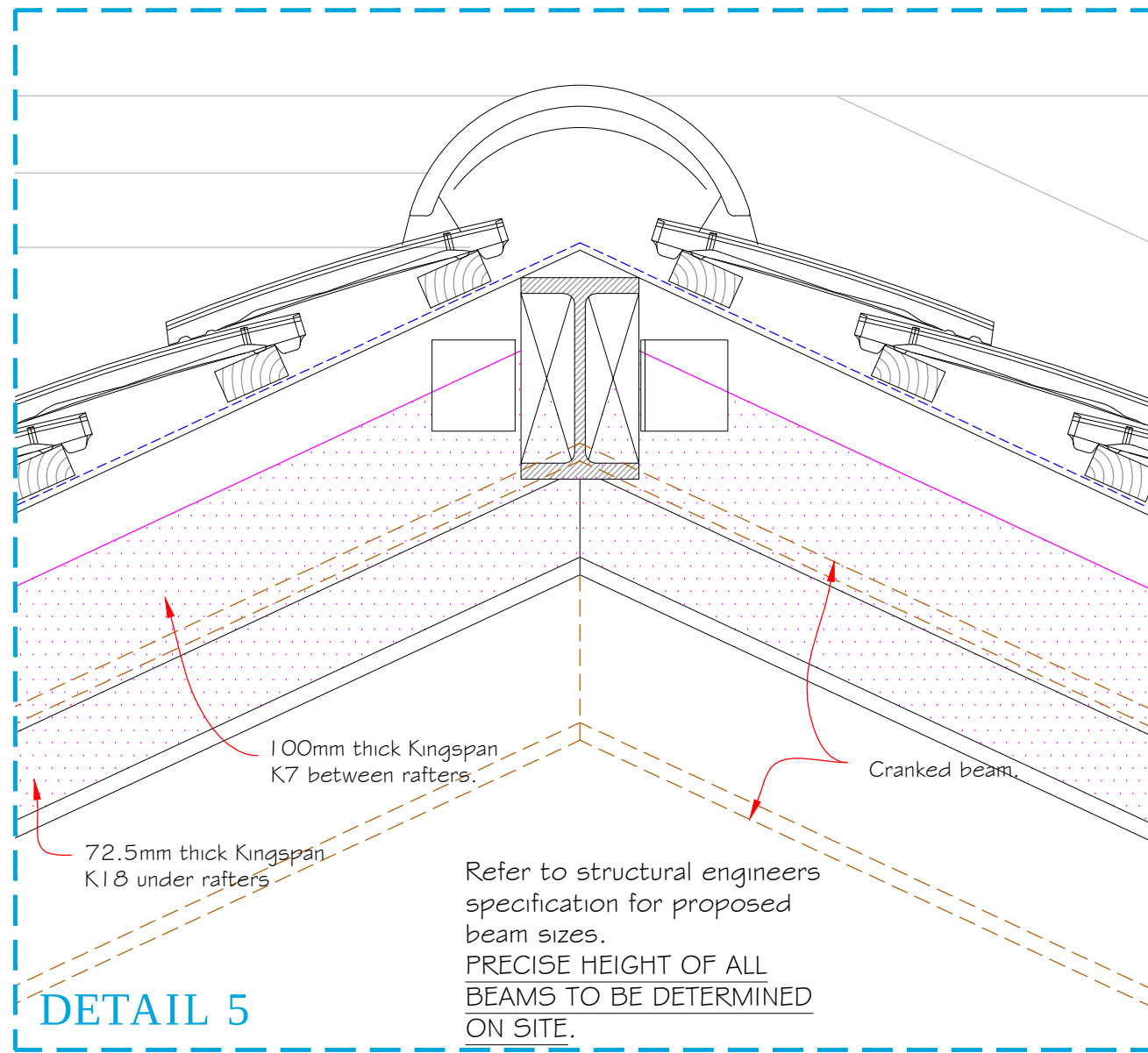
All architrave's and skirting to match existing. All new woodwork allow for knotted, stopper, primer, 1 coat undercoat and 2 coats of full gloss finish.

Contractor to make good to all disturbed surfaces, both internal and external.

Contractor to check and verify all dimensions on the site of the works, prior to commencement.

Any asbestos, contaminated soil or lead paint etc to be inspected and removed by a specialist. Asbestos is to be removed off site by a specialist licensed contractor as required under the Control of Asbestos Regulations 2006.

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

ALL WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH GOOD BUILDING PRACTICE RELATING TO BUILDING WORK.
CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON THE SITE OF THE WORKS, PRIOR TO COMMENCEMENT.

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

STRUCTURAL ENGINEER:
Andrew Hammet Ltd is the nominated structural engineer, contact information:
Tel: 01244 543181, Mob: 07761 346542
Address: 4 Dawn Close, Buckley, Flintshire. CH7 2SA, E-Mail: ah.ltd@talktalk.net

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 Principle 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 satisfy / 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 Android 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.

 25 Sunningdale Close Wrexham North Wales LL13 9QU T 01978 264376 M 07791 480768 E ajones540@btinternet.com	Client	Mr. & Mrs. Hughes.	
	Drawing Title:	Details & Specification.	
	Job Title:	Proposed Extension to Kingfisher House, Lightwood Green, Wrexham.	
	Date:	Scale:	Rev:
	May 2020	1:5 at A1	PD184 / 04