CONSTRUCTION NOTES

Proposed Extension

To

Pluckley Village Hall

Station Road

Pluckley TN27 0QZ

Revisions:

A	Original	19.08.14
B	Building Regs Comments	30.09.14
C	Revised Plans Update	24.07.15

EXCAVATIONS

All excavations are to be carried out in accordance with the Structural Engineer's details and to the satisfaction of the Local Authority.

FOUNDATIONS

Trench fill foundation design and specification to Structural Engineer's details.

GROUND FLOOR CONSTRUCTION

Cement Sand Screed (suspended 75mm minimum) – Provide cement sand screed 1:3 reinforced with 20-50mm mesh reinforcement in accordance with Structural Engineers details.

Ground floor Construction Beam & Block – Excavate out all vegetation and root containing topsoil. The ground floor construction is to comprise of **75mm Proprietary Suspended Floor Screed** on 500 gauge polythene vapour control layer on 75mm **'Celotex FR5000'** rigid insulation board on similar approved (Thermal conductivity 0.021W/mK) with 20mm **'Celotex T-Break TB4000'** (R Value 0.90m²K/W) perimeter upstand insulation (depth=floor insulation+screed), on 1200 gauge **'Visqueen Super'** DPM or similar approved linking with external wall DPC's on proprietary beam & block floor installed in accordance with manufacturers designs and in accordance with Structural Engineers details.

All to achieve a 'U' value of **0.22W/m²K.**

EXTERNAL WALLS

Below Ground – 300mm
300mm thick cavity walls to be FL quality bricks minimum strength 21N/mm² external leaf or dense concrete blocks (100mm) and 100mm dense concrete inner block leaf. Cavity 100mm to be filled with lean mix concrete stopped 225mm below lowest dpc level and finished with a splayed top. *Structural Engineer to specify strength of blockwork.*

Above Ground – 300mm Weatherboarded
300mm thick cavity walls comprising 100mm **Tarmac Toplite Standard** 3.6N/mm² (thermal conductivity 0.16W/mK, density 600-750kg/m³) block inner leaf and 100mm **Tarmac Hemelite** (density 1360-1450 kg/m³) block inner leaf with 100mm cavity insulated using **50mm Celotex CG5000** rigid insulation board installed strictly in accordance with the manufacturer's recommendations. *Structural Engineer to specify strength of blockwork.*

External face is to be clad using 'Eternit Weatherboarding' low maintenance Weatherboarding including all necessary trims and fixings as supplied by the manufacturer to be installed in strict accordance with manufacturers recommendations and details fixed to 38x50mm treated softwood battens fixed vertically @ 600mm max centres (note: provide at least three batten fixings to each board length) on **'Tyvek® Housewrap'** high spec. vapour permeable membrane.

To achieve U-value of **0.22W/m²K**

*Note: Walls to receive 12.5mm **plasterboard** finish as described under finishes.*

WALL TIES FOR 300MM EXTERNAL MASONRY WALLS

External Wall Traditional Mortar Bed (100mm Cavities) to be stainless steel **'Ancon ST1 Type 1'** (for any height) or similar approved **250mm** long to PD6697:2010, (with 50mm minimum embedment). Wall ties must be laid level or sloping towards the external face @ 750mm staggered centres horizontally and 450mm centres vertically, density 3.1/m² (300mm vertically & max 225mm from edge at reveals) to suit 100mm cavities.

DAMP PROOF COURSES ETC

Damp Proof Courses/Trays – To be proprietary approved black polythene min. 2000 gauge to BS 6515:1984 and provided at slab level and 150mm above external ground level, as indicated. Also to be provided as cavity head closer and cavity trays, as indicated on the general arrangement and detail drawings.

Lead Flashings etc

All lead-work to be in accordance with the requirements of the Lead Sheet Association, unless stated otherwise in the details lead code to be in accordance with the following recommendations.

FOR FLASHINGS AND WEATHERINGS

	Code 3		Code 4		Code 5	
Widths (mm)	3m	6m	3m	6m	3m	6m
150			9	18.5	11.5	23
200	9	18	12.5	24.5	15	30.5
250			15	30.5	19	38
300	13.5	27	18.5	36.5	23	45.5
350			21.5	43	26.5	53
400			24.5	49	30.5	61
450			27.5	55	34.5	68.5
600			36.5	73.5	45.5	91.5
Weights of rolls in kg						

FOR ROOFING, CLADDING AND GUTTER LININGS

Dimensions	Code 4	Code 5	Code 6	Code 7	Code 8
6m x 1.2m	147	183	216.5	257.0	290.0
3m x 2.4m	147	183	216.5	257.0	290.0
6m x 2.4m	294	366	433.5	514.5	579.5
12 x 2.4m	588	732	867.0	1029.0	1159.0
Weights of rolls in kg					

Guide to BSEN 12588 Codes of Thicknesses

Codes	Thickness (mm)	Weight kg/m²	Use for
3	1.32	14.97	(A)
4	1.80	20.41	(ABF)
5	2.24	25.40	(BCDEFGH)
6	2.65	30.05	(BCDEFGH)
7	3.15	35.72	(CDEGH)
8	3.55	40.26	(CDGH)

CAVITY CLOSERS

Cavity Closers to be **'Kingspan Thermabate'** with a thermal conductivity value of 0.034W/mK to suit 100mm cavities fixed to outer leaf and with standard flange clips to restrain insulation to all jambs / cill openings in external walls.

Note: Provide minimum 30mm overlap with back of window/door frame

LINTELS

External Walls – All lintels to openings in external walls are to be by **'I G Ltd'** (or similar approved) to BS EN 10142:2000 & to references as schedules by the manufacturer to suit 100mm cavities installed strictly in accordance with manufacturer's recommendations and Structural Engineers details. All lintels are to be insulated. Minimum end bearing 150mm or to manufacturer's requirements and Structural Engineers details.

Cavity trays are to be provided over all lintels and weep holes @ 450mm centres equally spaced across opening. Trays are to be stopped both ends and to extend 300mm beyond openings.

Internal Block Load Bearing Walls – All lintels to openings in the internal walls to be installed strictly in accordance with the manufacturer's recommendations and Structural Engineers details. Steel lintels to be manufactured to BS-EN 10142:2000. Precast concrete lintels to be factory made to BS845:2:2003, and to have a minimum 150mm end bearing.

BELOW GROUND SERVICE ENTRY

Any pipe or duct passing through walls to have 100x65mm prestressed concrete lintels with a minimum 150mm end bearing in accordance with Structural Engineer details. The pipe passing through an external wall shall have a clearance of 50mm and the opening masked both sides with rigid sheet material to prevent entry of fill or vermin.

BLOCKWORK PARTITIONS – LOADBEARING & NON-LOADBEARING

Partition to achieve minimum sound reduction of 44.3Rw (db) including finishes
100mm Internal Blockwork Partitions – All internal blockwork partitions are to be constructed using 100mm **Tarmac Hemelite** blockwork as indicated minimum strength 7.0-8.4N/mm² (Strength as required by the Structural Engineer)

*Note: Walls to receive 12.5mm **plasterboard** finish as described under finishes*

TIMBER TREATMENT REQUIREMENTS

Structural Softwood & Joinery – All structural softwood for dry applications (rafters, joists and studwork) must be stressed graded when dry and include the grading mark "DRY" or "KD".

All structural timbers and timbers exposed to external structure to be double vacuum pressure treated using a water based preservative based on copper triazole technology **'Tanalised'** or similar approved, applied under high pressure.
All site end cutting, notching or drilling following pressure treatment must be liberally swabbed with **'Ensele'** or similar approved compatible preservative to maintain the integrity of the treatment.

All internal & external joinery timbers to be double vacuum pressure treated using a water based preservative containing biodegradable fungicides and insecticides **'Vascol'** or similar approved, applied under low pressure.

All site end cutting, notching or drilling following pressure treatment must be liberally swabbed with **'Vacsele'** or similar approved compatible preservative to maintain the integrity of the treatment.

Treatment to be in accordance with BS 8417:2011 + A1:2014 which provides recommendations and guidance for the preservative treatment of timber to provide protection against biodeterioration in certain specified end use situations in the United Kingdom.

The table below explains the main Use Classes as defined in BS-EN 335:1:2013 to which timber can be subjected. *Note: Class 1 treatment shall not be specified*

Use Class	USE SITUATIONS	PRINCIPAL BIOLOGICAL SITUATIONS	TYPICAL SERVICE SITUATION	TYPICAL EXAMPLES
1	Above ground, covered. Permanently dry. Permanently less than 18% moisture content.	Insects	Internal with no risk of wetting or condensation	All timbers in normal pitched roofs except tiling battens and valley gutter timbers. Floor boards, architraves, internal joinery, skirtings. All timbers in upper floors not built into solid external walls.
2	Above ground, covered. Occasional risk of wetting. Occasionally more than 20% moisture content.	Fungi Insects	Internal with risk of wetting or condensation.	Tiling battens, structural timbers in timber frame houses‡, timber in pitched roofs with high condensation risk, timbers in flat roofs, valley gutter timbers, ground floor joists‡, sole plates (above dpc), timber joists in upper floors built into external walls.
3.1 3.2	Above ground, not covered. Exposed to frequent wetting. Often greater than 20% moisture content.	Fungi	External, above damp proof course (dpc) – **coated.** External, above damp proof course (dpc) – **uncoated.**	External joinery including roof soffits and fascias, bargeboards, cladding. Fence rails, gates, fence boards, garden timbers, cladding, deck boards and balustrades, agricultural timbers not in soil/manure contact.
4	In contact with ground or fresh water. Permanently exposed to wetting. Permanently above 20% moisture content.	Fungi	Soil contact. Timbers in permanent contact with the ground or below dpc.	Fence posts, gravel boards, deck support timbers, agricultural timbers in soil/manure contact, poles, sleepers, garden timbers.
			Fresh water contact. Timbers in permanent contact with fresh water.	Lock gates, revetments.
			Cooling tower timbers	Cooling tower packing (fresh water).

‡ These timbers are assigned to a higher Use Class than suggested by their location in the structure of a building, owing to the potential consequences of failure based on experience within the UK.

FLAT ROOF CONSTRUCTION

Roof Structure – 47x145mm C16 Rafters @ 600mm Centres
Main roof to be constructed using traditional cut & pitch construction using regularised stress graded timbers as indicated on the drawings and in accordance with Structural Engineers requirements. All jack rafters/trusses to be secured to 100x50mm softwood wall plates. Plates to be secured to walls using 'BAT M305' 5x27.5mm thick 100x1200 galvanised steel straps @ 1800mm centres maximum.

All gable walls are to be strapped to trusses at rafter level and ceiling tie level using 'BAT M305' 5X27.mm thick 100x1200 galvanised steel straps @1800mm centres over minimum 3no. trusses including all necessary noggins and blocking pieces.

Sarnafil Flat Roof – Cold Roof – 'U' value of 0.17 W/m²K
Full specification for flat roofing finishes to be provided by **'Sarnafil'.**
Roofing to comprise of **'Sarnafil'** G410 membrane adhered system on 24mm exterior equality plywood decking on timber firrings 47x145mm C16 Rafters @600mm Centres. To include 1 layer of **100mm 'Celotex FR5000'** insulation board (thermal conductivity max 0.022 W/mK), laid between rafters maintaining a 50mm clear air gap over and **40mm 'Celotex FR5000'** to underside of rafters.
Total installation is to be installed in strict accordance with the manufacturers' recommendations and details.

ROOF VENTILATION

Provide 25mm continuous ventilation at **eaves** level at front and rear of flat roof.

PITCHED ROOF CONSTRUCTION

Roof Structure – 47x150mm C16 Rafters @ 600mm Centres
Main roof to be constructed using traditional cut & pitch construction using regularised stress graded timbers as indicated on the drawings and in accordance with Structural Engineers requirements. All jack rafters/trusses to be secured to 100x50mm softwood wall plates. Plates to be secured to walls using 'BAT M305' 5x27.5mm thick 100x1200 galvanised steel straps @ 1800mm centres maximum.

All gable walls are to be strapped to trusses at rafter level and ceiling tie level using 'BAT M305' 5x27.5mm thick 150x1650mm galvanised steel straps @ 1800mm centres over minimum 3no. trusses including all necessary noggins and blocking pieces.

Sarnafil Pitched Roof – Cold Roof – 'U' value of 0.17W/m²K
Full specification for flat roofing to be provided by **'Sarnafil'.**
Roofing to comprise of **'Sarnafil'** G410 membrane adhered system on 24mm exterior quality plywood decking on 47x150mm C16 Rafters @600mm Centres. To include 1 layer of **100mm 'Celotex FR5000'** insulation board (thermal conductivity max 0.022 W/mK), laid between rafters maintaining a 50mm clear gap over and **40mm 'Celotex FR5000'** to underside of rafters.
Total installation is to be installed in strict accordance with the manufacturers' recommendations and details.

Roof to be lined on underside with 1 layer 12.5mm plasterboard on polythene vapour control layer.

COLD ROOF INSULATION

Roof Insulation Sloping Ceilings, inter & under – 'U' value of 0.17W/m²K
To include 1 layer of **100mm 'Celotex FR5000'** insulation board (thermal conductivity max 0.022 W/mK), laid between rafters maintaining a 50mm clear air gap over and **40mm 'Celotex FR5000'** to underside of rafters.
Total installation is to be installed in strict accordance with the manufacturers' recommendations and details.

Celotex Installation guidelines: unventilated
- *Install the breather membrane over the rafters by either fixing battens to the sides of the rafters and allowing the membrane to sag between the rafters, or by fixing counter battens over the membrane, leaving the entire rafter depth to be filled with insulation. All details are to be in accordance with the membrane manufacturer's recommendations.*
- *Install Celotex insulation boards with the long sides parallel to the rafter lines with both edges supported by rafters.*

Celotex Installation guidelines: ventilated and unventilated
- *Measure the space to be filled between the inside face of the rafter prior to cutting the board.*
- *Cut the Celotex insulation at a slight angle, making the board width slightly oversized on one surface to achieve a 'friction fit'. Celotex Insulation Clips should also be used to hold the board in place.*
- *Push the boards into the void between the rafters until they are tight up to the battens or the membrane, ensuring that lateral joints are closely butted. Secure the second layer of Celotex insulation to the underside of the rafters with broad headed clout nails. Joints between boards must be tightly butted.*
- *Seal the board joints with Celotex Insulation Tape. Vapour seal all perimeter abutments using sealant.*
- *Nail or screw plasterboard or other lining through the insulation to the rafter, ensuring that the length of the fasteners is adequate to secure the plasterboard lining.*
- *Alternatively, fit softwood battens to the underside of the insulation fixed through to the battens, and then fix the plasterboard directly to the batten. This also provides a void for lighting cables/conduit.*

ROOF VENTILATION

Provide 25mm continuous ventilation at **eaves** level and upper verge level with insect mesh.

FINISHES – CEILINGS

Ceilings to underside of sloping rafters – 12.5mm bonded plasterboard on insulation to receive 2mm skimcoat of 'Thistle Board Finish' plaster.

FINISHES – WALLS

Dry Lining Generally to Masonry External Walls – To be dry lined using 12.5mm wall board on adhesive dabs and pads **('DriLiner BASIC'** wall lining systems), all to be installed strictly in accordance with manufacturer's recommendations. Joints to be taped and jointed. **'Gyproc Drywall Primer'** (or **'Gyproc Drywall Sealer'** to WC's), applied prior to decoration strictly in accordance with manufacturer's recommendations.

Note: Use 12.5mm Moisture Resistant boards in kitchens & bathrooms.

Dry Lining Generally to Masonry Block Partitions – To be dry lined using 12.5mm **'Gyproc Wallboard'** minimum mass 8kg/m² on adhesive dabs and pads **('DriLiner BASIC'** wall lining system), all to be installed strictly in accordance with manufacturer's recommendations. Joints to be taped and jointed. **'Gyproc Drywall Primer'** applied prior to decoration strictly in accordance with manufacturer's recommendations.

Note: Use 12.5mm moisture Resistant boards in kitchens and bathrooms.

PLUMBING

Plumbing – All traps to be 75mm deep sealed, wastes to be 40mm dia generally to bath, basins and sinks, unless otherwise shown. 100mm diameter to WC's. Provide cleaning access to all waste pipes at changes in direction. SVP's to be 100mm dia uPVC and to terminate at ridge vents. Secondary vent pipes terminated with air relief valves, unless drain run exceeds 10m when open vent required check each side.

SANITARY WARE

WC Cubicles General <u>inward</u> opening – (<u>minimum</u> dimensions 800x1600mm)
Provide 450mm clear turning circle between WC pan and leading edge of <u>inward</u> opening door with 600mm opening.

WC Cubicles Ambulant Disabled <u>outward</u> opening – (<u>minimum</u> dimensions 800x1500mm) Provide 750mm clear space between WC pan and closed outward opening door with 700mm opening. Provide all necessary grab rails as detailed on the drawings.
Note: Standard height WC pan required.

Note: At least one WC cubicle is to be provided in separate sex toilet accommodation for use by ambulant disabled people. To be 800mm wide with 750mm clearance in front of pan, outward opening door & all associated fittings as "Approved Document M' Diagram 21.
Where for or more WC cubicles provided as single sex provision one to be provided to suit all ambulant disabled people.

Disabled Persons WC – (<u>minimum</u> dimensions 1500x2200mm)
Sanitary ware – by Armitage Shanks.
Wheelchair WC compartment to be provided in accordance with Building Regulations M3 (3), fitted out with 'Doc M Standard Pack'. Also provide 400 x 900mm mirror located 900mm above Finished Floor Level.
Note: Standard height WC pan required.
Note: Contrast wall bracket colour with wall decoration tone

Sanitary Ware - by Armitage Shanks.

Basins –
S2220 Portman 50cm washbasin with two tap-holes with overflow and chainstay hole.
S7106 (TP5) Nuastyle ½" inclined basin pillar taps, lever operated, dual indices, alternative antisplash or aerator outlets.
S8800 chrome plated, 1 ¼" plastic waste with bead chain and plug, 80mm slotted tail, bolt stay.
S8900 (TR1/M) 11 ¼" chrome plated bottle trap with 75mm seal, outlet screwed 1 ¼" BSP male with compression nut & ring.
S9151 concealed bracket with fixing clamps in aluminium alloy.
S9000 Isovalve servicing valve, inlet and outlet each with compression nut & ring for 15mm copper tube.

WC's –
E3570 Floor standing WC pan with concealed bottom outlet.
E8264 Push button dual flush valve cistern, 6/4 litre, bottom supply and internal overflow.
E9880 Studio seat & cover, stainless steel hinges.

Urinals –
S6100 (UR-G) Sanura 50cm wall urinal.
S6285 Top inlet spreader.
S9275 Concealed steel hangers.
S8850 1 ½" plastic domed strainer waste, 45mm unslotted tail.
S8915 (TR2/P) 1½" plastic bottle trap with 75mm seal.
S6120 Vitreous china division with hanger and screw.

Taps –
S7106 (TP5) Nuastyle ½" inclined basin pillar taps, lever operated, dual indices, alternative antisplash or aerator outlets.

Toilet Cubicles – by 'Amwell Systems' tel 01920 486793.

RAINWATER GOODS

Rainwater Goods – Rainwater to be **'Hunter'** uPVC 112mm high flow (or similar approved) with 89mm dia downpipes.

HEATING AND HOT WATER

Heating – Electric Heating Panels to WC and Entrance Lobby areas to suit requirements of facility to be in strict accordance with manufacturers specification and details.

Hot Water – Existing hot water supply to kitchen to be extended to serve new wash hand basins. Pipes supplying hot water to be insulated to give thermal conductivity no greater than 0.045W/m²K.

FIRE SAFETY

Generally – Fire detection and alarm system to conform to BS 5839:1:2013 and to the requirements of Building Control and the Fire Authority.

Fire Extinguishers – are provided as required by the Fire Officer/Building Control and located as indicated on the drawings.

Detectors - Smoke/Heat/Flame detectors are to be provided in areas as indicated on the drawings. The detectors are to be those most suited to the conditions of the premises and that will give the earliest reliable warning.

Emergency/Fire Signs – All means of escape/fire exit signs (signs with direction as appropriate) to comply with E.C. Directive 92/58/EEC, and the requirements of Building Control and the Fire Authority.

INTRUDER ALARM

Existing intruder alarm systems to be extended as appropriate.

LIGHTING

Generally
Unless stated otherwise the lighting complies with Clause 1.48 of App Doc L2 (Table8).
High frequency luminaires are to be used unless stated otherwise, controlled by on/off switches unless stated otherwise.

Internal Toilet Spaces
Internal toilet spaces are to be provided with self-contained maintained type emergency lighting luminaires. The emergency luminaires shall be connected via key operated switches for testing purposes. The switches are to be mounted in the local lighting switch box and the plate is to be engraved EMERGENCY TEST.

'INCLUSIVE ENVIRONMENTS' PROVISION

To be in accordance with the following documents: -

1. Disability Discrimination Act 1995 Technical Guidance (Produced by KCC)
2. Approved Document Part M
3. BS 8300:2009+A1:2010
4. Care for Accessible Environments 'Designing for Accessibility 2004'

Socket Outlets & Light Switches

All socket outlets are to be located between 450mm minimum and 1000mm maximum above finished floor level.

All light switches are to be located between 900mm minimum and 1100mm maximum above finished floor level.

All permanently wired switches are to be located between 400mm minimum and 1200mm maximum above finished floor level.

All switch controls requiring precise hand movement are to be located between 750mm minimum and 1200mm maximum above finished floor level.

Fully Glazed Doors & Fixed Glazing

The glazing must be clearly defined with two rows of 'manifestation' set at 850 – 1000mm & 1400 – 1600mm above finished floor level.
Alternate pattern or moving doors to fixed glazing.

Doors – General

- *The effective clear width should be measured from the face of the door when open to the opposite frame or doorstop (but note that protruding door furniture may reduce usable opening).*
- *Where double doors the minimum clear effective width relates to the lead door not the overall opening (unless automatic).*
- *Ensure 300mm manoeuvring space alongside leading edge door for wheelchair user.*
- *Ensure visual contrast door furniture.*
- *All doors are to have full length vision panels or achieve similar properties.*
- *Internal corridors doors are to be held open by electromagnetic door holders/overhead closers linked into the fire alarm.*

Principal or alternative entrance/exit and external fire escape doors

Single leaf – 1000mm clear effective opening.
Double leaf – 1000mm clear effective opening for the leaf generally used.

Internal Doors

Single leaf - 800mm clear effective opening (when approach is head on).
825mm clear effective opening (when at right angles to a min 1200mm corridor).

Mobility Threshold

Principal or alternative entrance/exit doors and external fire escape doors are to have Level Thresholds.
Where level approach is unachievable provide both ramp and steps to entrance and exits.

External Mobility Access Steps – *to be in strict accordance with BS 8300:2009*

All staircases are to be constructed in concrete. Clear width to be not less than 1200mm (between finished wall faces/balustrades) *Note: Minimum 1000mm required between handrails.* All **continuous** handrails are to be 600 & 900-1000mm above the pitch line. Landing balustrade to be 1000mm above finished paving. All spaces in balustrade to be less than 100mm. Parallel treads to have a maximum rise of **150-180mm** and going of **300-450mm.**

Note: Open risers are not to be used.
Nosings are to be clearly distinguished and not projecting.
*Steps must have **corduroy** tactile warning top and bottom set back 400mm from step.*
Dual height handrails to be Nylon coated and positioned both sides, colour contrasted to extend 300mm beyond start and finish and are retuned appropriately to prevent catching clothing or causing a hazard.
No outward opening doors or windows are to overhang steps.
*Provide a level landing top and bottom **1500mm** beyond door opening and not compromised by door swing.*

External Ramps – to be in strict accordance with BS 8300:2009

Going of Flight	Maximum Gradient	Maximum Rise
10cm	1:20	500mm
5m	1:15	333mm
2m	1:12	166mm

Note: For goings between 2m & 10m the gradients may be interpolated.
No individual flight of a ramp should have a going greater than 10m.
No series of ramps to a building should rise more than 2m without the introduction of an alternative means of access being provided such as a platform lift.
The clear width is to be 1500mm. If the top of the ramp is not visible from the bottom 1800mm width is required.
100mm upstands at exposed edges.
Slip resistant surface.
*Provide a level platform 1:60 top and bottom & intermediate **1500mm** beyond door opening and not compromised by door swing.*
Dual height handrails to be Nylon coated and positioned both sides, colour contrasted to extend 300mm beyond start & finish and are returned appropriately to prevent catching clothing or causing a hazard.
The surface of ramp is to contrast in colour with the landings.
No outward opening doors or windows are to overhang ramps.
At entrances and exits level change exceeding 300mm ramp should be accompanied by steps.

Balustrades/Handrails

Balustrades (and/or handrails) to be 32-50mm diameter polyester powder coated (nylon coated handrails when external), steel to be between 900 and 1000mm above the pitch line of the ramp/steps (and 1100mm above landings). All ends to be rounded and free handrails are to be min 60-75mm away form the wall and are to have their ends bent towards the wall. Colour to contrast with the surroundings. Open sides to ramps/steps to be guarded by a balustrade that will prevent a 100mm sphere passing through any opening and children cannot climb.

VENTILATION

Mechanical Ventilation

Extract ventilation to outside is required to sanitary accommodation using intermittent fans as below: -

> WC's – are to be mechanically ventilated at the min rate of 6 litres/second per WC pan/urinal and with a 15 minute overrun. All installations are to include occupancy sensor.

EXTERNAL WINDOW/DOOR SPECIFICATION

PVCu Windows – 'A' Rated Energy Efficiency

To be manufactured in PVCu confirming to BS7412:2007 & BS-EN 514:200 (ground floor windows only to conform with BS7412 Secured By Design), to sizes and patterns as indicated on the elevations. Windows are to be fully high performance (acoustic) weather-stripped and beaded to receive double glazing. Windows to be fitted with trickle ventilators achieving required ventilation area per habitable room. All windows are to include espagnolette locking system and furniture with key operated security locks to handles (childproof and lockable in night vent position) and friction hinges to allow external cleaning from within the building.
All ground floor window openings below **800mm** from ffl to include restrictors to limit the opening to 100mm (child safety) with escape release.
*Note: **All** windows **above** ground floor level are to include:*

- *Restrictors to limit the opening to 100mm (child safety) with escape release.*
- *Escape Projecting Hinges **(houses only where indicated)**.*
- *Window locks on egress windows must include child resistant release catch **(house only).***

Windows are to be installed with a minimum **30mm** set back from the external face of cavity.
Glazing – '**Double Glazed Energy Window with Warm-edge Technology'** be factory double glazed using hermetically sealed units, overall thickness to suit specified window, to BS5713:1979.
Window to achieve a 'U' value of **1.6W/m²K** including frame.
Windows are to conform with BS7950 (Secured by Design).

Main Entrance door to be manually operated with sign on door "TO BE KEPT UNLOCKED WHILE HALL IN USE".

SAFETY GLASS

Any areas of glass in critical locations i.e in areas below 800mm above ffl or to windows adjacent to external doors or other areas as defined in BS-EN 12600:2002 shall be safety glass to the requirements of the British Standard and shall be toughened or laminated.
Note: all glass below 1500mm in doors shall be safety glass.
Note: all safety glass that may be required in external doors and adjacent windows is to be laminated ("Secured by Design").

JOINERY

Skirtings and Architraves – Skirtings are to be softwood or MDF with feature groove and pencil round. Architraves are to be finished size 19 x 44mm softwood or MDF with feature groove and twice pencil round.

Door Stops – Door stops are to be finished size 18 x 38mm softwood glued and nailed to lining.

Doors – Internal
Internal doors style and manufacturer is to be as indicated on the drawings and are to be 44mm thick (unless stated otherwise) solid laminated timber core flush doors faced with Ash veneer with hardwood lippings to head and long edges.

- Doors to be 915mm wide unless stated otherwise to achieve a clear opening width with of 800mm. Where double doors required minimum width to be maintained for leading door leaf (unless automatically held open).
- Door linings to be softwood unless sated otherwise.
- Fire rated doors are indicated on the schedule and are to be marked with the appropriate signage.
- Where needing to be opened manually, the opening force at the leading edge of the door does not exceed 20N.
- Minimum of 300mm manoeuvring space to be provided alongside leading edge of door for wheelchair mobility.
- Ensure visual contrast with surrounding finishes.
- Internal doors to be fitted with push plates and pull handles only in direction of opening.

Doors indicated as FD30S are to be 30 minute fire resistance with Intumescent and smoke seals.
Fire doors to be fitted with Mann McGowan or equivalent intumescent strips/smoke seals (100P/100PSS) to head and long edges of doors (or frames). 38 x 4mm intumescent strips (210P) to be installed between frames and wall. Intumescent hinge strips (Pyro Hinge Strips) to be installed behind the hinges. Glazed panels to be bedded with intumescent seals (Pyroglazing 30/30 seals).

Coat Hooks
Provide coat hooks and freestanding benching in position to be agreed with client.
'Arkinstall" tel 01527 872962
T22 wall batten c/w 5 mild steel hooks.

FLOORING

Vinyl Safety Sheet Flooring – By Marley Safetread Universal laid over screeded floors including vinyl skirtings to be applied in strict accordance with manufacturer's recommendations. Colour to be agreed.

PART L2B COMPLIANCE

Standards to be achieved for new thermal elements of an extension

Walls	-	0.28W/m²K
Pitched Roof (insulation at ceiling level)	-	0.16W/m²K
Pitched Roof (insulation at rafter level)	-	0.18W/m²K
Flat roof with integrated insulation	-	0.18W/m²K
Floors	-	0.22W/m²K

(lesser provision if problems created with adjoining floor levels)

DECORATIONS

Preparation Generally

Comply with BS 8000:1:2014, Section 2 and additional requirements in this specification.

- When removing or partially removing coatings, use methods which will not damage the substrate or adjacent surfaces or adversely affect subsequent coatings.
- Materials used in preparation to be types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
- Apply oil based stoppers/fillers after priming. Apply water based stoppers/fillers before priming unless recommended by manufacturer. Patch prime water based stoppers/fillers when applied after priming.

Walls/Ceilings

Prepare all wall ceiling surfaces as required and apply 1 Mist coat and 2 full coats of Dulux Trade Diamond Matt Finish. Colour to be agreed.

Internal Joinery

Prepare all timber surfaces as required and apply knotting, 1 coat primer, 1 undercoat and 2 gloss coat paint finish. Colour to be agreed.

External Joinery

Prepare all timber surfaces as required and apply 3 full coats of Sadolin Superdec microporous paint finish. Colour to be agreed.

Ceramic Tiling

Allow for two rows 150mm ceramic tiles over wash hand basins to WC's. Colour to be agreed with client.

ADDITIONAL STRUCTURAL NOTES

Movement Joints in blockwork – Indicated **'MJ'** on the drawings are generally to be located in corners and are to be formed to create a 12mm joint to be formed using dense flexible bitumen impregnated board minimum mass 4kg/m² and 20mm minimum deep flexible. Polysulphide sealant. Provide debonding flat metal 200 x 25 x 3mm slip ties @ 450mm vertical centres.

Bed Joint Reinforcement – Where openings occur in external walls bed joint reinforcement is to be provided in 2 courses above and below opening extending 450mm beyond openings.

DRAINAGE

a. Before commencing any construction the contractor must check the condition, line and invert of the existing foul drain indicated on the drawing. Any discrepancies between actual invert and interpolated levels must be reported to the Architect. The existing pipe is to be examined for its entire length and cleared/repaired as required.

b. If any existing drainage pipes are intercepted during the course of the works they shall be investigated and re-connected as necessary.

c. All building drainage works to be in accordance with BS-EN 752:2008 Building Drainage and the current Building Regulations.

d. Cover levels shown are for guidance only. Final levels are to be determined on site. Where affected by the works existing covers are to be adjusted as necessary.

e. Private drainage both foul and surface water 'Marley' Shallow Access system or similar approved construction in accordance with BS-EN 752:2008 and Approved Document 'H' of the Building Regulations.

f. Drains passing beneath footings or through walls are to be bridged by pre-cast concrete lintels of adequate strength where necessary. Minimum clearance below lintel or ground beam to be 50mm. Opening each side of footing to be closed with rigid sheet material.

g. UPVC pipe work is to comply with BS 1660-4:1989, ISO 297:1988 or if clay-ware is used it shall comply with BS-EN 295-2:2013.

h. All pipe bedding and protection to be in accordance with manufacturers' recommendations and Approval Document 'H' of the Building Regulations.

i. Inspection chambers more than 1500mm deep to invert are to be either 1200mm diameter or rectangular 1200 x 750mm minimum.

j. Chambers 1500mm deep or less to invert may be 1050mm diameter or rectangular 1200 x 750mm minimum.

k. Chambers 1000mm deep or less to invert may be 450mm diameter performed chambers. These should not be used to change direction on runs where falls are critical.

l. Access points which are no deeper than 600mm may be 250mm diameter.

m. No inspection chambers or covers are to be located within footpaths, driveways or patios unless specifically shown on this layout.

n. All gullies shown are to be trapped and roddable.

o. All drainage is to be 100mm diameter unless shown otherwise.

p. Manhole covers to be ductile iron class D400 in carriageways, class B125 in car parking areas and class A15 only in pedestrian areas and footways all to BS-EN 124:2015.

q. PPIC'S cast iron cover and plastic frame is suitable where wheel loads do not exceed 1.5 tonnes. For heavier loading installations, chamber to be surrounded with 150mm thick concrete and cover replaced with appropriate type.

r. All pipe bedding and protection to be in accordance with manufacturers' recommendations and Approval Document 'H' of the Building Regulations. Bedding shall be 150mm granular bed surround where cover: -

   I. Greater than 450mm for 100mm diameter rigid pipes in soft landscaping areas.
   II. Greater than 600mm for all pipe diameters greater than 100mm in soft landscaped areas.
   III. Greater than 900mm for pipes in trafficked areas.
   IV. Greater than 1200mm for pipes in adopted areas. In all other cases including gully connections use 150mm (min) concrete protection.

s. Access to be provided at the base of all RWP's using trapped access gullies bedded and surrounded in 150mm ST4 Concrete. Gullies to be Hepworth Ref SG3/1.

t. Pipes shall be laid at a minimum gradient of 1:40 unless inverts indicate otherwise.

u. Any existing pipework becoming redundant shall be excavated or sealed with a cement grout.

v. All mortar shall be 3:1 sand:cement unless stated otherwise.

w. All concrete shall be in accordance with BS-EN 206:2013 with Sulphate resistance to suit ground conditions.

x. THE ATTENTION OF THE CLIENT AND THE PRINCIPAL CONTRACTOR IS DRAWN TO THE FOLLOWING POTENTIAL RISKS IN CONNECTION WITH THE PROPOSED ON-SITE AND OFF-SITE WORKS AS DESIGNED FOR THIS PROJECT.

   a) The works might entail deep excavation for which appropriate support and safety measures must be provided.
   b) Works in the vicinity of live services including gas and electricity (underground and overhead) will be necessary and the advice of all statutory service companies must be sought before any works commence.
   c) In making connections to existing sewers and drainage installations, man entry to confined spaces will be required and all appropriate safety precautions must be followed including the use of gas detection apparatus. The same precautions must be followed during inspection and/or maintenance of any part of the drainage system.
   d) Works in existing highway will involve conflict with traffic and all due precautions including traffic controls and signing must be taken to ensure safety of operatives and the general public.