CONSTRUCTION NOTES A - STRUCTURE

FOUNDATIONS:

Concrete foundations to Structural Engineer's design.

Foundations within 1m of drains to be taken down to a minimum depth of the drain invert.

All foundation widths, depths and strengths are to Local Authority requirements.

GROUND FLOOR - 0.11 W/m2k

- •20mm zone for floor finish
- •75mm sand and cement screed
- Vapour control layer
- •150mm Kingspan Kooltherm K103 (PIR) insulation
- •1200 gauge DPM lapped to DPC
- •150mm concrete beam and block floor to structural engineers design

SUSPENDED CONCRETE FLOOR:

Pre-stressed concrete beam and concrete block floor system installed in accordance with manufacturer's instructions. All dimensions to be checked on site. Ventilation to air space to be provided using air bricks and periscope vents at 2m providing 1500mm² /1.0m.

EXTERNAL WALLS

Wall type 1 - New walls to Western extension - 0.18 W/m2k

- 100mm fair faced brickwork external leaf to match existing
 130mm cavity with 80mm Kingspan Kooltherm 108 (PIR)
- •130mm cavity with 80mm Kingspan Kooltherm 108 (PIR) insulation
- •100mm medium dense blockwork inner leaf
- •12.5mm plasterboard on dabs with skim finish

Wall type 2 - Refurbishment to external walls on eastern end - 0.17 W/m2k

- •100mm fair faced brickwork external leaf to match existing
- 120mm cavity with 90mm Kingspan Kooltherm 106 insulation (Polypropylene fleece (grey facing) to face outward)
- •100mm medium dense blockwork inner leaf
- •12.5mm plasterboard on dabs with skim finish

Provide Ancon Staifix HRT4 S/S cavity wall ties at 750mm horizontal and 450mm vertical spacings in accordance with S.E specifictaions. Wall ties to be placed at 225mm vertical spacings within 225mm from the side of all openings with unbonded jambs. Wall ties to have minimum 55mm embedment

Lintels as per Structural Engineers specifications.

Provide thermally broken lintels to all openings in cavity walls with min. 150mm end bearing, provide expanded polystyrene insulation to lintels, in accordance with manufacturer's specifications.

Provide 'Rytons' RYTWEEP weepholes (colour 'clear') to all lintels and cavity trays at approved centres. Cavity trays to be provided with stop ends.

Provide pitch free 2000G DPC to walls - min 150mm above ground level. DPC to be bonded to DPM. Visqueen High Performance ZX

Brickwork below DPC level to be class B. Blockwork below DPC level to be class A.

Cavities to be filled to 225mm below DPC with lean mix concrete.

Provide preformed plastic cavity trays by 'Cavity Trays of Yeovil' to external cavity walls at abutments of flat/pitched roofs, and above and below all windows, with 'Rytons' RYTWEEP weepholes (colour 'clear') at 1.0m centres above cavity trays. All cavity trays to be provided with stop ends.

Insulated DPC/Thermabate cavity closers at all vertical structural openings.

Tops of cavity walls to be provided with a flexible fire cavity barrier closer

Provide movement joints at positions indicated on Structural Engineer's drawings

New walls to be fixed to existing with Catnic Stronghold OSA built-in connector strips

INTERNAL WALLS

Wall type 3 (internal structural)

- •100mm medium dense fair faced blockwork leaf Paint grade (external store side)
- •130mm cavity with 80mm Kingspan Kooltherm 108 (PIR)
- •100mm medium dense blockwork inner leaf
- •12.5mm plasterboard on dabs with skim finish

Wall type 4 (internal stud)

- •12.5mm plasterboard with skim finish
- •100mm studwork with 100mm Rockwool Soundblock between
- •12.5mm plasterboard with skim finish

Wall type 5 (internal infill)

- •12.5mm plasterboard with skim finish
- •100mm medium dense blockwork leaf
- •Clear cavity (varies)
- •100mm medium dense blockwork leaf
- ●12.5mm plasterboard with skim finish

Wall type 6 (acoustic partition)

- •12.5mm plasterboard & skim finish
- •28mm CELLECTA HiGYP28 composite acoustic wallboard
- 16mm metal resilient bar fixed to timber stud wall at 600mm (max) horizontal centres
- ◆15mm CELLECTA FIBREfon Micro15 non-itch sound absorbing quilt fitted in void between resilient bars
- 50mm acoustic mineral insulation fitted between studs -60kg/m3 (Rockwool RW3 or similar)
- 89 x 38mm CLS studwork at 600mm (max) centres
 12.5mm plasterboard & skim finish

New wall between entrance and commercial kitchen and all ceilings to use 15mm Fireline plasterboard

Moisture resistant plasterboard to be used in wet rooms

Lintels in internal load bearing walls to be Catnic OSA or PSRC (only use PSRC lintels with a minimum 3 courses of brickwork over)

STUDWORK:

Studwork to be 50 x 100mm uprights, sole plates, head plates and noggins at 400 centres. Clad both sides with 12.5mm plasterboard (min 10kg/m2) and gypsum plaster skim, with taped joints, where studwork bears on joists as a UDL, joists to be doubled. Provide 100mm Rockwool Soundblock between studs.

LATERAL RESTRAINT:

30mm x 5mm galv'd MS straps to be provided at roof and floor levels at max 2m centres. Straps to cover min 3 rafters or joists. Provide noggins under/between lateral restraint straps.

ROOF BUILD UP:

All roof design to Structural Engineer's details.

PITCHED ROOF - INERLOCKING CONCRETE TILE - 0.13 W/m2k

•Interlocking concrete tiles

- •25 x 50mm treated softwood battens
- Tyvek breathable roof underlay
- ●50 x 200mm treated C24 timber rafters @ 400mm centers to S.E design
- •300mm mineral wool insulation, 150mm laid between ceiling joists and 150mm laid over
- •15mm Fireline plasterboard with skim finish to underside

Roof trusses at 600mm centres to manufacturer's specification (BS 5268 Pt 3 1985). Trusses to have diagonal bracing from ridge to wall plate with horizontal bracing built into gable walls. Trusses to be fixed to wallplates with S/S truss clips. Trusses to be designed and manufactured by a member of the ITPA in accordance with BS 5268.

Rafters to be bolted to ceiling joists with S/S timber connectors. Rafters or trusses to be fixed to wallplate with S/S truss clips.

100mm x 50mm treated SW wallplates to be bedded in mortar and strapped to tops of walls with 30mm x 2.5mm x 1000mm long galvanised straps at 1.8m centres.

B - FIRE

Limitations on Fire Escape 'Travel Distance' in accordance with Building Regulations B1 Table 2.1 (5c -Assembly and recreation 'elsewhere')

Maximum Travel Distance where travel is possible in 1 direction = 18m more than 1 direction = 45m

Emergency lighting, one hour non-maintained to BS 5266 pt 1 to illuminate escape routes and circulation areas. Fire exit doors to be provided with emergency illuminated fire exit signs.

Provide linked mains powered smoke detectors. To be connected to a separate supply at fuse box and supplied with battery back-up, installed in accordance with BS 5839-6.

All wall and ceiling finishes to comply with approved document part B2 (surface spread of flame).

New fire doors to be type 3 (FD30S) in frames with min 35 x 25mm stops, fitted with intumescent strips and cold smoke seals.

Emergency lighting, one hour non-maintained to BS 5266 pt 1 to illuminate escape routes and circulation areas.

All structural steelwork to be encased with 1 layer of 15mm Fireline plasterboard achieving 60 minute fire resistance.

Extend existing fire detection and alarm system throughout.

Provide break glass call buttons at final exits

Fire exit doors to open air to be provided with fire exit signs.

C - SITE CONTAMINATION

According to Radon Map (https://www.ukradon.org/information/ukmaps), the site has a radon potential of 1% - 3%. This should be checked with Building Control. No radon barrier protection proposed at this time.

D-TOXIC SUBSTANCES

D1 - ensure cavity insulation does not use Urea Formaldehyde

E - SOUND

Acoustic stud walls (wall type 6) to all new partition walls unless otherwise indicated on drawing 101 - Detailed Ground Floor Plan.

To be CELLECTA HiGYP28 composite acoustic wall System. Achieves min 45dB Rw + Ctr Airborne Performance

Internal stud walls - 100mm Rockwool Soundblock between studs (wall type 4)

F- VENTILATION

General: Volume 2 Applies to buildings other than dwellings.

Background Ventilation Trickle Vents to Glazing

Town Clerks office - allow min 3,125mm2 (equivalent to 250mm2 /m2)

Office - allow min 8,250mm2 (equivalent to 250mm2 /m2)

Allow min 5% of floor area for openable windows or doors to allow purge ventilation, in accordance with CIBSE Guide B2 Ventialtion and Ductwork (2016) section 2.3.2.2

New windows - ensure by FENSA registered manufacturer and

Occupied rooms to be provided with wall mounted Carbon

Dioxide Monitors

Provide fan mechanical extract rapid ventilation to kitchenette

capable of extracting 15 litres/second.

Provide cooker hood mechanical extract rapid ventilation to

commercial kitchen capable of extracting 60 litres/second.

Provide mechanical extract rapid ventilation to WCs capable of extracting 6 litres/second. Fans to be linked to lightswitch with 15 minute overrun.

air gap at eaves level with insect guard.

Where ceilings follow pitch of roof provide continuous 25mm a

Pitched roof voids to be ventilated by providing continuous 10mm

Where ceilings follow pitch of roof provide continuous 25mm air gap at eaves level and 5mm continuous air gap at ridge level.

Provide 5mm continuous ventilation strip at ridge.

G - SANITATION, HOT AND COLD WATER

SPACE HEATING:

Wet heating system to be provided with programmer, roomstat and TRV's on all radiators and connected to existing ASHP and cylinder heating system. Hot water storage cylinder located in store off main hall.

WATER HEATING:

Instantaneous hot water units positioned under sinks

H - DRAINAGE & WASTE DISPOSAL

PLUMBING - ABOVE GROUND:

Wash basins to be fitted with 32mm dia waste, 75mm deep seal trap.

Sinks to be fitted with 40mm dia waste, 75mm deep seal trap.

WC pan to be fitted with min 110mm dia branch connection.

SVP to be 110mm dia UPVC and open to outside air and finish min 900mm above any opening to the building within 3.0m and be terminated with a suitable vent cap.

All discharge stacks to be enclosed in SW timber frame clad with 9mm plasterboard and surrounded in glassfibre quilt.

Sanitary pipework gradient to be between 1:80 and 1:40.

Where hot and cold water pipes pass through unheated spaces provide thermal insulation to BS 5422:2001 and BRE Report Number 262-2002. Insulation thickness to be equal to diameter of the pipe up to a maximum of 40mm. Insulation material to have thermal conductivity not greater than 0.045 W/MK.

Water tanks if applicable to be black polypropylene and insulated.

Sinks and basins to be fitted with in-line mixer valves to BS 1111:1999 and BS EN 1287:1999 to ensure that hot water temperature to taps does not exceed 48C to prevent scalding. Mixer taps to be located as close to hot water taps as reasonably possible in order to prevent the colonisation of waterborne pathogens in the water.

Commissioning certificates to be provided to Building Control by a qualified registered Heating and Hot water installer upon completion.

BELOW GROUND DRAINAGE:

All below ground drainage to Engineer's design. (Godsell Arnold Partnership GAP)

All drainage to meet the requirements of approved documents H1 and H2.

All drainage to be in accordance with manufacturer's recommendations and BS 8301 1985.

Buried drains to be 110mm UPVC pipework surrounded in min 100mm pea gravel. (Min depth 0.9m under any road and 0.6m in gardens).

Drain gradient to be 1:60.

Where drains pass through walls they should do so at 90° where possible and are to be bridged with 65mm PSRC lintels. (Provide 50mm space all round the pipe).

Drainage access points to be provided at the head of each drain run, at a bend or change of gradient and at a change of pipe size.

Inspection chambers to be UPVC/pre-cast concrete and have removable non-ventilating covers. Heavy duty covers to be used in trafficked areas.

Where drains run within 1m of the building, they are to be encased in concrete up to the lowest level of the foundations.

FW drainage to discharge into existing Local Authority sewer.

All drainage and ventilation pipework to be fitted with intumescent collars where pipes pass through floors, party walls or other fire

Inspection chambers to be UPVC/pre-cast concrete and have removable non-ventilating covers. Heavy duty covers to be used in trafficked areas. Internal manholes to be provided with screw down double seal covers.

RAINWATER DRAINAGE:

compartments.

Floor Plan

Veranda roof laid to achieve 1 in 40 fall.

100mm half round UPVC to be laid to falls discharging into 65mm dia downpipes into 110mm buried pipework.

RWP's to be provided with trapped gullies and to be roddable in the direction of the drain.

Provide threshold drain to all level door thresholds

Provide Aco drain OSA at bottom of walls and across all thresholds in accordance with drawing 101 - Detailed Ground

Site not suitable for Soakaway. Please refer to Surface Water Strategy prepared by Godsell Arnold Partnership

J - HEAT PRODUCING APPLIANCES Not applicable

K - PROTECTION FROM FALLING

All glazing in critical locations to be laminated safety glass to BS 6206: 1981. Appropriate thickness determined by glazing supplier.

Critical locations include all glazing up to 1500mm above the floor in the doors and side panels close to either edge of the door and glazing in walls and partitions are up to 800mm above the floor.

Windows to be fitted with restrictor stays.

place, to allow use of portable ladders not more than 9M long(measured from the ground to the upper support). Where ladders up to 6M long will be used, normal soil will provide a suitable standing surface. Where ladders over 6M long will be

Provision of an adequate area of firm level surface, in a safe

used, suitable tying or fixing points should be provided.

L1 - CONSERVATION OF FUEL AND POWER

See Part A - Structure for full build-up of structural elements.

Volume 2 Non-Domestic U Values

L1 (a) Table 4.1 - Limiting U Values

New or Replacement Elements in New and Existing buildings.

Floor (Max 0.18 W/m²K) Design achieves 0.11 W/m²K Walls (Max 0.26 W/m²K) Design achieves 0.18 W/m²K Pitched Roof (Max 0.16 W/m²K) Design achieves 0.13 W/m²K Windows (Max 1.6 W/m²K) Design achieves 1.4 W/m²K

THERMAL BRIDGING

Thermal bridging to be avoided as follows:-

- Thermabate OSA at all structural openings.
 Proprietary insulated DPC at window cills.
- All lintels in external walls to be insulated.
- Windows to be positioned in wall opening so as to maintain a min 30mm overlap with the cavity closer/insulation.

•25mm perimeter insulation around all heated floors

• Wall/roof insulation to be continuous at eaves junction.

CONSERVATION OF FUEL & POWER

100% low energy light fittings to be used

Low energy light fittings should have lamps with a luminous efficacy greater than 45 lamp lumens per circuit-watt and a total output greater than 400 lamp lumens.

Light fittings whose supplied power is less than 5 circuit-watts are excluded from the overall count of the total number of light fittings.

All external openings and loft hatches to be draught stripped.

Windows to be fitted with `K' low emissivity glass.

Windows to be double glazed and Argon filled.

M - DISABLED ACCESS

All accesses to be provided with level threshold

All sockets/outlets to be minimum 450mm and all light switches/entry phone/doorbell push to be maximum 1200mm from finished floor level.

All doors with the exception of store doors to be min. 838mm

P - ELECTRICAL SAFETY, DWELLINGS

Not applicable

Q - SECURITY

Not applicable

Electric vehicle charging is not currently proposed.

R-HIGH SPEED ELECTRONIC COMMUNICATION

Not applicable

S - INFRASTRUCTURE FOR THE CHARGING OF ELECTRIC VEHICLES

- - - - - REV. REVISION DETAILS BY CKD DATE

DESIGNERS RISK ASSESSMENT-

THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015

For significant hazards specific to the project please refer to

HEALTH AND SAFETY

NOTES:-

Drawing CDM01 where appropriate

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Chickerell Town Council

DRAWING TITLE

Construction Notes

Willowbed Hall, Chickerell

DRAWN BY RS MW DATE 07.08.2025

SCALE 1:100@A1 JOB NO. 2425051

DRAWING NO. REVISION -

CONSTRUCTION

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