

## **SECTION 3 – SPECIFIC DESIGN REQUIREMENTS**

### **1.0 SUB-STRUCTURE AND FOUNDATIONS**

- 1.1. Foundations (including sub-structure brickwork and blockwork) shall be of a type to suit the particular ground conditions encountered, the physical and natural characteristics of the ground and locality and the type and nature of building works proposed.
- 1.2. Adequate provision shall be made to eliminate any risk to the building or to the health and safety of its occupants arising from the nature of the ground or any contaminants that it may contain including but not limited to the ingress of methane and radon gases.
- 1.3. Foundation systems shall be designed by an appropriately qualified Structural Engineer and comply with all relevant formal and draft British Standards and Codes of Practice.
- 1.4. Foundations shall be designed to suit the ground conditions, etc., and they shall be to the entire satisfaction and approval of the Local Authority.
- 1.5. All works shall be carried out in accordance with the Engineers' design and to the depths required to obtain a proper foundation and to the satisfaction of the Local Authority.
- 1.6. All works shall be carried out with due regard to any adjoining property and users, and in any case in accordance with the Control of Pollution Act and any other Statutory Authority's requirements.

#### **SUB-STRUCTURE BRICKWORK AND BLOCKWORK**

- 1.7 Brick and block selection and mortar mixes will be subject to the Engineers' design within the parameters of these requirements.
- 1.8 Damp proof courses shall comply with British Standards.
- 1.9 A minimum clear cavity of 50 mm is required.
- 1.10 Cavities in hollow walls are to be filled to 150 mm below damp proof course level in concrete to the Structural Engineers' specified mix finished sloping towards the external face as necessary and with weep holes in the outer skin as appropriate, unless the Structural Engineer proposes alternative design details.

#### **COVERINGS**

- 1.11 Roof coverings shall be of plain concrete tiles and accessories on treated softwood battens over roofing felt to a minimum of current British Standards.
- 1.12 The selected roof covering must be suitable for the roof pitch to be covered which must fall within the maximum and minimum parameters specified by the roof tile manufacturer.

- 1.13 Eaves shall be supported by fascia and tilting fillet.
- 1.14 Tiles shall overhang to the centre of the gutter or be positioned to ensure that rainwater run-off discharges into the gutter.

#### VALLEYS, RIDGES, VERGES AND HIPS

- 1.15 Valleys to be tiled or lined with EPDM single-ply rubber valley gutter or other proprietary system of equivalent durability and weathertightness. Lead will not be accepted.
- 1.16 Ridges, verges and hips to be bedded and, if appropriate, clipped. All mortar for tiling shall be tinted to match the tiling. Dry verge or ridge systems may be used subject to the designer being satisfied that the chosen system is suitable for the anticipated exposure conditions. Hip irons to be to a standard not less than galvanised mild steel.

#### VENTILATION

- 1.17 Eaves and ridge ventilators must be provided to provide both mandatory and adequate ventilation.
- 1.18 All ventilation openings shall be designed/selected to prevent the ingress of rain, snow, birds and insects.
- 1.19 The designer may wish to consider strip vents to soffits or over-fascia ventilation.

#### FASCIAS, BARGEBOARDS AND SOFFITS

- 1.20 Fascias, soffits and bargeboards shall be aluminium.

#### GUTTERING AND RAINWATER DISPOSAL DOWNPIPES

- 1.21 All to be aluminium.

#### ACCESS HATCH

- 1.22 An insulated access hatch providing a clear opening not less than 550 mm x 550 mm or such larger size to allow for all parts of the clock to be replaced.

### **2.0 WINDOWS, FRENCH DOORS AND BI-FOLD DOORS**

- 2.1 All to be powder-coated aluminium (single RAL colour – TBC by client), manufactured, fabricated and installed by Companies having Quality Assurance accreditation to BS EN ISO 9000 and tested to BS 7950:1997.
- 2.2 All external doors to have the same key which is to be of the 'dimple' key type. 6no copies of the key to be provided with security code.
- 2.3 Note – the cleaner cupboard window is to be omitted. All liaison with the Local Authority Planning Department is to be undertaken to undertake this amendment.

### **3.0** **BINSTORE**

- 3.1. To be constructed with non-combustible materials.

### **4.0** **ADDITIONAL**

- 4.1 Roller Shutters – electric (automated) powdercoated steel roller shutters to be provided to perimeter of external covered area and to all external windows and left hand side elevation bi-fold doors.

Automation to be undertaken with the use of a key with switch locations to be agreed with client.

All shutters and fittings to be powdercoated in any single RAL colour (TBC by client).

Note – enlargement of piers to be undertaken as required. The contractor is to allow for any liaison and costs with the planning authority.

- 4.2 External covered area – finish floor coverings to match those of the other areas of porous paving.

Aco-drain to follow perimeter of external covered area and be provided to left hand side elevation bi-fold doors.

Note – The building is located in an area at risk from surface water flooding. Adequate drainage is to be provided to the building/site.

- 4.3 Extended Car park/ new footpath – finish to match surrounding areas. Additional sleepers to follow perimeter of new area. All lining to be provided and sleepers to be reused.
- 4.4 Lighting to extended car park – 2no additional lamp posts to be provided. To be connected to 'park supply'.
- 4.5 Window to right hand side elevation – to be omitted. Contractor to undertake liaison with the Local Authority regarding an amendment.

### **INTERNAL AREAS**

#### **5.0** **WALL AND CEILING FINISHES**

##### **GENERALLY**

- 5.1 Notwithstanding the following, the composition of wall finishes in terms of number of coats and thickness of plaster, number of layers and thickness of plasterboard, mass per unit area, etc. will be decided by the Designer/Design and Build Contractor in order to produce overall wall designs that will meet the requirements of the Building Regulations.

- 5.2 Walls generally are to be 'dry-lined'.

#### WALLBOARDS

- 5.3 The use of insulation backed, gypsum plaster wallboards is acceptable to the client where this is necessary to improve thermal performance of external walls. In such cases the boarding will be fixed strictly in accordance with the manufacturer's instructions and finished as described for 'wallboards' below.
- 5.4 Studwork partitions within shall be lined each side with minimum 2 (two) or more layers of plasterboard, each sheet of minimum mass per unit area 10 kg/m<sup>2</sup> or the like of a type appropriate to the nature of the wall and of the room containing the wall and finished with jointing or skim coat of plaster and left ready to receive an emulsion paint finish. Studwork walls around WC areas shall be lined with WBP plywood and finished with ceramic tiles as described below, enhanced as required to meet the requirements of Part E of the Building Regulations.
- 5.5 Gypsum plaster wallboards or the like shall be painted with minimum one coat board sealer, i.e. Drywall Primer, and left ready to receive an emulsion paint finish.

#### PAINT FINISH

- 5.6 Walls shall be finished throughout with a minimum of one mist coat and two full coats of emulsion paint so as to provide an even uniform finish throughout the building with the substrate properly covered.
- 5.7 Matt finish emulsion paint will be used in all situations excepting kitchen where moisture-resistant paint will be used.
- 5.8 Additional coats of emulsion will be applied where necessary to achieve an adequate and uniform coverage.

#### CERAMIC TILING

- 5.9 Glazed ceramic wall tiles size 152 x 152 x 4 mm shall be provided as half height to WC areas and cleaner cupboard. Contrast colour tiling to be provided.

#### KITCHEN LAYOUTS

- 5.10 No kitchen to be provided with the exception to the extraction element, however all plumbing, drainage, electrics and the like to be in place ready to receive a commercial grade kitchen.

#### SIGNAGE

- 5.11 Engraved satin anodised aluminium name plates and signage is to be provided to WCs as necessary. Illuminated statutory signage also to be provided.

## **6.0 SANITARY APPLIANCES**

### **GENERALLY**

- 6.1 Sanitary appliances shall be to a standard not less than Ideal Standard and shall be selected from a white colour range to the approval of the Employer.

One Dyson 'Airblade V' to be provided to all three WC areas.

### **TAPS**

- 6.2 Taps shall be Bristan Single Luxury Soft Touch Timed Flow Basin Tap (Z2LUX12C) and be in accordance with current British Standards.

### **TOILET ROLL HOLDER**

- 6.3 A toilet roll holder will be provided in each W.C.

### **MIRROR**

- 6.4 A mirror (minimum 400 x 600 mm) is to be provided above each wash hand basin.

### **CLEANER'S SINK**

- 6.5 A deep vitreous china cleaner's sink is to be provided.

### **DISABLED AND BABY CHANGE**

- 6.6 Armitage Shanks Contour 21 Doc M Pack with Close Coupled Toilet and Blue Rail plus all associated items to be provided.

- 6.7 Babycare MK II Folding Baby Changer (White) to be provided.

### **DUCTING AND CONCEALMENT**

- 6.8 Waste pipes shall be concealed wherever possible.
- 6.9 Pipe boxing/duct casing shall incorporate adequate provision for access for maintenance purposes.
- 6.10 All soil and vent stacks shall be enclosed in ducts which shall be insulated to provide adequate sound insulation. Adequate provision for access for maintenance purposes shall be made.

## **7.0 WATER INSTALLATIONS**

### **GENERALLY**

- 7.1 A suitable system for the supply of hot and cold water shall be provided. Adequate provision shall be made for maintenance, including the incorporation of stop and isolating valves (which must be provided to all fittings), drain off cocks etc.

#### PIPEWORK AND FITTINGS

- 7.2 Water supply and distribution pipes shall be in copper with capillary joints and fittings insofar as is possible. Compression fittings will not be accepted.
- 7.3 General pipework runs shall be so designed and installed as to have the minimum number of joints within the running length and all horizontal pipework at skirting level shall be run in ductwork (either proprietary or timber framed/boarded).
- 7.4 Pipework in floor screeds is to be avoided where possible.
- 7.5 Pipes must not be buried behind dry linings unless in ducts with access covers.

#### TAPPINGS

- 7.6 Individual mains tapping and external stopcock to be provided, suitably marked/tagged to indicate supply served.

#### WATER METER

- 7.7 Water meter to be provided.

#### HOT WATER SYSTEM PERFORMANCE

- 7.8 The hot water system must be designed and be capable of serving all WC's and a commercial kitchen in line with the recommendation of BS 6700, the NHBC and the Institute of Plumbing.
- 7.9 Simultaneous demand for kitchen and hand basins, for example, must not result in a significant loss of flow of hot water to either. The system must be designed to be capable of achieving this requirement.

#### WATER STORAGE

- 7.10 Assumed to be fed off the mains.

### **8.0 SPACE HEATING**

#### GENERALLY

- 8.1 Under floor electric heating to be provided to all areas. The heating system shall be designed to achieve not less than the internal temperature of 21°C given below when the external air temperature is -1°C and four air changes per hour are assumed. Three separate zones to be provided with remote control by way of mobile app plus wall mounted control.

## **9.0 ELECTRICAL INSTALLATION**

### **GENERALLY**

- 9.1 An adequate and separate metered 3 phase supply electrical installation shall be provided to current CIBSE and IEE standards and regulations.
- 9.2 5no Twin switched socket outlets shall be used throughout set 600 mm above floor level unless otherwise stated. Additional twin switched socket to be provided to the cleaner's cupboard. The system is to be provided with full trip protection and is to be designed and provided for the provision of power to meet external equipment requirements.
- 9.3 Electric system shall be left ready to receive kitchen installation completely.

### **LIGHT FITTINGS**

- 9.4 All areas (including external covered area) shall have IP rated 50,000 lamp-light OLED downlighters providing 400 lux per fitting. The main customer area and external covered area to also have dimmer control. All separate areas to have separate zones/switches.
- 9.5 Loft to be provided with a loft light with clearly visible neon indicator light fitted external to the loft. A switch is to be provided in an accessible position external to the loft.

### **WIFI**

- 9.6 Ceiling mounted receiver to be provided to main customer area hard wired back to main router/telecommunication point. Receiver to be capable to have main connection and guest (client – temporary) connections.

### **SECURITY/FIRE/HEAT ALARM SYSTEM**

- 9.7 Mains powered security (with PIRs), heat and fire 'smart' alarm system to be provided capable of external mobile app access. The system should be compatible and responsive on smartphones (iOS and Android).
- 9.8 All fire protection installations shall be in accordance with the Fire Officer's or Local Authority's requirements and where required by the Fire Officer or Local Authority will incorporate a linked fire alarm system and other required systems (i.e sprinkler or spray mist systems) noting the imminent installation of a commercial grade kitchen.

### **EXTERNAL LIGHTING**

- 9.9 Two additional lamp posts are to be provided to the car park area in a style to match the existing. Connection to be made to the same supply as the existing lighting.

- 9.10 Bulkheads to be provided to the elevations providing illumination to the perimeter of the building. To be provided with dusk til dawn sensors with over-ride and PIR detector. Fittings to be in-keeping with the building to the approval of the Employer. Low energy long life bulbs are to be provided.

#### LIGHTNING PROTECTION

- 9.11 Lightning protection shall be provided as necessary and/or recommended in accordance with BS 6651 or where the Designer/Contractor considers this a necessary precaution.

#### TELEPHONE LINES

- 9.12 Two separate phone lines are to be installed with telephone numbers required at PC.