CONSTRUCTION

NOTES &

SPECIFICATION

 Produced by: Paul Gendall BSC

On behalf of Mawgan-in-Meneage Parish Council

Address: Mawgan-in-Meneage Recreation Hall & Ground,

St.Keverne Road,

Mawgan,

Cornwall,

TR12 6AX

Table of Contents

1. General…..……………………………………………….……….. (3)
2. Foundations………………………………………………………. (6)
3. Sub-structure, Ground Floors & Drainage………….…. (7)
4. Superstructure…………..…………………………………….…. (9)
5. Roof………………………………………………..……………….. (12)
6. Services………………………………………………..………..…. (13)
7. General

**1.1 General Notes**

Project description – Extension to existing Recreation Hall to include new toilets & additional storage space, plus construction of patio & installation of bi-fold doors.

Condition Guidance - All new building works to be constructed in accordance with details and guide lines provided within Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings.

These notes, specifications and associated drawings have been produced for planning and building regulation purposes only as we are not employed as principle designer or acting as principle designer. It’s the employers duty to ensure all CDM regs are adhered to and any additional information required such as method statements are provided. All HSE regulations and guidance are to be strictly adhered to.

Temporary Works - The contractor will be responsible for the design, erection and maintenance of all temporary works to enable construction to be carried out without reducing the factors of safety within the building, during all stages of the construction works.

Building near or over main sewers – in the event of any proposals either extension or new development, being built over or within 3.0m of any mains foul water sewers. The water utility company for the area, should be contacted and the necessary application be made to said utility company and their approvals gained before any construction works are commenced.

Identifying Services – prior to commencing any works on site, the contractor is responsible for identifying all existing services on the site. The utility companies should be approached to obtain records for the site and site surveys should be commissioned as necessary to ensure that all services, either live or dead, are identified prior to commencing works.

Installation of Materials & Equipment - It is deemed that all materials and equipment supplied and or installed within the works will be used / installed to the requirements of all relevant British, European standards and manufacturers recommendations and instructions.

Design and Standards - All design, manufacture and installations are to comply with all relevant British Standards or Codes of Practice. Any references to a British Standard or Code of Practice or other publications shall be deemed to mean the latest relevant issue incorporating all amendments of such a publication at the date of tender.

Materials and Workmanship – All building works shall be carried out in accordance with Building Regulations Approved Document 7 in that all works shall be carried out,

· With adequate and proper materials which

· Are appropriate for the circumstances in which they are used

· Are adequately mixed or prepared and

· Are applied, used or fixed so as adequately to perform the functions for which they are designed.

· All in a workmanlike manner.

All works are to be carried out in full accordance with all relevant parts of BS8000 – Workmanship on Building Sites. Any works failing to comply with this will be required to be rectified by the contractor at his own expense. Failure to do so will be rectified by an appointed sub-contractor and charged to the contractors account including any associated making good.

Variation of Materials etc - Any construction materials / products specified within these specification notes are NOT to be substituted by another, without written approval or confirmation has been obtained from the supervising / issuing office of this specification and from the relevant Approved Building Control Inspector.

Damaged or Contaminated Materials – any materials intended for use onsite found to be damaged, contaminated, mouldy or mildewed are to be removed from site as soon as possible and returned to supplier for replacement.

Operating Instructions - Manufacturers operating instructions, manuals and certificates of warranty for all specialist materials and installations, appliances and equipment installed within the project are to be passed to the employer.

Measurements - All dimensions shown are approximate and are given to assist the Contractor in identifying and estimating for the works on the site. The works have been described in reasonable detail and the Contractor must allow for everything necessary for carrying out the work in the best possible manner including all making good.

**1.2 Construction (Design and Management) Regulations 2015**

CDM 2015 regulations apply to ALL construction projects, but notification to the HSE is NOT required if the project is for a private domestic client on their own dwelling.

A project IS notifiable if the whole project is likely to:

· Last more than 30 working days and have more than 20 workers working simultaneously at any point or

· exceed 500 persons days of construction work.

**1.3 Demolition, Salvage and Waste**

Demolition - The Contractor is to include for removing from site, and disposing of at his own expense, all debris and materials not required for retention or re-use. The Contractor shall not allow such materials to accumulate or allow dust and debris to become a nuisance.

Allow for areas affected to be well watered whilst pulling down or executing demolitions to prevent and laying of dust as far as possible.

Protection – adequately protect parts of existing work which are to be retained. Cut away and strip out the minimum necessary and with care to reduce the amount of making good to a minimum.

Structural Stability - adequately protect parts of existing work which are to be retained. Cut away and strip out the minimum necessary and with care to reduce the amount of making good to a minimum. Support existing structure as necessary during cutting of new openings or replacement of structural parts. Do not remove supports until new work is strong enough to support the existing structure.

Erect, maintain and clear away all necessary temporary supports and scaffoldings to the surrounding structure or work as required and reinstate all work damaged or disturbed.

Site Waste - the contractor should make every effort to control the amount and type of site waste, and therefore reduce the amount of mixed/general land fill waste from all construction works by way of separation of waste into inert, non-hazardous and hazardous waste, which can then be reused, recycled, compacted and separate disposal for hazard waste.

All hazardous waste to be disposed of legally and proof may be required in the form of recognised paperwork and certificates.

Asbestos – during all demolition works if any exposed materials appear to contain or be made of asbestos, works to those areas are to stop and the project manager informed immediately. Suspicious materials are to be tested by a licensed contractor as soon as possible and a decision made upon receipt of the test results.

Hardcore - Brick rubble or other hard materials arising from the work may be re-used as hardcore, subject to compliance with specification, and breaking up into suitably sized pieces.

Infected Timber - Where instructed, remove timber affected by fungal/insect attack from the building in a way which will minimise the risk of infecting other parts of the building, and destroy as soon as possible.

1. Foundations

**2.1 Excavations**

Protection of Services - Care must be taken not to damage existing land drains, stormwater drains, sewers, water services and gas and electrical conduits and all damage caused by neglect shall be made good at the Contractor's own expense.

Planking and Strutting - Provide and maintain all necessary planking, strutting and supports to secure and maintain the sides of the excavation.

Approval - The excavation shall be left bare until inspected and no concrete is to be laid until the excavated bottoms have been approved by the CA or the Approved Building Control Inspector.

Excavations to be a minimum of 600mm below ground level

**2.2 Foundations**

Surfaces to receive concrete to be clean, with no debris and free from water.

600x225mm GEN 3 concrete strip footings, to BS 8500-2.

Temperature range for concrete to be 5-30°C.

Concrete to compacted fully.

**2.3 Backfill**

Type 1 Granular Fill under concrete and pavings.

Fill material to be laid and consolidated in maximum 200mm layers

1. Sub-structure, Ground Floors & Drainage

**3.1 Ground Floor**

Structure – 150mm thick ground bearing slab, laid on minimum 150mm consolidated Type 1 sub-base. One layer A193 reinforcement in top of slab, laid in accordance with BS8666:2005 with a specified characteristic strength of 500N/mm². Minimum 40mm cover.

Radon Sumps - A proprietary system to be installed beneath the structural slab with minimum 110mm dia vent pipe to the outside of the building. Sumps to be installed to manufacturers guidance.

75mm flooring grade dense insulation e.g. Kingspan Kooltherm K103 PIR Insulation Board, to be laid on 1200 gauge DPM and Radon Barrier.

500 gauge polythene membrane to be laid on insulation prior to laying the screed. Joints to be lapped and taped.

75mm fibre reinforced sand/cement screed

Self levelling latex screed to be laid prior to laying the finished flooring.

Floor build-up to achieve u-value of 0.16w/(m²k)

**3.2 Drainage – Below Ground Systems**

Generally -. Provide pre-cast concrete lintels in footings over where drains pass through walls.

Existing Drains - Before starting work, check invert levels and positions of existing drains, sewers, inspection chambers and manholes against information shown on drawings and report any discrepancies to the Client or architect. Adequately protect existing live drains and maintain flows during construction works.

Size & Type - Drains to be 100mm diameter upvc underground quality pipes

Drain Lengths – maximum drain run distances to be:-

* 45m between inspection chamber and inspection chamber.
* 22m between rodding eye and inspection chamber.
* 22m between start of drain and inspection chamber.

Falls – all drain runs to be laid to falls as follows:-

Foul water:

* 75mm & 100mm diameter (between 1:10 and 1:80)
* 150mm diameter (between 1:35 and 1:150)

Surface Water:

* 75mm & 100mm diameter (between 1:10 and 1:100)
* 150mm diameter (between 1:10 and 1:150)
* 225mm diameter (between 1:10 and 1:225)

Access – to be provided at junctions and all changes of direction, constructed with proprietary polypropylene bowls laid on and surrounded with pipe bedding. Any rodding eyes, access fittings or inspection chambers to be provided with minimum sizes as described below. Size varies according to depth and nos. of branches.

Foul Water Drains – to be bedded and surrounded in minimum 150mm thick pipe bedding. Shallow drains i.e. less than 600mm cover to be protected with lean mix concrete. FW drains to discharge into / connect to existing system.

Testing Generally - Check that all sections of installation are free from obstruction and debris before testing. Provide assistance and apparatus for testing and inspection as required. Test all drains before covering and again after backfilling under inspection of and to approval of the Approved Building Control Inspector and remedy all defects without delay and retest as instructed.

**3.3 Drainage – Access Fittings & Inspection Chambers.**

Generally, access points to be provided as described above in the form of 1 of 4 types –

· Rodding Eyes – capped extensions of the pipes.

· Access Fittings – small chambers on (or an extension of) the pipes but not with an open channel.

· Inspection Chambers – chambers with working space at ground level.

· Manholes – chambers with working space at drain level.

Covers - Inspection chambers and manholes to be fitted with removable non-ventilating covers of durable material (such as cast iron, cast or pressed steel, precast concrete or plastics) and be of suitable strength dependent on location and possible traffic. Small lightweight access covers should be secured (for example with screws) to deter unauthorised access. Inspection chambers and manholes in buildings should have mechanically fixed airtight covers dependent on the finished floor covering i.e. recessed covers in screeded.

**3.4 Masonry**

7.5N Dense concrete blocks to BS EN 771-3

Mortar to BS EN 998-2

Pre-cast lintels to BS EN 845-2. 65x100 PC Lintels for all service penetrations through external and internal sub-structure walls, with max. 400mm clear opening and min. 150mm bearing each end.

Mortar Joints – lay units on a full bed and fill vertical joints. Lift Height to be no more than 1500mm per day.

Lowest Course to be minimum 150mm below finished ground level.

Lay DPC’s on full mortar bed and lap minimum of 100mm at joints and fully lay at angles. Lay a full even bed of mortar to receive next masonry course. The finished overall joint thickness should be a close as possible to general walling joints as is practicable. DPC’s should be at least 150mm above finished ground level. Joints with DPM should be continuous and sealed to manufacturers details.

1. Superstructure

**4.1 Air Tightness In Buildings**

Services - All services including pipes, ducts and cables are to be sealed internally when passing through the external envelope of the building including floors, ceilings and walls (walls also to be sealed externally) with a suitable sealant coloured to match adjacent finishes.

Draught Proofing – All external windows, loft access doors / hatches and external doors to be fitted with suitable brush or compression draught seals to all opening sashes, casements and doors leafs including cills.

Letterbox openings in external doors to be fitted with internal brush type/flap draught excluder to employers approval.

Openings Externally – All Window and door frames in external walls are to be sealed around their perimeter with a suitable sealant coloured to match adjacent finishes.

Openings Internally – The perimeter of all ceilings to be sealed to walls. All window and door frames in external walls are to be sealed around their perimeter including around window boards. All sealants are to be suitable for their location and coloured to match adjacent finishes.

Recessed Downlighters – Where recessed downlighters are to be fitted in ceilings to a roof void an air tight backbox is to be formed over and around each fitting of 15mm plasterboard with all joints sealed with intumescent mastic. (ensure a minimum clearance is maintained between the fitting and boxing in accordance with manufacturers recommendations).

* 1. **New External Walls**

Two skins of 100mm 7N Dense Concrete Blocks to BS EN 771-3, with 150mm Cavity. Mortar to BS EN 998-2, Joints – lay units on a full bed and fill vertical joints. Lift Height to be no more than 1500mm per day.

Stainless steel wall ties a 450x450 centres. Ties to be laid on every course around door/window apertures and within 200mm of the reveal.

Catnic lintels or similar approved, to meet BS EN 845-2

100mm Dense Cavity Insulation e.g. Kingspan Kooltherm K108 PIR Insulation Board, to be laid against the outer face of the internal skin of blockwork with clips on each wall tie.

Internal finish – sand/cement scratch coat, topped with skim plaster to take paint finish

External finish – Weber Silicone based Through Colour RenderExternal walls to achieve u-value of 0.16w/(m²k)

**4.3 Existing External Walls**

110mm Weber Insulated Render System to be retrospectively fitted externally - Webertherm MFD Mineral Wool fixed to Manufacturers Details, with Webertherm XM Thin Coat Silicone based Through Colour Render finish. Webertherm PPC Aluminium drip-flashings, expansion joints and termination beads to be installed to manufacturers installation guidance.

37.5mm Kingspan Kooltherm K118 Insulated Plasterboard to be mechnically fixed internally to external walls, with skim plaster finish.

**4.4 Internal Walls (Load Bearing & Non-Load Bearing)**

140mm 7N Dense Concrete Blocks to BS EN 771-3, with 110mm Cavity. Mortar to BS EN 998-2, Joints – lay units on a full bed and fill vertical joints. Lift Height to be no more than 1500mm per day. 140x140 pre-stressed concrete lintels. All internal walls to receive a scratch coat of sand/cement render, with skim plaster topping ready to receive final wall finish.

Wolseley Multipanel Classic bathroom wall panel, hydrolock tongue and groove 1200x2400mm panels to all toilet walls, or similar approved.

All remaining walls to be finished with three coats of Dulux Supermatt

**4.5 Ceilings**

15mm Wallboard with skim plaster finish. 15mm Moisture Resistant Board to be used in Bathroom, En-suite and Wetroom areas.

All ceilings to be finished with three coats of Dulux Supermatt

**4.6 Windows – New External**

Type – new windows to be UPVC in white with double glazing, see elevation drawings for variations.

Glazing - all windows to be complete with sealed double glazed units. All glazed units to be secured with internal bead fixings.

Safety Glazing - Glazing areas less than 800mm from floor, below 1500mm and within 300mm of a door to be toughened safety glass to BS 6206.

Rating - New windows to have a BFRC Band rating of A or better. Windows to be manufactured to FENSA standards to achieve maximum U-value 1.5W/m2

Draught Proofing – All external windows and external doors to be fitted with suitable brush or compression draught seals to all opening sashes, casements and doors.

Background Ventilation – to be provided to the whole dwelling via adjustable trickle ventilators at top of opening casements at least 1700mm above finished floor level.

To meet the requirements of Approved Document Q; windows and doors should meet the security requirements of PAS 24:2016. Note: Where door sets, coupled side panels and windows adjacent to door sets contain glass, each glazed area shall include at least one pane of 6.8mm laminated glass meeting the requirements of BS EN 356:2000, Class P1A or higher, and shall be glazed in accordance with BS 6262. Where windows contain glass and non-key unlocking hardware, each glazed area shall include at least one pane of 6.8mm laminated glass meeting the requirements of BS EN 356:2000, Class P1A or higher, and shall be glazed in accordance with BS 6262.

**4.7 Doors – Internal & External**

Internal doors - to be Howdens Dordogne (or similar approved) oak finish solid core and be fitted in locations shown on drawings.

Ironmongery - Doors on escape routes are to be fitted with simple fastenings that can be readily operated from escape side without the use of a key.

External Doors – to be PPC aluminium, double glazed. Front entrance door should have a clear opening width of 1000mm. Doors to be installed in accordance with Approved Document M Volume 2, section 2.

The access to the dwelling to comply with Approved Document M should be min 1500x1500 level landing at external of the entrance door with a max upstand of 15mm at door threshold, and any ramp no steeper than 1:20.

To meet the requirements of Approved Document Q; windows and doors should meet the security requirements of PAS 24:2016. Note: Where door sets, coupled side panels and windows adjacent to door sets contain glass, each glazed area shall include at least one pane of 6.8mm laminated glass meeting the requirements of BS EN 356:2000, Class P1A or higher, and shall be glazed in accordance with BS 6262. Where windows contain glass and non-key unlocking hardware, each glazed area shall include at least one pane of 6.8mm laminated glass meeting the requirements of BS EN 356:2000, Class P1A or higher, and shall be glazed in accordance with BS 6262.

**4.8 Flooring/Finishes**

Polysafe Standard PUR sheet vinyl in Nordic Grey 4090 laid to manufacturers guidance to all toilet areas, storage rooms and kitchen.

Karndean Da Vinci Natural Oak RP102 to main Recreation Hall and Entrance Lobby.

**4.9 Fire Protection**

To be read in conjunction with SMOKE DETECTION

Structural Elements - All structural steel beams and lintels unless supporting roof construction to be encased with two layers of 15mm plasterboard and skim with joints staggered on minimum 32x32mm

Service penetrations - i.e. pipe work or cabling etc less than 50mm dia passing through compartment walls or compartment floors (including walls and floors to integral garages) to be fire stopped with intumescent mastic.

1. Roof

**5.1 Construction of Pitched Roofs**

Timber roof truss as per Structural Engineers/Specialist Suppliers details, to BS EN 338.

Vapour control membrane to be laid onto timber trusses with 50x25mm treated battens

Roof finish – to match existing

**5.2 Drainage to Pitched Roof Areas**

Gutters - round section coloured upvc rainwater gutters to be provided at eaves to match existing building. Gutters to be fitted level and max 50mm roof tile overhang from the fascia board. Gutters to be fixed to fascia board at max 1000mm centres using gutter brackets, secured with two 25x4mm non-ferrous round head screws, gutter brackets also to be fitted within 150mm of all gutter unions, outlets, stopends, and both sides of internal and external angles.

Downpipes - round section rainwater pipes to be secured with a clip/bracket round the top most socket to support the downpipe system. Intermediate clips to be fitted at max 1.8m centres or centre of each length to maintain alignment. Clips to be secured with min two no 32 x 6.5mm non-ferrous round head screws. A gap of 10mm to be left between the end of each pipe and the bottom of the socket to allow for thermal movement.

1. Services

**6.1 Design, Operating & Maintenance Manuals**

Manuals - Design, Operating and Maintenance Manuals shall be provided by the contractor for the employer, and comprise of two separate manuals one for Electrical and one Plumbing & Heating Installations. These manuals may be bound in one document providing a definitive marker is placed between one and the other.

Each manual shall comprise one copy of as built drawings and design calculations etc for all floors and roof space installations, where applicable, together with operating and Instruction manuals for all installed fixed services, appliances, items and equipment.

Commissioning Certificates – certificates of any fixed building services requiring to be commissioned and any installations completed by an approved or accredited installer, are to be included in the O & M Manuals. An additional copy of all certificates are to be passed to the Building Control Body.

Consumer units - to be marked to indicate, to which circuit each breaker applies, or a drawing of the unit indicating the same information shall be included in the manuals.

Handover - The contractor shall allow for demonstrating on site to the employer upon completion of the works, the location of the principle items and there workings, together with a practical overview, content and use, of the manuals.

**6.2 Space Heating & Hot Water**

Ground Source Heating System – details of specification and supplier to be confirmed. Must be installed to manufacturers guidelines.

**6.3 Internal Cold Water System**

Guidance – A reliable wholesome cold water supply with sufficient pressure and flow rate is to be provided, to all sanitary appliances and fitments. A cold water supply of suitable quality is to be provided to any sanitary convenience fitted with a flushing device.

All installations to be in accordance with the Water Supply Regulations, and a suitable commissioning certificate to be provided upon completion of all works.

Water sources that are non-wholesome include:

• groundwater abstracted from boreholes, wells or springs;

• surface water from watercourses (e.g. streams, brooks, rivers) or ponds and lakes;

• rainwater (generally collected and stored, referred to as ‘harvested rainwater’);

• greywater (i.e. wastewater from baths, basins and showers);

• treated wastewater (from sewage treatment plants or industrial processes).

Labelling – if a non-wholesome supply is installed all outlets and points of use are to be clearly labelled green in accordance with BS 4800:1989 colour 12 D 45; not less than 100mm long; marked ‘NON-WHOLESOME WATER’ in black letters not less than 5mm high.

Insulation - Any pipework within roof space & boxings to be insulated with minimum 20mm insulation and clipped as necessary.

Spacing - Pipes to be spaced apart from each other & joists to allow for expansion & contraction & therefore eliminate noises. All new pipe work to be laid side by side, where this is not possible and pipes are to be run over each other hot pipe runs are to be laid upper most.

Valves - All cold water outlets to be complete with ¼ turn shut off valves to facilitate easy maintenance. All internal pipe installations to be in solder jointed copper, plastic pipework and fitments will not be acceptable.

**6.4 Sanitaryware Fitments & Appliances**

Generally - Install as necessary copper pipe, waste pipe, soil pipe & fittings necessary & make connections to ‘Wholesome’ hot water supply, ‘Wholesome’ cold water supply & soil system. All hot & cold water outlets to be complete with ¼ turn shut off valves to facilitate easy maintenance. All pipes to be insulated within boxings. All equipment to be installed according to manufacturer’s instructions. Where hot and cold taps are provided on a sanitary appliance, the hot tap should be on the left.

WC’s – to be installed in locations shown on drawings complete with external overflow warning pipe wastes, traps, handles & seats. New wc’s to be fitted with max 6 litre cisterns. Dual flush cisterns may be fitted with 6 litres maximum full flush and 4 litres maximum short flush in accordance with the Water Supply Regulations 1999.

Sinks & Basins – to be installed in locations shown on drawings complete with wastes, traps, taps & plugs.

Doc M W/C’s – to be installed in accordance with Approved Document M Volume 2.

Sanitary-ware to be Bushboard or similar approved.

IPS to be Bushboard HiZone or similar approved.

Commissioning - Upon completion of all works to all relevant systems a suitable commissioning certificate is to be provided to Building Control by the person who carried out the works who is registered with an approved competent person scheme not later than 5 days after the completion of the works.

**6.5 Pipe Fixing, Installation & Insulation**

Generally – All new pipework installations for cold water, hot water and heating systems are to be installed in accordance with BS8000-15, BS EN 806

Service pipework installations are to be insulated in accordance with the TIMSA guidance for achieving compliance with Part L of the Building Regulations Domestic And Non-Domestic Heating, Cooling and Ventilation Guide.

Pipes to be spaced apart from each other & joists to allow for expansion & contraction & therefore eliminate noises. All new pipe work to be laid side by side, where this is not possible and pipes are to be run over each other hot pipe runs are to be laid upper most.

Piping that is or is to be insulated shall be secured with clips or brackets that allow sufficient space between the pipe and the surface (batten or wall) to which the pipe is fixed for the insulation to be properly installed. Under no circumstances are pipes of differing temperatures are allowed to touch.

Pipework Falls - Generally lay pipes to falls to avoid trapped air at the high point and to facilitate the draining of the complete system.

Allowance for thermal movement - In installations with long straight runs and few bends and offsets, make allowance for expansion and contraction of the pipes by forming expansion loops, by introducing changes of direction to avoid long straight runs or by fitting proprietary expansion joints.

Direct hot water pipework, low, medium, and high temperature heating pipework should be insulated in all areas outside of the heated building envelope. In addition, pipes should be insulated in all voids within the building envelope and even within normally heated spaces if there is a possibility that those spaces might be maintained at temperatures different to those maintained in other zones.

Cooled pipework should be insulated along its whole length in order to provide the necessary means of limiting heat gain.

Hot and Cooled Ducting should be insulated along its whole length in order to provide the necessary means of limiting heat gains and/or heat losses from ducts.

**6.6 Waste / Foul Water – Above Ground Drainage System**

Traps - All sanitary fittings, attached appliances and points of discharge into the system to be fitted with a trap (e.g. a water seal trap) to prevent foul air from the system entering the building to BS EN 274, BS 3943.

Waste pipes to be fitted with rodding access points at changes in direction. Where pipe runs exceed permitted lengths an anti syphonic/resealing trap or branch ventilation pipe within 750mm of fitting connecting to soil pipe above spill over level of sanitary fitting to be provided.

Soil Pipes - Provide 100mm diameter soil and vent pipes where indicated and to pass through roof void and terminate with proprietary low profile tile vent minimum 900mm (measured vertically) above any opening e.g. windows, rooflights, doors and air intakes within 3.0m (measured horizontally).

Airtightness - The pipes, fittings and joints should be capable of withstanding an air test of positive pressure of at least 38mm water gauge for at least 3 minutes. Every trap should maintain a water seal of at least 25mm. Smoke testing may be used to identify defects where a water test has failed. Smoke testing is not recommended for PVC-U pipes.

**6.7 Electrical Installations**

Guidance - All new electrical installations are to be designed, installed, inspected, tested and certified by a competent person registered with an electrical self-certification scheme authorised by the Secretary of State approved in accordance to the current edition IEE regulations, BS 7671:2001 and Water Supply Regulations.

Completion - Upon completion of all works a signed self-certification certificate should be provided to the employer and the Approved Building Control Inspector. An Electrical Installation Certificate should also be provided to the employer.

The electrical consumer unit should be positioned at a height of between 1350-1450mm from finished floor height, in accordance with Approved Document P section 1.4.

Network-termination point for high-speed electronic communication networks, in accordance with Approved Document R.

All escape routes should have adequate artificial lighting. If the mains electricity power supply fails, escape lighting should illuminate the route. Escape lighting should conform to BS 5266-1

Every doorway or other exit providing access to a means of escape, should be distinctively and conspicuously marked by an exit sign in accordance with BS ISO 3864-1 and BS 5499-4.

Car-charging Points to be installed in accordance with Approved Document S

**6.8 Smoke Detection And Fire Alarm Systems**

Smoke and heat detection to be installed in accordance with Approved Document B1 and BS 5839-1.

New control panel and detectors to be installed within new building in positions shown on plans, of a suitable type to be compatible with the existing system.

New Systems – All new Fire Alarm and Smoke Detection systems to be installed in strict accordance with non-domestic buildings to be installed to BS5839 Part 1

Supply – All detectors and alarm system equipment to be permanently wired to a dedicated separate mains fused circuit. All Detectors to be interconnected and fitted with rechargeable cells or capacitors or backup batteries.

Audible and visual alarms to be installed in all areas in accordance with Clause 18 of BS 5839-1 g

Detectors – all detectors to be mains operated to comply with BS5839. Manufacturers operating instructions are to be included in the Design, Operating and Maintenance Manuals.

Control Panels and Equipment – where applicable to be installed to specialist consultants design details and specification.

Location – Ceiling mounted detectors to be sited minimum 300mm from walls and light fittings. Detectors to be positioned so that routine maintenance can be carried out easily.

**6.9 Ventilation**

Vent Axia Silhouette 100mm bathroom/toilet fans with integral adjustable electronic overrun timer (5-30 minutes), indication light and back draught shutter, in accordance with Building Regulations Approved Document F.

Mechanical cooker hood extract with 30l/s extract rate, in accordance with Building Regulations Approved Document F.

Purge ventilation to Recreation Hall and Entrance Hall to be provided via external doors.