



CORDWALLIS INDUSTRIAL ESTATE,
MAIDENHEAD

Outline Specification

September 2010 (Rev A)

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OUTLINE SHELL SPECIFICATION

1.0 Materials and Workmanship

All materials used shall comply with the latest relevant British Standard Specifications where applicable, and be compatible with the other materials with which they are intended to function.

Proprietary materials shall be used strictly in accordance with the manufacturer's specifications or printed instructions.

The Works are to be designed and constructed to comply with Planning Requirements, Building Regulations current IEE Regulations, the Fire Authority, all Statutory Requirements and CDM Regulations 1994.

1.1 Performance Specification Insulation

The building is to have minimum "U" values in accordance with the latest Building Regulations.

1.2 Foundations and Ground Floor Slab

The main framework of the building will be supported by cast in-situ reinforced concrete bases.

The perimeter walls will be supported by cast in-situ reinforced concrete bases.

Concrete to bases will be to suit Class DS-2 sulphate conditions as defined by the soils investigation.

A minimum CBR of 2% will be used for the design of on-situ roads and pavements, although this may be increased by further testing at a later date.

Ground slabs will be steel fibre-reinforced, at the design-build contractors discretion UDL capacity 37.5 KN/m². In either case they will be ground bearing on a lapped and taped 1200 gauge polythene separation membrane on compacted, granular fill (nominally sand blinded to fill interstices). Layouts indicating the contractor's casting sequence, hence proposed joint positions, will be required for approval, and possible co-ordination relevant to the fit-out works.

The slabs shall be designed to Load Category "Medium" and Surface Tolerance FM2 as defined in The Concrete Society Technical Report 34, Table 4.1 and 7.1 respectively, and shall be finished with a clear surface dust sealer/hardener. Abrasion resistance to meet Vlass AR2 of BS8204 Part 2, 1987.

The slabs shall be an absolute minimum of 160mm deep, irrespective of design factors.

1.3 Structural Frame

The superstructure will be formed of braced, steel portal frames.

NOTE: Unit height clear to underside of haunch will be 6.0m minimum

Cross bracing will be positioned in agreed locations sympathetic to architecture, and transfer lateral wind forces to the foundations. The steel frame will be Contractor designed to the requirements and approval of the Architect and Engineer.

Concrete / Masonry walls will be restrained relevant to their panel size and the appropriate wind forces, with propriety wind restraint posts where necessary.

1.4 Roof Coverings

The roof coverings shall comprise a British Steel Colorcoat Prisma insulated composite steel roof panel system, colour to be as specified on the Architect's drawings. The Internal liner sheet shall be finished with a factory applied polyester coating colour white. Double skin factory sealed "Mansafe" transparent roof lights shall be provided as an integral part of the roof covering laid in a strip pattern to 10% of the roof area.

Design and fixing of roof sheeting shall be in accordance with the National Federation of Roof Contractors profiled Sheet Metal Roofing and Cladding, "A Guide to Good Practice".

Roof systems shall include for a complete Gecko, Latchway or other equal and approved "Mansafe" horizontal roof harness system.

Roof systems are to be designed and installed strictly in accordance with the manufacturer's instructions and the roof pitch shall be in excess of the recommended minimum specified by the roof sheeting manufacturer.

Gutters to BS 1091 shall be galvanised steel primed and coated with two coats of bituminous paint, connected to a conventional rainwater system with down pipes direct to underground drainage with appropriate rodding access.

The gutters and rainwater disposal system shall be designed with adequate capacity to accommodate maximum anticipated rainfall relative to the catchment area of the roof based upon current available statistical data and site location. A design and calculation check is to be undertaken by an independent consultant to validate the design proposals to be adopted.

Galvanised steel balloon cages are to be fitted to all rainwater outlets and weir overflows to all eaves gutters.

1.5 External Walls

External walls will be constructed with profiled built-up British Steel Colorcoat Prisma insulated cladding with prefinished steel internal liner panel and Kingspan Microrib or equal approved CFC free 1.00m, 0.9 or 0.6m wide composite panels with vertical joint cover strips to conceal fixings and having factory cranked panels at 90° corners (All panels to be L.P.C approved).

Colours and cladding type locations all as indicated on the Architect's drawings. Internal liner panels to be white.

Internally a concrete abrasion wall will be provided to a height of approximately 2.25m.

The void between the top of the concrete abrasion wall and the inner liner panel will be sealed with an appropriate steel closure panel to Architect's detail.

Projecting internal columns are not to be encased.

1.6 Windows, Entrance Door And Glazing

Windows, entrance doors and associated glazing will be provided as shown on Architect's drawings.

Frames to be polyester powder coated Kawneer or similar approved aluminium and double glazed with anti sun glass outer leaf and clear inner leaf toughened or laminated where necessary in compliance with Building Regulations.

Approximately fifty percent of all windows will be "opening lights" top hung operation incorporating lockable handles to comply with current Building Regulations.

The entrance doors are to comprise a pair of 90° action leaves with 5 lever cylinder dead lock, flush bolts, built in concealed heavy duty closers and 400 x 75mm letter plate.

1.7 Loading Bay Doors

Manual operated "level intake" sectional overhead loading bay doors shall be provided comprising Crawford Doors or similar approved, minimum clear opening width of 3.0m wide x 4.0m high, each door to have manual override. Door to include spring break safety device and incorporate weatherstrip to bottom edge. Door and framing to have polyester powder coat finish to approved colours.

1.8 Fire Escape Doors

Fire escape doors shall be proprietary steel in steel frames and fitted with "Panic Latch" escape ironmongery and site painted internally and externally to approved colour. Numbers and locations are to comply with the Fire Officer's requirements.

1.9 Office Entrance Canopy

A clear polycarbonate roof entrance canopy feature to the office entrance shall be provided to Architect's detail.

1.10 Internal Walls

Internal walls shall be either concrete, dense blockwork or Gyproc metal stud partitions.

1.11 Internal Doors

Internal doors shall be Maple veneer solid core hardwood lipped flush doors in painted softwood frames/architraves fire resisting as necessary, with vision panels to all circulation doors.

Ironmongery shall be good commercial quality anodised aluminium or stainless steel and shall include kicking plates both sides, overhead door closers, locking devices, lavatory designatory symbols and door stops.

1.12 Internal FinishesWalls

Warehouse - Concrete Walls / Fairface blockwork / Gyproc metal studwork.

Offices / Circulation - Three coats vinyl matt emulsion paint finish.

Toilets - Ceramic tiles, prime cost £22.00 per m² supply only. (2 course splashback) Three coats vinyl silk emulsion paint finish.

Floors

Offices / Circulation - Carpet tiles £30.00 per m² laid incorporating a Nuway Tuftguard or similar mat in stainless steel inset frame.

Toilets - Vinyl sheet flooring and coved skirting.

Kitchen (if required) - Vinyl sheet flooring and coved skirting.

Ceilings

Offices - 600mm x 600mm Armstrong Due Tegular tiles in exposed lay-in grid colour white.

Toilets - Gyproc M/F plasterboard system painted with Three coats vinyl matt emulsion paint finish.

Kitchenette - Ceramic tiles, prime cost £22.00 per m² supply only. (2 course splashback) Three coats vinyl silk emulsion paint finish.

Skirtings - 25 x 100 mm painted softwood skirting.

Window Boards/ - MDF with gloss paint finish.

1.13 Toilet Accommodation

Toilet accommodation shall be as outlined on the Architect's drawings.

General sanitary fittings shall be Armitage Shanks or equal approved white vitreous china with chrome accessories. Washbasins shall be pedestal type with mixer taps.

Fittings shall include toilet roll holders, hat/coat hooks, over basin mirrors, electric hand-driers and shaver sockets.

Disabled toilet fittings shall be Twyford's Avalon or equal approved all in accordance with statutory requirements and shall include all necessary disabled grab rails.

All pipes and fittings are to be installed to ensure that service runs, etc., will be concealed where practicable. Access panels to be provided for inspection and cleaning.

Upon completion of sanitary plumbing installation all necessary measures are to be given to testing before finally concealing. All tests to be in accordance with minimum standards set by relevant Codes of Practice and authority bodies.

1.14 Mechanical Installation

Generally

The mechanical installation to the units including the offices will comprise the following:

1. Hot and cold water services to wash hand basins / Kitchenette sink.
2. Ventilation to toilets and offices where necessary.

Cold Water Supply

From point of entry position a cold water main is to be extended to serve the following with stop cocks or isolation valves at each point of use:

1. Kitchenette sink.
2. WC's.
3. External watering points.

Hot Water Supply

A suitably sized (to allow for an increase in the hot water requirement of 25%) pre insulated hot water heater is to be provided for domestic hot water services, with a primary coil suitable for 1 hour recovery period to serve the following:

1. Wc basins.
2. Kitchenette sink.

No dead-leg length shall exceed the length stipulated by the water authority.

Ventilation System

A ventilation system shall be provided to toilets and offices and any other areas as required to meet the air change requirements of the Building Regulations.

Fresh air is to be supplied via concealed ducting and external intake louvres giving due consideration to aesthetic and planning considerations. Extract air is to be through the roof away from the eaves via a weather proof upstand flashing terminating 300mm above roof level and finished with a weatherproof cowl.

Inlet and extract diffusers should be self finished white and be co-ordinated with the ceiling grid and lighting layout.

Test and Commissioning

Testing and Commissioning certificates for all mechanical systems shall be available on Practical Completion.

Operation and Maintenance Instructions

Operating and Maintenance instructions shall be provided on Practical Completion to include the following data:-

- a. "As Installed" drawings
- b. Testing and Commissioning Certificates
- c. Instructions on the operation of the system
- d. Details of required maintenance and frequency
- e. Fault finding procedure
- f. Details of plant and equipment including name and address of manufacturer and catalogues reference numbers
- g. Manufacturer's instruction leaflets and literature

1.15 Electrical Installation

Generally

The electrical installation to the units will comprise the following:-

1. Electrical distribution and sub distribution services
2. Lighting installation
3. General Power
4. Heating and ventilation system wiring
5. Fire alarm installation
6. Security and telephone installation (conduit only)

Distribution

Distribution boards, isolators, switches and fuse gear including earth leakage circuit breaker MCB distribution board shall be provided with 25% spare ways.

Lighting Installation

The lighting installation shall be designed to provide the following lighting levels:-

- | | |
|---------------------|--|
| Office Areas | - Low brightness, recessed Category 2 luminaires (aluminium diffuser type) suitable for continuous VDU use. 500 Lux. |
| Reception | - Low voltage recessed downlighters lighting system 500 Lux. |
| Toilets/Kitchenette | - Recessed compact fluorescent luminaires or other approved fittings. 300 Lux. |
| Warehouse | - By tenant. |

An emergency lighting system shall be provided to the satisfaction of the Fire officer including lighting to internal escape routes and external fire escape doors as applicable.

All lighting switches shall be MK Logic Range or similar. All offices shall be two-way switched. Switches mounted at 1,350mm above finished floor level except in disabled toilet where they shall be at 1,040mm.

All luminaires are to be uniformly spaced to suit the environment and required lighting levels.

Final connections to all luminaires in areas containing suspended ceilings shall comprise 3 pin plug-in rose, suitable length of 3 core 1.5 sq.mm² PVC/PVC white circular flexible cable and rubber grommet at entry points to luminaires.

All lamps shall be white fluorescent

General Power

The general power installation shall comprise the following:-

- Offices - Power distribution via 3 compartment dado trunking (self white finish) to all office perimeters with 1 No. twin switched socket outlet and 1 BT outlet at 2m centres in relocatable boxes.
- Reception - Power distribution via 2 No. wall mounted recessed double switched socket outlets to perimeter and 2 No. BT outlets in positions to be agreed.
- Circulation - One No. twin wall mounted recessed socket outlet to be provided in each area.
- Toilets - Power supplies and illuminated switched fused outlets for shaver sockets and hand-dryers.
- Generally - Suitable power supplies and wiring for electric heaters, heating and ventilation installation, etc.
- Warehouse - By tenant.
- Kitchen - 2 No. twin switched socket outlet and 2No swithed spur outlets for future appliances provided by tenant.

All accessories and fittings shall be flush white as manufactured by MK Logic range.

All wiring unless otherwise stated shall be concealed.

Heating

The electric heating system shall be designed to provide the internal temperatures listed below with an external ambient of -4°C . Allowance shall be made for 1 air change per hour due to infiltration together with any allowances required due to mechanical ventilation.

Offices and Reception Area	21 $^{\circ}\text{C}$
Toilets	13 $^{\circ}\text{C}$

Electric radiator / convector panels to be located in agreed locations to all office / reception areas. Radiators / convector panels shall be pressed steel and coloured white each radiator shall have ten percent spare capacity over and above the calculated required design output.

Fire Alarm Installation

A fire alarm installation shall be installed in accordance with the requirements of the Local Authority throughout the building.

Security and Telephone Installation

PVC conduits and skirting trunking with draw wires for Security and Telephone Installation concealed within the fabric of the building shall be provided for wiring by the Tenant.

Labelling

All main switches, sub-main switches, distribution boards and time switches, shall be clearly labelled in accordance with the 16th Edition of the IEE Regulations with the following information:

1. Item description.
2. Item voltage.
3. Item served.
4. Supplied from.

Labels shall be traffolyte with black letters on white and fixed to the item by rivets or screws. Adhesive fixing of labels will not be acceptable.

Circuits shall be marked on the boards as well as contained in plastic folders in the boards.

Testing

Testing shall be carried out in accordance with electricity board and the IEE Regulations BS7671. An installation completion certificate shall be provided on Practical Completion.

Operation and Maintenance Instructions

Operating and Maintenance Instructions shall be provided on Practical Completion incorporating the following data:

- a. "As Installed" drawings.
- b. Circuit test record charts.
- c. Instructions on the operation of the system.
- d. Details of required maintenance and frequency.
- e. Fault finding procedure.
- f. Details of luminaires and equipment including name and address of the manufacturer and catalogue number.
- g. Manufacturer's instruction leaflets and literature.
- h. Electrical installation Completion Certificate.
- i. Emergency call out numbers.

Lightning Protection

A lightning protection system shall be provided in accordance with BS:6651 1992 to each Unit.

2.0 External Works

Access Road

The new access road shall comprise concrete block paviors on suitable granular sub-base designed and constructed for use by 44 tonne heavy goods vehicles; kerbs shall be pre-cast concrete.

Service Areas and Car Parking

The service yard areas to be concrete block pavements with gradients not greater than 1:60 adjacent to the service bay doors. Generally the gradient in service areas shall be no greater than 1:60 unless specifically agreed at access points or ramps. Construction of the service areas will be designed to take the loadings of 44 tonne heavy goods vehicles. Car park spaces are also to be concrete block pavements delineated in contrasting coloured pavements including symbol designation for disabled spaces.

Pedestrian paving shall generally comprise precast concrete paving slabs.

The perimeter of the service yard and car parking adjoining landscaped areas to be formed in standard pre-cast concrete kerbs and edgings.

Surface water is to be collected and discharged into drains within the Service Area via heavy duty continuous channels A petrol interceptor shall be provided as required by the Local Authority.

Bollards/Metalwork

200mm diameter concrete filled dome capped steel bollards 1,200mm high above and below ground set in concrete and painted yellow/black hoops will be provided to the loading bay doors (1 pair per door) and to vulnerable areas of the service yards. Other exposed corners and elevations to be protected from vehicular damage by suitable barriers or kerbs to Architect's details.

Galvanised steel 'hooped' cycle racks adequate for the retention of 2 No. bicycles shall be provided to each unit.

Drainage

All external hard paved areas and the building roof drainage will be provided with adequate storm water drainage to the satisfaction of the Local Authority.

Landscaping

Soft landscaping will be provided in accordance with Local Authority requirements.

External Lighting

External Lighting to the service yard and car parking areas will be provided by off building luminaires wired back to each tenant's distribution board to provide an average general illumination level of 25 Lux. Each Unit lighting control to be via photo electric cell with override via a time clock.

Signage

A development name board shall be provided at the frontage of the site adjacent to the Access Road.

3.0 Incoming Services

The following services will be provided and terminated in agreed locations: -

Telephones

A supply duct linked to BT network with draw wire is to be brought into each unit terminating in an agreed location within the ground floor core area.

Electricity

A 3 phase 415/240 volt supply terminating in an agreed within the ground floor shall be provided to each unit

NB: The incoming tenant will complete a meter application with the Electricity Board as eventual user and liaise with the Employer's Agent regarding the connection date.

Gas

A gas service supply is to be brought up to each unit terminating in an agreed location outside the building.

NB: The incoming tenants will complete a meter application with the gas supplier as eventual user and liase with the Employer's Agent regarding the connection date.

Water

A 25mm water supply is to be provided to each unit complete with a water meter.

NB: The incoming tenants will complete a meter application with the water authority as eventual user and liase with the Employer's Agency regarding the connection date.

4.0 Exclusions

- Lifts (Unless required by tenant)