



Outline Shell Specification for Omega Industrial Units

Omega, Warrington

May 2010

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1 Accommodation and design features

Generally the building comprises a single storey industrial building to shell specification with serviced and finished office accommodation at first and second floors, accessed from ground floor via the main core, all within the envelope of the main building. The development includes all associated service yards, car parking, hard standings, drainage and landscaping works.

The building is a portal framed steel structure supporting wall and roof cladding. Subject to ground conditions the frame will be supported on mass concrete foundations with pinned base connections. Any perimeter masonry will be supported on mass concrete or precast concrete ground beams. Subject to ground conditions the ground floors will be a ground bearing reinforced concrete slab. The first and second floors will be precast concrete wideslab units or insitu concrete on a permanent formwork. The roof comprises a profiled insulated built up roof cladding system with 15% rooflights. The external walls to the warehouse are clad with a profiled built up wall cladding system with the external walls to the offices clad with a composite insulated "flat panel" cladding panel. Windows and external doors will be double glazed and constructed in coloured polyester powder colour aluminium frame.

Blockwork partitioning will form core areas, with a suitably fire retardant plasterboard stud wall separating the offices and warehouse at first and second floor levels. The offices will be left open plan for occupiers fitting out. Offices and core areas have carpet floor finish with vinyl in wet areas. Office and core areas to have plastered painted walls and toilets fully tiled. Suspended ceilings will be provided throughout all office areas. Services will be brought into the building to provide office areas with mechanical heating, ventilation, electrical lighting and power, water services and a telecommunications duct infrastructure.

External works to include concrete service yard and macadam car parking with white lining for an appropriate number of cars to suit the building size as indicated on the drawing, feature landscaping and vitrified clay drainage.

2 Substructure

The foundations will be designed appropriate to the ground conditions which will be established from a detailed site investigation undertaken by a suitably qualified geo-environmental Engineer. The ground floor slab will be designed for a uniformly distributed load on the slab of 37.50 kN/m², and/or concentrated point loads from racking of 60kN with a 100kN end frame. The floor will be power float finished to Concrete Society Technical Report No. 34 FM2 Property IV, and will be finished with a proprietary clear dust sealer/surface hardener.

3 Frame

Two Span Structural steel portal frame, 12.00m height to underside of the structural haunch with hit and miss central columns. The frame will have galvanised pressed metal secondary steelwork fix back and support the wall and roof cladding panels.

The steel frame will be designed to BS 5950 for a service loading of 0.25kN/m² generally. Provision for fire protection of the steelwork will be made where required to comply with the Building Regulations.

The Structural steelwork will be blast cleaned (SA 2.5) and shop primed to a 75 micron Dry Film Thickness with an epoxy zinc phosphate self finished primer to a standard colour. Any erection and handling damage will be touched up on site by brush painting with the same paint. Colour consistency of touch up cannot be guaranteed.

4 Upper Floors

Precast concrete wideslab floor units or an insitu concrete slab on permanent formwork will be used to form the first and second floor of the office accommodation. The upper floors will be designed to carry a superimposed uniformly distributed loading of 5.0kN/m² with an additional allowance for lightweight moveable partitions, ceiling finishes and services.

5 Roof

Proprietary trapezoidal profile, built up roof cladding system with HSP200 coating from a standard colour range. The external sheet thickness will be not less than 0.70mm. White enamel self-finished lining panel forms the internal face of the build up system. Air permeability detailing and insulation will be provided to meet current Building Regulations (assuming the space is heated). 15% of the roof area will comprise twin skin rooflights. The roof pitch will be not less than 6°. Concealed galvanised pressed metal gutter to suit symphonic drainage system with metal colour coated fascia detail matched to cladding will be provided.

6 Stairs

The main access staircase between ground floor reception and the upper floors shall be precast concrete with half landing all designed to meet DDA regulations for ambulant stairs and fire escape requirements. Balustrading and handrails will be constructed of powder coated steel or aluminium tube.

Secondary escape stairs will be painted steel with concrete filled metal pan treads and solid metal risers. Handrails and balustrades will be painted steel.

7 External Walls

The main unit will have a full height proprietary trapezoidal profile insulated built up wall cladding system with HSP200 coating from a standard colour range generally with panels and colours as indicated on elevations drawing. The outer sheet cladding thickness will not be less than 0.55mm. White enamel self-finished lining panel forms the internal face of the build up system. Insulation and air permeability requirements will be provided to meet current Building Regulations.

The external wall of the office elevations will be a proprietary composite micro rib insulated wall cladding system with LPC Grade B core. Insulation and air permeability requirements will be provided to meet current Building Regulations.

External walls adjacent to boundaries to be detailed and constructed to meet Building Regulation fire resistance requirements

Concrete fair faced paint grade blockwork up to dado height will be provided to the inner perimeter of the main unit including under the offices and will be 2.25m high.

8 Windows and External Doors

Electrically operated insulated sectional overhead doors will be provided as per following table. The level access doors will be 4.00m wide x 5.00m high and the dock level access doors will be 3.50m wide x 3.50m high. Each door jamb shall have a 100mm diameter steel bollard both internally and externally for protection from collision by vehicles.

Gross Warehouse Area (Ft Sq)	Dock Levellers (Number)	Level Access Doors (Number)
50,000	5	1
100,000	10	2
150,000	15	3
200,000	20	4
250,000	25	5
300,000	30	6

Steel personnel emergency exit doors will be provided to meet the means of escape requirements under the Building Regulations. Emergency exit doors and frames will be colour matched to complement the cladding. Appropriate emergency exit door ironmongery and signage will be provided.

The offices have Polyester powder coated aluminium double glazed ribbon window units with opening casements and trickle vents for ventilation and a pair of entrance doors and escape doors. The window and door frame colour will be to a standard colour range selected to match/complement the cladding. Glazing units to have grey body tinted laminated outer pane for increased security and to meet solar gain requirements of Building Regulations Part L2. The entrance doors will have appropriate ironmongery including concealed overhead door closers and matching pulls.

9 Internal Walls and Partitions

The strength of all blockwork will be 7N/mm². Blockwork partition walls will form and divide the office core and ancillary areas. Main office areas are left open plan for fitting out by the Client. A proprietary

fire resistant stud to meet building regulations will divide the offices from the warehouse at first and second floor levels.

Proprietary WC cubicle partitioning, vanity units and duct systems will be provided to all WC positions from a standard range and colour to include post formed edges.

10 Internal Doors

Internal doors to be self finished ash veneered flush doors, with Georgian wired glazed vision panels where appropriate, fire resistant to appropriate levels and complete with complete with steel cored, nylon colour coated ironmongery from an approved range and signage appropriate to the function of the door. All doors will have locks which will be master keyed. Ironmongery is to include 200mm high kick plates to both sides of all doors, closers and door stops to all doors.

11 Wall Finishes

Generally the fair-faced block walls in the warehouse shall be painted with three coats of masonry paint. The remainder of the internal linings to external walls and roof soffit within the warehouse will be self finished as part of the wall and roof cladding systems.

The walls to the office areas generally shall be plastered and emulsion painted.

Toilets shall be fully tiled with feature band from a standard colour range

The kitchen shall be plastered and finished with three coats of emulsion paint. Tile splash backs will be provided three courses high above the worktops.

All internal rainwater, soil and vent and waste pipes will be encased in ductwork finished to match adjacent wall areas. All heating pipework to be surface mounted and painted to match the background wall finish.

12 Floor Finishes

Broad loom carpet shall be provided to office areas generally including stairs with softwood painted skirtings. Gradus or equal approved nosings to stairs.

Heavy duty vinyl sheet to a standard colour with black sit-on PVCu coved skirtings will be provided in toilets and kitchen.

An aluminium matwell including frame and entrance matting will be provided inside the main entrance door.

13 Ceiling Finishes

Mineral fibre suspended ceilings in an exposed white finished T-bar grid shall be provided to office areas selected from a standard range of tiles and suspension systems to a quality and with a support system suitable for supporting integrated recessed light fittings.

The suspended ceiling will be installed at a minimum height of 2700mm AFFL with a ceiling void not less than 600mm deep (clear dimension).

Moisture resistant tiles will be provided to wet areas.

14 Fittings and Furnishings

14.1 Warehouse

Electrically operated dock levellers (capacity 9,000kg live load), of plan size 2.00m wide x 2.80m long with extending lips. Dock levellers to have safety interlock with overhead doors to prevent operation when door is shut.

Laminated double base unit to one sink position in the canteen/kitchenette with wall hung cupboard units above worktops. Plumbing for dishwasher to be provided.

14.2 Office

Laminated double base unit to one sink position in the kitchenette with wall hung cupboard units above worktops.

Mirrors in toilets on the wall above each wash hand basin position. Vanity unit tops in toilets.

14.3 General

Fire escape signage as required by the fire officer.

15 Sanitary Appliances

W.C.'s, inset wash hand basins and wall hung urinals in toilet areas as appropriate for the building size and number of occupants. Rainwater will be harvested and reused for the flushing of the toilets.

One stainless steel inset sink unit allowed in the kitchenette.

All selected from standard range of fittings and colours.

16 Disposal Installations

Above ground surface water drainage will be provided by a siphonic system. Rainwater pipes will be in material to suit gutters as appropriate.

PVCu soil, waste and vent pipework internally to toilet areas.

17 Water Installations

Insulated hot and cold water distribution pipework generally to appliances in the office and ancillary accommodation areas. A drinking supply, labelled as such, will be provided to the sink in each kitchenette area.

18 Heat Source

Each area will be provided with a local direct electric semi instantaneous water heater located in a concealed yet accessible position to provide all draw off points with hot water. Dead legs to any appliance will be kept as short as possible and in all instances shall not exceed 2m in length. Thermostatic mixing valves will be provided to all wash hand basins within disabled WC's.

19 Space Heating

19.1 Office Comfort Cooling and Heating

(based on an "open plan" office inc comms room)

A gas fired low pressure hot water radiator heating system will be afforded throughout the Office Areas, Toilets and ancillary/welfare areas, staircases, landings and reception. The main plant will comprise a gas fired atmospheric sectional cast iron boiler, duplicate heating circulating pumps duty and standby, twin wall metal flue to above roof, wall mounted control panel, pipes, valves, fittings and thermal insulation. Weather compensation control modulating the flow water temperature to improve comfort level will be incorporated into the automatic control system together with optimum start-stop control. Main distribution pipe work will be extended, where possible, in concealed ceiling void spaces to serve radiators of the pressed steel flat fronted panel type located generally below windows. All pipe work within the floor and ceiling voids will be thermally insulated to BS 5422.

Any pipe work exposed to view will be run in a neat manner to serve radiators with thermostat radiator valves on the flow and lockshield valves on return connections.

20 Design Criteria

Offices	-	To mandatory Health and Safety requirements
External Temperature	-	To mandatory Health and Safety requirements
Internal Temperature	-	To mandatory Health and Safety requirements
Air Infiltration	-	4 air change per hour
Noise Level	-	NR40

It should be noted that achieving a low noise level within the offices is a priority and mechanical ventilation noise is to be kept to a minimum.

Where possible recycled materials or materials from a sustainable source will be used.

21 Ventilating Systems

Air in the toilets, kitchenette and any internal offices is extracted through suspended ceiling grills and ducted to the outside air. Ventilation systems to be complete with twin extract fans and attenuators where necessary to maintain NR45 max. Control of extract fans shall be via PIR's located within each space with adjustable run-on timers to each fan. Acoustic separation between rooms shall be

adequately considered using cross talk attenuators where necessary. Ventilation to the general office area is achieved through trickle vents and opening casements to the windows in accordance with Building Regulation requirements.

22 Electrical Installations

The lighting within office and ancillary accommodation areas will be in accordance with C.I.B.S.E Guide to Lighting LG7 : Lighting for Offices and shall consist of 600mm square recessed modular luminaires with low brightness parabolic mirror controllers to provide a working illumination of 500 lux at the working plane.

Toilets, stores, plant rooms and any remaining parts of the office and ancillary accommodation areas are to be illuminated using recessed fluorescent luminaires with prismatic diffusers to provide working illumination of 100 lux. The fittings will be chosen for their ability to integrate with the selected suspended ceilings. No low voltage fittings will be incorporated.

Twin 13A switched socket outlets at positions to be agreed at the rate of one per 10m² of floor area will be provided to all office and ancillary accommodation areas with at least one twin 13A outlet provided to each room.

A fused connection unit for a hand dryer will be provided in each toilet.

An emergency lighting installation will be provided in accordance with BS5266 to cover all escape routes. The system will comprise standard luminaires incorporating 3 hour self-contained battery units.

All switches, outlets and ancillary equipment shall be positioned in accordance with Building Regulation requirements.

The electrical installation will be in accordance with the latest edition of BS7671 IEE Wiring regulations.

23 Gas Installations

A suitably sized valved and capped connection will be provided at an agreed position to allow connection to the warehouse heating system in the future.

24 Protective Installations

A lightning protection system to the building will be installed in accordance with BS 6651 if applicable.

25 Fire Alarm

A fire alarm system will be provided to the offices of the fully automatic and fully addressable analogue type, all in accordance with the requirements of BS5839 and the Local Fire Officer. The equipment will incorporate a main fire alarm panel located in the reception area, break glass manual contacts on all escapes to provide a complete system with zones being arranged to generally suit the Client's

requirements. Spare zones will be provided to permit the future addition of warehouse areas and cellular offices. Sounders will be provided throughout the offices to accord with the standard. The system will be wired in red firetuf or equal cable extended in a concealed manner in the Main Offices.

26 Lift Installations

A single lift to facilitate disabled access to the upper floor of the main office will be an eight person passenger lift to meet the requirements for disabled access

27 Builders Work In Connection With Services

All builders work in connection with service installations is included.

28 Site Works

The existing road infrastructure will be extended to provide a scheme entrance facility.

The service yard area will be designed and constructed in reinforced concrete and will be capable of being used by the heaviest unescorted articulated vehicles generally permitted on the U.K. highway. Gradients will not exceed 1:40 in any direction.

A macadam surfaced car park will be provided to suit the required number of vehicles. Precast kerbs, edgings and quadrants and white lining to show parking bays will all be provided as required.

A landscaping scheme will be provided to all areas within the plot boundary not requiring hard surfacing and to the future development site boundary. All as indicated on landscape drawings and to the approval of the Local Planning Authority.

New subterranean ducts of suitable type and size are to be provided for cable works in conjunction with CCTV security camera and control room positions to allow the positioning of cameras in such a manner so as to ensure that all areas of the site can be adequately covered.

A new 2.4m high fence pre finished in colour to Local Planning Authority approval to the site boundary complete with entrance gates to match will be provided.

29 Drainage

All hard landscaped areas shall be laid to falls to road gully drains or drainage channels. New surface and foul drainage systems will be provided and will be connected into the existing service infrastructure. If required by the Local Authority or the Environment Agency surface water will be controlled and attenuated on site in line with Sustainable Urban Drainage Systems (SUDS) Methodology and disposed of to the adjacent surface water sewer network. The roof drainage is to be a siphonic drainage system designed by a specialist sub-contractor. The rainfall intensity shall be derived in accordance with BS EN 12056-3:2000, Category 3 risk, based on a 25 year unit life. Where a primary and secondary system is to be used, the primary system will be stored for reuse to flush toilets etc. and the secondary will drain the balance, which may discharge onto external paved

surfaces (but remote from door entry positions and fire exit routes). The entire system shall be designed for a 112.5 year Return Period.

30 External Services

30.1 Gas Supply:

The gas supply infrastructure to serve the plot is in place and an incoming gas supply will be installed sufficient to serve the gas requirements of the building as described in this specification. The supply shall terminate with a meter.

30.2 Water Supply:

The water supply infrastructure to serve the plot is in place and a metered incoming mains water service will be provided to serve all internal draw off points as described in this specification.

30.3 Electricity Supply:

All the installation will be in accordance with the latest edition of the I.E.E. Regulations (including all amendments). The electric supply infrastructure to serve the plot is in place and a metered incoming supply will be installed sufficient to serve the electrical requirements of the building as described in this specification. The supply shall be sized appropriately to meet the anticipated demand of the building, and in any case will allow a minimum small power load of 20W/m² to the office areas and 10W/m² in the warehouse in addition to any loads associated with lighting and other equipment identified within this specification.

30.4 Telecommunications Supply:

Incoming telephone/data duct infrastructure will be provided capable of supporting the number of business/data lines required. The incoming service will terminate in reception.

30.5 Builders Work in Connection with External Services:

All ducts, trenches, connections, holes, channels, chases, meters (including housings and bases where required) and general builders work items in connection with the statutory service installations, as will be required by the development in accordance with this specification, will be included.

30.6 External Lighting:

An external lighting system will be installed to maintain a minimum lighting level in accordance with CIBSE Guide for Lighting LG 6. The system will consist of a mixture of column and building mounted luminaries with distribution via underground ductwork. The column heights and lighting system shall be as approved by the local Planning Officer and Building Control.