CONSTRUCTION OF AN
INDUSTRIAL FACILITY
AND
OFFICES
For

W LAMB LTD

Unit 1, Plot 1 and 2
ASTON 41
ASTON CLINTON

SPECIFICATION
March 2017
CLAUSE AND CONTENTS INDEX

1.0 Introduction

2.0 Design, Materials and Workmanship Standards

3.0 Drawings

4.0 Exclusions

5.0 Specification
   (BASED ON NBS STANDARD WORK SECTIONS)

C  Existing site/buildings/services
    C10  Site survey
    C11  Site investigation
    C20  Demolition

D  Groundwork
    D20  Excavating and filling

E  In situ concrete/Large precast concrete
    E05  In situ concrete construction generally
    E10  Mixing/casting/curing in situ concrete
    E30  Reinforcement for in situ concrete
    E40  Designed joints in in-situ concrete
    E41  Worked finishes to in-situ concrete
    E60  Precast/composite concrete floors/roof decks

F  Masonry
    F10  Brick/ block walling
    F30  Accessories/ sundry items for brick/ block/ stone walling
    F31  Precast concrete sills/ lintels/ copings/ features

G  Structural/Carcassing metal/timber
    G10  Structural steel framing
    G12  Isolated structural metal members
    G20  Carpentry/ timber framing/ first fixing
    G30  Metal profiled sheet decking

H  Cladding/Covering
    H20  Rigid sheet cladding
    H31  Metal profiled/ flat sheet cladding/ covering
    H32  Plastics profiled sheet cladding/ covering
    H43  Metal composite panel cladding/ covering

J  Waterproofing
    J40  Flexible sheet tanking/ damp proofing
    J42  Single layer polymeric sheet roof coverings
K Linings/Sheathing/Dry partitioning
   K10 Plasterboard dry linings/ partitions/ ceilings
   K32 Panel cubicles
   K40 Demountable suspended ceilings

L Windows/Doors/Stairs
   L10 Windows/ Rooflights/ Screens/ Louvres
   L20 Doors/ shutters/ hatches
   L30 Stairs/ ladders/ walkways/ handrails/ balustrades
   L35 Fixed utilitarian access systems
   L40 General glazing

M Surface finishes
   M10 Cement based levelling/ wearing screeds
   M12 Resin flooring
   M40 Stone/ concrete/ quarry/ ceramic tiling/ mosaic
   M50 Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting
   M60 Painting/clear finishing
   M61 Intumescent coatings for fire protection of Steelwork

N Furniture/Equipment
   N10 General fixtures/ furnishings/ equipment
   N13 Sanitary appliances and fittings
   N14 General signage systems
   N15 Fire and safety signage systems
   N17 Portable fire fighting systems
   N25 Permanent access and safety equipment

P Building fabric sundries
   P10 Sundry insulation/ proofing work
   P12 Fire stopping systems
   P20 Unframed isolated trims/ skirtings/ sundry items
   P21 Door/ window ironmongery
   P30 Trenches, pipeways and pits for buried engineering services
   P31 Holes, chases, covers and supports for services

Q Paving/Planting/Fencing/Site furniture
   Q10 Kerbs/ edgings/ channels/ paving accessories
   Q31 External planting
   Q35 Landscape maintenance
   Q40 Fencing
   Q41 Barriers/ guardrails

R Disposal systems
   R10 Rainwater drainage systems
   R11 Above ground foul drainage systems
   R12 Below ground drainage systems
   R18 Pumping stations and pressure pipelines
<table>
<thead>
<tr>
<th>X</th>
<th>Transport Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>X12</td>
<td>Vertical Platform Lift Systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Z</th>
<th>Building fabric reference specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z10</td>
<td>Purpose made joinery</td>
</tr>
<tr>
<td>Z11</td>
<td>Purpose made metalwork</td>
</tr>
<tr>
<td>Z12</td>
<td>Preservative/ fire retardant treatment</td>
</tr>
<tr>
<td>Z20</td>
<td>Fixings and adhesives</td>
</tr>
<tr>
<td>Z21</td>
<td>Mortars</td>
</tr>
<tr>
<td>Z22</td>
<td>Sealants</td>
</tr>
<tr>
<td>Z31</td>
<td>Powder coatings</td>
</tr>
</tbody>
</table>
1.00 Introduction

1.1 Project Description

1.1.1 The project will comprise the civil, structural and building works associated with the construction of an industrial unit with associated offices at Aston 41 industrial estate, Aylesbury, Bucks.

1.1.2 The development will include car parking, operational yard area, landscaping, services and drainage all as described on the contract drawings and in the contract documents.

1.1.3 The scope of the Project includes the construction of the estate road serving the site. The road, footpaths and street lighting are to be constructed to adoptable standards and strictly in accordance with the Consultant Engineers details and drawings. A separate specification is included in the contract set covering the road and associated works.

1.1.4 The accommodation to be provided includes a large open production space with 2 storey offices. The ground floor of the offices includes the main entrance and reception leading to the main accommodation stair. The first floor contains offices and staff toilets. Enclosed fire escape/access stairs link the first floor offices to the production area and provide means of escape.

1.1.5 The project has Planning Permission. Copies of the consent are included in the Employers requirements pack.

1.1.6 Consultation has taken place with the Building Regulations Approved Inspector, Approved Design, during the course of design development. Copies of the consultation report are included in the Employers Requirement pack.

1.2 Specified Items

1.2.1 Where reference is made in this specification to specific products or manufacturers, alternatives of similar quality and performance may be substituted subject to prior written approval of the Architect and the Employer.

1.3 Standards are noted and listed in the Preliminaries and Pre-ambles section of the tender document.

1.3.1 All elements of the works, materials, and workmanship will be designed and constructed in accordance with all relevant British Standards and Codes of Practice current at the time of commencement of the works including (but not exclusively) the following:-

- The 16th Edition of the IEE Wiring Regulations
- Health and Safety at Work Act
- Local Water Board Requirements and Regulations
- The Gas Safety Regulation
- The Clean Air Acts
- The Local Authority Building Regulations 1992 and subsequent amendments thereto, subject only to the relaxations sanctioned by the Department for Communities and Local Government.
- Specific requirements of the Utility Supply Local Authorities and Local Planning Authorities.
- The British Standards and Codes of Practice
The requirements of the Local Fire Brigade
The CIBSE Guides
The Factories Act 1961
Local Authority Bye-Laws
The Electricity Supply Act
Construction (Design and Management) Regulations (CONDAM) 2007
Exclusion of materials identified as potentially hazardous in BPF/BCO report
“Good practice in the selection of construction materials”-
Highways Agency Design guidelines

1.4 Site Cleanliness

1.4.1 The site will be regularly cleaned of all dust and debris arising from the works to prevent the accumulation of debris that could cause problems at completion. Cleaning will take place at least once per week. Operatives and sub-contractors will be made aware of the required standards and will be required to take measures in the manner of working to minimise the risk of dirt and dust accumulation. Regular inspections will take place.

2.0 Design, Materials and Workmanship Standards

2.1 All design, materials, workmanship and any testing shall all be in accordance with the latest amendments of the Building Regulations, the relevant British Standards and any other relevant mandatory documents at the time of the tender.

2.2 The design life of the structural and civil elements shall be as follows;

<table>
<thead>
<tr>
<th>Element</th>
<th>Life Span</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building structure</td>
<td>50 years</td>
</tr>
<tr>
<td>Drainage</td>
<td>50 years</td>
</tr>
<tr>
<td>Roads and Paving</td>
<td>25 years without significant maintenance and repairs</td>
</tr>
</tbody>
</table>

2.3 The design, materials and workmanship of the structural and civil elements of this project shall be in accordance with the current revisions and amendments of the following documents:

The Building Regulations
BRE Design Guides
The Highways Agency design guidelines
The National Structural Steelwork Spec (NSSS)
The National Building Spec (NBS)
NHBC
BS EN 752 Drain and Sewer systems outside buildings
BS5268 Structural use of Timber
BS5628 Structural use of Masonry
BS5950 Structural use of Steelwork in Buildings
BS6399 Loading for Buildings
Part 1 Dead and Imposed Loads
Part 2 Wind Loads
Part 3 Imposed Roof Loads
BS8000 Workmanship on Building Sites
BS8002 Earth Retaining Structures
BS8004 Foundations
BS8102 Protection of structures against water from the ground
BS8110 Structural use of Concrete

2.4 Drawings

2.4.1 For the purposes of the tender, the following drawings are to be read in conjunction with this specification and the Contract documents:

The DCM Partnership drawings:
866/C/001C Site Plan
866/C/101A Site Setting Out
866/C/201E Warehouse Floor Plan
866/C/202G Office Plans
866/C/204A Main Staircase
866/C/301A Roof Plan
866/C/401E Elevations
866/C/501E Sections
866/C/801B Door Schedule
866/C/802A Window Schedule
866/C/803A Schedule of Internal Colours and Finishes
866/C/901B External Works

3.0 Exclusions

The supply of all fire fighting equipment, hose reels, smoke ventilators and extinguishers and any other first aid fire fighting equipment as a requirement of the Local Authority Building Regulations and/or Bye Laws or the Fire Officer other than included in the scope of works. The use and supply of the items above to comply with the Regulatory Reform Order 2006.
Telephone and data equipment
Signage
Security Alarm and CCTV installation
Loose furniture, shelving, racking, kitchen equipment, reception desk.

4.0 Information Precedence

4.1 The information contained in this specification is to supersede any references noted on the planning drawings.

5.0 Specification

*The following specification is written in NBS format for the sake of clarity.*
C Existing site/buildings/services

C10 Site Survey

10.1 A measured survey of the area produced by Milton Keynes Surveys is available showing the site and associated external areas.

C11 Site investigation

11.1 The Contractor is to ensure that all necessary site investigation has been carried out. A geo-technical survey is available but the contractor should carry out investigations to verify the contents.

11.2 Contractor is to notify the Architect if it becomes apparent that any aspect of survey information is missing and deemed to be necessary.

D Groundwork (refer to Campbell Reith Specification)

D20 Excavating and filling

20.1 The site will be cleared by the Contractor of any obstructions in the ground necessary for the construction of the Works.

20.2 Where it is necessary to remove shrubs, trees, bushes, hedgerows etc, in order to properly complete the Works, the Contractor is to allow for all necessary excavation and back filling to properly deal with the effects of root action of the shrubs, trees, bushes, hedgerows etc, including the removal of desiccated clay or any other resultant ground conditions which are unsuitable for the scheme to be executed.

20.3 Instructions for the removal of any trees and shrubs will be issued by the Architect.

20.4 Spoil, where necessary, will be cleared out, including removal to the Contractor's tip off site. Any formation levels will be graded, trimmed and compacted prior to laying the hardcore bed.

20.5 Carry out all necessary reduced level excavations to form levels for the works and for removal of all old demolition and unsuitable fill materials and for filling as necessary with approved, selected material, adequately compacted.

20.6 Drainage trenches and services supply trenches will be required to make connections as indicated on the drawings, including draw pits and access points for services and ducting through existing foundations.

20.7 Carry out all associated earthwork support and temporary works necessary and allow for removal of all surplus excavated material and temporary works from site.

20.8 All necessary filling will be carried out from the sub-soil contours to the formation levels of the building in material approved by the Structural Engineer and the Building Control Officer.

E In situ concrete (refer to Campbell Reith Specification)

E05 In situ concrete construction generally
05.1 Foundations, including piling if necessary, will be to the design and specification of the Structural Engineer. Refer to Engineers drawings for details.

05.2 Excavations, back-filling and making good will be to the satisfaction of the Structural Engineer.

05.3 Where appropriate, the slabs shall be designed and constructed in accordance with BS8110 "The Structural Use of Concrete" and the recommendations of the Concrete Society.

05.4 Where it is necessary to provide the ground floor with movement joints and at junctions with the existing buildings, they shall be designed so that no vertical movement occurs.

05.6 The design and preparation of the substructure is dependent on the ground conditions and levels. See Engineers details.

05.7 Construct a new concrete yard area using air-entrained concrete to the Structural Engineers specification. The yard finished is to be brushed concrete with drafted margins to a bay layout determined by the Structural Engineer.

05.8 An in-situ concrete slab is to be constructed to accommodate a sub-station. The slab is to be 150mm thick reinforced concrete with an edge down-stand beam with a smooth trowelled finish approximately 5.0mx2.5m located as shown on the external works drawings.

**E10** Mixing/casting/curing in situ concrete

10.1 Specification of in-situ concrete slab and foundations to Structural Engineers design and specification. Refer to Structural Engineers drawings and specification.

**E30** Reinforcement for in situ concrete

30.1 Specification of in-situ concrete slab and foundations will be to Structural Engineers design and specification.

**E40** Designed joints in in-situ concrete

40.1 All cut and formed joints will be sealed with Fosroc Nitoseal MS300 (or similar) installed to the manufacturer’s instructions to allow a max width/depth ratio of 1:1. Joint below filled with Fosroc Fibreboard, to manufacturer’s instructions.

40.2 Movement and construction joints in in-situ concrete will be located and designed by the Structural Engineer. Any joints not in accordance with the design will be to the approval of the Engineer.

**E41** Worked finishes to in situ concrete

41.1 The floor slabs will be power float or steel trowelled finish and constructed so that the top surface is within the tolerances as defined in the Concrete Society Technical Report No. 34 entitled “Concrete Industrial Ground Floors” FM 2 standard - plus or minus 3mm from datum. The floor surface will be treated with a dust inhibitor/surface hardener curing agent.
41.2 The production area floor slab will accommodate a uniformly distributed load of 50kN/m².
41.3 The ground floor slab to the offices and staff areas will be thermally insulated with PIR floor insulation. The thickness is to comply with the requirements of Building Regulations Part L2.
41.4 Exterior bin/plant compounds to be brush finished concrete with drafted margins.

**E60 Precast concrete/composite concrete floors/roof decks**

60.1 The office first floor is to be formed with pre-cast concrete planks supported on the structural frame in accordance with the Structural Engineers design.
60.2 The floor will be designed to accommodate a superimposed uniformly distributed load of 5kN/m² + 1kN/m² imposed load.
60.3 The floor joints will be sealed and the finish left ready to accept a pedestal type raised floor.

**F Masonry**

**F10 Brick/ block walling**

10.1 The cavity masonry below floor level will be constructed in solid concrete block work laid in cement mortar.
10.2 The external face of the cavity wall, in all positions where it is visible and for a minimum of three courses below floor level will be constructed of blue engineering quality facing bricks in cement mortar, neatly pointed externally.
10.3 The cavity between brick or block work skins will be 100mm wide and include stainless steel wall ties at 900mm horizontal and 450mm vertical centres.
10.4 All brickwork will incorporate damp proof courses and necessary cavity trays with well-lapped joints.
10.5 The cavity of foundation brickwork will be filled with weak concrete to final ground level. See details.
10.6 In the event that foundation cavity walls are required to be retaining through variations in the external ground levels, they will be constructed in accordance with the Structural Engineer's details.
10.7 100mm dense concrete concrete block work inner leaf to receive plaster or plaster board.
    Compressive strength: 10N/mm²
    Bond: half lap stretcher.
    Joints: flush.
10.8 The production area will have a 2.25m high 100mm thick internal perimeter dense concrete block wall as shown on the drawings. The blockwork will be laid fair-faced pointed flush. The cavity between the dado wall and the cladding will be kept clean and clear of debris and will be closed off at the top with 22mm mdf board. The ground floor beneath the offices will have full height concrete block inner leaf constructed to the underside of the first floor and fire sealed.
10.9 100mm Springvale Platinum (or similar) expanded polystyrene cavity batts to encase all primary structure located in masonry pilasters.
10.10 All cavities to be clean and free of obstructions prior to installation of insulation.

10.11 The Contractor is to allow for all necessary movement joints, which are to be caulked and sealed in two-part polysulphide sealant in a colour to match the brickwork/blockwork and to the approval of the Employer. Refer to Architects detailed drawings for locations.

10.12 All wall cavities are to be closed around openings with proprietary insulated cavity closers such as Thermabate or equivalent approved.

10.13 All cavities are to be cleaned during the works and left clear of all dust and debris prior to closing.

10.14 The overall ‘U’ value of the cavity wall is to a min of 0.30W/m²K.

10.15 All clay facing bricks and engineering bricks are to be in accordance with BS EN771-1, and all concrete blocks in accordance with BS EN 771-3.

10.16 Workmanship Generally

Mortar joints: Fill vertical joints. Lay bricks and solid blocks on a full mortar bed.

Vertical joints in facework: Even widths. Plumb at every fifth cross joint.

Ensure levelling of separate leaves.

Ensure full length masonry units under lintel ends.

Fire Stopping: Avoidance of fire and smoke penetration. Fit tightly between cavity barriers and masonry.

Adverse weather: Do not lay blocks/bricks when at or below 3º deg C.

10.17 New work is to be protected against damage by adverse weather at all times from rain and snow and drying out too rapidly in hot conditions and in drying winds.

10.18 A sample panel for each type of masonry present to be constructed prior to construction and to be left in place until completion. Panel size: 1.5m x 1.5m.

10.19 Putlog scaffolding: Not permitted in facework.

10.20 Cleanliness: Keep facework clean. Mortar on facework: allow to dry before removing with stiff bristled brush. Rubbing not permitted.

F30 Accessories/ sundry items for brick/ block

30.1 Stainless steel wall ties at 900mm horizontal and 450mm vertical centres.

30.2 Brickwork support framework (Ancon or similar approved) to be provided at locations where masonry is set away from supporting steelwork.

30.3 Stressline or similar pre-stressed concrete lintels suitable for the span and wall thickness to be used at all openings, unless an engineered solution is required.

30.4 All damp proof courses will be a minimum of 150mm above adjacent ground levels and are to comprise Hyload or equivalent approved.

30.5 Provide cavity trays above all openings as necessary with weep holes as required at 1000mm centres.

30.6 Joist hangers suitable to accept the ceiling joists are to be installed to support the Security Office ceiling as indicated on the drawings.

G Structural/Carcassing metal (refer to Campbell Reith Specification)

G10 Structural steel framing
10.1 All structural steelwork and structural elements are to be to the Structural Engineers design and specification. Any proposed variations to the Specification are to be approved by the Architect and the Structural Engineer.

10.2 Any steel frames are to be designed in accordance with BS449 Part 2 or BS5950 Part 1 1985 CP3 Chapter V Part 1 and 2 and all relevant codes of practice and to the satisfaction of the Local Authority.

10.3 The two-storey office will be formed with a steel frame supporting a pre-cast concrete plank concrete floor designed by the Structural Engineer.

10.4 The steelwork centres will be as determined by the Structural Engineer and approval of the Architect. The main steel portal frame will have a clear height of 8.5m to underside of haunch.

10.5 Steel frame design will allow for superimposed loads from services etc of 0.25 kN/m².

10.6 All steelwork is to be shot blasted and primed with a proprietary white primer paint prior to delivery to site and will have the primer touched up and the frame cleaned down prior to completion ready to receive further decoration.

10.7 Enclosed structural steel is to have 2 coats of bituminous paint applied on site.

10.8 All structural members supporting the first floor and the compartment wall conditions to be FR60min rated.

10.9 Where protection of steel stanchions and frames is necessary, this will be carried out internally with intumescent paint treatment Gyproc Fireline plasterboard or concrete or block work encasing, all as noted on the drawings and to the satisfaction of the Building Inspector.

H Cladding/Covering

H20 Rigid sheet cladding

20.1 Roof cladding is to be C A Group Griffon Twin-therm built-up roofing system supported on cold rolled steel purlins laid to a minimum fall of 4° with all associated flashings, soakers and trims. Gutters to be proprietary galvanised steel profiles fully insulated with outlets and downpipes to engineer’s design.


20.3 Factory assembled high performance roof-lights will be installed to a minimum of 7.5% of the roof area to maximise the use of daylight using Therma-light GRP external sheet and liner panel.

20.4 All details to be approved by the Architect/Structural Engineer.

20.5 The cladding is to be fixed to steel purlins with plastic headed self-tapping screws and incorporating all accessories, flashings, trims, fillers and the like.

20.6 Openings identified on the drawings for extract, intake and plant installations to be fully detailed by the cladding subcontractor to the architect’s and plant installer’s approval with the required flashings, soakers and up-stands. Vents and louvers are to be colour-coated to match the surrounding cladding.
20.7 Cladding works are to be carried out by C.A. Roofing Services, Evenwood Industrial Estate, Copeland Road, Evenwood, Co. Durham, DL14 9SF or an approved cladding contractor.

20.8 A man-safe access fall restraint system is to be provided.

H43 Metal composite panel cladding/covering

43.1 External wall cladding will be steel faced composite panels on cold rolled sheeting and cladding rails.

43.2 External cladding:
- Kingspan micro-rib
- Kingspan KS1000FC box profile
- Kingspan KS1000RW trapezoidal
- Internal lining: C A Group CA LT 17 1000S - Bright White.

External cladding colours are to be as shown on the approved planning drawings. No variation in the specified colours will be accepted.

43.3 The envelope will be designed to achieve air-tightness and panel thickness will be specified to provide thermal insulation to meet Building Regulations. Cladding panels to achieve min. of 0.26W/(m².K) U-value.

43.4 An EPC will be issued for the building at completion.

43.5 External cladding and coatings will be guaranteed by the manufacturer for a minimum of 15 years, subject to conditions. A Tata Steel Confidex Guarantee for the cladding and roofing will be made available at completion.

43.6 Outer face of the cladding is to be directly above the outer face of brickwork, therefore the cold rolled sheeting rails are to be designed to span over cavity and external leaf and between primary structural elements if required.

43.7 Joint type: Side/vertical: - all jointed in accordance with manufacturers recommended jointing details and trims.

43.8 All external walls are to conform to the Building Regulations and relevant Codes of Practice and the design supported by Structural Engineer’s calculations.

43.9 The profiled metal cladding system is to achieve U value of min. 0.26W/m²K.

43.10 Cladding systems are to be provided with all necessary flashings, fillers and trims detailed by subcontractor. All details will require Architect’s approval.

43.11 Fire-rated cladding and components shall be installed to locations as determined by the Building Regulations and as indicated on the drawings.

J Waterproofing

J40 Flexible sheet tanking/ damp proofing

40.1 A min. 2000 gauge Visqueen or similar DPM will be provided, lapped and taped at the joints. DPM to be fully sealed around column bases and lapped to damp proof courses.

40.2 A damp proof layer will be incorporated into the floor coverings where they are to be laid on new concrete floors.

40.3 Brickwork dpc’s will be Hyload or similar extending the full width of the construction placed in accordance with the details with min 100mm laps at joints. Joints are to be bonded.
K Linings/Sheathing/Dry partitioning

K10 Plasterboard dry linings/Partitions

10.1 At locations above block work inner leaf where primary structure is encased with plasterboard, 60 min internal fire proof casing will be required as indicated on the drawings.

10.2 Internal partitions, linings and casings where indicated on the drawings are to be proprietary British Gypsum Gypwall stud C section metal frame carcass with plasterboard covering as specified and defined on the drawings, fire rated as noted.

10.3 The compartment wall between the two-storey element and the production area is to be 140mm thick dense concrete blockwork and Gypwall Jumbo Stud or similar approved with 60 min fire resistance and integrity, including all necessary fire stops and cavity barriers. Both sides of the wall are to have taped joints ready to receive decoration. The compartment wall is to be constructed to the underside of the roof and fire sealed.

10.4 Cavities in partition wall construction are to be cleaned of all debris and dust during the course of the works and will be inspected prior to final closing.

10.5 Ensure tight fit to structural members. Fire linings are to be fire stopped with fire proof packing.

10.6 The first floor offices external wall will be lined with plasterboard on metal studs plastered ready to receive a paint finish.

10.7 All first floor fire rated partitions are to be built to the underside of the roof and fire stopped to achieve the fire rating required by Building Regulations.

K32 Framed Panel Cubicle Partitions

32.1 Supply and install toilet cubicles in the office areas in locations shown on the drawings. The cubicles, integrated panel system and vanity units are to be from the Total Laminate Systems Enhanced range. Refer to the finishes schedule.

K40 Suspended ceilings

40.1 Suspended ceilings are to be Armstrong Microlook suspended ceilings with Armstrong Dune Supreme 600mm x 600mm x 18mm thick tegular edged ceiling tiles in office areas and Armstrong Dry-wall grid system in toilets and wet areas in a white painted grid.

40.2 Allowance will be made in the suspension systems for the support for light fittings and ventilation grilles.

40.3 Allowance will be made for the support of air-conditioning units in the ceilings.

K41 Raised Access Floors

41.1 The first floor office areas only are to be provided with a medium grade pedestal type raised access floor with fully steel encapsulated dense chipboard 600mm x 600mm floor tiles such as Kingspan Gravity Lay RMG600 system
or similar and approved, all installed strictly in accordance with manufacturer’s instructions.

41.2 Allowance is to be made for the provision of floor boxes at the rate of 1/10 m². The floor boxes will contain socket outlets and data sockets as described in the M&E Specification.

L Windows/Doors/Stairs

L10 Windows/Screens/Louvres

10.1 Windows in the offices as indicated on the elevation drawings are to be polyester powder coated aluminium framed double glazed windows with thermal break and all necessary fixings including head and cill trims to suit external wall cladding system. Opening lights are to have key operated locking handles. Windows are to be provided with EPDM sealing gaskets at jambs, heads and cills to be integrated into the cladding system.

10.2 Curtain walling units to entrance will be Kawneer or similar glazed as the main windows as shown on the drawings.

10.3 Glazing will be in 6mm Antisun smoke tinted on clear glass outer pane or similar approved, 12mm air space and 6mm clear inner pane. Spandrel panels where necessary, will be in Ultra-warm Permawall or similar, insulated panels.

10.4 Frames are to be PPC colour coated as shown on the finishes schedule.

10.5 All windows are to have trickle vents in the head section and all openable lights are to be top hung and have restrictor stays.

10.6 Any louvres or ventilation outlets associated with extract systems are to be fitted with insect mesh.

L20 Doors/shutters/hatches

20.1 Provide and install 4 no. Taskmaster S Series flush metal polyester powder coated door-set fire escape doors in the external wall providing access to concrete landings as indicated on the drawings. Doors to be fitted with escape ironmongery including lockable external access pass fittings to doors to goods yard.

20.2 Provide and install 2no aluminium framed polyester powder coated double doors to the main entrance and staff entrance as shown on the drawings.

20.3 The front entrance doors and frames will be manufactured in ‘Kawneer’ or similar polyester powder colour coated aluminium sections with concealed overhead door closers. Doors will be glazed to the recommendation of BS.952 and BS.CP 6262 in laminated or safety glass to match windows and curtain walling.

20.4 A letter plate is to be provided in or adjacent to the main entrance doors.

20.5 The main entrance doors are to be fitted with an intercom system.

20.6 The main entrance doors are to be fitted with automatic sensor operated opening/closer devices and a separate disabled actuation point. The staff entrance is to be fitted with a security key pad locking device.

20.7 All internal doors in the offices are to be American White Oak veneer faced and lipped with fire rating as specified in the door schedule. All doors to be in accordance with door schedule. All fire rated doors will be fitted with intumescent smoke seals in accordance with BS.
20.8 All doors are to be supplied with vision panels and commercial standard satin finished stainless steel ironmongery from a recognised supplier as indicated in door schedule including kick plates and finger plates.

20.9 4 no goods loading doors are to be installed to the loading yard elevation as shown on the drawings. The doors are to be fully insulated sectional overhead electrically operated with 1 row of DARP, double acrylic vision panels in a polycarbonate rectangular frame, internal dimensions 600 x 290mm with security grilles internally.

20.10 The doors are to be Assa Abbloy Crawford OH1042P (or similar) 4.8m high x 4.0m clear width with high lift mechanism, or similar approved of equal performance and standards finished externally PPC pre-coated RAL 7016 Anthracite grey. Stop and return safety edge devices are to be included.

20.11 Goods doors are to be supplied with high security locking mechanism suitable for interlinking to security alarm system.

L30 Stairs/ ladders/ walkways/ handrails/ balustrades

30.1 Pre-cast concrete stairs are to be installed in the offices as indicated on the drawings to the geometry shown on the drawings.

30.2 Stairs will be supported on and fixed to the floor slab.

30.3 Handrails to the main office accommodation feature stair will include stainless steel handrails with toughened glass infill panels. Treads will be ready to receive floor finish as shown on the drawings.

30.4 Handrails to fire escape stairs will be stainless steel bracket fixed to block walls.

30.5 Stair treads are to have contrasting coloured nosings, Gradus GR81 with Glacier grey standard inserts, or similar and approved.

M Surface finishes

M20 Plastered/Rendered/Roughcast coatings

20.1 Plasterboard partitions in office areas are to be skimmed with min 2.5mm finish coat of plaster ready to receive a paint finish with all necessary corner reinforcement beads, movement joints etc.

20.2 Plastered block walls are to receive a 12.5mm rough base coat and 2.5mm finish coat of plaster smooth finished ready to receive paint finishes.

20.3 Plaster stop beads are to be used on all exposed arrises.

20.4 Any movement joints in plastered finishes are to be reflected using back-to-back plaster stops with joint kept clear to allow for movement.

M40 Stone/ concrete/ quarry/ ceramic tiling/ mosaic

40.1 All movement joints in the production area floors are to be adequately cleaned and prepared ready to receive mastic pointing.

40.2 Toilet areas are to have fully glazed full height ceramic wall tile finish. The colour and pattern of the walls tiles is to be in accordance with the Finishes Schedule.
40.3 A provisional sum of £20.00 per sq.m. is to be allowed for the supply only of wall tiles.
40.4 The Contractor is to lay/fix all tiles and provide necessary materials, trims and fittings. Cut tiles are to be minimised.
40.5 Kitchen walls will be tiled with colour glazed ceramic tiles between worktop level and wall cupboards or underside of shelving.

M50 Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting

50.1 Floors in circulation areas and toilets are to be finished with Forbo Surestep ‘Stone’ vinyl sheet flooring with all associated trims and fittings. Refer to Finishes Schedule.
50.2 All joints to be welded with matching weld bead. See Finishes Schedule.
50.3 Skirtings to vinyl floors in toilets and kitchens are to be welded vinyl coved section as detailed.
50.4 Floors in the office areas are to be Forbo Tesserra Mix carpet tiles laid strictly in accordance with manufacturers’ details. See Finishes Schedule.
50.5 The main entrance is to be provided with Forbo Coral Classic entrance matting in a recessed matwell as indicated on the drawings. The staff entrance is to have a Forbo Nuway Grip entrance mat in a recessed matwell. See Finishes Schedule.
50.6 The stair treads to the main stair in the reception area are to be finished with Forbo Tessera Mix carpet tiles to match the offices with Gradus stair nosings with Glacier inserts. See Finishes Schedule.
50.7 The stair treads to the fire stairs will be finished with Forbo Surestep vinyl sheet flooring to match circulation areas. See Finishes Schedule.

M60 Painting/clear finishing

60.1 Plastered and plasterboard walls to offices, circulation areas, and stairs are to be painted with a mist-coat and two full coats of washable vinyl-based emulsion paint. See Finishes Schedule.
60.2 The production area side wall to the offices and the production area perimeter wall is to be left fair faced. Any open joints are to be pointed and movement joints filled with a suitable flexible filler.
60.3 All American White Oak joinery including door frames, skirtings and window boards will receive one coat of satin finish clear polyurethane varnish.
60.4 The production area steel frame will be decorated with gloss paint coloured white.

M61 Intumescent coatings for fire protection of steelwork

61.1 On site coating to all exposed primed structural steel framing and structural members located where Fire Resistant rating is required, to BS8202-2 where not encased in plasterboard or block-work to give 60 min fire protection.
61.2 Dry film thickness (DFT): determine for each member to give specified period of fire resistance and provide certified test results to show that film thickness has been achieved.
61.3 Use intumescent coating to manufacturer’s recommendations with all required primers and preparation. Colour: White

N Furniture/Equipment

N10 General fixtures/ furnishings/ equipment

10.1 The contractor is to make an allowance for the supply and installation of fitted kitchen units in the first floor kitchens as identified on the drawings.
10.2 The fittings are to be Magnet Trade range Strata Gloss White with laminate faced 44mm thick worktop, stainless steel single drainer sink with chrome mixer tap.
10.3 The contractor is not required to provide any further furniture or fixtures.

N13 Sanitary appliances and fittings

13.1 New sanitary ware is to be supplied and installed in the locations shown on the drawings in accordance with the M&E Specification with all associated copper hot and cold water supply pipework, fittings and plastic drainage.
13.2 All sanitary ware generally to office areas, disabled facilities and staff areas is to be white fully glazed clayware standard commercial grade from Armitage Shanks Ltd. as noted in the sanitary ware schedules.
13.3 See sanitary ware schedules and the ERS Ltd. M&E Specification.
13.4 Building Regulation Doc. M Pack disabled facilities are to be provided as shown in the drawings.

N14 General signage systems

14.1 Fire door signs and escape route signs are to be supplied and installed as indicated on the drawings and shown in the Door Schedule. Signs are to be brushed aluminium with etched lettering in green screw fixed with chrome c/sunk screws.

N15 Fire signage

15.1 Fire Exit signs are to be supplied and installed in accordance with the M&E Consultants drawings at all fire escape locations. The make and model of the signs is included in the M&E Specification.
15.2 Fire Exit route signs are to be installed in locations shown on the drawings.

P Building fabric sundries

P10 Sundry insulation/ proofing work

10.1 Flexible cavity barriers: to BS476-20. Coated woven glass fibre cloth barriers are to be used around structural members on compartment wall lines.
10.2 Mesh reinforced Rockwool cavity barriers are to be installed as indicated on the drawings at the junction of compartment wall and external walls fixed in
accordance with manufacturer’s instructions and in locations required by Building Regulation in the raised floor cavity and above suspended ceilings.

10.3 All internal plasterboard partitions are to have full-fill mineral fibre cavity insulation.

10.4 All door and window openings are to be thermally insulated with 60mm thick PIR thermal insulation suitably air-tight sealed to meet Building Regulation requirements.

P12 Fire stopping systems

12.1 In all cases where services penetrate fire compartment walls adequate fire stopping is to be provided. This will comprise fire dampers linked to the fire alarm system at ductwork penetrations and intumescent pillow systems at services penetrations, Nullifire or similar.

12.2 All joints in fire proof construction are to be sealed with non-combustible mastic, including movement joints, all installed strictly in accordance with manufacturers’ instructions by competent persons.

12.3 Fire resistant walls are to be fire stopped where they meet adjoining construction at floors and the roof with Rockwool or similar fire resistant insulation.

12.4 All vertical and horizontal cavities within the structure are to have fire cavity barriers at 20m intervals in accordance with the requirements of Building Regulations. Flexible barriers are to be wire reinforced mineral fibre.

P20 Unframed isolated trims/ skirtings/ sundry items

20.1 Timber skirtings where indicated on the drawings will be 100mmx25mm American White Oak finish softwood with pencil round edge in accordance with the Finishes Schedule.

20.2 Vinyl skirtings in other areas will be coved section proprietary skirting sections provided by the flooring contractor fixed in accordance with manufacturers recommendations. Internal and external corners will have special fittings as manufactured by the flooring suppliers.

20.3 22mm thick bull-nosed moisture resistant veneered cill boards are to be provided to all windows fixed to timber grounds and projecting 25mm from wall plane all as detailed.

P21 Door/ window ironmongery

21.1 All emergency exits to be fitted with suitable panic latches and external opening/locking facility. Internal escape doors are to be fitted with push pad mortice latch actuator as Dorplan 60241, satin stainless finish.

21.2 All external outward opening doors are to be provided with head restraints and self-closers to max 30N force.
21.3 Fire escape doors to be Taskmaster S Series high security polyester powder coated steel door set and to have door leaf restraint and panic bolt operated draw bolts top and bottom with mortice lock and dead lock.

21.4 All internal ironmongery is to be satin finished stainless steel. The style of the ironmongery is to be as Dorplan 11270 22mm lever set with face fixing flat plate back-plates, or similar and approved.

21.5 Refer to the door schedules.

P30 Trenches, pipeways and pits for buried engineering services

30.1 Provision will be made in the sub-structure brickwork for service entry ducts and drainage to the approval of the Local Authority.

30.2 Location of service entry points are to be to Structural Engineers design.

30.3 Allow for trenching and ducting for incoming electrical supplies from the sub-station to the incoming distribution board within the production area.

30.4 Lay a plastic duct suitable for electrical supplies to an illuminated sign to be located adjacent to the entrance to the site. The duct is to extend to a location adjacent to the ground floor offices.

30.5 Allowance is to be made for all necessary underground trunking and ducting for incoming services and telecoms.

Q Paving/Planting/Fencing/Site furniture

Q10 Kerbs/ edgings/ channels/ paving accessories

10.1 Car parks and yard areas are to bounded with 254mm x 127mm half battered precast kerbs to BS.340 (Marshalls or similar approved) bedded onto a 325mm x 150mm concrete base and haunches in in-situ concrete.

10.2 Dropped kerbs to be provided as required by Architects drawings.

10.3 Blister paving provided to cross over points and areas of potential obstruction.

Q22 Coated macadam/ asphalt roads/ pavings

22.1 The car parking area to the front of the building is to be paved with a mixture of 80mm thick concrete block and tarmacadum finish in accordance with the Engineers drawings and specification.

22.2 Car park spaces are to be marked as shown on the drawings including disabled spaces to Part M of Building Regulations.

Q31 External planting

31.1 The landscaping scheme is to be implemented as indicated on Landplan Associates drawings.

Q40 Fencing
40.1 2.4m high galvanised steel palisade fencing is to be erected around the operational yard as shown on the drawings. Matching manual operated swing gates are to be provided in the location shown on the drawings with substantial locking facility.

40.2 All posts are to be set in concrete bases min 900mm deep.

R Disposal system

R10 Rainwater drainage systems

10.1 The rainwater from the roof will be collected in verge gutters as specified within the roof package discharging to steel rainwater down-pipes coloured to match the cladding connected to underground surface water pipework.

10.2 Drainage is to be to Structural Engineers design and specification.

R11 Above ground foul drainage systems

11.1 Foul drainage will be constructed in accordance with the drawings and specification.

R12 Below ground drainage systems

12.1 The building is to have underground storm water attenuation tanks under the car park all to the Structural Engineer’s design and specification.

X12 Vertical platform lifts

12.1 A Pickering Lifts (or similar and approved) vertical rise open front platform lift is to be provided in the location shown on the drawings. The platform size is 1100 mm x 1580 mm. The floor finish is to match the lobby area.

Z Building fabric reference specification

Z11 Purpose made metalwork

11.1 Doors opening onto pathways are to be protected with 50mm dia. steel hoops 1100mm high fixed back to the face of the building and to the paving. The hoops are to be paint finished.

11.2 Allow a Provisional Sum of £10000.00 for the supply and installation of canopies over the main entrance door and staff entrance doors. The canopies are to be free-standing and will not gain any support from the building. In-situ concrete bases will be required to support the canopy.

11.3 Steel tube door jamb protection bollards are to be provided at goods loading doors 1.2m high, 150mm diameter set 1.0m into a concrete foundation, filled with concrete and painted yellow BS 4800 ref 10E53 located as shown on the drawings.

11.4 Steel tube cane detection guarding is to be installed at office and production staff entrance doors as shown on the drawings. 50mm dia. mild steel tubing set in concrete bases painted to match canopy.
11.5 A Broxap Wardale 10 space cycle shelter is to be installed in the location shown on the drawings. The shelter is to be galvanised and PPC finished RAL 7016 Anthracite grey.

Z20 Fixings and adhesives

20.1 Fixings of dissimilar metals require isolating washers/sleeves to avoid bimetallic corrosion.
20.2 Fasteners in external conditions to be of corrosion resistant material or with a corrosion resistant finish.
20.3 Adhesives for floor coverings will be as specified and supplied by the floor covering manufacturers to suit the locations. Ground floor covering adhesives will be suitable for a fully cured new in-situ concrete substrate.

Z21 Mortars: Cement gauged mortars

21.1 To BS 4721.
   Mix: Facing brick – Group 3 (1:1:6) generally, Group 1 (1:3) on exposed sills and at plinth stretcher
   Block work – Group 4 (1:2:8) generally.
   Mortar to colour to be plain mortar.
21.1 Cement: to BS EN 197 – 1 and CE marked, strength class 32.5, 42.5 or 52.5.

Z22 Sealants

22.1 Joint dimensions: within limits specified for the sealant depending upon location and performance criteria.
22.2 Substrate quality: surfaces to be regular, undamaged and sound.
22.3 Joints not fit for sealant: contractor to submit proposals for rectification.
22.4 Prepare all joints as required by sealant manufacturer recommendations with necessary primers, fillers and backing strips.
22.5 Apply sealants in dry conditions in accordance with sealant manufacturer’s recommendations.
22.6 Butt and lap joints: slightly concave.
22.7 Fillet joints: Flat or slightly convex.
22.8 Coloured sealant will be used to match substrate where visible.
22.9 Joints in concrete floors are to be cleared of any dust and loose particles to leave a clear and clean joint and primed ready to receive Fosroc Thioflex 600 or similar resilient mastic with a joint filler to maintain a suitable bead thickness, all as specified by the Structural Engineer, with surfaces flush with the floor finish.

Z31 Powder coatings

31.1 Working procedures: comply with BS 6496 for aluminium alloy backgrounds and BS6497 for galvanised steel backgrounds.
31.2 Powder coating manufacturers will be required to provide a guarantee.
31.3 Applicators to comply with certification of BS EN ISO 9001.
31.4 Pre-treatment: ensure materials to be powder coated are free from corrosion and damage, oil and grease and other impurities.
31.5 Extent of powder coating: to all visible component surfaces and concealed surfaces requiring coating. Coated surfaces will be deemed `significant surfaces for relevant BS 6496/ 9467 performance requirements.

31.6 Fabrication damage repair/replacement: check all components before delivery to site and rectify damage if necessary.

31.7 Protection: all powder coated surfaces to be protected from damage during handling and installation, or by subsequent operations.

31.8 Protective covering must be weather resistant and partially removable to allow building in as necessary.

31.9 Documentation required for each batch of powder coated components: Supplier; Trade name; Colour; Type of powder; Method of application; Batch and reference number; Statutory Requirements.