

**CONSTRUCTION OF
INDUSTRIAL UNITS
AND
OFFICES
for**

BLAKELANDS LLP

**PRINCES BUSINESS PARK
Summerleys Road
Princes Risborough**

**SPECIFICATION
December 2017**

04 12 17

CLAUSE AND CONTENTS INDEX

- 1.0 Introduction
- 2.0 Design, Materials and Workmanship Standards
- 3.0 Drawings and Documents
- 4.0 Exclusions
- 5.0 Information Precedence
- 6.0 Specification
(BASED ON NBS STANDARD WORK SECTIONS)

- C Existing site/buildings/services
 - C10 Site survey
 - C11 Site investigation
- 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
 - E20 Formwork for 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
 - G20 Carpentry/ timber framing/ first fixing
- H Cladding/Covering
 - H20 Rigid sheet cladding
 - H43 Metal composite panel cladding/ covering
- J Waterproofing
 - J40 Flexible sheet tanking/ damp proofing
- 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

- M Surface finishes
 - M20 Plastered/Rendered/Roughcast coatings
 - 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
 - N13 Sanitary appliances and fittings
 - N14 General signage systems
 - N15 Fire and safety signage systems

- 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

- Q Paving/Planting/Fencing/Site furniture
 - Q10 Kerbs/ edgings/ channels/ paving accessories
 - Q22 Coated macadam/asphalt roads/pavings
 - Q31 External planting
 - Q40 Fencing
 - Q41 Barriers/ guardrails
 - Q50 Site/Street Furniture

- R Disposal systems
 - R10 Rainwater drainage systems
 - R11 Above ground foul drainage systems
 - R12 Below ground drainage systems

- Z Building fabric reference specification
 - Z10 Purpose made joinery
 - Z11 Purpose made metalwork
 - Z20 Fixings and adhesives
 - Z21 Mortars
 - Z22 Sealants
 - Z31 Powder coatings

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 industrial units with associated offices at Princes Business Park, Summerleys Road, Princes Risborough.
- 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 contract has been let for the construction of the access road up to base course level. This project includes the wearing course and street lighting.
- 1.1.4 The accommodation to be provided is small industrial units arranged in two terraces around a shared operational yard with a separate main car park, including all associated external works, landscaping and associated services. The ground floor of the offices includes the main entrance, toilets and reception leading to the accommodation stair. The first floor contains offices.
- 1.1.5 The project has Planning Permission reference 17/05705/FUL dated 17th October 2017 issued by Wycombe District Council. Copies of the consent are included in the Employers requirements pack and all associated documents are available for reference.
- 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 17th 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 2015 (CDM 2015)

Exclusion of materials identified as potentially hazardous in BPF/BCO report “Good practice in the selection of construction materials”-

Highways Agency Design guidelines

Secure by Design Commercial 2015 ver2

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 issues at completion. Cleaning will take place at least once per week. Operatives and sub-contractors will be made aware of the required standards of cleanliness 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;
- | | |
|--------------------|--|
| Building structure | 50 years |
| Drainage | 50 years |
| Roads and Paving | 25 years without significant maintenance and repairs |
- 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

3.0 Drawings

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

3.2 The DCM Partnership drawings and Schedules:-

- 865C001 Site Plan
- 865C101 Setting Out
- 865C201 Unit 1-4 Floor Plans
- 865C202 Unit 5-8 Floor Plans
- 865C203 Unit 1-4 Office Floor Plans
- 865C204 Unit 5-8 Office Floor Plans
- 865C301 Unit 1-4 Roof Plan
- 865C302 Unit 5-8 Roof Plan
- 865C401 Unit 1-4 Elevations
- 865C402 Unit 5-8 Elevations
- 865C403 Unit 1-4 Office Elevations
- 865C404 Unit 5-8 Office Elevations
- 865C501 Unit 1-4 Sections
- 865C502 Unit 5-8 Sections
- 865C503 Unit 1-4 Office Sections
- 865C504 Unit 5-8 Office Sections
- 865C801 Doors Schedule
- 865C802 Windows Schedule
- 865C803 Finishes Schedule
- 865C804 Sanitary Ware Schedule

3.3 ERS Design drawings and specifications:-

- 3772_ide-002 Access Road Lighting
- 3772_idx-001 Incoming Services Layout
- 3772_icx-001 Incoming Services Quotation Tracker
- 3772_ide-001 Service Yard External Lighting
- 3772_idm-001 Typical Unit Mechanical Services Concept
- 3772_idp-001 Typical Unit Hot & Cold Water Services
- 3772_ide-003 Typical Unit Lighting Requirements
- 3772_CDM-001 CDM Residual Risk register
- 3772_ism-001 Mechanical Services Specification
- 3772_ise-001 Electrical Services Specification

3.4 BCAL Ltd drawings and specifications:-

Civils drawings

- 5619-10C1 Road GA Plan & External Finishes
- 5619-11C1 Access Road Contours & Sections
- 5619-14 External Levels
- 5619-15 Drainage Layout
- 5619-16 Drainage Construction Details Sht 1
- 5619-17 Drainage Construction Details Sht 2
- 5619-18 Drainage Construction Details Sht 3
- 5619-19 Drainage Construction Details Sht 4
- 5619-20 Proposed Impermeable Area Plan
- 5619-23 External Finishes
- 5619-25 Concrete Joints Layout
- 5619-26 Joints Details
- 5619-27 Gabion Walls Details

Structural drawings

- 5619-100 Units 1-4 Steelwork Column and Roof Plans
- 5619-101 Units 1-4 Steelwork Elevations
- 5619-102 Units 1-4 Steelwork Typical Sections and Details
- 5619-103 Units 1-4 Steelwork Section Through E,G&J
- 5619-104 Units 5-8 Steelwork Column and Roof Plans
- 5619-105 Units 5-8 Steelwork Elevations
- 5619-106 Units 5-8 Steelwork Typical Sections and Details
- 5619-107 Units 5-8 Steelwork Section Through C,F&J
- 5619-108 Units 1-8 Steelwork Notes
- 5619-150 Units 1-4 Foundation Plan
- 5619-151 Units 5-8 Foundation Plan
- 5619-152 Units 1-8 Foundation Details and Notes
- 5619-155 Units 1-4 Floor Slab Plan
- 5619-156 Units 5-8 Floor Slab Plan
- 5619-157 Units 1-8 Floor Slab Details
- 5619-160 Units 1-4 Office Joists
- 5619-161 Unit 5-8 Office Joists
- 5619-170 Units 1-8 Masonry Details

4.0 Exclusions

- 4.1 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.

5.0 Information Precedence

- 5.1 The information contained in this specification is to supersede any references noted on the **planning** drawings and is to be read in conjunction with construction/tender issue drawings.

6.0 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 utility survey of the area produced by Milton Keynes Surveys dated June 2016 and a topographical survey produced by CD Surveys dated December 2016 are included in the contract documents.

C11 Site investigation

11.1 A Site Investigation Report by The Brownfield Consultancy dated 29th June 2016 is included in the contract documents.

11.2 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.

11.3 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 BCAL Ltd 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 and the Landscape Architect.

20.4 The Contractors attention is drawn to the group of trees at the southern end of the site covered by Tree Preservation Orders and the associated root protection area identified on the drawings. A root protection barrier has to be erected in accordance with the contract drawings. There is also an ecology margin adjacent to the west boundary stream that has to be respected at all times during construction.

Access to this area is prohibited.

20.5 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.

20.6 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.

- 20.7 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.
- 20.8 Carry out all associated earthwork support and temporary works necessary and allow for removal of all surplus excavated material and temporary works from site.
- 20.9 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 BCAL Ltd 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, 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.
- 05.9 In-situ concrete slabs are to be constructed to provide bases for bin stores and cycle parking as shown on the drawings. The finish is to be brushed with drafted margins.

E10 Mixing/casting/curing in situ concrete

- E10.1 Specification of reinforcement to in-situ concrete slab and foundations to Structural Engineers design. Refer to Structural Engineers drawings and specification.

E20 Formwork for in situ concrete

- 20.1 70mm thick Celotex TB4000 Insulation board will be provided under ground floor office area in-situ concrete slabs as indicated on the drawings to achieve a min. U-value of 0.20 W/m²K.

E30 Reinforcement for in situ concrete

- 30.1 Specification of reinforcement to 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 prior 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 35kN/m².
- 41.3 The ground floor slab to the offices will be thermally insulated with PIR floor insulation to comply with Building Regulations if determined necessary by the Part L calculations. 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 timber joists and a chipboard deck 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.

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 below dpc level, 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 and blockwork 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 block work inner leaf to receive plaster or plaster board will have a compressive strength: 10N/mm² and will be laid half lap stretcher with pointed flush joints.
- 10.8 External blockwork to receive render finish will be laid in accordance with recommendations from the render manufacturer. Refer to clause M20.
- 10.9 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.
- 10.10 100mm Springvale Platinum (or similar) expanded polystyrene cavity batts to all cavity walls and to encase all primary structure located in masonry pilasters.
- 10.11 All cavities to be clean and free of obstructions prior to installation of insulation.
- 10.12 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.
- 10.13 All wall cavities are to be closed around openings with proprietary insulated cavity closers such as Thermabate or equivalent approved.
- 10.14 All cavities are to be cleaned during the works and left clear of all dust and debris prior to closing.
- 10.15 The overall 'U' value of the cavity wall is to be a min of 0.30W/m²K.
- 10.16 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.
- 10.17 Workmanship Generally
Mortar joints: Fill vertical joints. Lay bricks and solid blocks on a full mortar bed.
Vertical joints in face-work: 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 3° 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 face-work.
- 10.20 Cleanliness: Keep face-work clean. Mortar on face-work: allow to dry before removing with stiff bristled brush. Rubbing not permitted.

- 10.21 Concrete blockwork to receive render finish is to be stored to maintain a moisture content suitable to receive finish.

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 All damp proof courses will be a minimum of 150mm above adjacent ground levels and are to comprise Hyload or equivalent approved.
30.4 Provide cavity trays above all openings as necessary with weep holes as required at 1000mm centres.

F31 Precast concrete sills/ lintels/ copings/ features

- 31.1 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.

G Structural/Carcassing Metal/Timber (refer to BCAL Ltd 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 timber joist floor supporting a tongued and grooved chipboard deck all as noted on the drawings. The floor is to be 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 frame will have a clear minimum height of 7.0m 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 either 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.

G20 Carpentry/timber framing/first fixing

- 20.1 First floor construction to the office elements will be 22mm thick tongued and grooved moisture resistant timber particle board screw fixed to 50X122C16 or 253mm deep Gang-Nail Systems Ltd. Ecojoist® beams supported as shown on the drawings to Structural Engineer's design.
- 20.2 Stair openings are to be trimmed as shown on the Engineers drawings.

H Cladding/Covering

H20 Rigid sheet cladding

- 20.1 Roof cladding is to be composite panel or a 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.
- 20.2 External roofing panel: Trisomet 120mm thick insulated steel roof panel. Outer sheet finish HPS200 Ultra Alaska Grey RAL 7000, inner sheet Colorcoat High Reflect White.
Bull-nose feature eaves detail finished with HPS 200 Ultra Alaska Grey.
- 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 or similar and approved.
- 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 colour matched to cladding and incorporating all accessories, flashings, trims, fillers and the like.
- 20.6 Any 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 and approved sub-contractor.
- 20.8 The roof construction is to achieve a minimum U-value of 0.18 W/m²K.
- 20.9 All roofing components are to be fixed strictly in accordance with manufacturer's instruction by an approved sub-contractor.

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 wall cladding is identified on the drawings and will be :-
Trisomet micro-rib 120mm thick finished either Ultra White RAL 9003 or Alaska Grey RAL 7000 depending on location, Kingspan Five Crown box panel KS1000FC 100mm thick finished Anthracite RAL 7016 or Trisomet insulated steel faced wall panel 120mm thick finished Colorcoat Prisma Sirius Silver with all panels finished internally bright white.
The feature flashing is to be finished HPS 200 Solent Blue RAL 240 40 40.
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 0.18W/m²K 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 sheeting rail 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 as 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. 0.18W/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. 1200 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. The site is not in a high Radon area so a Radon barrier is not required.
- 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. All corners and junctions will be constructed with pre-formed components to ensure adequate damp-proofing.

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 (or similar and approved) 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 warehouse area is to be 100mm thick dense concrete blockwork with Celotex PL4000

40+12.5mm insulated wall linings or similar approved on office side on ground floor, and Gypwall Jumbo Stud with the cavity full-filled with insulation with Rockwool thermal insulation quilt (or similar approved) on first floor. The compartmentation wall is to achieve min. of 0.35W/m²K overall U-value and 60 min. fire resistance and integrity, including all necessary fire stops and cavity barriers. Ground floor wall lining and both sides of the first floor jumbo stud walls 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 are to be integrated panel system and vanity units are to be from the Total Laminate Systems Enhanced range or similar and approved by the Architect. Refer to the finishes schedule.

K40 Demountable 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 1st floor office areas and Armstrong Hydrobard in toilets and wet areas in a white painted grid. Ceiling tiles will be clipped.
- 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 of the first floor offices.

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, Kawneer AA720 glazing 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 AA720 system 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 RAL 7016.
- 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 Louvre panels are to be installed as part of the glazing system as indicated on the drawings. The louvres are to be polyester powder coated to match the glazing system RAL 7016. Any louvres or ventilation outlets associated with extract systems are to be fitted with insect mesh.
- 10.7 All window installations are to comply with LPS 1175 SR2 security rating.
- 10.8 Windows are to achieve a U-value of 1.5W/m²K.

L20 Doors/ shutters/ hatches

- 20.1 Provide and install Taskmaster S Series flush metal polyester powder coated door-set fire escape doors in the external wall providing access to escape routes as indicated on the drawings. Doors to be fitted with escape ironmongery with no external ironmongery. Escape doors are to meet the security standards of STS-202, BR2 and to be Secure by Design accredited.
- 20.2 The front entrance doors and frames will be manufactured in Kawneer AA720 Series 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 glass to match windows and curtain walling.
- 20.3 A letter plate is to be provided in or adjacent to the main entrance doors.
- 20.4 The main entrance doors are to be fitted with automatic sensor operated opening/closer devices and a separate disabled actuation point.
- 20.5 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 476.
- 20.6 All doors are to be supplied with vision panels and commercial standard polished finished stainless steel ironmongery from a recognised supplier such as the Dorplan 11270 22mm safety lever set or similar as indicated in the door schedule including kick plates and finger plates.
- 20.7 All doors marked as fire doors are to be FD60 with the appropriate ironmongery, identification, rating and glazing.
- 20.8 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.
- 20.9 The goods doors are to be Assa Abloy Crawford OH1042P (or similar) 5.0m high x 4.0m clear width with high lift mechanism, or similar approved of equal performance and standards finished externally PPC pre-coated RAL 9003 Ultra White. Stop and return safety edge devices are to be included.
- 20.10 Goods doors are to be supplied with high security locking mechanism suitable for interlinking to security alarm system, Secure by Design accredited.

L30 Stairs/ ladders/ walkways/ handrails/ balustrades

- 30.1 Timber 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 office accommodation stair will include stainless steel brush finished circular section handrails bracket fixed to stair enclosure walls.
- 30.4 The stair at first floor will be provided with an 1100mm high stainless steel balustrade with perforated stainless steel infill panels and a 125mm high stainless steel kick plate all securely fixed to the floor with reinforced bolt through fixings.
- 30.5 Treads will be ready to receive floor finish as shown on the drawings and are to have contrasting coloured nosings, Gradus GR81 with Glacier grey standard inserts, or similar and approved.
- 30.6 Pedestrian guard rails are to be provided at the main entrances to each unit as shown on the drawings. Rails will be 50mm dia. steel tube PPC coated RAL9003 Ultra White securely fixed to an independent concrete base.
- 30.7 Pedestrian balustrades are to be installed in the locations shown on the drawings and are to be Kee-Klamp or similar galvanised finished 1.1m high with suitable fixings to a concrete base.

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 arises.
- 20.4 Ground floor office ceilings are to be Fireline plasterboard, 2no layers with staggered joints, securely fixed to the underside of floor joists to achieve. 60min. fire resistance.
- 20.5 Any movement joints in plastered finishes are to be reflected using back-to-back plaster stops with joint kept clear to allow for movement.
- 20.6 Render to external walls at the office entrances where indicated on the drawings will be Weber-St. Gobain Monocouche decorative through coloured cement based render applied strictly in accordance with the manufacturer's instructions with all necessary render stops, corner reinforcement and associated fittings. The render colour will be Chalk.

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 £24.00 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 Toilet areas will have mirrors as shown on the drawings, secret fixed and recessed into the tiling with a mastic filled joint to match the tile grout.

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

- 50.1 Floors in circulation areas and toilets are to be finished with Forbo Surestep 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 are to be welded vinyl coved section as detailed.
- 50.4 Floors in the office areas are to be Forbo Tessera Teviot 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. See Finishes Schedule.
- 50.6 The stair treads to the main stair in the reception area are to be finished with Forbo Tessera Teviot carpet tiles to match the offices with Gradus stair nosings with Glacier inserts. 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 laid fair faced. Any open joints are to be pointed and movement joints filled with a suitable flexible filler prior to a white emulsion paint finish.
- 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) is to be sampled to determine suitability for each member to give the specified period of fire resistance and certified test results provided 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

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 clay-ware standard commercial grade from Armitage Shanks Ltd. Contour 21 range 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 from the Armitage Shanks Contour 21 range of fittings.

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.
- 15.3 Fire Assembly Point signs are to be installed in the locations shown on the Fire Strategy drawing, either securely fixed to fencing or on free-standing galvanised steel posts set in an independent concrete foundation.

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 Rockwool 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 all in accordance with the construction drawings.

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 or similar 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 mineral wool 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. 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 are 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.
- 21.4 All internal ironmongery is to be polished 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 be bounded with 254mm x 127mm half battered precast kerbs to BS.340 (Marshall's 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 permeable paved with a mixture of 80mm thick concrete block and tarmac 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.
- 22.3 The operational yard area is to be paved with in-situ concrete in accordance with the Engineers details. Car parking areas and perimeter footpaths are to have permeable concrete block paving, Marshall's Prioria or similar, all to engineers specification. Block paving is to be laid in accordance with manufacturers details as part of the site-wide SUDS scheme. Blocks to be coloured Charcoal with parking bays defined with natural concrete coloured blocks. Refer to BCAL details.
- 22.4 The main car park is to be paved with Terram Bodpave 85, Grasscrete or similar porous paving laid on a suitable sub-base to Engineers specification as part of the SUDS scheme. Pavers are to be filled with graded angular gravel aggregate with an underlying weed control permeable geo-textile. Car bay proprietary marker inserts are to be provided.
- 22.5 The scope of works includes laying a tarmac wearing course to the access road and footpath between the site entrance and the existing estate road. See BCAL drawings for details.

Q31 External planting

- 31.1 The landscaping scheme is to be implemented as indicated on Ed Sharkey Associates drawings.
- 31.2 Allow for grass seeding the top-soiled areas adjacent to the new access road constructed by others. The specification for ground preparation and seeding will be as seeded areas on the development as shown on the landscape drawing.

Q40 Fencing

- 40.1 2.5m high galvanised steel vertical post fencing is to be erected around the boundary as shown on the drawings. Matching manual operated sliding 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.
- 40.3 Alternate fence panels are to be left with a 200mm gap at ground level in accordance with the recommendations of the Ecology Report.
- 40.4 2 no. lockable personnel gates are to be provided in the locations shown on the drawings.
- 40.5 Perimeter fencing is to be Barbican Fencing supplied by Jackson Fencing Ltd or similar and approved with manual operated sliding lockable gates installed in the location shown on the drawings in accordance with manufacturer's details to maintain a secure perimeter.

Q41 Vehicle Barriers

- 41.1 Armco vehicle barriers are to be installed in the locations shown on the drawings with support posts set in concrete bases. The barriers are to be galvanised finish with all necessary fixings, fittings and end guards.

Q50 Site/Street Furniture

- 50.1 A Broxap Arbroath motorcycle rack is to be provided in the location shown, 4300mm long to accommodate 5no motor cycles. The rack is to be finished Anthracite grey RAL7016. An in-situ concrete base will be provided with base plate fixing pads.
- 50.2 A Broxap Wardale 3600mm long 8 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. An in-situ concrete base will be provided to Engineer's details. The shelter will be fixed in accordance with manufacturer's instructions.

R Disposal system

R10 Rainwater drainage systems

- 10.1 The rainwater from the roof will be collected in pre-formed galvanised steel 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 Gutters are to be treated with an appropriate rust inhibitor after allowing a suitable period for weathering.
- 10.3 Drainage is to be to Structural Engineers design and specification.
- 10.4 Overflow weirs will be installed at each end of the gutters with discharge spouts coloured the same as the eaves cladding.

R11 Above ground foul drainage systems

- 11.1 Foul drainage will be constructed in accordance with the drawings and specification produced by ERS Ltd. All above ground drainage pipework will be pvc and will be concealed wherever possible. Any exposed pipework will be painted to match the surroundings.
- 11.2 Suitable rodding points and accesses in any boxing will be provided.

R12 Below ground drainage systems

- 12.1 The building is to have underground storm water drainage under the car park and yard area all to the Structural Engineer's design and specification.
- 12.2 The surface water drainage scheme is a SUDS scheme with an outfall to the stream on the south-west boundary via a hydro-brake. The stream is ecologically sensitive and must not be used as general surface water outfall during construction other than through approved filtration and discharge flow rate control under any circumstances.
- 12.3 Foul drainage is via a pumped rising main connected to existing private outfall. The pump station is located on the south boundary and will be constructed to the Engineers detail and specification.
- 12.4 Refer to BCAL Ltd drawings and specification for details of the drainage installation.

Z10 Purpose made joinery

- 10.1 A hit-and-miss timber screen will be constructed to screen the bin store on the location shown on the drawings. The bin store will be 1800mm high and will be constructed of rough sawn pressure preservative treated timber, all screw fixed. The timber will receive a further coat of suitable compatible preservative post-construction. See details.

Z11 Purpose made metalwork

- 11.1 Allow a Provisional Sum of £10000.00 for the supply and installation of canopies over the main 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.
- 11.2 Steel tube door jamb protection bollards are to be provided at goods loading doors 1200mm high, 150mm diameter set 1000mm into a concrete foundation, filled with concrete and painted yellow BS 4800 ref 10E53 located as shown on the drawings.
- 11.3 Steel tube cane detection guarding is to be installed at office entrance doors as shown on the drawings. 50mm dia. mild steel tubing set in concrete bases painted white.

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 (1:1:6) 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 are to be 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.
- 22.10 The Contractor will provide recommendations for making good any damaged joint arises in floor joints prior to sealing.

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.

The DCM Partnership Ltd
8 Albion Place
Northampton
NN1 1UD

01604 239898
dcm@thedcmp.com