



Sheraton Hotels  
**SHERATON METECHI PALACE**  
Tbilisi

NBS Outline Specification

24 Thurs 20  
Rev A

## DOCUMENT REVISION HISTORY

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## **SPECIFICATION INTRODUCTION AND PRELIMINARIES**

As outlined in the Concept Design Report the external building materials have been selected to contribute to the overall image of the development. Consistent building materials are to be used with the following in mind –

1. Materials shall be carefully selected to enhance the overall character of the development,
2. The suppliers as indicated within this outline specification are provided as a guide for the level of quality that is expected for the materials and finishes within the development and must be adhered to where possible. Local suppliers and branches under the same company designation must be sought after to ensure the suppliers and products as indicated within this specification are followed wherever possible.
3. Buildings and other structures shall have a strong presence and quality to provide a sense of place and create a sense of history over time.
4. Use of high quality building materials shall be encouraged at all times.
5. Energy efficient materials like low emitting carpet tiles, adhesive etc shall be encouraged.

### A50 PRELIMINARY INFORMATION/REQUIREMENTS TO BE READ IN CONJUNCTION WITH THE NBS SPECIFICATION

#### **SPECIFICATION INTRODUCTION**

All materials identified in the Architectural Specification are to be in accordance with the current relevant British Standards unless noted otherwise. QA/ QC quality checks are required from the Contractor to ensure all Sub Contractor/ Supplier shop drawings and submittals achieve the minimum requirements as set out in the Drawings the Specifications prior to release to the Engineer for review/ approval.

#### **CONTRACTOR'S DESIGNED PORTION**

The work specified in this Section is Contractor's Designed Portion work to be carried out by a Trade contractor listed in accordance with the trade contract

#### **CONTRACTOR'S RESPONSIBILITIES**

The Main Contractor is to engage with the Design team throughout the Client sign off procedure, and to provide and facilitate, but not be limited to, the following;

1. To be integrated into the design process with architect so as to support the client decision making process.
2. To ensure all samples are provided in advance for client sign off, in line with the mock up & sample schedule provided by the design team.
3. To hold a library of all signed-off samples on site throughout the duration of the programme
4. To confirm a programme for the submission, review, reiteration and approval of mock up's required in line with critical path of the master programme to ensure that potential delays on site are mitigated by achieving early approval of key elements.
5. To demonstrate that all items within the Contractor's Design Portion are both compliant to British Standards, Building Regulations Approved documents and meets Design Team approval
6. To ensure that all materials and design proposals are suitable for both ongoing maintenance and accessibility, and provided from sustainable sources in line with the client's environmental policy requirements.
7. To provide a design solution to be tailored to meet the proposed subcontractors pricing but to ensure that the finished element is in line with the architect's design intent
8. To deliver the elements detailed herein to provide the required design solution within the approved cost plan

The following items are to be delivered by the Contractor (or external Consultant) with all design, detailing, shop documentation, inspections and certification by suitably qualified Sub contractors:

#### **GEOTECHNICAL:**

Field tests required to confirm bearing capacities under foundations/ slabs on grade/ pavements.

Note: Those are to be supervised by the geotechnical laboratory who has carried out the soil investigation. Tests to be submitted to the Engineer for review/ approval prior to any concrete works.

1. Piling.
2. Proprietary shoring systems.
3. Ground anchors.
4. Soil improvement works.

#### **CONSTRUCTION:**

1. Contractor's temporary works items. (I.e. Hoarding, Signage, Dewatering, Shoring, etc)
2. Design of back-propping sequencing and requirements.
3. Formwork design.
4. Construction methodology analysis.
5. Crane bases, ties, etc.

#### **CIVIL WORKS:**

1. Sub grade / base for landscaping areas. Note: Design by a Civil Engineering Consultant.
2. Roads and pavements. Note: Design by a Civil Engineering Consultant.
3. All heavy civil structures. Note: Design by a Civil Engineering Consultant.
4. External drainage, sewage and water supply. Note: Design by a Civil Engineering Consultant.

#### **CONCRETE:**

1. Proprietary precast systems (foundations, columns, walls, beams and slabs). The precast elements are either load bearing or non-load bearing.
2. Post-tensioned floor plates / post-tensioned slabs on grade. Swimming pool shells

#### **GLASS, STEEL, ALUMINIUM, TIMBER:**

1. Steel to steel connections. Note: The Engineer provides connections design intent and forces.
2. Crane girders.
3. Secondary support for pipe works including monorails and lifting beams.
4. Secondary steel required for plant equipment support.
5. Supports for BMU equipment.
6. Secondary support for fire shutters.
7. Fabric or tension structures and their supporting steelwork or frameworks.
8. Sun shades.
9. Architectural canopies.
10. Aluminium elements design.
11. Facade framing and glazing including door and window trimmers.
12. Proprietary product systems (e.g. Steel stud walls, Louvre frames, etc.)
13. Light poles, Flag poles, Signage.
14. Proprietary steel/ aluminium stairs, walkways & handrails.
15. Steel/ aluminium purlin and side rail accessories.
16. Featured Metal work.
17. Balustrades.
18. Timber elements design.
19. Glass elements design

#### **MISCELLANEOUS ITEMS:**

1. Roof fall arrest/ safety systems.
2. Design for implementation of proprietary formwork systems (e.g. jump forms)
3. Nonstructural elements.
4. Acoustic isolation/ bearing system for plant framing.
5. Water tanks excluding reinforced concrete ones.
6. Proprietary lateral restraints to block-work.

#### **GENERALLY**

The design, fabrication, installation and performance requirements specified are intended to establish a minimum performance level and general principles. The Trade contractor shall be responsible for achieving or surpassing the design and performance criteria for all components.

### **TENDER/CONTRACT INFORMATION**

Drawings and schedules have been prepared as listed on the Drawings Register. Information shown is schematic and indicative of the design proposals for the basic functional and architectural requirements. The drawings do not indicate a detailed solution, nor do they prejudice the submission of alternative proposals complying with the specified requirements. The Trade contractor is to complete the works from the information provided. No other information will be provided unless at the discretion of the CA.

### **WARRANTY**

The Trade contractor must warrant that he has exercised, and will exercise, all reasonable skill and care in:

1. The design of the works insofar as the Works have been or will be designed by the Trade contractor.
2. The selection of materials and goods for the Works insofar as such materials and goods have been or will be selected by the Trade contractor.
3. The satisfaction of any performance specification or requirement insofar as such performance specification or requirement is included or referred to elsewhere in this specification.
4. The Contractor must review the Contract Documentation and provide a written warranty confirming that all specified products are suitable for the expected conditions of use, in all specified locations

### **DESIGN LIFE OF THE INSTALLATION**

1. The design life of the building, as defined in BS 7543, is 60 years.
2. The components, assemblies, and installations, specified in this Section, have a design life, as defined in BS 7543, of not less than 30 years.
3. The Building Manual, specified in the A Section preliminaries, shall provide information on the methods for replacing all components and assemblies with a design life less than that of the building or less than that of the installation of which they form part.

### **BUILDING MANUALS**

The Main Contractor will co-ordinate the preparation of an overall Building Manual describing the fit - out works.

This is to be a comprehensive information source and guide for the Employer and end users providing a complete understanding of the building and its systems and enabling it to be operated and maintained efficiently and safely.

The Trade Contractor is required to collate all relevant information on their works and submit the required number of copies to the Main Contractor in the form of an Operating & Maintenance Manual.

This will be included in the overall Operation & Maintenance (O&M) Manual and the following information:

1. Details of key construction principles, including safe working floor and roof loads.
2. Detailed technical specifications
3. Details of construction methods and materials, including data sheets, which may present residual hazards with respect to cleaning, maintenance, repair, renovation or demolition.
4. Detailed maintenance instructions including access provision and information about equipment provided for cleaning and maintaining the building fabric.
5. The nature, location and markings of utilities and services, including emergency and fire fighting.
6. Instructions for operation, maintenance, dismantling and removal of equipment and systems.
7. Schedules of plant and materials suppliers
8. Access requirements/restrictions.
9. As-built drawings of any designed work undertaken
10. Guarantees and Warranties

Draft copies of the information for consultant review:

11. Number of copies: 1 electronic copy

12. Latest date for submission: not less than 28 days prior to the date of practical completion of the contract.

Final copies of the information:

13. Number of copies: 2
14. Latest date for submission: Within 4 weeks of practical completion of the specific package.

### **THERMAL MOVEMENT**

The design of the components is to take account of all temperature changes, local climatic conditions, temperature differentials, etc. to ensure that no buckling, distortion, or damage, to components, joints, or fixings occurs.

### **EVIDENCE OF PERFORMANCE**

Provide, with the Tender, independently certified evidence that all specified variants of components comply with specified performance requirements. Evidence relating to fire resistance requirements shall:

1. Indicate whether these are the result of specific tests, or assessments based on tests of similar components.
2. include confirmation that the Architect's information does not include any detail or specified requirement likely to invalidate test results.
3. clearly identify components for which project-specific testing or assessment will be required, with details of the programme and cost implications of such testing and assessment.

## **70 SPECIFICATION FORMAT**

- The Specification comprises Sections A to Z and follows the Common Arrangement classification system.
- Work Sections A and Z provide general requirements applicable to Work sections F to X.
- Work Sections F to X detail particular requirements specific to individual trades or elements of the works.
- The Works Sections comprising each Fit Out Package will be defined by H+A.

Packages with Contractor Design Portions/Responsibilities will be defined within the particular Works Sections as follows:

- Prescriptive (P): The Section is a detailed materials and workmanship Specification reflecting the Architect's design solution. The Contractor will be required to provide fabrication details but design responsibility remains with the Architect.
- Descriptive (D): The section, when read with the Design Drawings, indicates the visual intent with which the Contractor must comply when undertaking the Detailed Design. The Contractor retains full responsibility for completing the Detailed Design and execution of the works and for meeting the specified performance criteria.
- The Specification shall be read in conjunction with the Conditions of the Contract, Preliminaries, Design Drawings, Instructions and Supplemental information and other relevant documents. Refer to Clause 100.
- Performance criteria where specified shall be considered as minimum standards with which the Contractor's proposals shall comply.
- The Works Sections of the Specification shall not impose a lesser standard of material than defined in Sections A and Z

## 80 SUPPLEMENTARY INFORMATION:

Read this Specification in conjunction with all relevant information from the following (if available):

- Fire Strategy Report.
- Building Movements and Tolerances Report.
- Structural Drawings and Specifications.
- Acoustic Specifications.
- M/E/P Drawings and Specifications.
- IT Drawings and Specifications.
- AV Drawings and Specifications.
- Catering Drawings and Specifications.
- Security Drawings and Specifications.

## 130 THE PROJECT STANDARDS AND QUALITY

Provide and use all products, materials and components, and carry out all work in accordance with good building practice as required by the General Preliminaries, and having consideration for the following:

- The Client proposes to occupy the completed building for a minimum period of 20 years. The project is therefore to provide works, products and materials to a standard and level of durability consistent with that tenancy period.
- Products, components and elements of the works required to be relocatable or otherwise alterable are to be accordingly durable.
- Products which it is necessary to replace periodically (e.g.: seals and sealants), or which it is necessary to replace/renew as part of the process of relocation or alteration of other components, should be sourced and used with consideration for their likely long term availability.
- The Main Contractor must verify with his suppliers that proposed products subject to periodic renewal are not planned to be phased out or be replaced with incompatible products within a minimum of 5 years from the date of Practical Completion.

## 220 ARCHITECT'S DESIGN DRAWINGS

All Architects' design drawings must be read in conjunction with the relevant specifications, schedules and any scopes of work and associated documents. Drawings prepared by the Architect indicate the design of the works to the extent of the information provided. Prescriptive (P): Drawings issued by the Architect, representing the Design.

Descriptive (D): Drawings issued by the Architect, showing the design intent, scope, layout, principal dimensions, function, visual and aesthetic requirements.

The Trade Contractor is required to develop detailed design and production information as necessary to allow

complete and proper execution of the works. The extent of this information will vary from package to package but will include co-ordinated drawings, layouts, shop drawings, additional builders work drawings, calculations and other information necessary.

Ensure sufficient time is allowed for in the programme for any process of development, submission and comment as required and that the tender includes for the cost of such work.

## 230 DESIGN DRAWINGS/INFORMATION

To be submitted with the tender must include:

- Drawings/information as necessary to allow the validity of the tender to be checked against the Architect's Design Intent drawings where the tendered work includes contractor design or the trade contractor is proposing deviation from the architect's drawings.
- Any drawings submitted should include outline details and information for any element of the works in which the Trade Contractor proposes to include products other than those specified.

## 240 PROPOSED MANUFACTURERS/SUPPLIERS

Of products, including all items for which the choice of manufacturer/supplier is at the discretion of the Main Contractor must be submitted with the tender, and thereafter within one week of request.

## 250 SPARES

Provide with the Tender a recommended preliminary list of spares necessary to be used or held in store by the Client. Each item is to indicate current supplier's price including package and delivery to site, and delivery periods.

Final spares policy is to be subject to agreement between the Trade Contractor, Main Contractor, Employer and relevant consultant.

#### 260 TECHNICAL INFORMATION

Relating to the trade contractor's submission must be submitted in accordance with specification.

#### 270 QUALITY CONTROL RESOURCES

Relating to the trade contractor's submission must be submitted in accordance with the specification.

#### 280 HEALTH AND SAFETY INFORMATION

Relating to the trade contractor's submission must be submitted in accordance with the specification.

#### 290 HEALTH AND SAFETY STATEMENT

Must be submitted with the tender describing any significant and unavoidable hazards which may arise as a result of carrying out the work and the measures proposed to safeguard the health and safety of operatives and of any person who may be affected by the work

#### 440 CROSS-REFERENCES TO THE SPECIFICATION

Where a numerical cross-reference to a specification section or clause is given on drawings or in any other document the trade contractor must verify its accuracy by checking the remainder of the annotation or item description against the terminology used in the referred to section or clause.

Where a numerical cross-reference is not given the relevant section(s) and clause(s) of the specification will apply, cross-reference thereto being by means of related terminology.

Where a cross-reference for a particular type of work, feature, material or product is given, relevant clause(s) elsewhere in the referred to specification section dealing with general matters, ancillary products and workmanship also apply.

The Trade contractor must, before proceeding, obtain clarification or instructions in relation to any discrepancy or ambiguity, which he may discover.

#### 460 EQUIVALENT PRODUCTS

Wherever products are specified by proprietary name and the words 'or equal and approved' are not included, alternative products may be permitted subject to the following:

- Submit, within the Tender Programme period, a comprehensive list of all proposed alternative products identifying in each case:
  - The relevant specification clause number.
  - The product named in the relevant specification clause.
  - The proprietary name of the proposed alternative product.
  - The justification for the proposed substitution including any cost variations.
  - For every proposed alternative product submit for verification documentary evidence that the alternative product is equivalent in respect of material, safety, reliability, function, compatibility with English translations of any foreign language documents.
  - Any proposal for use of an alternative product must also include proposals for substitution of compatible accessory products and variation of details as necessary, with evidence of equivalent durability, function and appearance of the construction as a whole. Provide revised drawings, specification and manufacturer's guarantees as required by the CA. Before ordering alternative products, obtain written confirmation from the CA.

## **K LININGS/SHEATHING/DRY PARTITIONING**

### K10 PLASTERBOARD DRY LININGS/ PARTITIONS/ CEILINGS

#### **TYPES OF DRY LINING**

- 110 PLASTERBOARD DRYLINING TO INTERNAL WALLS
- Manufacturer: Saint-Gobain Gyproc Middle East or equal approved.
  - Studs:
    - Type: 50 mm Gypframe 50 S 50 'C' Studs. Refer to drawings.
    - Centres: 600 mm.
  - Insulation: Isover N/A
    - Thickness: Fill cavity.
- 220 PROPRIETARY SUSPENDED CEILING SYSTEM
- Manufacturer: Saint-Gobain Gyproc Middle East or equal approved.
    - Product reference: Gyproc MF Suspended Ceiling System.
  - Lining board: 12.5 mm Gyproc Regular plasterboard.
    - Finishing: Skim coat plaster with seamless jointing, 1 coat of Gyproc Drywall Primer.
  - Insulation: Mineral wool to BS EN 13162.
    - Thickness: As required to meet Acoustic Specialist's details.
- 220C PROPRIETARY SUSPENDED CEILING SYSTEM EXTERIOR CEILING LININGS
- Manufacturer: Promat International (Etex Group) or equal approved.
    - Material: MASTERBOARD 12mm thick with board size to suit as required.
  - Structural soffits: Concrete.

### K13 RIGID SHEET FINE LININGS AND PANELLING

#### **TYPES OF LINING AND PANELLING**

- 110 WOOD PANELLING
- Substrate: Concrete / blockwork.
    - Materials: Generally to BS EN 942. Wood species: As shown on drawings.
    - Appearance class: J2.
    - Panels: As shown on drawings.
    - Finish (to match approved sample): Nonintumescent clear finish
- 120 WOOD VENEERED PANEL LINING
- Substrate: Concrete / blockwork.
    - Core material: As per Contractor's recommendation. Must be resistant to humidity. Thickness: As shown on drawings.
    - Supplier: Contractor to submit proposals.
    - Finish (to match approved sample): As shown on drawings.
- 130 LAMINATED PLASTICS VENEERED PANEL LINING AS SHOWN ON DRAWINGS
- Substrate: Concrete / blockwork.
    - Core material: As per Contractor's recommendation. Must be resistant to humidity. Thickness: As shown on drawings.
  - Manufacturer: Contractor to submit proposals.
  - Product reference: TBC

K40 DEMOUNTABLE SUSPENDED CEILINGS

**TYPES OF CEILING SYSTEM**

110 SUSPENDED CEILING SYSTEM REFER TO ID DRAWINGS AND APPENDICES

- Ceiling system manufacturer: Armstrong World Industries Ltd or equal approved.
  - Product reference: Prima Dune Plus or similar approved.
- Ceiling:
  - Type: Exposed grid with microperforated textured mineral tile.
  - Ceiling module: see drawings

110A SUSPENDED CEILING SYSTEM ACOUSTIC WITH HYGIENE PROPERTIES

Ceiling system manufacturer: Hunter Douglas Middle East or equal approved.

- Product reference: Luxalon Lay-In Panel or equal approved.
- Ceiling:
  - Type: Exposed grid with microperforated aluminium pre-painted metal tile, Perforation dia 1.5mm, minimum openness - 22%.
- Ceiling module: See Drawings mm.

## **L WINDOWS DOORS AND STAIRS**

### 650A METAL GRILLES AND DIFFUSERS

- Manufacturer: Hunter Douglas or equal approved.
  - Product reference: Submit proposals.
- Material: Aluminium.
  - Finish as delivered: Jotun Super Durable Powder coating, colour: WHITE to the approval of the Architect.

### L20 DOORS/ SHUTTERS/ HATCHES

#### 230 WOOD FLUSH DOORS FD60 FIRE RESISTING

- Manufacturer: Baybridge Trading LLC or equal approved.
  - Product reference: To Architect's approval.

#### 231 WOOD FLUSH DOORS STORAGE

- Manufacturer: Baybridge Trading LLC or equal approved.
  - Product reference: To Architect's approval.

#### 232 WOOD FLUSH DOORS FD90 FIRE RESISTING

- Manufacturer: Baybridge Trading LLC or equal approved.
  - Product reference: To Architect's approval.

#### 233 WOOD FLUSH DOORS FD120 FIRE RESISTING

- Manufacturer: Baybridge Trading LLC or equal approved.
  - Product reference: To Architect's approval.

#### 410A WOOD DOORSETS - INTERNAL

- Manufacturer: Baybridge Trading LLC or equal approved.
  - Product reference: Submit proposals.

#### 480 DOORSETS STEEL PANEL DOOR LEAF

- Manufacturer: Tacam UK, Evendine, or equal approved.
  - Product reference: Duralite general purpose lightweight doors.

### L40 GENERAL GLAZING

#### **TYPES OF GLAZING**

#### 370 BEAD FIXED GLASS UNITS VISION PANELS

- Pane material: Emirates Glass Industries or equal approved.
  - Inner pane: 8 mm clear float glass.
  - Outer pane: 8 mm fully tempered clear glass.

## **M SURFACE FINISHES**

### M10 CEMENT BASED LEVELLING/ WEARING SCREEDS

#### **TYPES OF SCREED**

##### 115A CEMENT:SAND LEVELLING SCREEDS TO INTERNAL

- Substrate: Concrete slab
- Screed construction: Solid floor.
  - Reinforcement for crack control: Steel fabric, as clause 392 - Refer to Structural Engineers details.
- Thickness:
  - Nominal: 38 mm.
- Mix:
  - Proportions (cement:sand): To BS 8204-1.
- In situ crushing resistance (ISCR) category: B (4 mm maximum indentation).
  - Mass of test weight: 4 kg.

##### 155 CEMENT SAND SURFACING TO LIGHTWEIGHT AGGREGATE LEVELLING SCREEDS

- Surfacing layer: Bonded to lightweight aggregate base layer:
  - Method: Either lay and compact within 24 hours of laying the base layer or, apply a suitable bonding agent.
- Thickness:
  - Nominal: 20 mm.
  - Minimum: 15 mm.
  - Maximum: 25 mm.
- Surfacing layer mix:
  - Proportions (cement:sand): 1:3-4.5.
- In situ crushing resistance (ISCR) category: B (4 mm maximum indentation).
  - Mass of test weight: 4 kg.

### M20 Plastered/ Rendered/ Roughcast coatings

#### **TYPES OF COATING**

##### 200 GYPSUM PLASTER ON CEMENT GAUGED UNDERCOATS TO ALL INTERNAL LOCATIONS

- Substrate: Concrete blockwork as section F10 .
  - Preparation: Spatterdash keying coat.
- Undercoats:
  - Mix: To manufacturer's recommendations.
  - Thickness (excluding dubbing out and keys): 10 mm (maximum) overall.

##### 280 GYPSUM PLASTER SKIM COAT ON PLASTERBOARD

- Plasterboard: 12.5 mm .
  - Preparation: Bonding agent recommended by plaster manufacturer .
- Plaster: Board finish/ finish plaster to BS EN 13279-1.
  - Manufacturer: Saint-Gobain British Gypsum Ltd or equal approved. Product reference: Thistle Multifinish .
  - Thickness: 2 mm

### M21 INSULATION WITH RENDERED FINISH

#### **TYPES OF INSULATION WITH RENDERED FINISH**

M40 STONE/ CONCRETE/ QUARRY/ CERAMIC TILING/ MOSAIC

**TYPES OF TILING/ MOSAIC**

M51 EDGE FIXED CARPETING

**TYPES OF CARPETING**

110A AS PER DRAWINGS

- Base: Concrete.
  - Preparation: To carpet manufacturer's recommendations.
- Fabricated underlay: Not applicable.
- Interlay: Not required .
- Underlay to BS 5808 and BS EN 14499:
  - Manufacturer: Al Mostafawi or equal approved.

M60 PAINTING/CLEAR FINISHING

110 EMULSION PAINT TO INTERNAL PLASTERED SURFACES

- Manufacturer: Jotun paints or equal approved.
  - Product reference: Fenomastic Matt - Acrylic Co-polymer highly washable matt emulsion finish.
- Surfaces: Smooth render / Gypsum board / Plaster board etc.
  - Preparation: Strict accordance with manufacturer's recommendation.
  - Number of coats: Two full coats.

195 SPECIAL COATING TO ALL ALUMINIUM WORK

- Manufacturer: Jotun Powder Coating U.A.E. (LLC) or equal approved.
  - Product reference: Super Durable Powder coating.
- Surfaces: Aluminium and architectural steel unless specified otherwise.
  - Preparation: Blast cleaning or chemical treatment.

## **N FURNITURE/EQUIPMENT**

### N10 GENERAL FIXTURES/ FURNISHINGS/ EQUIPMENT

- 291 DOOR STOPS TO ALL DOORS
- Manufacturer: To be same as ironmongery supplier.
    - Product reference: Refer to ironmongery schedule.
  - Material: Stainless steel

### N14 General internal signage systems

- 113 DOOR SIGNS RANGE TO ALL GENERAL, TECHNICAL, AMENITIES, EMERGENCY, ESCAPE DOORS AT FOH & BOH AREAS
- System manufacturer: Al Reyami Signs & Advertising or equal approved.
    - Product reference: Submit proposals.
  - Layout and dimensions: Refer to manufacturers detail drawings.
  - Lettering:
    - Language: English and Arabic.
- 114 ESCAPE SIGN RANGE - ESCAPE ROUTE PLAN - SEE SECTION N15
- System manufacturer: Refer to MEP Specifications and details - Al Reyami Signs & Advertising LLC or equal approved.
- 141 ROAD SIGNAGE SYSTEM - PARKING DIRECTIONAL SIGNAGE
- Standard: To BS EN 12899-1.
  - System manufacturer: Al Reyami Signs & Advertising LLC or equal approved.
    - Product reference: as per manufacturer

### N15 Internal fire and safety signage systems

- 110 FIRE SIGNAGE SYSTEMS FOR ESCAPE ROUTE
- System manufacturer: Emirates Neon Group PO Box 5975, Sharjah, UAE T:06 503555 F:06 5331748 or similar approved.
    - Product reference: Submit proposals.
- 120 SAFETY SIGNAGE SYSTEMS IN ACCORDANCE WITH MEP CONSULTANTS SPECIFICATION
- System manufacturer: Emirates Neon Group or equal approved.
    - Product reference: Submit proposals.

## **P BUILDING FABRIC SUNDRIES**

### P21 DOOR/ WINDOW IRONMONGERY

#### 170A IRONMONGERY FOR FIRE DOORS

- Relevant products: Ironmongery fixed to, or morticed into, the component parts of a fire resisting door assembly.
- Compliance: Ironmongery included in successful tests to BS 476-22 or BS EN 1634-1 on door assemblies similar to those proposed

#### **DOOR OPERATING DEVICES**

#### 413 PERFORMANCE SPECIFICATION FOR OVERHEAD DOOR CLOSERS

- Standard: To BS EN 1154.
  - Door closing devices to fire/ smoke control doors: CE marked.

#### 472 PERFORMANCE SPECIFICATION FOR ELECTROMAGNETIC HOLD OPEN/ SWING-FREE DEVICES (24 V) To corridor doors identified in layouts

- Standard: To BS EN 1155.
  - Electromagnetic devices to fire/ smoke control doors: CE marked.
- Type: Swing free, integral with closer .

#### 526 PERFORMANCE SPECIFICATION FOR DOOR LOCKS AND LATCHES

- Lock suites for use on fire rated door assemblies shall be independently tested and certified as not compromising the fire rating and shall not contain plastics, zinc or other low melting point components.
- Mortise locks and latches shall conform to industry performance requirement BS
- EN5872 category B and industry fire rating standard EN 1634-1

#### 578 PERFORMANCE SPECIFICATION FOR PANIC EXIT DEVICES on all exit doors into staircases

- Standard: To BS EN 1125.
  - Panic exit devices for locked doors on escape routes: CE marked.

#### 583 DOOR BOLTS

- At top and bottom of non-active leaf of door pairs. Flush bolts to be provided having a 19mm throw. Flush bolts to be 225mm long body with a dovetail return to resist damage to the door.

#### **DOOR FURNITURE**

#### 615 LEVER HANDLES

- All lever handles with concealed fixing base, spindle and roses for door thickness between 35mm and 54mm of Satin stainless steel material grade 316.

#### 645 PULL HANDLES

- Pull handles should be as specified in the hardware schedule. They should be 300\*19mm diameter bolt through fixing unless otherwise specified.

#### 675 PUSH PLATES

- Shall be manufactured from the specified finish. All plates to be 1.6mm thick and shall be fixed with flush countersunk screws located 5mm from the edge corner.

#### 695 KICK PLATES

- Material/ finish: Satin stainless steel, grade 1.4401 (316) .
- Mounting: Face fix .
- Additional requirements: Screw heads colour matched to plate .

#### 710 ESCUTCHEONS.

- Material/ finish: Satin stainless steel, grade 1.4401 (316)

725 DOOR STOPS

- All doorstops should be robust matching other ironmongery, concealed fixing.

895 DOOR MOUNTED AIR TRANSFER GRILLES.

- Material/ finish: Satin stainless steel, grade 1.4401 (316) .

120 HARDWOOD ARCHITRAVES AND SKIRTING

- Quality of wood and fixing: To BS 1186-3.
  - Species: TBC
  - Class: CSH.

## Z BUILDING FABRIC REFERENCE SPECIFICATION

### Z10 PURPOSE MADE JOINERY

#### 110 FABRICATION

- Standard: To BS 1186-2.
- Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
  - Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
- Joints: Tight and close fitting.
- Assembled components: Rigid. Free from distortion.
- Screws: Provide pilot holes.
  - Screws of 8 gauge (4 mm diameter) or more and screws into hardwood: Provide clearance holes.
  - Countersink screws: Heads sunk at least 2 mm below surfaces visible in completed work.
- Adhesives: Compatible with wood preservatives applied and end uses of timber.

#### 115 GENERAL JOINERY REQUIREMENTS

Allow for the following joinery items:

- MDF skirtings throughout: height to match basebuild.
- Generally allow for frame and fixings to detail at junctions with stud partition walls, columns, core walls, plasterboard and metal ceilings, and raised floor as shown on General Arrangement Plans and detail drawings.
- Allow for all accessories, i.e. glazing, ironmongery, manifestation, miscellaneous trims, etc as shown on the detail drawings
- Allow for accommodation of equipment and routing of services/containment where required
- Allow for finishing of all surfaces in accordance with the Finishes Schedule/detail drawings and Spec K13 to the Architect's approval

#### 117 DETAIL DESIGN

The drawings show the design intent only. The setting out parameters and finished profiles, are indicative only.

The Trade Contractor will have full responsibility for the works in this specification, including:

- Fabrication, assembly and installation of the work to provide durable and integrated joinery fixture as shown on the drawings and to comply with this specification.
- Provision of all information necessary for submission under, and in compliance with, the requirements of the Building Regulations and the Health and Safety Regulations.
- Co-operation with the Planning Supervisor and compliance with the Health and Safety plan for the project.
- The integration into the work of any proposed substitutions, including the preparation and submission for review of drawings, samples, certificates, etc, and liaison with other Trades/disciplines

#### 120 CROSS SECTION DIMENSIONS OF TIMBER

- General: Dimensions on drawings are finished sizes.
- Maximum permitted deviations from finished sizes:
  - Softwood sections: To BS EN 1313-1:-  
Clause 6 for sawn sections.  
Clause NA.2 for further processed sections.
  - Hardwood sections: To BS EN 1313-2:-  
Clause 6 for sawn sections.  
Clause NA.3 for further processed sections.

#### 125 SURVEY OF EXISTING BUILDING

After appointment, the Joinery Trade Contractor shall survey the existing building where necessary to complete shop drawings.

#### 127 DRAWING SUBMITTAL PROCEDURE

The Joinery Trade Contractor shall prepare and submit shop drawings for the works in accordance with the procedures set out within the A Section Preliminaries documents showing fully the locations, all component parts, methods of assembly and fixing and the relationship with adjacent units or materials, indicating permissible deviations.

- Note: Shop drawings to include General Arrangement plan, elevations, sections and details. Details to include all standard and special abutments.
- This specification is to be read in conjunction with the relevant design drawings, General Arrangements, detailed drawings and associated specifications forming part of the package.

#### 130 PRESERVATIVE TREATED WOOD

- Cutting and machining: Completed as far as possible before treatment.
- Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
- Surfaces exposed by minor cutting and/ or drilling: Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

#### 135 PRE-TENDER SURVEY

- The Contractor is to visit the site by prior arrangement with the Construction manager to establish locations, dimensions, and all areas requiring joinery items.
- An inspection of base building fabric is to be carried out during the bid period by tenderers to determine appropriate installation methods.
- Site dimensions must be taken and recorded on shop drawings before starting to make prefabricated items
- The Trade Contractor is responsible for providing a conditional survey of all existing skirtings and advise the CA on the potential for re-refurbishment.

#### 140 MOISTURE CONTENT

- Wood and wood based products: Maintained within range specified for the component during manufacture and storage.

#### 145 PERMISSIBLE DEVIATION

Generally in accordance with A Section Preliminaries and additionally:

- Length: +/- 1.5mm
- Width: +/-1.5mm
- Squareness: +/-1.5mm in 1m, (taking the longer of sides at any corner as a baseline and measuring the deviation of the shorter side perpendicularly from the baseline).
- Flatness: +/- 0.5mm under a 1m straightedge.
- Finished dimensions of components must be such that the required accuracy of the finished joinery items and joints can be achieved.
- Arrange the setting out, erection, juxtaposition of components and application of finishes to ensure that there is satisfactory fit at junctions, and that there are no practically or visually unacceptable changes in plane, line or level and that the finished work has a true and regular appearance.
- Wherever satisfactory accuracy, fit and/or appearance of the work are likely to be critical or difficult to achieve, obtain approval of proposals, or of the appearance of the relevant aspects of the partially finished work as early as possible.

#### 150 CONTROL SAMPLES

Complete a sample for each type of installation incorporating materials matching previously agreed samples, being part of the finished work in advance of the remainder, in an

approved location, and obtain approval from the Architect of appearance and method of construction before proceeding with further installation.

Control sample to incorporate typical components features, including all, interface with adjoining works.

Location: to be advised

#### 160 DETAILS REQUIRED FROM THE CONTRACTOR AT BID RETURN

- A full description of the construction including: materials, systems, finishes, type(s) and locations of fixings, jointing materials and methods. Clearly indicate any proposed departure from the requirements of the tender documents.
- The Contractor should include with the bid-return, independently certified evidence that all specified variants of components comply with specified performance requirements.
- A complete quantified breakdown of the work.
- Details of Quality control and health and Safety Procedures.
- Full description of builder's works, special provisions and special attendance to be provided by others.
- Reference to work of a similar nature carried out by the tenderer on other contract(s), with relevant dates.
- If any work is sub-contracted, provide company name and profile of sub-Contractor with references to work of a similar nature carried out on other contracts with relevant dates. The Contractor shall supply indicative details of the following at Bid return:
  - Typical sections through joinery items showing jointing details.
  - Typical elevations of joinery items.
  - Junctions at the abutments of differing new and base build partition walls, suspended ceilings and raised floors construction.
  - Details of structural frames.

#### 200 VENEERS

Refer to Architect's Finishes Schedule for types.

The Architect is to approve the selection of logs.

Appearance:

- Veneers will be required to match guide samples available for viewing at the Architect's office. These will identify the range of veneer appearance considered acceptable in the form of three samples identifying the 'ideal' and also both the 'upper' and 'lower' extents of the range.
- Condition core material and veneers before bonding. When not otherwise specified, apply to the reverse side of lat boards a balancing veneer with the same moisture and tempering movement characteristics as the facing veneer.
- Set out veneers so that feature and pattern are aligned and in regular, uniform symmetry unless specified otherwise. Apply veneers with edges tight butted and flush, with no gaps or other open defects.
- Bond in presses whenever possible.
- Finished components to be free from defects, including bow, twist, scratches, chippings, pimpling, depressions, glue spilling and staining.
- Sand to a fine, smooth finish free from sanding marks.

Matching:

- Ensure that all adjacent finishes match each other and any adjacent wall panelling.
- The grain in veneers shall be consistent in grain and colour. The Designers' approval for matching must be sought prior to final fixing.
- The Contractor shall provide a list of all veneer suppliers used in formulating his bid.

#### 215 GLASS

Refer to Architect's Finishes Schedule for types.

- All glass to be generally in accordance with BS 952 (taking account of the December 1993 draft proposed revision) and BS 6262. All glass including after processing, is to be free of any blemishes.
- Blemishes in Glass: Notwithstanding BS 952, Glass and Glazing Federation or other definitions, for the purpose of this project a blemish is anything that is visible to the naked

eye from a distance of two metres under all normal lighting conditions, and at any angle. Inspection for blemishes will be prior to Practical Completion.

- Heat Processed Glass: Roller wave distortion must be arranged in one orientation in the finished work, i.e. all vertical or all horizontal. All such glass to be discretely and permanently marked with origin and type.
- Thermal safety of glass: Ensure that the glass will not develop any damaging thermal stresses which could cause breakage.

#### 220 WOOD VENEERED BOARDS/ PANELS

- Core material and veneers: Conditioned before bonding.
- Setting out: Veneer features and grain pattern aligned regularly and symmetrically unless instructed otherwise.
- Balancing veneer: Applied to reverse side of core material.
- Moisture and temperature movement characteristics: As facing veneer.
- Veneer edges: Tight butted and flush, with no gaps.
- Tolerance of veneer thickness (maximum):  $\pm 0.5$  mm.
- Finished components: Free from defects, including bow, twist, scratches, chipping, splits, blebs, indentations, glue marks and staining.
- Surface finish: Fine, smooth, free from sanding marks

### Z11 PURPOSE MADE METALWORK

#### 310A MATERIALS GENERALLY

- Grades of metals, section dimensions and properties to be to the appropriate British Standard. When not specified, select grades and sections appropriate for the purpose.
- Prefinished metal may be used if methods of fabrication do not damage or alter appearance of finish and finish is adequately protected.
- Fastenings to be to the appropriate British Standard and, unless specified otherwise, to be of the same metal as the component, with matching coating or finish.
- Materials obtained from non-UK sources shall comply with the relevant national standard provided always that this shall be not lower than the equivalent British Standard.

#### 310B MATERIALS GENERALLY

- All metals exposed to external atmosphere to be marine grade quality, including but not limited to fixings, features, reveals, framing, extrusions etc.

#### 320 STEEL LONG AND FLAT PRODUCTS

- Hot rolled structural steels (excluding structural hollow sections and tubes): To BS EN 10025-1.
- Fine grain steels, including special steels: To BS EN 10025-3 and -4.
- Improved atmospheric corrosion resistance: To BS EN 10025-5.

#### 330 STEEL PLATE, SHEET AND STRIP

- Plates and wide flats, high yield strength steel: To BS EN 10025-6.

#### 340 HOT ROLLED STEEL PLATE, SHEET AND STRIP

- Flat products, high yield strength for cold forming: To BS EN 10149-1, -2 and -3.
- Low carbon steel sheet and strip for cold forming: To BS EN 10111.
- Narrow strip, formable and general engineering purposes: To BS 1449-1.8 and BS 1449-1.14.

#### 350 COLD ROLLED STEEL PLATE, SHEET AND STRIP

- Steel sections: To BS EN 10162.
- Flat products, high yield strength micro-alloyed steels for cold forming: To BS EN 10268.
- Low carbon steel flat products for cold forming: To BS EN 10130 and BS EN 10131.
- Uncoated mild steel narrow strip for cold forming: To BS EN 10139 and BS EN 10140.
- Narrow strip, general engineering purposes: To BS EN 10132-1, -2, and -3.

- Low carbon steel flat products for vitreous enamelling: To BS EN 10209.

### 360 STEEL COATED FLAT PRODUCTS

- Hot dip zinc coated low carbon steel sheet and strip for cold forming: To BS EN 10327 and BS EN 10143.
- Hot dip zinc coated structural steel sheet and strip: To BS EN 10143 and BS EN 10326.
- Hot dip zinc-aluminium (za) coated sheet and strip: To BS EN 10326 and 10327.
- Hot dip aluminium-zinc (az) coated sheet and strip: To BS EN 10327.
- Organic coated flat products: To BS EN 10169-1.

### 370 STEEL STRUCTURAL HOLLOW SECTIONS (SHS)

- Non alloy and fine grain steels, hot finished: To BS EN 10210-1 and -2.
- Non-alloy and fine grain steels, cold formed welded: To BS EN 10219-2.
- Weather resistant steels, hot finished: To BS 7668.

### 380 OTHER STEEL SECTIONS

- Equal flange tees: To BS EN 10055.
- Equal and unequal angles: To BS EN 10056-1 and -2.
- Wire, mild steel for general engineering purposes: To BS 1052.
- Wire and wire products, general: To BS EN 10218-2.
- Tubes:
  - Seamless circular: To BS EN 10297-1.
  - Seamless cold drawn: To BS EN 10305-1.
  - Welded and cold sized square and rectangular: To BS EN 10305-5.
  - Welded circular: To BS EN 10296-1.
  - Welded cold drawn: To BS EN 10305-2.
  - Welded cold sized: To BS EN 10305-3.

### 400 STAINLESS STEEL PRODUCTS

- Chemical composition and physical properties: To BS EN 10088-1.
- Sheet, strip and plate: To BS EN 10088-2.
- Semi-finished products bars, rods and sections: To BS EN 10088-3.
- Wire: To BS EN 1088-3.
- Tubes:
  - Welded circular: To BS EN 10296-2.
  - Seamless circular: To BS EN 10297-2.

### 400A STAINLESS STEEL PRODUCTS (INCLUDING STAINLESS STEEL MESH)

- Chemical composition and physical properties: To BS EN 10088-1.
- Sheet, strip and plate: To BS EN 10088-2.
- Semi-finished products bars, rods and sections: To BS EN 10088-3.
- Wire: To BS EN 1088-3.
- Tubes:
  - Welded circular: To BS EN 10296-2.
  - Seamless circular: To BS EN 10297-2.

#### Stainless Steel Mesh (to comply with the above standards)

- Location: As indicated on drawings
- Manufacturer: Submit Proposals
- Design: Baltic, open area of not less than 43%

Method of fixing: Stretched panels with clamp fixing to perimeter edges with intermediate ties on fixed and pivoting panels formed from stainless steel flat sections mechanically fixed refer details. All to works contractors design and in accordance with Manufacturer's recommendations.

- Resistance to corrosion: to manufacturer's recommendations.

## Z21 MORTARS

### **CEMENT GAUGED MORTARS**

- 110 CEMENT GAUGED MORTAR MIXES
- Specification: Proportions and additional requirements for mortar materials to be specified.
- 120 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS
- Standard: To BS EN 13139.
  - Grading: 0/2 (FP or MP).
- 131 READY-MIXED LIME/ SAND FOR CEMENT GAUGED MASONRY MORTARS
- Standard: To BS 4721 or BS EN 998-2.
  - Lime: Nonhydraulic to BS EN 459-1.
- 135 SITE MADE LIME/ SAND FOR CEMENT GAUGED MASONRY MORTARS
- Lime: Nonhydraulic to BS EN 459-1.
    - Type: CL 90S.
- 160 CEMENTS FOR MORTARS
- Cement: To BS EN 197-1 and CE marked.
    - Types: Portland cement, CEM I.
- 180 ADMIXTURES FOR SITE MADE CEMENT GAUGED MORTARS
- Air entraining (plasticizing) admixtures: To BS 4887-1 and compatible with other mortar
- 190 RETARDED READY TO USE CEMENT GAUGED MORTAR
- Standard: To BS 4721 or BS EN 998-2.



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