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## UCLH PHASE 4 AND PROTON BEAM THERAPY BUILDING PROJECT

### Architectural Specification

#### Section: Q50 – Site/ Street Furniture/ Equipment

#### Revision: A – 100% Stage E Issue

Revision	Date	Clauses revised	Notes
Contract Issue	28/07/2014	-	-
Rev. A 100% STAGE E ISSUE	16/12/2016	Q50.1201	Bollard specification amended
		Q50.1222	Bicycle stand added
<b>General notes:</b> Omissions to specification shown in blue and struck through. <del>Example.</del> Additions to specification shown in red. <b>Example.</b> Updates from Contract Specification to be agreed by ByUK and UCLH where relevant.			

**Scott Tallon Walker Architects**

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**Q50 SITE/ STREET FURNITURE/ EQUIPMENT**

To be read in conjunction with Section A91 and other related sections of the Specification, Preliminaries and Contract Conditions.

**Q50.1000 SCOPE, SUBMITTALS, TESTING AND PERFORMANCE**

**Q50.1100 SPECIFICATION AND SCOPE**

Q50.1101 General

- a) Works covered in this section are specified by performance and therefore designated as works with specialist sub-contractor Design (SCD). Refer to Section A91.
- b) Complete the Detailed Design, manufacture, supply, install and warrant the works whilst complying with the visual intent indicated on the Design Drawings and criteria stated in the Specification.
- c) For design and general performance requirements, refer to Section A91 of the Specification. Specific design and performance requirements are as defined in the particular trade sections.
- d) Where no material, product or supplier is indicated in the Specification, propose suitable materials and systems prior to Contract award which comply with the visual intent and performance criteria stated and remain fully responsible for the Detailed Design of the works.
- e) Where a particular material, product or supplier is indicated in the Specification, such material, product or supplier shall be deemed indicative representing the Architect's design intent only. The Contractor may complete the installation using that product, or such other confirmed as acceptable by the Architect in writing, but shall remain fully responsible for the Detailed Design and performance of the works.

Q50.1102 Scope of Works

This section of the Specification, when read in conjunction with the Design Drawings, provides particular requirements with respect to the following:

- a) Bollards.
- b) Site furniture.
- c) Planters.

Q50.1103 Particular Interfaces

- a) Complete the Detailed Design of all interfaces with adjoining trades prior to commencement of manufacture.
- b) Ensure that all interfaces are fully co-ordinated prior to commencement.

**Q50.1200 SYSTEM TYPES**

**Bollards**

Q50.1201 Type DAM-052 Bollards

- a) Metal bollards, with integral lights, of suitable dimensions and finishes to achieve the performance criteria stated in the Specification.
- b) Impact resistance/ performance: PAS 68 Classification; V/ 7500(N2)/ 64/ 90:8.7/ 0.0 or acceptable equivalent.
- b)c) Material: ~~Bead blasted~~ ~~Satin polished~~ stainless steel grade 1.4401 (AISI 316) ~~rectangular circular~~ hollow section with flat top.
- e)d) Size: ~~Min~~ 1000mm (h) ~~tall~~ above finished surface x 200mm (w) x 50mm (d). ~~150mm diameter.~~
- e) Base plate below ground with mechanical ~~f~~Fixing method as recommended by the manufacturer. Base plate shall have 4no. fixing holes to take nominal M16 anchor bolts.
- f) Fixing method: Bollard shall be fixed as recommended by the manufacturer with

foundation systems provided to meet performance requirements within the space constraints of existing or new utilities beneath the lines of bollards.

d) ~~Special requirements: Lockable hinges for access.~~

~~Q50.1202 Type FX-076 Bespoke Bollard Base~~

a) ~~Bespoke bollard base to carry a bollard light.~~

b) ~~Material: Bead blasted stainless steel grade 1.4401.~~

c) ~~Size: Refer to the Design Drawings.~~

d) ~~To include concealed cabling and fixings.~~

#### **Planters**

~~Q50.1210 Type EXT-006 Planters~~

a) ~~Planters integrated with BAR-010 comprising external plate mild steel fabricated planter with polyester powder coated finish.~~

b) ~~Polyester powder coating as Section Z31. Allow for metallic finish. RAL colour to be confirmed. 70%/ 30% matt:gloss ratio.~~

c) ~~Size: Refer to the Design Drawings.~~

d) ~~Fixing method as Section Z20.~~

e) ~~All welds ground smooth.~~

f) ~~Integrated with drip feed irrigation. Refer to Section Q31 for planting requirements.~~

g) ~~Provide internal steel frame and fibre-glass liner.~~

#### **Site Furniture**

~~Q50.1220 Type EXT-004 Seating~~

a) ~~Mild steel and timber seat comprising steel profiles with polyester powder coated finish.~~

b) ~~Timber: Hardwood.~~

c) ~~Species: Teak.~~

d) ~~Finish: Smoothed planed and sanded with satin clear sealed with UV resistant seal or oiled.~~

e) ~~Polyester powder coating as Section Z31. Allow for metallic finish. RAL colour to be confirmed. 70%/ 30% matt:gloss ratio.~~

f) ~~Size: Refer to the Design Drawings.~~

g) ~~Fixing method as Section Z20.~~

h) ~~All welds ground smooth.~~

Q50.1221 Type EXT-014 Bicycle Rack

a) Two tier bicycle parking system.

b) Indicative product:

i) Manufacturer: Josta Two tier cycle parking or an acceptable equivalent.

ii) Reference: Josta Two tier cycle parking or an acceptable equivalent.

c) Material: mild steel.

d) Finish: Hot dipped galvanised to BS EN ISO 1461.

Q50.1222 Type EXT-015 Bicycle Stand

a) Custom made cycle racks configured as indicated on the Design Drawings.

b) Size: 50mm x 20mm x 1029mm; min. 765mm above finished floor level.

c) Material/ Finish: Grade 1.4401 (AISI 316) brushed finish stainless steel.

- d) Method of fixing: Bolted into concrete through the base plates to the manufacturer's recommendation.

**Miscellaneous**

~~Q50.1230 — Type FX-073 Fixed concierge console/ Cabinet~~

- ~~a) Fixed concierge console with power data/ lockable storage cabinet (suitable for 2 people).~~  
~~b) Material: Brushed stainless steel grade 1.4401.~~  
~~c) Size: Refer to the Design Drawings.~~  
~~d) Refer to the M&E Specification for power and data requirements.~~  
~~e) Fixing method as recommended by the manufacturer.~~  
~~f) Special requirements: Lockable hinges for access.~~

~~Q50.1231 — Type FX-077 Bespoke Dry Riser Inlet~~

- ~~a) Bespoke Dry Riser Inlet comprising 'trimless' tray to receive precast concrete panel to match system EWS-600.~~  
~~b) Material: Precast concrete with finish to match EWS-600. Refer to Section H42.~~  
~~c) Size: Refer to the Design Drawings.~~  
~~d) Refer to the M&E Specification for riser services requirements.~~  
~~e) Panels to be fixed to frame with concealed fixings. Provide heavy duty stainless steel hinges.~~  
~~f) Special requirements: Lockable hinges for access.~~

**Q50.1300 SUBMITTALS**

**Tender Submittals**

Q50.1301 Tender Response

- a) Provide tender submittals in accordance with the requirements of Section A91.4000 of the Specification.
- b) Submit a design response with the Tender proposal, to include all profiles of typical conditions, with dimensions.
- c) The Tender design response shall include:
- i) Samples where specified.
  - ii) List of Tests included.
  - iii) QA/ QC programme.
  - iv) List of proposed Working Drawings.
  - v) Summary of deviations from the Specification.
  - vi) Outline technical specifications reflecting proposed materials/ systems.
  - vii) A list of proposed suppliers and sub-contractors intended to be used.

**Samples, Mock-ups, Prototypes and Quality Benchmarks**

Q50.1302 Pre-contract Samples

Relevant trade literature and technical specifications shall be provided in accordance with Section A91.4000.

Q50.1303 Post Contract Award Samples

In accordance with Section A91.4000, post contract award samples of the following shall be provided:

- a) Samples of all agreed finishes to all metalwork items.

- b) Sample of bollard type.
- c) Sample or planter container.

Q50.1304 Mock-ups  
Not required.

Q50.1305 Prototypes  
Not required.

Q50.1306 Quality Benchmark Requirements  
The following quality benchmarks shall be provided, in locations to be agreed with the Architect, in accordance with Section A91.4000:

- a) An area determined by the Architect of each element of the works fully installed, completed and accepted by the Architect.

**Testing**

Q50.1307 Testing Requirements

- a) Include for testing by an accredited independent testing specialist or provide independently certified test data to demonstrate compliance with the Specification.

**Q50.1400 PERFORMANCE REQUIREMENTS**

Comply with the general performance of Section A91.5000 and the following specific performance requirements.

**Structural**

Q50.1401 General  
Barriers shall be in accordance with BS 7818.

Q50.1402 Dimensional Co-ordination  
Detail the works by producing fully co-ordinated drawings, taking into account the system as a whole, all interface conditions and on-Site dimensions, to ensure that the works is installed without alteration. Unless otherwise stated herein or agreed with the Architect.

Q50.1403 Specific Live Loads  
The works shall be capable of accommodating the following live loads without any reduction in performance:

- a) A horizontal line load applied to the works in accordance with BS 6180 and BS EN 1991.

**Durability**

Q50.1404 General

- a) The design life of the works shall be not less than the design life and service life requirements specified in Section A and require the minimum of maintenance. Submit to the Architect a schedule for maintenance and for replacement of secondary components.
- b) The performance criteria shall be satisfied for the full design life of the works, provided always that the maintenance has been carried out as specified.
- c) The finished work shall resist heavy impacts from hand-held objects without any noticeable change to the surface appearance.
- d) The works shall maintain its original appearance throughout its design life, when maintained in accordance with an agreed programme, without failure and without developing an objectionable appearance as a result of defects in the design, materials or workmanship.
- e) Failure shall be defined as breakage, excessive wear, displacement, unevenness, lipping

of joints or rattle of any metal. An objectionable appearance shall include discolouration, staining, cracking and/ or displacement of joint material.

- f) Corrosion Protection:
- i) Provide a degree of protection appropriate to its location to ensure adequate durability throughout the life of the building. Adequate allowance shall be made to protect work that will be temporarily exposed during the construction period.
  - ii) Electro-chemical corrosion or staining resulting from water running from one material to another shall be prevented.
  - iii) Components receiving an applied coating shall observe the relevant recommendations of BS 4479: Parts 1-5 and 8 and BS EN ISO 14713.
- g) Electrolytic Action: Where there is a possibility of electrolytic or galvanic action occurring due to the contact of reactive materials, special protection shall be provided. The method of protection used shall be permanent and consistent with attention paid to fixings; refer to PD 6484 for guidance.

**Thermal Movement**

Q50.1405 General

- a) All components shall provide for such expansion and contraction of component materials as shall be caused by an ambient air temperature range of -5°C to 30°C externally, without causing failure of joint, damaging loads on fasteners, reduction of performance or other detrimental effects.
- b) All components shall provide for such expansion and contraction of component materials that are caused by temperature increases due to solar radiation. Surface differential temperature ranges (for components of the external metalwork) of -25°C and +80°C shall be accommodated without causing failure of joint, damaging loads on fasteners, reduction of performance or other detrimental effects.
- c) The amount of such movement that is accommodated shall be identified on the Contractor's Working Drawings.

**Q50.2000 SYSTEMS, MATERIALS AND FABRICATION**

**Q50.2100 GENERAL**

**Seating**

Q50.2101 Seating Generally

- a) Timber species to be confirmed.
- b) Seating to form heavy-duty external public standard seating.
- c) Grade 1.4401 stainless steel to BS EN 10088-1.

**Bollards**

Q50.2102 Stainless Steel Bollards

- a) Grade 1.4401 stainless steel to BS EN 10088-1.
- b) Refer also to Section Z11.
- c) Bollards to be set into concrete foundations as required.

**Planters**

Q50.2103 Planters Generally

- a) All planters shall incorporate an irrigation system.
- b) Refer to the Landscaping Consultant's requirements as applicable.
- c) All planters shall be provided with internal steel frame and fibreglass liner.

**Miscellaneous**

- Q50.2104 Fixed concierge console/ Cabinet
- a) Grade 1.4401 stainless steel to BS EN 10088-1.
  - b) Refer also to Section Z11.
- Q50.2105 Bespoke Riser Inlet
- a) Refer to Section H42 for precast concrete requirements.
  - b) Refer also to Section Z11 for metalwork.
  - c) Metal finishes to be polyester powder coated. RAL colour to be confirmed.
- Q50.2200 MATERIALS**
- General**
- Q50.2201 Timber
- a) Timber shall be to BS EN 942.
  - b) Preservative treatments as Section Z12 of the Specification.
  - c) Adhesive shall be synthetic resin to BS EN 301, type 4, as Section Z20.
- Q50.2202 Metalwork
- a) Refer to Section Z11 for mild steel.
  - b) Refer to Section Z11 for stainless steel.
  - c) Refer to Section Z11 for aluminium.
  - d) Refer to Section Z30 for metalwork finishes generally.
- Q50.2203 Finishes
- Refer to Section Z31 for polyester powder coating.
- Q50.2204 Fixings
- a) Fixings shall be as recommended by the manufacturer, being suitable and adequate to comply with the Specification.
  - b) All fixings shall conform to all statutory requirements in respect of strength and type.
  - c) Fixings shall be in accordance with Section Z20.
- Q50.2205 Sealants
- Sealants shall be in accordance with Section Z22.
- Q50.2300 FABRICATION**
- Q50.2301 Material Tolerances Generally
- Width and lengths of varying sizes shall not deviate by more than  $\pm 2\text{mm}$  of the described size.
- Q50.3000 SITE INSTALLATION**
- Q50.3100 WORKMANSHIP**
- Q50.3101 Tolerances
- The works shall be installed according to the manufacturer's tolerances.
- Q50.3102 Workmanship
- a) Joinery workmanship as Section Z10.
  - b) Metalwork workmanship as Section Z11.



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**End of Section**

## UCLH PHASE 4 AND PROTON BEAM THERAPY BUILDING PROJECT

### Architectural Specification

#### Section: N23 Sanitary fittings and Plumbing Equipment

#### Revision: A –90% Stage E Issue

Revision	Date	Clauses revised / <b>added</b>	Notes
Contract Issue	28/07/2014	-	-
<b>Rev. A – STAGE E – 90% Issue</b>	07/11/2016	N23.1200 N23.1402 N23.2101-N23.2123 N23.2125-N23.2126 N23.2127A N23.2130-N23.2133 N23.2137-N23.2150	N23.1402 added. Flow rates and flush notes updated for BREEAM compliance.  Washing machine cycles updated to <i>max</i> 10 litres <i>per</i> <i>KG</i> rather than <i>per cycle</i> for BREEAM compliance.
<b>General notes:</b> Omissions to specification shown in blue and struck through. <b>Example</b> Additions to specification shown in red. <b>Example</b> Updates from Contract Specification to be agreed by ByUK and UCLH where relevant.			

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N23.1204	Type SAN-005 Hospital Pattern WC and Cistern .....	5
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N23.1207	Type SAN-007 Clinical basin/ waste and tap.....	5
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<b>N23.1400</b>	<b>PERFORMANCE REQUIREMENTS .....</b>	<b>8</b>
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N23.2106	Type SAN-006 Bariatric WC Suite .....	11
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N23.2121	Type SAN-029 Sink .....	19
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N23.2122	Type SAN-017 Shower Unit .....	20
N23.2123	Type SAN-016 Shower Unit .....	20
N23.2124	Type SAN-015 Shower Tray .....	20
N23.2125	Type SAN-014 Floor Drain with Cover .....	20
N23.2126	Type SAN-014A Floor Drain with Cover .....	20
N23.2127	Type SAN-040 Water cooler .....	21
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N23.2128	Type SAN-041 Ice maker - clear ice cubes .....	21
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N23.2130	Type SAN-043 Mini kitchen with integral sink, small boiler and fridge .....	21
N23.2131	Type SAN-044 Dish washer .....	21
N23.2132	Type SAN-045 Washing Machine .....	22
N23.2133	Type SAN-046 Washing machine (theatre footwear) .....	22
N23.2134	Type SAN-047 Washer Disinfector (pass through for endoscopes) .....	22
N23.2135	Type SAN-048 Mascerator (bedpan disposal unit) .....	22
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## **N23 SANITARY FITTINGS AND PLUMBED EQUIPMENT**

To be read in conjunction with Section A91 and other related sections of the Specification, Preliminaries and Contract Conditions.

### **N23.1000 SCOPE, SUBMITTALS, TESTING AND PERFORMANCE**

#### **N23.1100 SPECIFICATION AND SCOPE**

##### N23.1101 Scope

- a) Works covered in this section are specified by performance and therefore designated as works with specialist sub-contractor Design (SCD). Refer to Section A91.
- b) Complete the Detailed Design, manufacture, supply, install and warrant the works whilst complying with the visual intent indicated on the Design Drawings and criteria stated in the Specification.
- c) For design and general performance requirements, refer to Section A91 of the Specification. Specific design and performance requirements are as defined in the particular trade sections.
- d) Complete the Detailed Design, manufacture, supply, install and warrant the works whilst complying with the visual intent indicated on the Design Drawings and criteria stated in the Specification.
- e) Where no material, product or supplier is indicated in the Specification, propose suitable materials and systems prior to Contract award which comply with the visual intent and performance criteria stated and remain fully responsible for the Detailed Design of the works.
- f) Where a particular material, product or supplier is indicated in the Specification, such material, product or supplier shall be deemed indicative representing the Architect's design intent only. The Contractor may complete the installation using that product, or such other confirmed as acceptable by the Architect in writing, but shall remain fully responsible for the Detailed Design and performance of the works.

##### N23.1102 Scope of Works

This section of the Specification, when read in conjunction with the Design Drawings, provides particular requirements with respect to the works, which include the following:

- a) WC suites.
- b) Showers.
- c) Washbasins.
- d) Sinks, troughs, Slop hoppers.
- e) Drinking fountains.
- f) Taps.
- g) Washing Machines.
- h) Traps, wastes, gullies.
- i) Accessories.

##### N23.1103 Particular Interfaces

- a) Complete the Detailed Design of all interfaces with adjoining trades prior to commencement of manufacture.
- b) Ensure that all interfaces are fully co-ordinated prior to commencement.

##### N23.1104 Health Technical Memorandum

All finishes and components shall comply with the requirements of the relevant Health Technical Memorandum with respect to physical and performance characteristics and shall be selected as suitable for hospital environments: HTM 64 Sanitary Assemblies (HBN 00-10 Part C).

##### N23.1105 Health Building Notes

Refer to Health Building Note HBN 00 02 'Sanitary Spaces'.

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**N23.1200 TYPES OF SANITARY FITTING**

**WC Suites /Urinals/ Basins**

- N23.1201 Type SAN-001 Panel System
- a) Plumbed panel lining system including relevant sanitaryware types.
  - b) Pre-plumbed panel system comprising HPL faced dense particleboard panels or SGL (Solid Grade Laminate) 13mm thick as indicated on the Design Drawings.
- N23.1201A Type SAN-001A Panel System – MRI Safe**  
**Like N23.1201 but MRI Safe**
- N23.1202 Type SAN-002 Panel System
- a) Plumbed panel lining system relevant sanitaryware types.
  - b) Pre-plumbed panel system comprising HPL faced dense particleboard panels or SGL (Solid Grade Laminate) 13mm thick as indicated on the Design Drawings.
- N23.1203 Type SAN-004 Accessible WC and Cistern  
Accessible WC and cistern for pre-plumbed panel lining system.
- N23.1203A Type SAN-004A Accessible WC and Cistern – with “Big John” seat**  
**Like N23.1203 but with “Big John” seat**
- N23.1204 Type SAN-005 Hospital Pattern WC and Cistern  
Hospital Pattern WC and cistern for preplumbed panel lining system.
- N23.1205 Type SAN-003 Small Child WC and Cistern**  
**Small child WC and cistern for preplumbed panel lining system.**
- N23.1206 Type SAN-006 Bariatric WC and Cistern**  
**Bariatric WC and cistern for preplumbed panel lining system.**
- N23.1207 Type SAN-007 Clinical basin/ waste and tap  
Clinical basin, with 150mm upstand splashback, concealed waste and wall mounted mixer tap (lever type) for preplumbed panel lining system.
- N23.1207A Type SAN-007A Clinical basin/ waste and tap – MRI Safe**  
**Clinical basin, with 150mm upstand splashback, concealed waste and wall mounted mixer tap (lever type) for preplumbed panel lining system. – MRI Safe**
- N23.1208 Type SAN-008 Basin and tap  
Basin small general and fitting mounted mixer tap (lever type) for preplumbed panel lining system.
- N23.1209 Type SAN-009 Basin and tap  
Basin medium general and fitting mounted mixer tap (lever type) for preplumbed panel lining system.
- N23.1210 Type SAN-010 Basin and tap  
Accessible basin - general and fitting mounted mixer tap (lever type) for preplumbed panel lining system.
- N23.1211 Type SAN-011 Basin and tap  
Basin large general and wall or fitting mounted mixer tap (lever type) for preplumbed panel lining system.
- N23.1211A Type SAN-011A Basin and tap with additional support**  
**Basin large general and wall or fitting mounted mixer tap (lever type) for preplumbed panel lining system – with additional support**

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N23.1212	Type SAN-018 Basin and tap Stainless steel basin, small with compact mixer tap for preplumbed panel lining system. <b>Sinks/ Troughs/ Janitors/ Slop Hopper Sinks</b>
N23.1217	Type SAN-024 Bucket (sink) - option Bucket (sink) - option.
N23.1218	Type SAN-021 Sluice and <del>sink</del> unit Sluice <del>and sink</del> unit mounted on stainless steel base unit.
<b>N23.1218A</b>	<b>Type SAN-021A Sink unit</b> <b>Sink unit mounted on stainless steel legs.</b>
N23.1219	Type SAN-019 Scrub-up Trough Troughs - scrub-up - 2 places (1600mm long) on preplumbed panel lining system.
N23.1220	Type SAN-020 Scrub-up Trough Troughs - scrub-up - 3 places (2400mm long) on preplumbed panel lining system.
N23.1221	Type SAN-022 Sluice and sink unit Sluice and sink unit mounted on stainless steel brackets.
N23.1222	Type SAN-023 Janitorial Unit Cleaners sink/ janitorial unit.
N23.1223	Type SAN-027 Clinical Sink Clinical sinks - flat drainer mounted on base unit.
<b>N23.1223A</b>	<b>Type SAN-027A Clinical Sink</b> <b>Clinical sinks – Laboratory type.</b>
<b>N23.1223B</b>	<b>Type SAN-027B Clinical Sink</b> <b>Clinical sinks - flat drainer mounted on legs.</b>
<b>N23.1223C</b>	<b>Type SAN-027C Clinical Sink</b> <b>Clinical sinks - no drainer mounted on preplumbed panel assembly.</b>
N23.1224	Type SAN-028 General sink - ribbed drainer - mounted on base unit General sink - ribbed drainer - mounted on base unit.
N23.1225	Type SAN-029 Catering Worktop/ Sink Catering worktop with inset sink as required.
<b>N23.1225A</b>	<b>Type SAN-029A Beverage Bay Worktop/ Sink</b> <b>Beverage bay worktop with inset sink as required.</b> <b>Shower fittings</b>
N23.1230	Type SAN-016 Shower Unit Shower mixer, thermostatic, flexible head and hose.
N23.1231	Type SAN-015 Shower Tray Shower tray with integrated floor gully. Ceramic (or Durastone). 900 x 900mm and other sizes as required.
N23.1232	Type SAN-017 Shower Unit Shower mixer, thermostatic, flexible hose. <b>Miscellaneous</b>

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- N23.1262 Type SAN-014 Floor Drain with Cover  
Floor drain with cover - patient shower areas.
- N23.1262A Type SAN-014A Floor Drain with Cover**  
**Floor drain with cover - technical areas.**
- N23.1263 Type SAN-040 Water cooler  
Water cooler.
- N23.1263A Type SAN-040A Water cooler**  
**Water cooler worktop mounted**
- N23.1264 Type SAN-041 Ice maker - clear ice cubes  
Ice maker - clear ice cubes.
- N23.1265 Type SAN-042 Water boiler - wall mounted  
Water boiler - wall mounted.
- N23.1266 Type SAN-043 Mini kitchen with integral sink, small boiler and fridge  
Mini kitchen with integral sink, small boiler and fridge.
- N23.1267 Type SAN-044 Dish washer  
Dish washer.
- N23.1268 Type SAN-045 Washing Machine  
Washing machine – small commercial model.
- N23.1269 Type SAN-046 Washing machine (theatre footwear)  
Washing machine (theatre footwear).
- N23.1270 Type SAN-047 Washer Disinfector (pass through for endoscopes)  
Washer Disinfector (pass through for endoscopes).
- N23.1271 Type SAN-048 Mascerator (bedpan disposal unit)  
Mascerator (bedpan disposal unit).
- N23.1272 Type SAN-049 Bench, stainless steel, down draught, with sink and disposal  
Bench, stainless steel, down draught, with sink and disposal.
- N23.1273 Type SAN-030 Wash Down Hose  
Wash Down Hose to waste yard - high pressure unit.
- N23.1274 Type SAN-050 Scope cleaning Sink**  
**Sink for washing scopes, height adjustable.**
- N23.1300 SUBMITTALS**
- Tender Submittals**
- N23.1301 Tender Response
- a) Provide tender submittals in accordance with the requirements of Section A91.4000 of the Specification.
  - b) Submit a design response with the Tender proposal, to include all profiles of typical conditions, with dimensions.
  - c) The Tender design response shall include:
    - i) Samples where specified.
    - ii) List of Tests included.
    - iii) QA/ QC programme.
    - iv) List of proposed Working Drawings.



- v) Summary of deviations from the Specification.
- vi) Outline technical specifications reflecting proposed materials/ systems, etc.
- vii) A list of proposed suppliers and sub-contractors intended to be used.

**Samples, Mock-ups, Prototypes and Quality Benchmarks**

- N23.1302 Pre-contract Samples  
Not required.
- N23.1303 Product Data  
Data shall be submitted for review, including copies of technical data prepared for each product or material proposed, which lists the specified performance of each material and product to be used.
- N23.1304 Post Contract Award Samples
- a) In accordance with Section A91.4000, post contract award samples of the following shall be provided:
  - b) Each specified appliance/ fitting shall be submitted to the Architect for acceptance prior to any ordering and the appliances/ fittings being incorporated into the works.
- N23.1305 Mock-ups  
To be confirmed.
- N23.1306 Prototypes  
Not required.
- N23.1307 Quality Benchmark Requirements  
The following quality benchmarks shall be provided, in locations to be agreed with the Architect, in accordance with Section A91.4000:
- a) The first appliance/ fitting of each type.

**N23.1400 PERFORMANCE REQUIREMENTS**

- N23.1401 Comply with the general performance of Section A91.5000.
- N23.1402 The works shall achieve the following sustainability requirements without any reduction in performance:
- a) Refer to the BREEAM Pre-assessment Report, contained within the Contract Data, for strategies that shall be adopted and a record of which credits are targeted.
  - b) Refer to Section A.7000 series clauses of the Specification.
  - c) BREEAM 2011 New Construction Scheme The works defined in this work section shall contribute to the following Credits:
  - d) Wat 01: Water Consumption.

**N23.2000 SYSTEMS, MATERIALS AND FABRICATION**

**N23.2100 SYSTEM DESCRIPTIONS**

**Pre-plumbed Panel Systems**

- N23.2101 Type SAN-001 Panel System
- a) Pre-plumbed panel lining system.
  - b) High pressure plastic laminate (HPL) faced and balanced panels as follows:
    - i) Minimum 17mm thick moisture resistant formaldehyde free 680 kg/m<sup>3</sup> particleboard faced on both sides with high-pressure laminate (HGP) facing and post-formed vertical edges and black PVC edging to horizontal edges. Overall thickness 19mm. Laminate to be in a solid colour, with a semi matt plain finish and balancing laminate on the inner face of the panel.

- ii) Moisture content shall be maintained at appropriate levels in relation to the core material and to suit the internal environmental conditions.
- iii) Adhesives shall comply with BS EN 204, type to match durability class of core material.
- iv) Colour of laminate face and edges shall be as indicated on the Finishes Schedule and agreed with the Architect based on accepted samples.
- v) Manufacturer: Formica Ltd (Tel: 0191 259 3000).
- c) Panels joined together with locating dowels.
- d) Joints to be 19mm with HPL faced dense particleboard backing.
- e) Panels to be fitted to corrosion protected steel sub-frame and joggle clips. Panel fixing to include click-fix location brackets.
- f) Provide extruded aluminium site framing, head frame sections and wall channels.
- g) Sanitaryware factory assembled and pre-fixed and sealed to form pre-plumbed panels.
- h) Where required, solid grade laminate (SGL) shall be minimum 13mm thick and as follows:
  - i) Edge treatment: Black chamfered.
  - ii) Colour of laminate face and edges shall be as indicated on the Finishes Schedule and agreed with the Architect based on accepted samples.
  - iii) Joints: Butt jointed/ sealed.
  - iv) Manufacturer: Formica Ltd or an acceptable equivalent.
- i) HPL and Solid grade laminate to BS EN 438 and [HTM-64HBN 00-10 Part C](#) and HTM 68.
- j) All fixings shall be concealed on suitable removable clip system.
- k) Shadow gaps shall be filled with nominal 5mm mastic sealant.
- l) Refer to the Design Drawings for sanitaryware arrangements and variations.
- m) Refer to Section N23 for sanitaryware specifications.
- n) All pre-plumbed sanitaryware shall be mounted on partitioning/ panels.
- o) All cisterns shall be concealed.
- p) All pipework shall be concealed within ducts as far as possible.
- q) Swan-neck outlets shall not be provided as recommended by Health Facilities Note 30.
- r) All bottle traps to sinks and basins that are visible shall be chrome plated bottle traps.
- s) All panels in public areas to be fitted with secure locks

**N23.2101A Type SAN-001A Panel System – MRI safe**

- a) As N23.2101 but MRI safe (non-ferrous)

**WC Suites /Urinals/ Basins**

**N23.2103 Type SAN-004 Accessible WC Suite**

- ~~Wall~~**Floor** mounted WC suite including rimless pan, seat, concealed cistern and fixtures/ accessories. WC to be mounted onto pre-plumbed to paneling system.
- a) Standard: [HTM64HBN 00-10: Part C](#).
  - b) Pan:
    - i) Manufacturer: Armitage Shanks.
    - ii) Reference: Contour 21 Rimless ~~Wall~~**Floor** Mounted WC Pan 70cm HTM Projection (HBN 00-10 Part C).
    - iii) Type: Rimless washdown with horizontal outlet.
    - iv) Material: Vitreous china to BS 3402.
    - v) Pan colour: White.
  - c) Pan connector shall be as the mechanical services specification.
  - d) Cistern and flush:

- i) Conceala 2 - cistern and cover; 4.5 litres, pneumatic single flush valve fittings ½in Microvalve HP/ LP ballvalve, side supply, internal overflow, alternative height plastic flushbends and Simpla inlet connector.
    - Water Consumption: max. 4 litres, effective flush volume.
  - ii) Contemporary flush-plate dual-flush unbranded for Conceala 2 cisterns.
    - Manufacturer: Armitage Shanks.
    - Finish: Stainless steel.
  - iii) **Flush control suitable for operation by patients with frail or infirm hands.**
- e) Seat:
- i) Manufacturer: Armitage Shanks.
  - ii) Contour 21 toilet seat only, no cover with top fixing hinges with retaining buffers in light grey.
  - iii) Material: Plastic.
  - iv) Colour: White.
- f) Other requirements:
- i) Support bracket, raised height with bolts.
  - ii) Contour 21 constructed flushpipe extended and necessary for installation of this WC.
  - iii) **Proprietary filler piece fitted at skirting level between back of the pan and skirting and between floor and bottom of the IPS panel to be fitted as part of the installation, as indicated on drawings**
- N23.2103A Type SAN-004A Accessible WC Suite with "Big John" seat**
- a) **As N23.2103 but with "Big John" seat suitable for bariatric patients**
  - b) **Seat:**
    - i) **Manufacturer: Big John Products**
    - ii) **Model: Big John Bariatric Toilet Seat with cover, model 1-W**
    - iii) **Material: ABS**
    - iv) **Colour: white**
    - v) **Max weight: 1200 lb**
- N23.2104 Type SAN-005 Hospital Pattern WC Suite**
- ~~Wall hung~~**Floor mounted** standard projection WC suite including seat, concealed cistern and fixtures/ accessories. WC to be mounted onto pre-plumbed to paneling system.
- a) Standard: ~~HTM64~~**HBN 00-10: Part C.**
  - b) Pan:
    - i) Manufacturer: Armitage Shanks.
    - ii) Reference: Contour 21 Rimless ~~Wall~~**Floor** Mounted WC Pan standard Projection (HBN 00-10 Part C).
    - iii) Type: Rimless wall mounted WC pan with horizontal outlet.
    - iv) Material: Vitreous china to BS 3402.
    - v) Colour: White.
  - c) Cistern and flush:
    - i) Conceala 2 - cistern and cover; 4.5 litres, pneumatic single flush valve fittings ½in Microvalve HP/ LP ballvalve, side supply, internal overflow, alternative height plastic flushbends and Simpla inlet connector (S3640).
      - Water Consumption: max. 4 litres, effective flush volume.
    - ii) Contemporary flush-plate dual-flush unbranded for Conceala 2 cisterns.

- iii) Flush control suitable for operation by patients with frail or infirm hands.
  - d) Seat:
    - i) Manufacturer: Armitage Shanks.
    - ii) Contour 21 toilet seat only, no cover with top fixing hinges with retaining buffers in light grey.
    - iii) Material: Plastic.
    - iv) Colour: White.
  - e) Other requirements:
    - i) -Support bracket, raised height.
    - ii) Proprietary filler piece fitted at skirting level between back of the pan and skirting and between floor and bottom of the IPS panel to be fitted as part of the installation, as indicated on drawings
- N23.2105 Type SAN-003 Small child WC Suite
- Contour 21 schools, back to wall and close coupled WC pan with horizontal outlet, 305mm high including seat, concealed cistern and fixtures/ accessories. WC to be mounted onto pre-plumbed to paneling system.
- a) Standard: HBN 00-10: Part C
  - b) Pan:
    - i) Manufacturer: Armitage Shanks
    - ii) Reference: Contour 21 schools, back to wall and close coupled WC pan with horizontal outlet, 305mm high
    - iii) Material: Vitreous china to BS 3402.
    - iv) Pan colour: White.
  - c) Cistern and flush:
    - i) Conceala 2 - cistern and cover; 4.5 litres, pneumatic single flush valve fittings ½in Microvalve HP/ LP ballvalve, side supply, internal overflow, alternative height plastic flushbends and Simpla inlet connector (S3640).
      - Water Consumption: max. 4 litres, effective flush volume.
    - ii) Contemporary flush-plate dual-flush unbranded for Conceala 2 cisterns.
    - iii) Flush control suitable for operation by patients with frail or infirm hands.
  - d) Seat:
    - i) Manufacturer: Armitage Shanks.
    - ii) Reference: Contour 21 toilet seat no cover for 305mm high pan, bottom fixing hinges
    - iii) Material: Plastic
    - iv) Colour: White
  - e) Other Requirements:
    - i) Proprietary filler piece fitted at skirting level between back of the pan and skirting and between floor and bottom of the IPS panel to be fitted as part of the installation, as indicated on drawings
- N23.2106 Type SAN-006 Bariatric WC Suite
- Floor mounted Bariatric WC Pan including seat, concealed cistern and fixtures/ accessories. WC to be mounted onto pre-plumbed to paneling system.
- a) Standard: HBN 00-10: Part C
  - b) Pan
    - i) Manufacturer: Acorn Powell

- ii) Reference: Bariatric WC Pan Apinox range, product code: 122
  - iii) Material: 2mm thick grade 304 stainless steel
  - iv) Finish: white "Enviro-Glaze"
  - v) Colour: white
  - c) Cistern and flush:
    - i) Conceala 2 - cistern and cover; 4.5 litres, pneumatic single flush valve fittings ½in Microvalve HP/ LP ballvalve, side supply, internal overflow, alternative height plastic flushbends and Simpla inlet connector.
      - Water Consumption: max. 4 litres, effective flush volume.
    - ii) Contemporary flush-plate dual-flush unbranded for Conceala 2 cisterns.
      - Manufacturer: Armitage Shanks.
      - Finish: Stainless steel.
    - iii) Flush control suitable for operation by patients with frail or infirm hands.
  - d) Seat:
    - i) Manufacturer: Big John Products
    - ii) Model: Big John Bariatric Toilet Seat with cover, model 1-W
    - iii) Material: ABS
    - iv) Colour: white
    - v) Max weight: 1200 lb
  - e) Other Requirements:
    - i) Proprietary filler piece fitted at skirting level between back of the pan and skirting and between floor and bottom of the IPS panel to be fitted as part of the installation, as indicated on drawings
- N23.2107 Type SAN-007A Clinical Basin – concealed waste – MRI safe
- a) Like N23.2108 but MRI safe (non-ferrous)
- N23.2108 Type SAN-007 Clinical Basin – concealed waste
- White vitreous china, clinical wash basin with 150mm upstand splashback, and tap (lever type) - medium clinical basin for preplumbed panel lining system. Mounted onto pre-plumbed to paneling system.
- a) Standard: ~~HTM64~~HBN 00-10: Part C.
  - b) Basin:
    - i) Manufacturer: Armitage Shanks or an acceptable equivalent.
    - ii) Reference: Contour 21 Washbasin 50cm No Taphole No Chainstay Hole or Overflow.
    - iii) Colour: White.
    - iv) Size: Refer to the Design Drawings.
  - c) Type: No taphole, no overflow, no chainstay hole with back outlet.
  - d) Concealed steel hangers.
  - e) Trap: Chrome plated bottle trap with 75mm seal, outlet screwed with compression nut and ring.
  - f) Tap:
    - i) Markwik 21 demountable panel mixer, single sequential lever, detachable spout, isolation valves.
    - ii) Type: ~~HTM64~~HBN 00-10: Part C (~~HBN 00-10~~, HBN-00.09, HTM04-01 Addendum 2013) compliant integral thermostatic bib mixer tap, with long lever, with colour temperature indicators.
      - Flow rates: max. **7.5 Litres** ~~4.5 litres~~ per minute to meet the sustainability

performance requirements.

- iii) Manufacturer: Armitage Shanks.
- iv) Reference: (TB-H2A) Markwik 21 integral thermostat, demountable panel mixer, single sequential lever, Armitage Bioguard outlet fitted.
- v) Finish: Chromium plated.
- vi) Integral thermostat set at 41°C.
- vii) TMV3 Thermostatic Mixing Valve to meet the requirements of the NHS Model Engineering Specification.
- viii) Conforms to HBN 00-10, HBN-00.09, HTM04-01 Addendum 2013.

N23.2109 Type SAN-008 Basin small general

White vitreous china, wash basin and tap (lever type) - small general basin for preplumbed panel lining system. Mounted onto pre-plumbed to paneling system.

- a) Standard: ~~HTM64~~HBN 00-10: Part C.
- b) Basin:
  - i) Manufacturer: Armitage Shanks or an acceptable equivalent.
  - ii) Reference: ~~PortmanContour~~-21 washbasin 40-37 x ~~37cm~~-30cm single right hand or left hand taphole (as indicated in the Sanitaryware schedule and on drawings) or an acceptable equivalent.
  - iii) Colour: White.
  - iv) Size: Refer to the Design Drawings.
- c) Type: No overflow, no chainstay hole with bottom outlet.
- d) Concealed steel hangers.
- e) Trap: Chrome plated bottle trap with 75mm seal, outlet screwed with compression nut and ring.
- f) Waste: ¼ inch chrome plated flush strainer waste 80mm unslotted tail.
- g) Tap:
  - i) Nuastyle washbasin thermostatic mixer, 1 hole sequential lever, flexible tails.
  - ii) Type: ~~HTM64~~HBN 00-10: Part C, HTM-04 and Doc M compliant integral thermostatic monobloc pillar mixer tap, with short lever, with colour temperature indicators.
  - iii) Manufacturer: Armitage Shanks.
  - iv) Reference: Nuastyle.
  - v) Finish: Chromium plated.
  - vi) Integral thermostat set at 41°C.
  - vii) TMV3 Thermostatic Mixing Valve to meet the requirements of the NHS Model Engineering Specification.
  - viii) Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.

N23.2110 Type SAN-009 Basin medium general

White vitreous china, wash basin and tap (lever type) for preplumbed panel lining system. Mounted onto pre-plumbed to paneling system.

- a) Standard: ~~HTM64~~HBN 00-10: Part C.
- b) Basin:
  - i) Manufacturer: Armitage Shanks or an acceptable equivalent.
  - ii) Reference: Portman 21 Washbasin 50 x 42cm RH Taphole, No Overflow or Chainstay Hole (HBN 00-10 Part C) or an acceptable equivalent.
  - iii) Colour: White.
  - iv) Size: Refer to the Design Drawings.

- c) Type: One taphole, no overflow, no chainstay hole with bottom outlet.
- d) Concealed steel hangers.
- e) Trap: Chrome plated bottle trap with 75mm seal, outlet screwed with compression nut and ring.
- f) Waste: ¼ inch chrome plated waste with swivel plug and 80mm unslotted tail.
- g) Tap:
  - i) Thermostatic, lever action, sequential basin mixer tap with flexible inlet tails with isolating valves and integral strainers.
  - ii) Type: [HTM64HBN 00-10: Part C](#) compliant integral thermostatic monobloc pillar mixer tap, with long lever, with colour temperature indicators.
  - iii) Manufacturer: Armitage Shanks.
  - iv) Reference: Contour 21 washbasin mixer thermostatic 1 hole, single sequential long lever, copper tube inlet.
  - v) Finish: Chromium plated.
  - vi) Integral thermostat set at 41°C.
  - vii) TMV Thermostatic Mixing Valve to meet the requirements of the NHS Model Engineering Specification.
  - viii) Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.

N23.2111 Type SAN-010 Accessible basin - general

White vitreous china, wash basin for preplumbed panel lining system. Mounted onto pre-plumbed to paneling system.

- a) Standard: [HTM64HBN 00-10: Part C](#).
- b) Basin:
  - i) Manufacturer: Armitage Shanks or an acceptable equivalent.
  - ii) Reference: Contour 21 Accessible 55cm washbasin or an acceptable equivalent.
  - iii) Colour: White.
  - iv) Size: Refer to the Design Drawings.
- c) Type: One taphole, with overflow, no chainstay hole with bottom outlet.
- d) Concealed steel hangers.
- e) Trap: Chrome plated bottle trap with 75mm seal, outlet screwed with compression nut and ring.
- f) Waste: ¼ inch chrome plated waste with swivel plug and 80mm unslotted tail.
- g) Tap:
  - i) Thermostatic, lever action, sequential basin mixer tap with flexible inlet tails with isolating valves and integral strainers.
  - ii) Type: [HTM64HBN 00-10: Part C](#) compliant integral thermostatic monobloc pillar mixer tap, with long lever, with colour temperature indicators.
  - iii) Manufacturer: Armitage Shanks.
  - iv) Reference: Contour 21 washbasin mixer thermostatic 1 hole, single sequential long lever, copper tube inlet.
  - v) Finish: Chromium plated.
  - vi) Integral thermostat set at 41°C.
  - vii) TMV Thermostatic Mixing Valve to meet the requirements of the NHS Model Engineering Specification.
  - viii) Flow rates: max 4.5 litres per minute to meet the sustainability performance requirements.

- N23.2112 Type SAN-011 Basin large general
- White vitreous china, wash basin - accessible for preplumbed panel lining system. Mounted onto pre-plumbed to paneling system.
- a) Standard: [HTM64](#)HBN 00-10: Part C.
  - b) Basin:
    - i) Manufacturer: Armitage Shanks or an acceptable equivalent.
    - ii) Reference: Portman 21 wash basin 60 x 48cm with right hand taphole or an acceptable equivalent.
    - iii) Colour: White.
    - iv) Size: Refer to the Design Drawings.
  - c) Type: One taphole, no overflow, no chainstay hole with bottom outlet.
  - d) Concealed steel hangers.
  - e) Trap: Chrome plated bottle trap with 75mm seal, outlet screwed with compression nut and ring.
  - f) Waste: ¼ inch chrome plated waste with swivel plug and 80mm unslotted tail.
  - g) Tap:
    - i) Thermostatic, lever action, sequential basin mixer tap with flexible inlet tails with isolating valves and integral strainers.
    - ii) Type: [HTM64](#)HBN 00-10: Part C compliant integral thermostatic monobloc pillar mixer tap, with short lever, with colour temperature indicators.
    - iii) Manufacturer: Armitage Shanks.
    - iv) Reference: Contour 21 washbasin mixer, thermostatic, one hole, single sequential long lever, copper tube inlet.
    - v) Finish: Chromium plated.
    - vi) Integral thermostat set at 41°C.
    - vii) TVM Thermostatic Mixing Valve to meet the requirements of the NHS Model Engineering Specification.
    - viii) Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.
- N23.2112A Type SAN-011A Basin large general with additional mounting support
- a) Like N23.2112 with additional mounting support
  - b) Mounting support:
    - i) Manufacturer: Armitage Shanks
    - ii) Reference: Stainless Steel Leg centre support 900mm with fixing plate, product code:B78987, SKU:S9181MY
    - iii) Material: stainless steel
    - iv) Additional requirements: must allow cutting length to suit on site
- N23.2113 Type SAN-018 Stainless steel basin, small
- Stainless steel wash basin for preplumbed panel lining system - bib-taps. pre-plumbed to paneling system.
- a) Manufacturer: Franke or an acceptable equivalent.
  - b) Reference: BS 204 with single taphole on the right, 500mm x 335 x 155mm or an acceptable equivalent.
  - c) Type: No overflow or chainstay.
  - d) Material: Satin polished stainless steel.
  - e) Trap: Chrome plated bottle trap with 75mm seal, outlet screwed with compression nut and ring.



- f) Taps:
  - i) Manufacturer: Armitage Shanks or an acceptable equivalent.
  - ii) Product: Nuastyle thermostatic basin mixer tap.
  - iii) Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.

**Sinks/ Troughs/ Janitors/ Slop Hopper Sinks**

- N23.2114 Type SAN-019 Scrub-up Trough
- a) Troughs - scrub-up - 2 places (2400mm long) on preplumbed panel lining system.
  - b) Manufacturer: Franke or an acceptable equivalent.
  - c) Reference: G22030 1600mm x 400mm LH/ RH Waste Cover & Hangers (HBN 00-10 Part C).
  - d) Material: Satin polished stainless steel.
  - e) Taps: Panel mounted ~~HTM-64~~ HBN 00-10: Part C (4TB 2H2a) Markwik 21 demountable panel mixer, single sequential lever, detachable spout.
    - i) Flow rates: max. 7.5 Litres per minute to meet the sustainability performance requirements.
- N23.2115 Type SAN-020 Scrub-up Trough
- a) Troughs - scrub-up - 3 places (2400mm long) on preplumbed panel lining system.
  - b) Manufacturer: Franke or an acceptable equivalent.
  - c) Reference: G22031 2400mm x 400mm LH/ RH Waste Cover & Hangers (HBN 00-10 Part C).
  - d) Material: Satin polished stainless steel.
  - e) Taps: Panel mounted ~~HTM-64~~ HBN 00-10: Part C (4TB H2Ha) Markwik 21 demountable panel mixer, single sequential lever, detachable spout.
    - i) Flow rates: max. 7.5 Litres per minute to meet the sustainability performance requirements.
- N23.2115A Type SAN-021 Sluice ~~and sink~~ unit mounted on stainless steel base unit  
Sluice ~~and sink~~ unit mounted on stainless steel base unit.
- a) Manufacturer: Meiko or an acceptable equivalent.
  - b) Reference: Sluice ~~and sink~~ unit mounted on stainless steel base unit, No Taphole (HBN 00-10 Part C).
  - c) Material: Satin polished stainless steel.
  - d) To include wall mounted bib taps: Bib tap extensions ½" x 100mm long (pair) - (TB H1) Markwik ½" bib taps or an acceptable equivalent.
    - i) Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.
  - e) Support: Unit supported on four stainless steel legs with adjustable feet.
- N23.2115B Type SAN-021B Sink unit mounted on stainless steel legs
- a) Like N23.2119 but:
    - i) mounted on stainless steel legs with one shelf under
    - ii) LH or RH sink bowl
    - iii) Size 1500x600mm or 1200 x 600mm (refer to Sanitaryware schedule and drawings)
- N23.2116 Type SAN-022 Sluice and sink unit mounted on stainless steel brackets  
Sluice and sink unit mounted on stainless steel brackets.
- a) Manufacturer: Franke or an acceptable equivalent.
  - b) Reference: Sluice and sink unit mounted on stainless steel brackets, No Taphole (HBN 00-10 Part C).

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- c) Material: Satin polished stainless steel.
- d) To include wall mounted bib taps: Bib tap extensions ½" x 100mm long (pair) - (TB H1) Markwik ½" bib taps or an acceptable equivalent.
- i) Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.
- N23.2117 Type SAN-023 Cleaners sink/ Janitorial Unit
- a) Type: ~~HTM64~~HBN 00-10: Part C compliant Combined Sink and Hand Basin Janitorial unit, stainless steel, complete with tamper proof concealed panel for basin trap, hinged bucket grating to sink and tap.
- i) Manufacturer: Franke or an acceptable equivalent.
- ii) Reference: Janitorial Sink Stainless Steel Unit, with mixer (HBN 00-10 Part C).
- iii) Overall Size (Rectangular): 500mm x 570mmD x 880H.
- b) Wastes:
- i) Sink waste: Unslotted strainer waste.
- ii) WHB waste: Unslotted waste with swivel plug.
- c) Traps:
- i) Sink trap: Plastic resealing bottle trap, 75mm seal.
- ii) WHB trap: Plastic resealing bottle trap, 75mm seal.
- d) Support: Unit supported on four stainless steel legs with adjustable feet.
- e) Taps: Monoblock mixer with swivel nozzle, lever handles copper tails.
- i) Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.
- N23.2118 Type SAN-024 Bucket Sink (Option)
- a) Bucket sink – floor standing, stainless steel with splash back. Hinged grating and tap.
- b) Manufacturer: Franke or an acceptable equivalent.
- i) Reference: G2166N Bucket Sink or an acceptable equivalent.
- ii) Overall size: 500mm (W) x 517mm (D) x 800mm (H).
- c) Waste: 38mm unslotted strainer waste.
- d) Trap: 1½ inch plastic resealing bottle trap with 75mm seal, multi-purpose outlet.
- e) Support: 2 front legs and wall bracket
- f) Material: Satin polished stainless steel.
- g) Taps: Alterna Quadrant ½ inch lever bib-taps.
- i) Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.
- N23.2119 Type SAN-027 Clinical Sink
- a) Clinical sink with flat drainer mounted on base unit.
- b) Sink material: Stainless steel.
- c) Standard: ~~HTM64~~HBN 00-10: PART C.
- d) Basin:
- i) Manufacturer: Franke/ Pland or an acceptable equivalent.
- ii) Reference: Stainless steel LH/ RH Drainer, No Taphole, no overflow, no chainstay.
- iii) Finish: Satin polished stainless steel.
- iv) Size: 1200 x 600mm.
- e) Type: Mounted on stainless steel base unit, one basin, one drainer.
- f) Waste: 38mm BJP flush grated waste outlet.

- g) Trap: Chrome plated bottle trap with 75mm seal, outlet screwed with compression nut and ring.
- h) Taps:
  - i) Markwik 21 demountable panel mixer, single sequential lever, detachable spout, isolation valves.
    - Flow rates: max. 7.5 Litres per minute to meet the sustainability performance requirements.
  - ii) Type: ~~HTM64~~HBN 00-10: Part C (HBN 00-10, HBN-00.09, HTM04-01 Addendum 2013) compliant integral thermostatic bib mixer tap, with long lever, with colour temperature indicators.
  - iii) Manufacturer: Armitage Shanks or an acceptable equivalent.
  - iv) Reference: (TB-H2A) Markwik 21 integral thermostat, demountable panel mixer, single sequential lever, Armitage Bioguard outlet fitted.
  - v) Finish: Chrome plated.
  - vi) Integral thermostat set at 41°C.
  - vii) TMV3 Thermostatic Mixing Valve to meet the requirements of the NHS Model Engineering Specification.
  - viii) Conforms to HBN 00-10, HBN-00.09, HTM04-01 Addendum 2013.
- N23.2119A Type SAN-027A Clinical Sink
  - a) Like N23.2119 but:
    - i) Mounted on stainless steel legs
    - ii) Laboratory grade stainless steel
    - iii) Bowl dimensions: 500x400x150mm
    - iv) Dimensions: 920H 750D, Length to suit the room (refer to drawings)
    - v) Two tap holes
    - vi) Taps: Laboratory taps
- N23.2119B Type SAN-027B Clinical Sink
  - a) Like N23.2119 but:
    - i) Mounted on stainless steel legs with undershelf
    - ii) Sink bowl dimensions: 270x600x475mm
    - iii) Dimensions: 900H 3000W 700D mm
- N23.2119C Type SAN-027C Clinical Sink 600x600, no drainer
  - a) Like N23.2119 but:
    - i) Mounted on preplumbed sanitary panel assembly
    - ii) No drainer
    - iii) Dimensions: 600Wx600D mm
- N23.2120 Type SAN-028 General Sink
  - a) General sink with ribbed drainer mounted on base unit, 1200mm x 600mm.
  - b) Sink material: Stainless steel.
  - c) Standard: ~~HTM64~~HBN 00-10: PART C.
  - d) Basin:
    - i) Manufacturer: Franke/ Pland or an acceptable equivalent.
    - ii) Reference: LH/ RH Drainer, No Taphole, no overflow, no chainstay.
    - iii) Finish: Satin polished stainless steel.
    - iv) Size: 1200 x 600mm.

- e) Type: Mounted on stainless steel base unit, one basin, one drainer.
- f) Waste: 38mm BJP flush grated waste outlet.
- g) Trap: Plastic bottle trap with 75mm seal, multi-purpose outlet screwed with compression nut and ring.
- h) Taps:
  - i) Wall mounted bib-taps.
  - ii) Type: ~~HTM64~~HBN 00-10: PART C compliant.
  - iii) Manufacturer: Armitage Shanks or an acceptable equivalent.
  - iv) Reference: (TB-H1) Markwik ½ inch bib-taps/ bib tap wall mounts ½ inch for concealed plumbing (pair), bib-tap extensions ½ inch x 75mm long (pair).
    - Flow rates: max 4.5 litres per minute to meet the sustainability performance requirements.
  - v) Finish: Chrome plated.
  - vi) Integral thermostat set at 41°C.
  - vii) TMV3 Thermostatic Mixing Valve to meet the requirements of the NHS Model Engineering Specification.
  - viii) Conforms to HBN 00-10, HBN-00.09, HTM04-01 Addendum 2013.

N23.2121 Type SAN-029 Sink ~~and handwash~~

- a) Sink ~~and handwash~~ set into stainless steel flat/ dished worktop on base unit (catering standard).
- b) Sink material: Stainless steel.
- c) Basin:
  - i) Manufacturer: Bartlett/ Burlodge or an acceptable equivalent.
  - ii) Reference: Special Construction.
  - iii) Size: ~~Refer to the RDS for configuration.~~ 650D 2400W 900H mm
  - iv) Bowl sizes: Sink 610mm x 450mm, ~~handwash 380mm diameter.~~
- d) Stainless steel base unit.
- e) Trap: Chrome plated bottle trap with 75mm seal, outlet screwed with compression nut and ring.
- f) Waste: 38mm BJP flush grated waste outlet.
- g) Taps:
  - i) Type: ~~HTM64~~HBN 00-10: PART C compliant.
  - ii) Manufacturer: Armitage Shanks or an acceptable equivalent.
  - iii) Reference:
    - Sink: monobloc mixer tap, short lever, dual flow swivel spout.
    - Handwash: Fitting mounted thermostatic mixing tap with 150mm lever control.
    - Flow rates: max. 4.5 litres per minute to meet the sustainability performance requirements.
  - iv) Finish: Chrome plated.

N23.2121A Type SAN-029A Sink

- a) Like N23.2121 but:
  - i) Manufacturer: Steelplan
  - ii) Dimensions: refer to drawings
  - iii) Type: mounted on 18 gauge (1.2mm) zinc coated steel base units, finish: coated in polyester powder stoved at 120deg C.

**Shower fittings**

- N23.2122      Type SAN-017 Shower Unit  
Staff shower unit. Wall mounted built-in thermostatic shower control unit with lever control and remote wall mounted swivel shower head with adjustable spray nozzle.
- a) Manufacturer: Rada or an acceptable equivalent.
  - b) Reference: Healthcare standard valve with front access cover and fixed swivel action shower head.
  - c) Finish: All chrome.
  - d) Operating control: Lever handle.
  - e) Supply valve to be accessed via front cover plate.
  - f) To be TMV3 Scheme approved.
  - g) **Max. flow 6 litres per minute.**
- N23.2123      Type SAN-016 Shower Unit  
Patient shower unit. Wall mounted low pressure thermostatic shower control unit with lever control, concealed connections, 1.5m single flow flexible hose and wall mounted handset.
- a) Manufacturer: Rada or an acceptable equivalent.
  - b) Reference: Healthcare standard valve with shower hole and fixed handset.
  - c) Finish: All chrome.
  - d) Operating control: Lever handle.
  - e) Supply valve to be accessed via front cover plate.
  - i) **Flow rates: max. 6 litres per minute to meet the sustainability performance requirements.**
  - f) To be TMV3 Scheme approved.
- N23.2124      Type SAN-015 Shower Tray  
Staff shower tray with integrated floor gully comprising flat top ceramic (or durastone) shower tray.
- a) Manufacturer: MX-Group or an acceptable equivalent.
  - b) Reference: Durastone or an acceptable equivalent.
  - c) Size: 900mm x 900mm.
  - d) Waste: Chromium plated.
- N23.2125      Type SAN-014 Floor Drain with Cover  
Floor drain with cover - patient shower areas:
- a) 50mm Water Seal Trap, polished s/s clamp ring and cover plate.
  - b) Manufacturer: Wade/ Bluscher or an acceptable equivalent.
  - c) Reference: Trapped gully with vertical outlet.
  - d) Body type/ material: Stainless steel grade 1.4301 (304) polished finish 147mm diameter circular access cover for use with sheet flooring.
  - e) Outlet : Type and direction to suit pipework and sheet (vinyl) flooring with adaptors and connections as recommended by the manufacturer.
  - f) Refer also to the Services Engineer's requirements.
  - g) **Base unit with 2 storage units, 2 sliding doors to each, raised on legs, refer to drawings**
- N23.2126      Type SAN-014A Floor Drain with Cover  
Floor drain with cover - technical areas:
- a) **Manufacturer: Wade/ Bluscher or an acceptable equivalent.**
  - b) **Reference: Stainless steel bell trapped gully with vertical outlet.**

- c) Body type/ material: Stainless steel grade 1.4301 (304) polished finish 147x147mm square access cover for use with resin flooring.
- d) Outlet : Type and direction to suit pipework and resin flooring with adaptors and connections as recommended by the manufacturer.
- e) Refer also to the Services Engineer's requirements.

**Miscellaneous**

- N23.2127 Type SAN-040 Water cooler
- a) Water cooler dispenser floor mounted ~~(by others)~~.
  - b) Services to be provided ~~for Group 2 provision~~: Mains water and drainage required.
  - c) Connection type to be approved by infection control
  - d) Cross reference to Services information.
- N23.2127A Type SAN-040A Water Cooler (worktop mounted)
- a) Water cooler dispenser (worktop mounted).
  - b) Services to be provided: Mains water and drainage required.
  - c) Connection type to be approved by infection control
  - d) Cross reference to Services information.
- N23.2128 Type SAN-041 Ice maker - clear ice cubes  
Ice maker - clear ice cubes.
- a) Services to be provided for Group 2 provision.
  - b) Cross reference to Services information.
- N23.2129 Type SAN-042 Water boiler - wall mounted  
Water boiler - wall mounted ~~(by others)~~.
- a) Services to be provided ~~for Group 2 provision~~.
  - b) Cross reference to Services information.
- N23.2130 Type SAN-043 Mini kitchen with integral sink, small boiler and fridge
- a) Hideaway Mini kitchen with integral sink, small boiler and fridge.
  - b) Manufacturer: John Strand MK Ltd./ Space Savers (London) or an acceptable equivalent.
  - c) Product reference: Hideaway mini-kitchen – commercial model.
  - d) Size: 1200mm (W) x 600mm (D) c 2100mm (H) (bowl to manufacturer's standard).
  - e) Material: Brushed polish stainless steel sink bowl in stainless steel dished top – LR/RH bowl, with veneered cabinet construction.
  - f) Tap/ chainstay/ overflow holes: To manufacturer's standard.
    - i) Flow rates: max. 5 Litres per minute to meet the sustainability performance requirements
  - g) Water supply fittings: From manufacturer's standard range.
  - h) Operation: Single action small lever.
  - i) Waste/ trap: Complete with waste, trap and overflow fittings for 40mm connection.
  - j) Accessories: Supplied with wood veneer base unit, plastic laminate top unit and shelving, interior light and power point and integral fridge with wood veneer door panel.
- N23.2131 Type SAN-044 Dish washer
- a) Dish washer – small commercial model.
    - i) Water usage rate: max. 6 Litres per rack to meet the sustainability performance requirements.
  - b) Services to be provided for Group 2 provision.
  - c) Manufacturer: Miele or an acceptable equivalent.

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- d) Cross reference to Services information.
- N23.2132 Type SAN-045 Washing Machine
- a) Washing Machine – small commercial model.
- i) Water usage rate: max. 7.5 litres per kg to meet the sustainability performance requirements.
- b) Services to be provided for Group 2 provision.
- c) Manufacturer: Miele or an acceptable equivalent.
- d) Cross reference to Services information.
- N23.2133 Type SAN-046 Washing machine (theatre footwear)
- a) Washing machine (theatre footwear).
- i) Water usage rate: max. 7.5 litres per kg to meet the sustainability performance requirements.
- b) Services to be provided for Group 2 provision.
- c) Manufacturer: Miele/ Lancer or an acceptable equivalent.
- d) Cross reference to Services information.
- N23.2134 Type SAN-047 Washer Disinfector (pass through for endoscopes)
- Washer Disinfector (pass through for endoscopes).
- a) Services to be provided for Group 2 provision.
- b) Manufacturer: Lancer – model ED-Flow AER.
- c) Cross reference to Services information.
- N23.2135 Type SAN-048 Mascerator (bedpan disposal unit)
- Mascerator (bedpan disposal unit).
- a) Services to be provided for Group 2 provision.
- b) Manufacturer: Vernacare or an acceptable equivalent.
- c) Cross reference to Services information.
- N23.2136 Type SAN-049 Bench, stainless steel, down draught, with sink and disposal
- a) Bench, stainless steel, down draught, with sink and disposal.
- b) Manufacturer: Steel Line Ltd./ J Marston Engineers or an acceptable equivalent.
- N23.2137 Type SAN-030 Wash Down Hose
- a) Wash down hose to waste management area.
- b) Manufacturer: Aquajet/ Jetwash Direct or an acceptable equivalent.
- c) Construction:
- i) Cover material: Modified nitrile specially compounded to handle high- water pressure environments.
- ii) Reinforcement: High tensile steel one-wire braid.
- iii) Tube material: Nitrile specially compounded to handle high-pressure water service.
- iv) Colour: Black.
- d) Working temperature: -40° C to + 121° C. Exact requirements to be confirmed with Employer.
- e) Other requirements: Bend restrictors required.
- f) Flow rates: max.8.3 Litres per minute to meet the sustainability performance requirements
- N23.2150 Type SAN-050 Sink, washing scopes, height adjustable
- a) Height adjustable sink, double bowl, single drainer, including taps, wastes and traps
- i) Manufacturer: Goldsworth / Getinge or acceptable equivalent

- ii) Material: 240 grit polished Grade 304 stainless steel
- iii) Welded construction
- iv) Raised edges to sides and front, 100mm upstand to rear
- v) Mechanically height adjustable on two electrical rams controlling box frame support assembly, +/-125mm adjustment from 900mm height, control swith on front panel
- vi) Dimensions: 650D 2100W 900H LH and RH version
- vii) Bases of bowls tapered towards outlet
- b) Waste & trap
  - i) 38mm dia
  - ii) High level weir overflow standpipe with clear litre measurements
- c) Taps
  - i) Thermostatically controlled HTM and WRAS approved single lever pillar mounted taps for connection to hot and cold water
  - ii) Spray guns
- d) Services connections as per M/E engineer specification

**N23.2200 MATERIALS**

N23.2201 Generally

- a) All fixtures to be free from imperfections, true to line, angles, curves and colours, smooth, watertight and complete in every respect.
- b) All vitreous ware shall be fired vitreous chinaware of the best quality, non-absorbent and burned so that the whole mass is thoroughly fused and vitrified, producing a material, consistent in colour, which when fractured shall show a homogeneous mass, close grained and free from pores.
- c) The glazing of vitreous china fixtures shall be thoroughly fused and unitised to the body, without discolouration, chips or flaws, and shall be free from craze. Warped or otherwise imperfect fixtures shall not be accepted.
- d) One manufacturer shall supply all fixtures, unless specified otherwise.

N23.2202 Sealant Pointing

Sealant pointing (at joints between appliance/ fitting and substrate) shall be silicone based sealant in accordance with Section Z22. Colour shall be 'White' or to complement the adjacent appliance/ fitting or as agreed.

N23.2203 Bonded Decorative Laminates

- a) Decorative high-pressure laminates of less than 2mm in thickness forming bonded panels shall be manufactured in accordance with BS EN 438: Part 3.
- b) Edgings shall be provided as indicated on the Design Drawings or in accordance with the indicative proprietary panel manufacturer's standard detail.
- c) Edgings shall be applied in a manner that minimizes the visible black line.
- d) Methods of edging shall be as follows:
  - i) 3-5mm thick ColorCore lippings in matching colour.
  - ii) Matching decorative laminate applied in factory conditions by radio frequency edgebanders prior to application of the face laminate.
  - iii) Hardwood lippings.
  - iv) Post-formed edges.

N23.2204 Compact Grade Laminate

- a) Compact grade laminate to BS EN 438: Part 4.
- b) Machine cut to sizes as indicated on the Design Drawings.
- c) Concealed fixings to be used unless otherwise indicated on the Design Drawings.



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- d) Exposed edges shall be chamfered/ bevelled and polished to avoid sharp edges as indicated on the Design Drawings.
  - e) Concealed panel edges shall be square edged with clean cut edge.
  - f) Panels to provide Class 0 spread of flame.
  - g) Panel edges shall be sealed where exposed in wet areas.
- N23.2205 Plywood/ Laminboard
- a) Plywood generally shall satisfy the requirements of BS EN 313, BS EN 314, BS EN 315, BS EN 322, BS EN 324, BS EN 325, BS EN 326, BS EN 335, BS EN 635, BS EN 636, BS EN 1084, DD CEN/TS 1099, BS EN 12369 and BS EN 1995 as relevant.
  - b) Type: Minimum class 2 or class 3 bond quality to BS EN 314, in thickness to suit the design requirements.
  - c) Plywood durability shall satisfy minimum hazard class 3 to BS EN 335, (i.e. moisture content frequently above 20%) unless otherwise agreed.
  - d) Dimensional tolerances to BS EN 315 and to satisfy any additional requirements of this Specification.
- N23.2206 MDF and Particleboard
- a) MDF:
    - i) All MDF shall be to BS EN 622: Part 5.
    - ii) Type: Moisture resistant type.
    - iii) Formaldehyde class: To BS EN 622-1, Class E1 (using formaldehyde-free resin ie no added formaldehyde).
    - iv) Fire rating: Class 0 unless otherwise specified.
    - v) Thickness: As shown on the Design Drawings.
    - vi) Edges: Sanded smooth.
  - b) Particleboard:
    - i) Dense particleboard as specified.
    - ii) Type: Moisture resistant type.
    - iii) Formaldehyde class: To BS EN 622-1, Class E1 (using formaldehyde-free resin ie no added formaldehyde).
    - iv) Fire rating: Class 0 unless otherwise specified.
    - v) Thickness: As shown on the Design Drawings.
    - vi) Edges: Sanded smooth.
- N23.2207 Steel Framing
- a) Steel framing members shall be fabricated using only appropriate grades, strengths and thicknesses to provide full structural compliance. The wall thickness of steel sections shall be sufficient to ensure rigidity in the lengths required in the final installation.
  - b) Steel as Section Z11.
  - c) Corrosion protection, hot-dip galvanising as Section Z30.
  - d) Use only continuous profiles free from marks, defects, flaws, steps, waves or any other damage.

## **N23.3000 SITE INSTALLATION**

### **N23.3100 WORKMANSHIP**

#### N23.3101 General

- a) Appliances and accessories shall be so assembled and fixed that surfaces designed to falls drain as intended.
- b) Non-ferrous or stainless steel fastenings shall be used unless otherwise specified.
- c) Jointing and bedding compounds recommended in writing by the manufacturers of the appliances, accessories and pipes being jointed or bedded shall be used.
- d) Appliances shall not be used for any purpose until Practical Completion.
- e) On Practical Completion, protective coverings, tapes, etc. shall be removed and appliances checked for damage and defects. They shall be tested for satisfactory operation and all damaged or defective components/ accessories replaced. The whole installation shall be thoroughly cleaned.
- f) Noggings and bearers required to support sanitary appliances and fittings shall be accurately positioned, securely fixed and concealed from view.
- g) Sealant application shall be as Section Z22.

#### N23.3102 Appliances

- a) WC seats and lids shall be stable when raised and capable of remaining in a vertical position.
- b) Cisterns:
  - i) Cistern operating components to be as recommended by the cistern manufacturer. The ball valve shall match pressure of water supply.
  - ii) A cistern shall be fixed at the height recommended by the manufacturer unless otherwise specified or shown on the Design Drawings.
  - iii) The overflow pipe shall be fixed to falls and located to give visible warning of discharge. Agree the position with the Architect where not shown on the Design Drawings.
- c) Taps shall be fixed securely, making a watertight seal with the appliance.
- d) Wastes/ Overflows shall be bedded in waterproof jointing compound and fixed with a resilient washer between appliance and backnut.

**K32.3200 WORKMANSHIP FOR PANELS**

K32.3201 General

- a) Manufacture as much as possible in shop with machinery to eliminate as much hand tooling on project Site as possible. Shop manufacture to allow for adjustments at site for proper levelling, anchoring and joining.
- b) Accurately cut and form materials to the required shape, accurate in size and profile with all exposed surfaces free from irregularities and defects.
- c) Noggings, bearers, etc. shall provide fixing points for linings running parallel with but offset from main structural supports, or to support fixtures, fittings and services which are accurately positioned and securely fixed. After fixing the panels and linings, the positions of noggings and bearers shall be marked, for following trades.
- d) Do not cut, plane, drill, or sand pre-finished panels.
- e) Adhesive joints shall be adequately protected during the curing process to avoid contamination by dust and other debris.
- f) Allowance for future moisture and temperature movement of panels shall be made.
- g) Linings and panels shall be stored on Site for at least 48 hours before fixing, in conditions similar to those that will prevail after the building has been occupied. Free circulation of air to all surfaces shall be maintained at all times.
- h) All work shall be carried out in accordance with the manufacturer's recommendations.
- i) Dimensions and levels of the structure shall be verified by the Contractor prior to manufacture of components.
- j) All elements of framework and associated beads and strips shall be stored on Site such that they shall not be damaged, distorted or weathered unevenly.
- k) Factory finished boards shall be consistent in colour and texture, including accessories, throughout individual areas of work. Boards shall be laid out to ensure that any texture is all one direction and lined up if there is any visible repeat.
- l) Preparation: Wood shall be sanded to remove offset and non-level conditions, roughness, machine marks, glue residue and arrises. Remove all sanding residue and clean off grease and resinous deposits with proprietary thinners.
- m) Do not cut, plane, drill or sand prefinished panels unless otherwise indicated on the Design Drawings.

**End of Section**