

**6.12 Appendix 12 - Health Facility Design Review Checklist**

# Health Facility Design Review Checklist

This checklist is to be used by DOH or outsourced Design Reviewers to record any non-compliance of the submitted design of a new health facility or an existing facility undergoing major refurbishment (exceeding 50% of the existing).

## 1 General Information of Facility

Choose the applicable Facility Type of the proposed facility:

<input type="checkbox"/> General Hospital	<input type="checkbox"/> Specialty Hospital	<input type="checkbox"/> Oncology Centre
<input type="checkbox"/> Rehabilitation Centre	<input type="checkbox"/> Day Surgical Centre	<input type="checkbox"/> Fertility Centre
<input type="checkbox"/> Renal Dialysis Centre	<input type="checkbox"/> Polyclinic	<input type="checkbox"/> Specialty Clinic
<input type="checkbox"/> Convalescence House	<input type="checkbox"/> Radio Diagnostic Centre	<input type="checkbox"/> General Clinic
<input type="checkbox"/> Medical Laboratory	<input type="checkbox"/> Dental Laboratory	<input type="checkbox"/> Dental General Clinic
<input type="checkbox"/> Diagnostic Centre (Multiple Specialties)	<input type="checkbox"/> Hospital (Inpatient) Pharmacy	<input type="checkbox"/> Community (Outpatient) Pharmacy
<input type="checkbox"/> TCAM Centre	<input type="checkbox"/> Company Clinic	<input type="checkbox"/> Hotel Clinic
<input type="checkbox"/> School Clinic	<input type="checkbox"/> Drug Store	<input type="checkbox"/> Relaxing Massage Centre
<input type="checkbox"/> Special Needs Centre	<input type="checkbox"/> Air Ambulance	<input type="checkbox"/> Optical Centre
<input type="checkbox"/> Beauty Centre Salon	<input type="checkbox"/> Home Healthcare Agency	<input type="checkbox"/> Telehealth

All Mandatory FPU's provided (refer to appendix 11 of Part A)  YES  NO

Optional FPU's provided

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Overall Facility RDL:  1  2  3  4  5  6

Design Consultant Prequalification Category:  1  2

Application type sought:  Single Step Application  
 2 Step Application -  Schematic Design Submission  
 Detailed Design Submission

Are all required deliverables as per applicable checklist provided?  YES  NO

(Refer to submitted **Deliverables Checklist (Appendix 1 for Schematic Submission or Appendix 2 for Detailed Submission in Part A)** by Applicant)

## 2 Functional Planning Unit (FPU) or Department

Choose the applicable FPU(s) being reviewed (ideally use one set of comments per FPU):

<input type="checkbox"/> Administration Unit	<input type="checkbox"/> Admissions Unit & Discharge	<input type="checkbox"/> Birthing Unit
<input type="checkbox"/> Cardiac Investigation Unit	<input type="checkbox"/> Catering Unit	<input type="checkbox"/> Clinical Information Unit
<input type="checkbox"/> Complementary and Alternative Medicine Centre	<input type="checkbox"/> Coronary Care Unit	<input type="checkbox"/> Day Surgery/ Procedure Unit
<input type="checkbox"/> Dental Surgery Unit	<input type="checkbox"/> Education Unit	<input type="checkbox"/> Emergency Unit
<input type="checkbox"/> Endoscopy Unit	<input type="checkbox"/> Engineering & Maintenance Unit	<input type="checkbox"/> Health Centres
<input type="checkbox"/> Housekeeping Unit	<input type="checkbox"/> Inpatient Unit - Bariatric	<input type="checkbox"/> Inpatient Unit - General
<input type="checkbox"/> Intensive Care Unit - General	<input type="checkbox"/> IVF Unit (Fertilisation Centres)	<input type="checkbox"/> Laboratory Unit
<input type="checkbox"/> Linen Handling Unit	<input type="checkbox"/> Main Entrance Unit	<input type="checkbox"/> Maternity Unit
<input type="checkbox"/> Medical Imaging Unit - General	<input type="checkbox"/> Medical Imaging Unit - Nuclear Medicine Unit & PET	<input type="checkbox"/> Mental Health Unit - Adult
<input type="checkbox"/> Mental Health Unit - Child & Adolescent	<input type="checkbox"/> Mental Health Unit - Older Persons	<input type="checkbox"/> Mobile Healthcare Unit
<input type="checkbox"/> Mortuary - General	<input type="checkbox"/> Oncology Unit - Medical (Chemotherapy)	<input type="checkbox"/> Oncology Unit - Radiation
<input type="checkbox"/> Operating Unit	<input type="checkbox"/> Outpatients Unit	<input type="checkbox"/> Pharmacy Unit
<input type="checkbox"/> Public & Staff Amenities	<input type="checkbox"/> Rehabilitation - Allied Health	<input type="checkbox"/> Renal Dialysis Unit
<input type="checkbox"/> Sterile Supply Unit (SSU)	<input type="checkbox"/> Supply Unit	<input type="checkbox"/> Waste Management Unit

FPU RDL:             1             2             3             4             5             6

(Note: default = the Whole Facility RDL)

New Facility

Refurbishment

% Refurbished

%

%New

%

% Cumulative Refurb

%

### 3 Architectural/ Medical Planning Compliance Checklist

Does this FPU comply fully with the mandatory SOA?  Yes  No

Remarks: \_\_\_\_\_

Have any non-conformances been declared or not?  Yes  No

Remarks: \_\_\_\_\_

Are the alternative design solutions acceptable or not?  Yes  No

Remarks: \_\_\_\_\_

Are the functional relationships acceptable? Internal -  Yes  No  
External -  Yes  No

Remarks: \_\_\_\_\_

Do Room sizes matching the SOA's of the Guidelines?  Yes  No

Note: Normally up to 10% deviation in area should be accepted

Note: Guidelines use the no-gap area measurement which should not be confused with clear area

Note: Any area approved in the design must be accepted by the inspector

Remarks: \_\_\_\_\_

Do all the corridor widths comply with the DOH HFG?  Yes  No

Note: Minimum requirements of fire corridors (Civil Defense) may not be sufficient. Operating Unit and ICU requires wider corridors.

Remarks: \_\_\_\_\_

Do clearances around beds and other objects comply with the DOH HFG?  Yes  No

Note: First refer to the FPU diagrams. If not available refer to the relevant RLS for guidance on clearances

Remarks: \_\_\_\_\_

Hand wash basins are provided where they are required and shown in design?  Yes  No

Note: also check the types required, eg Type A, B, C. Higher type can replace lower type. Antiseptic Hand Gel Dispenser is not a replacement for Hand Wash Basin.

Remarks: \_\_\_\_\_

Are all finishes specified are appropriate in clinical areas?  Yes  No

Remarks: \_\_\_\_\_

Are there any sliding doors used in clinical areas?  Yes  No

Note: Cavity sliders may only be used in non-clinical areas such as administration. In all clinical areas any sliding doors must only be surface sliders or swing doors. Surface above sliders should resist dust collection

Remarks: \_\_\_\_\_

Does minimum ceiling height comply with the DOH HFG?  Yes  No

Note: Default ceiling height is 2700 except procedural area which are 3000 AFFL.

Note: When limited and local deviations are observed check against the allowance permitted in Part D

Remarks: \_\_\_\_\_

Are all door openings adequate as per the DOH-HFG?  Yes  No

Note: Pay particular attention to areas requiring bed movement and the geometry of space

Note: Also look for any mandatory observation panels which may be required (none required for standard patient bedrooms)

Remarks \_\_\_\_\_

Mandatory external windows, where required, are provided?  Yes  No

Note: Refer to the allowances in the DOH-HFG, sometimes borrowed light is allowed eg in ICU

Mandatory direct light is only into Inpatient Bedrooms

Remarks: \_\_\_\_\_

Are proposed window treatments for sun control appropriate in clinical areas?  Yes  No

Note: Curtains should not be used in clinical areas. Window sun control in operating theatres, labs, ED, ICU etc can only be within double glazing. Curtains may be used in Inpatient Bedrooms except isolation rooms as well as non-clinical areas.

Remarks: \_\_\_\_\_

Does the facility comply with the ergonomics standard as per DOH-HFG?  Yes  No

Note: Refer to Part C for examples of ergonomics

Remarks: \_\_\_\_\_

Are hand rails provided to at least one side of the main corridors?  Yes  No

Note: hand rails may be combined with crash bars but the handle still must comply with DOH-HFG

Remarks: \_\_\_\_\_

#### 4 MEP Engineering Compliance Checklist (only applicable for Detailed Design Submission)

Is the HVAC system design in compliance to the Project Requirements and DOH-HFG Part E?

Yes  No

Remarks: \_\_\_\_\_

Is Adequate Filtration and Air changes been provided for spaces according to DOH-HFG?

Yes  No

Remarks: \_\_\_\_\_

Are the mandated air pressurisation requirements for spaces met?

Yes  No

Remarks: \_\_\_\_\_

Is a pressure display monitor provided for the isolation room?

Yes  No

Remarks: \_\_\_\_\_

Has the exhaust for negative isolation rooms been provided with HEPA filtration and stack discharge?

Yes  No

Remarks: \_\_\_\_\_

Has HEPA filtration been provided for the Operating Rooms, Burns Unit and Positive Isolation Rooms?

Yes  No

Remarks: \_\_\_\_\_

Has a fully ducted return air system been provided?

Yes  No

Note: Ceiling plenum can never be used as a supply or return air duct.

Remarks: \_\_\_\_\_

Has the MRI room been provided with non-ferrous MEP systems? Has a quench pipe been provided? Has an emergency exhaust system been provided?

Yes  No

Remarks: \_\_\_\_\_

Are the pharmacy clean rooms provided with HEPA filters?

Yes  No

Remarks: \_\_\_\_\_

Have laboratory fume hoods been provided with dedicated exhaust?

Yes  No

Is the exhaust provided with HEPA filtration and stack discharge?

Yes  No

Remarks: \_\_\_\_\_

Are the IVF Procedure Rooms, Embryo Transfer Rooms and Labs provided with HEPA filtration?

Yes  No

Remarks: \_\_\_\_\_

Has emergency power been provided in accordance to DOH HFG Part E?

Yes  No

Remarks: \_\_\_\_\_

Has UPS power been provided in accordance to DOH HFG Part E?

Yes  No

Remarks: \_\_\_\_\_

Has IPS power been provided in accordance to DOH HFG Part E Guidelines?  Yes  No

Remarks: \_\_\_\_\_

Is the generator location been discussed and accepted by DEWA and complied to its requirements?

Yes  No

Remarks: \_\_\_\_\_

Are the electrical rooms provided with 2 hour fire rating or fire suppression as per DEWA requirements?

Yes  No

Remarks: \_\_\_\_\_

Is the central server room located at a level where flooding cannot occur? Or are there remedial measures in place?

Yes  No

Remarks: \_\_\_\_\_

Is the system resilience covered as per DOH HFG Part E requirements?  Yes  No

Remarks: \_\_\_\_\_

Does the Fire Alarm system comply to Civil Defence requirements?  Yes  No

Remarks: \_\_\_\_\_

Has the Nurse Call and Emergency Call system provided?  Yes  No

Note: Pull-cords are not acceptable due to safety aspect of patients.

Remarks: \_\_\_\_\_

Are the Annunciator or indicator lights provided and visible?  Yes  No

Remarks: \_\_\_\_\_

Has the Electrical System been installed as per DEWA requirements?  Yes  No

Remarks: \_\_\_\_\_

Has the main water been provided with a DCV after the water meter?  Yes  No

Remarks: \_\_\_\_\_

Is the water supply Treated with special water treatment equipment?  Yes  No

Note: One of the following must be present:

- Low Level Chemical Water Treatment for Raw Water Tank
- Water Softener
- Ultra Violet
- Multimedia Filtration
- Copper Silver Ionisation
- Microfiltration
- Cooling Water Plant Via Heat Exchanger
- Reverse Osmosis Water Treatment
- Ozone Water Treatment

Remarks: \_\_\_\_\_

Has warm water been provided to each Hand Wash Basin?  Yes  No

Note: One of the following methods should be present.

- TMV-03 at High Level connected to Hot Water Line
- TMV-03 provided through Sanitaryware Mixing Tap
- Warm Water Plant

Remarks: \_\_\_\_\_

Has a valve assembly set (includes PRV and DCV) been provided on cold and holt water services to each room?  Yes  No

Remarks: \_\_\_\_\_

Has a water balancing valve been provided on the hot water return side?  Yes  No

Remarks: \_\_\_\_\_

What is the pipe material for the water supply system?

Note: One of the following may be used.

- Copper
- MDPE
- PVC
- PPR
- Stainless Steel

Remarks: \_\_\_\_\_

Is the RO water system been provided for Washer Disinfectors for Dirty Utilities?  Yes  No

Remarks: \_\_\_\_\_

Has an independent RO water System been provided for the dialysis areas (only for Dialysis Areas)?  Yes  No

Remarks: \_\_\_\_\_

Has an independent RO water System been provided for areas outside dialysis areas supply (such as CSSD, Laboratory, Washer Disinfectors, HVAC Equipment etc)?  Yes  No

Remarks: \_\_\_\_\_



Are the RO water system service pipes specified in stainless steel?  Yes  No

If no, state which material was used:

Remarks: \_\_\_\_\_

Has a Water Recycling system been installed?  Yes  No

If so, they may be used in one of the following areas:

- External Irrigation Areas
- Internal Irrigation Areas
- All Irrigation Areas
- Flushing WC System
- All of the Above

Remarks: \_\_\_\_\_

Has a Clean Steam System been provided to the facility?  Yes  No

Note: This may apply to the following areas:

- SSU
- Laboratory
- Pharmacy
- HVAC Equipment

Remarks: \_\_\_\_\_

Has Raw/Plant Steam been provided to the facility?  Yes  No

Note: This may apply to the following areas:

- Laundry Area
- Kitchen Area
- Hot Water Equipment

Remarks: \_\_\_\_\_

Has the above system been designed as per Abu Dhabi Municipality requirements?  Yes  No

Remarks: \_\_\_\_\_

Is the drainage crossing Patient areas (including clean areas)?  Yes  No

One of the following may apply:

- Double Pipe (Pipe-in-Pipe)
- Drip Tray
- Acoustically rated pipe

Remarks: \_\_\_\_\_

Are the main drainage lines electro-fusion welded?  Yes  No

Remarks: \_\_\_\_\_

For Oncology Areas, is the pipe material used stainless steel?  Yes  No

Remarks: \_\_\_\_\_

For Oncology Areas, is the pipe buried in Concrete Bunkers? Is the pipe, pipe-in-pipe?  Yes  No

If Yes to the above, one of the following will apply:

- Duplex Stainless Steel
- 304 L Stainless Steel
- 316 L Stainless Steel

Remarks: \_\_\_\_\_

For Laboratory Areas, is one of the following materials used for pipework?

- HDPE
- Ultra-Pigmented PVC Pipe
- Ultra Polypropylene
- UPVC
- None of the Above - Please state Other

Remarks: \_\_\_\_\_

Has an STP been provided?  Yes  No

Remarks: \_\_\_\_\_

Has Liquid Oxygen been provided with Vaporiser?  Yes  No

Remarks: \_\_\_\_\_

Have 2no. Liquid Oxygen Tanks been provided?  Yes  No

Remarks: \_\_\_\_\_

Has Oxygen Generation Been Provided?  Yes  No

Remarks: \_\_\_\_\_

Are the number cylinders system sized based on actual flow?  Yes  No

Remarks: \_\_\_\_\_

Is there an Automatic Cylinder Manifold system for each gas system?  Yes  No

Remarks: \_\_\_\_\_

Is there an Emergency Manual Manifold System for each gas system?  Yes  No

Remarks: \_\_\_\_\_

Do both manifolds systems for all medical gas systems have an exhaust to atmosphere pipe from the manifold?  Yes  No

Remarks: \_\_\_\_\_

Is the cylinder room located on the ground floor?  Yes  No

Remarks: \_\_\_\_\_

Are the Oxygen and Nitrous Oxide Cylinders in the Same Room?  Yes  No  
Remarks: \_\_\_\_\_

Is there a spare Cylinder Room or just spare cylinder area?  Yes  No  
Remarks: \_\_\_\_\_

Has central Carbon Dioxide Plant been provided?  Yes  No  
Remarks: \_\_\_\_\_

Is the Medical Air and Vacuum System provided?  Yes  No  
If Yes to the above, select the location from one of the two below:  
 Ground Floor  
 Basement  
Remarks: \_\_\_\_\_

As per the HVAC AHU startegy for Special areas (such as opertaingtheatgrets, endoscopy rooms, etc) has a Simplex AGSS unit been provided for eahc AHU?  Yes  No  
If Yes to the above, select the location from one of the two below:  
 Ground Floor  
 Roof  
Remarks: \_\_\_\_\_

Has the facility been provided with Duplex AGSS system for other areas outside the simplex units?  Yes  No  
Remarks: \_\_\_\_\_

Is the main medical gas alarm panel provided?  Yes  No  
If Yes to the above, select the location from one of the below:  
 Fire Control Room  
 Secuirty Room  
 Plant Room  
 Non of the Above  
 Other  
Remarks: \_\_\_\_\_

Are the general Medical Gas AVSU's been provided at the Staff Stations?  Yes  No  
If no, specify location: \_\_\_\_\_

Has more than one AVSU been provided for special areas as as Operating Theatres, ICU's etc?  Yes  No  
If Yes, specify location: \_\_\_\_\_

Has a dedicated AVSU or AVSU's been provided to special clinical areas such as Operating Theatres, ICU etc?  Yes  No  
If Yes, specify location: \_\_\_\_\_

Which one of the following is specified to open the valves on the AVSU panels?

- Key
- Push Button
- Break Glass

Remarks: \_\_\_\_\_

Does the design specify a key access to the AVSU panel?  Yes  No

If Yes, it is located at: \_\_\_\_\_

Has the Electrical rooms (not LV switch rooms, just local floor rooms) been provided with an extinguishing system?  Yes  No

If Yes, select the applicable system from below:

- Gas Suppression
- Automatic Water Based Sprinkler
- None - Due to 2 Hour Fire Rated Enclosure

Remarks: \_\_\_\_\_

Has the Server room been provided with an extinguishing system?  Yes  No

If Yes, select the applicable system from below:

- Gas Suppression
- Automatic Water Based Sprinkler
- None - Due to 2 Hour Fire Rated Enclosure

Remarks: \_\_\_\_\_

Has the oil type generator been provided with an extinguishing system?  Yes  No

If Yes, select the applicable system from below:

- Water Mist System
- Deluge System
- Foam System
- Gas Suppression System
- Other – Please state which type \_\_\_\_\_

Have the transformers been provided with an extinguishing system?  Yes  No

If Yes, select the applicable system from below:

- Water Mist System
- Deluge System
- Foam System
- Gas Suppression System
- Not required - Dry Type Transformer Used
- Other – Please state which type \_\_\_\_\_

Have the Main Electrical Rooms (LV) been provided with an extinguishing system?  Yes  No

If Yes, select the applicable system from below:

- Water Mist System
- Deluge System
- Automatic Sprinkler System
- Foam System
- Gas Suppression System
- Other – Please state which type \_\_\_\_\_

Have extinguishing systems been provided in the special clinical areas such as Operating Theatres, Endoscopy procedure rooms etc?  Yes  No

If Yes, select the applicable system from below:

- Pre-Action Automatic Double Interlock System
- Pre-Action Automatic Single Interlock System
- Automatic Sprinkler System
- Gas Suppression System
- Other – Please state which type \_\_\_\_\_

Have extinguishing systems been provided inside the imaging rooms?  Yes  No

If Yes, select the applicable system from below:

- Pre-Action Automatic Double Interlock System
- Pre-Action Automatic Single Interlock System
- Automatic Sprinkler System
- Gas Suppression System
- Other – Please state which type \_\_\_\_\_

Has the system been designed as per Abu Dhabi Municipality requirements?  Yes  No

Remarks: \_\_\_\_\_

Has a gas solenoid valve been provided after the LPG or NG gas meter?  Yes  No

Remarks: \_\_\_\_\_

Is the LPG, NG or Diesel fuel connection - points locked and can only accessed via key access?  Yes  No

Remarks: \_\_\_\_\_

Are the LPG, NG or Diesel fuel connection points located on the ground floor?  Yes  No

Remarks: \_\_\_\_\_

What is the material specified for the LPG pipe?  
Remarks: \_\_\_\_\_

What is the material specified for the NG pipe?

Remarks: \_\_\_\_\_

What is the material specified for the diesel pipe?

Remarks: \_\_\_\_\_

Are the fuel pipe systems specified with welded pipe?  Yes  No

If Yes, state which fuel services: \_\_\_\_\_

If the gas pipe is designed in the basement of a facility, is the pipe, pipe-in-pipe?  Yes  No

Remarks: \_\_\_\_\_