

## Part B - Health Facility Briefing and Planning

### 470 MEDICAL IMAGING - MRI

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#### INTRODUCTION

##### General

- 470 .2.00 MRI may be provided as a section of Medical Imaging or as a separate or freestanding unit. If MRI is provided as a freestanding unit, the following additional facilities/requirements will be applicable:
- Reception
  - Film Storage
  - Clean Utility
  - Dirty Utility
  - Patient Toilet / Change
  - Staff Toilet / Change
  - Radiation Protection

#### PLANNING

##### Functional Areas

- 470 .3.00 The MRI Unit may consist of the following Functional Areas:
- Reception and Waiting Areas
  - MRI Scanning Room with Control and Equipment Room
  - Film processing and storage areas
  - Anaesthetic Room (if applicable)
  - Patient Holding area and toilets
  - Support Rooms including Clean & Dirty Utilities and Preparation areas
  - Staff Areas including Reporting Rooms, Offices, Staff Toilets and Change areas.
- 470 .4.00 PROCESSING AREA
- A Darkroom may be required for processing cassettes and shall be located near the Control Room.

### Functional Relationships

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- 470 .5.00 The MRI Unit should be located with ready access to the Emergency Unit, Operating Unit and Critical Care Areas. It requires easy access for ambulant patients and beds/ stretchers. A Ground Floor location is preferred.

## DESIGN

### Building Service Requirements

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- 470 .6.00 CRYOGEN FACILITIES

Cryogen storage may be required in areas where service to replenish supplies is not readily available. Cryogen venting is required.

## COMPONENTS OF THE UNIT

### Introduction

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- 470 .7.00 The Medical Imaging - MRI will contain a combination of Standard Components and Non-Standard Components, according to the Level of Service.

Standard Components must comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets.

### Standard Components

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- 470 .8.00 Provide the Standard Components as identified in the Generic Schedules of Accommodation.

### Non-Standard Components

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- 470 .9.00 Provide the Non-Standard Components as identified in this section and in the Schedule of Accommodation, according to the Operational Policy and Functional Brief.

- 470 .10.00 MRI ROOM

#### DESCRIPTION AND FUNCTION

The MRI Room provides the area and equipment for MRI scanning procedures.

The MRI Room may range from 38 m2 depending on the vendor and magnet strength.

- 470 .11.00 LOCATION AND RELATIONSHIPS

The MRI Room should be located with direct access to the Control Room and ready access to patient waiting areas, patient holding, preparation and utility areas.

When Spectroscopy is proposed, caution should be exercised in locating it in relation to the magnetic fringe fields.

- 470 .12.00 CONSIDERATIONS

Power conditioning and voltage regulation equipment as well as direct current (DC) may be required.

Magnetic shielding may be required to restrict the magnetic field plot. Radio

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frequency shielding is required to attenuate stray radio frequencies.

### 470 .13.00 MRI COMPUTER ROOM

#### DESCRIPTION AND FUNCTION

A Computer Room shall be provided to accommodate computer equipment. A room of up to 35 m2 may be required depending on the equipment vendor and magnet strength.

### 470 .14.00 LOCATION AND RELATIONSHIPS

The MRI Computer Room shall be located adjacent to the MRI Scanning Room and Control Room.

### 470 .15.00 CONSIDERATIONS

The Computer room will require adequate ventilation/ air-conditioning for the computer equipment.

### 470 .16.00 MRI CONTROL ROOM

#### DESCRIPTION AND FUNCTION

The Control Room shall be provided that is designed to accommodate the computer and other controls for the equipment. The Control Room requires a full view of the MRI Room.

The Control Room should be a minimum of 9 m2, but may be larger depending on the vendor and magnet size.

### 470 .17.00 LOCATION AND RELATIONSHIPS

The MRI Control Room shall be located with direct access to the MRI Scanning Room.

### 470 .18.00 CONSIDERATIONS

The Control Room will require:

- Workbench
- MRI Scanner computer screens
- Telephones, computers, printers for staff use.

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## APPENDICES

### Med Imag.-MRI Generic Schedule of Accommodation

470.19.00 Schedule of Accommodation for an MRI Unit at levels 4, 5 and 6:

ROOM / SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ANAESTHETIC INDUCTION ROOM	yes			1 x 15 optional	1 x 15 optional	2 x 15 optional	
BAY - HANDWASHING	yes			2 x 1	4 x 1	4 x 1	
MRI SCANNING ROOM				1 x 38	1 x 42	2 x 42	Depending on Operational Policy
MRI CONTROL				1 x 9	1 x 10	2 x 10	
MRI COMPUTER ROOM				1 x 10	1 x 10	2 x 10	
OFFICE - SINGLE PERSON 9 M2	yes				1 x 9 optional	1 x 9 optional	Senior Radiographer, according to staffing establishment
OFFICE - SINGLE PERSON 9 M2	yes				2 x 9 optional	2 x 9 optional	Nursing personnel, Registrar, according to staffing establishment
PATIENT BAY	yes			2 x 9	2 x 9	4 x 9	Holding - Allow 2 Bays per MRI Room
TOILET - PATIENT	yes			1 x 4	1 x 4	2 x 4	With Change facilities
CIRCULATION %				35	35	35	

470.20.00 SHARED AREAS

ROOM / SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
BAY - LINEN	yes			1 x 2	1 x 2	1 x 2	
BAY - RESUS TROLLEY	yes			1 x 2	1 x 2	1 x 2	
CLEANER'S ROOM	yes			1 x 4	1 x 4	1 x 4	
CLEAN UTILITY	yes			1 x 12	1 x 12	1 x 12	Also used for Preparation
DIRTY UTILITY	yes			1 x 10	1 x 10	1 x 10	
PROPERTY BAY - STAFF	yes			1 x 6	1 x 6	1 x 6	
RECEPTION	yes			1 x 10	1 x 10	1 x 10	
STORE - FILM				1 x 8	1 x 12	1 x 12	
TOILET - STAFF	yes			1 x 2	2 x 2	2 x 2	
X-RAY VIEWING AND REPORTING	yes			1 x 8	1 x 8	1 x 16	
WAITING	yes				1 x 12	1 x 12	

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### References and Further Reading

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- 470 .21.00 - American Institute of Architects, Guidelines for Design & Construction of Hospital & Healthcare Facilities, 1997.
- NSW Health, Design Standard 15 Health Building Guidelines - Medical Imaging Unit, 1992.

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### FUNCTIONAL RELATIONSHIPS DIAGRAM - MEDICAL IMAGING (MRI)

