

## MRI Control Room

|                           |                      |
|---------------------------|----------------------|
| <b>Room Code</b>          | MRI-CTRL             |
| <b>Briefed Area</b>       | 14.00 m <sup>2</sup> |
| <b>Ceiling Height</b>     | 2.7 m                |
| <b>Occupancy</b>          | up to 3 staff        |
| <b>Hours of Operation</b> | Up to 24 hours       |

**Description** | The MRI Control Room provides the space and equipment for remote control of MRI equipment, and the amenities for review of images and reporting. Direct visibility of the patient through an observation window and direct access to the imaging room is required.

|                              |                                             |                                     |                    |                                                                                |                                     |
|------------------------------|---------------------------------------------|-------------------------------------|--------------------|--------------------------------------------------------------------------------|-------------------------------------|
| <b>Electrical</b>            | PROTECTION: body protected                  | <input type="checkbox"/>            | <b>HVAC</b>        | AIRCONDITIONING: general                                                       | <input checked="" type="checkbox"/> |
|                              | PROTECTION: cardiac protected               | <input type="checkbox"/>            |                    | AIRCONDITIONING: HEPA filtered                                                 | <input type="checkbox"/>            |
| <b>Lighting</b>              | LIGHTING: general                           | <input checked="" type="checkbox"/> |                    | AIRCONDITIONING: positive pressure                                             | <input type="checkbox"/>            |
|                              | LIGHTING: colour corrected                  | <input type="checkbox"/>            |                    | AIRCONDITIONING: negative pressure                                             | <input type="checkbox"/>            |
|                              | LIGHTING: dimmable                          | <input checked="" type="checkbox"/> |                    | VENTILATION: exhaust                                                           | <input type="checkbox"/>            |
|                              | LIGHTING: indirect                          | <input type="checkbox"/>            |                    | VENTILATION: supply                                                            | <input type="checkbox"/>            |
| <b>Nurse Call and Duress</b> | NURSE CALL SYSTEM: buttons / handset        | <input checked="" type="checkbox"/> | <b>Medical Gas</b> | VENTILATION: natural                                                           | <input type="checkbox"/>            |
|                              | NURSE CALL SYSTEM: annunciator              | <input type="checkbox"/>            |                    | MEDICAL GAS: general anaesthesia                                               | <input type="checkbox"/>            |
|                              | DURESS: fixed                               | <input checked="" type="checkbox"/> |                    | MEDICAL GAS: special care                                                      | <input type="checkbox"/>            |
|                              | DURESS: wireless coverage                   | <input checked="" type="checkbox"/> |                    | MEDICAL GAS: special care, neonatal ventilation                                | <input type="checkbox"/>            |
| <b>Security</b>              | ACCESS CONTROL: to door                     | <input type="checkbox"/>            | <b>Hydraulic</b>   | MEDICAL GAS: birthing                                                          | <input type="checkbox"/>            |
|                              | ACCESS CONTROL: to item / joinery           | <input type="checkbox"/>            |                    | WATER: drinking                                                                | <input type="checkbox"/>            |
|                              | INTERCOM: service communications            | <input checked="" type="checkbox"/> |                    | WATER: specialty                                                               | <input type="checkbox"/>            |
|                              | INTERCOM: security and access control       | <input type="checkbox"/>            |                    | DRAINAGE: sanitary                                                             | <input type="checkbox"/>            |
|                              | CCTV: camera coverage within room           | <input type="checkbox"/>            | <b>Fire</b>        | DRAINAGE: specialty                                                            | <input type="checkbox"/>            |
|                              | INTRUSION DETECTION: door monitoring        | <input type="checkbox"/>            |                    | DETECTION: smoke                                                               | <input checked="" type="checkbox"/> |
| <b>ICT and Audio Visual</b>  | INTRUSION DETECTION: spatial monitoring     | <input type="checkbox"/>            | <b>Shielding</b>   | DETECTION: heat                                                                | <input type="checkbox"/>            |
|                              | AUDIO VISUAL: patient entertainment system  | <input type="checkbox"/>            |                    | SHIELDING: ionising radiation                                                  | <input type="checkbox"/>            |
|                              | AUDIO VISUAL: visitor experience system     | <input type="checkbox"/>            | <b>Acoustics</b>   | SHIELDING: magnetic and radio frequency                                        | <input checked="" type="checkbox"/> |
|                              | AUDIO VISUAL: virtual collaboration system  | <input type="checkbox"/>            |                    | SPEECH PRIVACY:<br>not private ..... moderate ..... private ..... confidential |                                     |
|                              | AUDIO VISUAL: clinical support system       | <input type="checkbox"/>            |                    | NOISE SENSITIVITY:<br>not sensitive ..... medium sensitive ..... sensitive     |                                     |
| <b>Accessibility</b>         | AUDIO VISUAL: digital operating room system | <input type="checkbox"/>            |                    | NOISE GENERATION:<br>low ..... moderate ..... high ..... very high             |                                     |
|                              | AUDIO: hearing augmentation                 | <input type="checkbox"/>            |                    |                                                                                |                                     |
|                              | VISUAL: luminance contrast                  | <input checked="" type="checkbox"/> |                    |                                                                                |                                     |
|                              | SIGNAGE: accessible, statutory              | <input type="checkbox"/>            |                    |                                                                                |                                     |

### Additional Considerations

- The MRI Control Room is located within Zone III (the outer controlled area) as set out in the RANZCR MRI Safety Guidelines.
- The entrance of the MRI Imaging Room must be visible from the MRI Control Room.
- Magnetic and Radiofrequency shielding is to be as advised by specialist consultant.
- Cable ducts for services between the imaging unit, the equipment room and the control room will be required and must be coordinated with the MME vendor. Additional building services connections and outlets are to be coordinated to suit equipment requirements.
- Waveguide ports, also known as penetration panels, are specialised openings in the walls designed to allow the passage of various items like tubing and cables without compromising the magnetic and radiofrequency shielding. Waveguide ports are required from the MRI Control Room to the MRI Imaging Room.

- The size, quantity and configuration of computer display screens is to be finalised based on the specific image display and processing task requirements (e.g. number of application windows to be viewed concurrently) and ergonomic considerations. Providing flexibility of monitor positioning is vital to ensure adjustments are possible to meet the ergonomic requirements of different users.
- Provision of height adjustable workstations or fixed joinery is to be in line with service requirements and local WHS policies.
- Hours of operation depend on the service in which this room is located. Ambulatory medical imaging services may only operate during business hours or extended business hours, some small hospital services may have an on-call, after-hours service. Large units are likely to provide a 24-hour service, especially where a satellite service is provided with an emergency department.
- Requirement for fixed and/or mobile duress to be confirmed to suit service requirements.
- An operational model for responding to calls from staff/patients will be needed to support the inclusion of a nurse call system and is to be determined based on service requirements.
- Provision of an intercom for staff communication within the department is dependent on service requirements. This function may be provided as part of the telephone system.
- The need for and extent of emergency power and UPS must be reviewed to suit site specific requirements and confirmed based on risk assessment considering the impact of a power outage on patient care/safety.



## Doors and Windows

| CODE        | DESCRIPTION                                                                      | COMMENT                                      |
|-------------|----------------------------------------------------------------------------------|----------------------------------------------|
| WIFX-008.04 | WINDOW: fixed, internal, single glazed, sill at 1050H, radio frequency shielding | for observation of patient from control room |
| AHWCV-001   | WINDOW COVERING: blind, roller, single                                           |                                              |



## Finishes

| CODE     | DESCRIPTION                                             | COMMENT |
|----------|---------------------------------------------------------|---------|
| FLVY-101 | FLOOR FINISH: vinyl, seamless, standard slip resistance |         |
| FLSK-021 | SKIRTING: vinyl, integral with floor vinyl, coved       |         |
| WLFI-002 | WALL FINISH: paint, clinical areas                      |         |
| MIMR-112 | ACCESS PANEL: penetration, waveguide port, MRI          |         |
| CLTI-021 | CEILING: drop-in tiles, prefinished                     |         |
| CLCN-041 | CORNICE: wall trim fixing, prefinished                  |         |



## Joinery

| CODE     | DESCRIPTION                    | GROUP | QTY | COMMENT                                                                                                                                                 |
|----------|--------------------------------|-------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| FQSN-341 | LOCKER: floor standing, 4 door | ③     | 2   | optional                                                                                                                                                |
| JOBE-061 | BENCH: 750D, laminate          | ①     | 1   | bench height to be confirmed; adjustable height desks may be considered depending on WHS policies and coordination with services and observation window |
| JOBE-211 | BENCH SUPPORT: bracket         | ①     | 2   | leg support is also acceptable                                                                                                                          |
| JOBE-221 | BENCH SUPPORT: end panel       | ①     | 1   | leg support is also acceptable                                                                                                                          |
| JOBE-251 | CAP: cable access              | ①     | 3   |                                                                                                                                                         |



## Fittings, Furniture and Equipment (FF&E)

| CODE     | DESCRIPTION                 | GROUP | QTY | COMMENT |
|----------|-----------------------------|-------|-----|---------|
| FIBM-019 | WHITEBOARD: fixed, magnetic | ②     | 1   |         |

| CODE     | DESCRIPTION                                                                                | GROUP | QTY | COMMENT                                                 |
|----------|--------------------------------------------------------------------------------------------|-------|-----|---------------------------------------------------------|
| FIDI-241 | DISPENSER: alcohol-based hand rub, wall mounted                                            | ②     | 1   |                                                         |
| FIHR-026 | HOOK: coat                                                                                 | ①     | 2   | optional                                                |
| FIHR-201 | BRACKET: central processing unit (CPU), under bench/desk                                   | ②     | 2   | 1 to MRI control CPU, 1 to PACS CPU                     |
| FIHR-221 | BRACKET: computer display screen, dual, articulated, bench/desk mounted                    | ②     | 1   | to display/processing workstation                       |
| FIHR-341 | BRACKET: television/AV system display screen, single, articulated, wall mounted            | ②     | 1   | optional - to CCTV display screen if provided           |
| FIHR-408 | BRACKET: patient monitor, articulated, wall mounted                                        | ②     | 1   | to slave patient monitor                                |
| FQBS-172 | CHAIR: office, ergonomic, high                                                             | ③     | 3   |                                                         |
| FQSM-287 | CABINET: mobile, 1800H nominal, tambour unit                                               | ③     | 1   | type and extent of storage to suit service requirements |
| FQWS-051 | BIN: general waste, 20L                                                                    | ③     | 1   |                                                         |
| ITAV-102 | CONTROL PANEL: AV system, wall mounted                                                     | ①     | 1   | vendor supplied sound system                            |
| ITAV-152 | SPEAKER: AV system, ceiling recessed                                                       | ①     | 1   |                                                         |
| ITCL-381 | DISPLAY SCREEN: patient observation                                                        | ①     | 1   | optional - for physiological monitoring                 |
| ITNE-071 | TELEPHONE: handset, desktop                                                                | ③     | 1   |                                                         |
| ITNE-102 | COMPUTER: dual display screens, central processing unit (CPU), keyboard and mouse, desktop | ③     | 1   |                                                         |
| ITNE-153 | COMPUTER: central processing unit (CPU), PACS                                              | ③     | 1   |                                                         |
| ITNE-172 | DISPLAY SCREEN: computer, PACS                                                             | ③     | 2   | display/processing workstation, on dual arm bracket     |
| ITNE-201 | INPUT DEVICE: keyboard and mouse                                                           | ③     | 1   |                                                         |
| ITNE-311 | PRINTER: desktop                                                                           | ③     | 1   |                                                         |
| ITSE-111 | DISPLAY SCREEN: security, CCTV monitoring                                                  | ③     | 1   | optional                                                |
| MIGE-046 | CONTROL CONSOLE: contrast injector, touch screen                                           | ③     | 1   |                                                         |
| MMPM-051 | MONITOR: patient, slave                                                                    | ③     | 1   |                                                         |



## Major Medical Equipment (MME)

| CODE     | DESCRIPTION                                                                                                   | GROUP | QTY | COMMENT |
|----------|---------------------------------------------------------------------------------------------------------------|-------|-----|---------|
| MIMR-011 | CONTROL CONSOLE: MRI, dual display screens, keyboard and mouse, control unit, microphone and speaker, desktop | ②     | 1   |         |
| MIMR-016 | COMPUTER: MRI, central processing unit (CPU)                                                                  | ②     | 1   |         |
| MIMR-032 | BUTTON: quench, MRI                                                                                           | ①     | 1   |         |



## Engineering Services

| CODE     | DESCRIPTION                                | GROUP | QTY | COMMENT                                       |
|----------|--------------------------------------------|-------|-----|-----------------------------------------------|
| ELGP-105 | GPO: single, wall mounted, cleaner         | ①     | 1   |                                               |
| ELGP-131 | GPO: single, emergency power, wall mounted | ①     | 1   | optional - to CCTV display screen if provided |
| ELGP-161 | GPO: single, UPS, wall mounted             | ①     | 1   | to slave patient monitor                      |
| ELGP-161 | GPO: single, UPS, wall mounted             | ①     | 1   |                                               |
| ELGP-201 | GPO: double, wall mounted                  | ①     | 1   | to printer                                    |
| ELGP-231 | GPO: double, emergency power, wall mounted | ①     | 6   |                                               |

| CODE     | DESCRIPTION                                                 | GROUP | QTY | COMMENT                                                                                                                                     |
|----------|-------------------------------------------------------------|-------|-----|---------------------------------------------------------------------------------------------------------------------------------------------|
| ELGP-261 | GPO: double, UPS, wall mounted                              | ①     | 2   | to control console, extent of UPS to be confirmed to suit service and equipment requirements                                                |
| ELPR-031 | PANEL: UPS status indicator, wall mounted                   | ①     | 1   |                                                                                                                                             |
| ELPR-071 | RCD: residual current device, wall mounted                  | ①     | 1   |                                                                                                                                             |
| ELSW-021 | SWITCH: light, dimmer                                       | ①     | 2   | to general room lighting, 1 to each door                                                                                                    |
| ELSW-121 | BUTTON: emergency stop, wall mounted                        | ①     | 1   | main power emergency stop, refer to equipment manufacturer for safety and compatibility with equipment                                      |
| HYGE-351 | CONTROL PANEL: water pump, cooling                          | ①     | 1   |                                                                                                                                             |
| ITCL-181 | BUTTON: nurse call, staff assist, with cancel, wall mounted | ①     | 1   | optional - for anaesthetic assist                                                                                                           |
| ITCL-181 | BUTTON: nurse call, staff assist, with cancel, wall mounted | ①     | 1   |                                                                                                                                             |
| ITCL-191 | BUTTON: nurse call, emergency, with cancel, wall mounted    | ①     | 1   |                                                                                                                                             |
| ITIN-016 | OUTLET: data, single RJ45, wall mounted                     | ①     | 1   | to slave patient monitor                                                                                                                    |
| ITIN-016 | OUTLET: data, single RJ45, wall mounted                     | ①     | 1   | optional - to CCTV display screen if provided                                                                                               |
| ITIN-026 | OUTLET: data, double RJ45, wall mounted                     | ①     | 2   |                                                                                                                                             |
| ITIN-036 | OUTLET: data, triple RJ45, wall mounted                     | ①     | 3   |                                                                                                                                             |
| ITSE-061 | BUTTON: security, duress, fixed, wall mounted               | ①     | 1   |                                                                                                                                             |
| ITSE-166 | INTERCOM: audio, slave, wall mounted                        | ①     | 1   | optional - inclusion dependent on service requirements and ICT policies, may be integral function of telephone, to control workstation area |
| MEGE-001 | CONTROL PANEL: HVAC                                         | ①     | 1   |                                                                                                                                             |
| MEGE-081 | ALARM: oxygen depletion                                     | ①     | 1   |                                                                                                                                             |
| MGFP-001 | ALARM: medical gases, panel, wall mounted                   | ①     | 1   |                                                                                                                                             |