



Vital spaces for our communities

WE UNDERSTAND THE DIFFICULTIES WHICH LIE AHEAD, AS YOU PREPARE TO DEAL WITH THE INCREASE IN RESPIRATORY CASES AND ASSOCIATED COMPLICATIONS FROM COVID-19.

Tips and Quick Fixes

Health Care Facilities – Key considerations

- WA Facility Health Guidelines require that air flow should be from corridor to room/wards.
- How are your existing wards conditioned?
If they comply with the guidelines then only minimal modifications are required.
- Does the ward air handling system mix return air?
Consider running AHU in economy cycle.
- What other areas could be used for isolation?
Consider Theatres, Endoscopy Suites or other areas with dedicated air handling systems.
- Medical gas loads. Be aware that the increased use of ventilators will increase the use of oxygen.

Thinking outside the box

Alternative Care Sites – considerations

- Generally suitable for quarantine isolation only. They are not constructed as healthcare sites with the requisite infection control.
- Hotels:
 - In hotels with central exhaust systems can the volumes be increased to enable negative pressure in rooms?
 - How is the make-up air provided?
 - Can the outside air rate of flow to common areas be increased to improve dilution of contaminants?

We are happy to chat through any of these suggestions with your engineering and maintenance teams if it would be of assistance.

OUR EXPERTISE

If you need help assessing your existing assets or with adapting accommodations temporarily, we have the know-how and we're here to help.



Murdoch University – Institute for Immunology and Infectious Diseases (IIID)

The IIID provides 3,600m² of state-of-the-art research accommodation, including PC3 and radioisotope laboratory spaces for cellular immunology, pharmacy, phlebotomy, consulting and administration space. Our consultants delivered compliant designs for the three-storey facility, including PC1-, 2- and 3- standard laboratories. Features:

Electrical

- A DNA processing lab with air pressurisation and one-way doors to achieve isolation
- Low voltage electrical supply for 900kVA requirements across the building
- Standby generator and UPS to ensure uninterrupted activity in the event of power failure

Hydraulics

- Centralised purified water system reticulates deionised water in continuous loop
- Duplicate hot water system for potable and non-potable use
- Zoned backflow protection to isolate areas and prevent cross-contamination

The facilities are accredited by both the National Association of Testing Authorities Australia for lab testing (ISO/IEC 17025) and by the American Society for Histocompatibility and Immunogenetics (ASHI) for human HLA typing.



Fiona Stanley Hospital, WA

The main Medicine (respiratory) ward has 24 beds for infectious diseases, immunology and rheumatology cases. Eight are available for non-invasive ventilation and positioned within clear line-of-sight for staff. Eight Class N respiratory isolation rooms are also located here to treat air-borne infections. They feature HEPA-filtered exhaust systems, POC testing bays and arterial blood gas testing facilities available. Class N Cardiac isolation rooms include ventricular assist devices like biphasic positive airway pressure and blood gas analysis capability.

Within the Haematology ward, HEPA-filtered air locks were added to the isolation rooms, as many immune-compromised patients also have respiratory infections. The ward itself is positively pressured to the corridor and rest of hospital to eliminate infection. The Short Stay Ward can also manage large numbers of SARS patients with direct and independent discharge of exhaust air externally. HEPA filters and 2-speed fans are available as needed.

If you think you could benefit from a chat with one of our consultants, please [contact us](#).

We're better together.