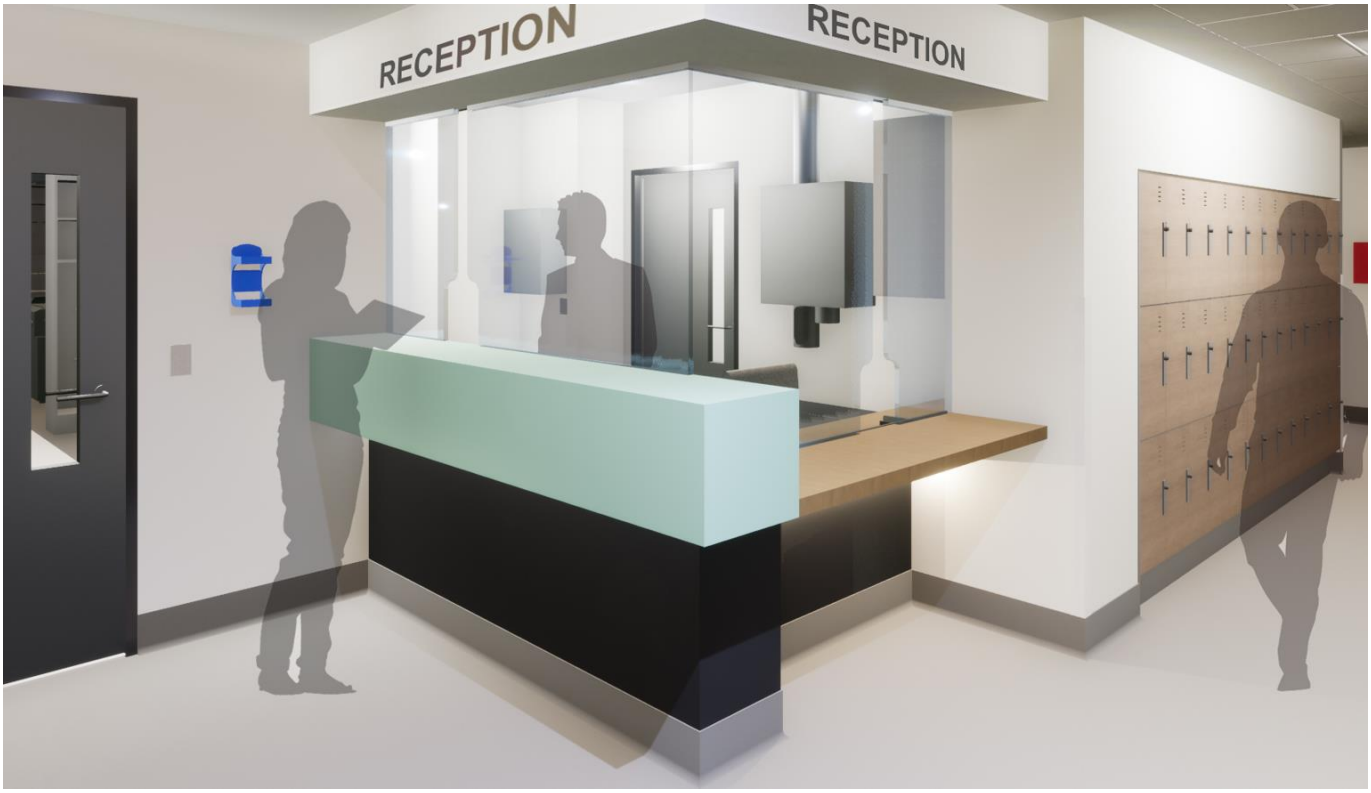
Department of Health

Tasmania

Royal Hobart Hospital (RHH) Pharmacy Expansion Project

SUBMISSION TO THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

July 2023



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1. EXECUTIVE SUMMARY

The purpose of this document is to inform the Parliamentary Standing Committee on Public Works of the need for the Pharmacy Expansion Project and how the final design will address this need.

In line with the Government's commitment for the redevelopment of the Royal Hobart Hospital, this project has been commenced to provide critical expansion, risk mitigations and facilities upgrade of the RHH Pharmacy, Tasmania's only Level 6 Pharmacy service. The project will also provide TGA compliant manufacturing facilities for the Jack Jumper Ant Venom Immunotherapy program which provides a unique, live saving product produced only in Tasmania.

The Australian Health Facilities Guidelines (AusHFG) have been used as a basis for the design, along with the project brief and extensive stakeholder input. Infection control requirements have been included within the planning processes and reflected within the plans. Further, the requirement to undertake the construction while maintaining Pharmacy and Jack Jumper services has been addressed within the final design, staging and construction methodology.

Due to the highly specialised nature of the construction of sterile manufacturing facilities, external input has also been procured from PharmOut, a specialist in the design and approval processes required by the Therapeutic Goods Administration (TGA) for the sterile production suite to ensure that the required licensing approvals can be achieved upon completion.

At the time of this submission, the project has completed comprehensive stakeholder engagement activities, finalised detailed design and commenced a tender process to procure a construction contractor. Approval by the Parliamentary Standing Committee on Public Works is required prior to establishment of a contract a contractor and is now a critical path issue for the project to enable construction.

An approved budget of $21.86 million has been provided by the Government of Tasmania and the project has been value managed to deliver a high quality design solution within this budget envelope. The project has been programmed to commence in August 2023 with practical completion planned for the first half of 2024.

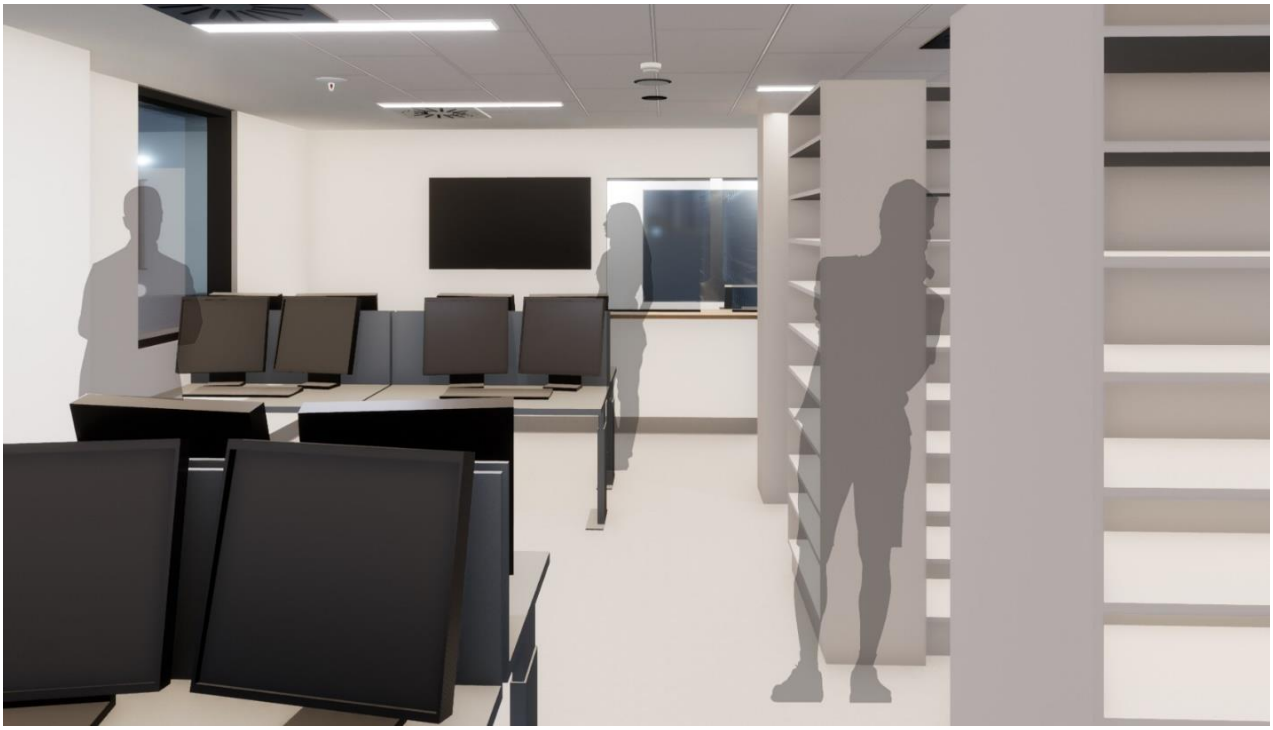


Image: RHH Pharmacy Proposed Dispensary

2. DOCUMENT PURPOSE

The purpose of this document is to inform the Parliamentary Standing Committee on Public Works (PSCPW) of the need for the expansion of the existing Royal Hobart Hospital Pharmacy and the construction of sterile production facilities for the Jack Jumper Ant Venom Immunotherapy products. Further, this document will explain the processes undertaken during the design phase to maximise the delivery of the desired outcomes within the constraints of the available facility footprint and budget allocation.

3. PROJECT DEFINITION

Background

The RHH is Australia's second oldest hospital and first began serving the Hobart community in 1804 moving to its present site in the Hobart central business district in 1820. The RHH is comprised of a number of buildings of varying age, compliance and functionality. The existing site is bounded by Liverpool, Campbell, Collins, and Argyle Streets and has an area of approximately 2.3 Ha. The hospital and associated support and outpatient services also occupy several further buildings within the surrounding area. The site is shared with the Hobart Private Hospital (HPH), which occupies approximately 0.3 Ha on the corner of Argyle and Collins Street.

The RHH is Tasmania's largest hospital and the state's major referral centre for a range of clinical specialties. As the major clinical teaching and research centre, it works closely with the University of Tasmania and other institutions in the state and elsewhere. The RHH is committed to providing coordinated, high-quality care and is responsive to community needs.

The main RHH Pharmacy is located on Level 5 of D Block, and it is the only Level 6 pharmacy service in Tasmania and the only public hospital pharmacy service in Southern Tasmania. The RHH Pharmacy provides essential services to RHH inpatient wards, inpatients, and outpatients, including but not limited to:

- Dispensing service for inpatients and outpatients.
- Clinical pharmacy service to wards and units at the RHH.
- Sterile drug (aseptic and cytotoxic) and extemporaneous drug preparations.
- Ward medication management and restocking "imprest" services throughout the RHH itself and supply to outpatient centres.
- Local and statewide pharmacy administration; and
- Clinical research, education, and clinical trials.

Since the construction of the Pharmacy in its current location in 1998, the service has seen significant increase in service volumes and complexity. The original design assumed:

1) Chemotherapy services would be largely outsourced thus providing minimal facilities for the preparation of cytotoxic drugs.
2) Just in time inventory systems would significantly reduce stock holding requirements; and
3) Pharmacy staffing would remain static.

Unfortunately, none of these assumptions have been proven correct and consequently, the current facilities are unable to cater for either current or future demand. Notably:

4) While chemotherapy production was successfully outsourced as planned, a significant portion of production must remain on site due to increasing use of biologically engineered drugs that are viable for only a few hours after preparation.
5) Despite the implementation of a just-in-time inventory model, the utilisation and range of commonly prescribed drugs has evolved to where drugs are frequently ordered twice a day. Also, as a level

6 Pharmacy service the RHH Pharmacy must maintain adequate supplies of critical medicines resulting in requirements to maintain stock lines which have increased from 1800 products to well over 2800 which requiring increased drugs inventory storage and dispensing workspaces.

6) Staffing resource requirements have increased with increasing services delivery requirements resulting in the current, excessively cramped working environment.
7) And importantly, do not meet contemporary standards expected of a tertiary hospital pharmacy including the Australasian Health Facilities guidelines (AusHFG).

The Tasmanian Government has committed to the expansion of the RHH Pharmacy and upgrade of manufacturing facilities to meet contemporary standards and cater to future demand.

Further, the Jack Jumper Ant Venom Immunotherapy Program undertakes manufacturing activities within the current footprint of the RHH Pharmacy providing potentially lifesaving products to Tasmanians as well as patients in South Australia and Victoria. Demand or the Jack Jumper products are increasing and are estimated to increase by greater than 100% over the next 10 years. In 2022, the TGA released revised guidelines for pharmaceutical manufacturing which included increased requirements for sterile injectable product guidelines including the Jack Jumper product. Compliance with these revised guidelines is a requirement for maintenance of the current TGA license and addressing these requirements have been a key component of the project design.

Project Overview

The current RHH Pharmacy facilities are inadequate across all areas of service delivery, lacking a number of critical capabilities found in other tertiary hospitals. Further, undersized and ageing facilities contribute to a range of staff safety and clinical risks due to crowded work areas, inadequate sterile manufacturing facilities and secondary exposure to potentially toxic pharmaceuticals (i.e., cytotoxics) during the preparation processes that form a portion of the pharmacy core business function.

The RHH Pharmacy's capacity is significantly constrained, impacting on production and distribution of a range of medications necessary for tertiary hospital inpatient and outpatient services across the RHH and Tasmania. The inadequate dispensing space and staff overcrowding contributes to an increased risk of dispensing errors and thus impacts the safety of patients accessing the service. The current facility consistently fails to meet the requirements outlined within the Australasian Health Facility Guidelines and other applicable standards.

The project will deliver a new purpose built sterile pharmaceutical production facility at the RHH, as well as an expansion of key areas within the department such as the dispensary, storage, administration and support services. This facility will include a contemporary, safe, high-capacity sterile production suite that is fit for purpose and is able to meet the manufacturing requirements for clinical service delivery across the RHH, including the Intensive Care Unit, Neonatal Intensive Care Unit, cancer services, elective surgery and the production of biologicals for the treatment of a broad range of clinical conditions. The RHH Pharmacy Expansion Project will also provide dedicated Therapeutic Goods Administration-licensed facilities to meet the manufacturing requirements of the Jack Jumper Ant Venom Immunotherapy Program and its clinical allergy and immunotherapy services.

The project will provide:

- New sterile pharmaceutical production facility with incorporation of Jack Jumper Allergy Program requirements.
- Expansion and redesign of the dispensary to align with the updated operating model.
- Increased provision of administration offices, hot-desk, meeting and support spaces.
- Incorporation of automation technologies, where appropriate, that enhance service delivery and align with operating model; and
- Expansion and relocation of pneumatic tube capacity to service areas.

Due to the critical nature of the clinical service that the RHH Pharmacy and manufacturing suites provide, this project has required the development of a construction methodology that enables maximum continual operation of these services, whilst delivering value for money. The design approach, construction staging and methodology have been meticulously crafted to leverage existing space on RHH Level 5 D, made available by the relocation of CSSD Services following commissioning of the new K Block building, to ensure that essential pharmacy services will be maintained throughout the project.

As a result, key overarching design considerations include:

- The continued operation and delivery of clinical services from the current RHH site;
- The restrictions imposed by the site taking into consideration the required staging of the work; and
- The risk to public, patient and staff safety for the duration of the works.

Design Philosophy

The design philosophy for the expanded and upgraded Pharmacy and Sterile Production Suite is to employ best design practice to enable optimum clinical services including:

- The design of high quality staff work areas to enable effective dispensing of inpatient and outpatient medication;
- Innovative planning that provides efficient and effective workflow that matches the operational service delivery model of the Pharmacy;
- Providing a high quality working environment to improve staff efficiency and working experience;
- Designing in flexibility to ensure that the new Pharmacy has the capacity and capability to adopt new models of service delivery as required;
- Design in accordance with the Australasian Health Facility Guidelines (AHFG);
- To optimise energy efficiency and maximise environmental benefits of natural light, views and indoor air quality;
- Incorporating best practice Environmentally Sustainable Fit out Design;
- Incorporating best practice design for the Aseptic and Cytotoxic Production Suites to ensure compliance with the relevant standards that relate to pharmacy manufacturing units;
- Incorporating best practice design for the Jack Jumper allergy production suite to ensure compliance with the requirements of GMP to ensure Therapeutic Goods Administration approval and certification.

4. PROJECT BENEFITS

The Pharmacy Expansion Project will provide a myriad of benefits to pharmacy staff, service consumers both within and outside the RHH and ultimately to patients. These benefits include:

- Improved drug stock management ensuring fewer stockouts that may compromise patient care. This will ensure patients receive the drugs they are proscribed in a timely fashion which directly impacts patient outcomes.
- Improved dispensing space which will improve efficiency for the dispensing process, reducing waiting times for prescriptions
- Minimisation of risk of staff workplace exposure to harmful cytotoxic drugs and workplace related injuries.
- A pharmacy that is better able to meet the evolving requirements of cancer patient and the throughput demanded by contemporary chemotherapy treatment.
- Improved patient safety by reduction the risk that patients will be receive the wrong drug or drug dose as a direct consequence of the improved design of dispensing workspaces.
- Maintenance of TGA licencing for the manufacture of Jack Jumper Ant Venom Immunotherapy products in the only such production facility in Australia along with enabling the expansion and commercialisation of this unique service.

5. CONSULTATION AND GOVERNANCE CONSULTATION

Consultation

As part of the design phase, input has been sought from RHH Pharmacy staff and leadership, Statewide Pharmacy staff, The Tasmanian Pharmaceuticals Services Branch, Jack Jumper Immunotherapy staff, Infection Prevention and Control, and a range of internal service providers.

As a direct result of these ongoing consultations, GHD Architects were engaged to provide an independent review of proposed storage facilities for Schedule 8 medications (drugs of dependence). The resultant report highlighted that the proposed design is compliant with relevant guidelines and standards with no areas of significant risk identified. The report has been provided to the Tasmanian Pharmaceuticals Services Branch for final sign off and remains with the TPB at the time of writing.

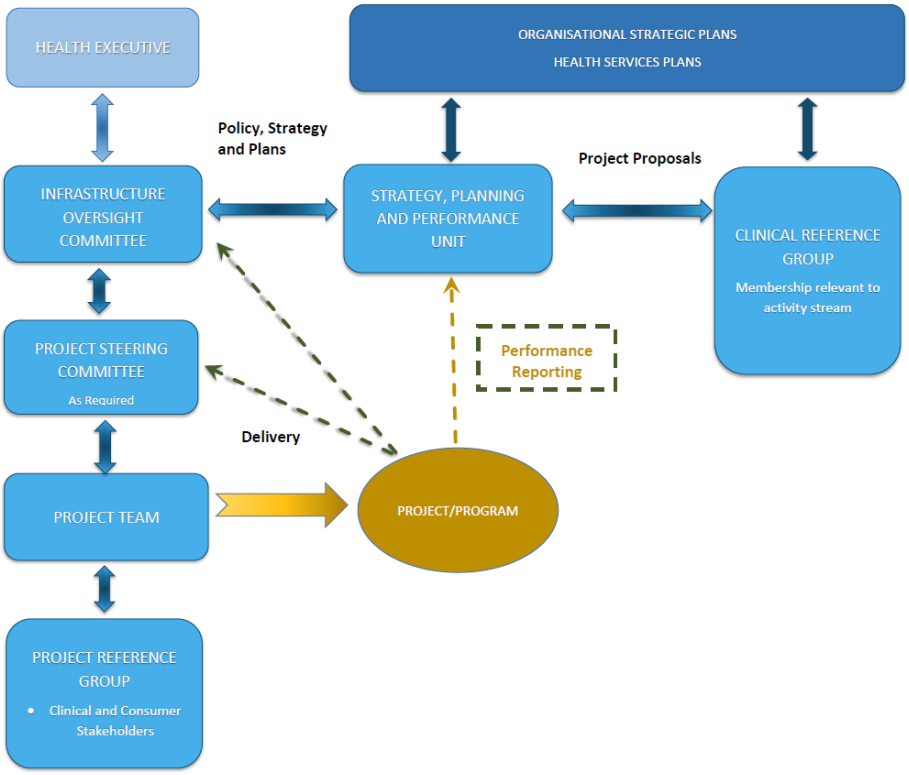
Due to the extremely specialised nature of both constructing a sterile medication manufacturing facility and TGA licencing requirements, the Pharmacy Expansion Project has engaged PharmOut to provide advisory services throughout the design, tender and construction phases of the project. PharmOut is an industry recognised consultancy group with extensive experience and an established track record in developing GMP compliant facilities and navigating the complexities of TGA licencing. To this point, PharmOut has endorsed the design of the Jack Jumper Ant Venom Immunotherapy production facilities and have provided valuable insight into the construction tender.

As designs have been developed, they have also been circulated to RHH Facilities & Engineering, Emergency Management and Information and Communication Technologies teams to provide opportunity for comment ensuring the proposed design aligns with the broader hospital management requirements.

The proposed development was advertised in the Mercury newspaper on Saturday 10 June 2023, informing the public of the project and calling for submissions to the Parliamentary Standing Committee hearing.

Governance

The following diagram illustrates the Infrastructure Oversight Committee (IOC) Project Team and Project Reference Group relationships.



Risks and Risk Mitigation

The existing pharmacy site and design has been noted to be a risk to staff and service delivery for decades with the May 2005 Estimates Committee being told “In the Pharmacy Department, dispensing space is limited and is a potential source of error due to cramped work areas.” In the 18 years since these remarks, demands on the Pharmacy has continued to increase year on year with service volume and staffing requirements far outstripping the capacity of the existing footprint and design meet service delivery obligations.

Significant risks posed by the existing design include but are not limited to:

- Potential exposure to cytotoxic drugs due to inadequate space for unpacking, handling and manufacture of chemotherapy and cytotoxics – proposed design mitigates this risk providing safe, contemporary facilities for staff involved with all elements of chemotherapy production.
- Documented OHS High Risk of musculoskeletal injury/ illness due to lack of space, poor monitoring capability of staff working in manufacturing areas and overcrowded general working conditions which will be mitigated by providing adequate workspaces with compliant circulating space in dispensary, office and manufacturing locations.
- Documented increased risk of medication error due to poor dispensary design and limited dispensing space will be addressed via provision of well lit, ergonomic spaces supported by integrated technology to support best practice in safe dispensing.
- Risk to TGA licence for Jack Jumper Ant Venom Immunotherapy Products as indicated by last recorded TGA licence audit which noted that current facilities are inadequate to meet future expanded TGA audit requirements. Proposed Jack Jumper manufacturing area has been designed to be compliant with all TGA licencing requirements.

Design Approval Process

The design process included:

- Initial stakeholder meetings to gain further understanding on clinical, infection control, health service planning and facilities and engineering requirements.
- The preparation of a schedule of accommodation in conjunction with the stakeholders/users to establish the extent, size and type of rooms/spaces that were required. This was then compared against the schedule of accommodation included in the Australasian Health Facility Guidelines (AusHFG), Part B - Health Facility Briefing and Planning 0560 - Pharmacy Unit for deviations.
- Detailed briefing meetings were held with the stakeholders/users to review the detailed requirements for each room and room type identified in the schedule of accommodation to produce a complete set of Room Data Sheets (RDSs). The RDSs were regularly reviewed at user meetings until an agreed signed off set was produced. This set was then used as the reference document when producing the initial concept design and later during detailed design to ensure that all the required elements and services were included.
- Ongoing meetings were completed where concept designs were presented to the project reference group, and the agreed concept design developed further to schematic design.
- The Pharmacy Expansion Project has two distinct user groups, RHH Pharmacy and Jack Jumpers Ant Venom Immunotherapy. Design meetings were held with both groups separately when reviewing the specific requirements of each area and also jointly when dealing with broader issues common to all.
- Further meetings were undertaken with RHH Pharmacy key staff and Jack Jumpers key staff to complete room layout sheets and design choices, with the final documentation signed off by the senior members of the stakeholder/users.
- PharmOut, an external consultant who specialises in the design and delivery of GMP (Goods Manufacturing Process) facilities that are suitable for TGA licensing and accreditation was involved in the total design process providing feedback and design reviews on a regular basis.

6. ADDRESSING THE NEED

The Site

The proposed project will expand and upgrade the Royal Hobart Hospital's existing Pharmacy and sterile production facilities and construct a dedicated sterile production to enable pharmaceutical production in a TGA compliant facility. The existing Pharmacy unit occupies approximately half of Level 5 in RHH D Block with public access being gained via the main lifts in C Block.

Architecture & Interiors

The Pharmacy was last refurbished in 1998 and is now an aged facility that is overcrowded, functions poorly and does not meet the future servicing needs of the RHH clinical services or consumers. The Royal Hobart Hospital Pharmacy's capacity is significantly constrained by the current design, impacting on the production, storage and supply of medications necessary for all general hospital and tertiary services across the RHH campus itself and more broadly Tasmania, in accordance with the Tasmanian Role Delineation Framework.

The Tasmanian Role Delineation Framework (TRDF) sets out the following overarching principles:

- The facility must be able to sustain a competent and high performing clinical workforce, infrastructure and support services required to provide care that is consistent with best practice.
- Appropriate minimum service volumes must be maintained to ensure the competence and professional practice of the multidisciplinary team can be sustained.
- Tasmanians must be able to access services which are determined by the facility's ability to deliver consistently safe, high quality care, rather than on considerations of proximity.
- Relying on small numbers of clinicians to be on call 24 hours a day, 365 days a year to maintain a service is neither safe nor sustainable. Workload needs to be sufficient to engage multiple clinicians across the range of necessary disciplines in the delivery of a quality sustainable service. Services with key person dependencies must be redesigned to ensure quality, safety and sustainability.
- Care must be continually improved. The impact on patient outcomes and experience must be continually monitored, reviewed and evaluated. Tasmanians should expect to receive care comparable with national and international standards.

The TRDF is then broken down into the different services within the Department of Health, with Medication (Pharmacy) Services being defined as a core service. Under the TRDF, Medication Services include a range of activities aimed at enhancing the safe and effective use of medicines to optimise patient outcomes, including medication storage, distribution, dispensing, compounding, medicines information, clinical pharmacy services, medication monitoring and safety systems.

It is here that the scope of service required to be provided by a Level 6 Pharmacy, such at the RHH Pharmacy, is defined. Meeting these requirements within the existing pharmacy is not easily achieved given the physical constraints on facilities. The current facilities present an environment where there is an increased risk of dispensing errors caused by inadequate dispensing space and overcrowding, this makes it easy for the wrong drug to be labelled and issued. The current facility does not meet all the requirements outlined within the Australasian Health Facility Guidelines and other applicable standards. The current facility also does not support the needs of other level 6 services at the RHH including haematology/oncology, critical care, and neonatal ICU, all of which require a fit-for-purpose pharmacy sterile compounding facility in order to produce the short-turnaround products required for acute patient care. The working environment present within the current Pharmacy presents a workplace health and safety risk to both staff and patients as a result.

The new expanded and refurbished Pharmacy will comprise three (3) main components;

1. A new contemporary, safe and high-capacity sterile production facility for cytotoxic and aesthetic drug manufacture that can meet the manufacturing requirements for clinical service delivery across the RHH, including the Intensive Care Unit, Neonatal Intensive Care Unit, cancer services, elective surgery and the production of biologicals for the treatment of a broad range of clinical conditions.
2. A new sterile production facility to meet the manufacturing requirements of the Jack Jumper Allergy Program and its clinical allergy and immunology services in a Therapeutic Goods Administration (TGA) compliant facility.
3. General pharmacy space including increased on-site storage, revamped dispensing areas, space for clinical trials and research plus general office administration. The expansion and redesign of the dispensary area is being undertaken to align with the updated operating model of the Pharmacy.

In undertaking the expansion and refurbishment of the Pharmacy and sterile manufacturing spaces, the design process has been subject to and considerate of a range of authorities, guidelines and standards that have direct and indirect impact on the design, operation and construction that exist in addition to the requirements of the National Construction Code. Some of these applicable codes and standards are outlined below:

- Australian/New Zealand Standard ISO 14644;
- Australian Health Facility Guidelines, Part B - Health Facility Briefing and Planning 0560 - Pharmacy Unit;
- Pharmacy Board of Australia Guidelines on Compounding of Medicines, August 2017;
- USP-NF General Chapter <797> Pharmaceutical Compounding - Sterile Preparations;
- USP-NF General Chapter <800> Hazardous Drugs - Handling in Healthcare Settings;
- ISOPP Standards of Practice - Safe Handling of Cytotoxics;
- PIC/S Guide to Good Manufacturing Practice for Medicinal Products PE 009-13;
- PIC/S Guide to Good Practices for the Preparation of Medicinal Products in Healthcare Establishments, PE 010-4;
- SHPA Guidelines for Medicines Prepared in Australian Hospital Pharmacy Departments; and
- Australian Pharmaceutical Formulary and Handbook - Extemporaneous dispensing.
- Therapeutic Goods Administration
- National Association of Testing Authorities
- Pharmaceutical Inspection Convention
- Australian Health Practitioner Regulation Agency.

The design solution has recognised the requirement of 24-hour staffing in providing a safe and efficient working environment. Physical safety for clients and staff is a priority. Visual supervision of public waiting and patient areas is critical to ensuring suitable levels of OH&S and security where required, noting that public access is now generally limited to patients participating in clinical trials as the general public now access the out-patients facility within the Wellington Centre for access to their post discharge prescriptions.

Layouts of the offices, workstations and dispensary areas have been resolved to optimise the potential to supervise pharmacy areas by minimum staff numbers through the provision of physical security equipment such as controlled access, security CCTV cameras and duress alarms. The design allows for security control at nominated points of entry and after-hours control and also provides secure zones for staff safety.

Where possible, the use of natural light and ventilation incorporating passive solar principles has been optimised and maximised for energy efficiency and sense of wellbeing. All dispensing areas have been located to take advantage of natural light especially given its importance for the mitigation of risks involved in medication dispensing.

Attention has been focused on creating interior design aesthetics that have a holistic and considered approach for the well-being of users and staff offering direct relationships with nature. Materials selections have been carefully considered for the use of the space. The design approach addresses the aesthetic while balancing the considerations of staff requirements, Infection Prevention and Control, wayfinding, statutory requirements, ergonomics, the Disability Discrimination Act (DDA), maintenance and the quality of the working environment. Interior colour and material selections have been proposed as a basic neutral palette interspersed with colour highlights. Consideration has also been given to paint finishes so that they appear welcoming and friendly in staff and public zones whilst addressing clinical requirements as required.

Where possible, the minimum standards recommended by the AusHFG have been achieved with regards to floor area and provision of required services. In areas where this was constrained by the facility footprint, consideration in the design was always given to clinical spaces such the sterile production areas as the priority for spatial importance and complete compliance with the AusHFG.

Business Continuity during Construction

The mandate of the Pharmacy Expansion Project has from the outset been to deliver the new and expanded services with minimal disruption to essential pharmacy and Jack Jumper Ant Venom Immunotherapy production. To mitigate the risk of disruption to these critical clinical services during construction, the design has reflected the 3-stage construction methodology proposed and agreed to by the Pharmacy and Jack Jumper teams.

Stage 1: Construction of the new sterile production suite for Jack Jumpers and Pharmacy cytotoxic and aseptic production located in the currently vacant space created by the earlier relocation of the RHH Central Sterilisation Department across to K Block. This stage will also include construction of new cool rooms for drug storage, new communications infrastructure, and a new main switchboard with an area specific distribution board which are essential enabling works to be constructed as a discrete area thus minimising subsequent need for shutdown of services. In this stage, Jack Jumper sterilisation facilities will be relocated to preserve the capability to manufacture the Jack Jumper Ant Venom Immunotherapy products until new production facilities are commissioned at the conclusion of Stage 1.

Stage 2: Construction of new offices, shared workstations for pharmacy staff along with a new Staff Room to replace the currently inadequate space. Also includes new administrative offices. This area will also be provided with new services which will be fed directly from the new switchboard and comms room constructed in Stage 1 (significantly reducing services disruptions and shutdowns).

Stage 3: Construction of the balance of the floor which includes the new Reception, Pharmaceuticals Services Branch compliant Schedule 8 drugs strong room and Schedule 4 drugs dispensary along with the new main general drugs dispensary and storage areas. The general dispensary will be equipped with new ergonomic height adjustable workstations for use by the dispensing pharmacists.

At the commencement and conclusion of each of these 3 stages, services from within the construction zones will be decanted to temporary locations outside the construction stage footprint so that services can be maintained during construction. All temporary relocations will be undertaken in close consultation with service leadership teams.

Environmentally Sustainable Design

The environmentally sustainable development features include:

- Energy efficient light systems through type/wattage and sensors.
- Material selections (where suitable) for the project have been selected based upon the criteria of low off-gassing characteristic (low VOC), low embodied energy and suitability for recycling.

- Local materials have been used wherever possible, however, given the specialist nature of some of the finishes required, most materials and finishes that have been selected are only available from mainland suppliers as Tasmania has limited manufacturing capability in specialised building materials. All installation works will be undertaken by local suppliers and subcontractors.
- Material selection is also governed by the needs of the RHH relating to infection prevention & control and the required ability to wipe down surfaces regularly with high grade disinfectants. Generally, the floors are covered in vinyl that coves up the walls to provide an easily cleanable skirting. Where needed, vinyl or a hard-wearing panel product called Acrovyn is installed on the walls to provide protection of the painted plasterboard from impact damage.
- The sterile production area has very specific requirements for harder wearing materials than normal due to the need for a higher frequency of cleaning using stronger chemical and alcohol-based products. Specialised materials and construction methods have been identified to match this requirement. The materials selected within the suite will be smooth, impervious and resistant to physical abrasion, disinfectants, detergents and particle generation. Ceilings will be constructed of solid sheet with an impervious coating. Coving of the floor, wall and ceiling interfaces is required using a finish which does not conceal unknown physical damage such as water leaks. Floor coverings are vinyl which match the requirement to be non-porous, abrasion and chemical resistant and are of a stronger and more durable type that is suitable for use within a laboratory environment with a colour selection used to visually define the different spaces within the sterile suite.
- Generally, material selection has been based upon the two main uses of the Pharmacy: 1) the main dispensary and workstation zones, and 2) the sterile production suite space.

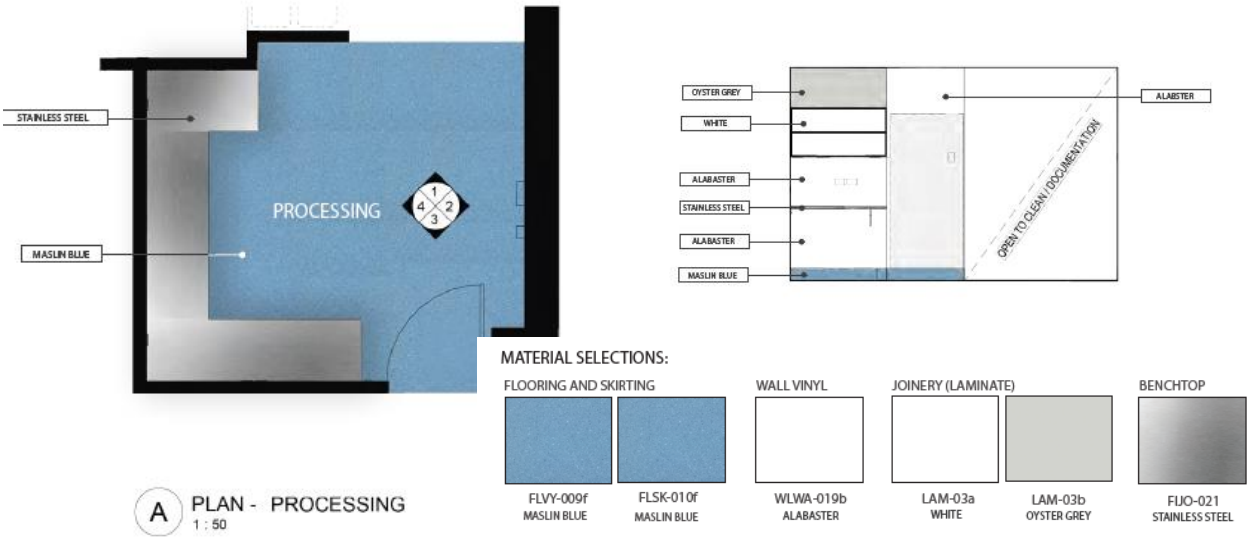


Image: Clean Room processing facilities - finishes and colour palette

Building Services Upgrades

The existing RHH Pharmacy has ageing services infrastructure which does not adequately supply the capacity or functionality required for the expanded Pharmacy to proposed future demand. Importantly, it does not meet contemporary standards expected of a tertiary hospital Level 6 pharmacy. Furthermore, the engineering services in the vacated Central Sterilising Department area are specific to the requirement for a CSD and do not have capacity or functionality to meet the services and complexity required for the Pharmacy Expansion.

The existing Level 5 building services include:

- Air conditioning with a combination of preconditioned air supply from air handling units located in the Level 6 Plant room above and fan coil units located in the Level 5 ceiling space for the existing

Pharmacy area.

- Air conditioning with HEPA filter for a small sterile drug preparation suit, but no dedicated facility for the Cytotoxic Drug preparation area.
- Air conditioning and exhaust system specific to the requirement of the redundant CSSD.
- Honeywell digital control system for existing plant and equipment.
- General lighting with recess fluorescent light fitting.
- Fire detection.
- Limited electronic security or access control.
- Data and communication with the comms rack collocated in the staff tearoom.
- Sanitary plumbing and drainage for sinks, basins, and condensate drains.
- Reticulated domestic hot and cold-water services with limited facilities for backflow prevention or tempering valves.
- Fire hydrant and hose reel, but no fire sprinklers.
- Dual pneumatic tube systems, allowing document transfer to stations in K, D, A, H, J and G Blocks.

Services upgrades are required for the proposed RHH Pharmacy Expansion and manufacturing.

The building services noted in the Pharmacy and adjacent vacated CSD areas are missing a number of essential facilities required for contemporary compliance and obligation such as the provision of fire sprinkler protection.

The services upgrades which will be delivered during the RHH Pharmacy Expansion include:

- Air conditioning and environmental control systems to serve new purpose built sterile pharmaceutical production facilities to meet manufacturing compliance requirements;
- Air conditioning and environmental control systems for a dedicated Therapeutic Goods Administration-licenced facility to meet the TGA manufacturing requirements of the Jack Jumper Allergy Program and its clinical allergy and immunology services;
- Air conditioning for expansion of key areas within the department such as the dispensary, storage, administration, and support services;
- Air conditioning upgrade for the existing Pharmacy areas due the age and condition of the existing system;
- Removal of redundant services from the old CSSD area;
- Upgrade of the Honeywell digital control system for new and existing plant and equipment;
- Replacement of general and task lighting with energy efficient lighting to meet NCC energy efficiency requirements and Code requirements for appropriate workplace illumination;
- Fire detection system upgrade to suit the redeveloped and expanded Pharmacy areas;
- New EWIS system installation for Level 5;
- Installation of fire sprinkler protection for Level 5 and the provision of additional fire hydrants to meet Tasmanian Fire Service and the building egress requirements;
- Upgrading and expansion of electronic security or access control;
- Upgrade data and communication services and the provision of a dedicated comm room;
- Upgrading and modification to existing sanitary plumbing and drainage to suit the new layout for the Pharmacy and manufacturing areas;
- Upgrading and modification to existing reticulated domestic hot and cold-water services and the installation facilities for backflow prevention devices and tempering valves for NCC compliance;
- Pneumatic document transfer stations relocation to suit the revised Pharmacy expansion;
- Testing and validation for the Sterile manufacturing areas for Code compliance including GMP, TGA and NATA certification; and

- The removal of redundant plant and equipment from the vacated CSD area followed by the staged installation and upgrading of services to suit the Pharmacy expansion work programming, whilst maintaining sufficient facilities to minimise disruption to the Pharmacy's service delivery.

As previously noted, the proposed Pharmacy Expansion Project will also deliver new sterile pharmaceutical production services and Jack Jumper Ant Venom Immunotherapy production facilities in the vacated CSD area. The sterile manufacturing facilities have substantial and unique requirements for specific fittings and equipment including an Environmental Monitoring System.

Due to the critical nature of the clinical service that the RHH Pharmacy and manufacturing suite provide, the engineering services for this project has also necessitated the development of a construction methodology that enables maximum continual operation of these services.

7. PROJECT SCHEDULE & BUDGET

Project Schedule

A Summary of the Project Timeline is as follows:

Completion of design development	October 2022
Development Application	February 2023
Completion of Construction Tender Documentation	March 2023
Construction Tender (closing and assessment)	April 2023
Construction Commencement (subject to PSCPW approval)	August 2023
Practical Completion of Construction	January 2024

Presentation to the PSCPW

At the time of the completion of detailed design documentation in February 2023 the project was placed on hold pending confirmation of the availability of required funding. Subsequently, the Secretary for Health provided direction to proceed with an accelerated programme to bring the project to tender and concurrently seek approval of the PSCPW for the project. The project notes that the approval of the PSCPW is required prior to entering into a contract for the construction.

Project Cost

Total approved funding for the RHH Pharmacy Expansion Project is $21.86 million. The estimated construction costs have been provided by the project's Quantity Surveyor and internal services resources and are based on reasonable allowances for the project's location, current market conditions, and tender documentation.

The components of this budget can be broken down as follows:

Construction Costs (inclusive of market escalation and construction contingency)	$ 13,900,000
DOH Project Contingency (latent conditions, hazardous materials)	$ 1,811,000
Professional Fees and associated costs	$ 1,390,000
Post occupancy allowance	$ 400,000
Information and Communication Technology Infrastructure	$ 800,000
Furniture and Equipment	$ 2,300,000
Furniture and Equipment (Specialist Manufacturing)	$ 800,000
Arts Tasmania	$ 80,000
Staged decanting allowance (including storage)	$ 200,000
Authorities, isolations, and service interruptions	$ 180,000
PROJECT TOTAL	**$ 21,861,000**

In reviewing the project budget, it should be noted that the construction costs include a 30% allocation to address risks associated with Tasmanian construction market conditions and the challenges of construction within the aging RHH facility. Further allowances have been made in consideration of the complexities created by the requirement to complete this expansion without significant interruption to either RHH Pharmacy or Jack Jumper services.

Given the documented risks posed by the existing pharmacy facility, the pending TGA compliance requirements for Jack Jumper Ant Venom Immunotherapy manufacturing and the challenges of construction within a complex, functioning Pharmacy service, the benefits of this project will provide value for money.

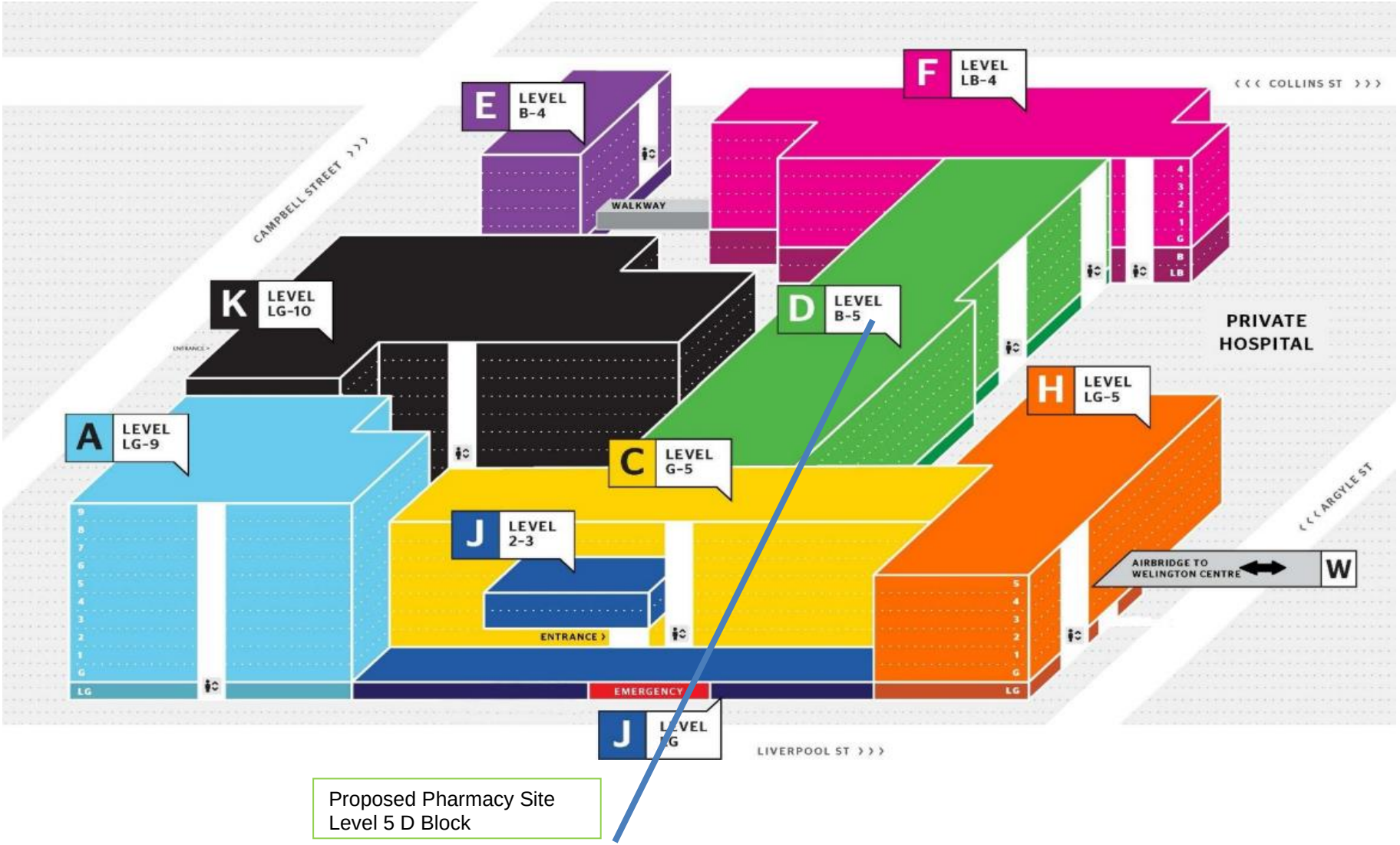
8. RECOMMENDATIONS

The Department of Health, RHH Pharmacy Services, the Jack Jumpers Service and Project Team have carefully assessed and explored the options and solutions available and have determined the designs submitted addresses the criteria set out in the initial project Functional Brief. In addition, the design is consistent with strategic long-term direction of the Tasmanian Health Service.

It is recommended that this submission be viewed favourably given the benefits it will provide to members of the Tasmanian community accessing essential RHH Pharmacy Level 6 services and to those requiring the unique products manufactured by the Jack Jumpers Ant Venom Immunotherapy program.

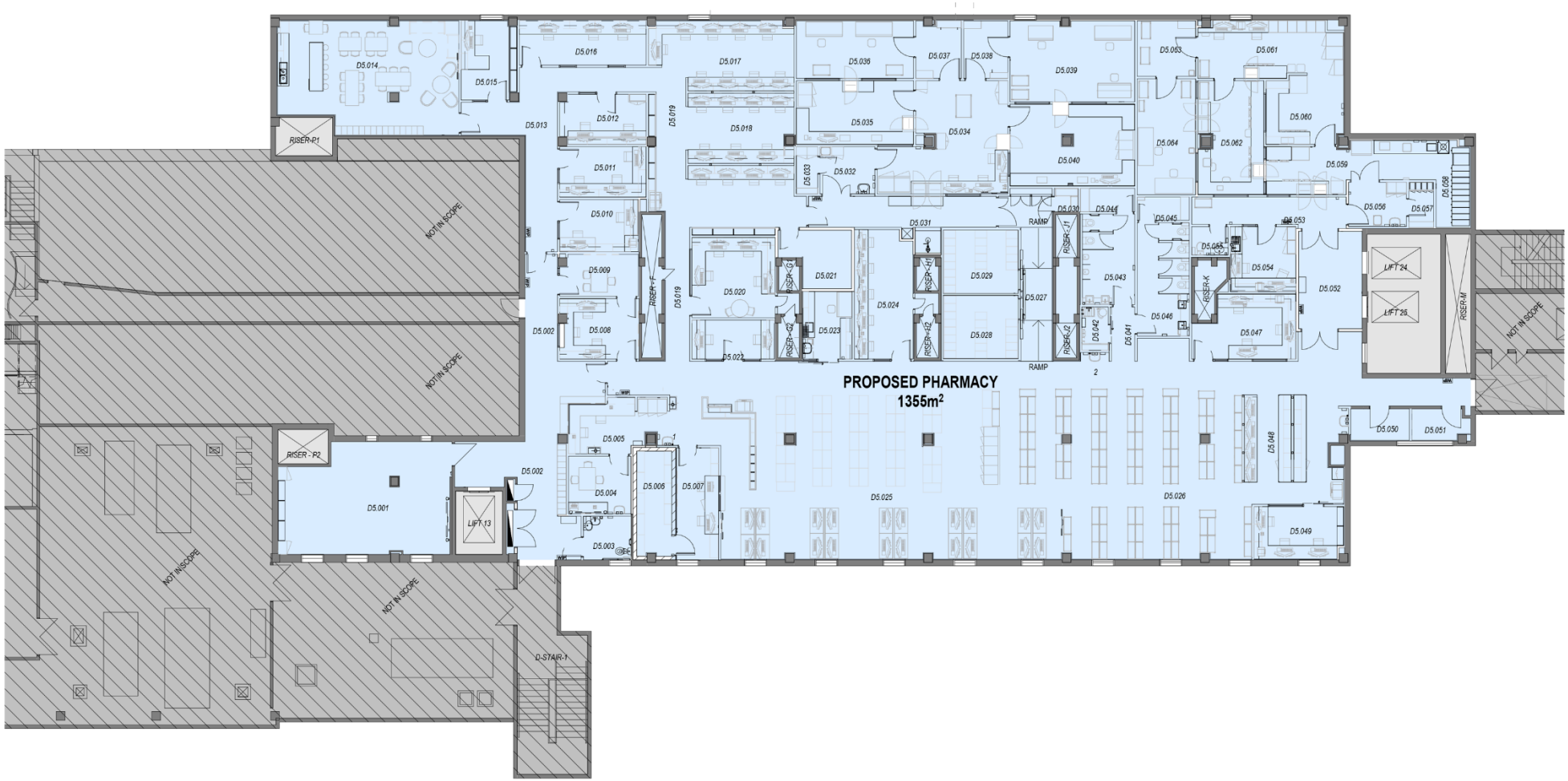
Image: Jack Jumpers Ant Venom Immunotherapy Program Sterile Manufacturing Area

APPENDIX A – RHH PHARMACY EXPANSION PROJECT - RHH SITE LOCATION



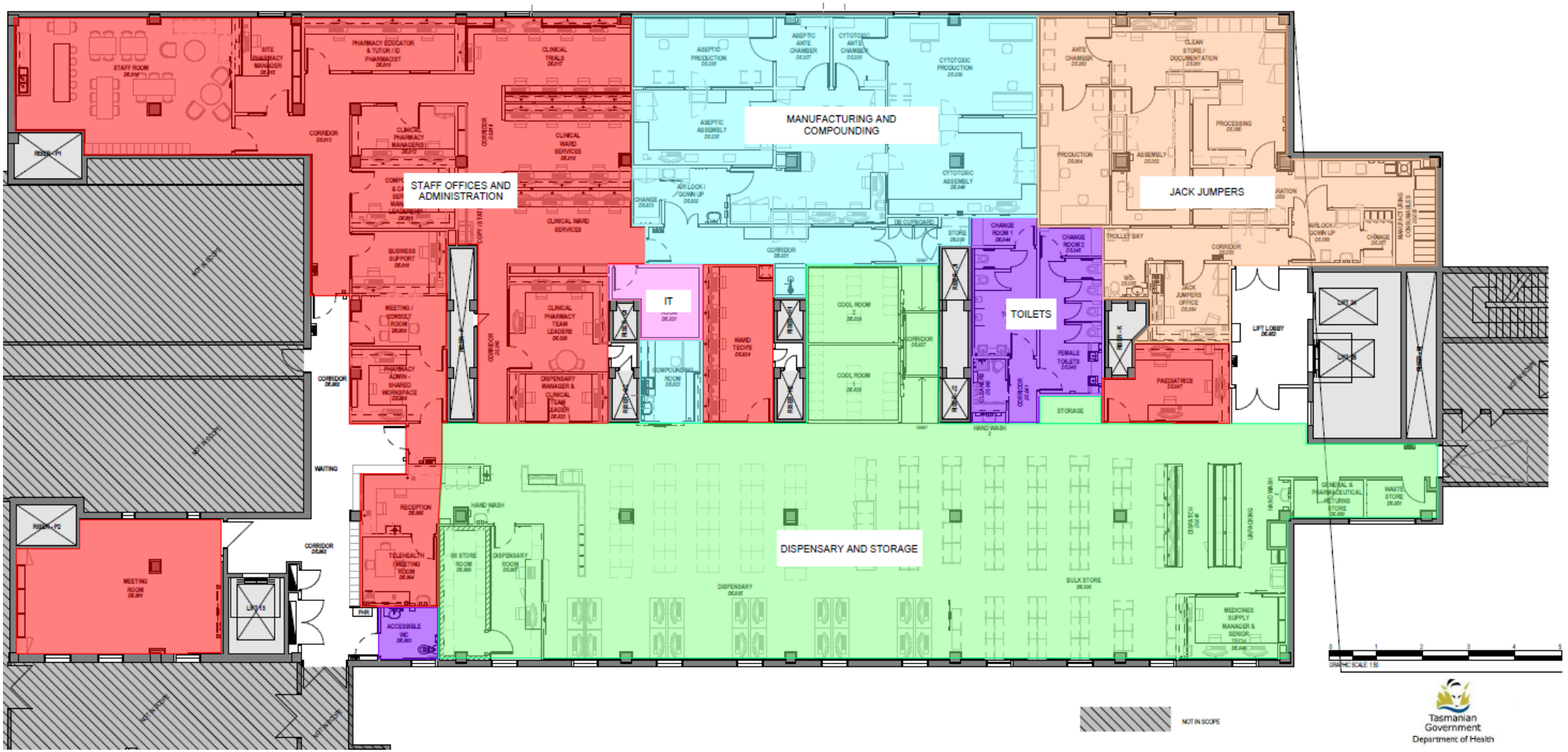
APPENDIX B - D BLOCK LEVEL 5 PHARMACY SITE LAYOUT – EXISTING VS PROPOSED

1 EXISTING D BLOCK - LEVEL 5
1 : 200



2 PROPOSED - D BLOCK - LEVEL 5
1 : 200

APPENDIX C - D BLOCK LEVEL 5 PHARMACY EXPANSION PROJECT GENERAL ARRANGEMENT



APPENDIX D - PHARMACY EXPANSION PROJECT – STAGING PLAN

APPENDIX E - PHARMACY EXPANSION PROJECT FLOOR FINISHES