

Our Place | Ahu Taumatua

THE REDEVELOPMENT OF PALMERSTON NORTH REGIONAL HOSPITAL

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Our Place | Ahu Taumatua brings you all the latest information on the redevelopment projects at Palmerston North Regional Hospital to improve capacity and healthcare available in our region.

INTRODUCTION

Work continues to bring Palmerston North Regional Hospital's facilities up to modern standards and to a size that supports our communities.

In line with our strategic property plan, the construction of a contemporary Acute Mental Health Unit is nearing its third month. Good progress on the ground works and foundations is being made, with the first major concrete pour occurring on 28 April.

Our interim solutions, such as SPIRE, are progressing. The area in theatre which will house the district's first interventional cardiac catheterisation laboratory (cath lab) is being prepared and the cardiology service is doing a lot of work alongside this to get equipment, systems and staff ready. Work also continues to create two additional operating theatres. The air conditioning and other plant to support the cath lab and theatre will go on the roof and this area is being prepared.

Alongside this, progress on the long term hospital development is being advanced with a draft Clinical Services Plan soon to be issued for discussion. This will set out what hospital level services will be required over coming years, and changes to the way they are delivered. Be sure to read this and let us know what you think.



E ai ō harirau, hei rere mai
You have the rights to fly here.
You can get here if you really try (because you have the means)

Source: Ngā Pepeha a ngā Tipuna.

ACUTE SERVICES BLOCK AND RE-LIFING OF THE CLINICAL SERVICES BLOCK

A new acute services block for Palmerston North Regional Hospital is planned, as well as the re-lifing of the current Clinical Services Block which houses the medical and surgical wards, theatres, ICU and CCU. Critical to these plans is understanding our population, its health needs, and what range and level of services our hospital will need to provide.

During March, the clinical services planning team met with a range of clinicians (hospital, primary and community), consumers, Iwi, Māori, Pacific, disability and rainbow communities to talk about hospital and specialist services.

Workshops were held regarding:

- *Long Term Conditions Care, such as services supporting people living with long term conditions, such as cardiovascular disease, respiratory illness and diabetes.*
- *Urgent Care, ie unanticipated, unscheduled or afterhours care, provided primarily in the community but also in the Emergency Department.*
- *Unplanned Care, unanticipated, unscheduled or on-demand clinical care which patients require even when healthy and well managed or as a result of suboptimal self management, poor adherence or challenges with access to care.*
- *Planned Care, traditionally known as “electives”, included medical and surgical care for people who do not need to be treated right away (ie within 24 hours). This is a continuum of care from a few days after symptoms to years.*

The workshops generated over 150 model of care innovations on ways of improving patient flow, and 32 of these are being assessed in more detail.

The outcome of this work, and feedback from other groups, will be brought together into the Clinical Services Plan, identifying the current state of our hospital and specialist services, what is required for the future, and the gap between these, and how this can be addressed.

From the workshops, the current state was summarised as:

- *Some specialist services are unable to provide the national standardised intervention rate for the MidCentral population.*
- *Patients are waiting a long time to be seen by a specialist, or to be treated by a specialist.*
- *There is an increasing trend of acute patients displacing elective admissions.*
- *The hospital is often full, necessitating cancellation of inpatient planned care due to lack of beds.*
- *Theatre and ICU facilities in Palmerston North are out of date and limited, preventing some procedures from being done efficiently.*
- *Compared with other New Zealand hospitals on a population basis, MidCentral has fewer theatres and procedure rooms.*

Engagement on the draft Clinical Services Plan will get underway in June and your feedback is welcomed. Watch out for information on its release and ways to engage.

SPIRE – STAGE 2

- *The district's first interventional cardiac catheterisation laboratory.*
- *Two additional operating theatres.*
- *The fourth procedure room/hybrid theatre.*



Work on Stage 2 is well underway.

The area to house Theatres 1, 8 and 9 has been cleared. New walls are being erected, and preparatory work done on the pipework, etc required to deliver medical gas and medical vacuum services to these areas, as well as air handling services. This includes the installation of new duct work outside the building.

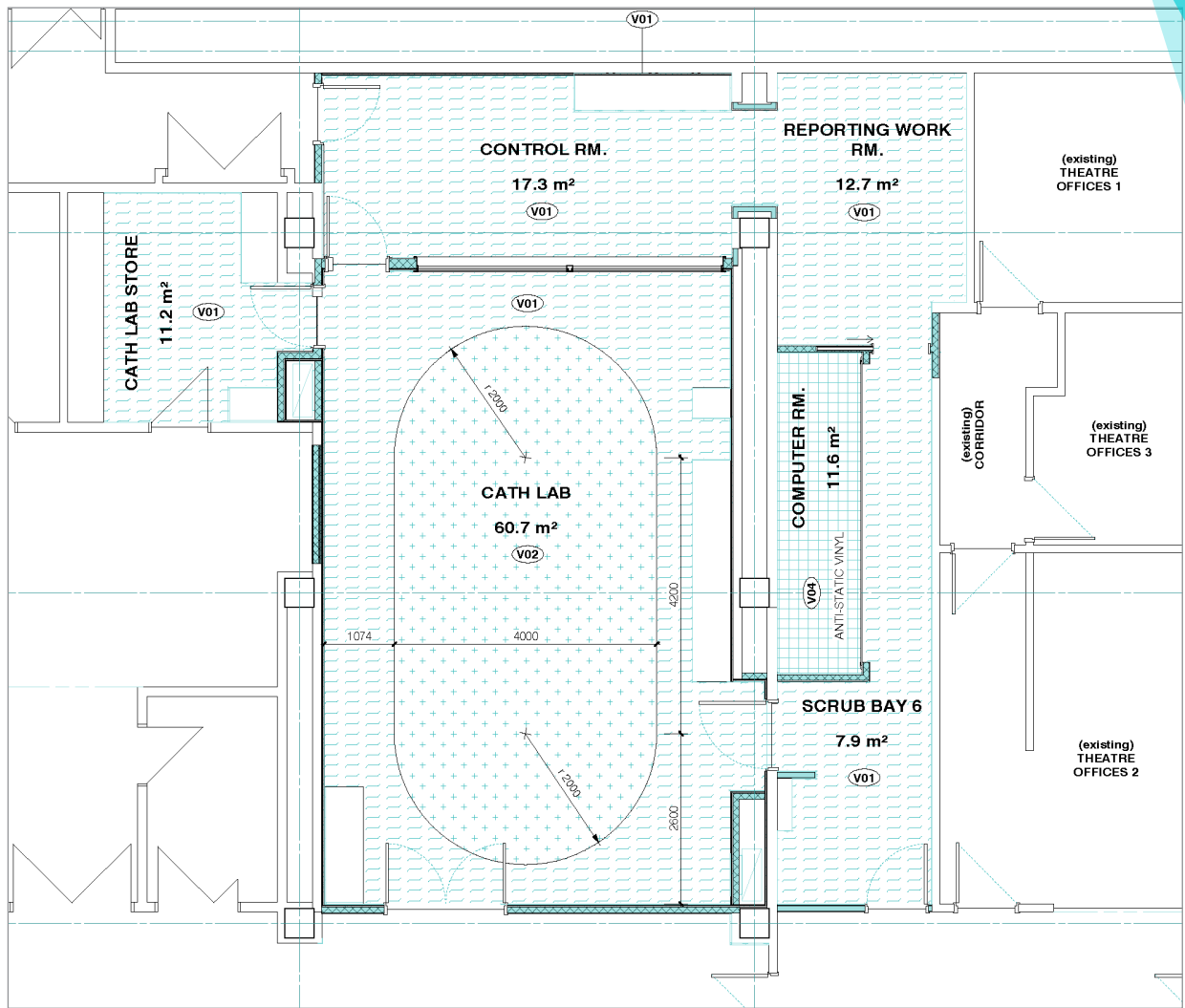
On the roof top, a new strengthened roofing structure is being installed, and covered with a weatherproof membrane. The air handling and other plant required to support the theatres, cath lab and the COVID-19 wards (see article on last page) will be sited on this. This work is not impacted by the weather as it is occurring under a large tent structure.

INTERVENTIONAL CARDIAC CATHETERISATION LABORATORY

Work in the cardiac catheterisation laboratory (cath lab) area is also underway. The Cardiology team at Palmerston North Regional Hospital is excited that many people in the Manawatu-Whanganui area who require interventional cardiology care – PCI (percutaneous coronary intervention) will no longer have to travel to Wellington for procedures such as stents and angioplasty. The establishment of a cath lab and interventional service in the MidCentral region is part of an overarching regional approach to cardiology care in the Central district. The project team providing governance for this project includes clinicians from Whanganui and Wellington Hospitals, as well as new staff recruited to provide clinical care and expertise within the interventional service. The team is working through all aspects of the interventional cardiology service, including guidelines for patient care, workforce development, equipment requirements and referral and discharge processes. Cardiologists and interventional cardiologists will perform the procedures, supported by cath lab nurses, cardiac physiologists and technicians. Other procedures, such as pacemaker implantation, will also be provided in the dedicated facility resulting in improved access to services and reduced waiting times.

The cath lab will be located just inside the theatre suite and this area, which previously housed offices, is being demolished in readiness. The cath lab comprises a large room where the procedures are undertaken, with control and computer rooms alongside it, together with a small storage area and a scrub bay for the interventional cardiology team. The cath lab equipment consists of specialist imaging systems with which to view coronary arteries and cardiac structure, as well as state of the art haemodynamic monitoring systems to monitor the patient's vital signs. The cardiologists are able to view the coronary arteries and any blockages, as well as determining how well the blood is flowing to and from the heart. The angioplasty and stenting process enables the cardiologist to treat any blockages and improve blood flow to the heart muscle. The main equipment, costing around \$1.7 m has been purchased, and will be delivered on site in August 2023.





Layout for Palmerston North Regional Hospital's cath lab.

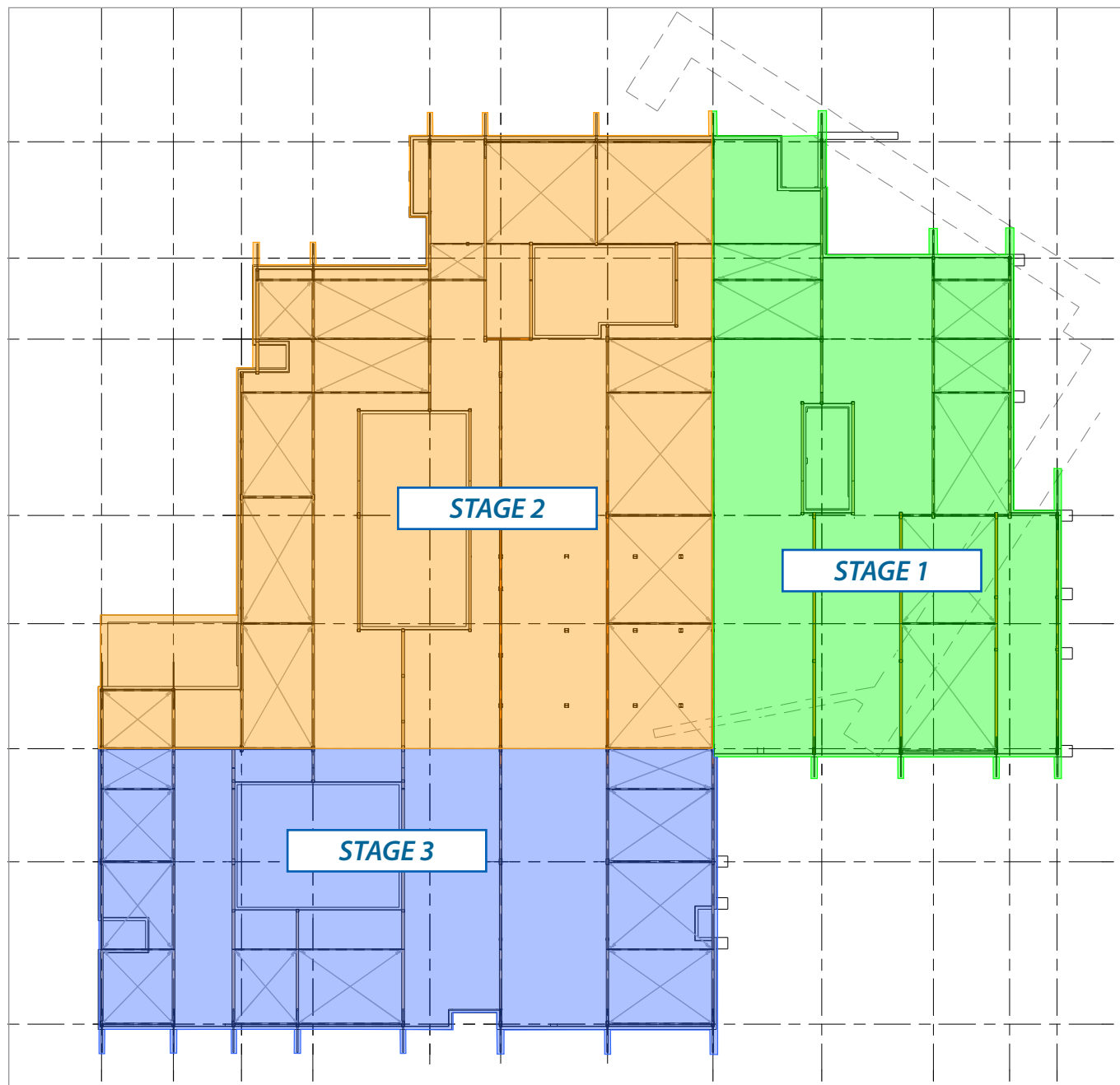
Below are pictures of the construction work in progress, including the infrastructure necessary to support it. This includes keeping the room at a constant temperature, changing the air regularly (around 25 times per hour), and electrical systems.



ACUTE MENTAL HEALTH UNIT

Ground works commenced in early February this year and are progressing well. The site has been levelled and compacted, and tunnels dug to house pipes, etc for plumbing and other services.

The work is being done in three phases as per the diagram below.



The first concrete pour took place on 28 April, with further pours scheduled for May. In total, five trucks of concrete was used for the first pour, being the Stage 1 exterior foundation.

*The photos on next page show progress.
To check out others, go to our website www.projects.mdhb.health.nz
or scan the QR code.*





To find out more about this project, and the completion of Stage 1, go to our website www.projects.mdhb.health.nz or by scanning the QR code.



BEHIND THE SCENES

COVID-19 PREPAREDNESS

With the fourth wave of COVID-19 now occurring within our communities, the opening of Ward 26 as a COVID treatment ward is timely should in hospital numbers increase.

The Ward closed for nine weeks while work was done to upgrade the air handling system so it can cope with air borne viruses such as COVID. While this sounds a simple exercise, it is a complex process made more difficult by having to retro fit it into an existing facility.

Below is a pictorial view which attempts to show some of what is involved in changing an area which, from an air handling perspective, was one open area where the air and any air borne viruses circulated throughout, to one which has two zones, each with its own air handling system.

While the Ward was closed, the opportunity was also taken to install some of the plumbing and other services required to support renal dialysis patients. When completed the two bed areas will be able to accommodate dialysis machines for those patients on renal dialysis who require medical inpatient care.

The Ward's medical oxygen and vacuum systems were also upgraded, providing high flow oxygen and vacuum to each bed. Previously, these were shared between beds in some rooms.



Pipework on the southern side of the building, brings air into the ward via the new ducting and air handling units.



The air goes through a filter, and then is "conditioned" (heated or cooled) to bring it to 22 degrees Celsius. New pipework and pumps were installed in the basement, piping hot and chilled water up to the air inlet to do the conditioning.



A display screen at the Ward's nurses' station shows patient areas by zone. One zone has 13 beds and the other 19.



The air extracted from each zone goes through new ducting to HEPA filters located on the roof. After being cleansed through the HEPA filters, it is then safely discharged through the flues which discharge three metres above the roof.

HEPA filters on rooftop, with discharge flue.

New ducting x 5 taking air up to HEPA filters.



HEPA filters being installed.

Above bed extraction unit.

High flow oxygen at bedside.

Renal service connections.



The air is brought into the Ward and piped into the two zones. Each zone has its own extraction system, including units above each bed as well as the main unit (see insert photo). The bed area at the far right has been set up to accommodate renal dialysis, with piping and outlets installed between the two blue panels, with the rest of the services behind the adjacent door.



Te Whatu Ora

Health New Zealand

Te Pae Hauora o Ruahine o Taranaki
MidCentral

“Our Place” keeps you informed of the strategic projects, interim solutions and the supporting infrastructure work being progressed to ensure Palmerston North Regional Hospital is able to meet current and future demand.

Strategic

- Acute Services Block
- Reconfiguration of Clinical Services Block
- Mental Health Acute Facility
- Regional Cancer Facilities

Interim

- SPIRE Project (Surgical and Peri-operative Capacity)
- ED and Acute Assessment Capacity (ED, EDOA & MAPU)
- ICU and Acute Care Capacity

InfraStructure

- Electrical, heating, ventilation
- Three waters
- Medical gases
- Fire systems
- Thermal and emergency generation systems