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PARLIAMENT OF TASMANIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

ROYAL HOBART HOSPITAL CAMPUS UPGRADE – PHASE ONE PROJECTS

*Presented to His Excellency the Governor pursuant to the provisions of the Public
Works Committee Act 1914.*

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Legislative Council

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INTRODUCTION

To His Excellency the Honourable Peter George Underwood, Officer of the Order of Australia, Governor in and over the State of Tasmania and its Dependencies in the Commonwealth of Australia.

MAY IT PLEASE YOUR EXCELLENCY

The Committee has investigated the following proposal: -

Royal Hobart Hospital Campus Upgrade – Phase One Projects

and now has the honour to present the Report to Your Excellency in accordance with the *Public Works Committee Act 1914*.

OVERVIEW

The submission of the Department of Health and Human Services was as follows:-

Background

In May 2009 Cabinet decided not to build a new hospital on the Railyards site and committed \$100 million over five years to keep the current site up to standard and provide improved operational efficiency.

During the latter half of 2008 the Royal Hobart Hospital (RHH) developed an interim Strategic Asset Management Plan (SAMP) for the purposes of keeping the site in operation while the proposed new hospital was built on the Railways site. In the course of developing the interim SAMP, analysis was undertaken of the existing facility capacity and patient flow patterns. This was in addition to an extensive consultation process which lead to the identification of asset constraints that were inhibiting the efficient delivery of services. This was aided by updated demographic demand projections compiled for the new hospital project.

Subsequent to the Cabinet decision to remain on site, the hospital executive, utilising the interim SAMP, reviewed the most urgent steps required to meet demand and deliver service needs. They identified what are generally referred to as the Phase One projects along with a range of upgrades essential to keep the hospital operational. Further opportunities have arisen since and include a Commonwealth / State agreement to fund cancer centres around the state and the lease of a commercial kitchen at Cambridge.

Project Outlines

Department of Critical Care Medicine (DCCM)

The DCCM encompasses the Intensive Care Unit (ICU). Provision of additional ICU beds is a fundamental throughput and capacity increase requirement. It will assist in meeting demand peaks such as occur during major disease cycles and also to support efficient throughput in other areas of the hospital such as theatres. The 11 additional beds will be provided by infilling between two buildings adjacent to the existing ICU

facility. Existing ICU beds occupy 13 m². Current standards require 20-24 m² to meet the needs of modern equipment and staffing levels around the patient.

Access and Patient Flow Unit

The new Access and Patient Flow Unit (previously known as the Central Coordination Unit) will integrate the admissions, bed management and discharge functions within the hospital and is a vital initiative in addressing throughput and patient services. It is planned to be located adjacent to the front forecourt of the building.

Assessment and Planning Unit

The introduction of an Assessment and Planning Unit (APU) located close to the existing Department of Emergency Medicine is an initiative to receive, assess and plan patient treatments early in their admission period, reducing the pressure on the main hospital wards.

Department of Medical Imaging

The upgrade of the remainder of the Department of Medical Imaging to address substantially inadequate staff and patient areas and to prepare for major equipment upgrades. The installation of the PET/CT suite is about to commence construction with the Commonwealth funded equipment due to arrive December.

Integrated Cancer Centre

The extension and fitout of the lower floors of A Block will provide a new cancer centre including a third Linear Accelerator Bunker as part of a statewide Commonwealth / State funded integrated cancer centre program with centres in Burnie, Launceston and Hobart.

Extension to A Block

The extension of A Block to upper floors provides the potential to improve services on the Paediatric ward for adolescents and for Endoscopy services in the Day Procedures Unit along with widening other floors to achieve efficient ward footprints.

Kitchen

The availability of a commercial kitchen at Cambridge has provided the opportunity to establish an off site production kitchen, moderating space demand within the RHH for the cafeteria and receiving kitchen that will remain on site.

Other Activities

Parallel to these Phase One projects other significant projects are being progressed:

- A separate contract has been let for the installation of the PET/CT and associated works. The PET/CT equipment is funded separately and due to arrive on site this December.
- Extensive upgrade of the site services including the provision of fire services, power and chiller capacity is underway with further investigations into reticulated water, stormwater and sewage works to commence in the near future.

- The management of hospital equipment is a major initiative in providing efficient and safe patient services and will be supported by the provision of a Central Equipment Store.
- Functions that can operate away from the main site are being relocated to leased premises in the MBF and Telstra buildings within a city block of the RHH campus.
- The clinical capacity of the Repatriation Centre is being expanded to further ease pressure on sub-acute services, including relocation of some functions to St Johns Park.
- Extensive investigations and upgrade of the infrastructure and engineering services are underway including a new High Voltage ring main, upgrade of low voltage transformer and switchboards, provision of new chillers and emergency power generators
- Planning for subsequent development of the sites continues with options of extending the B Block up at least two levels. This planning has ensured that, in a funding constrained environment, further development can occur and that current proposals do not inhibit future development.

These projects do not, of themselves, reach the \$5 million threshold for consideration by this Committee. DHHS is aware that the enabling Legislation, the *Public Works Committee Act (1914)* requires that all works which the estimated cost of completing exceeds \$5 000 000 must be referred to and reported on by the Committee whether such works are “ a continuation, completion, repair, reconstruction, extension, or new work”.

In an environment as complex as the RHH, it is not possible to clearly differentiate where projects are no longer connected and where new works are entirely separate from normal upgrading and maintenance. Therefore the hospital is making its best endeavours to comply with the legislative requirements by seeking approval for projects over \$5million and reporting on the overall redevelopment program.

The challenge of this redevelopment is daunting. As predicted in the New Royal business case, the volume and acuity of patients has risen sharply over the last 3 years and there will now not be a new 737 bed hospital to meet that demand in 2015.

More immediately, the demand projections the showed a need for 400 acute overnight beds are currently being met from the same 353 overnight bed capacity the Royal has had for over 20 years.

Meeting these demands will require new, flexible approaches to the delivery of care including consideration of the development of a health precinct as opposed to a single traditional hospital.

Assumptions and Constraints

This redevelopment program, particularly in relation to the \$100 million, is based on some specific assumptions and constraints, namely:

- Assumptions

- The Royal Hobart Hospital will remain on the current site for the foreseeable future.
- The community based Integrated Care Centres at Rosny (Clarence), Glenorchy and Kingborough are expected to be coming on line during the five year planning period and will divert some demand that would otherwise present at the RHH.
- Some areas of the Clinical school will become available as University of Tasmania (UTAS) progressively move to the Menzies Centre releasing urgently required decanting and educational space.
- Recurrent funding for service delivery and normal maintenance and operational funding for the hospital is not included in this program. Staffing and other costs are related to demand and form part of the budget process.
- Constraints
 - The \$100 million is insufficient to fully redevelop the RHH campus to meet current or future demand.
 - The intention is to achieve best practice and contemporary standards of design in those areas redeveloped under this program; however the constraints of budget and physical premises will necessitate some considered compromises.
 - The Hobart Private Hospital is expected to remain leased to a private operator and not be available for inclusion within the planning period.
 - Even if additional space from the Clinical School and/or Hobart Private were to become available, establishing efficient functional relationships between services and achieving acceptable standards would require major investment.

Governance

The sponsor for this program is Michael Pervan, CEO, Southern Tasmania Area Health Service who has ultimate accountability and responsibility for the project.

The redevelopment program is overseen by the Southern Tasmania Area Health Service Strategic Asset Management Steering Committee (the Steering Committee) chaired by the sponsor. The Steering Committee is responsible for policy and resourcing decisions essential for the delivery of project outputs and the attainment of project outcomes. It is also responsible for ensuring appropriate management of the project components including risk monitoring, quality and timeliness.

Each project area such as those detailed in this submission has a business owner who is responsible for managing the project outputs for utilisation by the staff, patients and other stakeholders. Typically the business owner is the head of the respective section or Department that is being extended or redeveloped.

The program and projects are supported and delivered by a project team comprising project officers and managers from RHH and Department of Health and Human Services (DHHS) Asset Management Services (AMS) as required and appropriate to the nature, scale and complexity of the project.

Across the program, the RHH takes responsibility for clinical service planning, functional briefs, change management and communication whereas AMS develops the plans and delivers the project as approved by the Steering Committee, using the resources of design consultants and builders as required.

There is a meeting structure and cycle to allow the above to operate in addition to weekly and monthly reporting. Periodic briefings are provided to the Department Secretary and Minister for Health as required.

The DHHS strives to achieve best practice in all aspects of project management and delivery. This includes a formal business case development process and the introduction of Gateway reviews to ensure that the projects are efficiently managed and value for money is being achieved in a timely manner and within the available resources.

Planning Context

Demand

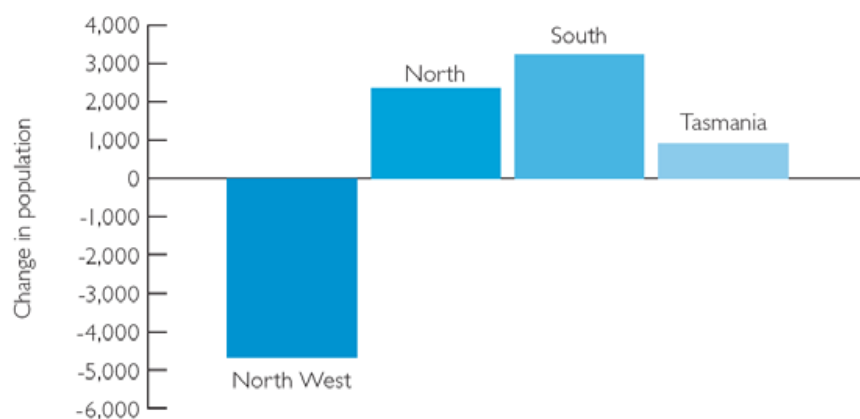
Tasmania is a relatively small state for which the RHH is the principal tertiary hospital. Although bed-days may be purchased from private providers at times to meet capacity this is unreliable and expensive. Insufficient clinical capacity can only be met by sending patients interstate. The RHH cannot refuse to accept patients. This places an obligation on the hospital to provide a full spectrum of specialist services and a 'place of last resort' capacity.

Tasmania has a dispersed population of approximately 500,000. The population is generally older, poorer and less healthy than those of the mainland Australian States and Territories. This poses a major challenge for providing a health system in an economical and proficient manner.

Tasmania's population is projected to increase by 3.2% between 2006 and 2021 but the greatest growth is in the South as demonstrated in the projection below.

Figure 2: Changes in population by region 2006 to 2016

(Tasmania's Health Plan – Clinical Services Plan: Update May 2008, p. 16)



Source: ABS, DoHA. Projected Resident Population on 2001 statistical local area (SLA) Boundaries (ASCG 2001) as at 30 June 2002–2022.

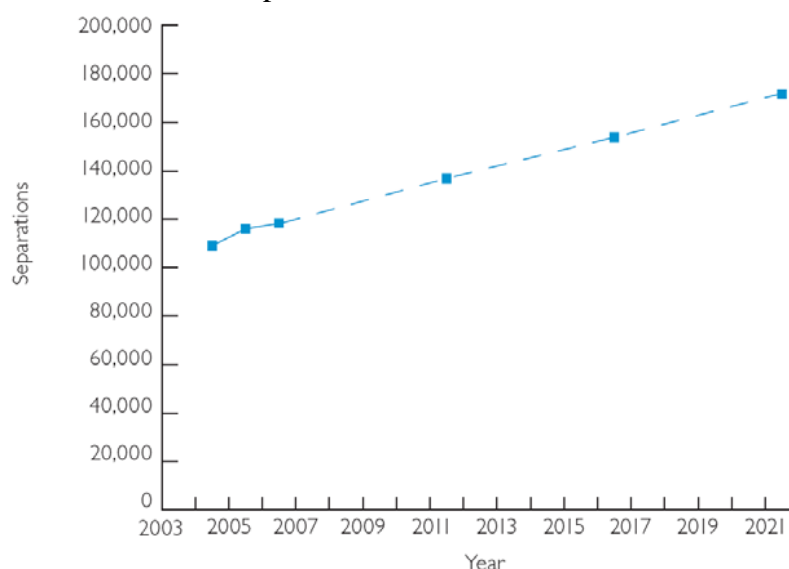
The life expectancy at birth of Tasmanians is about 1.3 years lower than the Australian average. Compared with the national average, Tasmania has higher proportions of the population who report a long term health condition, who are obese, who smoke and who die from smoking-related disease.

Nationally, Tasmania has the second highest death rates for cancers overall and for circulatory diseases; the second highest incidence of respiratory cancers; and the second highest rates for accidents and intentional self-harm.

Tasmania is expected to experience a significant increase in chronic/complex health care needs with the ageing of the population, particularly over the next 10 to 20 years.

The Tasmanian public acute health system will need to manage significant projected growth in demand for inpatient services. Resident demand for all public acute health services in Tasmania's south will increase by 47.4% separations and 41.7% bed days between 2006-07 and 2021-22.

Figure 3: Forecast increase in separations to 2021



There is also major growth projected in day only procedures, most notably chemotherapy, medical oncology and haematology.

As the State's major tertiary referral hospital and the provider of most single and statewide services, the RHH will have to accommodate the majority of this high-growth in demand. This will require significant expansion of hospital infrastructure.

An efficient hospital operates at approximately 85% capacity. This prevents "gridlock" where patient movements through the system are impeded by lack of facilities at the next stage; for example between theatres and recovery. Over the last two years, the RHH has continually operated at over 100% capacity.

Planning History

Cabinet's decision, announced on 18 May 2009, that a new hospital on the Railyards site had been ruled out has significantly changed the planning context for the existing facility from one of 'keep safe and operate' to the dual task of sustaining existing services while planning and undertaking a major redevelopment.

The \$100 million provided over five years provides little more on an annual basis than the hospital typically requires to keep its facilities in serviceable condition and undertake modest upgrades. The certainty of funding constrains the scope but does enable a continuity of activity without the need and disruption of bidding each year for funding.

Neither the investigation undertaken to keep the hospital safe and operational, or those conducted to inform the business case for the New Royal Project have fully foreseen the reality of the hospital remaining on the current site for a prolonged period.

The interim SAMP developed in the latter part of 2008 in the context of the New Royal Project, proposed works that addressed the most urgent needs and would return a benefit within the nominal 5 to 7 year timeframe that the hospital was expected to continue providing services on the current site. The underlying investigation and planning for those projects remains valid but the level of upgrade has changed as the resultant upgrade will be in operation for longer and needs to meet both escalating demand and clinical services changes.

Another impact of not proceeding with the new facility is the "spring effect": staff that may have accepted their inadequate facilities for the time it would take to construct a new hospital are now seeking to address inadequacies now there is no other avenue. This increases the number of areas from those identified in the interim SAMP requiring attention.

There is pressure to increase the space required closer to contemporary guidelines as well as improving the functionality of the fitout and its ability to support contemporary models of care.

The New Royal Project and the new facilities it would provide was an opportunity to introduce new clinical practices. The interim SAMP was not expected to provide the additional space required to achieve the transition. Although the expectation of facilities is no longer there, the necessity to maintain system safety and quality, to achieve best practice and continual improvement remains.

Systemic Issues

Bed Block

The hospital frequently experiences a situation where there are patients being admitted to the Emergency Department, but there is no capacity on the wards to absorb them; not dissimilar in principle to a traffic grid lock. The 'ramping' of ambulances unable to discharge their patients is one consequence.

The problem is more pronounced in the winter flu season due to the increased severity of illnesses in patients requiring admission, resulting in stays longer

than is commonly associated with these conditions. There is also a weekly peak as emergency admissions continue through the weekend when there is reduced medical and diagnostic staff available to treat and discharge patients. The problem is compounded by beds being committed to longer term geriatric and slow stream rehabilitation patients for whom more appropriate accommodation is not available.

Bed blockage in key areas, particularly in the ICU, causes a consequential admission delays and theatre cancellations.

The hospital has in recent years undertaken a range of initiatives to manage and address the problem both physically and operationally. For example, the Emergency Department pro-actively assesses and treats minor incident patients so that they can be discharged as early as possible freeing up treatment space. A short stay unit has been established to manage circumstances that do not warrant full admission and the commitment of a valuable ward bed.

Much of the bed blocking problem has been attributed to sub-acute geriatric patients remaining in the hospital unable to find a suitable nursing home. The re-opening of the Repatriation Centre 42 sub-acute and transition beds provided significant relief, however, this capacity is being rapidly absorbed with increasing demand for sub-acute services.

The proposed strategy to address bed blockages includes:

- Establishing an APU immediately adjacent to the Department of Emergency Medicine. The Unit would predominately receive medical admissions, assess their condition, prepare and commence a treatment plan with a length of stay in the Unit of no more than 48 hours. The hospital has been piloting the concept in the existing ward 2B but a purpose built unit in the right location is required to have a substantial impact.
- The provision of 11 additional ICU beds will substantially increase capacity and reduce cancellations and blockages.
- The Access and Patient Flow Unit is intended to provide integrated admissions, bed management and discharge services which will significantly improve patient management and experience through the hospital.

Throughput

Demand on theatres has been progressively increasing over recent years despite a range of operational initiatives aimed at streamlining the process.

Two new theatres were opened in late 2007 to improve surgical capacity. However adequate recovery space remains a limiting factor for the theatres, exacerbated by increased demand for day only procedures.

Throughput capacity is frustrated by the current flow patterns through the Day Procedures Unit (DPU), between the unit and the main theatres and to other areas where interventional diagnostics are undertaken. For example, the current stage three recovery area in DPU, is substantially undersized for its

function with inadequate space around the chairs. Although patients in stage three are sitting up and preparing to go home, they have often been through significant procedures and need continuous supervision which is difficult to do in the current configuration.

The hospital is seeking to establish a 23 hour unit to accommodate patients that require a maximum of one overnight stay following their procedure. It would also assist accommodating patients into the evening, providing the option of extending the operating hours of the DPU. These patients currently occupy beds in inpatient units or day procedures are halted earlier in the day to enable enough time for recovery. Provision of a 23 hour unit will free inpatient beds for other patients and therefore increase total bed capacity.

The human and functional impact of congested and inadequate facilities for the throughput demand is demonstrated in the Pregnancy Assessment Centre within Women's and Children's Services. The unit operates as the emergency department for pregnant woman (i.e. triages patients) and manages those presenting with difficulties. It is substantially undersized and poorly appointed for its functions of looking after women and families in often extremely stressful and emotional circumstances.

Surgical throughput in the main theatres has also been constrained by limited intensive care and high dependency capacity. Capacity limitations are also forcing high need medical patients to remain in normal wards longer than is preferred. Conversely a shortage of general beds is forcing some patients to remain in the very expensive ICU longer than necessary. Both neurosurgery and cardiothoracic surgery are both highly dependent on the availability of ICU/High Dependency Unit (HDU) beds to proceed, thus capacity problems have an extensive impact.

The existing ICU would be unable to manage a significant infection outbreak or pandemic. The open ward configuration does not enable areas to be separated and the existing isolation rooms have inadequate air handling to sustain the differential in air pressure that is required for infection control.

The proposed strategy to address throughput includes:

- Expand the DPU by establishing three compliant endoscopy rooms and appropriate patient admissions and recovery areas.
- Provide a 23 hour recovery unit able to receive patients from all treatment areas that require an extended recovery period without admission.
- Increase the capacity of the ICU.

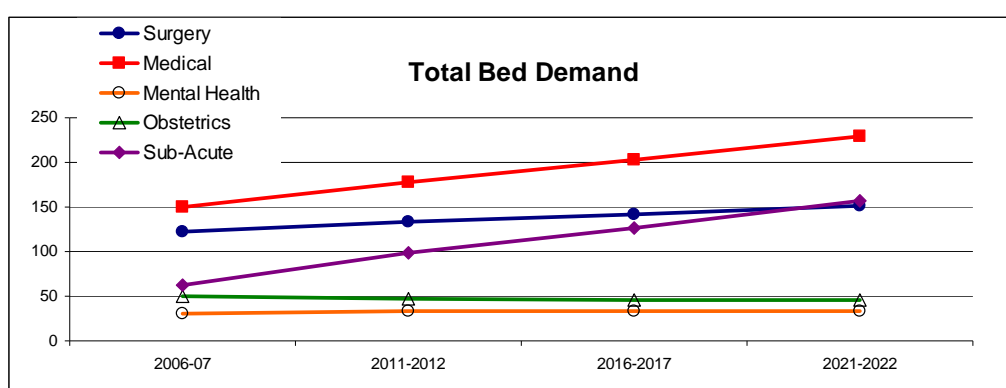
Increasing Demand

The total bed demand is projected to increase by 12% over the coming five years based on a projection undertaken by Hardes Associates (2008) using available demographic forecasts and assuming current clinical practices.

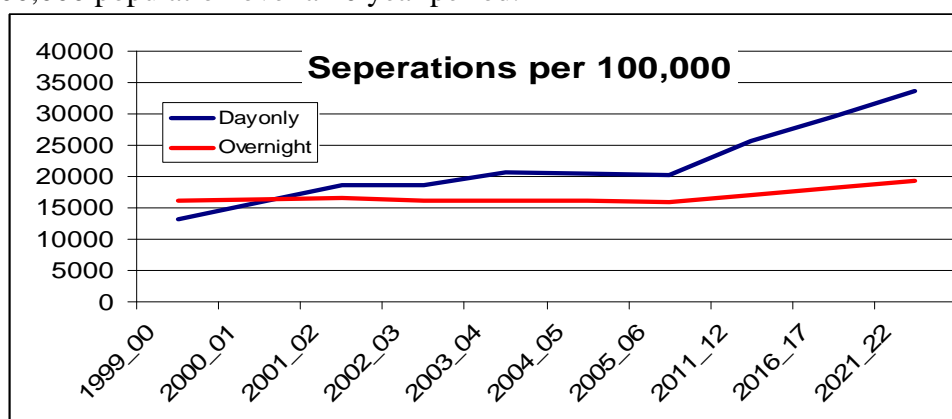
Viewed as total beds, which counts day only chairs though to long stay beds, this means an additional 50 beds will be required within the next five years.

The raw bed demand is expected to be moderated to some extent by preventative initiatives including the community based Integrated Care Centres along with changes in clinical practices, however this will be off-set by the increasing age of the population base.

The forward bed demand for the period 2006-07 to 2021-22 is indicated in the following table.



The most significant increase in demand is forecast to occur in day only procedures and sub-acute / geriatric services. The increase in day only activity relative to overnight stays is evident in the graph showing separations per 100,000 population over a 20 year period.



The demand for sub-acute, generally aged services is expected to rise by over 100% in the period to 2016. If no other action were taken, the demand for the 42 beds currently provided at the Repatriation Centre would rise to a requirement for over 100 beds. A range of initiatives have been implemented to moderate this demand including improved liaison with district hospitals, with private aged care providers, and with the community nursing and support sectors. The escalating demand for these services is such that these measures alone will not be sufficient to contain demand within the planning period and those patients that do necessarily present at the RHH will be more acute.

Addressing demand requires actions on all fronts, strategies include:

- Expand the role of the Repatriation Centre where appropriate
- Expansion of the Day Procedures Unit
- Provision of a 23 hour extended recovery unit
- Increase ICU capacity
- Provision of an Access and Patient Flow Unit

Wards and Clinics

Over a period of time the effective ward areas have been eroded by the encroachment of other activities or the splitting of ward functions. The result of undersized wards is the loss of educational spaces, limited storage capacity and difficulties in managing increased levels of equipment. The greatest impact of undersized wards is inefficient staffing ratios and therefore increased operational costs.

Other information technology initiatives intended to enhance admission practices and clinical management are constrained by the older style wards lacking adequate information technology infrastructure.

An efficient ward for nursing ratios and for flexibility is between 24 and 32 beds, generally in pods of 8 beds. Block A on the North East of the site and parts of Block D located behind the central building are physically capable of accommodating more beds but many have been reduced in size or are accommodating multiple and not necessarily compatible functions.

The loss of educational space is more subtle, but is becoming sharply evident with the re-introduction of on site nurse education programs. Flexible spaces such as doctor's write-up, library and education areas have been absorbed in the pressure for space. These spaces are now needed to address the expanded on site training program and the increasing use of computers for reporting and patient management.

The demands on the wards and public expectations have changed over time, exemplified by the need for an adolescent unit incorporating mental health beds. The unit would accommodate adolescents of 12 to 18 years who are not appropriately located or cared for on paediatric or adult wards.

The wards are typically experiencing substantial difficulties in locating and storing the increasing array of equipment required for contemporary nursing and clinical practices, including lifting frames. The increasing number of bariatric (obese) patients is requiring an increase in equipment, adding to the problem and also impacting on toileting facilities. Part of the equipment problem throughout the hospital can be improved with computer tracking systems and other practices, but the physical items still need to reside somewhere. The evidence of the problem can be seen in the ward corridors, but is also hidden in the time spent by nurses and hospital orderlies looking for items of equipment or travelling long distances to obtain them.

The development of the ICCs at the acute sites and in suburban locations including Rosny (Clarence), Glenorchy and Kingston, is a central element of

the DHHS Clinical Services Plan (updated May 2008) aimed at addressing the increasing burden of chronic diseases and multiple co-morbidities in the community. The initiative will pro-actively treat patients before they need acute services, moderating the demand on the more expensive services and improving quality of life and health outcomes for the recipients.

The proposed strategy includes:

- Establish an adolescent unit incorporating mental health beds
- Provide a central equipment store
- Undertake a range of space corrections through existing ward spaces to achieve efficient configurations

Redevelopment Program

Projects for which approval is being sought

Department of Critical Care Medicine

The Department of Critical Care Medicine (DCCM) includes the Intensive Care Unit (ICU) which operates on the first level of Block H at the southern end with administrative functions in Block D. The facility is substantially undersized with less than half the beds required in relation to the roles and scale of the RHH. The space around each bed is half the size recommended by the Australasian Health Facility Guidelines. The existing isolation rooms are also inadequate as are the general support and storage facilities.

Options to relocate the ICU on the site have been investigated but they either involve massive disruption to other key functions, or need to await the construction of a major new building. Time is of the essence to upgrade the ICU facility demonstrated by the extreme pressure placed on the facility during the recent flu pandemic.

The ICU will remain operational during the works necessitating a phased redevelopment. The first stage comprises the construction of a concrete deck between the D and H Blocks to provide 11 new ICU beds immediately adjacent to the existing ICU beds. This addition does much to resolve the above issues with increased capacity and the introduction of new technologies. The upgrade also includes refurbishment of staff amenities, reception and relative's areas along the Argyle St frontage to further support infection control and improve amenity for all stakeholders (Stage 1a).

The second phase of redevelopment of the ICU, Stage 2, will proceed as funds become available. During this phase the centre of care will shift to the new beds providing building space in the existing unit.

Access and Patient Flow Unit

The Access and Patient Flow Unit is a new business unit developed by the amalgamation of areas pivotal to the success of patient access and flow through the hospital system. It combines – Admissions, Discharge, Transit lounge, Bed Management, Roster Support, Casual Pool and After Hours Clinical Management for the hospital.

The new unit will be located in the Liverpool Street forecourt. The services are currently dispersed around the hospital and do not support the close management practices required to optimise the hospitals available bed resources.

An improvement in team interaction and collaboration is paramount to the improvement in patient flow and increased efficiencies in the combined areas. It is vital that all areas are housed together to allow a cohesive workforce. This in turn, will promote a team approach to solving and coordinating all aspects of the patient journey.

An interim discharge lounge has already been established to allow patients due to be discharged on that day to relocate to a comfortable lounge, releasing the overnight bed for new admissions. This function will be expanded in the new unit and located conveniently adjacent to the pickup and drop off area.

The unit is expected to increase inpatient bed capacity by 9%, decrease ambulance ramping in the Department of Emergency Medicine and reduce elective surgery delays while streamlining patient transfers through the hospital.

Patient and visitors services are also enhanced and general movement through the ground floor corridor of the central C Block will be improved. This corridor is the most heavily used in the hospital carrying patients, visitors, catering and supplies into and throughout the hospital.

Planning for the building in the hospital forecourt was undertaken in consultation with Heritage Tasmania to protect the integrity of the central hospital building.

Assessment and Planning Unit (APU)

The APU is to be located immediately adjacent to the Department of Emergency Medicine and will receive medical admissions, undertake assessments and commence treatment programs, thereby reducing the gap between initial presentation and the start of treatment. The initiative will reduce the number of patients being admitted into the general wards and also increase the hospitals total bed capacity by 28 beds.

The juxtaposition of the APU and emergency services along with changes in triage and clinical practices through the two units is recognised as industry best practice across Australia. The objective is to address the escalating demand for emergency services and moderate bed demand generally.

The standard of fitout within the existing built space will be equivalent to contemporary ward space and includes a mixture of single and multiple bed wards plus treatment and monitoring spaces.

Department of Medical Imaging

The current Medical Imaging Department at the RHH is unable to meet demand resulting in significant delays in reporting and problems doing diagnostic work. The substandard layout and amenity is resulting in a poor work ethos.

Medical Imaging occupies the ground floor of Block H fronting onto Argyle Street. Other than works associated with updating major equipment, most of the floor is not significantly altered from its original construction creating a dysfunctional and inefficient layout. Patient and clinician areas are entangled and inadequate, the general condition of the facility ranges from recently developed to untouched since construction of the H Block. The upgrade will address inadequate viewing and write up facilities, shielding and support of an existing CT scanner and patient and staff pathways

The new PET/CT unit for which construction is about to start, displaces ultrasound rooms which have been temporarily relocated. The proposed redesign will increase ultrasound capacity from 3 to 6 suites and renovate the reporting room. The administration and patient waiting area will also be upgraded to establish some differentiation and integrity in a very tired facility.

Integrated Cancer Centre

The Department has successfully applied for Commonwealth Funds to develop an Integrated Cancer Centre. The application sought \$18.7 million in Commonwealth funding as part of a proposed \$47.7 million statewide infrastructure redevelopment and construction program. The application is a whole-of-state public and private partnership initiative that coordinates and links the state's three regions and the three major hospitals: Southern Region (STAHS), Northern Region (NAHS) and North Western Area (NWAHS); the Menzies Medical Research Institute (Menzies); Cancer Council Tasmania (CCT) and other key stakeholders.

This infrastructure funding is balanced and coordinated across the state. The establishment of a cancer precinct in each hospital will bring together the currently fragmented and disjointed treatment approaches. Funding has been allocated to maximise patient benefits and minimise duplication whilst balancing patients' need for cancer care close to where they live. With the support of the Menzies, patients, both public and private, will have access to some of the most innovative and advanced therapies and care arrangements available.

This infrastructure is needed as the state has:

- a population ageing at a more rapid rate than other Australian States and territories, with 20% of its residents aged 60 or over. By 2016 this number is expected to reach 30%;
- the highest age-standardised incidence rates of cancer of any state or territory in Australia at 433.9 cases per 100,000 people;

- a projected increase in cancer incidence of 42% over the next 10 years, increasing the number of cancers detected annually to 4,724 new cancers in the year 2021; and
- based on projections for 2011, Tasmanians are not only the most likely Australians to be diagnosed with cancer, they are also more likely to die from the disease with age standardised death rates for cancers in Tasmania being 184.8 deaths per 100,000 people compared to the national average of 178.5 deaths per 100,000 people.
- only a 42% referral rate (2006), well below the recommended rate of 52.3%. If referral rates remain unchanged and with predicted growth in patient numbers this would see an estimated 921 patients not receiving radiation therapy.

(taken from the Integrated Cancer Centre funding application)

The incidence of cancer and mortality, as described above, places pressure on Tasmania's capacity to adequately provide for cancer patients. Currently, day oncology chemotherapy chairs in each of our three major hospitals do not meet national space guidelines. Ad hoc solutions include converting chairs in other parts of the hospital to chemotherapy chairs, providing consultations in public areas, and increasingly using corridors for storage and consultation. Similar pressures are placed on radiation oncology.

Current infrastructure deficiencies will be compounded by the projected growth in patient numbers. Infrastructure funding will double the space available to treat cancer patients. The proposed new infrastructure at the RHH and other centres will do more than help meet projected demand for cancer services; it will also serve as a catalyst to deliver new models of care that will feature greater collaboration and coordination across the state.

Cancer related facilities and services at RHH are under significant and increasing pressure. The radiation oncology unit was established in the 1960's and was designed for one linear accelerator and 11 staff. Now there are two linear accelerators (both of which are fully committed) and 35 staff. This sees many aspects of this unit not meeting OH&S standards with corridors commonly used for storage and consultation and overcrowded meeting rooms.

The chemotherapy pharmacy was designed over a decade ago to produce small volumes of chemotherapy medications. The facilities are now constrained due to the increasing use of non-cytotoxic biological therapies that require a biohazard containment suite that is not currently available, with a possible OH&S risk to staff working with these treatments. The oncology ward houses 20 beds and shares its facilities with a general ward. Patient privacy is poor, as the majority of rooms are shared 4-bed rooms.

Day oncology occupies 260m² of space and as well as administrative space, houses 14 chemotherapy chairs (reduced from 17 to comply with the Australian Standard of 9m² floor space per chair). The tight space constraints

necessitate patient consultations being given beside other chemotherapy patients. Oncology clinics were recently relocated to a different floor and are now housed in a disused inpatient ward, separate from the chemotherapy treatment unit, in order to provide more space.

These infrastructure constraints are compounded by service deficiencies that are the result of fragmented services and facilities. This physical separation has inhibited the development of a shared-care model and a multidisciplinary and seamless approach to service provision.

Funding will be directed towards:

- **Outpatient Centre:** A multidisciplinary outpatient cancer centre will be developed that will include shared clinical and administrative space. Patients will be treated in one clinic irrespective of care provision. A dedicated room for meetings with state of the art video conferencing facilities will also promote telehealth to allow outreach services to remote areas. A dedicated oncology satellite pharmacy will also be established.
- **Day oncology:** Chemotherapy will be provided in enhanced surroundings allowing private patient consultation.
- **Radiation oncology:** This redevelopment will allow for the Patient Support and Services Centre (refer next). A third bunker will be built to enable the second linear accelerator machine to be replaced in 2012 without disruptions to clinical services. Administrative space can be centralised and combined with medical oncology. A third linear accelerator will be provided by the state when required (depending on demand and referral rates, between 2014 and 2021).

Patient Support and Services Centre: This will provide psycho-social support, training and education for patients, preventative workshops and complementary health care, and will be located close to patient transport and accommodation.

The cancer centre widens the lower floors of A Block and includes a new Linear Accelerator on the ground floor adjacent to the existing Holman Clinic with the first floor of A Block converted to day treatment areas and support spaces. This is on the same level as the in-patient oncology ward in the B Block.

Extension to A Block

With the cancer centre widening the lower floors of A Block there is a cost effective opportunity to extend the building upwards to provide additional space up to level 6 or level 7 (the exact extent upward is dependent on detail planning and cost benefit analysis). The advantages include:

- The need to provide adequate accommodation for the acute rehabilitation functions (Dwyer Ward) displaced from the first level to accommodate the cancer centre

- Widening Level 3, Paediatric ward, providing some capacity to increase adolescent services. Addressing the need for a full adolescent and mental health ward, expansion of maternity capacity and the integration on the one floor of woman's clinics, pregnancy assessment and other support functions will not be possible until the B Block is expanded.
- Widening Level 4, Day Procedures Suite, providing capacity for 3 compliant endoscopy suites and expanded patient receiving and recovery areas. The provision of a fully functional 23 hour recovery ward integrated with expanded general theatre capacity will not be possible until the B Block is expanded.
- Addressing inadequacies in other ward floors up to level 6 and potentially converting level 7 to a ward.
- General increase in ward capacity essential to prepare for expansion of the B Block.

Kitchen

A report investigating statewide kitchen options was prepared in 2008 by Cini Little Australia. The report recommended a kitchen be established within the new Royal, but also noted that an off site kitchen would cost some \$15m (construction only). The proposal to establish a new hospital was subsequently abandoned. The report recommended that the kitchen

“...needs to be replaced as a matter of urgency to satisfy Occupational Health and Safety and food safety standards. Improvements in the kitchen will also reduce waste in providing food services and improve the working conditions. The current situation needs to be addressed as soon as possible. It cannot wait until the new hospital is complete in 2015.”

A second report prepared in November 2009 by Food Services Australia (FSA) investigated options for Southern Tasmania only. The report identified that an off site production kitchen would cost \$13m, excluding land purchase and development, with conversion of the existing facility to a receiving kitchen at a cost of \$9m. The off site option was compared to redeveloping the full service on site at a cost of \$12.7m, excluding the opportunity costs within the hospital of making the space available.

Investigations have been underway to explore redevelopment on the existing site or establish a production kitchen off site. The available footprint on site is severely constrained and being located in the centre of the hospital has few opportunities for expansion. The existing kitchen occupies an accumulative area of 1,550m². An on site kitchen with associated support functions would require in excess of 2,000m².

An opportunity recently became available to lease a building at Hobart Airport, Cambridge, which was originally constructed as a Qantas food kitchen. The functional match makes this an outstanding opportunity to

establish a production kitchen off site which is a business model consistent with both preceding reports.

Planning for the Cambridge Production Kitchen is now underway with the aid of expert design advice and detailed local engineering investigations. The buildings were constructed as a commercial production kitchen and can be readily converted to suit the hospital's requirements.

The kitchen functions within the RHH campus will change to that of a receiving kitchen, plating and serving and providing cafeteria services to staff, patients and visitors. The modest reduction in the footprint will provide capacity for adjacent functions to expand.

Other Activities

Education and Simulation Centre

There is a pressing need to expand teaching facilities to enable the RHH to fulfil its role as a major teaching hospital. This includes establishing a simulation centre and tutorial spaces close to the functional areas to facilitate in-service training without disrupting ward functions. Over previous years much of the incidental teaching and library spaces have been absorbed into ward or other functions. These need to be recovered, preferably as an integrated and multi-purpose educational facility. This planning will occur in consultation with UTAS and the facility is planned for the fourth floor of the clinical school building. The existing and substantially inadequate simulation facility is in a temporary enclosure within the space required for the Assessment and Planning Unit.

Central Equipment Store

The hospital wards depend on an increasing array of equipment including beds, lifting gear, IV fluid dispensers, wheel chairs and walking frames. Without a central repository the equipment is blocking up ward corridors and other non storage space. There are no standardisation of equipment or equipment cleaning and maintenance which leads to wards and other service areas hording items, further exacerbating the problem.

A Central Equipment Store will maximise the appropriate use of equipment, reduce time spent by staff locating equipment and reduce loss of equipment with the development of an accurate tracking system. The tracking system and data base will lead to rationalisation and standardisation of equipment and decrease the cost of consumables with annual savings forecast to be in the order of \$1.5m per annum.

The Central Equipment Store is to be initially located adjacent to the kitchen, later expanding into the current cafeteria area.

Loading Docks

The four loading docks provided as part of the Block B upgrade have since been diminished to two effective docks as the other two truck positions are now occupied by permanent skips collecting medical and general waste.

The loading docks and associated storage and handling facilities are substantially inadequate for the hospital operation, and pose unnecessary OH&S and infection risk. These problems will be exacerbated when the main food preparation kitchen moves off site and daily deliveries of prepared food increase significantly.

Options to provide a long term solution for the docks are being explored including the potential of a new bridge off Collins Street. Short term relief is being provided by moving some parking off site releasing storage space underneath the B Block.

Building Services Infrastructure

Over recent years audits and inspections of plant and equipment have been undertaken either from the perspective of keeping the existing facility operational until a new hospital was constructed, or to provide comparative information for the new hospital business case. Neither of these two perspectives addressed the challenges of a sustained presence on the existing site with increasing capacity.

Planning is currently underway on programs which will sustain and upgrade plant for long term viability within the available funds in the areas of power supply, reticulated hydraulic services, lifts and fire services. The issues that are of particular note include:

- Upgrade of the site power supply referred to as the ring main along with upgrade of the main switchgear and sub-stations. Much of this work will be necessary before or parallel to installation of the proposed PET/CT scanner and the new chillers.
- Replacement of a very old emergency generator serving Block A and Block D.
- The air conditioning heating and chillers units were upgraded or replaced at the commencement of the Honeywell performance contract approximately 11 years ago. The work was 'designed to last the distance' and is now in medium to poor condition. Replacement of the Chillers on the H Block and D Block has been accelerated as the existing units are failing and unable to meet current demand let alone the new PET/CT and additional beds in ICU and APU.

- The hydraulic infrastructure including domestic and fire services water supply and sewage is generally as old as the respective building unless specific areas have been subsequently upgraded, with a consequence that there are significant runs of very old pipe work that can be expected to fail at any point. A program of mapping and testing the services will be necessary in order to prepare an upgrade program.
- The hospital has some 23 lifts of varying size and age. A full hazard and risk assessment has still to occur which it is expected to identify a range of works required. Some of the lifts (i.e. those in the H Block) are too small and are not worth extensive upgrading in which case new lift shafts outside the existing building may be required.
- A fire engineering safety assessment of the hospital was recently completed and remedial works are currently being undertaken to address the most immediate concerns of fire separation between buildings and fire suppression in the higher risk areas. Other upgrade work will be achieved within the projects currently being planned. Further analysis is required to guide future upgrade works across the site, review areas that are not expected to be upgraded in the current program, and re-assess the overall site fire safety strategy.

Leased Premises

The early decanting moves to nearby leased space in the MBF building and the Telstra building has provided approximately 2,000m². These spaces are being used for clinical and administrative functions that do not need to be located on the main hospital campus.

Future Options

Planning Context

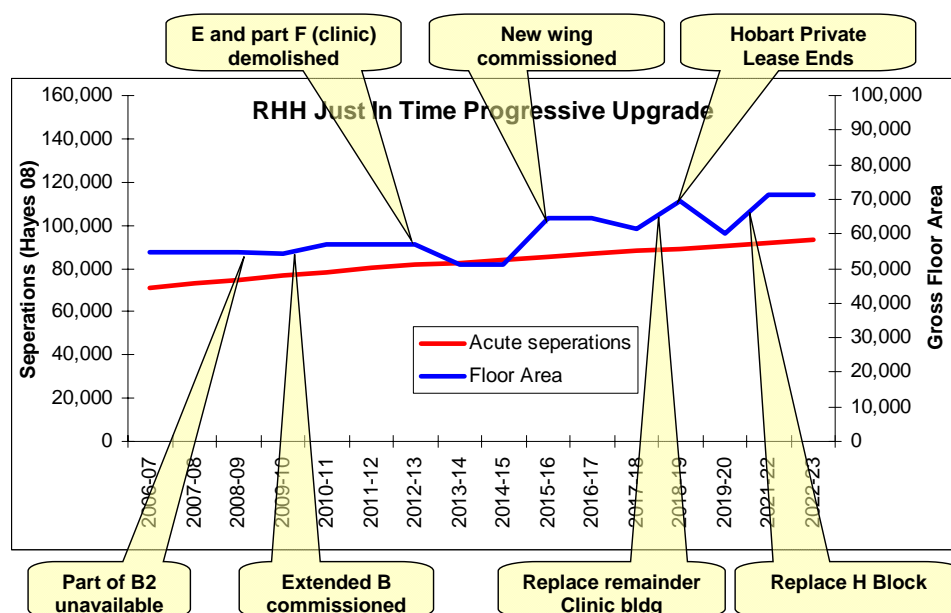
The existing RHH is currently approximately 66,000 square metres in total floor area. Planning undertaken as part of developing the New Royal business case in 2008, based on a detail accommodation schedule using contemporary standards of accommodation, established that to provide a modern hospital to current standards would require a floor area in the order of 70,000 to 75,000 square metres just to accommodate the current services (i.e. no expansion of scope or capacity).

To meet the growing demand for healthcare services, by 2015 approximately 85,000 to 90,000 square metres will be required, and an additional 5,000 square metres could be needed 5 to 10 years beyond that if patterns remain unchanged. This reflects the anticipated 40% to 50% growth in demand on our hospitals by 2021. In addition, the delivery of health services is changing both constantly and rapidly, and the redevelopment of the RHH will need to include the flexibility to move with those changes.

Other options of providing expanded capacity off-site and reduce the pressure on the RHH campus are being progressed, most notably the Integrated Care Centres at Rosny, Glenorchy and Kingston. These centres are intended to reduce the number of clients needing services in an acute centre by increasing health promotion, locally based care where appropriate and post acute care to support people in their communities. Without these centres the pressure on the major acute site would escalate dramatically. The success of the ICC's will delay expected demand growth but it will also increase the intensity of the service finally required in the acute setting.

There is sufficient capacity within the current street boundaries to meet the floor area requirements and keep the complex generally below level 7, however the redevelopment will require careful staging to sustain the ongoing operation of the hospital.

The pressing need to progress expansion of the site is demonstrated in the graph below which maps floor area against demand escalation through to 2022-23.



Existing Buildings

There is potential to expand existing buildings to achieve some additional space, an example being the recently completed infill building on Block D, and the proposed widening of Block H for ICU and Medical Imaging. The analysis summarised below explores these options for each building. In some cases the potential expansion enables important functional changes and capacity increases as summarised below. This approach by itself will not provide sufficient additional space to meet forward demand. The process of extending or widening existing buildings is relatively expensive and disruptive for the quantum of space created.

Building	Existing	Max	Increase	Percentage
Block A	10,405	11,795	1,390	13.36%
Block B	8,224	10,164	1,940	23.59%
Block C	4,667	5,867	1,200	25.71%

Block D	14,357	14,357	0	0.00%
Block E	Engineering and educational functions			
Block F	Clinical School			
Block G	Leased to Hobart Private Hospital			
Block H	9,264	11,361	2,097	22.64%
Total	46,917	53,588	6,627	14.12%

The projects currently being planned will consider extending existing buildings where appropriate, a particular case being the potential widening of Block H towards Argyle Street. Adding slithers of buildings onto existing fabric is an expensive and disruptive operation, however in this case the additional space may be instrumental in providing sufficient width to accommodate contemporary ICU beds in an efficient configuration. On the floor below the additional space may negate the need to move some medical imaging functions to other areas and on the floor above it may provide the opportunity to bring together physiotherapy and other allied health functions into the same area.

The Block F, Clinical School, may offer some space as University of Tasmania (UTAS) and other research functions are relocated to the new Menzies Clinic. Discussions are underway between UTAS and RHH to ascertain the quantum and timing but it is already apparent that the new Menzies Centre is catering for functions coming being relocated from the Sandy Bay campus as well as the Clinical School and very little space will become available. It should be noted that the hospital already has access to significant areas within the building, particularly on the Theatres (Level 4) and Pathology (Level 1) floors. At least half if not all of the Clinical School building is likely to be demolished within the first major step of a full redevelopment as discussed below.

Major New Building Alternatives

There have been a range of major building developments proposed for the RHH site including replacement of the Clinical School along Collins Street, replacement or redevelopment of the Hobart Private Hospital when that lease expires, replacement or widening of the H Block along Argyle Street and expansions of the B Block as discussed in further detail below.

Non of these major future options are constrained by the Phase One projects as proposed.

B Block Options

Block B was redeveloped some 10 years ago but well short of its potential contribution due to the retention of the old nurse's home and limiting the new portion to level 2. Engineering analysis undertaken subsequent to the first PSCPW hearing has established that the building can be extended upwards and linked horizontally to the D Block and A Block.

Redeveloping the B Block and extending it up to at least level four and across to D Block creates the two urgently needed floor plates connecting theatres with day

procedures on Level 4, and maternity through to paediatrics on level 3. These steps resolve those immediate shortfalls that can not be effectively addressed by other means.

Extending B Block increases the area of floor three across the hospital, creating a dedicated Women's and Children's floor. This would allow the development of an appropriate adolescent unit, an increase in maternity beds to meet current and future demand and space for the Pregnancy Assessment Centre and Women's Clinics to expand into. The connection between a new B Block and D Block on the fourth floor would allow theatres to expand and connect with Day Procedures and provide a 23 hour unit.

The B Block development provides large new floor areas central to the site and not on the periphery, away from the core functions. The proposal is a result of consultation and has strong support from the hospital clinicians and staff.

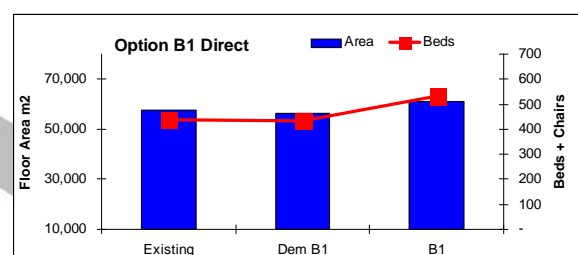
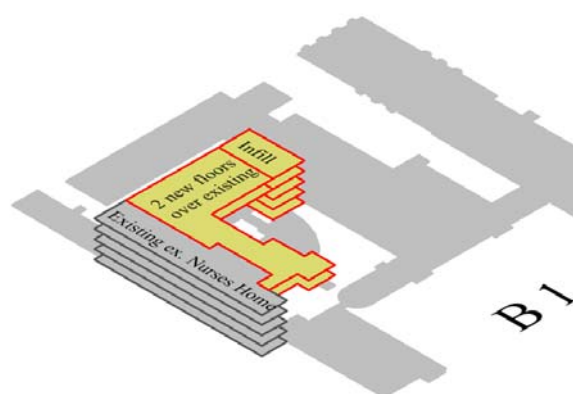
Redevelopment of B Block does not prejudice the decision associated with selecting the next long term initiative of developing on Collins or Argyle Street. It is entirely complementary to both as the diagram below indicates.

There are broadly three options for redeveloping B Block summarised below for the purpose of demonstrating the achievable solutions.

- **Option B1: Extending the newer portion of B Block up to level 4 and across to join D Block.**

This option provides an additional 3,600m² and potentially 96 additional beds. With the older nursing component of B Block being retained this is the least disruptive option and lowest capital cost.

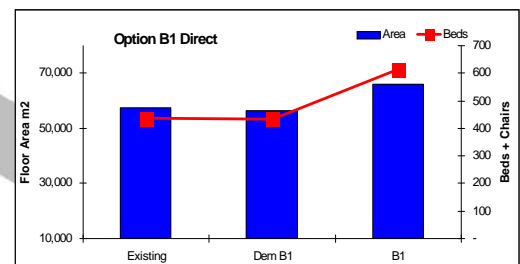
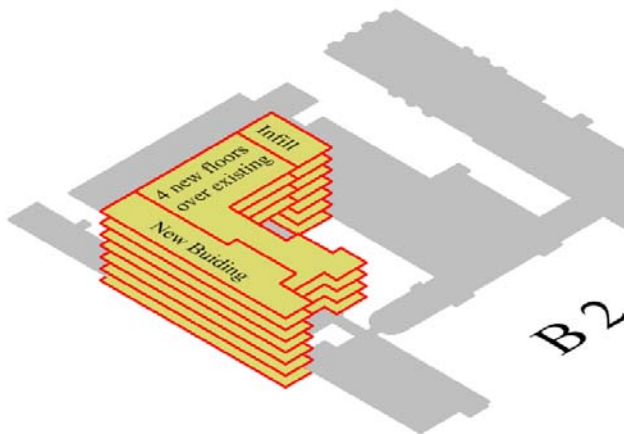
Option "B1" costings	(\$'000)
Building Works	34,000
Fees	5,100
Equipment	3,400
Decanting	3,000
	45,500



- **Option B2: Extending the newer portion of B Block up to level 6 and across to join D Block, and replacement of the older nurses home component of B Block.**

This option provides an additional 8,400m² and potentially 176 additional beds. The result is an all new building with problems such as the column spacing of the old nurses home resolved. The decanting issues and how they might be addressed are described below.

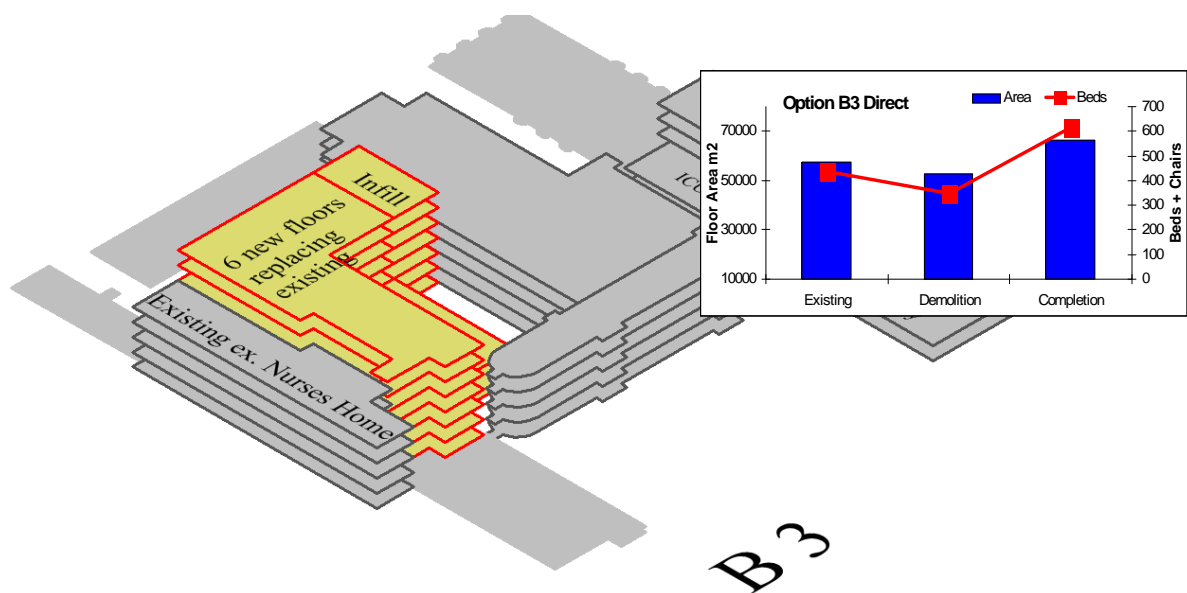
Option "B2" costings	(\$'000)
Building Works	84,000
Fees	12,600
Equipment	8,400
Decanting	3,000
	108,000



- **Option B3: replaces the newer portion of the existing B Block from the ground level (above the car park) up to level 6 and across to D Block leaving the existing former nurses home building.**

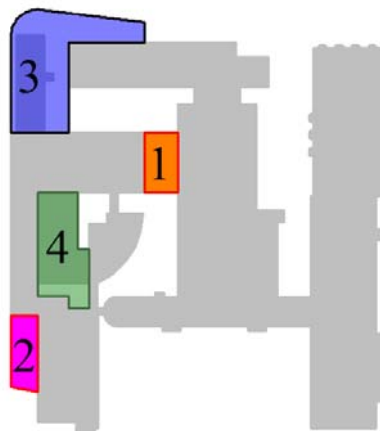
This option provides 9,070m² and potentially 176 additional beds. Demolition of the newer portion displaces some 114 beds including the acute psychiatric unit. There are no immediate solutions to how this could be achieved without a significant cost of leasing beds, thus the high decanting cost.

Option "B3" costings	(\$'000)
Building Works	100,000
Fees	15,000
Equipment	10,000
Decanting	15,000
	140,000



The Cancer Centre in Context

The immediate challenge is to generate sufficient decanting space to allow a significant redevelopment to commence. There are a number of ways of developing the initial decanting space to commence redeveloping the B Block as numbered below.



Options 1: This option constructs an infill between the existing B and D Blocks up to level 4 providing nominally 1,080m² total new space. Construction will impact on the existing D Block maternity and cardiothoracic wards but there is a reciprocal benefit. The work has minimal disruption to the B Block wards but has to occur over the kitchen loading area.

Option 2: (Cancer Centre) Construct an extension on the side of A Block. This proposal is greatly aided by the Integrated Cancer Centre providing the lower ground and ground floors. Additional funds could widen the building up to the fourth floor and beyond if required. The A Block wards would benefit considerably with a larger and more flexible configuration.

Option 3: Replacement of the existing E Block with a new 4 to 6 storey building has the benefit of minimal disruption to current patient services. There are currently 1,800m² of educational and administration functions which would need interim accommodation but are later rehoused within a building that expands to encompass the existing clinical school building providing a much more efficient configuration.

Option 4: Commencing the upward extension of the newer portion of B Block without relying on a preceding construction program is the fastest pathway but requires a reasonable proportion of the ward areas 2B North and South to be temporarily decanted. The oncology clinics currently occupying the space indicated could not be moved off site but there may be other functions that could locate to the Repatriation Centre if there was confidence that they would return within a defined period.

Option 2 is the recommended strategy as it is funded in large part through the Integrated Cancer Centre, provides the lowest risk construction risk with the building having its own street frontage and provides considerable benefit across a number of functions detailed elsewhere.

Resource Management

Budget and Expenditure

Funding Sources

State Government \$100m Redevelopment	\$100,000,000
State Government Cancer Centre	\$24,000,000
Commonwealth Government	\$24,000,000
Program Total	\$148,000,000

Project Budgets

Department of Critical Care

ICU Stage 1 (Deck)	(pre-tender estimate)	
Works		\$6,223,000
Provisions and contingencies		\$391,000
Loose furniture and equipment		\$498,000
Fees and charges		\$763,000
Escalation provision		\$90,000
TOTAL		\$7,965,000

ICU Stage 1A	(design development estimate)	
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Works	\$1,047,000
Provisions and contingencies	\$73,000
Loose furniture and equipment	\$84,000
Fees and charges	\$129,000
Escalation provision	\$25,000
TOTAL	\$1,358,000

A provision of \$3.4 million has been allocated for major equipment purchases for the ICU in addition to the above project budgets which includes a monitoring system at an estimated \$0.77 million, pendants at \$0.55 million and ventilators at \$0.65 million along with specialist beds and a range of minor equipment.

Access and Patient Flow Unit

Access and Patient Flow Unit (design development estimate)	
Works	\$4,643,019
Provisions and contingencies	\$673,726
Loose furniture and equipment	\$401,264
Fees and charges	\$652,054
Escalation provision	Included above
TOTAL	\$6,370,063

Assessment and Planning Unit

APU (design development estimate)	
Works	\$3,900,000
Provisions and contingencies	\$400,000
Loose furniture and equipment	\$312,000
Fees and charges	\$468,000
Escalation provision	\$175,500
TOTAL	\$5,255,500

Department of Medical Imaging

Medical Imaging Ultrasound (schematic design estimate)	
Works	\$1,300,000
Provisions and contingencies	\$220,000
Loose furniture and equipment	\$200,000
Fees and charges	\$180,000
Escalation provision	\$20,000
TOTAL	\$1,920,000

Medical Image Remainder of Works (concept design estimate)	
Works	\$3,200,000
Provisions and contingencies	\$500,000
Loose furniture and equipment	\$400,000
Fees and charges	\$460,000
Escalation provision	\$80,000
TOTAL	\$4,640,000

A provision of \$1.9 million has been allocated for major equipment purchases for the Department of Medical Imaging other than the PET/CT which is Commonwealth funded. The items include a CT Scanner, Fluoroscopy Screening unit and Bone Mineral Density Machine.

Integrated Cancer Centre

Integrated Cancer Centre (Matrix QS. cost control structure)	
Integrated Cancer Centre (inc level 7 ward)	\$17,003,000
A Block Extension to Level 6	\$13,285,000
Provisions and contingencies	in above
Loose furniture and equipment	\$6,158,000
Fees and charges	\$5,554,000
Escalation provision	in above
TOTAL	\$42,000,000

Kitchen

Kitchen (concept design estimate)	
Cambridge Production Kitchen	\$1,902,000
RHH site receiving kitchen and cafeteria	\$2,220,000
Provisions and contingencies	in above
Loose furniture and equipment	\$1,780,000
Fees and charges	\$886,000
Escalation provision	\$20,000
TOTAL	\$6,808,000

Other Provisions

The above project provisions include a proportional allowance for artworks as a budgetary amount although DHHS has negotiated with Arts Tasmania to treat artwork as a single sum for the redevelopment program to allow greater flexibility in the design, selection and placement of the artworks.

The above projects do not include all the decanting costs necessary to facilitate the construction program. They are addressed separately within the overall program budget and within other projects such as leasing of adjacent premises and refurbishment of the Clinical School Building.

Budget Summary

Project	Cost
Intensive Care Unit New Deck	\$7,965,000
Intensive Care Unit Stage 1A (Argyle Street)	\$1,358,000
Intensive Care Unit Equipment	\$3,400,000
Access and Patient Flow Unit	\$6,370,063
Assessment and Planning Unit (APU)	\$5,255,500
Department of Medical Imaging Ultrasound	\$1,920,000
Department of Medical Imaging Remainder	\$4,640,000
Medical Imaging Equipment (ex. PET/CT)	\$1,900,000
Cancer Centre and A Block Extensions	\$42,000,000

Kitchen inc Cambridge and on-site	\$6,808,000
Projects Total	\$81,616,563

EVIDENCE

The Committee commenced its inquiry on Monday, 23 August last when it conducted an inspection of the sites of the proposed works following which the Committee reconvened in Committee Room 2, Parliament House whereupon the following witnesses appeared, made the Statutory Declaration and were examined by the Committee in public:-

- Michael Pervan, Chief Executive Officer
- Lorraine Millar, Executive Director Continuing Care
- Les Burbury, Manager Infrastructure Investment
- Peter Alexander, Director Asset Management Services
- Karlene Willcocks, Nursing & Services Director – Medicine Services
- Felicity Geeves, Nurse Unit Manager
- Rob de Salis, Manager – Food Services
- Dr Rosie Harrup, Director Oncology
- Marianne Hercus, Chief Radiation Therapist
- Marc Bester, Acting Assistant Director of Nursing
- Simon Barnsley, CEO Business Services
- John De Vries, Business Manager, Department of Medical Imaging

Project Cost

The Committee sought an explanation from the witnesses regarding the discrepancy between the estimated cost of the proposed works contained in the Message from His Excellency the Governor-in-Council (\$25 million) and the estimated cost of the proposed works contained in the submission of the Department of Health and Human Services (\$81.6 million).

Mr Burbury responded:-

... it is because of the two events. One is the Commonwealth offer to us to proceed with the cancer centre which in turn creates opportunities around that which we will be happy to explain. The other is the commercial opportunity of the kitchen so it is that sum that we are seeking your approval of.

Mr Alexander added:-

Mr Chairman, the difficulty we have is the act has been really established to deal with this group project and the Royal Hobart Hospital on one hand is a work in progress. It is always doing things and separating these out and being able to schedule them in a way that meets the operation of the hospital and takes advantage of the opportunities has made it extraordinarily complex for us to try to comply with the act and put together a program of works. So we apologise for that.

Mr Burbury concluded:-

I could add to that clarification too that the cancer centre money - and we have brought Simon along to detail how that is put together - in actual fact is only about \$10 million additional State money. The other money is Commonwealth money and the remainder of the difference is in fact within the \$100 million that you have previously considered so it is not a new thing in a big scale.

Overview

Mr Pervan provided the following overview of the proposed works:-

I think it is always good to reflect back on the context of the \$100 million and the original purpose for the money in that it was first raised by the department some three years ago that while a new Royal Hobart Hospital was being built, some works would be necessary at the current site to keep the facility and the hospital safe and operational for the five years it would take to build a whole new hospital on a greenfield site.

Some preliminary work was done by the asset management branch of the department and came back with a series of works and a tentative value of around \$100 million, just to keep the site safe and operational to current building and health standards. Following the announcement that the new hospital was not going to be proceeding, we re-examined the priorities within the original \$100 million and that was the nature of our last presentation to this committee, that we identified a series of projects which we thought were going to get us the greatest clinical impact for the investment that we would put into it. It would be easy to think about building extensions to things and additional floors for ward space, but a few more beds for a \$100 million would not get us anywhere near the clinical impact that this set of projects would get us.

Expanding the ICU has been discussed and considered for around 15 years. Even when we complete those works and effectively double the current size of our intensive care unit, Tasmania will still only have about half the intensive care beds per head of population that the College of Intensivists recommend you should have. It will give us greatly increased capacity and certainly will help us increase throughput on cardiothoracic surgery and handle people who are critically ill, but it is by no means an oversupply or over-resource. It is quite literally a consideration of what we can get out of the space we have available.

The access and patient flow unit similarly provides a discharge lounge and more efficient processing of patients. Some of that work currently is being done while the patient is still occupying a bed. We will be able to do more with them prior to admission onto a ward and be able to move them off the wards faster and into a discharge lounge.

The Department of Medical Imaging is currently one of the great obstacles we have to patient throughput because of its size and its configuration. There is very limited space down there; putting patients who are waiting for scans in beds; things like that. It slows down the movement of patients into and out of the hospital. We need to modify that facility to house a PET scanner, and make changes so that we can improve the efficiency of the department itself.

The APU, the Assessment and Planning Unit, as Karlene told you this morning, is around having an intensity of assessment and the early commencement of treatment for particular cohorts of patients who we take through the Emergency department. The alternative is what we have currently: work is either done in the Emergency department and slows down the processing of patients there, or the patients go to the wards and wait anything up to a day to see a physician on a general round. This way, that assessment and the commencement of treatment can begin within the first hour that they are with us. It increases the speed and the intensity of care that people get and, if it is well modelled, well planned and well operated, you can get people a higher quality of care and get them home much sooner than if you just put them into a general medical ward in the model that we currently have.

The cancer centre, of course, is part of the State Cancer Plan and the most likely last round of Commonwealth HHF funding. We have needed to seriously invest in cancer services in southern Tasmania for a number of years and we were successful in the application to the Commonwealth and in doing further with the State to get \$22 million towards a substantial redevelopment of the cancer services we have. Once again, that is an opportunity that has just come up and will enable us to improve both the quantity and quality of care we currently deliver in a building that is largely around 50 years old. The kitchen, as Les said, is a commercial opportunity that came up at the airport. The alternative would be to try to rebuild and redevelop the production kitchen where you saw it operating this morning, while still needing to produce 2 000 meals a day out of the same site. So, much to the intense frustration of both Les and Peter and our food services staff at times, at one point we were seriously talking about finishing cooking at the end of the day, clearing the kitchen and pouring concrete overnight and then having to have it all set and able to take work in the next day.

We have managed to install the new carts using that model, but we went for days with ceilings patched with gaffer tape and plastic bags and all sorts of things to stop dust from falling in on the food. That part of the operation was successful. I would not like to try to take the risk of dismantling our production kitchen and rebuilding it on site.

The site at the airport is made for the purpose. It is large, all the cool rooms work, it is quite simple to move walls around inside and it will enable us to offer a bit of service to other potential customers within the public sector such as Corrective Services or even from the private sector in the hospitals and nursing homes.

Far from this being just a series of projects identified to keep us safe and operational for five years, we have spent a great deal of time, in fact 12 months' full planning and discussion with 10 user groups made up of clinical staff, to extract absolute maximum value in terms of clinical services and patient care out of the original \$100 million which had slightly different purposes. Thanks to collaboration with the department, we have also managed to address some long-outstanding fire safety risks and other issues with plant and equipment, air-conditioning chillers and so on at the hospital. The ring main that goes underneath the hospital was put down in about 1935. We have addressed the safety issues and we have managed to come up with a series of projects which, within the bed stock that we have, will maximise our potential for patient care.

Assessment and Planning Unit (APU)

Mr Burbury provided the Committee with the following evidence on relation to the APU:-

... the current site of the APU is not an ideal location for patient care. It has always been where medical records are but it is prime real estate of which there is no equivalent on the Liverpool Street campus. It is a large area and there are no other large areas like that. It is adjacent to the Emergency department so there is no other location that we could possibly have that would be better. We moved a large quantity of digital medical records over the past three years and the remaining paper records to other locations around the campus. So we are clearing that space so that it can be turned over to patient care. It would be far better with a lot more natural light but the works that are planned are modest and will enable us to open a 26-bed APU, and hopefully eventually a 28-bed APU which will accommodate a large number of the patients who would otherwise be in ED cubicles for a considerable period of time or put onto the wards where they would be waiting up to 24 hours to commence diagnosis and treatment.

Ms Willcocks added:-

... We have a significant amount of bed block in the hospital at the moment where patients are kept for prolonged periods of time in ED and what this model proposes is that those patients will be able to move over to the APU immediately and clear that bed block which will also clear some of the ambulance ramping issues we have for the State. It is a huge concern if

we have ambulances ramped in a tertiary hospital or at any hospital. The aim is really about patient flow, initial treatment and planning for the stay.

... Twenty beds plus the high dependency area beds is what is on the plan at this point in time.

The Committee noted the business case which was proposed for a new hospital and in particular the submission that the volume and acuity of patients has risen sharply, with demand predicted to reach in the order of 730 beds by 2015. The Committee questioned the witnesses as to whether such predictions were still envisaged. Mr Pervan responded:-

The figures quoted from the new Royal business case are quite correct for that business case, but what we have seen actually is demand increase faster than it was predicted for the business case. We have gone from a hospital that hovered between 85 per cent and 90 per cent occupancy to a hospital that now hovers between 95 per cent and 100 per cent occupancy, and there is an increasing number of days where it is the work of Karlene and her peers, and specific clinicians who are brilliant at fast assessment and sometimes discharge, in the case of Dr Tolman, that keep the beds moving, if you like, keep the flow going.

The move to things like the assessment and planning unit at the front end and a discharge lounge at the other end were not actually envisaged in the new Royal business case. It was very much a traditional model hospital of having an emergency department, wards and normal discharge from the wards. This enables us to get people's treatment commenced sooner with a view to giving them a discharge sooner. So these are very much coping strategies around the current bed stock that we have got.

Ms Willcocks added:-

The APU will add 28 additional beds to what we currently have, so this will be 28 additional beds. We have to staff the beds, obviously, but that will add 28 extra beds to our current pool of beds. The patients that we talk about now are currently being managed within the stock we have got. We have significant numbers of patients that stay in our Emergency department longer than our KPIs suggest they should and part of the APU, and other parts of this business case, will support the moving of patients out of the ED and into appropriate bed spaces earlier which will meet that demand to that degree.

The Committee questioned the witnesses as to how the APU would facilitate patient movement. Mr Pervan responded:-

... the work ... goes to patients with very, very specific conditions where we know if we commence treatment on them early enough, we can get them out within 36 hours. If they get to the 36 hours and fail, they are not ready for discharge, then we can transfer them onto a ward. But for these sorts of wards it is very much a process of maintaining that discipline of getting them in and treating them as quickly as we can and at 36 hours making an assessment of whether they go onto a different part of the hospital or they are ready for discharge home if not earlier than that.

It is a model of care that goes to very, very careful data analysis and streaming of patients that is something that we learnt from queuing theory but if we could make it work we can actually - I would not say be a lot more comfortable with the bed stock we have but it is a survival strategy which is far more intelligent and sustainable than just putting 26 or 28 general beds into the stock that would not actually help us a whole lot.

The Committee questioned the witnesses as to whether the APU would address the issue of 'ambulance ramping'. Ms Willcocks responded:-

...Yes, we do have an issue with ambulance ramping at present and certainly in the last month it has been relatively increased from what we had seen in the previous few months and that is due to the occupancy level in the hospital which has been over 100 per cent. So not only is the hospital at 100 per cent but DEM has been at 100 per cent as well so our cubicles have been full and there has been no room to move the patients into the DEM environment.

...and obviously ... (the inefficiency of the ambulance services because of being ramped) affects the State as a whole, so from a tertiary perspective whether you would rather move the patients through and have the ambulances out and working than looking after patients for us in our back corridor.

The Committee questioned the witnesses as to what, if any, pressure upon hospital services would be relieved by the new ICC centres proposed at Clarence, Glenorchy and Kingborough. Mr Pervan responded:-

We have not done any figures on it at the moment because we are still working out exactly what services we are going to deliver there but they would be more the services which would reduce demand on our outpatient clinics than on the ED and the bed stock.

... It still goes to contributing to the end result which is less pressure on the Royal but if there are people out there who do require health services, not just medical but other health services beyond that which a general practice can provide to them, if they do not get access to those services then they end up becoming sicker and fall into the Royal. So it is a matter of keeping people well enough so that they do not require an acute admission.

Certainly around the chronic conditions, around the management of people with diabetes and other conditions, that is really what we would be looking to handle a lot of in the ICCs at Clarence, Glenorchy and Kingston.

... There is not a lot of data around (from other jurisdictions) because they are models that are quite flawed and change all the time but certainly there is an indication from Victoria around the Hospital Admission Risk Program and other initiatives like that, that they have had a significant impact on demand on the outpatients services in the central hospital locations. So it is keeping people out of Melbourne basically and keeping them in the periphery, accessing services that otherwise they could only get at a hospital.

The Committee questioned the witnesses as to how the proposed measures would alleviate capacity occupancy of the hospital as opposed to the new hospital solution. The witnesses responded as follows:-

Mr PERVAN - *The approach that we have taken on this was that the Government's allocation at the time they decided not to proceed with the new hospital was \$100 million, so we have gone about designing a set of projects within that maximum budget that we get the biggest bang for the buck from. This combination of the assessment and planning, or APU beds, plus the intensive care unit beds, plus the discharge lounge are what we determine will get us the greatest relief from the pressure that we are getting at the moment.*

Mr ALEXANDER - *.... A new hospital on a new site that met our expected demand, wherever the site is - and I think the site was probably played up in media and other places as an issue - is really the best option. But because of the global financial crisis and the State's financial position, this project has been driven really by affordability not need. Cabinet allocated us an amount of money and the hospital and the clinicians have worked extraordinarily hard to squeeze the best value out of that. But it is not going to solve our problems long term. We always knew that even if the new Royal occurred, there would be a number of years before it opened its doors and we were already working on some projects to meet that incremental demand, and what we have done is extended that with the available money.*

And further:-

Ms WILLCOCKS - *Over the last two weeks if we had had these beds open, plus all the other beds we currently run, at times we could still have been at capacity, but there would be more leniency than we have currently, so this morning I would have had 10 beds free across the hospital, if we had done exactly the same work.*

Mr BURBURY - *Can I add to that; on page 23 there is a diagram which almost plots that deteriorating bed circumstance and it was a set of scenarios that were valid earlier this year that shows you that as the demand increases we need to take some action, and the more you delay the action the harder it is to, in fact, take it because you are sitting in the space you need to clean up and change. So short of getting a brand-new hospital across the road that you just pop up one morning and walk across to, it is dependent on all of those actions and we are in that first part of the step.*

Ms WILLCOCKS - *We have clearly articulated that the model of care needs to change with the unit, not just looking at bed numbers, but looking at the way we deal with our clientele and our patients, and the best outcomes for them. Health has significantly understood now that we get patients put in the wrong wards and we leave patients in EDs longer. Those things significantly increase patient length of stay, so it is about getting the patient to the right place at the right time to get the right care and that improves outcomes and decreases the stay for patients.*

The Committee questioned the witnesses about the level of referral from the LGH, Mersey and Burnie. Mr Pervan responded:-

The increased referrals are happening for a variety of reasons. We are the State's referral centre, the only service in the State that provides cardiothoracic surgery, neurosurgery and a number of other clinical specialties and because of the north and north-west's challenges with recruiting staff - a replacement for Dr Siejka in the north and having no neurology service at the moment, in particular cancer specialties, gynaecology and paediatric oncology. All of those things are being increasingly referred to us. So the capital works at the LGH, in particular, will not necessarily overcome the problems they have with recruiting and retaining staff.

... And particularly since they are single practitioner services. Stan was the only neurologist that they had. It makes it very, very fragile. Even now Tasmania has one paediatric surgeon, Mr Ed Fenton. There are not sufficient paediatric surgery cases to justify more than two. We are about to recruit a second one, but Ed has been our only paediatric surgeon for a couple of decades now. Similarly, we have one paediatric oncologist and he is a registrar, Dr John Daubenton. These services are quite small as they are and so the referral rates as the population grows will increase, because we also have Dr Tolman and some other specialists who handle things like Parkinson's disease and that complex relationship between the geriatricians and the neurologists. So we are seeing an increase in rate of referral. We are also seeing an increase in collaboration with Dr Tolman spending a lot of time in the north-west and working with clinicians up there to try to improve their services. But at the end of the day, we are the State's referral centre so they do come down here.

Interstate referrals, for a variety of reasons, are right down in the south. We have done a lot of work to retain the patients here. It is a far better outcome for the patient and of course for their family. The investments that successive governments have put in to the NICU and other services like that, mean that we are not transferring paediatric patients interstate as much as we used to. There are particular neurosurgical and cancer treatments that we still have to refer interstate for, but they are highly specialised. Generally we are retaining the patients here now. There are particular types of brain injuries, aneurisms and things that probably only two or three specialists in the entire country will operate on, and they are the people who we are currently transferring, but even a transfer from us to Calvary costs many

tens of thousands of dollars. The more patients we can retain within the Royal, and provide a sustainable service for, the better the return on the tax dollar for the health investment.

Medical imaging

Mr Pervan provided the following overview of the works proposed for the Department of Medical Imaging:-

... I might have mentioned to some members of the committee this morning that the redevelopment of the Royal is very much an exercise of rebuilding a Rubik's cube from the inside out, and I do not think there is a greater example so far than what we are doing in the DMI with moving some registrars to the basement and others to other buildings, and trying to clear a space big enough so that we can begin demolition and rebuilding something which is desperately needed for the hospital. H block, I think, goes back to 1968 and there has been really not a significant investment in it since that time. As you have noticed from all of the little waiting areas and multiple administration areas through H block, its design actually predates computers and only after the event was wired up for telephones. So it is a building that was not designed for the way we deliver care, and certainly was not designed for large pieces of machinery like MRIs and the larger CTs and in fact the PET machine that are coming in. So it requires a substantial amount of work.

If the Department of Medical Imaging is not working really well, then you will be holding patients in the Emergency department or on the wards when they do not need to be. You will be delaying diagnosis, delaying treatment. It is critical to the hospital that Medical Imaging is upgraded, updated with contemporary equipment. Dr Carr pointed out the bone density machine this morning, the bone densitometer. That is 17 years old and still runs on DOS. I think one of the committee members asked us if we were using a Commodore 64, or something like that. It is very much that kind of vintage of equipment. So we need to have it more focused around how we deliver care now and have a design such that we can move the patients in and out of the department far more easily than we currently can - not just the ambulatory patients in those funny little waiting areas but also patients in beds where we currently have to put them in corridors or go and fetch them from the ward just before we can do their imaging, which means once again a safari of beds and orderlies moving through the hospital constantly.

... more and more you are finding at the same time doctors in the Emergency department, and even in some cases nurses, are ordering pathology tests, blood tests and so on. They are wanting not just X-rays but an MRI or a CT of a specific site. The German radiologist who you met this morning is not just a radiologist but he coils aneurysms and does all sorts of other interventional radiology, so it is one of the strategies that we have, once again, to live inside the bed stock that we have. The difference between having an aneurysm coiled and having it physically operated on by a neurosurgeon is the difference between a 20-minute light anaesthesia and a couple of days in hospital, and major brain surgery and weeks of rehab and all sorts of other things. Clipping an aneurysm is extremely complicated and very specialist surgery. Having Professor Froelich there able to coil many of them will result in far better and far faster outcomes for patients in Tasmania, but all of that currently is happening in that Department of Medical Imaging.

Mr De Vries added:-

... one of the issues we have faced in the past is about retaining qualified radiologists. We have had quite a bit of turnover and we recently lost one a couple of months ago. One of the key strategies in retaining people like Professor Froelich is having upgraded facilities. You probably saw this morning the reporting room. The facilities are substandard. Professor Froelich was surprised by that. It is about upgrading these facilities so that these people are working in to the appropriate standard so that we can retain the staff.

Mr Pervan concluded:-

Once again, there is nothing overly ambitious about the plans for medical imaging; it will not give us anything above Australian health facility guidelines but it will be functional and at the moment it is not quite functional.

... Professor Bell likes to tell people that H Block won the Royal Australian Institute of Architects award for the worst-designed public building in Australia three years in a row and at the end of it they gave us a perpetual award because they realised it was so bad that we would win it every year. I'm not sure when that happened but it was a very colourful anecdote.

Notwithstanding that, you have seen yourself how we had to sort of squeeze around filing cabinets of X-rays and all sorts of things that you probably have not seen in a teaching hospital anywhere in Australia for five to 10 years. We are getting an online medical imaging system - PACS - which should be going in shortly. That will move all those filing cabinets of X-rays off into archives and people will work straight off the computer at their desk. Even then, when I came in as acting CEO we had three radiologists sharing one workstation; they had to stand around and wait. It has been an area of the hospital that has been quite neglected for about 15 years, for all manner of reasons, and it needs serious investment to get it back online so it can enable the other clinical functions of the hospital.

The Committee questioned Mr Pervan as to what extent medical imaging services had been outsourced. Mr Pervan responded:-

We can do that but we have kind of used up all of our goodwill in the private sector as well. There is plenty of private work for the various imaging companies in southern Tasmania and they are clearly well occupied on an inpatient basis anyway with Calvary and Hobart Private patients. We do occasionally call on them for help. We do outsource some work but you cannot outsource the work without outsourcing the patient as well. If they are an inpatient we do not want to put them in an ambulance and send them to Lenah Valley for imaging, although we have done that when our infrastructures failed. Similarly, when our current PACS system - the picture archiving system - fails we have had to print images, and you walked past boxes of filing cabinets of those today, but printing out X-ray films is very antiquated now.

Once again, it is not just that it is antiquated; this is not about fashion, it is about efficiency. It takes five to 10 times longer to print the films, put on a light box for a doctor to dictate the report, have the typist typing it up than to put the image straight onto a computer and have the radiologist type their report straight into the system to go straight to the treating doctor. That is where we need to be.

Mr De Vries added:-

We should be providing a service to GPs and specialists around Hobart and Tasmania but because of the lack of facilities and reporting services we do not provide that service and that goes to private providers. Certainly when we get this new equipment we will be providing a greater service to the GPs and specialists around town.

The Committee questioned the witnesses about the delay in finalising the contract for the radiology information and picture archiving system. Mr Pervan responded:-

... the successful tenderer of the contract for the radiology information and picture archiving system - the RIS/PACS - was determined just over a year ago and since that time the contract has been bouncing between the successful tenderer and the State Solicitor. I am not sure what the agony is but clearly it has slowed things down. That, combined with the changes to the infrastructure, will make it a vastly different department and an asset to the hospital instead of one of those things we continually identify as an obstacle to patient flow -

not because of the staff in it, especially John who is wonderful, but simply because the systems just do not allow anything other than what sometimes feels like stone-age processes.

I am pursuing it pretty vigorously and all the doctors are ringing the minister about it. It has been identified by the entire clinical staff as a major risk to clinical care because of the length of time taken to get things into the system, read and reported on. The RIS/PACS, as I said, vastly increases the speed of that. When you are dealing with particular brain injuries and things like that, you need those images as quickly as you can possibly get them. So they are all taking that up.

Mr Alexander added:-

... I have been tied up in that particular contract. The Government's procurement process is through the Treasury and Crown Law and requires some adherence to a range of criteria, and the sort of thing that is required generally is terms and conditions that are in the Crown's favour, to the extent that ideally the Crown Solicitor's Office says they want unlimited liability, and those sorts of things. Over the past few years - and I am talking about other contracts but I am assuming that it is a similar type of issue - industry is not prepared to accept that anymore. It is pushing back. It is requiring its own terms and conditions. It is limiting warranty, it is limiting liabilities and pushing risk back to the Crown.

That has created a situation which a lot of legal issues in the Crown have not fully dealt with and the people who are dealing with it on a legal side see the contractual risk, not the actual practical risk. We are working in a number of areas to balance the acceptance of some contractual risk to mitigate a real practical risk on the ground. So it is being actively pursued, but it comes down to some of those legalistic things around terms, conditions, warranties, risk profiles and things like that.

Professional retention

The Committee questioned the witnesses as to whether professional retention has been a problem because of the less than desirable circumstances within which people work in the Imaging department. Mr De Vries responded:-

Yes, and that would be fair. That would range from the actual physical condition of the buildings, to the support provided to the radiologist, to the processes around them. They are used to, for example, working with electronic RIS/PACS programs. Their efficiency and output is a lot better and more professional. The service that they are providing they feel is substandard because of the equipment around them and the conditions they are working in. Some are like Professor Froelich. In the past he would have been much more efficient than he can be in the Royal Hobart Hospital. With these new redevelopments and the new equipment coming in, he can work to his capacity.

As to professional retention in the hospital generally, Mr Pervan submitted:-

There is no doubt that the condition of the hospital does not act as an attractant. It is always a good reality check to speak to particularly some of the locums that we get from the mainland in terms of the facilities that they are used to working in and what we have to offer them. But the hospital that we've got is the hospital that we've got and without wanting to play the infrastructure card too high, there are things that are happening within the hospital which balance out, if you like, the effect of the infrastructure. We have things like the Patient Assessment Program that was developed in-house with the nursing staff and with our own little innovation unit which we are in the process of selling to the NHS. We have work under way with our own electronic patient record or virtual electronic patient record, if that is not a contradiction in terms in itself, using our digital medical record and some other things that have been developed through the department's information services which give us 80 per cent of the impact of a full electronic health record and could lead to paperless wards

at the Royal within the next one or two years. These are things that other hospitals travel to Tasmania to see in place at the Royal, including Hunter, New England, and Flinders - places like that which are renowned nationally for innovation and improvement.

So there are things happening at the Royal which, while it is not the newest of facilities, certainly make up for it but for reasons which probably will take me another five years to fully understand medical imaging has probably the greatest example of neglect in terms of commitment, development and just maintenance really right across the hospital. Our operating theatres have largely been rebuilt and redeveloped in the last ... 10 years. The B Block wards, while challenging in themselves, are relatively new. It is not good infrastructure but it is not the worst infrastructure and certainly one of the things that we are quite proud about, although in a typically southern Tasmania way, is that the new Royal business case said that you could not do any innovation or reform to patient care or improvement of patient flow on the current site because the infrastructure just would not allow it. We have actually proven that that is not the case. According to the original new Royal business case, we would not have been able to sustain the demand pressures that we are currently dealing with at that site, but we are and we are, by all standards, quite well. So the impact of the infrastructure is significant. It would be great to have a whole new hospital on a new site that was properly designed and did not have the feel of a coral reef, which is the current site. But, notwithstanding that, it is a very high quality of care that we deliver.

Department of Critical Care Medicine

Mr Pervan provided the following overview of the works proposed for the Department of Critical Care Medicine:-

That takes us to the Department of Critical Care Medicine and the expansion of the ICU by 11 new beds. I think it has been identified both before this committee and before the last five or six Estimates committee hearings that I am aware of that the current size of the ICU has been not only a profound impact on the capacity to provide critical-care medicine in southern Tasmania, it has also been a major obstacle in the delivery of cardiothoracic surgery and surgery generally to highly complex patients.

So what we are talking about in this concept and, once again, making the best use of the available workforce that we might have, is: rather than establishing satellite ICU or critical-care beds around the hospital to extend the floor outside the existing ICU and expand the current ICU by 11 beds; it is not just around the expansion of the beds but the expansion of the size of the cubicles. As I think you would have probably heard this morning, at the moment it is not easy to work on a highly complex patient and if there is something going on at the moment because of the way the place is set out, the staff almost as second nature now will pull the curtains around the other beds, move any visitors out and get on and do it. To be honest, words fail me that the department of critical care medicine and the ICU staff have been able to survive with the capacity that they have for so long and produce such brilliant results. This is a unit which has not only provided a brilliant service to southern Tasmania but has also published multiple articles in the New England Journal of Medicine and has taught countless numbers of nursing staff in terms of delivery of critical care medicine. It is an amazing unit in terms of infection control and other issues that are problematic in every ICU around Australia except at the Royal Hobart Hospital.

If we are to make serious inroads into things like cardiothoracic surgery, we desperately need additional beds. Also, the population is getting older and the acuity of the patient is increasing. They are sicker, they are more complex to manage and so the requirement for ICU beds is immediate. This is our second-highest priority in terms of the services we can deliver and the maintaining of the sustainability of those services.

Ms Willcocks added:-

... I suppose I would see this as another recruitment and retention strategy as well. When I first came to the organisation and walked through I failed to see how we would retain staff in this area and it is to the credit of Felicity and her team and Andrew and their team that they do recruit staff and train them to the utmost level. We do grow our own and we grow nurses that people want to take elsewhere. It really is to their credit that they keep their staff.

When we walked through I described the confidentiality issues we have in the unit. Those are ongoing; there is nothing we can do about those due to the environment and it is to the credit of the Tasmanian population that we can continue to run the unit in the way we do because I think everyone respects the situation that you are in when you go in there. It is a difficult place to work and when you have a particularly unwell patient in one of those cubicles the other patients and their families suffer through not being able to go into the unit readily. So it is not just one person you end up restricting visitors to, it is the whole unit.

As we noted in the walk around this morning, this does not give us the guidelines size bed but it certainly in some cases doubles what we are using now. I think the staff are looking forward to that so much and I think if this project does not go ahead, we would be in significant strife...

Food services

Mr Pervan provided the following overview of the works proposed for food services:-

... food services at the Royal has not really received any significant amount of funding or attention for 15 to 20 years. With a growing demand for the production of food from that site and with failing infrastructure, we needed to do something and do something seriously. There has been a number of reviews done, both through the new Royal planning process and otherwise identifying the need to improve the production capacity and general facility of food services. This morning when you were going around with Rob de Sallis, you would have seen the loading dock areas and all the other alleyways and things that we are currently dealing with. We have been putting a lot of time into a redevelopment plan that would have made an attempt at rebuilding and redeveloping the kitchen on site, but then another opportunity has come up recently which will probably work out significantly cheaper, in my view, but offers a better result for everyone, ultimately, in terms of having a contemporary production kitchen area.

... We had a kitchen, and the submission before you makes it quite clear that we have basically been in the good graces of the Hobart City Council and other authorities in terms of occupational safety and health issues, compliance with local by-laws for our food production area and just generally having staff who have been willing to continue working in what are very, very confined spaces for the equipment that we use. So we have now a process under way where we can lease a commercially designed facility, the Alpha building at Cambridge, and turn it into our main production facility with the on-site services being confined to plating and dishwashing, basically.

Mr De Salis added:-

That is correct. That would leave the new meal delivery system at the Royal Hobart Hospital - distribution of patient meals would remain where it is. We are currently redeveloping the wear/wash area and the dishwashing area. The production area is probably moving off-site. As Mike has said, there were several issues - anything from meeting the Food Standards Code. There was a workplace standards issue with space, work clothes and hazards; they have all been identified. There are also the issues of failing equipment and the loading dock. It is not just the goods in and out, it is the access and the number of trucks that we have coming in with food in and out of the hospital area. So we would lighten that load in the loading dock.

The Alpha building is a new exciting project that we are currently working towards and we have concept design layouts at the moment. We are now working on how to refit that building so that it will become what we need to meet our needs.

The Committee questioned the witnesses regarding the proposed expenditure of \$1.9 million on capital expenditure at Cambridge. Specifically the witnesses were questioned as to how any failure to negotiate a successful lease at Cambridge would impact upon the proposed works at the RHH site. Mr Alexander responded:-

We are pretty sure we can (successfully negotiate a lease). It was slightly on again, off again and we have already been through one iteration of what you are saying.

The kitchen out there was built, I think, for Qantas and then not used and I think we became aware of it with the real estate agent trying to use us to get someone else to sign the lease when they had the pen in the hand because 24 hours later it disappeared. We were annoyed by that but went ahead with the design of trying to rebuild the kitchen within the Royal, which was the only option we had. The lease through there fell through and the real estate agent came back to us more genuinely now and we have a memorandum of understanding which gives us a lead position to commence that lease and the cost of that lease is extremely favourable.

Melbourne is using off-site kitchens all the time now because you can supply different facilities, you can change the way you do business, you can change the scope and capacity of your business much more easily. As Mike said this morning, trying to produce meals and rebuild in the same space at the same time is not something you would want to do at home, and far less with the sort of quantities we are talking about.

We went partly down the track of doing a design and a process within the existing kitchen. It would have been really expensive because we would only have been able to work during periods of the night for some days of the week. We jumped at this opportunity when it reinvented itself and we have gone down the process of developing a design and an indicative cost. There is nothing locked into this cost until we have this committee's approval and until we have signed the lease.

... We were as confident as we can be that the lease will go ahead, but anything is possible. If it did we have done investigations into other options.

Mr Pervan added:-

As it stands, with the exception of the capex around some new equipment, the cost of the lease and the transport are almost insignificant. As Peter said, it is a very favourable lease that we are talking about, in return for which Hobart Airport Corporation get a longstanding tenant in a facility that they have had enormous difficulty finding any tenant for at all. There has even been an approach to food services from the Airport Corporation for us to put a window on the side of the kitchen to sell coffee to taxi drivers who are queued up, so they are very keen to welcome us into the facility. Also, as we have said, it provides us somewhere to have a properly designed, properly fitted out production kitchen that is compliant with various regulatory and occupational safety and health codes that we have to comply with.

...It is a very flexible interior space with a large number of cool rooms and fridges and freezers and other things in there, and I think five loading docks, or at least four.

Mr De Salis added:-

There are three or four loading docks there. As you say, the structure is a simple structure that can have walls moved around; you can redesign, reconfigure, the structure is there. There

is some work done on the walls and flooring. It is ready to go. It is far better than a vacant block of land and building a new kitchen on. The structure is already there.

Mr Burbury concluded:-

The kitchen design is perfect in the sense that it is a slab off the ground, about 1 200 off the ground, so all the plumbing travels underneath. It is basically built of coolroom biscuit panels with a tin roof over the top, so the biscuit panels can be moved in any direction you want. If you set off to design the perfect kitchen that is exactly the formula you would use. And it is precisely the formula that we inspected. I came to two of them in Melbourne, where they have these major production kitchens. So you could not ask for better as a starting base.

The Committee questioned the witnesses as to whether the Cambridge facility presented revenue opportunities. Mr Pervan responded:-

There are lots of revenue opportunities ... it is more that the facility does give you that flexibility. You can seriously consider providing food to nursing homes, Meals on Wheels, far beyond what we already do, which is quite a significant part of the business.

Integrated Cancer Centre

Mr Pervan provided the following overview of the works proposed for the Integrated Cancer Centre:-

This was, as I said, a stand-alone application under the specific cancer centre funding, the last piece of the HHF pie that the Commonwealth advertised. A collaborative bid was put in that included ourselves and Calvary for a comprehensive cancer centre in the south, but before I hand over to Lorraine and Marianne to go into more detail, when you look at what we applied for with the outpatient centre, day oncology and improvements to radiation oncology they were the same themes that have come up with all the other major projects. Services that used to be provided on an inpatient basis we now provide on an ambulatory or outpatient basis. But out of a facility that was never designed to deliver facilities in that way or to the volumes that we now deliver at, what we are heading towards is a service that is purpose built for cancer patients, that is far more sensitive around their needs and does not require for them to have to negotiate through, as when you entered wing 3 and 4 today, what appears to be a rabbit warren of old offices, clinic rooms and all sorts of things to get to a waiting area that is too small with patients who are going to be feeling particularly unwell. If they are going through chemo at the same time, as many of them are, the surroundings, the environment and the general layout of the place makes a profound difference to the care that they experience, not the least of which is in the space that we currently have to deliver it in we are queuing people up.

So, once again, what we are trying to do is move the infrastructure towards enabling a more contemporary model of care, one that is going to enable us to see more patients in that outpatient ambulatory model that is inpatients, the way they used to be, as well as looking to the future. It is no small credit to the people sitting to my right that after, I won't say how many years, but after having separate medical and radiation oncology services at the Royal Hobart Hospital since there have been such things as oncology services they are now being brought together under Dr Rosemary Harrup as a single southern Tasmanian cancer service. So we are getting a collaborative joined-up model of care in southern Tasmania with the Holman Clinic and medical oncology all working collaboratively. So it is quite a significant step forward in the way we manage patients that will be reflected in the infrastructure once these works are completed.

Ms Hercus added:-

... One of the barriers, I guess, to the total integration is the fact that the services are not collocated so once the collocation eventuates then the services will be truly integrated and patients will have a very coordinated, multidisciplinary journey through the system. That has been shown nationwide and worldwide to produce better outcomes for cancer patients, that there is no repetition of services, there is no duplication and there is no confusion amongst who is the carer and who is caring for that patient and what services they are being provided with. That is the biggest outcome that comes with an integrated cancer service. The patient care is totally efficient, effective and coordinated.

...The other part which is most important and needs to be addressed and has not been over a number of years in most cancer centres is the actual patient support areas, that we need to be looking after the total patient care including their psycho-social needs, their dietary needs and things like that, and having support areas for their ongoing care. Patients do survive now and they do need to be supported through the whole of their life as survivors of cancer not just for the time they were having the treatment, and that is something that no services really have had the capacity to do. We believe with the new service and the new space that will be provided we will be able to provide a support service within the hospital for the ongoing care of patients after they have completed their active treatment.

The Committee questioned the witnesses as to what effect, if any, the delay in the ratification of the Commonwealth State Agreement had played. Mr Pervan responded:-

... I expect that we will have that resolved in the next couple of days. What happened after our submission went in, of course the State's original application was for a significantly larger sum of money, so we had to modify our application to, once again, match the money that we have got as opposed to the service demand that we know that we are going to get. So that required some changes to the application and that is what is tied up in that as well as some discussions with the Menzies around opportunities there. So it was a matter of discussing with the Menzies and Calvary what the options were for meeting that original business case that went up, and the service outcomes that we were planning on delivering, and what we can now do for the money that we have got ahead of us. Not just for the money, but a real focus on, in terms of collaboration with other sites, what it meant for the patient, what were the clinical considerations that we had moving forward with the options in front of us around alternative sites or splitting the service over two sites and various other things that came up. The clinicians have been through an assessment process in that regard and we should be able to ratify that agreement within the next few days.

Mr Barnsley added:-

... with the way that the HHF is working, the application went in and was approved with a policy commitment. The agreement that Michael is referring to is the formal piece of paper that says when they will make the progress payments and what stage will the work be at. It will be slightly more than a couple of days, Michael, because it needs a Health minister to sign it and I do not know if they can sign in caretaker mode in Canberra. They have been doing all of the work in Canberra to have it ready to sign and in fact I sent the draft back up this morning to Canberra. We will iterate that with Canberra, so it will be ready for a minister to sign, but I think they need a government.

Access and Patient Flow Unit.

Mr Pervan provided the following overview of the works proposed for the Access and Patient Flow Unit:-

... these sets of projects aren't just about push, getting people into the hospital such as the Assessment and Planning Unit but about pull and the Access and Patient Flow Unit. This helps us not only sort out a whole lot of administrative services which have been in office

spaces designed and largely fitted out in 1938 but also enables us to have a proper discharge lounge where we can clear beds earlier. If people are just waiting for pharmacy or dispensing or something like that, they can go somewhere that is comfortable and physically appropriate, not the plastic chairs that we have just inside the front doors currently but something that is designed for patients to sit comfortably and safely while they are waiting to go home or be transferred to another facility.

Mr Bester added:-

... What we were talking about this morning was integrating the discharge and the admissions area, which would provide a focal point at the front of the hospital that we do not have at the moment. People coming in for admission are dispatched down the corridor to that small room we were all piled into. Patients being discharged have historically waited in their bed or sat in a chair on the ward with not necessarily direct care and supervision. We have the temporary discharge lounge in operation, which is great, and that is moving patients off the ward much faster and is then helping in the Emergency department to cut ambulance ramping - all of those things that we are talking about to improve our patient flow.

The new facility locates all of the key components in one space. At the moment some of the offices were up on the eighth floor, other areas of the staff are on the ground floor. It is bringing everybody together so we can communicate and coordinate our patient flow, our staffing, to make sure that we have the staff in place, patients moving as efficiently and effectively as possible.

Mr Pervan concluded:-

The other benefit, of course, and we have discussed it several times today, is that where you have a hospital that is not expanding in terms of bed numbers significantly, having a very tight co-located team running bed management is absolutely critical. Currently we are having two to three bed management meetings a day, which requires people to come from all over the campus to talk about which beds they have open, which beds they have closed, which ones they need to move patients from and all these sorts of issues, which if they were all co-located could be dealt with in a moment.

This is as critical for us as the APU in terms of just the more efficient management of a hospital that is a legacy of buildings designed, developed and occupied over almost a hundred years now, all joined together by the old C Block, which has become more or less four levels of corridors for us with all the other major buildings plugged on the outside of it, and patients, beds, food, everything, moving up and down those corridors all day every day. So having a central planning unit and all those patient administrative functions around it actually enables us to manage that traffic flow, if you like, much more efficiently.

DOCUMENT TAKEN INTO EVIDENCE

The following document was taken into evidence and considered by the Committee:

Royal Hobart Hospital Redevelopment Program – Submission to the
Parliamentary Standing Committee on Public Works, August 2010
(Department of Health and Human Services)

CONCLUSION AND RECOMMENDATION

The need for the proposed works was firmly established. The proposed works aim to improve patient care and outcomes by providing a health service site that will ensure the sustainability of the Royal Hobart Hospital campus by the:-

- provision of 11 additional ICU beds, staff and patient facilities with upgrade of existing beds subject to future funding
- establishment of the Access and Patient Flow Unit to manage admissions, discharge and other client and public services
- provision of a new Ultrasound Suite and general upgrade of medical imaging services
- establishment of the Assessment and Planning Unit - a 20 bed short term ward adjacent to the existing Department of Emergency Medicine
- Integrated Cancer Centre and ward expansions
- fit out of the Production Centre at Cambridge and improvement to catering functionality within the RHH

Accordingly the Committee recommends the project, in accordance with the documentation submitted.

**Parliament House
Hobart
30 September 2010**

**Hon. A. P. Harriss M.L.C
Chairman**