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PARLIAMENT OF TASMANIA

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

# **Royal Hobart Hospital Department of Emergency Medicine**

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*Brought up by Mr Best and ordered by the House of Assembly to be printed.*

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## MEMBERS OF THE COMMITTEE

### LEGISLATIVE COUNCIL

*Mr Harriss (Chairman)*  
*Mr Hall*

### HOUSE OF ASSEMBLY

*Mr Best*  
*Mrs Napier*  
*Mr Sturges*

By Authority: Government Printer, Tasmania

## INTRODUCTION

The Committee has the honour to report to the House of Assembly in accordance with the provisions of the *Public Works Committee Act 1914* on the -

### Royal Hobart Hospital Department of Emergency Medicine

This reference to the Committee sought approval for the relocation and redevelopment of the Department of Emergency Medicine (DEM) at the Royal Hobart Hospital.

## BACKGROUND

The Royal Hobart Hospital (RHH) DEM, built in 1963, is currently located in the Outpatient or H Block (Argyle Street Wing) of the Hospital. It was originally used as a casualty or large general practitioner Area where patients were given immediate care and referred on for speciality treatment in the Hospital. Since then, emergency medicine has progressed significantly, reaching a point where it is now a speciality in its own right and patients receive far more extensive treatment before they are forwarded directly to the theatre or wards. This helps to ensure optimal outcomes for patients.

In 1987, the Campbell Strategic Planning Study identified that the accommodation of the Royal Hobart Hospital DEM was “confused, poorly planned and difficult to staff and operate safely and efficiently”. The report recommended the inclusion of an observation Area to assist the RHH DEM in more effective use of space and staff.

In response to the Campbell Strategic Planning Study, funding was allocated in the late 1980s for a minor upgrade. However, asbestos was discovered in the area and the funding was redirected towards the removal of the asbestos. As a result, the issues identified were not rectified.

The Australasian College of Emergency Medicine accredited the RHH DEM in 1996, allowing the creation of accredited medical training positions. During the accreditation process, issues were raised about the size and layout of the department and its impact on patient care, training opportunities and senior staff retention. As a result, further funding was allocated to upgrade the DEM. The relocation of the old Queen Alexandra wards and facilities, due to the Hobart Private Hospital collocation process, absorbed what funding was available.

DEM service delivery performance is currently measured against two sets of standards:

- The Australasian College for Emergency Medicine: Emergency Department Design Guidelines; and
- The Australian Council on Healthcare Standards Evaluation and Quality Improvement Programme, August 1999.

Surveys conducted by accreditation bodies, against the abovementioned standards, identified the following major problem areas:

- Occupational health and safety and work environment issues associated with lighting and ventilation, work flows, facilities for the management of difficult and aggressive patients and facilities for paediatric patients. The ability to provide an isolation and decontamination facility was also questioned.
- Levels of patient care do not meet current standards. The lengthy delays in medical assessment result from an insufficient number of cubicles. An absence of integration between Resuscitation facilities and Medical Imaging resources results in delays in obtaining initial radiological investigations. Patient confidentiality issues arise due to the crowded nature of patient accommodation and the layout of the department.
- DEM inefficiencies impact on the efficiency of the Hospital as a whole. DEM is a key propellant of Hospital activity and inefficient work flows and admissions cause significant bed management issues and bed block and exit block problems.

As a result, the major changes being experienced in the clinical, teaching and research practices in emergency medicine are rendering the service unsafe and inefficient as it endeavours to function in a work area designed and built more than 35 years ago.

In response to the above, planning for a new Department of Emergency Medicine for the Royal Hobart Hospital commenced in December 1999.

The initial proposal to redevelop the DEM in its current location included significant pre-requisite works and post-occupation works. It would have a major impact on adjacent areas and the Department of Medical Imaging. Following a series of project adjustments, a final expenditure allocation of \$8.71 million was approved.

The planned duration of this complex proposal, including post-occupation works, was 187 weeks, with a proposed end date of December 2004.

In 2001, a detailed review of the DEM project proposal highlighted the following problems:

- Inadequate DEM capacity and no scope for expansion;
- Security and operational risks associated with the separation of the main DEM functional area from the Observation and Short-Stay Unit and the division of the Administrative Area by a major public access; and
- Unacceptable risks in operating a “temporary” DEM and a double relocation of DEM functions.

Based on Australian College of Emergency Medicine and the Victorian Department of Health and Safety guidelines, the current DEM has a maximum physical capacity to manage approximately 30,000 presentations per annum. Despite these recommendations, the DEM currently manages around 37,000 presentations each year. These figures support accreditation findings of inadequate and inefficient space and work flow arrangements.

The RHH Strategic Asset Management Plan (SAMP) was developed during 2002 and was presented to Treasury in January 2003. The SAMP included an evaluation of options for a new DEM facility and resulted in additional Clinical Information Project funding of \$2.34 million for the 2005-2006 financial year in support of a revised proposal to construct a new DEM below the Forecourt of the RHH.

The original DEM redevelopment proposed a design that could sustain around 26,400 presentations per annum. This configuration, while meeting design standards, was clearly inadequate to support current and future usage rates. The SAMP-initiated proposal to redevelop the DEM under the Liverpool Street Forecourt took current usage and future growth into consideration, resulting in a design that meets current recommended standards and provides the capacity to manage up to 45,000 presentations per annum. This design meets the current and projected future needs of the community in an environment that considers the needs of all stakeholders.

Work on the revised project progressed, including considerable stakeholder and community consultation, site visits to mainland centres and the appointment of architectural consultants.

The Design Development phase of the project was completed in December 2004 with stakeholders agreeing to the final schematic plan. Despite significant changes to the original proposal, the projected completion date is November 2006, only 11 months behind the indicative completion date of the original Clinical Information Project approval.

In addition, provision has been made for future expansion. The adjacent Patient Information Management Services section (PIMS) occupies a significant area of the building for record storage. As the Hospital transfers from its current paper-based system to an electronic records format, considerable floor space in PIMS will become available, should the need for future expansion of the DEM arise.

The new design incorporates the following features in response to needs identified in the accreditation process and through stakeholder consultation:

- Improved security arrangements and the inclusion of better facilities to manage mental health presentations;
- Separate areas for the management of paediatric and gynaecological patients.
- Inclusion of a number of isolation bays;
- Integration of medical imaging into the resuscitation bays and the inclusion of additional imaging modalities within the DEM;
- Establishment of a ten-bed Short-Stay Ward to improve the admission process and ease bed and access block issues. This area is designed for potential isolation from the rest of the DEM in order to create a dedicated Isolation Facility within the Hospital;
- Centralised staff areas to provide a greater degree of patient supervision within the department; and
- Increased overall capacity to meet community needs.

## CONSULTATION AND BRIEFING

The planning for the new DEM at the Royal Hobart Hospital has been prepared in close consultation with the Executive User Group appointed by the Hospital. Regular fortnightly meetings have allowed plans to be presented to the group by the Consultants and comments from the Users to be received, reviewed and agreed to. Amendments formed through this process have been progressively incorporated into the planning, resulting in the plans included with this report.

Additionally, consultation has been undertaken with the Tasmanian Ambulance Service, the Police, the Hospitals Infection Control Department, Medical Imaging and Engineering Services.

A Functional Design Brief was developed prior to commencing planning and was the starting point for the design. This has been reviewed and modified progressively with the Executive User Group as the planning has evolved.

The major planning constraint has been the limitation of available space for the Department to the area defined by the Hospital Forecourt and the adjacent undercroft area on the Campbell Street side of the site. The adjacent area occupied by PIMS is not encroached upon. The limitation will have a minimal impact on the clinical Areas but some compromise will necessary for staff offices and meeting rooms.

### Vehicular Access and Entrance

#### Department of Emergency Medicine

To facilitate the rapid transfer of patients, vehicular access will be provided by a ramp from Liverpool Street that leads to the Ambulance Entrance. It will allow space for six ambulances and emergency vehicles as well as a drop-off for ambulant patients coming by private car. The access ramp configuration will allow a card operated access or remotely operated boom gate to be installed that will enable isolation of the vehicular entrance and limit access solely to ambulances in case of a disaster.

Under normal conditions, separate entrances will be provided for patients arriving by ambulance and walk-in patients. Each will have an airlock fitted with electric remotely controlled locks which will serve a dual function as a security filter.

Additionally, a stair and lift from the Forecourt level will discharge into the ambulant access airlock, providing quick access from the upper level.

The stair and lift will be incorporated into a new, free-standing building within the Forecourt. It is proposed that the building include a coffee shop, to allow more free space within the existing Hospital Foyer. The proposed architectural form of this building is a transparent “building in space” with its own contemporary identity so as to not compromise the heritage values of the existing Hospital Façade. The transparency and building form will bring natural daylight into the Ambulant Entrance and Waiting Area.

## RHH Liverpool Street Forecourt

The proposed Forecourt plan design acknowledges that this space combines the functionality of being the front door of the RHH to the Public, RHH Staff, visiting medical officers and services. The Forecourt is also the only external green space for RHH patients. The Façade and space is registered with Tasmanian Heritage Council and the Hobart City Council.

This area is also the major aspect of the Liverpool Street Civic Administrative Precinct.

The design proposes to:

- Provide only essential parking, reinstate public urban space and retain the original horse-shoe circulation pattern
- Introduce urban planting to create a more open and natural space
- Provide a foyer with lift and a stair for access to DEM as well as a separate café
- Create skylights into DEM workspaces
- Introduce high quality urban design elements including street furniture, reflective pools, integrated lighting and landscaping. The design will be co-ordinated with Hobart City Council for the upgrade of the Liverpool Street Civic Precinct. This plan includes the proposal to expand the Forecourt by reducing the traffic lanes from three to two, providing more civic and community space and enhancing the RHH Forecourt and Entrance.

## Planning

### Resuscitation

The ambulance entrance will provide fast and uninterrupted access to three Resuscitation Bays and an Isolation Resuscitation Room. The Isolation Room will be self-contained with airlock access and its own dedicated ensuite and Sub-Dirty Utility Room. It will also have the flexibility of being able to be opened directly to the Resuscitation Area with a large sliding door when not needed for isolation purposes. A gantry-mounted x-ray unit will serve the four Resuscitation Bays.

Two Distressed Relatives and Bereavement Rooms will be located adjacent to the Resuscitation Area, accessible from the Ambulance Entrance but separate from clinical areas. These rooms will have their own toilet and beverage bay.

### Ambulant Patients

Walk-in patients will enter a Central Registration and Triage Area which will be located between the Ambulance and Ambulant Entrances for control and ease of supervision of each area. A Security Office will be located with these functions to be easily accessible to Entrances, Waiting Areas and the Central Treatment Area.

The Waiting Area will be divided into sections for paediatric patients and parents, patients with respiratory problems and general patients to allow privacy. Six Fast-Track Treatment Areas and an Eye Room for less serious cases will be accessed

separately from the Acute Treatment spaces. The Fast-Track Area will have close proximity and access to Medical Imaging.

Within the Acute Care Area, Patient Treatment Bays will surround a central Staff Station incorporating a Medication Room and Pathology Bay. The Medication Room and Pathology Bay will be partitioned with part height glass screens for uninterrupted visual supervision of the area. To maximise the visibility into Treatment Bays and supervision of patients, the floor of the Staff Station will be raised above the general floor level. A Quiet Area with an Isolation Room will be immediately adjacent to the Acute Area. A five-space Paediatric Area will be accessible from both the Acute and Fast-Track Areas.

A private Gynaecology Room with attached ensuite will be controlled from the Staff Station. Two Seclusion Rooms are near the Staff Station for close supervision. These will be accessed from either the Ambulance Entrance or the general Waiting Area.

### Medical Imaging

Medical Imaging incorporating a General X-Ray Room, CT Scan and Ultra Sound Room will be located close to the Fast Track Area, providing for the majority of patients seeking general x-rays and also having direct access from the General Treatment Spaces. The proposed location will be flexible in case of the expansion of the Hospital Medical Imaging Department if it is relocated into the area presently occupied by PIMS.

### Treatment or Procedure Rooms and Stores

Two Treatment or Procedure Rooms will be grouped with Stores and support spaces off the rear corridor. A Sterile Store will be located between the two.

### Administration and Staff Facilities

Administration Offices will be grouped at the eastern side of the site, away from the public and Treatment Areas but central to the Observation Ward and the Resuscitation Area. These will be close to and easily accessible from the main Treatment Area.

Office and clinical staff will have access to a small Meeting Room and Library within the Administration Area. Larger departmental, clinical meetings and staff seminars will be catered for with a Tutorial Room and Audio Visual and Tele-Medicine Room that will be capable of being opened up to create a large single space, should one be required.

These will be located adjacent to the existing PIMS lift and may be accessed from other areas of the Hospital without compromising the functioning of DEM.

Staff facilities including Locker Rooms, Toilets, Showers and a Staff Lounge will be grouped with the Administration Area and will be accessible from the rear corridor.

## Observation Ward

An Observation Ward will be located within the area defined by the existing undercroft, adjacent to the Campbell Street entrance. It will have eight beds in a screened but open configuration and two single bed rooms with ensuites. A central Staff Station will have maximal visual supervision of the area. This area will be supported by Clean Utility, Dirty Utility, Store and Beverage Pantry.

An airlock will provide access to the Ward, facilitating its use as a large Isolation Ward, should the need arise. Its location will enable access from the Campbell Street Lobby and the A Block lifts. Alternative ambulance access will be available from the existing parking area at the rear.

Controlled access through the corridor doors adjacent to the Administration Area will provide an increased level of isolation and security from the DEM, should it be required.

## Forecourt

The project is proposed as a single-stage development. The construction phase will preclude access through the Forecourt to the Main Entry, the Holman Clinic Lobby, Radiology and other minor entrances.

The proposal includes reinstating the Holman Clinic Lobby, the expanded Main Entry Lobby *porte cochère* and Radiology. The Main Entry redesign includes provisions for patient transfer space without congestion at Main Entry doors, Emergency Services vehicle access and short-term parking for up to 12 vehicles.

Liverpool Street is at this point a one-way dual vehicle carriage way, six metres wide.

## Environment

The submission of the Department of Health and Human Services advised that consultants were conscious of a perception that locating the new DEM at the lower level, below the Hospital Forecourt, may result in a dark and unfriendly environment. Potentially, a lower ground location could suffer from a lack of direct access to the outside and natural daylight.

However, locating the DEM at this lower level has significant environmental advantages, with improved thermal insulation and less exposure to solar radiation. It is proposed to incorporate skylights within the landscaped Forecourt, positioned to bring daylight to strategic locations such as the central Staff Station, circulation areas and Waiting Areas.

Careful interior design proposes the use of durable materials and fittings, furnishing and finishing the spaces in harmonising colours that are contemporary and soothing. This will create a non-threatening, friendly and comfortable environment for patients, doctors and staff alike.



## Summary of Clinical Spaces

### Emergency Department:

Resuscitation Bays	3
Isolation and Resuscitation Room	1
Triage Bay	1
Seclusion Rooms	2
Monitored Bays	8
Adult Treatment Bays	10
Isolation Room	1
Gynaecology Room (with ensuite)	1
Eye Room	1
Paediatric Treatment Bays	4
Paediatric Treatment Room	1
Fast Track Treatment Bays	4
Fast Track Treatment or Consulting Rooms	2
Procedure or Treatment Rooms	2
<hr/> Total	41

### Observation Ward:

Single Bedrooms (with ensuite)	2
Open Bed Bays	8
<hr/> Total	10

### Medical Imaging:

General X-Ray Room	1
CT Scan Room	1
Ultrasound Room	1
<hr/> Total	3

## DESIGN CONCEPT

### History

Whilst the history of the Royal Hobart Hospital stretches back to the early colonisation of Tasmania and the settlement of Hobart Town, the structural changes from the 1850s to the present day to the Liverpool Street frontage are the most pertinent to this development.

The following is a snap-shot of past developments:

1842	Hobart Paupers Hospital was centrally located on the Liverpool Street frontage (in the middle of the existing courtyard space)
1850s to 1930s	Additional developments to the edges of the site fronting Campbell Street and Collins Street

1938 to 1940s	Original sandstone Hospital demolished and Acute Wing developed (designed by Leighton Irwin)
1963	North East Children's Wing casualty completed
1970	Intensive Care Unit developed
1971	Operating Theatres re-developed
1980	Queen Alexandra Maternity Hospital on the corner of Argyle Street and Collins Street opened
1972 to Present Day	Internal refurbishment and infill developed
1988 to Present Day	Entrance Canopy constructed and Forecourt landscaped

Whilst other parts of the site were redeveloped for the Royal Hobart Hospital's clinical teaching facilities, the above development stages were focused on the Campbell Street, Liverpool Street and Argyle Street frontages.

Throughout all development of the Hospital, the most characteristic feature of the site has been the retention of the north-facing landscaped courtyard with its role as the Main Hospital Entry drop-off and parking area and its more recent function as a public and patient seating area.

Another hidden feature of development in the 1970s and 1980s was the construction of an underground service tunnel (approximately three metres deep and two point four metres wide), which crosses the courtyard from west to east.

This underground infrastructure facility obliterated what remained of the original hospital foundations but was fundamental to the concept of a modern, integrated hospital facility.

Current development strategies maintain the function of the original courtyard.

### Heritage Approach

In putting forward the proposal to house the new DEM below the level of the existing courtyard, the Design Team acknowledged the importance of the Liverpool Street frontage of the original 1938 Leighton Irwin Acute Wing elevations. This included the architectural symmetry of the entry as well as the functional amenity of the horse-shoe driveway used for the pick-up and drop-off patients and visitors.

Whilst this is a constraint that might otherwise prohibit development prospects on what is already a highly pressured site, by accepting that the building can be accommodated below ground level, significant opportunities are opened up for a Civic space, as well as the consolidation of the courtyard as a predominantly pedestrian and patient use area.

Under the proposed development, at the courtyard level the existing sail structures would be removed and replaced by a structure which is less dominant and subservient in scale, respecting the symmetry of the Leighton Irwin Building.

### Design Approach

Fundamental to the consideration of design solutions for the proposed new DEM was the need for a contemporary, functional, efficient and safe environment for a facility which is at the core of modern Hospital infrastructure.

The efficient delivery of critical response medical services for a variety of unexpected or life-threatening health occurrences is paramount in modern hospital care. The Royal Hobart Hospital DEM is the first port of call for a spectrum of medical situations, from an individual sporting injury to multiple victim motor vehicle accidents. It is from the DEM that patients progress to other areas of the Hospital for recovery.

Appropriate locations for a new DEM within the Hospital complex have been sought, realising that the existing critical response location needs to remain operational during the predicted 15 to 18 month construction period.

During the process of site selection, consideration has been given to the nature of vehicle and pedestrian movement in and around the Hospital precinct bounded by Liverpool Street, Campbell Street, Collins Street and Argyle Street. Investigations identified lower traffic levels in Liverpool Street and the capacity to develop a Civic Precinct sufficient for existing traffic as well ambulance approach and egress.

After an analysis of the options, the only design preference that would permit existing functions to be retained safely during construction, was the development of the DEM under the courtyard level in Liverpool Street.

### **The Design Response**

Central to the concept of the development of the Department of Emergency Medicine below the existing Royal Hobart Hospital entry courtyard was the encouragement of the potential for a Civic Precinct in Liverpool Street.

The concept enables a subterranean location for the DEM, an improved urban design and a landscaped solution for the existing courtyard. It also offers potential partnering with the Hobart City Council to create a Civic Precinct in Liverpool Street, from Campbell Street to Argyle Street.

The design team's vision for this part of Liverpool Street recognised the pre-eminence of such buildings as the Royal Hobart Hospital, the Magistrates' Court, the Remand Centre and the Central Hobart Police Station.

This short section of the street has been assessed as a functional necessity in emergency situations of a larger scale. The proximity of these buildings allows for the street to be cordoned off for in case of a major critical security incident. In the event of a security breach, the sectioning of this area would ensure uninterrupted flow of emergency and public vehicles in and out of the Hospital, Remand Centre and Police Station.

From the perspective of improving the Hobart Town Centre, the Liverpool Street axis commencing at the Railway Roundabout offers the potential for an attractive entry to the central City Precinct. This area of the urban landscape could be updated and

improved through better-designed street furniture and tree planting, such as is planned for the RHH Forecourt.

Architecturally, the design for the courtyard will develop this theme through the selection of high-quality paving materials such as stone, stainless steel, reflective water basins and glazing, with opportunities for incorporated artwork. The garden area would also be improved with roll-out turf and appropriate tree planting.

All structures will be designed to be subservient to and recognise the symmetry of the original Leighton Irwin building and the horse-shoe entry space.

In order to enhance activity within the courtyard, a small coffee shop and patisserie will be located within the stair lift access area, which joins the courtyard to the lower-level DEM.

This structure will be transparent and will stand alone from the original buildings as an object in the courtyard space. It will be unconnected, other than by an open landscaped pathway.

Specialised lighting is planned to highlight the reflective pools, trees and artworks. Normal safety and walkway lights will also be chosen according to the overall design.

As an integral part of the design and as requested through preliminary meetings with the Tasmanian Heritage Council and the Hobart City Council, long-term parking within the courtyard space will be limited. The horse-shoe circuit will retain some parallel drop-off spaces and will include access and disability parking. This will maximise the pedestrian, patient and civic use of the area.

### **Archaeology**

There is evidence that the original early colonial buildings in the vicinity of the courtyard have been completely demolished and removed during the subsequent phases of development. However, this development may permit further archaeological investigation.

The Department of Health and Human Services will appoint an archaeological team to investigate the site as work proceeds to dig to a depth of between four and five metres across the courtyard, to the edge of the road reserve.

### **Temporary Enabling Works**

In order to facilitate the construction of the new facility, once planning and building approval have been achieved, temporary works will be undertaken to relocate the Main Entry access to the Argyle Street frontage. The Campbell Street entry will also be improved, with the inclusion of ramping as required. This will remain in place until the commissioning of the new DEM and the reinstatement of the existing Main Entry. Ambulance and DEM access will remain in Argyle Street until the new facility is commissioned in December 2006.

Maintaining access to the Hospital during the construction period is a key aspect of the project. The RHH is currently working with a Senior Traffic Engineer and the

Hobart City Council to develop a suitable plan for the management of traffic flow and patient access during the building process and the Liverpool Street Forecourt closure. The Plan will include the provision of suitable client drop-off and pick-up points at the Argyle Street and Campbell Street entrances.

A contract has been entered into with Sultan Holdings Pty Ltd for the provision of additional parking spaces to compensate for those lost as part of the capital works. Current parking spaces in the Liverpool Street Forecourt will be re-located to some existing spaces, as well as spaces about to be created.

### **Traffic Management**

Investigations have favoured access and egress for ambulances to the new DEM from Liverpool Street. In so doing, preliminary discussions have been held with Hobart City Council on opportunities for public pedestrian footpaths and the reduction of parking along the Hospital side of Liverpool Street.

Such a design will permit safer traffic delineation, whether vehicle or pedestrian, and will allow for a street tree planting zone from Campbell Street to Argyle Street.

This development would take up the existing pavement and car parking to the edge of Liverpool Street. However, there would be no effect on the existing three lanes required for traffic into the city along Liverpool Street.

### **Structural Hydraulic Engineering**

The sides of the excavation would be supported by pre-cast concrete retaining walls with appropriate measures to prevent water ingress. Temporary support to excavations would generally be avoided by using progressive excavation and wall panel erection. The ground is sandstone, so no specific difficulties are anticipated.

The adjacent multi-storey buildings (A Block and H Block) have basements and foundations at approximately the same level as the PIMS and DEM building, so underpinning will not be required for those buildings. However, the single-storey structure in front of C Block will be underpinned where required.

The basement floor would be a slab-on-grade with under-floor drainage to preclude problems with hydrostatic uplift.

The new Forecourt would have a pre-stressed concrete slab. This slab and its supporting walls and columns would be of fire-rated construction. The slab would be designed for heavy truck loadings. It would have a flat soffit, free of beams, to allow maximum space for mechanical services.

The pre-stressed slab should already be waterproof, but an applied waterproof membrane will also be provided, as well as additional waterproofing measures at slab joints.

Stormwater drainage would be as follows:

- The courtyard would have falls in topping slabs and finishes to pits.
- Downpipes would run inside concrete columns to drains under the basement.
- Courtyard levels would be such that in the event of blocked drains or flood, any overflow would be to Liverpool Street, not into other Blocks.
- Ambulance roadway drainage would be into the main stormwater system to Campbell Street, but with a back-up system of pit and pump to Argyle Street, in case of blocked drains or flood conditions.

## **Building Services Engineering**

### General

The building engineering services for the new DEM at the Royal Hobart Hospital are being designed in accordance with the current requirements of the Department of Health and Human Services, the provisions of the Building Code of Australia and Australian Standards, including Department of Health and Safety (Victoria) Guidelines for Hospitals and Day Procedure Centres 2005. Environmentally sustainable design provisions are being incorporated into the plans to ensure energy efficiency and longevity of plant, equipment and finishes.

### Mechanical Services

The building would be provided with background heating and cooling via in-slab water pipes, with supplementary local heating and cooling derived from the central plant, delivered through air-conditioning systems to serve specific functional requirements and heat loads.

Resuscitation and other critical treatment areas would be provided with high air change rates to minimise the risk of cross-infection.

Isolation rooms, including the Observation and Isolation Ward, will be provided with positive (or negative) pressure regimes, in accordance with the brief. Supply or exhaust air would be fitted as appropriate with High Efficiency Particulate Air (HEPA) filters.

Procedure rooms would be fitted with HEPA quality filters on the supply air systems.

Specific loads such as imaging equipment (CT scanner) would be provided with a dedicated cooling plant.

Medical gases would be provided in accordance with the requirements of user groups, including the recommendations of the Australian College of Emergency Medicine, and would be connected to the existing Hospital medical gases infrastructure.

## Electrical Services

The existing high voltage electricity supplies to the Hospital site would be relocated below the new building. The sub-station that serves the immediate vicinity of the DEM would be upgraded to meet the additional requirements.

Several switchboards would be provided to serve light and power within each fire and smoke zone and functional area.

Lighting would generally be provided by energy-efficient T5 fluorescent tubes, supplemented by colour-corrected lamps in clinical observation areas. Fittings would be located to the side of corridors to prevent the “soldier effect” experienced by patients on trolleys. Supplementary wall lighting would be provided to mitigate the institutional atmosphere which may otherwise be created. Lighting levels will be in accordance with current international and Australian standards.

Body-protected power would be provided to all patient care areas, with cardiac protection in critical care areas. A new standby generator and uninterrupted power supplies to selected areas would be provided to ensure the ability to continue operations in the event of a mains power failure.

An important consideration has been the need to keep the DEM operational in case of failure or a deliberate attack on the existing Hospital infrastructure. Secondary communication cables and fibre optic cables direct to the DEM from Liverpool Street and the new dedicated generator form part of this strategy. The generator would provide power to supply air, exhaust systems, essential power supplies and half of the lighting.

External lighting would enhance the ambience and heritage features of the Forecourt and surrounding buildings, whilst providing clear direction and safe lighting levels to external areas and ramps leading to the DEM.

Master antenna television services would be installed in the Waiting Areas Paediatrics and the Observation Area.

Data services would be reticulated from the DEM Information Technology Room at the Department of Health and Human Services, currently Category Six standard, to all locations requiring data, closed circuit television, telephony or patient monitoring services. It would have copper and fibre-optic linkage to the Hospital Main Distribution Frame Room and the IT Room.

## Nurse Call and Communications

The RHH places emphasis on communication between staff members (and also between patients and staff) to ensure that an enhanced level of care is provided. A nurse call system would be zoned from the existing nurse call and paging system with three levels of call:

- Nurse Call;
- Staff Assist; and
- Emergency Call.

These calls would be made and identified through sound and colour-coded LED displays, strategically located in corridors and nurse stations.

Certain staff members would be provided with a local mobile telephone system handset (DECT) to allow communication within the DEM and the Cafeteria. The Hospital-wide radio system will also be available to some staff members in order to contact orderlies when required.

Ceiling-mounted speakers, specialised telephone handsets and a public address microphone system would be used for local paging, within the confines of the DEM.

Telephones would be placed at the Entrances and Isolation Rooms to allow hands-free communication to the triage Area, or other fixed internal locations.

### Electronic Security

Security provisions for staff are paramount and an extensive closed-circuit television network to external entries, roadways and internal areas would be installed and connected to the new Hospital web-based closed-circuit television system.

Access control to the DEM building would be provided by proximity cards that operate electronic locks.

An extension to the existing Hospital security duress system would provide further protection to staff through covert wired push-buttons, placed in important areas, which would indicate an alarm to the security area and the external monitoring station.

### Fire Services

The building would be fitted with sprinkler protection, also providing a valuable increase in fire compartments. It would include smoke and heat detection for early warning in patient care areas, in accordance with the Building Code of Australia. Additionally, full evacuation alarm systems (EWIS) compatible with the rest of the site would be included.

### Vertical Transportation

The building would be connected from the Forecourt to Reception by a 14-person lift providing equal access for disabled persons.

The proposal is to upgrade an existing lift in C Block which would connect with the DEM for use as bed and passenger lift for transfer to wards and theatres.

### Planning Approval

The project has received support from many members of the community, including Hospital staff, medical consultants and the City Fathers.



In March 2005, the project was granted full Hobart City Council planning approval, with requirements stipulated for Enabling Works and Accessibility.

Issues surrounding the heritage aspects of the site were resolved with representatives from the Tasmanian Heritage Council and the Hobart City Council.

A requirement of the Planning Approval is that an archaeological investigation be undertaken on site at the commencement of the construction process in order to uncover and record what is suspected to remain of the foundations of the original colonial hospital.

### **Project Budget**

The current project budget is advised as:

<b>Construction</b>	
Building Works	\$9,613,000
Site works	\$2,146,663
External Services	\$254,500
<b>Total construction cost</b>	<b>\$12,015,000</b>
<b>Special provisions</b>	
Relocate existing services	\$115,000
Environmentally sustainable design	\$200,000
Escalation, contract rise and fall	\$275,000
Design and construction contingency	\$1,265,000
Post occupancy contingency	\$130,000
<b>Total Special provisions</b>	<b>\$1,985,000</b>
<b>Professional and other fees</b>	<b>\$1,384,000</b>
<b>Total Project Budget</b>	<b>\$15,384,000</b>

Note: specialist medical equipment is being funded from another source.

### **EVIDENCE**

The Committee commenced its inquiry on Wednesday, 6 April last with an inspection of the site of the proposed works. The Committee then returned to Parliament House whereupon the following witnesses appeared, made the Statutory Declaration and were examined by the Committee in public:-

- Ted Rayment, Chief Executive Officer, Royal Hobart Hospital;
- Dr Alastair Meyer, Director, Department of Emergency Medicine, Royal Hobart Hospital;
- Anne Barwick, Clinical Nurse Manager, Department of Emergency Medicine Royal Hobart Hospital;
- Peter Alexander, Manager, Facilities Management Branch, Department of Health and Human Services;

- Bill Cochrane, Senior Project Manager, Facilities Management Branch, Department of Health and Human Services;
- Tim Penny, Philp Lighton Architects;
- Andrew Shurman, Crawford Shurman Architects; and
- Ian Bennett, Health Science Planners

## Overview

Mr Rayment gave the following overview of the project:-

*The Hospital and Ambulance Service Division of the Department of Health and Human Services on behalf of the Royal Hobart Hospital (RHH) ... seeks approval for the relocation and redevelopment of the Department of Emergency Medicine (DEM) in order to meet the growing emergency medical care needs of the Tasmanian community.*

*The new facility will be developed under the Liverpool Street Forecourt of the RHH and this facility will incorporate increased ambulance access, 18 patient cubicles and an additional Discrete Clinical Area for the specific care of paediatric patients. There will be four Resuscitation Bays, two Seclusion Rooms for the assessment and management of mental health presentations, dedicated Isolation Rooms and Procedure Rooms. An area for the management of patients not requiring admission to the DEM is also included and Waiting Areas have been designed to allow for the separation of adult and paediatric patients. Short-stay accommodation will be established as part of the redevelopment and this area will cater for the needs of those patients requiring extended periods of observation but who do not require admission to the Hospital. This unit will provide services to patients in an environment conducive to an overnight stay, thus reducing Hospital bed block. Overall, the new facility will provide for a capacity of greater than 45 000 presentations per annum, compared to the 37 000 presentations currently seen each year in the department. The current physical capacity is only suitable for 30 000 presentations.*

## Planning

Mr Bennett, whilst speaking to the plans, made the following submission to the Committee in relation to the planning issues:-

*We will start with the upper level obviously to put it into context ... We have the existing Hospital here, Argyle Street and Liverpool Street. The ramp going down comes from ... close to Campbell Street, down through underneath and back again up close to the exit to Argyle Street. Ambulances come from Campbell Street or from Liverpool Street from the roundabout, through down and then exit north of Argyle Street or through the city further along Liverpool Street.*

*The site constraint we had was that we were limited in our planning. Even though the original program suggested that we need more space than we have actually used, it is limited by the outline of the existing buildings and an area of under-croft in this area here.*

The floor level of this building relates exactly to the floor level of the building we were in this morning. There is a facility for connection to that building ... and a connection through here into the Medical Records section, so there is a direct connection through to Medical Records from Emergency, which is a very important relationship.

... We have four Trauma Bays with direct access off the ambulance parking and the ambulance discharge area, through an airlock and through into a holding area and then through into each of those three areas.

This particular bay here, or this room here, also has the added facility to be used as an Isolation Bay. There is a direct access from the Ambulance Entry, through into an airlock and through into the separated area, and that can be sealed off ... if we get an incident with SARS or some similar nasty problem we can bring people in and isolate them in there without contaminating the rest of the Emergency Department.

Each of these bays will have x-ray facilities, with a gantry over the top of each of the areas. Once the patient is in there, they don't have to be moved. They can be stabilised within that area before they transfer them to other parts of the Hospital.

You have the Reception and Triage Area between the Trauma Resuscitation Area and the general Ambulant Entry ... and that supervises the Ambulance Bays, the airlock as you come in and back onto the other side. This room is the Security Area, and you saw this morning how important that was, and that Security Bay has access directly out into the general Clinical Area, back into the Ambulance Bays, back into the Resuscitation Area or out into the Waiting Room, so it is very centrally located. The brown area is the offices and they are slightly more generous than Alastair's office and other offices you saw this morning, and it is noted what the individual offices are. The director's office has an overview of the Ambulance Bay. It also has ease of access through into the Trauma Area, as well as being relatively isolated from the hurly-burly of the public space here, but he is readily accessible. We have other offices and a Meeting Room and combined Library adjacent.

In relation to the staff specialists' office ... we have four rooms instead of the one large area, and we have four rooms that are shared by two people in each room, so we have made spaces for the staff specialists. We have a room for nurses for their write-up. We have a specialist equipment nurse and an educational nurse sharing an office, secretarial space and the office for the clinical nurse manager. This connects to the main circulation system and we have staff facilities - Change Rooms, Toilets and Showers, male and female, and we have the staff Lunch Room. The Tea Room is quite large. The circulation continues through to the Observation Ward...

There is the main Acute Area and the Entrance for ambulant patients. The ambulant drop-off is through this area here, and they come through an airlock into Reception and general triage and the Waiting Area to the right. The airlock serves two functions, one as an airlock obviously, but it is also a security screen at particular times of the day. That door can be controlled from the Reception Area, so people come into this area and they are vetted and screened before they can come through into the general Waiting Room.

The Waiting Area has been broken down into three separate functions. One is the general Waiting Area, which is this larger area; and then we have a separate area for paediatric patients, so parents with children can be isolated away from other people within the Waiting Area and feel safe and secure and keep their children away from other people. We also have a special facility for patients with potential respiratory problems, so they can be isolated again away from the Waiting Area so that we do not get cross-infection. They are put into this area and we have separate exhaust ventilation allowed for that area.

The normal procedure will be that the patient will come in, be triaged and their condition will be determined and they will either be told to wait or they will be taken directly through into the general Acute Treatment Area. In this general Acute Treatment Area, we have individual bays all the way round, surrounding a central Staff Station. That central Staff Station is raised above the general floor area so that the staff within it have a good overview of all of those spaces. We have two Isolation Rooms for disturbed patients and they are able to be overviewed from the Staff Station directly.

Associated with this we have a dedicated area, a Gynaecological Area, for gynae patients with its own ensuite and a large sliding door to the general Acute Area. When it is not needed as a gynae room it can be used as a general treatment bay and that is overviewed by the Staff Station there. On the opposite side to that we have a dedicated Eye Room and that is either accessible from this side or directly from the Waiting Room. If somebody has a problem they are directed into there, again without having to go through the general Acute Treatment Area.

Extended from that we have what we call a Quiet Area, where there are four bays where patients who need to be in a Quiet Area can be put, away from the general hurly burly of this space and also included in that area we have another Isolation Room. This Isolation Room is for immune compromise patients and it is positively pressured rather than negatively pressured and that has its own associated locker and toilet. There might be somebody who is undergoing chemo for cancer treatment or is in a similar situation.

Below that we have a dedicated paediatric Area with four Paediatric Bays - they are quite large bays - and a dedicated Paediatric Treatment Room with its own Staff Station which supervises that area. That area for paediatrics is accessible close to the Paediatric Waiting Area directly through to there without having to go through the Adult Treatment Area, or a patient can be brought directly through from the Resuscitation Room into that area.

Below that we have a Fast-Track Area for patients who come in and might need Panadol or a bandaid or something - slightly more serious than that - but the idea is that, rather than clog up the working of the Acute Area where the high-powered work is done, these patients are brought directly into the Fast-Track Area, they are seated on a chair, they are talked to, they are stitched up or given a Panadol and then they are sent home immediately. That area has a small Sub-Wait Area associated with it and that Sub-Wait is available for use for relatives or friends of paediatric patients.

The location of this related to Medical Imaging is important because a lot of medical imaging patients, particularly general x-ray, come from this area where they are fast-tracked through rather than come through this area, so if they come in with a broken arm or collarbone they are fast-tracked through here into x-ray and then back out quickly.

At the rear, along this main circulation spine, we have a number of important rooms. You saw the Minor Procedure Room this morning. At DEM we have two Minor Procedure Rooms - one here and one here - and we have a Clean Store located between the two, accessible from each of those two areas so that we don't get a problem with the storage of consumables that we have within the existing system of the DEM.

This access through here leads to this new corridor here which goes through to a lift which will access the theatres and the ICU immediately above, so it is a Fast-Track Area to theatres without having to go through any other department.

I am just repeating what I have said essentially, the Sub-Wait Area for patients gives access to Fast-Track with eyes and gynae. There are six Fast-Track Treatment Areas; there are four small bays and there are two what we term "lay-down Fast-Track" which are really minor doctors' consulting rooms essentially.

In the Medical Imaging Area we have a general X-Ray Room; we have an Ultrasound Room and a CT Scanner Room. There is some office accommodation for Allied Health staff who work in that area as well - the paediatric, eye and gynae emergency.

That is the Medical Imaging Department which is the general x-ray and within the general x-ray we have an OPG machine which is for x-raying the mouth and teeth and a CT scan room with a common Control Room and Reporting Room immediately shared between the two. Ultrasound is located here and that is accessible from here or from the back corridor or directly from the Acute Treatment Area.

We have made provision for the general x-ray access doors to be immediately opposite the doors from the Acute Treatment Area so patients can be taken straight in, without too much of a long trip. Immediately below that we have the connections through to Medical Records and we have two Meeting Rooms, one as a seminar/staff education room and the other as a telemedicine room. They can be opened up so that we have one large meeting area for large seminars or large education programs. There is room for 25 people in each of those so we can usually fit 50 people in those two areas when they are opened up into one space.

One of the advantages of the Emergency Department within this area, apart from the logical consideration of it being the only real area available, was that we have access without difficulty to the three areas of the Hospital. We can go through to the lifts where the existing DEM is from this area to the building above; we can go back through this way to the lifts in the building off Campbell Street; and we can connect through to the new lift in this area here, which is behind the existing building and goes directly up into theatre.

There is the Observation Ward or a Short-Stay Ward, which will be controlled by DEM. It goes within an area of under-croft that exists. It is already excavated down to most of the level currently. We have ten beds within that area: There are eight in an open-plan configuration and we have two single beds with their own ensuite for maybe patients who require isolation. The central Staff Station has an overview of these patients and also of the entrance. We have located the entrance in this particular area because it is accessible from the Campbell Street building through a new set of doors here, without having to go through DEM, or you can access from DEM. The other added advantage is we are able to bring an ambulance through to this back door, so that if we have a patient who requires isolation, we can bring them through into here again without compromising the integrity of DEM. The huge advantage of this is that we were able to isolate this off from the rest of the Hospital by closing these doors here, having access through here for ambulance and access through here for staff and visitors. We have an airlock at the entrance and this will be set up as an Isolation Ward so that it will have the proper HEPA filtering and exhaust from that area, so if we do get a SARS outbreak we are able to bring the patients through into this area, without compromising the rest of the department.

One important issue: perhaps there is a perception that, because we are going below ground, it will be dark and dull and dim. There are a lot of advantages in being below ground in terms of environmental sustainability. You get good insulation. You do not have the problem of heat build-up which you have on exteriors of buildings. But we are also able to bring in areas of natural daylight in key spaces such as over the central Staff Station in the middle of the Acute Treatment Area. We have areas through the corridor at the rear, and we have a large skylight proposed over the Waiting Area and the Reception Area at the front.

### Compromise in Design

The Committee questioned the witnesses as to what, if any, compromises were made in the design phase of the project and in particular whether greater floor area would be desirable. The witnesses responded:-

*Mr BENNETT*- The original briefing document called up a slightly larger area than we have and because of constraints, there were some minor compromises that had to be made. We worked through those with the executive user group of Alastair and Anne and we are comfortable with what we have. Alastair might like to comment.

*Dr MEYER*- I think ... there is always going to be compromise. If we had a brand new flat bit of grass, then I think we would do a few things differently and maybe a few things bigger. So the answer to your question is that, yes, we have compromised on things.

*Dr MEYER*- I guess the office space and accommodation is smaller and fewer than we thought.

*Ms BARWICK*- We have dropped a gynae, which was a private, single cubicle with ensuite.

*Dr MEYER - We have dropped an x-ray room; it was on our wish list to have two x-ray rooms. And there are other constraints around that. To have two x-ray rooms we would need two radiographers and we do not have that. So there are issues that add to the compromise. As I mentioned to you this morning, Royal North Shore went from 30 000 to 45 000 very quickly. It would be nice to have capacity for major disasters, things like that, but how long is a piece of string, I suppose. We could keep building it forever if we had a green field site, and I probably would, but we have not compromised on patient Treatment Areas except for a few sub-specialty rooms.*

*Ms BARWICK - One of the other compromises was the relationship of x-ray with Resuscitation Rooms because of the shape, so we have rearranged to make it logical but still functional.*

Dr Meyer added:-

*Just to backtrack a little, one area that we haven't mentioned, we saw that blue room off the Waiting Room where we speak to grieving relatives - a tiny little room - it is relative to the soft site, which is our colloquial term for people who are a little bit sad and emotionally upset but don't need to be locked away. You can talk to them in a quieter room, akin to a general practice office, and we can park dead bodies in there for the relatives to spend time with them rather than, as you saw today, in the corridor. They can make a cup of tea and the like.*

*Another compromise that comes to mind is that we were trying to put another one at the other end of the department because, I suppose, of the urban myth that when you have two car crashes the families all come in and fight with each other. We were going to put one set of the grieving relatives in the rooms up one end and the other down this end. The compromise is that we have had to put them in the same area. We have never actually seen two parties fight, so we are quite happy to put them together.*

The Committee questioned the witnesses as to what, if any, potential for expansion existed in the design, in particular, the possibility to expand into the records area. Mr Bennett responded:-

*... it is quite feasible actually, and it was deliberately planned the way it is to facilitate that potential expansion once that space is available ...*

## **Records Department**

The Committee questioned the witnesses regarding the time frame envisaged for the transfer of the Hospital records from paper to digital format. Mr Rayment responded:-

*First of all, it would need to be approved and funded to move to a digital record. Assuming that did happen, it would take some time, because we would be putting new patients as they come in, or existing patients, onto the system and gradually reducing the amount of records that we have. The older, historical ones would fade out, so the free space would*

gradually increase. The task of trying to put on record all of the records that are there would be huge.

I was in the ACT when I was head of the Canberra Hospital and we went through that process, and we had a scanning of records put on the computer system. It takes a while, but when it happens you do not want to look back to where you were.

### Staff Office Facilities

The Committee questioned the witnesses as to how the new facility will be configured to provide office facilities for staff. Dr Meyer responded:-

Essentially ... there is the director's,... the secretary; the clerical manager, ... two staff specialists will share each office after that, so there are ten work-stations in offices that they share. The senior nurses: Anne's office is there with her secretary, and the nurse educator's office ... and the Allied Health people have their own office down in the Fast-Track Area, so they were in that office with the IT chap. They will be able to stop hot-desking their computer. The next level of doctors, the registrars, will have an office that will have smaller work-stations but able to seat three - I think four will fit into that registrars' office - and there will be communal, if you like, computers available in the Meeting Room/Library and also in the Tutorial Room ...

... we lost some research work because the computer was hot-desked, but hopefully we will be able to secure them all, and people will be able to have their own work-station with computer. The pharmacist has *their* own office as well which is an important feature for security and drug-dispensing.

### Car Parking

The Committee questioned the witnesses as to what provision would be made for car parking at the Hospital entrance. The witnesses responded:-

*Mr BENNETT*- There is drop-off to the Main Entrance to the Hospital, and it is a vastly improved drop-off, in fact.

*Mr PENNY*- I am happy to talk to that plan, if you would like. Obviously that is your front door at the moment and we have the limitations of the long A Block and H Block, so we still retain the horse-shoe shape which was seen as important from the Heritage Council point of view. So we still have short-term parking on those edges around here, but generally as a planning philosophy we get out all the short-term car parking within the space ... at the moment the space has parking for visiting medical officers. There are a lot of service vehicles, such as florists, not so much goods into the Hospital that happens separately down here off Campbell Street, and incidental things that come in through the front door. We are working through a process of quantifying what exactly that is and what traffic movements there are so we can ascertain exactly how many of those there need to be in relation to the Hospital's traffic management planning. But the general philosophy is to have these around here for short-term drop-off and to expand the current entry. That is happening by putting a bigger canopy over it, with a bigger coverage. We



saw how inadequate it was today, which is nicely illustrated when the westerlies blow. It is grossly inadequate for people coming in and out of that front door.

I think it is important to recognise that there are some limitations in relation to what we can do with the heritage-listed front of that building. You all would have noticed those decorative sandstone elements, and obviously we cannot go modifying that building fabric, so it has to be a sensible design response that is sensitive to those sorts of elements. However, the Forecourt will still function in a very similar way to what it is at the moment, in that your front door is for people arriving at the Hospital. This is also the 24-hour entry point for Hospital staff predominantly, and in the longer term, the security -

## Security

The Committee questioned the witnesses regarding the proposed security regime for the new facility. The witnesses responded:-

*Mr BENNETT* - This is why I mentioned the airlock below. People can get through into the airlock but they can't go through the next level of security until they are allowed to by the people within the building.

*Mr PENNY* - That side of the building, which is the café, is secure. It is designed to be as transparent as possible, so all those issues about surveillance, shift turnovers, staff arriving out of hours are able to be well-monitored ... In terms of a space, it is linked to the lower level lobby but, as Ian was saying, it doesn't go straight into the triage Reception Area.

*Mr COCHRANE* - And all our external entrances will be secured and monitored by our surveillance cameras. Our security officer will have access to that vision.

Later during the hearing, Dr Meyer submitted:-

... we have spent one of our meetings on security access on how to get in and which doors will open to what level of staff and we have addressed security to us from violent and aggressive patients with our Seclusion Bays. The main risk of harm to the staff is violent and aggressive patients, and with the facility we have, we have to take them all the way through the department to that funny little Room 22, whereas now they are right at the door and there are hopefully going to be rooms where we can look after these patients better and therefore look after ourselves better. Security from outside elements coming in, that is a bit beyond what I have been looking at with our staff, but I am sure our security people have been looking at it with the team as well.

## IT System

The Committee questioned the witnesses as to what IT services would be provided. The witnesses responded:-

*Mr BENNETT* - We have category six wiring allowed for through all of the areas, so every area will be wired and every area will have computer outlets. For details of the

existing IT system, you probably should ask somebody else about that, as it is not within my sphere.

*Mr COCHRANE* - We have actually upgraded our normal standard that we have within Health for this facility. As you said, we have gone to category six over category five. We are also making provision for fibre-optic cabling to specified areas. If we start transporting files electronically, but especially if we start transporting digital images and x-rays, we will have the capacity within DEM to retrofit fibre to some areas, but as this project brief is developing, there is every likelihood that we will actually incorporate into this project some specific areas that have fibre-optic capability.

... within budget constraints, we certainly will be putting fibre-optic into specific areas, but we will have the capacity to very easily retrofit and upgrade. The actual carrier that we are putting in to carry the cables will have copper on one side and the capacity to run fibre-optic on the other, so we will be able to pull cable through there pretty easily without disruption to DEM.

*Mr ALEXANDER* - There are also wireless options, and the design brief said that there should be nothing in the construction which impedes future use of wireless communications.

## Heritage Considerations

The Committee questioned the witnesses as to what planning had been made in regard to the protection of any heritage aspects of the site. Mr Shurman responded:-

We have planned that into our next phase, basically, which is to have an early planning approach to archaeology. We are aware of low risk there in the sense that the tunnel that traverses the site, which is about three metres by four metres, went right smack through that area. We also suspect that when the newer building was built, the Hospital remained. If you saw the earlier pictures in the report there you will see the buildings and the new building behind it. Then the next picture shows you the flattening of that to create the Forecourt and we suspect a good proportion of that material is now gone. Notwithstanding that, we have been involved in other projects around the area and we realise the risks. Our biggest contingent risk, I suppose, is if we discover anything like an Aboriginal relic, but that comes under an act of Parliament of we all have to stand back in that sort of circumstance. But we are not anticipating that.

## Additional Staffing

The Committee questioned the witnesses as to whether the employment of additional staff would be required as a result of this proposal. Dr Meyer responded:-

The simple answer is yes because we are changing the way we do our work and the first area will be the Short-Stay Unit ... At the moment because we are a tiny unit, the footprint of our unit is small, we can actually see patients even when we are tripping over them virtually and so you can imagine somebody in Trauma Bay One and somebody down here then we are going to have to probably have extra staff. The nursing staff is modelled on the

Western Australian nursing hours for patient day and so that will actually give us the correct number of staff to run it. It doesn't depend on the size; it depends on presentations and timing, department and category. We will have enough nursing staff if we can recruit them. We are actually short of nurses on that model now. If there were nurses available we would fill the positions, so we would need some for there. The nursing staff in here seem to be all right. With the medical staff, we have fewer doctors than benchmark hospitals have for our number of patients and acuity. That is another issue and we are working towards that, but hopefully by the time we open we will have an emergency position to manage the Short-Stay Unit and the extra two or three that we need at the moment, but that is running in parallel to this.

... The benchmark levels based on Australasian College for Emergency Medicine guidelines for the number of senior doctors is roughly six or seven more than we have at the moment. With the next level of doctors, the registrar, it is probably two more than we have at the moment. With the junior doctors we are probably on par with the rest of the hospitals. The nursing funding is there but we just don't have nurses and we have actually got the business case written for the Short-Stay Unit so we are ahead of ourselves with that and that requires about three or four more doctors. It is roughly \$2.5 million per annum in staffing or thereabouts.

Other things, such as ancillary staff, there is twice as much floor so we will have to have twice as many cleaners and things like that. We will need orderlies because we need to push a person who needs a CT scan from here to 65 metres down the other end of the department, so we need to improve and change our work practices. Really that is the next phase of what our team clinician team is going to be looking at - how we are going to get the patient from place to place - and putting forward business proposals for.

With a lot of what we do in the department at the moment we are just hanging together and we have this opportunity to try, with a better facility, to practise emergency medicine a little better than we are at the moment.

Ms Barwick added:-

One thing we are trying to do is introduce the changes now gradually so that when we get to the new department it is not 'shock, horror'.

### **Patient Amenity during Construction Phase**

The Committee questioned the witnesses as to what strategies would be put into place to ensure the protection of patient amenity during the construction phase. Mr Cochrane responded:-

Actually, we are taking a two-pronged attack to that, but certainly within our architectural team's brief there will be proper provision during that construction program for proper acoustic protection for the ongoing operations of the Hospital. The Hospital facilities management area are also undertaking some research of their own to make sure that what we promote is right by having someone have a second look at it. We are relatively confident and we have to get it right - there is no relatively about it. We have to

*make sure that the Hospital is able to function while we are undertaking a construction program.*

#### DOCUMENTS TAKEN INTO EVIDENCE

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

- Department of Health and Human Services Hospital and Ambulance Services Division – Submission to the Parliamentary Standing Committee on Public Works – Royal Hobart Hospital Department of Emergency Medicine Development, March 2005.

#### CONCLUSION AND RECOMMENDATION

The Committee was satisfied that the need for the proposed works at the Royal Hobart Hospital was clearly established, as current facilities are grossly inadequate.

The proposed facility would incorporate increased ambulance access, 18 patient cubicles and an additional discreet Clinical Area for the specific care of paediatric patients. There would be provision for four Resuscitation Bays, two Seclusion Rooms for the assessment and management of mental health presentations, as well as Isolation Rooms and Procedure Rooms. An area for patients not requiring admission to the DEM is also included in the proposal. Waiting Areas have been designed to allow for the separation of adult and paediatric patients. Short-stay accommodation would also be established as part of the redevelopment.

The new facility would provide for more than 45,000 presentations per annum, compared to the 37,000 presentations currently seen each year. The current physical capacity is only 30,000 presentations.

The proposed development would meet the growing need for emergency medical care within the community and would better enable the RHH to fulfil its role as the major Tasmanian tertiary referral acute care centre.

In conclusion, the project would deliver significantly improved access to emergency medicine services for the Tasmanian community now and into the future. Consequently, the Committee recommends the project, in accordance with the documentation submitted, at an estimated total cost of \$15,384,000.

Parliament House  
HOBART  
19 May 2005

Hon. A. P. Harriss M.L.C.  
CHAIRMAN