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PARLIAMENT OF TASMANIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Royal Hobart Hospital Redevelopment

Brought up by Ms White and ordered by the House of Assembly to be printed.

MEMBERS OF THE COMMITTEE

Legislative Council	House of Assembly
Mr *Harriss* (Chairman)	Mr *Booth*
Mr *Hall*	Mr *Brooks*
	Ms *White*

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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 following reference -

Royal Hobart Hospital Redevelopment

BACKGROUND

The RHH has existed on its current site for 190 years, with the oldest current buildings dating back to 1939. In recent decades, a succession of expansions, redevelopment projects and upgrades have occurred in response to clinical needs but have been constrained by funding. Typically investment has been in tranches of less than 1% or 2% of replacement value.

Between 2006 and 2009, the Tasmanian Government investigated the feasibility of replacing the hospital on a greenfield site. In May 2009, the Tasmanian Cabinet decided not to proceed with a greenfield redevelopment and committed $100 million over five years to keep the existing RHH campus safe and operational. The majority of this funding has been committed to urgent works and infrastructure upgrades.

The opportunity for major funding arose in late 2010 when the DHHS submitted a business case to the Commonwealth Health and Hospital Fund (HHF). This submission was successful and the RHH now has the opportunity to make a quantum change in its operation and significantly redevelop the campus to meet contemporary needs.

The redevelopment outlined in this submission to the PSCPW is underpinned by the following key project objectives:

- to enable effective and efficient health service delivery for Tasmania and to meet predicted future demand
- to provide new and refurbished facilities to meet contemporary standards and which offer high levels of flexibility and adaptability to new technologies and models of care
- to develop this first stage in Redevelopment RHH within the framework of the agreed 2011Redevelopment RHH Masterplan and importantly to pave the way for future phases in the Hospital's redevelopment as further capital monies become available
- put in place governance and management structures which will ensure the effective oversight and management of the project's design and delivery

- ensure the long term viability of the campus after completion of the current phase of development to allow for the renewal/ replacement of all buildings and assets on the site
- achieve optimum value for money for the available capital budget upgrade existing infrastructure services on the site to support the current and future phases of Redevelopment RHH
- to deliver a redevelopment which recognises RHH's significant role within the Hobart and Tasmanian communities

The full submissions of the Department of Health and Human Services in support of this reference is published on the website of the Committee at:

http://www.parliament.tas.gov.au/ctee/Joint/works.htm

PROJECT COSTS

Costings based on the scope of work outlined in this PSCPW submission have been prepared by the project cost planners, DCWC. The estimate, which has been prepared to Cost Plan C1 Level, indicates that the redevelopment works as outlined in this report together with the concurrent Phase 1 projects can be delivered within the nominated total funding envelope of $567, 800, 000.

Budget Breakdown:-

Ref	Section	Budget
1.01	Building K Trades	188,960,000
1.02	Building K ESD Allowance	4,580,000
1.03	Building K Staging Allowance	1,090,000
1.04	Site Wide Infrastructure - Trade Value	35,080,000
1.05	Design Contingency	6,070,000
1.06	FF&E	30,190,000
1.07	FF&E Contingency	1,080,000
1.08	Escalation allowance	18,700,000
	Total Trades Allowance	**285,750,000**
2.01	Trade Preliminaries	20,765,000
2.02	Novated Consultant Fees	11,500,000
2.03	Works Insurance	3,000,000
2.04	MC Preliminaries and Margin	45,485,000
	Nominated GCS in MC RFT	**366,500,000**
3.01	GCS Negotiation Contingency	9,760,000
3.02	Construction Contingency	25,160,000
3.03	Hazardous Materials and Contamination Removal	2,150,000
3.04	Delay Allowance	2,490,000
3.05	Client Consultant Fees	18,500,000
3.06	Authority Fees	**incl**
3.07	ICT & AV	13,000,000
3.08	Escalation allowance on Client Costs	8,240,000

3.09	Cancer Clinic Works	7,000,000
3.10	Client Decanting & Disruption	5,000,000
3.11	Planning Fees & Charges	2,000,000
3.12	Client Operating Budget	8,000,000
3.13	Phase 1 Operational Infrastructure	100,000,000
	GRAND TOTAL	**567,800,000**

EVIDENCE

The Committee commenced its inquiry on Wednesday, 3 October last with an inspection of the site of the proposed works. The Committee then resumed in Committee Room 2, Parliament House, whereupon the following witnesses appeared, made the Statutory Declaration and were examined by the Committee in public:-

- Larraine Millar, Acting CEO and Strategic Director
- Peter Alexander, Redevelopment RHH Director
- Michael Yates, Group Manager- Women's, Adolescent's and Children's Services
- Dr Boon Lim, Staff Specialist, Obstetrics and Gynaecology
- Cameron Lyon, Director, Lyons Architects
- Jack Kerlin, Health Director, AECOM
- Stefano Scalzo, Principal, Lyons Architects

Overview

Ms Millar provided the following overview of the works:-

> *At the hospital we are very excited about this capital works program, which is in line with our campus site master plan. With the ageing population and the increased incidence of chronic disease we are building this capital works program in the context of a larger health network. We are looking at the two towers being a major component of the work, and linking them in with the other facilities we have in the south. Looking at the integrated care centres - we have already built one at Clarence - there will be one at Kingborough, one in Glenorchy and a potential one in the city. Our hospital, which takes care of the acute aspect of illness, is then able to link in to the integrated care centres where members of the community can be treated closer to their place of residence.*
>
> *In terms of the build, Michael Yates and Boon Lim who will talk about the women's and children's aspect. In terms of surgery, we are getting additional capacity for theatres. Currently our theatres are only 39 square metres. We are getting additional theatres that are 64 square metres and one that is 80 square metres. The 80 square metre theatre can potentially become a hybrid theatre, and be used in the future for interventional procedures that are less invasive, and result in patients healing much more quickly and having a reduced length of stay.*
>
> *In terms of ward design - Cameron will talk about this later - we have increased light into all areas. All of the rooms are placed around the outside of the building to allow natural*

light, which promotes healing. We will no longer have four bedroom wards. We are now limiting ourselves to one and two bedroom wards. There is a great advantage for patients and staff in the new design, with larger wards and more opportunities for efficiency in the new units.

Mr Alexander added:-

If I can make a few points on the background of the project and the response as we go down to the design. In 2007 the state put out the state's health plan and out of that we put together the HHF, but after the state decided not to proceed with the full new Royal.

Our funding from that was a bit iterative; we got $100 million over five years and then we got the suggestion and later the promise and then the confirmation of other funding, so it gave us a slightly rocky start to our planning horizon because we did not know what the whole scope was.

We had $100 million for women's and children's confirmed and get ahead of the rest. At that time the women's and children's money was meant to deliver a women's and children's hospital in 2013 and then the rest came up. That was an agreement with the commonwealth. Subsequently we convinced the commonwealth that it had to be an integrative project; that the women's and children's area had to work with the rest of the hospital - with pathology services, linen services, kitchens, medical imaging, those things that could not be done as a stand alone. It was all brought together into one major project.

We are managing cancer services through in the same processes, but it was funded separately and is ahead of that. Some of the other works you have seen and we have brought to this committee in the past are out of that $100 million worth of money. We have had in this year $70 million worth of contracts running which has had well over 100 tradesmen on site every day and has given us a very good trial run at keeping the hospital operational and working around all those things.

Since we got the major amount of money - I have put the objectives into the executive summary there - but I guess the four things, the most important thing to us was, if we were going to spend this much money on the site we couldn't get to the end of it and then say, 'That's got a five year life and then we need a greenfield site'. We did some extensive master planning, which I think Cameron will speak to, to show that once we've done this we have paved the way for the future so that this site remains viable for a generation at least. Some of the things you saw today - where in the past we've had small amounts of money to do little changes here and there - that is not an efficient way to invest. Quite an amount of the money we're investing now sets the hospital up so that every amount of money we get from now on hopefully we can spend for the maximum efficiency to add the project. So we are not redoing things and having the same costs.

We have also recognised that we have only one opportunity to get this right. The fond hope that we will get an equivalent amount of money from future governments is not something we are relying on, although this is stage 1 of a full redevelopment and we will need to continue to invest.

The other major point is ensuring the safety of the infrastructure that is back-up power supplies, fire-suppression systems and all those systems across the entire site to the greatest extent that we can, and to re-establish efficient clinical relationships across the hospital. I said this morning that the $365 million is less than 12 month's recurrent cost for the hospital, so anything we can do to make more efficient staffing ratios, to put

people in close proximity to other areas that they need to be, are spin-offs in the efficient operation of the hospital, which has spin-offs in being able to treat more people. We've had all those things in mind.

There are two more points I would like to make on that. One, this project is to some extent unprecedented in Tasmanian terms. Most of the procurement guidelines and Treasurer's instructions and other things we use in undertaking most projects are not directly applicable. We've been very aware of that and have actively sought out, imported and brought in review processes that are normal in other states where they do projects of this size. We proactively introduced the Victorian gateway review process. The gateways are basically hold points in the projects where you get external people to come in and review it. In the last few weeks we've had two review processes, which weren't favourably reported in the paper but they are a normal part of what we do, what we want to do and what we encourage. One was a technical review against the number and size of rooms and the type of facilities we're providing and one was a process review about the governance, contractual arrangements and those sorts of things. We are very conscious that we're using evidence-based not just for the design but for the process as we go through this.

Two, the budget is fixed. Currently the budget is under a bit of pressure. The contractual model that we're using allows us to engage and manage a contractor; a model of contract, which was used for the prison, and is being used for major hospitals on the mainland where they're not being done as a public-private partnership. It allows us to engage with the contractor so he can bring his smarts in construction technology and keep the construction costs as reasonable as possible. We do not sign up to the price until we've agreed a scope and price. That is a guaranteed construction sum, and while there are inevitably contingencies beyond that, it is the way of ensuring we land the project within budget. It is quite appropriate for the hospital to be squeezing as much value as possible out of this. By the time we get to agreeing a guaranteed construction sum, there is every chance that some things will be left for the next stage for it to be added in on a risk basis. We are very keen to make sure we squeeze as much value out of it as possible.

Women's and children's services

Mr Yates made the following submission in relation to women's and children's services:-

The women's and children's part of the redevelopment gives us the opportunity to provide the facilities to ensure that the service we are delivering is as it should be - that is, it is family, kid and woman centric. It is centred on those units that we are trying to keep together, as you saw this morning, in the paediatric area and also in PICU. You did not get the chance to see maternity, but we will speak more maternity as well. It gives us the opportunity to have facilities that meet Australian standards. It will ensure we are able to provide capacity for the future needs of the community, in relation to paediatric services, for example.

It will provide us with the opportunity of developing an adolescent service, which this state currently does not have. As you saw, the care aspects are delivered within the confines of the paediatric unit. As Michelle Williams discussed this morning, we have babies through to 18 or 19 year olds in paediatrics - it is a mixed environment and not necessarily a therapeutic environment. To have the paediatric and the adolescent units co-located on the same floor with access - as we have designed - to a garden space, will be excellent in terms of providing a therapeutic environment, particularly for those who are there for long periods of time. It will provide us with a better facility for safer delivery of care and also ensure that the models we have developed and continue to work on, will be supported by the facility itself.

In terms of NRCU, whilst it was redeveloped and built in 2007, as you saw today the unit currently has a lack of space. With the redevelopment we will have an appropriately set out unit that will provide greater functionality, particularly given the fact that the service there provides the neonatal and paediatric retrieval service for the state as well. The paediatric and the adolescent units will be co-located. On the next floor up will be the maternity/birthing areas and on the floor above it will be the neonatal and paediatric intensive care unit. It will give us good synergies - we will be able to work well and transfer patients through efficiently. I might hand over to Boon to be able to talk about

Dr Lim added:-

This redevelopment has given us an opportunity to modernise the maternity service. I mean that the models of care have developed over the last 18 months so that women are given the choice - which has not been available in the past - of being seen in the right place by the right people.

We have satellite midwifery clinics now that see women closer to home but that is in recognition of the fact that the new development will identify women into the right areas so the high risk women will be seen in the right place. They can concentrate their expertise in the right place, and the women with normal risk will be seen principally by midwives and given the opportunity of having pool labours so that increases their choice by ensuring that safety is paramount in the design.

We also recognise that obstetrics is becoming more and more specialised and we are seeing women with higher acuity - more diabetics now, more obese women - so in the design, we are providing for that model of care as well. As has been alluded to, the close links with the NPICU give the opportunity for high-risk care. We are also a tertiary referral centre for the states and that is why the design has taken that into account as well. This is a great opportunity to provide a service that really is needed in Tasmania.

I want to add a very short note on the women's' surgical unit. We have also recognised that currently our gynaecology and our gynae-oncology women are current seen in a general surgical ward. In the design we have identified a discreet area for women so that the sensitivities are taken into account and they are given the privacy and dignity that they deserve when they come to hospital.

Tender process

The Committee questioned the witnesses regarding the propriety of the tender process. Mr Alexander responded:-

... *we are well through a tender process. It just requires a sign off so that we can inform the tenderers. It has been a very exhaustive process and was very well received by the market. Very strongly contested by the market. Very pleasingly, it essentially endorsed the program and the budget that we had for the scope of works and the time frames. When I say very pleasing, with the best will in the world the consultants are to some extent theoretical, but when a contractor turns up and says they can do it, and they are prepared to sign on the dotted line, it gives us a sense of reality that we can work with.*

(the tendering process is unimpeachable) *and we have gone over and above the Tasmanian Treasury guidelines. The Health Department, being a big department, has some mature tender processes. We have employed a probity adviser through that entire process and we went out to a competitive process for the probity adviser. We*

have got a fellow who apologises for being as strict as he is, and I am very pleased that he is as strict as he is.

If I can, without taking up too much of your time, give you a very small example. Under the Treasury guidelines people involved in the process have to sign a conflict of interest declaration form. That is what you get from the Treasury website and Treasury are happy that is what you do. This probity adviser asked for a schedule of every contractor who is working or has worked on the hospital. He will sign off against each and every one of those contractors that they have no conflict of interest here, or anywhere else. Hopefully we are taking things a stage beyond, which is commensurate with the value of the project.

We have presented a probity report to the review and advisory committee, which is there to support the minister.

Contingency budget

The Committee questioned the witnesses as to whether the budget for contingencies was appropriate. Mr Alexander responded:-

It is, particularly at this stage. Anecdotally, the construction industry prices are not going up at that rate of escalation, but it would be imprudent of us to live in hope. As I was saying before, we have things we would love to put into the scope, if we could afford them. If we do not need that escalation money, we will continue to add to the scope.

... *They are prudent market tested scenarios. Donald Cant Watts Corke, the quantity surveyors, are also the quantity surveyors for the Box Hill Hospital in Melbourne.*

... *All our consultants are in association with local Tasmanian firms but Donald Cant Watts Corke are the QSs for Box Hill in Victoria, which is a $400 million redevelopment brownfield site with quite a lot of similarities. That is a good a market-tested comparison as we have. In the construction contingency, for instance, within two or three weeks we will be running a risk-base workshop. That contingency is essentially set as a percentage of the construction sum when you first set it, and at tender time. It doesn't take account of the specifics of our site, so we will be sitting down with the consultants and others and asking, 'What are the risks to us on this site?', and that may amend it up or down. Within that we have specific allowances for things such as asbestos removal, and they're things we can't fully assess at this point.*

Treasurer's Instructions

The Committee questioned the witnesses as to the applicability of the Treasurer's Instructions. Mr Alexander responded:-

... *the project is bound by the Treasurer's instructions and we are following those. The Treasurer's instructions are not written for a project of this size and scale, so we are importing processes and sometimes developing processes over and above the current Treasurer's instructions. The gateway process, which is used in most states of Australia, and was initially used in Britain, is applied to projects over $20 million. It has been talked about in Tasmania but there aren't enough projects over $20 million to have made it a requirement, so we have proactively said that we want to use those processes. They exist in other states so where possible we've brought in mature process from other states. We are complying with the Treasurer's instructions in all instances.*

(gateway reviews) *are right through the project. There are six gates. The first one or two have to do with the business case and because of the circumstances we couldn't do that. We had a few weeks to put together the HHF but at the time we undertook a gateway review before we went to post master planning - before we put out a scope to contractors. The next gateway review we will do is before we sign on the dotted line with the contractor. Not before we sign on the dotted line, because of the way the contract is set up. It is set up and the contractor comes on board to assist with the design and then there is a second stage where we agree a price, which is some months further on. The gateway review will occur before we agree the price.*

The Committee questioned Mr Alexander as to how a market price is achieved in such a structure. Mr Alexander responded:-

It is a mature contractual form. There's no Australian standard but there are three types of managing contractor models that are widely used in Australia in the public sector. The one we have chosen to go with is the one that's run by the Queensland government. The Crown Solicitor here has worked with us to tailor it to our needs. The contractor tenders on his profit, risk, margins and preliminaries - what it's going to cost him - but not on the scope of works itself. The scope of works is competitively tendered later with us having an open book in response to that. You are only tendering on his fees, as you would with a consultant, and you are allocating the risk and those other things. The companies that are able to respond have to be companies that have pre-registered with the federal government for projects over $300 million, which limits the number of respondents. We got five at an EOI stage, we reduced that to three and out of that three we have a preferred respondent. For the scope of works we've given, he has given us all his on-site overheads, off-site overheads, preliminaries - all his costs - and the conditions under which he would accept those costs. He has given an indication, from the scope of works we went to tender with, of the program and what he thinks he can do it for. The benefit of this first stage is that the contractor can come in - with no disrespect to our architectural friends - and look at the structure, the façade, or the way the windows are being designed and say, 'I can do that more cheaply using a technique I've used on another job'. He works with us on that. When it is actually tendered the guaranteed construction sum - we say the scope and he has to guarantee he will deliver the entire scope for that price. Within that there is a savings strategy. So if he can save further money, 70 per cent of the savings come to us and 30 per cent stay with him so there is an incentive for him to continue to drive the price down. Our savings will be used for additional scope. We will not take money out, we will do things we had to cut out in the first place.

Concept design

Messrs Lyon and Scalzo provided a narrative (the full text of which is published on the web site of the Committee) to an animated digital presentation which provided detail of the concept design and detail of stage one as presented in the submission. Mr Lyon made the following observations during his presentation:-

… it is heavily congested site. It is a very complex site. No doubt if we left you in a room and said, find your way out, you'd struggle to find your way out of the hospital. We have been working on it for over a year and the routes that Larraine and her colleagues take just dumbfound us. It is a really poor facility for way finding. For the visitor, you come to that first foyer and you struggle beyond that point. In fact most of the circulation systems through the hospitals are through corridors of old, single, stand-alone buildings.

It is also evident that the buildings and infrastructure are now at the end of their economic life. ... there have been a few refurbishments and upgrades but they have been purpose-built, small upgrades. The hospital in a broader sense is in its palliative care stage of existence.

The buildings on the site have been developed probably from the 1930s through to the 1980s. There is a mixed bag of buildings. They occupy most of the site and what we have to understand is that we are going to put a building in order of 35 000 to 40 000 square metres on the site. Something has to give and during that construction period we have to maintain the hospital as an operational facility.

Overlaid with that obviously we to address the service needs of the project. We have to put things in the right place. Peter has talked about the master planning work and that is a very intensive process we have been through to try to understand how one may master plan it for today and also for future growth. In the project approach where we recognise that the funding has come for a single building or a single project, but we should wherever possible try to redress inefficiencies elsewhere on the site. Certainly the aggregation of the wards into a single central block ... gives a spin off effect for the rest of the site that is beneficial.

We need to take a responsible approach to environmentally sensitive, sustainable design and we have addressed that from a patient amenity point of view. What does it mean to the patient? That is very important to how we have tackled many issues. The final point we will touch on in this contextual discussion is wayfinding. We needed to introduce some means of wayfinding, around an entire city block, where patients feel comfortable arriving - they understand where they can go. We talked briefly about the patient flow unit being the primary arrival point where you check in before you move elsewhere in the hospital.

When we were doing the master planning we did some analysis of the existing additions on site to find out where various departments were - the ward layouts on the site. They've been referred to by the nurses and doctors as the 'safari rounds'. They can visit five patients in an entire morning. They need to take a cut lunch and a backpack in order to find their way around. It is similar with the outpatient clinics, when you look at where they're scattered throughout the site. This morning on the site, we recognised the yellow area was the work completed on the cancer centre site - building A is earmarked as the integrated cancer centre. The two red blocks - G representing the private hospital, and F being an extended lease to UTAS - take it off the scale in terms of where the opportunities arise to put 37 000 metres of building. The emergency department below the forecourt is also a no-go area. So, we really needed to investigate the blue areas. Through various analyses we concluded that, through a sequence of work, we could develop the new facilities on the space occupied by building B, because it gave us the opportunity to start on part of the site, decant, continue to extend, decant, continue to extend, et cetera.

In terms of wayfinding, when you arrive at the front entrance the only circulation is down the corridor of the heritage building C. This is a fairly narrow alleyway and it services the entire hospital. The approach was to look at it from a broader urban design point of view and say, 'How would you provide streets?'. As architects we call them 'streets' - they are not roadways or streets, they are like linear atriums. We are putting a linear atrium that connects Campbell and Argyle streets directly on the back of building C. We will expose the back of the heritage building in building C and we are also providing in stage 2 - that's when Peter talked before about the potential, hopeful funding in another little while - that it will connect the Liverpool Street entry all the way through to Campbell Street. Right at that crossroads is where we're putting the reception point - the patient flow unit - and that is the central arrival point to the hospital.

It has been one of the longest-occupied, single-site hospitals in Australia. It has been occupied since the 1880s as a hospital. The heritage building, that we are calling heritage now, was developed during the 1930s and 1940s and we would like to see that maintained and become a focal point, and retain its front entry configuration for the new hospital. Notwithstanding that, we're suggesting that the other streets - Collins, Campbell, Liverpool and Argyle - be permeable to patients visiting the hospital. This is a combination of a staging plan, and a master planning approach we have taken to the project. That little building there is the fan building that we walked around, and stood in the car park underneath. Oncology is moving out of that building into the cancer centre. There are a couple of other, dare I say, soft spaces - offices and accommodation - that can find their way into other parts of the hospital.

The first stage will be to demolish that fan building. It gives us the opportunity to build up to five levels on the site. We also talked today about separating the loading dock from that site, so it would be a two way access and the dock would be reconfigured, but it has to remain operational because it is the heart of the hospital.

That is the first part of the construction. Then we span over building B - technically very difficult, but it seems to be in hand. Then we are able to build the first half of the ward floors and the inpatient building. That has a lot of services in it. We are building the lift core and all the service rises into the first stage of the work. We are doing all the intensive work early in the project.

... When we have built the first half of the building, we can decant the occupants of the existing building B into that half building. It will be fully commissioned and operational, have all its lifts running, and have all its services running, and then we will decant building B into it, which allows us to demolish building B and build a conventional building from the ground, that dovetails in. The two wings of the H plan are 32-bed wards, so it is a 64-bed ward plan, which is the most efficient national benchmark for hospitals.

Energy efficiency

The Committee questioned the witnesses as to what, if any, energy efficiencies were gained from the cladding and window design. Mr Lyon responded:-

The building is oriented at 45 degrees to north so we have to deal with sun shading to the windows in order to meet section J which is the energy efficiency guidelines of the document.

Hobart is one of those fairly unusual climates in terms of how it is assessed under that model. It does have low angles of sun at unusual times of the day. If you were to picture a square window we need a vertical sunshade, we need a horizontal sunshade so what we have ended up doing is, we have filled in the blocks between the sunshades. At the moment, as Peter said, the managing contractor still has to come along and add value as to how they want to do that. They may make it part of the curtain wall unless -. It's all a single unit or they might do it in two parts. The lightweight cladding is an additional layer that gives it -. We are very cautious of having the hospital monolith which is probably the New South Wales approach. As architects I do not think you can put that great big hospital monolith in the middle of Hobart given it is -. Coming over the bridge you read quite an incredible texture up against Mount Wellington and the dish of Hobart. I do not think you need that great big flesh-coloured blob sitting in the middle of that. I think it deserves more than that. The façade is a bit more of a response to trying to capture that grain of the city and trying to abstract the depth and give it another layer of reading beyond the ubiquitous pre-cast concrete ...

Mr Alexander added:-

> ***...*** *we have gone to an awful lot of trouble with the externals of the building and we have recognised that there will be a range of views from, at one end of the spectrum, saying, anything you spend on aesthetics as opposed to clinical interiors is mainly wastage, to people who recognise that the urban design and the place of the hospital in the hearts of people of Hobart, and the heart of Hobart itself.*
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> *Out of some of the analysis I can give you two responses, and Jack may want to step in. The amount of glazing you can use is set by the energy code of the building code. There are a whole lot of complications around that. Through the sun-shading and the glazing the figures we were given back is that we can actually reduce the size of the air-handling plant and save $1.5 million of capital. The recurrent costs of running that plant will be reduced by $150 000 to $200 000 a year by having appropriate clarity of glass and sun-shading which means that for patient comfort internally you do not have so much radiant heat that the building is trying to cop with. On top of that we looked at the overall cost of the façade as a proportion of the building cost. We got a range from a bog-standard office block where the externals of the building are something like 8 per cent. I am quoting the figures that were provided by our consultants. To some fancy buildings in the capital cities where it is 13.5 per cent. We are around 11.5 per cent. That said, we have always anticipated that a contractor will find a more efficient way of delivering that. That includes argon-filled double glazing with thermally-broken frames and those sort of ESD efficiency things.*
>
> *The external review that we have just had said, yes, it is fine to talk about percentages but if you have got an expensive building internally which this hospital is. The degree of fit-out of operating theatres, the trusses, it artificially reduces that figure. As soon as we get a contractor on board, we will be looking at making it as efficient as possible, but retaining the design intent which has been really well accepted. It has been through state cabinet, it has been through the development application process. It has certainly been through all hospital process.*

Mr Kerlin concluded:-

> *...We have modelled it extensively. It should be acknowledged that Tasmania has only legislated a 2009 BCA, and part of this building we have gone to 2011 which is the rest of the national standard. The rest of the states of Australia and territories have gone to 2011 national construction code. Tasmania is on 2009 for whatever reason. So we have taken it to 2011, so from 2009 to 2011 improves your energy efficiency by about 15 per cent. That brings it down to your current operational costs. We have looked at that and [inaudible]. Part of that challenge though is to improve that glazing, improving that aspect of internal - bringing the light into the space. To make that internal environment as part of it -. Which is one of the basics of sustainability, to make an internal environment -. It is not just about energy savings, it is about the environment you occupy. That is the work we have done to improve that. We have got daylight factors of a quite high number in there and that is with the H value as well. The H-shaped window has done that. Traditionally if you looked at the code you would have a strip of windows to meet that current code. We have tried to model to get the best value, best aesthetic, on the building and get value for what we are doing as well so that you can improve the internal environment. We have gone to a lot of trouble at this stage to make sure we test that thoroughly.*
>
> *... We are going through (an energy efficiency) self-assessment process. The new Royal Children's Hospital in Melbourne had a pilot scheme and they preferred not to go*

down the route of making a final assessment. The major hospital infrastructure is not really suited to Green Star rating. What you do is a self assessment, and we have done that. You look at the appropriate tools. We have done that as part of our [inaudible]. What is the appropriate saleability for this building? There are things in there like car parks which we which give you points but we don't have them - small cars and things like that. Self-assessment to the appropriate areas, and we have detailed that in our report to make sure we are spending that money wisely, not just chasing points or stars for the sake of it.

On the energy rating, we have benchmarked around Australia. We are quite a large company and do a lot of the large hospitals including the Queensland Children's Hospital and the Fiona Stanley Hospital. We look at others ones now, the Royal Melbourne Hospital, Austin, Mercy. We do a lot of hospital work and we have benchmarked this one to try to get the energy target to match or better that in the current context. That is done in a couple of ways; not just on energy but also carbon. Tasmania is in a good space with the Hydro contribution, so the carbon is quite good here but the energy is quite high so we are trying to get that down.

Design redundancy

The Committee questioned the witnesses as to whether there was sufficient capacity for expanded future need built in to the design. Ms Millar responded:-

As explained this morning, all the clinicians have been involved in the working groups and the user groups and as part of the design they have looked at their service brief and models of care and looked at projections into the future. Also taking into account, as Boon said, that we are looking at a health system rather than a hospital so that in the future there may be utilisation of the integrated care centres, which will impact on the numbers of patients coming to the hospital. We have looked at those projections into the future and we feel that there is future-proofing for these areas within the hospital.

Mr Alexander added:-

It is fair to say that this is a stage 1, but it builds on the health service planning that has gone on since Tasmania's health plan in 2007, which has various projection levels, all of which have social and financial implications and all of which ultimately depend on how much both state and federal governments decide to fund. A big injection of funding could result in a major bulge in some sort of surgery or something else. That is not all predictable. This hospital has built in capacity, it has built in flexibility and adaptability and most of all in the master planning if the need were there and the need was funded there is the capacity to upscale as well.

DOCUMENTS TAKEN INTO EVIDENCE

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

- Royal Hobart Hospital Redevelopment – Submission to the Parliamentary Standing Committee on Public Works – September 2012

CONCLUSION AND RECOMMENDATION

The need for the proposed works was clearly established. The redevelopment will provide state-of-the-art, flexible new and refurbished facilities which will enable the Royal Hobart Hospital to deliver health services corresponding to contemporary health services standards in addition to an environment that allows efficient work practices and efficient operation.

The redevelopment also addresses urgently needed works in relation to site infrastructure to ensure continued and safe operation of the hospital facilities.

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

Parliament House
Hobart
19 October 2012

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