Queensland Audit Office

Hospital infrastructure projects

Report 2 : 2014–15

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October 2014

The Honourable F Simpson MP
Speaker of the Legislative Assembly
Parliament House
BRISBANE QLD 4000

Dear Madam Speaker

Report to Parliament

This report is prepared under Part 3 Division 3 of the *Auditor-General Act 2009*, and is titled *Hospital infrastructure projects* (Report 2: 2014–15).

In accordance with s.67 of the Act, would you please arrange for the report to be tabled in the Legislative Assembly.

Yours sincerely

Andrew Greaves
Auditor-General

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Summary

In August 2006, the then government made election commitments to build three tertiary hospitals at an estimated total cost of $2.87 billion:

- Gold Coast University Hospital (GCUH)
- Lady Cilento Children's Hospital (LCCH)
- Sunshine Coast Public University Hospital (SCPUH).

This followed the announcement of new hospitals for the Gold Coast and the Sunshine Coast in the Queensland Government's *SEQ Infrastructure Plan 2005–2026*, released in April 2005.

The objective of this audit was to examine the adequacy of the state's planning and delivery of these three projects. We specifically looked at whether decision making was based on sound planning and the delivery of intended benefits.

Conclusions

The three hospital projects will deliver needed health services, but poor health service and investment planning, prior to and at the time these projects were announced, has cost the state more than expected—and the projects will be delivered later than when the services were needed.

In addition to reinforcing the need for better service planning, the broader lessons for the public sector relate to situations where public commitments have been made to deliver major infrastructure projects prior to detailed planning.

Queensland Health (QH) took the position that the announcements set for it the scope and expectations of each project. Consequently, it focused on delivering the new infrastructure without first exploring whether other options could achieve the same outcome and offer better value for money as required by the project assurance framework (PAF). In this context, QH also did not have sufficient regard to defining the benefits it expected to realise through delivery of the new hospitals, or how it would track these benefits.

Sound public administration requires both seeking to realise clearly defined benefits and making choices that optimise value for money outcomes. These requirements cannot be clearly demonstrated across the three projects. From a total asset management perspective, there is little detail in their strategic planning that future decision makers can use.

This should serve to alert decision makers to the increased risks they take when such large-scale investments are undertaken in the absence of the rigour that the PAF requires.

Project delivery status

QH has delivered, or is on track to deliver, three new hospitals, in line with the time frames and budgets set in the approved business cases. In doing this, it has increased the public hospital network's bed capacity, delivering more beds than were announced in August 2006.

Because the funding available to operate the GCUH and LCCH hospitals is less than forecast in each respective business case:

- GCUH operated with 122 fewer overnight beds than expected in 2013–14
- LCCH will operate with 71 fewer beds, on average, than expected in its first year of operation.

Gold Coast University Hospital

GCUH opened in September 2013, three months later than planned, but much earlier than it would have without a pragmatic decision to include information and communication technology (ICT) works into the construction phase, rather than after practical completion of the building. A three-month variance is not significant, given that construction was scheduled to take four years.

GCUH has built the intended bed capacity, but only operated 561 overnight beds in June 2014, compared to the 683 beds forecast to be operating by 2013–14.

Lady Cilento Children's Hospital

LCCH is working towards an opening date of December 2014 which is consistent with the original time frame in the business case, but ICT risks could delay opening beyond this date. The LCCH project includes a spare floor which has a capacity of 48 beds to cater for future expansion beyond the 359-bed capacity that is being built.

LCCH will open with 359 beds, but will operate with the equivalent of 288 beds on opening—the same number of beds currently operating across the two existing children's hospitals in Brisbane—71 fewer than the built capacity.

LCCH has advised that this is sufficient to meet the current demand and the level of services agreed with QH and that it has developed new models of care that place more emphasis on day medical and surgical care and ambulatory practice than the number of beds. Without an updated business case, however, it is not clear how the actual level of services delivered compare against the intended level of service.

Sunshine Coast Public University Hospital

SCPUH will be delivered two years later than originally announced because of a decision made in 2009 to delay the project for two years and allow market conditions for a public private partnership (PPP) to improve. QH mitigated the effect of the two-year delay by implementing an interim demand management solution. This increased capacity in the Sunshine Coast Hospital and Health Service (HHS) in the period leading up to the opening, and during the ramp-up, of SCPUH.

The original scope announced for SCPUH of 450 overnight beds was not sufficient to meet the health service needs of the Sunshine Coast area. The two-year delay provided the opportunity for more detailed planning, resulting in an increased bed capacity to 650 overnight beds (738 total beds) by 2021–22.

This revised scope will benefit the communities on both the Sunshine Coast and in Brisbane; patients on the Sunshine Coast will not have to travel to Brisbane for health services and Brisbane hospitals will have more capacity for Brisbane residents.

Project cost status

When commitment was made to build the three hospitals, no robust investment planning and analysis had been undertaken to determine their likely outturn cost, with the result that the August 2006 estimates significantly understated the cost of the projects.

When QH subsequently defined the project scopes and developed the required business cases, its estimates of the final project costs were more reliable and it has managed project delivery to those estimates.

The current approved project budgets vary from the estimates contained in the final business cases by only three per cent**,** whereas they are $2.2 billion, or 77 per cent higher than the estimates in the 2006 announcements.

Figure 1 shows the evolution of cost estimates for the three projects from 2006 to their current project budgets in 2014.

Figure 1
Project cost history—tertiary hospital projects

Costing source	GCUH $ billions	LCCH $ billions	SCPUH $ billions
August 2006 commitments	$1.230	$0.700	$0.940
Final business case	$1.549	$1.407	$1.973
Current project budget	**$1.762**	**$1.447**	**$1.872**

Source: Queensland Audit Office

Service and investment planning

When the government announced its intention to build three new hospitals, QH did not have in place the health service plans that could be used to inform decisions properly about the best locations for and optimal capacity of new hospitals.

While the Gold Coast Health Services District prepared the *Gold Coast Health Service District Master Planning Studies Report* in 2003 and the *Tertiary Strategy Framework—Gold Coast Health Service District* in 2004, the health service plan for the new hospital involved a master plan in 2005 and a final plan in 2008. The 2005 and 2008 plans were developed in response to the announcement in the *SEQ Infrastructure Plan 2005–2026* released in April 2005 that a new hospital would be built on the Gold Coast.

Health service plans aim to improve health services to meet health needs better, in part by identifying the gaps between the services currently provided to a given population and what it requires in the future.

The decision to build the new hospitals before QH had completed the health service plans, before a preliminary evaluation of options and before business cases were developed, put the whole planning process for these infrastructure projects out of step with the Project Assurance Framework (the Queensland Government's policy for projects over $100 million).

QH did not assess alternatives to understand or demonstrate that the single children's hospital option would deliver a superior outcome compared to the dual hospital model. This remains an unanswered question. It provided a qualitative assessment of the benefits of a single hospital site compared to dual sites, but did not sufficiently detail all potential options and compare the benefits in measurable terms to demonstrate why government should not consider other options.

The business cases for all three projects were based on a single solution. There was no comparison to alternatives to determine whether the solutions chosen achieved the best value for money outcomes. The business cases also did not explicitly outline the improved health outcomes that QH expected to achieve, nor demonstrate that services would be delivered more effectively and efficiently.

In the case of the SCPUH, the two-year delay allowed QH to complete additional analysis which identified the original solution would not provide the expected level of tertiary services required on the Sunshine Coast. Changing the scope of the hospital to deliver additional services identified shortcomings in the original planning assumptions.

Value for money

One consequence of the lack of timely, long term planning for service needs was that QH had to implement interim service solutions costing $170.8 million to meet demand while the three hospitals were being built.

On the Sunshine Coast, QH purchased services from the operator of the private hospital. The paediatric cardiac unit at The Prince Charles Hospital was transferred to the Mater Children's Hospital and will later be relocated within LCCH. On the Gold Coast, QH created 50 new beds at the Southport Hospital.

As the planning process was out of sequence, and the solutions announced before options had been evaluated and analysed, QH was constrained to specific project scopes and time frames for delivery; and/or to specific sites. One consequence of this was that it lost commercial leverage in negotiating with third parties who occupied these sites.

The agreements, into which QH entered to secure the land required for the hospitals, transferred $190.4 million in economic benefits to third parties. These agreements included the relocation of affected stakeholders and the development and operation of car parks.

QH has a policy of not facilitating the provision of car parks at its facilities because it is not its core activity. While this approach avoids upfront capital outlays and removes risks of ownership, it also deprives QH of the opportunity to use car park revenue to contribute to the operating cost of the hospitals.

A key consideration in such decisions from a value for money perspective is whether there has been an effective risk allocation, so the parties that retain the risks also retain the benefits. This did not happen. QH funded the construction of the LCCH car park, but transferred management rights to Mater for 60 to 90 years for nil consideration. Under the arrangements to develop and manage the car parks at GCUH and SCPUH, QH is still retaining the risk for low demand below contractually agreed thresholds.

Benefits realisation

None of the three projects could demonstrate that realisation of benefits was a significant driver in project delivery.

The GCUH and SCPUH projects do not have a benefits management framework to enable them to report benefits realised against benefits intended. Their respective business cases do not define what benefits were expected to be achieved by delivering those hospitals; therefore, they lack a baseline from which to develop a benefits management framework.

The LCCH project was the most advanced of the three in developing a benefits management framework. The LCCH business case provided a definition of benefits that helped the project to develop a benefits management framework but, because the benefits in the business case were not defined, there was no baseline to support measurement of benefits realised.

All three projects began work on benefits realisation late in their project lifecycles, but the SCPUH project has enough time before the hospital opens to develop and implement a benefits management framework.

Information and Communication Technology risks

All three projects underestimated the impact that ICT risks would have on project delivery and cost; however, the SCPUH project is better positioned to manage these risks because of the lessons it can learn from the GCUH and LCCH projects. ICT was the main reason the GCUH project was delayed by three months and the LCCH project could also be delayed if ICT risks are not mitigated within the time remaining. Across both projects, ICT costs increased by $112 million, or double the initial estimates; funds were reallocated on both projects to mitigate ICT risks.

When QH developed the business cases for the three projects, it overlooked the potential significance of ICT risks; the three projects did not consider these risks adequately until after construction began. QH's internal ICT provider was not resourced appropriately to ensure it could support three major capital projects at the same time.

Recommendations

It is recommended that Queensland Health:

1. **implements a benefits management and realisation methodology for use in the planning, delivery and evaluation of all hospital infrastructure projects**
2. **assesses the impact of the change in the funding model on the hospitals' operating costs, services and bed capacity**
3. **regularly reviews health service plans to keep them current and to identify long term solutions in a timely manner**
4. **plans all future hospital infrastructure projects in compliance with the government's project assurance framework to:**
   - **identify the service need and possible options to meet the desired outcome**
   - **define the criteria for project success**
   - **analyse the costs, risks, benefits of various options**
   - **comprehensively assess whole-of-life financial effect of the project options**
5. **reviews its car park policy to ensure new car park developments achieve the best value for money outcome over their full life, consistent with the principles of the project assurance framework.**

Reference to comments

In accordance with section 64 of the *Auditor-General Act 2009,* a copy of this report was provided to Queensland Health, Gold Coast Hospital and Health Service, Sunshine Coast Hospital and Health Service and Children's Health Queensland Hospital and Health Service with a request for comments.

Their views have been considered in reaching our audit conclusions and are represented to the extent relevant and warranted in preparing this report.

The comments received are included in Appendix A of this report.

1 Context

1.1 Tertiary hospitals

In August 2006, the then government made election commitments to build three tertiary hospitals:

- Gold Coast University Hospital (GCUH)—project cost of $1.23 billion, to be built by the end of 2012 and contain 750 beds
- Lady Cilento Children's Hospital (LCCH)—project cost of $700 million, to open by 2014 and contain up to 400 beds
- Sunshine Coast Public University Hospital (SCPUH)—project cost of $940 million, to open in 2014 with 450 beds, expanding to 650 at a later date.

This followed the announcement of new hospitals for the Gold Coast and the Sunshine Coast in the Queensland Government's *SEQ Infrastructure Plan 2005–2026*, released in April 2005.

A tertiary hospital provides specialist care for patients after referral from primary and secondary care.

In this report, we use the term *Queensland Health* meaning the entity which encompasses the department and the Hospital and Health Services, and *the department* meaning the Department of Health.

1.1.1 Gold Coast University Hospital

Gold Coast University Hospital (GCUH) opened in September 2013.

The new hospital has been built to a capacity of 762 beds and 143 same-day and bed alternatives, totalling 905 beds. This is a 66 per cent increase in capacity on the former Gold Coast Hospital located at Southport, which contained a total of 546 beds and which closed when the new hospital opened. The emergency department of GCUH is 80 per cent larger than the former Gold Coast Hospital, with 56 emergency department treatment bays compared to 31.

GCUH is configured with a high proportion of single rooms—more than 70 per cent of beds are located in single occupancy rooms, compared to the previous Queensland average of 25 to 30 per cent. The potential benefits to patients of single occupancy rooms include reduced infection rates and clinical errors which are more prone to occur in multi–bed rooms. This contributes to a shorter length of stay and a more therapeutic environment to assist reducing stress levels and improve healing.

The hospital is adjacent to the Griffith University Gold Coast campus to integrate the teaching activities between the hospital and the university. The hospital is part of the Gold Coast Health and Knowledge Precinct which includes GCUH, Griffith University and land being developed for the Commonwealth Games Village.

GCUH was built using a managing contractor delivery model, while the car park was built using a public private partnership (PPP) procurement model.

1.1.2 Lady Cilento Children's Hospital

A review into paediatric cardiac services in Queensland in March 2006 chaired by Professor Craig Mellis (known as the Mellis Review) recommended the establishment of a new, single, purpose-built Queensland Children's Hospital to address issues associated with the fragmentation of children's health services across three tertiary paediatric services. The government subsequently established the Paediatric Cardiac Services Taskforce (the Taskforce) on 27 March 2006 to further assess recommendations made by the Mellis Review. The Taskforce confirmed the Mellis Review's recommendation that building a single specialist children's hospital was the best option to optimise the standard of paediatric health care.

The August 2006 commitment to build the Queensland Children's Hospital—now named Lady Cilento Children's Hospital (LCCH)—stated the hospital would be located beside the Mater Children's Hospital in South Brisbane, contain up to 400 beds, cost $700 million and be delivered by 2014. The two existing children's hospitals—the Mater Children's Hospital and the Royal Children's Hospital—contain a combined number of 288 beds.

Figure 1A shows reviews relevant to the decision to build LCCH and the recommendations they made.

Figure 1A
Reviews relevant to the decision to construct LCCH

Review	Date	Recommendation
South East Hospital Planning Project options paper	Mar 1993	More detailed analysis and consultation to be undertaken with clinicians and other interests to determine the best way to provide paediatric services; one of three options was to combine existing children's hospitals into a single service
Forster Review	Apr 2005	A rationalisation of the two-hospital system to improve service sustainability, maximise available resources and reduce pressure on staff
Mellis Review	Mar 2006	Tertiary paediatric services to be subsumed into a single, purpose-built new Queensland Children's Hospital; ideally, this facility would be situated next to a major adult teaching hospital with all medical and surgical specialties and close to a major obstetric unit
Taskforce on Paediatric Cardiac Services	Aug 2006	A single children's hospital, to be built next to either the Mater Hospital or the Royal Brisbane and Women's Hospital.

Source: Queensland Audit Office

The key factors arising from the Mellis and Taskforce reviews which influenced the government's decision to construct a new children's hospital were:

- there were two competing tertiary children's hospitals in Brisbane
- all infants and children with cardiac disease were assessed and underwent surgery in an adult cardiac unit at The Prince Charles Hospital rather than in one of the children's hospitals
- the fragmented model of delivering paediatric tertiary services in Queensland was unsustainable and not in the best interests of children.

LCCH will be the single specialist paediatric hospital for the state and will bring together the staff and services of the Royal Children's Hospital and Mater Children's Hospital. LCCH will be owned and operated by Children's Health Queensland Hospital and Health Service.

LCCH will incorporate all paediatric services currently provided at the Mater Children's Hospital and the Royal Children's Hospital. LCCH will provide specialist paediatric care for children across the state and general health services for its local catchment area, inner Brisbane. The rest of the network will provide general health services for children in their local areas.

An academic and research facility will be built next to LCCH and will bring together child health research from Queensland Health, the Mater Hospital, The University of Queensland and Queensland University of Technology.

1.1.3 Sunshine Coast University Hospital

Sunshine Coast Public University Hospital (SCPUH), incorporating the Skills, Academic and Research Centre, is part of the Kawana Health Campus which also includes a private hospital that opened in November 2013.

The private hospital will treat public patients, from December 2013 to mid–2018, to help meet demand while SCPUH is being built and commissioned. SCPUH will form part of the Sunshine Coast Hospital and Health Service's network of hospitals, which includes Nambour General Hospital, Caloundra Health Service, Gympie Health Service, Maleny Soldiers' Memorial Hospital and community health services.

In August 2006, the government announced that the capital budget for SCPUH would be $940 million, the hospital would open in 2014 and would contain 450 beds, expanding to 650 beds at a later, unspecified date. Following detailed planning, government endorsed the agreed scope and program that will see SCPUH open with approximately 450 beds in 2016, growing to a 738-bed facility by 2021. The new hospital will provide additional capacity to the network of hospitals on the Sunshine Coast, which means patients will be able to access services closer to where they live, instead of travelling to Brisbane for treatment.

1.2 Health service planning

Health service planning aims to improve health service delivery and/or system performance to better meet the health needs of a population. It encompasses the process of aligning existing health service delivery arrangements with changing patterns of need, making the most effective use of available and future resources.

Health service planning is future oriented and usually adopts a medium-long term (10–15 years) perspective, supporting organisations to respond to:

- new policy initiatives and directions
- increasing or changing service demand
- targeted population health improvement
- emerging trends in service delivery
- improved service delivery models.

Data on population characteristics, risk factors and patterns of disease inform effective health service planning. Because health service planning is the result of analysis at a point in time, subsequent review is required to adjust plans to reflect changes in assumptions or the environment over time.

Advanced health service planning describes the services required, their complexity and the expected volume of activities and the models of care to be applied in treating patients. These are key inputs into the location, size, design and functionality of a hospital so it achieves the desired outcomes efficiently and effectively.

1.3 Investment planning and delivery

Effective planning for major infrastructure projects helps the investment of public funds in capital projects to deliver value for money and achieve expected outcomes. The government's frameworks for infrastructure planning provide agencies with the foundation they need to plan infrastructure projects effectively and maximise the benefits achieved from the government's investment in projects.

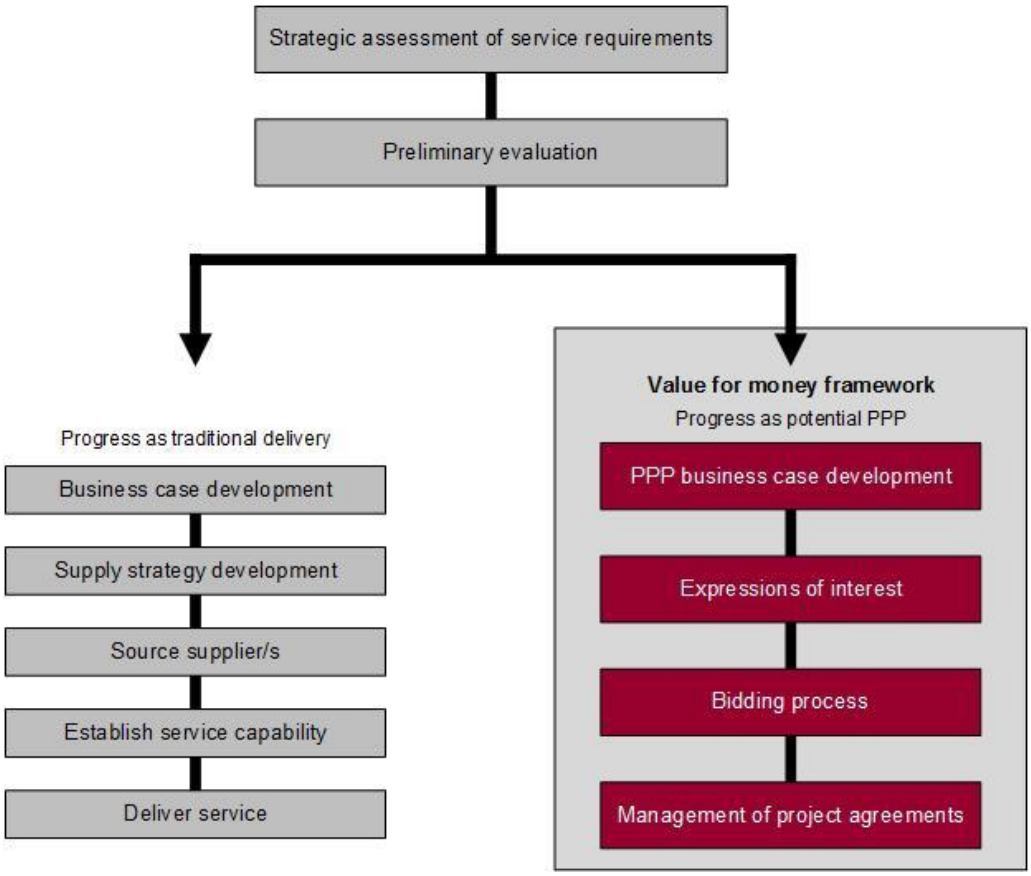
1.3.1 Project assurance framework

The project assurance framework (PAF) establishes a common approach to assessing projects at critical stages in their life cycle. The Queensland Government endorsed the PAF in November 2007 as the minimum standard for project initiation, evaluation, procurement and assurance across the Queensland public sector.

Agencies were using PAF methodology before the government formally endorsed this framework. Queensland Health (QH) stated in a submission to government in April 2007 that it would use the methodology to develop a business case for the Queensland Children's Hospital project.

In the preliminary evaluation phase of the PAF, the agency should conduct an assessment to determine whether the project should be progressed through traditional delivery methods or as a potential PPP project. If the project is likely to be managed as a PPP project, and the expected whole-of-life project cost will exceed $100 million net present value during the term of the contractual relationship, the value for money (VFM) framework will apply.

Figure 1B
Key project stages under the project assurance framework



Source: Queensland Audit Office—adapted from project assurance framework, the State of Queensland (Queensland Treasury and Trade) 2012 Version 1

Under the VFM framework, the business case development stage involves detailed analysis of the project to present the government with a case to take the project to the private sector if it is likely to represent a value for money delivery option. The business case should enable government to make commitments regarding funding of the potential project. This stage involves identifying all the risks facing the project and allocating those risks to the party best able to manage the risks.

The VFM framework was available for agencies to use in 2006, when the government noted that a list of proposed projects planned to use the framework to determine their suitability as a PPP. These projects included the new Gold Coast Hospital. The current VFM framework is based on the *National Public Private Partnership Policy and Guidelines* endorsed by the Council of Australian Governments.

1.3.2 Capital works management framework

Prior to establishment of the PAF, the capital works management framework (CWMF) assisted agencies to meet the requirements of the Financial Management Standard 1997 for planning capital investments. The CWMF provided guidance for the project phases: initiation, development, implementation and review.

Project initiation involved strategic planning to develop service delivery strategies that matched the outcomes required by government with the current and projected needs of the community.

Project development involved evaluating options so they provided maximum value for money. It also involved developing a business case to document the results of the options analysis.

1.4 Procurement delivery methods

The PAF and VFM framework help agencies assess which procurement method will provide government the best value for money outcome by comparing the costs and risks of each method for a particular project against the outcomes being sought.

The two main options are:

- managing contractor model, where the principal appoints a head contractor responsible for managing the design and delivery of the project
- PPP where a private provider will build, operate and maintain a facility to specified standards over a long period. The private provider usually finances the project.

1.4.1 Managing contractor

Queensland Government hospital infrastructure projects have traditionally been delivered using the managing contractor procurement model. QH is using this procurement model to deliver the GCUH and LCCH projects.

This form of contract involves:

- the principal appointing a head contractor (the managing contractor) who engages consultants and subcontractors to deliver the works
- the managing contractor being responsible for managing the design, documentation and construction of the project; and for delivering the project on time and within the agreed guaranteed construction sum for the fixed fees
- the guaranteed construction sum is negotiated at or before completion of the design and is the capped cost for the construction elements of the project.

1.4.2 Public private partnerships

SCPUH is the first public hospital project QH is delivering as a PPP. QH assessed the project according to the government's VFM framework and developed a business case which showed the PPP procurement method would deliver better value for money to the state, compared to a traditional managing contractor model.

PPPs typically make the private sector parties who build public infrastructure financially responsible for its condition and performance throughout the asset's lifetime. The government is typically seeking the whole-of-life innovation and efficiencies that the private sector can deliver in the design, construction and operating phases of the project. In July 2012, QH entered into contractual arrangements with a consortium to design, construct, commission, maintain and partially finance SCPUH for 25 years. At the end of the 25-year contract term, QH will be responsible for maintaining the hospital buildings.

In a typical PPP project, the government:

- prepares an output-based specification rather than a prescriptive specification
- engages a provider to deliver services over a long term (e.g. 20 to 35 years or more)
- requires the provider to design, finance, construct, maintain and operate the facility; the private party provides ancillary services including security, facilities management and other services and takes the risk for those functions
- makes no payments to the provider before the facility is commissioned
- provides payments over the term of the contract, based on services delivered against the achievement of key performance indicators, ensuring the infrastructure is maintained over its lifetime
- eventually takes back full control of the asset at a specified handover quality/standard.

1.5 Audit objective, method and cost

The objective of the audit was to examine the adequacy of the state's planning and delivery of three major hospital projects (Lady Cilento Children's Hospital, Gold Coast University Hospital and Sunshine Coast Public University Hospital).

The audit examined whether:

- the decisions to build the hospitals, and the procurement methods chosen, were based on sound business cases
- project delivery was, and continues to be managed effectively to deliver on the intended benefits.

The cost of the audit was $700 000.

1.6 Report structure

The remainder of the report is structured as follows:

- Chapter 2—Project outcomes
- Chapter 3—Planning for the new hospitals
- Chapter 4—Third-party agreements
- Appendix A contains responses received
- Appendix B contains the audit method
- Appendix C contains detailed findings for the Gold Coast University Hospital
- Appendix D contains detailed findings for the Lady Cilento Children's Hospital
- Appendix E contains detailed findings for the Sunshine Coast Public University Hospital.

2 Project outcomes

In brief

Background

In August 2006, the government made an election commitment to construct three tertiary hospitals at an estimated combined cost of $2.87 billion—Gold Coast University Hospital (GCUH), Lady Cilento Children's Hospital (LCCH) and Sunshine Coast Public University Hospital (SCPUH).

Conclusion

The three hospital projects have cost the state more than was initially estimated when they were announced in August 2006, because the original estimates were unrealistic and not informed by business cases or detailed planning; however, once Queensland Health developed business cases for the projects, it managed delivery to the cost and time estimates it provided.

Key findings

- Initial cost estimates for each project were announced before business cases were developed. There were no caveats on the reliability or completeness of estimates when they were made public. The expected final cost for the three projects of $5.08 billion is $2.2 billion more, or 77 per cent higher, than the initial estimates.
- Queensland Health has since managed delivery of the projects in line with the time frames and budgets estimated in the business cases.
- Planning for all three projects underestimated the critical effect that information and communication technology (ICT) would have on project delivery and cost.
- The three projects have delivered, or are on track to deliver, the numbers of beds required by the respective business cases; because of limited funding, not all the bed capacity will be used and economies of scales on operating cost have not been realised. GCUH is operating 122 overnight beds fewer in 2013–14 than was expected and LCCH will operate the equivalent of 71 total inpatient beds fewer in its first year of operation than was forecast in the business case.
- None of the projects can objectively demonstrate how the new hospitals will improve health outcomes in their communities compared to defined targets, because they did not identify and set a baseline for the benefits.

Recommendations

It is recommended that Queensland Health:

1. **implements a benefits management and realisation methodology for use in the planning, delivery and evaluation of all hospital infrastructure projects**
2. **assesses the impact of the change in the funding model on the hospitals' operating costs, services and bed capacity.**

2.1 Background

For each of the three hospital infrastructure projects, we examined how the project outcomes compare to the initial estimates for cost, time and scope; and whether the expected benefits from the projects will be realised.

2.2 Conclusions

The estimates quoted when announcing the decision to build the new hospitals significantly underestimated the likely cost of the three projects, because they were not informed by business cases or detailed planning at the time of the announcements. No caveats were placed on these estimates at the time, which has direct implications for the public's ability to gauge the relative merits of the fiscal policies of incumbent and alternative governments.

Once Queensland Health (QH) completed detailed planning and submitted business cases for the three projects, it has managed delivery of the projects to those business cases, consistent with the time and cost estimates it provided.

While the new hospitals will deliver improved health outcomes for Queenslanders, the business cases do not define specific benefits, and ways to measure them. As a result, QH cannot report, in measurable terms, the benefits of the new hospitals compared to defined targets. It has no baseline to measure improvement and cannot compare benefits to the costs of the three hospitals in a meaningful way to demonstrate cost effectiveness.

The three hospitals have delivered, or are on track to deliver, the expected bed capacity; but current funding arrangements have limited the number of beds actually operating at Gold Coast University Hospital (GCUH) and Lady Cilento Children's Hospital (LCCH).

2.3 Project costs

The project costs announced in August 2006 were significantly underestimated and lacked transparency—the GCUH project cost is 43 per cent higher, while the LCCH and Sunshine Coast Public University Hospital (SCPUH) project costs are approximately double the estimates announced in August 2006. The total cost of all three projects is $2.2 billion more, or 77 per cent higher than the estimates announced publicly.

QH provided government with an indicative cost estimate to inform the budget announced in August 2006 for the Gold Coast and Sunshine Coast hospital projects, but not for the children's hospital.

Once QH defined the project scopes and developed business cases, it provided government with a more accurate estimate of the final project costs. The total cost estimates in the combined final business cases vary from the current project budgets by only three per cent.

Figure 2A shows the evolution of cost estimates for the three tertiary hospital projects from 2006 to the current project budgets in 2014.

Figure 2A
Project cost history—tertiary hospital projects

Costing source	GCUH $ billions	LCCH $ billions	SCPUH $ billions	Total cost $ billions
August 2006 election commitments	$1.230	$0.700	$0.940	$2.870
Final business case	$1.549	$1.407	$1.973	$4.929
Current project budget	**$1.762**	**$1.447**	**$1.872**	**$5.081**

Source: Queensland Audit Office

In October 2009, QH obtained approval for a budget increase of about $212.8 million for GCUH after the business case was approved. The business case did not include the increase in construction costs to completion nor a funding offset from the proceeds of the proposed sale of the Southport site. The current project budget for SCPUH is $100.35 million lower than the business case. QH believes a combination of factors contributed to this result including a competitive procurement process, innovation in project delivery, a highly competitive market when the contract was awarded and lower life cycle costs arising from assumptions relating to cost increases and maintenance requirements.

In 2005, the then government announced estimated total project costs of $500 million each for the Gold Coast and Sunshine Coast hospital projects in the *SEQ Infrastructure Plan 2005–2026*. There is no evidence to show how the 2005 project cost estimates were calculated.

2.3.1 Information and Communication Technology costs and risks

Information and communication technology (ICT) is a key area of risk in opening a new tertiary hospital. ICT systems need to be installed, configured and tested properly before a hospital can open. The opening date of the Fiona Stanley Hospital in Western Australia has been delayed by six months, due to delays arising from ICT issues.

All three projects originally underestimated ICT costs and how critical ICT is to the project delivery. GCUH and LCCH did not identify the serious nature of ICT risks early enough. When compared with GCUH (which identified ICT as an extreme risk around two years before actual opening) and LCCH (which identified the same extreme risk two and a half years before scheduled opening), the SCPUH project is well positioned to learn from both projects and has time to implement mitigating actions.

Figure 2B
ICT costs—planned vs actual

Hospital	Business case $ millions	Actual expenditure/current budget $ millions
GCUH	32.0	106.9
LCCH	54.0	92.4

Source: Queensland Audit Office

ICT proved to be a major risk on both the GCUH and LCCH projects, but neither business case identified ICT-related risks as a threat to project delivery. Project contingency funded the GCUH ICT budget shortfall of $74.9 million. This contingency amount was previously earmarked for the design, procurement and installation of the project's cogeneration plant.

The LCCH project reallocated project funds for ICT, increasing the ICT budget by $38 million from $54 million to $92 million. The project has identified that it is likely to require a further $18.75 million to address additional ICT risks that have emerged.

The key reason for the significant increase in ICT costs was that the cost of procuring ICT-skilled resources was greater than anticipated. In the case of the LCCH project, the initial ICT budget was based on using public servants in QH and other government departments but, instead, it engaged external contractors at a higher cost. This occurred because of a cap on the number of staff QH could employ. The LCCH project has spent $38 million on ICT consultants, which accounts for the variance between the planned and actual LCCH budget for ICT.

Health Services Information Agency capacity

The Health Services Information Agency (HSIA) is QH's internal ICT service provider. Traditionally, HSIA's role on capital projects is to deliver the ICT infrastructure at the end of a project, between practical completion and occupancy.

It was not until HSIA's 2013 strategic ICT plan that there was any mention in hospital planning documents of the role of HSIA in supporting the three major tertiary hospital projects. All three projects raised concern within their own governance bodies, that the HSIA could not support three major tertiary hospital projects at the same time.

The LCCH project director's August 2013 report to the LCCH program steering committee states 'HSIA is currently constrained by a lack of available resources due to GCUH and business as usual activities, therefore engagement with the LCCH ICT team is limited'. The LCCH project established its own ICT group and appointed a system integrator in June 2013 to mitigate ICT risks and manage its relationship with HSIA. As the program was still reporting seven extreme ICT risks in August 2014, it remains to be seen if the program took these mitigating actions in time.

Similarly, a presentation to the SCPUH project steering committee in October 2013, on the outcomes of a workshop the project held with HSIA, stated that HSIA advised 'that they do not have the current resource capability to provide significant input into the project in the design, procurement and delivery phases. This is primarily due to their involvement in the GCUH and Queensland Children's Hospital (now LCCH) projects'.

A GCUH project briefing to QH's director-general in April 2012 stated 'the existing project team size and available operational resource capacity cannot deliver the requirements within the expected time frames'. This briefing also stated that, while ICT costs for all works not covered by the managing contractor were previously viewed as a HSIA responsibility, no budget allocation was provided in either HSIA's budget or the project budget for these works.

To mitigate the ICT risk to GCUH, the project transferred this responsibility to the managing contractor in November 2012 at a cost of $30.5 million, which enabled the core ICT infrastructure to be purchased and installed before practical completion. This extra, unplanned cost was funded from project contingency and required a variation to the contract with the managing contractor, which also meant the date for practical completion was rescheduled from February 2013 to September 2013.

2.4 Operating capacity

The three hospitals have delivered, or are on track to deliver, the expected number of beds; however, current funding arrangements have limited the operating capacity of GCUH and LCCH.

The operating cost projections in the business cases for the three hospitals were based on the *More Beds for Hospitals* recurrent funding model. In 2010–11, QH moved to the national funding model, activity based funding (ABF) and a national efficient price for weighted activity units. The ABF model allocates health funding to public hospitals based on the cost of health care services (referred to as 'activities') delivered, rather than bed numbers.

None of the business cases was revised to reflect the change in funding model nor to assess the effect on the project.

Under the ABF model, the purchasing of health services no longer funds 'beds', but rather funds 'activities' in the form of patients treated. The local Hospital and Health Services (HHS) negotiate with the Department of Health, on an annual basis, the level of activity to be funded for the upcoming year. The HHSs decide how they will deliver services within the allocated budget.

Because the funding available to GCUH and LCCH is less than forecast in the business case, opportunities for better unit cost outcomes arising from economies of scale have not been realised:

- GCUH operated with 122 fewer overnight beds than expected in 2013–14
- LCCH will operate with 71 fewer beds than expected, on average, in its first year of operation, comprising the same number of beds currently provided in the two existing children's hospitals. LCCH has advised this is sufficient to meet the current demand and the level of services agreed with QH.

Performing a like-for-like comparison of bed numbers across the three hospitals is complicated, due to inconsistent use of bed definitions. Bed numbers can include overnight beds, same-day beds and bed alternates. Inpatient beds can refer to any of these categories or to the total of all three categories.

Announced bed numbers throughout the projects include:

- In August 2006, the bed numbers announced for GCUH and SCPUH were overnight beds while, for LCCH, the bed numbers announced included all inpatient beds.
- The publicly reported bed number for GCUH of 750 does not include same-day and bed alternates, while the publicly reported number of 738-bed capacity for SCPUH does. These announced bed numbers were informed by the respective business cases.
- The 738-bed capacity promoted for SCPUH by 2021–22 is not comparable to the 450 beds initially announced for the hospital, which only included overnight beds; however, these figures have been used to promote the growth of SCPUH. The SCPUH website states that 'the hospital will open with about 450 beds in 2016, growing to a 738-bed facility by 2021'.

Figure 2C outlines the bed numbers announced, planned, delivered and operational for each hospital.

Figure 2C
Bed numbers—planned vs actual

Hospital	Beds announced in August 2006*	Bed capacity		Beds operating	
		Beds estimated in business case	Beds—actual / forecast	Beds estimated in business case	Beds—actual / forecast
GCUH	750 o/night beds	750 o/night beds 171 same-day beds and bed alternates	762 o/night beds 143 same-day beds and bed alternates	683 o/night beds by 2013–14	561 o/night beds (2013–14) 120 same-day beds (2013–14)*
LCCH	up to 400 inpatient beds	359 inpatient beds	407 inpatient beds	359 inpatient beds by 2014–15	288 inpatient beds (2014–15)
SCPUH	450 o/night beds	666 o/night beds 72 same-day beds	666 o/night beds 72 same-day beds	Not available	Not available
Totals		**2 018**	**2 050**		

* GCUH operated 120 same-day and alternate beds in 2013–14 in addition to 561 overnight beds; however, the business case did not state how many same-day and alternate beds were expected to be operating by 2013–14. Operating funding for SCPUH is yet to be confirmed.

Source: Queensland Audit Office

LCCH has a built capacity of 407 beds, consistent with the August 2006 announcement which stated the new hospital would have up to 400 beds. The 407 beds includes 359 beds (as per the business case) and a spare floor with capacity for future expansion of 48 beds.

The original project scope for SCPUH, announced in August 2006, of 450 overnight beds was insufficient to meet the health service needs of the Sunshine Coast area. Following the intervention of clinicians after the announcement of the two-year delay, QH developed a strategic business case in 2010 which assessed options for expanding the capacity of SCPUH commensurate with the growing demand for services. Government endorsed QH's recommendation to change the project scope to increase the expected overnight bed numbers to 738 by 2021–22.

2.5 Project schedule

QH has managed delivery of the projects in line with the time frames estimated in the business cases.

The three hospital infrastructure projects have progressed against the estimates announced in August 2006:

- GCUH opened in September 2013, three months later than estimated in the business case, but within the contractually agreed time frame, because more time was required to install ICT than was planned. This is not a significant variance, given that construction was planned to take four years. The August 2006 announcement did not specify when the hospital was expected to open.
- At September 2014, the LCCH project is working towards an opening date of December 2014, as per the original estimate; however, construction delays and ICT risks could delay the opening of the hospital.
- At September 2014, SCPUH is expected to open in 2016, two years later than the original estimated opening date. In June 2009, the government approved delay of the SCPUH opening by two years so the public private partnership market could recover from the global financial crisis. Following this delay, the SCPUH project has progressed in line with the revised announced program.

2.6 Benefits realisation

The government's project assurance framework requires agencies to identify the benefits of each project option when developing the business case and to determine, at the end of the project, whether the benefits identified in the business case have been realised. The desired outcomes should form the basis for a project and for determining its success.

A benefits realisation process requires:

- identifying benefits
- developing one or more key performance indicators for each benefit
- reporting benefits realised.

None of the projects can objectively demonstrate how the new hospitals will improve health outcomes in their communities, compared to defined targets, because they did not identify and set a baseline for the benefits. The business cases did not articulate benefits in measurable terms. As a result, the projects are not able to report whether the benefits realised achieve the benefits intended when the projects were planned and approved.

This does not mean the hospitals will not deliver benefits but, rather, that QH does not have a framework to ensure it captures, measures and reports benefits realised, consistently and objectively to demonstrate value for money.

The three new tertiary hospitals will deliver health benefits to Queenslanders. These include, but are not limited to:

- patients will have greater access to services closer to where they live
- the health and hospital services and facilities provided will increase their ability to attract and retain staff
- models of care can be modified to improve patient health care outcomes
- integration between the hospitals and universities will provide greater opportunities for teaching and research in clinical areas.

In all three cases, while the decisions to build the hospitals were made before the business cases were developed, QH did not conduct a thorough assessment of benefits to justify the investment decision. It did not fulfil its responsibility to demonstrate that the projects will provide cost effective solutions.

2.7 Recommendations

It is recommended that Queensland Health:

1. **implements a benefits management and realisation methodology for use in the planning, delivery and evaluation of all hospital infrastructure projects**
2. **assesses the impact of the change in the funding model on the hospitals' operating costs, services and bed capacity.**

3 Planning for the new hospitals

In brief

Background

Under the government's project assurance framework, planning effectively for infrastructure projects includes identifying the service need and outcomes sought; assessing potential options to address the service need; and developing a business case that informs the decision to invest in the project by comparing the risks, benefits and costs of various options.

Conclusions

Detailed planning for the new projects did not occur until after the projects were publicly announced. The reactive planning by Queensland Health (QH) for health services for the Gold Coast, Sunshine Coast and children's health has meant that QH did not identify the need for long term solutions when the solutions were needed. This has cost $170.8 million in interim solutions in all three areas to meet health service needs while the new hospitals were being built.

Key findings

- QH did not perform detailed health service planning to inform the April 2005 announcements of new hospitals for the Gold Coast and Sunshine Coast, nor the August 2006 announcement for a new children's hospital.
- None of the three tertiary hospital projects undertook a thorough assessment of service delivery options before the projects were made public. Sunshine Coast Public University Hospital (SCPUH) was the only project where QH assessed the procurement method to deliver the state optimal value for money. QH did not assess the Gold Coast University Hospital (GCUH) and Lady Cilento Children's Hospital (LCCH) projects against the government's value for money framework because of the risk of delaying completion of those projects.
- The business cases for all three projects were developed well after the decisions were made to progress the projects. The business cases do not comply with the government's project assurance framework because they do not:
  - define the criteria to measure project success beyond delivering the projects on time and budget
  - provide a comparison of the costs, risks and benefits of various options for delivering the required service outcome—although the SCPUH business case does this for the procurement method but not the service delivery method
  - provide a thorough financial and economic assessment of the financial effect of the project option on the government over the life of the hospitals in comparison to other options.

Recommendations

It is recommended that Queensland Health:

3. **regularly reviews health service plans to keep them current and to identify long term solutions in a timely manner**
4. **plans all future hospital infrastructure projects in compliance with the government's project assurance framework to:**
   - **identify the service need and possible options to meet the desired outcome**
   - **define the criteria for project success**
   - **analyse the costs, risks, benefits of various options**
   - **comprehensively assess whole-of-life financial effect of the project options.**

3.1 Background

The project assurance framework (PAF) is a whole-of-government project assessment process that establishes a common approach to assessing projects at critical stages in their lifecycle. Figure 3A outlines the PAF phases relevant to the audit.

Figure 3A
PAF phases relevant to the audit

PAF phase	Requirements
Strategic assessment of service requirement	Define the service need and outcome sought; identify potential options to inform the decision of initiating a project Health service plans align with the strategic assessment of service requirement phase in PAF
Preliminary evaluation	Assess the priority and affordability of the project options and the strategic decision; confirm the desired outcome; conduct a preliminary evaluation of the costs, risks and benefits associated with the identified project options; determine whether the project should be progressed through traditional delivery or as a public private partnership (PPP)
Business case development	Undertake a more detailed analysis of the smaller number of potentially viable options identified during the preliminary evaluation; confirm the outcome sought; conduct a detailed evaluation of the costs, risks and benefits associated with the identified project options; recommend a preferred option

Source: Queensland Audit Office adapted from Queensland Government Project Assurance Framework

We used the PAF principles to assess the planning for three tertiary hospital projects—Gold Coast University Hospital (GCUH), Lady Cilento Children's Hospital (LCCH), formerly known as the Queensland Children's Hospital project and Sunshine Coast Public University Hospital (SCPUH).

3.2 Conclusions

Queensland Health (QH) did not proactively plan health services on the Gold Coast, Sunshine Coast and for children's health. The decision to build the three new hospitals was announced before QH made detailed plans to identify service needs and explore options for how to best meet these needs. As a result, QH focused on the announced infrastructure solutions without adequate consideration of alternative options, their risks, costs and benefits. This is reflected in the projects' business cases, which do not compare and analyse options to show that the option chosen for each hospital provides the best value for money and health outcomes.

Because of the late strategic assessment of service requirements, QH had to develop interim solutions to manage health service demand, which cost $170.8 million while the new hospitals were being built.

3.3 Summary findings

Figure 3B provides a summary of our assessment of the planning for the three hospitals.

Figure 3B
Planning—tertiary hospital projects

PAF requirement	GCUH	LCCH	SCPUH
Timely strategic assessment of service requirement (health service planning) to define the need to be addressed and outcome sought, and identify potential solutions to achieve the outcome	Not timely—health service planning did not inform the new hospital announcement in April 2005. A Master Plan of Health Services informed the revised project scope announced in August 2006.	Not timely—health service planning did not inform the new hospital announcement in August 2006.	Not timely—health service planning did not inform the new hospital announcement in April 2005. A health service plan informed the revised project scope announced in August 2006. A two-year delay announced in 2009 provided time for more detailed planning which resulted in the revised project scope announced in April 2010.
Preliminary evaluation of options with the greatest potential to provide value for money solutions and achieve the outcome sought	A single project option to develop a new hospital was submitted to government in August 2006. Procurement delivery options were not assessed.	There was no detailed assessment to confirm the single hospital option is superior to a dual hospital model. There was no detailed assessment of the two most suitable site options before it was recommended the new hospital be built adjacent to the Mater Hospital. Procurement delivery options were not assessed.	Site options were assessed to inform the government's site decision in August 2006, but there was no assessment of a broader range of options beyond building a new hospital. Options for the size of the new hospital and for managing demand were assessed post-announcement. Procurement delivery options were assessed.
Business case with detailed comparative evaluation of options	The business case was based on a single option for the solution and delivery method; it was not completed and approved until November 2008.	The business case was based on a single option for the solution and delivery method; it was not completed and approved until April 2010.	The final value for money business case, completed and approved in April 2011, was based on a single solution. It demonstrated value for money for the selected delivery method.

Note: QH's briefing to government in August 2006 refers to a health service plan; however, QH has not been able to provide evidence of this plan.

Source: Queensland Audit Office

3.4 Health service planning

A health service plan:

- establishes future service needs
- identifies models of care to meet those needs
- considers population characteristics, trends in health risks and disease patterns and the health status of the population to project the future service needs
- identifies the minimum health service standard to be met to prioritise the allocation of resources.

Advanced health service planning describes the services required, their complexity and the expected volume of activities and the models of care to be applied in treating patients. These are key inputs into the size, design and functionality of the hospital so it achieves the desired outcomes efficiently and effectively.

Detailed health service planning did not inform the government's announced intention to build the new hospitals. All three hospital projects completed health service planning after the government announced its decision to build the hospitals. For GCUH and LCCH, this occurred over a compressed time frame during the project scoping stage, although Gold Coast health service planning began in 2003.

Figure 3C
Health service plans—completion dates

Hospital	Announcement	Health service plan completed	Time frame covered by plan
GCUH	April 2005	Master plan—October 2005 Health service plan—January 2008	2008–2021
LCCH	August 2006	July 2008	2008–2018
SCPUH	April 2005	February 2012	2012–2022

Source: Queensland Audit Office

The time from planning to delivery of a hospital is typically four to seven years. Each hospital project completed a health service plan in the context of its capital construction projects. Figure 3D provides a summary of the weaknesses we identified with the health service planning for the three projects.

Figure 3D
Health service planning—weaknesses

Hospital project	Weaknesses
GCUH	The 2008 health service plan was high level and not supported by detailed, up to date quantitative analysis of population, demographics and trends in chronic diseases and hospital treatment. The methodology of the forecasts and the assumptions made were not clearly documented.
LCCH	The 2008 health service plan did not detail the forecasting methodology applied, data used and the assumptions made. The plan required bed numbers to be adjusted manually because there was no historical activity information for new and expanding services; the plan did not provide an analysis of how the manually adjusted bed numbers were derived.
SCPUH	QH did not brief government until 2009 on the patient activity expected to flow to Brisbane as a result of the Sunshine Coast hospital network not having sufficient capacity. It emerged, after the intervention of local clinicians and QH's subsequent analysis, that this 2009 advice did not adequately consider clinical and operational issues. After QH updated its planning information, SCPUH scope changed to include bed capacity increasing from 507 beds available on opening to 738 beds by 2021–22. The health service plan, completed in 2012, was not approved until early 2013, after the contract was signed to construct the new hospital in 2012. This means the output specification of the PPP contract was not informed by an approved health service plan, but relied on earlier draft documentation. QH advised that earlier iterations, supporting data and demographic information were available throughout the planning of SCPUH and that these informed the scope and scale of SCPUH and the resulting decision making at all stages of SCPUH's development.

Source: Queensland Audit Office

When health service planning is left too late, interim solutions are needed to address immediate health service needs while new infrastructure is built. The cost of interim solutions for the Gold Coast, Sunshine Coast and children's health, while the new hospitals were being built, totalled $170.8 million.

In the case of GCUH, this meant QH had to increase hospital services in the existing Gold Coast hospital network during the planning and construction phase of the new hospital. It created 50 new beds at the Southport hospital, which the Gold Coast Health Service District's *Interim demand management strategy 2008–12* forecast would involve capital costs of $67 million.

One consequence of the late start of health service planning for the children's hospital was that QH did not identify the need for the service when it was actually needed. This was shown by the Mellis Review in 2006, which found Queensland paediatric cardiac services to be in 'an unsatisfactory and unsustainable condition'.

This placed the project under extra time pressure and meant QH needed an interim solution to address concerns over paediatric cardiac services until the new hospital was built. The interim solution involved the temporary transfer of the specialist paediatric cardiac services provided by The Prince Charles Hospital to the Mater Children's Hospital, with a forecast cost of $28.6 million to upgrade facilities at the Mater Children's Hospital.

The establishment of a specialised paediatric hospital sooner may have avoided the need for this interim strategy. Had QH performed more timely health service planning, it would have been in a better position to respond to the service need. When the service need became more pressing, QH did not have enough time to define the service need properly, nor to consider the lead times to develop an optimal solution.

The interim solution required for the Sunshine Coast to support the construction of a new private hospital is a further consequence of QH's reactive planning; this has cost the state $75.2 million in net present value terms.

3.4.1 Future planning

Health service planning should be an ongoing activity which regularly updates planning assumptions and service objectives. This means it can provide timely reports on the level of demand and the services available. Regular updates of the health service plan identify early any imbalances between service demand and supply so solutions can be identified, investigated and implemented when they are needed.

The current health service plans cover the next four to eight years. These plans have not been refreshed to ensure they remain current. This creates a risk that future needs will not be identified early enough to plan for long term solutions. It is likely that planning for new services will again be reactive, because of insufficient time and resources to develop solutions before the existing infrastructure reaches capacity.

The fundamental assumptions underpinning the health service plans for GCUH and LCCH have changed under the new funding model. The health service plan objectives for the GCUH and LCCH may no longer be valid, due to either a change in the projected demand and/or the actual services available to meet the demand for services. As the health service plans have not been updated, it is unclear what health service benefits will be achieved as a result of the changes.

3.5 Options analysis

Because the government announced its decision to build the new hospitals before QH completed the health service plans, QH focused on the options announced and did not thoroughly identify and assess other potential options to achieve the same outcome:

- GCUH—QH did not identify or assess potential options before the project was announced in April 2005, nor when the project scope was redefined and announced in August 2006. QH's submission to government in August 2006 contained a single option for the project, driven by QH managing the risk of not delivering the project according to the government's time frames.
- SCPUH—QH assessed site options to inform the government's decision in August 2006 to change the site for the new hospital, but did not evaluate a broader range of options (beyond building a new hospital at a greenfield site) to demonstrate that the solution would provide best value for money and be the most effective means to meet service demand. All options included a new hospital being built at Kawana.
- LCCH— QH did not assess alternatives to a single hospital option compared to the dual hospital model; nor did QH conduct a detailed analysis of the two most suitable site options before it recommended that the new hospital be built adjacent to the Mater Hospital.

3.6 Business cases

The purpose of a business case is to undertake a more detailed comparative analysis of the shortlisted project scope and delivery options identified during the preliminary evaluation stage to identify the option most likely to provide the best value for money outcome. A business case is required, irrespective of the procurement method used to deliver the project.

To develop a business case it is necessary to:

- review and confirm the outcome sought, as well as the criteria for success, to determine whether the response is meeting the identified service need
- conduct a detailed comparative evaluation of the options, including detailed risk analysis, detailed financial and economic analyses and consideration of whole-of-government policies, legislative requirements and procurement strategies.

As part of financial analysis, the PAF requires comparison of the net cash effects under each option against the status quo or base case to highlight the relative costs of implementing each option. A preferred option and delivery model is identified and recommended, based on the detailed comparative assessment. The business case is then submitted, seeking approval to proceed with the project, funding approval for the project delivery and allocation of appropriate resources.

The business cases for GCUH, LCCH and SCPUH did not meet all the PAF requirements. None of them provided comparative options and analysis to show that the option chosen for each hospital provides the best value for money. The business cases did not compare the risks, costs and benefits against a status quo option or some other base option.

While the decisions to build the hospitals were made before the business cases were developed, by not analysing the selected option against others in terms of a comparative cost-benefit analysis, QH could not, and did not, inform decision makers of the extra costs of their decisions. Such analysis would have allowed decision makers to validate their original decisions, or at least demonstrate why future capital infrastructure decisions should follow detailed cost-benefit analysis.

None of the business cases included explicit measures of project success from the users' perspectives—neither public nor clinicians. The business cases did not establish any measurable health outcome targets; therefore, the government, clinicians and the public do not have a measurable framework to judge the success or otherwise of the three projects.

The financial and economic assessment contained in the GCUH and LCUH business cases did not provide sufficient justification for the expected capital and operating cost of the new hospitals. In each instance, each business case indicated it will cost the state more to operate the new hospital, compared to the existing facilities, but did not explain why this was an acceptable outcome.

The LCCH business case was the only one to include an assessment of the whole-of-life costs as required by the PAF, but this had limited value as there were no other project options for comparison.

3.6.1 Procurement delivery method

The final value for money business case for SCPUH provided adequate justification for the project to be delivered as a PPP.

QH selected its preferred procurement delivery model—guaranteed construction sum—for LCCH and GCUH ahead of the business case, contrary to the PAF. In both cases, QH based its choice on achieving project time frames within budget, rather than identifying an innovative and best value for money solution.

In 2006, QH planned to evaluate both projects against the VFM framework to determine their suitability as PPP projects; however, in April 2007, QH recommended to government not to proceed with the evaluation and not to go ahead with PPP arrangements in either case.

In the GCUH project, QH was concerned that the time required to prepare a business case under the VFM framework would put project time frames at risk. It was also concerned that, at the time, there was insufficient market depth to deliver the project as a PPP.

QH regarded the LCCH project as too complex for a PPP arrangement. This was due to the merger of two hospitals with differing practices, processes and systems and the fact that it would take longer to integrate the two hospitals, meaning the project could not finish on time. QH did not detail the expected additional time required to prepare and deliver the GCUH and LCCH projects under a PPP option, nor did it complete an options analysis to assess the merits of a traditional delivery method against delivery as a PPP project.

QH did not assess the option of extending the time frame of the Gold Coast interim demand management strategy to consider alternate procurement models. This would have enabled more detailed planning and analysis to test if an alternative outcome could deliver a least cost solution, or greater service capacity for similar overall cost.

3.7 Recommendations

It is recommended that Queensland Health:

3. **regularly reviews health service plans to keep them current and to identify long term solutions in a timely manner**

4. **plans all future hospital infrastructure projects in compliance with the government's project assurance framework to:**
   - **identify the service need and possible options to meet the desired outcome**
   - **define the criteria for project success**
   - **analyse the costs, risks, benefits of various options**
   - **comprehensively assess whole-of-life financial effect of the project options.**

4 Third-party agreements

In brief

Background

To deliver hospital projects, Queensland Health (QH) entered into agreements with third parties on land acquisition, relocation of affected land holders and purchase of services. We assessed whether QH achieved value for money outcomes for the state when it entered into agreements with third parties to secure land and provide car parking services for the new hospitals.

Conclusions

QH has transferred economic benefits worth at least $190.4 million to third parties across the three projects. It did this to avoid upfront capital costs which would have increased the project budgets and to transfer the construction and the operating risks associated with car parks; however, the short term benefit of avoiding upfront capital costs comes with a long term loss of economic benefits. QH could not transfer all operating risks of the Gold Coast University Hospital (GCUH) and Sunshine Coast Public University Hospital (SCPUH) car parks, commensurate to the value of the economic benefits lost.

Key findings

- QH did not achieve value for money for the state when it executed agreements with third parties to construct and operate the GCUH car park and to secure land for the Lady Cilento Children's Hospital (LCCH).
- QH secured the land for LCCH through an agreement with the Mater, which transferred economic benefits of $24.7 million from the state, including the car park agreement. QH made concessions in this agreement to secure Mater's support for constructing the new hospital.
- For GCUH and SCPUH, QH has effectively provided a minimum revenue guarantee, subject to specified conditions, and is at risk of making good any revenue shortfalls to the respective car park consortia.
- Untimely health service planning by QH and a two-year announced delay to the SCPUH project meant QH did not achieve value for money when it agreed to purchase services from the Sunshine Coast University Private Hospital.

Recommendations

It is recommended that Queensland Health:

5. reviews its car park policy to ensure new car park developments achieve the best value for money outcome over their full life, consistent with the principles of the project assurance framework.

4.1 Background

As well as entering into agreements to construct hospital buildings, Queensland Health (QH) entered into agreements with third parties on land acquisition, relocation of affected parties, car park development and operation and purchase of services.

We assessed the arrangements QH made with third parties to estimate the economic value of the relevant transactions. Our assessment of economic value is based on a cash flow analysis and includes any capital costs, operating expenses and revenues over the term of the arrangement and discounted to a present value. We have used QH's projections of cash flows, unless a change in circumstance or updated information has warranted updating projections.

4.2 Conclusions

QH has transferred economic benefits worth at least $190.4 million to third parties across the three projects; however, it has not consistently transferred the risks commensurate with the value of these economic benefits, meaning it has retained risks without the potential benefits.

QH policy not to develop or operate car parks avoids upfront capital costs and transfers the construction and some ownership risks to the third party; but also means that QH foregoes the car park revenues for Gold Coast University Hospital (GCUH) and Lady Cilento Children's Hospital (LCCH). We estimate that, by applying the policy, QH is missing out on $121.9 million that could have contributed to the cost of operating the hospitals.

QH achieved a better value for money outcome on the Sunshine Coast Public University Hospital (SCPUH) car park, estimated to be a $61.5 million reduction in quarterly service payments over the term of the arrangement, due to the bundling of the car park into the public private partnership (PPP) arrangement.

Because QH did not identify the need for health services on the Sunshine Coast in time—and the delivery of SCPUH was delayed by two years—it entered into an agreement with a private hospital operator to construct a new private hospital and deliver public services over five years, which has resulted in a value transfer to the private hospital operator of $54.5 million.

4.3 Value transfers

To avoid incurring upfront capital costs, all three hospital projects required significant transactions with third parties. The long term effect of these transactions is that the state transferred $190.4 million in economic benefits to third parties. About 64 per cent of this relates to car park revenue.

The agreements with third parties included:

- GCUH
  - a PPP for 31 years to construct, maintain and operate the hospital car park
  - several agreements with third parties to acquire the land required to build the hospital.
- LCCH
  - a Memorandum of Understanding (MoU) with Mater Misericordiae Health Services Brisbane Limited (Mater) to acquire the land required to build the hospital
  - several agreements with other land holders to acquire the land required to build the hospital.

- SCPUH
  - an agreement with the private sector consortium developing SCPUH to construct and operate two car parks for the SCPUH site for a total term of 28 years: 25 years for the SCPUH car park from 2016 and 28 years for the cark park supporting the private hospital, which opened in November 2013
  - a contract with a private hospital operator to provide services which equate to approximately 70 to 110 public beds over a five-year period, starting in 2013–14.

Figure 4A summarises the results of our assessment of the transfer of economic benefits to third parties in nominal dollars.

Figure 4A
Estimated value of economic benefits transferred to third parties

Hospital	Third party	Estimated value transfer $ millions*
GCUH	Car park operator	91.9
LCCH	Mater	24.7
	Telstra	10.0
	Leukaemia Foundation	9.3
SCPUH	Private hospital operator	54.5
Total		**190.4**

*Dollar values are expressed in nominal terms in the year in which the agreements were being considered by QH: GCUH Car park operator 2010–11, LCCH Mater 2008–09, LCCH Telstra 2011–12, LCCH Leukaemia Foundation 2009–10, SCPUH Private hospital operator 2009–10.

Source: Queensland Audit Office

4.4 Land

QH made agreements with existing land holders to secure the land for the hospital sites. This included:

- GCUH—$53.1 million to acquire the site, plus $62.2 million to relocate the Griffith University Centre for Medicine and Oral Health
- LCCH—$33.5 million to acquire 49 per cent of the hospital footprint; QH obtained the remainder through a MoU with Mater
- SCPUH—$42 million to acquire land from a developer; the site acquisition involved an infrastructure agreement between QH, Caloundra City Council (succeeded by the Sunshine Coast Regional Council) and the developer to upgrade water and wastewater services, stormwater, roads and bicycle pedestrian infrastructure in the area.

QH's MoU arrangement with Mater for the LCCH project was the most significant of the land transfers from a value for money perspective. We did not identify any material issues with the land transactions for the GCUH and SCPUH projects.

To minimise the upfront capital costs of the project, QH purchased only part of the land for LCCH. It bought 49 per cent of the footprint for $33.5 million, with the remaining 51 per cent acquired under an arrangement with Mater for 60 years, with an option to extend to 90 years. QH has agreed that, at the end of the agreement, it will transfer ownership of the entire LCCH footprint, including the hospital buildings, to Mater.

Through the MoU, QH transferred $24.7 million of net economic benefits to Mater. Departmental briefing papers indicate QH was aware the arrangements provided net financial benefits to Mater when it agreed and executed the MoU. QH advised the then government the MoU included concessions to secure Mater's continuing support for the new hospital, but it did not assess and brief government on the potential value of benefits.

The announcement of the hospital site before any detailed planning was completed weakened QH's negotiating position. As a result, QH focused on delivering the project within the parameters set in the then government's announcement.

QH entered into arrangements with other land holders including Telstra and the Leukaemia Foundation to secure land in the LCCH footprint. QH paid above market value to secure the land because its payments included QH funding construction of replacement infrastructure at new locations for affected parties as incentive to vacate the land.

4.5 Car parks

QH's approach to have the private sector build the car parks at GCUH and SCPUH means it avoided any upfront capital contributions and reduced the state's risk exposure to these projects during the construction and operating phases. QH endorsed a car parking policy in 2008 which states:

> *'Although Queensland Health will facilitate the provision of car parking at its facilities, such services are not core Queensland Health activities. Accordingly Queensland Health prefers not to be directly involved in the provision of such car parking.'*

Consequently, private sector providers are operating the car parks at all three hospitals. Figure 4B summarises key characteristics for each hospital car park development.

Figure 4B
Hospital car park comparison

Characteristics	GCUH	LCCH	SCPUH
Upfront funding of construction cost	Private sector	Department of Health	Private sector
Car park operator	Private sector	Private sector	Private sector
Term of operating agreement	31 years	60 or 90 years	29 years
Low demand risk	Shared between private sector and QH	Private sector	Shared between private sector and QH
High demand benefit	Shared between private sector and QH	Private sector	Private sector
Department of Health incurs penalties if hospital opening delayed	Yes	No	No
Estimated economic benefits—net present value transferred to private sector	$91.9 million over 31 years *	$30 million over 60 years	
Estimated economic benefits—net present value retained by QH			$61.5 million over 29 years

*The estimate of the net present value of the GCUH car park of $91.9 million over 31 years includes the estimated net present value benefit to QH of $15.6 million over 31 years associated with the profit sharing arrangements with the private sector consortium.

Source: Queensland Audit Office

By not operating the car parks, while retaining low demand risks, QH is missing an opportunity to use car park revenue to assist with funding the operating cost of the hospitals. QH did not advise government of the potential value of the GCUH and LCCH car parks when it recommended these car parks be operated by the private sector. Our estimates in Figure 4B are based on QH constructing and operating the car parks consistent with the cost structures of the private sector.

The SCPUH car parks will provide some economic benefits to QH because the development and operation of the new car parks were packaged as part of the hospital development.

While QH may share some of the economic benefits of the GCUH car park if specific financial targets are exceeded, it has not transferred all the associated operating risks.

Hospitals in the private sector and other jurisdictions use car park revenue to contribute to funding patient care, which is made known to the users of their car parks.

- Mater states on its website that, from the three multi-storey car parks it owns, 'All proceeds support Mater patient care'.
- The Royal Children's Hospital in Melbourne states on its website that 'All revenue generated by the RCH car park remains at the Royal Children's Hospital'.

Our assessment of the transfer of economic benefits is based on the project assurance framework and the Infrastructure Australia national PPP guidelines. The discount rate applied in our estimates is outlined in Figure 4C.

Figure 4C
Hospital car park revenue estimate calculations

Calculation item	GCUH	LCCH	SCPUH
Risk free rate	5.56%	6.08%	3.80%
Systematic risk premium[#]	3.00%	3.00%	3.00%
Discount rate	8.56%	9.08%	6.80%

*The risk free rate is based on the 10-year Commonwealth Government bond rate prevailing at the time of each of the car park agreements.

[#]The risk premium of 3.0 per cent is based on our observation of guidelines in other jurisdictions for hospital car parks.

Source: Queensland Audit Office

4.6 Services

QH signed a contract in 2011 with the successful bidder for the private hospital operator of the Sunshine Coast University Private Hospital tender to provide the equivalent of 70 to 110 public beds over a five-year period starting in 2013–14. This arrangement involved:

- a service fee payable on the treatment of each patient
- an availability fee, payable to the private hospital operator, in return for providing access to beds.

The service fee increases by a fixed 3.5 per cent over the five-year term, rather than by the variable rate used to fund Queensland public hospitals. The private hospital operator could earn a service fee above the rate used to fund public hospitals if the increase in the public rate is less than 3.5 per cent. The commercial arrangements to which QH agreed involve the private hospital keeping any efficiency savings, rather than sharing savings with QH.

Our analysis of the availability fee over the 50-year life of the private hospital identified that, in net present value terms:

- the private hospital's expected construction cost was $125.7 million
- the state's share of the construction costs, based on the proportion of beds to be made available, was about $20.7 million; however, the availability fee payable by QH to the private hospital operator totalled $75.2 million for the five-year term
- QH contributed about 60 per cent of the private hospital's construction cost to purchase 16.5 per cent of its capacity over its 50-year life.

Figure 4C details the transfer of economic benefits to the private hospital operator of $54.5 million.

Figure 4D
Value for money analysis—purchase of services from private hospital

Details	2010 $ millions
State's share of construction costs based on share of beds over 50-year life of hospital on a net present value basis	$20.7
Net present value of availability fee payments	($75.2)
Value for money outcome for the state	**($54.5)**

Source: Queensland Audit Office

Before it entered into this agreement, QH assessed alternatives and concluded that supporting the construction of a private hospital, before the public hospital opens, was the only option that could help reverse patient flows from Brisbane. It conducted a competitive tender process and selected the private hospital operator offer that would deliver the best value for money outcome for the state in the circumstances.

The $54.5 million value transfer that resulted from this agreement was the cost to accelerate delivery of health services on the Sunshine Coast, due to QH's untimely health service planning and decision to delay construction of SCPUH by two years.

QH advised during the audit that the basis for the availability fee was to reimburse the private hospital operator for delivering the hospital (and associated public hospital services) the Sunshine Coast Hospital and Health Service wanted, rather than the hospital a private hospital operator may have traditionally wished to deliver on the site at that time. The state gets the benefits of using the built capacity during the term of the service purchase, while the private hospital operator builds and configures the facility to QH's requirements and then reconfigures the facility to its own requirements at the end of the agreement.

4.7 Recommendations

It is recommended that Queensland Health:

5. **reviews its car park policy to ensure new car park developments achieve the best value for money outcome over their full life, consistent with the principles of the project assurance framework.**

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Appendix A—Comments

In accordance with section 64 of the *Auditor-General Act 2009*, a copy of this report was provided to the Department of Health, Gold Coast Hospital and Health Service, Children's Health Queensland Hospital and Health Service and Sunshine Coast Hospital and Health Service with a request for comment.

A fair summary of the responses received are included in this Appendix.

Responsibility for the accuracy, fairness and balance of the comments rests with the head of these agencies.

Fair summary of response provided by the Director-General, Department of Health on 7 October 2014:

…With regards to the recommendations identified within the proposed report, I have provided a further attachment which outlines the approach which will be taken by Queensland Health for the implementation of those recommendations. Please note that the actions and implementation timeframe reflect the changing business model for Queensland Health and operational autonomy of the HHSs, which will increase as each HHS takes ownership of their land and property assets…

Fair summary of response provided by the Board Chair, Children's Health Queensland Hospital and Health Service on 3 October 2014:

…I reiterate that all 359 beds will be commissioned and available from the opening of LCCH…

…The contemporary management of an acute tertiary facility indeed necessitates that the number of beds required for patients will vary seasonally and day-to-day. However I must emphasise that 359 beds will be available on opening and sufficient funding is available for CHQ to meet the predicted service demands for LCCH and for CHQ to achieve the state and national surgical waiting list and emergency wait time targets.

Secondly, the report notes that no formal review of the original business case occurred over the course of the LCCH Project period. While there was no formal business case review, I would note that consistent with our accountabilities as a statutory body, CHQ has undertaken strategic and operational planning processes to ensure the LCCH as a facility is fit for purpose, that necessary services are provided and contemporary models of effective and efficient care will be available on the opening of the LCCH.

Finally, the report notes there was no detailed assessment of options other than the 'single hospital option'. The report does however note and list the numerous reviews from credible local and national experts that recommended the single consolidated hospital as the best "option" for tertiary paediatric services within Brisbane and Queensland. This option was further supported within the international literature and a timely report from McKinsey on the advantages of consolidated paediatric services for a population equivalent to that served by the LCCH…

Fair summary of response provided by the Chief Executive Officer, Gold Coast Hospital and Health Service on 3 October 2014:

…Statements made within the conclusions section of the report are not true for all of the three projects. Each of the projects is at a very different stage in their lifecycle; the three projects cannot be justly compared…

… GCUH is operating less than the forecast number of beds, however the Health Service is meeting demand within the new funding arrangements and funding allocated to the GCHHS. The project delivery status does not take into account the fact that the Health Service is meeting demand…

… The GCUH project has been delivered within budget and is currently projecting a surplus of $15M subject to final and financial project close. The scope and funding of the project changed over time. The $1.76B is inclusive of site acquisition and relocation costs, replacement of Griffith University Medical School plus Building Price Index (BPI) escalations as informed by Queensland Treasury. The final budget allocation is a product of successful project management over a project lifecycle…

…Extensive planning was completed to inform decision making and the health needs of the population into the future. This is evidenced by the Capital Works Management Framework (CWMF) as the key planning document in place at project initiation for GCUH. This is not reflected in the Proposed Report… The CWMF (page 6) notes that 'project initiation is undertaken by departments as they develop service delivery strategies to match the outcomes required of them by Government'. Government required a new hospital on the Gold Coast, therefore project feasibility studies and extensive health service planning were undertaken by the former Gold Coast Health Service District to inform the 2006 formal announcement. If the issue is about 'timely' health service planning as opposed to 'poor' – these are two very different issues. Health service planning was in fact timely for the GCUH as it assisted to evaluate the feasibility of the project at the outset. In addition, the interim demand strategies planned for and implemented maximised existing infrastructure across the Gold Coast. They were an integral component of planning…

…Page seven (appendix two) of the Project Assurance Framework articulates that 'benefits may be expressed in outcome statistics or physical units (e.g. number of hospital beds, lives saved, increased literacy rates).The two prime issues in relation to benefits were to increase access to health services and the range of services available to the community. Sound evidence was provided by the GCUH project to demonstrate that the GCUH Project does not 'lack a baseline' to measure benefits as noted in the report…Benefits were implied in the business case and the baseline was the old facility. Performance / outcomes achieved are validated through accepted hospital performance measures including elective surgery wait times; activity; NEAT; NEST etc. These were clearly evidenced in the findings of the Building Performance Evaluation supplied to the QAO…

…Recognising and addressing the complexity of ICT infrastructure, it was difficult to accurately project related costs and plan for the level of technological change that would occur during the period of planning, design and construction which spanned approximately 6 years. The cost for ICT was absorbed within GCUH budget and delivered on 1 July 2013, three months ahead of the variation program…

…For future projects, the recommendations are appropriate as detailed in the response schedule. These recommendations have largely been applied in the planning and delivery of the GCUH Project…

Fair summary of response provided by the Chief Executive Officer, Sunshine Coast Hospital and Health Service on 7 October 2014:

…the assessment of the alternative service delivery models was undertaken as part of the Strategic Business Case, which determined the 450 bed SCPUH, expanding to 738, was the appropriate service delivery model, and this decision was endorsed by Government. In accordance with the VFM Framework, the VFM Business case did not revisit this decision, but sought to confirm the procurement / delivery model that was most likely to deliver value for money for the State. Revisiting the service delivery approach at every step of a project's lifecycle is not practical and potentially undermines the certainty provided by earlier decisions which is critical to progress detailed planning, market engagement and development of the VFM Business Case itself...

…Queensland Health does not solely retain the risk of low demand beyond the threshold, but rather it shares this risk with Exemplar Health...this risk sharing mechanism explicitly requires that financial remedies are to be used as a last resort only, and both parties must take a flexible approach in negotiations that consider a range of non-financial strategies in this scenario...the Key Risk Event is not linked to staff numbers, but rather overall Forecast Carpark Revenue (noting that staff numbers are a key, but not only, determinant of this forecast)…

…the delivery of increased capacity for the delivery of health services on the Sunshine Coast is stated as a benefit in the VFM Business Case…

…Queensland Health believes [the] statement ('Bed numbers can include overnight beds, same-day best and bed alternates. Inpatient beds can refer to any of these categories or to the total of all three categories.') is incorrect and does not reflect how bed numbers are calculated and reported……The SCPUH project was not procured under the PAF framework. As it was identified as a Public Private Partnership, it progressed under the PPP VFM Framework. This was done under the direction of the whole-of-government Steering Committee, which includes representation from Queensland Treasury and Trade, custodians of the PAF and VFM Framework…

…Queensland Health believes that the analysis supporting [the] statement ('Untimely health service planning by QH and a two-year announced delay to the SCPUH project meant that QH did not achieve value for money when it agreed to purchase services from the Sunshine Coast University Private Hospital')(presented in section 4.6) is incomplete…The Availability Fee was competitively tendered, and the PHO with the lower Availability Fee was successful; The basis of the Availability Fee is that it was to reimburse the PHO for delivering the hospital the SCHHS wanted (and deliver the public services and modalities the SCHHS required) rather than the hospital that a PHO may have traditionally wished to deliver on the site at that time. This included building to the capability expected of a collocation with a major tertiary hospital, prior to that hospital being built. For this reason, it is not accurate to characterise the whole of the Availability Fee as the State's 'contribution' to the Private Hospital's construction cost. To the extent the PHO is building, then reconfiguring, capacity required by the SCHHS, the State gets the benefit of that capacity during the term of the service purchase. Ramsay's financial model does not reflect a rate of return which suggests that 'super profits' have been projected (as might be expected if there was a significant 'value transfer' to the private hospital operator). The VFM analysis may be better undertaken in the context of alternative options for the provision of public health services on the Sunshine Coast, for example: construction of new public facilities; purchase of services through other providers; or 'do nothing' and under-supply the SCHHS…

… Queensland Health does not agree with the QAO's conclusion that insufficient information was presented to government regarding whole-of-life costs. The information presented to government included: Whole-of-life costs (building and maintenance) for the term of the PPP; Whole-of-life costs (operations) for SCPUH once fully operational…Any estimates of cost beyond these periods would be inherently unreliable given the rapidly evolving health care industry and would therefore be unlikely to be of any value to the decision making process.

…Legal advice was provided as an attachment to the submission to government recommend [sic] the execution of contracts (Cabinet-in-Confidence). This legal advice confirmed that issues could be managed without materially altering the risk profile...

Response to recommendations by Director-General, Department of Health received on 7 October 2014

	Recommendation	Agree / Disagree	Timeframe for Implementation	Additional Comments
1.	**implements a benefits management and realisation methodology for use in the planning, delivery and evaluation of all hospital infrastructure projects**	Agree	September 2015 (following Tranche 3 of the Land and Buildings Transfer project)	The Department of Health has benefits management and realisation requirements as part of its current suite of planning, delivery and evaluation policy documentation relating to capital project delivery. However, as a statutory bodies, Hospital and Health Services are not required to apply or comply with departmental policies. Therefore, the Department will work with Hospital and Health Services regarding the incorporation of benefits management and realisation methodology within their own local policy and processes for capital project delivery.
2.	**assesses the impact of the change in the funding model on the hospitals' operating costs, services and bed capacity**	Agree	Completed	Hospital and Health Service funding occurs in accordance with the Queensland Healthcare Purchasing Framework. Any change in funding occurs in consultation with Hospital and Health Services under a Service Agreement, and is inclusive of consideration of potential operating and service delivery impacts.
3.	**regularly reviews health service plans to keep them current and to identify long-term solutions in a timely manner**	Agree	Completed	Health Service Plans are required to be developed and maintained in accordance with *Hospital and Health Boards Act 2011*. Within the supplementary documentation developed to assist achievement of this requirement, it is identified that Hospital and Health Services are to review Health Service Plans at regular intervals.

Response to recommendations by Director-General, Department of Health received on 7 October 2014

	Recommendation	Agree / Disagree	Timeframe for Implementation	Additional Comments
4.	**plans all future hospital infrastructure projects in compliance with the government's project assurance framework to:** – **identify the service need and possible options to meet the desired outcome** – **define the criteria for project success** – **analyse the costs, risks, benefits of various options** – **comprehensively assess whole-of-life financial effect of the project options**	Agree	Completed September 2015	Compliance with the Project Assurance Framework (PAF) is a key consideration in the establishment and maintenance of capital project governance arrangements within the Department of Health. The Department will continue to review all current planning, delivery and evaluation policy documentation with focus on alignment to the PAF. The Department will also work with Hospital and Health Services to align their own local policy and processes for capital project delivery with the PAF.
5.	**Reviews its car park policy to ensure new car park developments achieve the best value for money outcome over their full life, consistent with the principles of the project assurance framework.**	Agree	N/A	Queensland Health does not have a car park policy that applies to car park developments and, as noted within CBRC Dec No 311, ".....ownership and operation of car parking infrastructures at Queensland Public Hospitals is not a core business activity of Queensland Health... ". It should however be noted , that any car park development occurring as part of a hospital infrastructure project, will be subject to the principles of the PAF as per implementation of Recommendation 4

Response to recommendations by Chair, Children's Health Queensland Hospital and Health Service received on 3 October 2014

Attachment 1

Response to recommendations provided by Children's Health Queensland on 2 October 2014

Recommendation	Agree / Disagree	Timeframe for Implementation	Additional Comments
1. implements a benefits management and realisation methodology for use in the planning, delivery and evaluation of all hospital infrastructure projects	N/A	N/A	Departmental policy issue. However CHQ have commenced a benefits realisation process for optimising services and infrastructure at LCCH
2. assesses the impact of the change in the funding model on the hospitals' operating costs, services and bed capacity	Agree	2015	Funding and activity targets are negotiated annually with the Department of Health
3. regularly reviews health service plans to keep them current and to identify long-term solutions in a timely manner	Agree	Completed	Review of health service plans incorporated into the CHQ annual planning cycle
4. plans all future hospital infrastructure projects in compliance with the government's project assurance framework to: – identify the service need and possible options to meet the desired outcome – define the criteria for project success – analyse the costs, risks, benefits of various options – comprehensively assess whole-of-life financial effect of the project options	N/A	N/A	Departmental policy issue.
5. reviews its car park policy to ensure new car park developments achieve the best value for money outcome over their full life, consistent with the principles of the project assurance framework.	N/A	N/A	Departmental policy issue.

Response to recommendations by Health Service Chief Executive, Gold Coast Hospital and Health Service received on 8 October 2014

Responses to recommendations

Response to recommendations provided by **Ron Calvert, Health Service Chief Executive, Gold Coast Hospital and Health Service on 8 October 2014.**

	Recommendation	Agree / Disagree	Timeframe for Implementation	Additional Comments
1.	**implements a benefits management and realisation methodology for use in the planning, delivery and evaluation of all hospital infrastructure projects**	Agree		Detailed comments on this issue are provided in the attached response.
2.	**assesses the impact of the change in the funding model on the hospitals' operating costs, services and bed capacity**	Agree	Continuous	This is part of the existing funding process between GCHHS and DOH.
3.	**regularly reviews health service plans to keep them current and to identify long-term solutions in a timely manner**	Agree	Continuous	This is part of business as usual for the GCHHS.
4.	**plans all future hospital infrastructure projects in compliance with the government's project assurance framework to:** – **identify the service need and possible options to meet the desired outcome** – **define the criteria for project success** – **analyse the costs, risks, benefits of various options** – **comprehensively assess whole-of-life financial effect of the project options**	Agree		This recommendation is not specific to the GCHHS, however the GCHHS will contribute to state-wide infrastructure planning.
5.	**reviews its car park policy to ensure new car park developments achieve the best value for money outcome over their full life, consistent with the principles of the project assurance framework.**	Agree		This recommendation is not specific to the GCHHS.

1

Response to recommendations by Chief Executive, Sunshine Coast Hospital and Health Service received on 7 October 2014

Responses to recommendations

Response to recommendations provided by Kevin Hegarty, Chief Executive, Sunshine Coast Hospital and Health Service.

	Recommendation	Agree / Disagree	Timeframe for Implementation	Additional Comments
1.	**implements a benefits management and realisation methodology for use in the planning, delivery and evaluation of all hospital infrastructure projects**	Agree	Present through to post completion	The framework for a benefits management and realisation report for SCPUH will be developed now, to form the basis of this assessment post completion. More detailed comments on this issue are presented in Attachment 1.
2.	**assesses the impact of the change in the funding model on the hospitals' operating costs, services and bed capacity**	Agree	Continuous	This is part of the existing funding process between the SCHHS and DOH. More detailed comments on this issue are presented in Attachment 1.
3.	**regularly reviews health service plans to keep them current and to identify long-term solutions in a timely manner**	Agree	Continuous	This is business-as-usual for the SCHHS. More detailed comments on this issue are presented in Attachment 1.
4.	**plans all future hospital infrastructure projects in compliance with the government's project assurance framework to:** – **identify the service need and possible options to meet the desired outcome** – **define the criteria for project success** – **analyse the costs, risks, benefits of various options** – **comprehensively assess whole-of-life financial effect of the project options**	N/A		This recommendation is not specific to the SCHHS. More detailed comments on this issue are presented in Attachment 1.
5.	**reviews its car park policy to ensure new car park developments achieve the best value for money outcome over their full life, consistent with the principles of the project assurance framework.**	N/A		This recommendation is not specific to the SCHHS. More detailed comments on this issue are presented in Attachment 1.

1

Appendix B—Audit method

Audit objective

The objective of the audit was to examine the adequacy of the state's planning and delivery of three major hospital projects (Lady Cilento Children's Hospital, Gold Coast University Hospital, Sunshine Coast Public University Hospital).

Figure B1
Audit scope

Sub-objectives		Lines of inquiry	
1	The decisions to build the hospitals, and the procurement methods chosen, were based on sound business cases.	1.1	Strategic assessment of the service need was performed.
		1.2	A preliminary assessment of the options available to achieve the required outcome was performed before developing a detailed business case.
		1.3	The business case for each hospital was robust and provided sound evidence of the service need and the public benefit to be obtained from the hospital projects.
2	Project delivery is managed effectively to deliver on the intended benefits.	2.1	Project delivery is managed effectively.
		2.2	The expected benefits are clearly defined and monitored throughout the project.

Source: Queensland Audit Office

Reason for the audit

Hospitals are a fundamental part of the delivery of health services to the community. In 2006, the government announced initiatives to provide three new major hospitals, which are now in various stages of completion: the Gold Coast University Hospital; the Lady Cilento Children's Hospital; and the Sunshine Coast Public University Hospital—Queensland's first public hospital constructed through a public private partnership.

Capital works projects represent a major investment and financial risk for the state. With a total investment of $5.08 billion across the three hospitals, robust planning and effective project delivery are essential to ensure that the projects deliver public benefits, and achieve value for money for the state.

Performance audit approach

The audit was conducted between November 2013 and August 2014.

The audit consisted of:

- interviews with staff at the Department of Health, Children's Health Queensland Hospital and Health Service, Gold Coast Hospital and Health Service and the Sunshine Coast Hospital and Health Service
- analysis of key documents, including Cabinet documents, business cases, plans and performance reports
- financial modelling on the value of economic benefits.

The audit was undertaken in accordance with *Auditor-General of Queensland Auditing Standards* which incorporate Australian auditing and assurance standards.

Appendix C—Gold Coast University Hospital

Figure C1
Timeline of events—Gold Coast University Hospital (GCUH)

Date	Event
2003	Gold Coast health service planning for new tertiary services commenced.
July 2004	The draft SEQ infrastructure plan identified the need for a new Gold Coast hospital.
April 2005	The government announced a new tertiary hospital for the Gold Coast in the *SEQ Infrastructure Plan 2005–2026* with an estimated project cost of $500 million.
11 Jul 2005	The government announced the new Gold Coast hospital would be built next to the Griffith University Gold Coast campus at Parklands.
Oct 2005	The *Gold Coast Health Services District Health Services Master Plan* was completed. It included a recommendation to construct a new hospital with a capacity of 979 beds. The master plan was prepared in response to the draft SEQ infrastructure plan released in July 2004.
14 Aug 2006	The government noted initial planning for the new hospital was based on 750 beds and approved an indicative cost of $1.23 billion.
15 Aug 2006	State election called.
18 Aug 2006	The government announced an election commitment to develop the new Gold Coast tertiary hospital by the end of 2012. The government stated the initial plan was based on a 500-bed hospital by 2014 but the revised plan was for a 750-bed hospital by 2012.
17 Jan 2008	The Gold Coast Health Service District completed the GCUH *Health Services Plan*.
30 Sep 2008	The Gold Coast Health Service District completed the GCUH business case.
3 Nov 2008	The government approved the GCUH business case.
8 Dec 2008	Main construction commenced.
Nov 2012	The responsibility of the core information and communication technology (ICT) infrastructure transferred from the department to the managing contractor.
1 Jul 2013	ICT local infrastructure and final practical completion of main construction.
31 Jul 2013	Main construction completed.
28 Sep 2013	GCUH opened to the public following the relocation of patients and services from the existing Gold Coast Hospital.
30 Oct 2013	GCUH officially opened.

Source: Queensland Audit Office

Project status

Capital costs

The 2005 *Gold Coast Health Service District Master Plan of Health Services* provided an estimate of the capital cost of constructing GCUH of $1.30 billion, which included furniture, fittings and equipment; however, there was no detail included in the master plan to show how this was calculated. This formed the basis for QH's briefing to government in August 2006 of an indicative capital cost of $1.23 billion.

The August 2006 cost estimate of $1.23 billion for the GCUH project did not include:

- $177.4 million—the cost of acquiring the site to build the new hospital
- $62.6 million—to Griffith University for a new Griffith health centre next to GCUH
- $147.8 million—escalation costs to completion.

These costs were included in the final business case in November 2008, except for the escalation costs which were included in the final expenditure approval in October 2009.

Apart from these costs, the cost to construct GCUH is consistent with the August 2006 estimates.

Figure C2 shows the changes to the GCUH project budget from August 2006.

Figure C2
Project cost history—Gold Coast University Hospital (GCUH)

Project element	August 2006—election commitment $ millions	June 2009 state budget—current budget $ millions
GCUH	$1 230	$1 371.6
Site acquisition	—	$52.2
Additional infrastructure	—	$62.6
Griffith University Medical School	—	$62.6
Total	**$1 230**	**$1 549**
Add funding for sale of Gold Coast Hospital site	—	$65
Escalation to completion	—	$147.8
Final budget	**$1 230**	**$1 761.8**

Source: Queensland Audit Office

Operating costs

The GCUH business case in November 2008 estimated the cost of operating the hospital in 2014–15 would be $572.8 million to fund the operation of 716 beds. The business case has not been revised to assess either the effect of the change in funding model, from funding based on bed numbers to activity based funding or the assumptions used to determine the costs of operating a 750-bed hospital by 2015–16.

The funding estimated to be made available for the GCUH in 2014–15 is $722.7 million. While this is more than the business case estimate by $149.9 million, it will not be enough to fund the equivalent of 716 beds as forecast in the business case. The project estimates that it will operate up to 597 overnight beds by 30 June 2015.

Project schedule

In August 2006, the government announced that GCUH would be built by the end of 2012. Although the announcement did not specify when the hospital would be opened, the 2008 business case states Queensland Health (QH) planned to open the hospital by June 2013. A project briefing to the department's director-general in November 2012 shows the project was aiming to open the hospital by April–May 2013.

Figure C3 shows the key changes to the practical completion schedule; that is, the date the managing contractor would hand over the facility to QH.

Figure C3
Key changes to project schedule—Gold Coast University Hospital (GCUH)

Date of project director's report	Forecast date for practical completion	Reason for change
December 2011	10 December 2012	n/a
July 2012	25 January 2013	Delay due to default of subcontractor
September 2012	28 February 2013	Delay due to default of subcontractor
November 2012	16 September 2013	Contract with managing contractor varied

Source: Queensland Audit Office

The hospital opened in September 2013, three months later than planned in the business case, but within the contractually agreed period. This variance is not significant for such a complex infrastructure project. While practical completion of the hospital was delayed for nine months, due to the financial collapse of a subcontractor and ICT issues, the mitigating strategies adopted minimised the effect on the opening date—for example, the department varied its contract with the managing contractor to include core ICT delivery as part of practical completion instead of having these works completed by the department's ICT division following practical completion.

Planning

The construction of a new hospital provides an opportunity to introduce new services and new models of care. QH scoped the services to be delivered in the new hospital as part of the GCUH health service plan. Some of the services were defined against government frameworks, directives issued by departmental executives and with clinician and other stakeholder input.

Health service planning

The Gold Coast Health Service District prepared the *Gold Coast Health Services District Master Planning Studies Report* in May 2003 based on a 10-year planning horizon. The 2003 report was not intended to be a detailed planning exercise. It identified service demand would significantly increase and recommended a capital program of $160.5 million across 15 projects to upgrade, refurbish and expand existing facilities. The report did not include a comparison of upgrading the existing facilities against that of building a new hospital.

The 2003 planning report was superseded in 2005 by the *Gold Coast Heath Service District Master Plan of Health Services* which was prepared on the basis that a new 750-overnight bed hospital was to be built.

The *Gold Coast University Hospital Health Service Plan* was prepared in 2008, based on the 2005 master plan. The 2008 health service plan did not:

- update the demographic profiles
- outline the methodology applied or the planning parameters applied to estimate future demand
- include sufficient detail to show how forecasts were derived, including detailing the forecasting model used
- analyse historical services provided to develop future predicted service needs
- provide a robust quantitative analysis of historical and projected population and demographic trends, clinical services and chronic diseases to inform the number of beds and services required for a new hospital
- fully articulate future models of care for clinical services or demonstrate consideration of best practice.

The demand analysis contained in the 2008 plan was high level and not supported by detailed, up to date quantitative analysis of population, demographics and trends in chronic diseases and hospital treatment. The methodology of the forecasts and the assumptions made were not clearly documented. This places some doubt on the reliability and appropriateness of the demand forecasts.

The 2008 plan did not clearly state how population forecasts were derived and a consistent set of census data was not applied. The forecasts for cancer services and outpatient services were based on 1996 and 2001 census data respectively, without any explanation why the forecasts for cancer services were based on dated census data. The 2008 plan applied differing methodologies for forecasting the demand for services to be provided at GCUH, and did not explain consistently, for all services, the basis of health utilisation trend forecasts in chronic disease and hospital treatment.

The demand and supply analysis identified a potential shortfall of beds from 2008–09. The GCUH health service plan warned that the shortfall identified in 2021–22 (of 235 beds) could be larger, because the modelling assumptions were conservative. QH outlined additional strategies to manage demand for health services and enable the Gold Coast hospital network to cope with increasing demand. This included minimising the use of hospital services via prevention strategies; early intervention; the community health network; and new models of care. QH did not develop and report measures on the strategies' effectiveness in mitigating the risk of hospital bed shortfall.

Business case

The business case for GCUH did not explain why QH did not consider the option of redeveloping the Gold Coast Hospital at Southport.

The financial and economic analysis in the business case was not based on the full expected life of the new hospital, as the analysis only extends to 2015–16. QH did not prepare information establishing the capital investment required for the selected option provided the best value for money over the long term. The business case lacked a net present financial value analysis and did not compare projected operating costs against the status quo, on a per bed basis, to identify project efficiency and the extent of any economy of scale gains.

To determine if the business case shows benefits from economies of scale, we analysed the expenditure forecasted in the business case to 2015–16 and compared this to 2011–12, the year before commissioning of the new hospital. Figure C4 shows the operating cost per bed increases by more than 15 per cent from the time the previous hospital opens, to the time the new hospital is fully operational with 750 beds. The business case did not explain why a 15 per cent increase in operating costs is justified.

Figure C4
Business case forecast operating costs—Gold Coast University Hospital (GCUH)

	Gold Coast Hospital	Gold Coast University Hospital			
	2011–12	2012–13	2013–14	2014–15	2015–16
Expenditure on preferred delivery model ($ 2007–08)	$264 300 000	$393 100 000	$431 700 000	$450 100 000	$477 500 000
Projected overnight bed number	480	624	683	716	750
Operating cost per bed ($ 2007–08)	$550 625	$629 968	$632 064	$628 631	$636 667

Source: Queensland Audit Office

Delivery

Benefits realisation

The GCUH business case defined project objectives across eight areas: service delivery and care; people; site access and egress; future proofing and flexibility; teaching and research; stakeholder relationships; business continuity and government commitment; and policy and objectives. No benefits or key performance indicators are assigned to these objectives to measure baseline data and benefits delivered by the project. The project objectives in the business case are not sufficient to form the basis of a detailed assessment of potential benefits.

The project did not complete a benefits management plan before the new hospital was operational, to ensure the benefits were identified, baselined and measurable. Therefore it cannot report, in measurable terms across all the project's objectives, the benefits of the new hospital compared to the existing hospital.

The project is planning a Gate 5 (benefits realisation) gateway review; however, the value of the gateway review to the Gold Coast Hospital and Health Service or the project is debatable in the absence of identified and measureable benefits.

The project is performing a building performance evaluation (BPE), in accordance with the department's BPE procedure and guideline. The GCUH BPE process is not aligned to a benefits management plan, as stated as best practice in the department's BPE guideline, to ensure the BPE is performed against the benefits intended when the project was planned.

Despite this, the hospital clearly has and will continue to deliver benefits for the community. A key benefit of a new Gold Coast hospital with expanded and new services is that patients can now be treated closer to home. This is because:

- new services at GCUH, such as neonatal intensive care, radiation therapy, trauma response and children's critical care, mean patients needing these services no longer need to travel to Brisbane hospitals for treatment
- trauma cases previously airlifted to Brisbane hospitals can now be taken to GCUH.

Our analysis of hospital transfer data shows that, in the six months following the opening of GCUH, the incidence of transfers to Brisbane hospitals from GCUH was 20 per cent lower than for the last six months of operation by the Gold Coast Hospital. This benefit will increase over time as GCUH implements new services the former Gold Coast Hospital did not have.

We were not able to compare the effect of the new hospital in reducing patient flows to Brisbane as there were no data available on the number of Gold Coast patients admitted into Brisbane hospitals, before and after GCUH was commissioned.

Car park

QH endorsed a car parking policy in 2008 which states it prefers not to be directly involved in the provision of car parking at its facilities as such services are not core QH activities. As a consequence, the private sector has built the car park at GCUH.

The GCUH car park used a public private partnership (PPP) model to:

- deliver car parking facilities at no cost to the state
- satisfy enterprise bargaining agreements relating to staff parking on hospital sites.

The project objective to deliver car parking at no cost and risk to QH was based on an analysis prepared by a commercial advisor. The qualitative analysis of procurement options identified three combinations of private sector construction; and one option where QH funded the construction of the car park and sold it to the private section on completion.

The analysis of the procurement options did not consider the risks and benefits of QH funding and maintaining ownership of the car park against a PPP procurement model. While QH's policy was to not develop or operate car parks, it did not assess the opportunity cost of its policy to assess whether it would deliver the best value for money outcome over the longer term. QH did not assess whether:

- the state would achieve a better value for money outcome if it funded the car park and retained both the economic benefits from car park revenues and the risks of owning and operating the car park
- the economic benefits from the car park could be directed to funding services provided by the hospital, where car park fees partially fund the services provided by the hospital.

In 2010, QH entered into a PPP with a private car park operator to build, operate and maintain the GCUH car park. The arrangement was for a multi-level car park with 2 229 spaces on the GCUH site, with no capital input from the state and a lease term of 31 years from 4 March 2013. At the end of term, ownership of the car park will transfer to QH. Construction was completed, as contractually agreed, on 1 January 2013 before the hospital opened in September 2013.

QH's decision to have the private sector develop the car park has reduced its construction risk exposure and the need to fund construction; however, QH did not fully transfer the demand risk to the private sector and has given up the benefit of revenues the car park will generate.

We estimate the GCUH car park will generate a potential economic benefit of $91.9 million in net present value terms over the 31-year term of the contract. Under the PPP model, the private sector retains these benefits as the developer and operator of the car park. Under the arrangement, QH gets a share of revenues and returns above those agreed in the contract with the private sector consortium. Our analysis indicates QH has the potential to receive economic benefits estimated at $15.6 million in net present value terms over the 31-year term of the agreement, should the car park demand be similar to that assumed for Sunshine Coast Public University Hospital (SCPUH). These returns are assumed to arise on the basis that the car park performance will exceed the forecasts contained in the agreement.

QH signed the car park contract in July 2010, at a time of financial market uncertainty and higher finance costs. The project was refinanced in February 2012 at lower interest costs which increased the car park's profitability.

The contract with the GCUH car park operator did not provide flexibility for parking rates to be reviewed if refinancing the car park project resulted in lower interest charges. In contrast, SCPUH contract negotiations allowed interest rates to be reviewed before the final contract was signed. As a result, SCPUH will incur lower quarterly service payments as interest rates decreased after the global financial crisis.

Compensation events

QH has not fully transferred the demand risks associated with the GCUH car park. QH agreed to compensate the car park consortium for several prescribed events that might affect the revenues of the car park. These compensation events include:

- failure to achieve forecast car park revenues, due to a shortfall in the contractually agreed number of operational overnight beds per quarter (the agreed bed numbers were 315 by January 2013, 630 by April 2013 and 760 by 30 September 2016)
- imposition by a government agency of car parking space levies
- changes in law which discriminate against the car park operator
- staff industrial action affecting car park revenue by more than an agreed threshold
- opening of a competing car park by the state within one kilometre of the GCUH site.

The first of these compensation events has already occurred: failure to achieve an agreed number of operational overnight beds, caused by a delay in the new hospital opening. QH had to pay the car park consortium $7.4 million in compensation, due to the hospital opening in October 2013 rather than 1 January 2013, which affected car park demand during that period.

The agreement with the GCUH car park consortium required the car park being ready to operate on 1 January 2013 and includes penalties payable by QH if the hospital opening was delayed beyond that date. We could not identify the basis of the hospital opening date being 31 December 2012 in the car park agreement when the planning for the hospital determined an opening date in mid to late 2013.

At June 2014, the hospital had 561 operational overnight beds. Because the car park is at risk of not meeting contractually agreed forecast revenue while the operational overnight beds are below the contractually agreed levels, this could trigger further compensation payments to the car park operator. While QH's risk of further compensation payments is currently reduced due to non-hospital patronage, such as Griffith University students, the risk may increase when Griffith University completes construction of a new 1 000 space car park by mid–2015. The university car park is likely to attract student patronage away from the hospital car park which could potentially trigger further compensation payments to the car park operator.

Size of the car park and length of the agreement

In July 2006, a traffic engineering consultant advised QH the hospital would need 3 000 car park spaces and the ability to expand as demand grew. Based on this advice, QH proposed to build two car parks: an eastern car park of 1 200 spaces and a western car park of 1 800 spaces.

The preferred bidder stated that a car park facility of only 2 229 spaces would be required and that two car parks were not commercially viable without a government contribution. QH accepted this argument from the bidder and decided to develop the western car park, increasing the number of its spaces to 2 229.

The preferred bidder stated that, to achieve an outcome for a single car park solution with 2 229 spaces that would not involve a government contribution, the lease period would need to be extended from QH's proposed 25 years to 31 years. QH agreed to this, although QH's commercial advisors identified that granting an additional period of six years represented a 'significant value transfer' to the car park consortium.

QH did not complete a financial and economic analysis to identify whether extending the term of the lease by six years presented a better value for money outcome than making a government contribution.

QH did not request the bidders to estimate the government contribution required under a 25-year term, to gain understanding of the magnitude of the contribution required.

Appendix D—Lady Cilento Children's Hospital

Figure D1
Timeline of events—Lady Cilento Children's Hospital (LCCH)

Date	Event
Mar 1993	South East Hospital Services Planning Project identified three options to provide paediatric services, including consolidating two existing paediatric hospitals (Royal Children's Hospital and Mater Children's Public Hospital) into a single tertiary hospital.
16 Dec 2002	The state government, through Queensland Health (QH), signed a 20-year agreement with Mater to provide public hospital services, including the Mater Children's Public Hospital.
26 Apr 2005	The government commissioned the Forster review following public concern about the quality and safety of public hospital services.
Sep 2005	The Forster review identified Queensland's population was not large enough to support two specialist children's hospitals: duplication of expensive tertiary paediatric sub-specialty services at Royal Children's Hospital and Mater Children's Hospital did not appear to be sustainable.
Mar 2006	Professor Mellis published results of his review, finding 'Queensland paediatric cardiac services to be in an unsatisfactory and unsustainable condition'. QH's Director-General requested the review of paediatric cardiac services in Queensland, following: • concerns expressed by clinicians regarding a series of deaths following paediatric cardiac surgery at The Prince Charles Hospital • coronial inquest findings into a cardiac death at the Royal Children's Hospital • comments in the Forster Report on the need to rationalise tertiary paediatric services in Queensland.
27 Mar 2006	The government established the Taskforce on Paediatric Cardiac Services in response to the Mellis Review recommendations.
7 Aug 2006	QH submitted the Taskforce on Paediatric Cardiac Services report to government and recommended construction of the new Queensland Children's Hospital (QCH) adjacent to the Mater Hospital.
15 Aug 2006	State election called.
27 Aug 2006	The government announced an election commitment to build the QCH by 2014, beside the Mater Hospital, with up to 400 beds at an estimated cost of $700 million.
10 Apr 2007	The government approved QH's recommendation that the planning for the QCH: • not consider an option for delivery of the hospital as a public private partnership (PPP) • be undertaken in accordance with the project assurance framework.
Jul 2008	Minister for Health approved the QCH *Health Services Plan 2007–2018*.
3 Nov 2008	Preliminary business case submitted to government.
23 Sep 2009	Tenders for the managing contractor role closed.
Nov 2009	Bulk earthworks on the site commenced.
28 Jan 2010	Managing contractor was appointed for stage one.
15 Apr 2010	Final business case approved.

Source: Queensland Audit Office

Project status

Capital costs

A cost estimate of $700 million was announced for the Queensland Children's Hospital project in August 2006, before a business case was developed. The business case and final project budget for the resulting Lady Cilento Children's Hospital (LCCH) is more than double the initial estimate, demonstrating the initial estimate was not based on comprehensive planning.

When the initial cost estimate for the LCCH project was announced, QH did not know the effect of the site decision. When the implications of this decision became known, the project budget was revised to include:

- land acquisition costs of $104.5 million
- central energy facility costs of $88.1 million—the energy plant was originally planned to be delivered through a PPP, but this became unviable due to changes in economic conditions (including the effect of carbon tax changes). The project incurred an additional $18.3 million to relocate the Leukaemia Foundation of Queensland, which was concerned about being located next to the energy plant
- pathology services costs of $7.4 million—services were to be delivered by the Mater, but a review by Queensland Treasury Corporation determined that better value for money could be achieved if this was delivered by Pathology Queensland, which is part of the Health Service Support Agency in the Department of Health
- relocation of the Telstra exchange—required because of changes mandated by the Coordinator-General for road realignment which required removal of Telstra's telephone exchange. This added $73.579 million to the project budget, which included a $28 million interest free loan to Telstra that Telstra is required to reimburse to the Queensland Government on or before July 2018.

Figure D2 shows the changes to the project budget from August 2006.

Figure D2
Changes to project budget—Lady Cilento Children's Hospital (LCCH)

Date	Budget $ millions	Comments
2006 election commitment	$700	No detailed budget breakdown; escalation costs not included
2008 preliminary business case	$1 148	Government endorses capital funding of up to $1.044 billion; Department of Health to fund remaining $104.4 million Additional $400 million for works and land acquisition not included in original estimate Estimated escalation costs of $385 million mentioned in preliminary business case but not included in budget
2009–10	$1 294.5	Includes $135.13 million escalation cost provided by Queensland Treasury Corporation
2010 final business case	$1 407.3	Includes additional $113.8 million for: • central energy facility ($88.1 million) • pathology laboratory ($7.4 million) • relocation of Leukaemia Foundation of Queensland ($18.3 million)
July 2010 / current budget	$1 447.5	Includes $50.15 million to relocate Telstra exchange

Source: Queensland Audit Office

Operating costs

LCCH will open with a capacity of 359 beds. Children's Health Queensland will operate, on average, the equivalent of 288 beds in the new hospital in its first year—the same number of beds currently provided in the two existing children's hospitals.

LCCH has advised that this is sufficient to meet the current demand and the level of services agreed with QH, and that it has developed new models of care that place more emphasis on day medical and surgical care and ambulatory practice than the number of beds. The business case was not updated to reflect this; therefore, it is not clear how the actual level of services delivered compares against the intended level of service.

Children's Health Queensland Hospital and Health Service (CHQ) estimates the operating costs for LCCH will be $372 million for the first year of operation. This is approximately three per cent less than the cost of operating the existing two children's hospitals, on an inflation adjusted basis. Economies of scale are possible with future expansion of services because the cost of increased services can be spread over a larger cost base than the previous two hospitals.

The business case assumed that LCCH would operate at full capacity in 2014–15. This has not occurred because LCCH has not been funded to operate at full capacity. The business case assumed that LCCH will be funded by:

- $374.5 million—operating funding for the existing children's hospitals in 2014–15 dollars
- $76 million—funding from the *More Beds for Hospitals* strategy
- $32 million—additional state funding to be sought.

Only the operating funding for the existing children's hospital has been made available for the new hospital, which is why the new hospital will operate the equivalent of the same number of beds that the existing two hospitals serviced.

Project schedule

In August 2012, an industrial dispute affected the LCCH project, when approximately 600 construction workers went on strike for two months.

Practical completion of the building was completed on 26 September 2014, eight months behind the project's agreement with the managing contractor and 12 months behind the schedule in the business case.

The original schedule provided 12 months between practical completion and hospital opening. With a practical completion date of 26 September 2014, the project will have less than three months to complete commissioning activities. The project obtained shared site access with the managing contractor from 21 July to assist in mitigating the extreme risk associated with reducing commissioning time.

In addition, seven extreme ICT risks pose a threat to the opening date of the hospital. While the project is taking mitigating actions to address the risks, these have been left too late to reduce the project's residual risk exposure from ICT risks.

Despite the delays caused by construction delays and ICT risks, the project is still working towards an opening date of late 2014 as planned.

Planning

When QH submitted its recommendation for a new single specialist children's hospital in August 2006, it did not have a health service plan that defined the future needs for paediatric health services. QH based its assessment of the service need for children on a high-level vision informed by the Mellis and Taskforce reviews to improve the quality of care for children, due to concerns regarding cardiac service outcomes.

Health service plan

The health service plan approved in July 2008 forecasted that the children's hospital would require a 410-bed capacity, which was later revised to 401 beds. The plan used an external forecasting model developed by a consultant which QH approved for use in health service planning; however, the plan did not detail the forecasting methodology applied, data used and the assumptions made.

The plan did not state if the historical demographic and health trends outlined in the health service plan were the basis of the forecasts used, or whether the model used alternate data to generate its forecasts. The forecasting model also required adjustments to be made as the base data did not accurately reflect certain paediatric activities—babies, oncology, paediatric intensive care unit and the high dependency unit.

QH does not explain the basis for these adjustments in the health service plan. As new and expanding services did not have supporting historical activity information, the forecasting model was unable to predict future service needs and QH manually adjusted these bed numbers, based on the analysis in the health service plan. The health service plan does not provide an analysis of how these manually adjusted beds numbers were derived.

QH confirmed the hospital's capacity of 359 beds in the preliminary business case, following an update of the health service plan forecasts and models of care completed in April 2009. The strategy for reducing the planned capacity of the hospital included introducing new models of care, providing additional beds in the metropolitan hospitals and expecting that private hospital beds would supply some of the expected demand. We found no evidence that QH considered the costs, benefits and risks of this strategy when it recommended its adoption to government.

Options

The Forster, Mellis and Taskforce reviews recommended a single tertiary children's hospital. QH did not perform a detailed assessment to confirm that the preferred single hospital option would deliver a superior outcome, compared to the dual hospital model.

The Taskforce recommended QH select a site adjacent to the Mater Hospital or to the Royal Brisbane and Women's Hospital. This would enable access to the range of specialist services needed so children received optimal care.

The Taskforce left the final decision about a new hospital site as a matter for government and recommended further detailed analysis of two preferred sites and their budget implications.

QH performed a high-level options evaluation for a range of possible scenarios at the Mater Hospital site. It did not perform the same evaluation for the site adjacent to the Royal Brisbane and Women's Hospital site.

In August 2006, QH provided government with its own qualitative assessment of the benefits of a single hospital site compared to dual sites but, in doing this, it did not conduct the further site or budget analysis the Taskforce recommended. QH's brief lacked sufficient analysis to justify its recommendation in favour of the South Brisbane site; and did not explain why it ruled out the Herston site when, at the time, there was no detailed understanding of the hospital to be built, or of the site and budget implications.

The Queensland Children's Hospital *Health Services Plan 2007–2018* proposed total bed numbers of 410, which was later revised to 401. The preliminary business case (2008) assessed 11 options to develop a hospital at the South Brisbane site. These options were ranked according to quantitative and qualitative criteria; two options were identified as superior to the other nine options.

The highest ranking option was selected, which reduced the number of beds for the new hospital to 359. The two superior options were separated by only 0.01 per cent in the options analysis rankings.

The second highest option had 16 more beds, eight additional emergency care beds and two additional operating theatres, compared to the highest option. It was not considered further because it did not meet the 'available funding' criterion.

While the second highest option fully satisfied the health service plan activity requirements (which the selected option did not), its capital cost of $1.435 billion was $340 million more than the highest ranking option and exceeded budget envelopes significantly.

To address a 42-bed shortfall between the preferred option and the health services plan's requirement for 401 beds, QH decided to add 72 beds to secondary level services elsewhere within the paediatric network of south-east Queensland, at a forecast capital cost of $100 million. This strategy costed significantly less than the $340 million required to deliver the second highest option, which had 16 more beds than the preferred option.

In addition, the project scope was amended in June 2009 to provide additional spare capacity for the new hospital. The original scope included 12 neonatal intensive care unit (NICU) cots. The activity and associated funding for three cots were to be transferred from Mater Mothers Hospital (MMH), activity for three cots were to be transferred from Royal Brisbane and Women's Hospital (RBWH) and six new cots were to be recurrently funded and commissioned. The scope was changed to locate the NICU cot activity, based on needs. The activity for six new cots were allocated to GCUH and the other six cots remained within MMH and RBWH. The redistribution of NICU cots allowed a new floor to be added in the LCCH building to provide space for 48 more beds if required, without further project cost implications, for total potential capacity of 407 beds.

Business case

The business case for LCCH assumed a single hospital model was favourable; it did not demonstrate how the single hospital model provides a better outcome, considering the costs, benefits and risks, in comparison to improving existing facilities. The preliminary business case considered 11 options, but all these options were related to the size and configuration of the new hospital at the South Brisbane site. The business case for LCCH was approved after building work commenced.

The business case did not demonstrate the new children’s hospital would deliver economy of scale benefits from a single location, nor did it sufficiently place a value on the additional health service benefits the community would gain from a new, larger hospital.

The business case projections of annual operating costs at the new children’s hospital were $1.075 million per bed for 359 beds; compared to $0.993 million per bed for the existing 288 beds (status quo)—15.21 per cent higher per bed at the new children's hospital.

The business case stated this increase was affected by costs of major infrastructure (central energy facility and building management contract) not in place at the Royal Children’s Hospital or Mater Children’s Hospital. After these effects are removed, however, the operating costs of the new hospital are still projected to be 10.74 per cent higher per bed, than the status quo. Figure D3 illustrates this comparison.

Figure D3
Business case forecast operating costs–Lady Cilento Children's Hospital (LCCH)

Hospital	Labour cost $ millions	Non-labour costs $ millions	Total estimated operating cost $ millions	Total estimated cost per bed 2008–09
Baseline—Royal Children's Hospital and Mater Children's Hospital 288 beds	$218.26	$67.80	$286.06	$933 257 / bed
LCCH 359 beds	$274.82	$111.19	$386.01	$1 075 226 / bed
LCCH 359 beds (excluding costs for major infrastructure not in place at previous facilities)	$274.82	$96.19	$371.01	$1 033 454 / bed

Source: Queensland Audit Office

Delivery

Benefits realisation

The LCCH business case defined objectives in the areas of clinical, child and family, social and community, academic and research, workforce and value for money; however, the benefits and key performance indicators assigned to these objectives were not defined to allow measurement of the baseline data and benefits delivered by the program.

In June 2013, the project team completed a benefits management strategy and handed this to CHQ for implementation. CHQ initiated work on defining the benefits in February 2014.

CHQ's work on benefits realisation started late in the project, reflecting the lack of emphasis given to defining project benefits. The delay means CHQ may not be able to identify, develop and baseline the benefits in time to measure change after the new facility opens.

The lack of focus on benefits realisation on the LCCH program is partially attributable to the governance arrangements of the program that split the accountabilities for the capital project and the business outcome. This meant that the program held no accountability for benefits management, despite being well placed to support CHQ in developing the program's benefits management activities.

Memorandum of Understanding

QH entered into a Memorandum of Understanding (MoU) with Mater in December 2008 to facilitate the construction of LCCH at the South Brisbane site. The MoU deals with complex issues to secure the land required to construct the new hospital and to seek Mater's collaboration in the transfer of services from the Mater Children's Hospital to LCCH. It establishes principles to govern the relationship between QH and Mater about the LCCH project and sets out the process to formalise long term agreements outlined in the MoU.

The MoU with Mater introduced added complexity and uncertainty to the project in cost, risks of land tenure and related transactions such as:

- the 20-year funding agreement, which began on 1 July 2002, for public hospital services at the Mater Children's Hospital
- Mater wanting to continue to provide pharmacy and pathology services in the new hospital
- the need to compensate Mater for the loss of its Raymond Terrace car park which the department needed to acquire to build the new hospital
- closure of the Mater Children's Public Hospital on completion of LCCH in 2014 and termination by QH of its funding agreement with Mater 7.5 years early.

QH formed the view that the MoU was 'clearly in the financial favour of the Mater Hospital'. QH did not fully brief government on the MoU, alternatives available and value transferred to Mater to acquire the land required for the children's hospital. There is no evidence QH assessed and advised government of the expected cost of the MoU and the associated risks, compared to traditional land acquisition, nor of the costs of terminating its funding agreement for the Mater Children's Hospital. QH did not maintain any records of briefings it made to its director-general, including the outcomes of any legal and commercial advice it sought, before the director-general signed the MoU.

To determine the value for money outcome resulting from the MoU arrangements, we analysed each transaction with financial implications to estimate its value and the beneficiary of the value transfer. We identified that QH transferred $24.7 million of net economic benefits to Mater. We also analysed the key non-quantifiable benefits.

Figure D4 summarises the value for money outcomes of the MoU arrangements.

Figure D4
Summary of MoU value for money outcomes

Transaction type and description	Value gain to state	Value gain to Mater
	Land tenure	
51% of LCCH footprint transferred from Mater to state for $1. 100% of LCCH footprint to be transferred from state to Mater for $1 after 60 years. State has option to extend date that Mater can receive land to 90 years but, if it exercises this option, state may be liable for demolition costs.	State occupies 51% of LCCH footprint for period of 60 to 90 years for $1 and avoids payment of $40.5m (estimated land value in 2008 prices) or estimated lease payments of **$48.7m** in NPV terms over 60 years.	**$33.6m** of land acquired by state (in 2008 prices) to be transferred to Mater in 60 to 90 years for $1. Mater forgoes payment for land in sale proceeds or rental payments for future land acquisition and benefits from any future appreciation in land value of LCCH footprint. Mater has option to request state to fund demolition of LCCH building in 90 years.
	Car park revenue	
Management rights to LCCH car park transferred to Mater for 60 or 90 years.	Department transferred risk of car park management to Mater.	State agreed to set car park management rights at nil. Department's commercial advisor estimated value of rights at $21m. Our analysis estimates rights have value of **$30m** over 60 years, due to changes in valuation assumptions.
	Compensation for demolition of Raymond Terrace car park	
State compensated Mater for demolition and relocation of Raymond Terrace car park to new Hancock Street car park.	Land occupied by Raymond Terrace car park available to construct new hospital. 342 car spaces available to LCCH staff and visitors in new Hancock Street car park. Staff parking based on department's staff tariffs with terms yet to be finalised.	**$4.4m** value transfer to Mater from compensation paid to replace Raymond Terrace car park and construct access tunnel. Mater receives interest subsidy for funding costs associated with construction of 342 car park spaces in advance of demand. Interest subsidy reduced by any revenues generated by 342 car park spaces.
	Adolescent Drug and Alcohol Withdrawal Services (ADAWS)	
Construction of new ADAWS facility funded by department and built on land owned by Mater.*	Leases land on commercial terms to locate new ADAWS facility. Mater operates facility under a management agreement for four years to LCCH opening.	Commercial lease payments for 40-year term on land with ADAWS. At end of lease, ownership of ADAWS building will transfer to Mater (capital cost of **$5.4m** in 2008).
Sub-total land related transactions	**$48.7 million**	**$73.4 million**

Transaction type and description	Value gain to state	Value gain to Mater
Existing Mater Children's Hospital		
Mater's agreement to vary 20-year funding agreement signed by both parties in 2002 to provide public paediatric hospital services at Mater Children's Hospital.	Nil	Mater Children's Hospital to be converted to adult facility delivering new services with 150-bed capacity. Mater has said it will seek compensation payments to amend funding agreement and recover costs of refurbishment to adult facility. Mater also seeking reimbursement for costs associated with Mater staff attending LCCH-related training and for redundancy payments for Mater staff who do not secure a position at LCCH.
Academic and research facility		
Department and Mater to jointly develop land for research centre. Department chose to pursue this opportunity in its own right on land previously occupied by Leukaemia Foundation.	Nil	Nil
Total (estimated)	**$48.7 million**	**At least $73.4 million**

*In relation to ADAWS, QH and Mater have subsequently agreed for Mater to continue to provide the ADAWS services and for QH to pay no rent for the land.

Source: Queensland Audit Office

Car park

QH's agreement with Mater for operating the car park was executed in the context of the land agreement.

QH funded $48 million to construct the LCCH car park but transferred management rights to Mater for 60 to 90 years for nil consideration. As part of the land transfer arrangement with Mater for LCCH, QH agreed for Mater to operate and keep the financial benefits of the LCCH car park.

We estimate the economic benefit of the LCCH car park over 60 years is $30 million. QH has transferred all demand risks to the car park operator and does not incur any penalties if the hospital opening is delayed or if the introduction of the number of beds changes to those planned.

Appendix E—Sunshine Coast Public University Hospital

Figure E1
Timeline of events—Sunshine Coast Public University Hospital (SCPUH)

Date	Event
April 2005	The government announced a new tertiary hospital for the Sunshine Coast in the *SEQ Infrastructure Plan 2005–2026*, with a budget of $500 million, to be delivered between 2009–10 and 2014–15 and located at Sippy Downs.
Aug 2006	The government made an election commitment to build a 450-overnight bed hospital at Kawana by 2014 with an expected cost of $940 million.
15 Aug 2006	State election called.
Jun 2009	The government approved a two-year delay to SCPUH to allow the public private partnership (PPP) market to recover from the global financial crisis. The interim demand management strategy was completed.
15 April 2010	The government approved Queensland Health's (QH) recommendation to increase the bed capacity of SCPUH to 738 beds by 2021.
18 Nov 2010	The government approved the draft value for money business case.
1 Apr 2011	The government approved the final value for money business case.
13 Apr 2011	QH sought expressions of interest from PPP consortia.
Feb 2012	Sunshine Coast Hospital and Health Service (SCHHS) completed the SCHHS *Health Service Plan 2012–2022*.
Jul 2012	QH entered into contractual arrangements with Exemplar Health to design, construct, commission, maintain and partially finance SCPUH for a period of 25 years.
Oct 2012	Construction began on SCPUH.
Nov 2013	A private hospital (Sunshine Coast University Private Hospital) opened, offering an interim service until SCPUH was constructed.
2016	SCPUH is expected to open with a 507-bed capacity.
2021–22	The SCPUH expansion to 738-bed capacity is expected to be completed.

Source: Queensland Audit Office

Project status

Capital costs

A project cost estimate of $940 million was announced for the SCPUH project in August 2006 to cover land acquisition, design and construction costs. The final project budget is $1.87 billion—almost double the August 2006 estimate— because the original estimate did not include escalation costs and the project scope changed significantly between August 2006 and July 2012, when the contracts with the successful bidder were signed.

QH provided government with an indicative cost estimate to inform the announcement in August 2006, but did not document the process or assumptions used to derive the estimate.

The initial capital budget was based on a managing contractor delivery model but, following a value for money assessment, the actual delivery method is a PPP. The $1.87 billion project budget includes maintenance of the new hospital until 2021–22, when the expansion to 738 beds is completed; the term of the PPP agreement includes maintenance of the hospital for 25 years, until 2041.

Figure E2 shows the changes to the project budget from July 2005.

Figure E2
Changes to project budget—Sunshine Coast Public University Hospital (SCPUH)

Date	Budget $ millions	Comments
2005 SEQ infrastructure plan	$500	No documentation to support initial budget estimate
2006 election commitment	$940	No detailed budget breakdown; escalation costs not included
2009 interim demand management strategy	$1 570.3	Funding for SCPUH approved, inclusive of escalation costs and the effect of a two-year construction delay
2010 strategic options assessment and funding submission	$1 972.5	Budget increased by $402.2 million to expand overnight bed capacity from 450 to 650 beds
2011 final value for money business case	$1 973	Approved budget for SCPUH project confirmed as $1.973 billion, excluding cost of constructing an academic and research centre ($60.8 million)
Current project budget	**$1 872.1**	Final project budget confirmed, following signing of the contract with the successful bidder

Source: Queensland Audit Office

Project schedule and scope

The August 2006 announcement of SCPUH was a building with 450 overnight beds opening in 2014 and room for an extra 200 beds, to be added at an unspecified later time.

The government-approved, two-year delay meant there would be a shortage of beds for that period, so QH developed an interim demand strategy.

The interim demand strategy involved several initiatives which included supporting a private hospital operator to build a new private hospital, the Sunshine Coast University Private Hospital, co-located with SCPUH and scheduled to open by the end of 2013. QH supported the private hospital by purchasing public services over a five-year period. The volume of public services purchased equates to about:

- 70 bed equivalents in the first year of operation in 2013–14
- 110 bed equivalents for the second to fourth years in 2014–15 to 2016–17
- 80 bed equivalents in the final year of the arrangements in 2017–18.

These services will be used by public patients until SCPUH is built to a 450-bed overnight capacity by 2018–19.

After the announcement of the two-year delay and the interim demand strategy, clinicians raised concerns about the decision to build a hospital of 450 overnight beds. They argued it would not meet the expected demand, nor reverse the flow of Sunshine Coast patients to Brisbane, considering the remaining bed demand and capacity in the district.

In response to clinicians' concerns, QH developed a strategic business case in 2010 that recommended increasing the number of beds to 738 by 2021–22. The figure of 738 beds would include 650 overnight and 88 same-day beds.

Planning

Health service planning

In August 2006 QH forecasted that demand would shortly exceed the capacity of existing health infrastructure on the Sunshine Coast and advised the government that rapid and continuing population growth in the region would require additional health infrastructure. However, it did not brief government until 2009 on the patient activity expected to flow to Brisbane as a result of the Sunshine Coast hospital network not having sufficient capacity.

QH advised the government in 2009 that SCPUH would meet reverse flow targets and free up significant capacity in north Brisbane tertiary hospitals. Following the intervention of local clinicians and QH's subsequent analysis in 2010, it emerged that QH's advice in 2009 did not adequately consider clinical and operational issues.

The local clinicians identified three major issues with the 2009 demand analysis:

- The announced 450-bed capacity of SCPUH was inadequate to meet demand. QH's analysis in 2009 assumed that the new hospital at Kawana would not affect available bed capacity at Caloundra Health Service (CHS) and Nambour General Hospital (NGH), clinically or operationally. The intent at this time was for NGH to be scaled back to a non-acute facility and to cease operating an emergency department.
- The proposed facilities were insufficient to reverse patient flows to Brisbane. Detailed analysis identified that admissions from emergency presentations could consume most general medical and surgical beds at SCPUH from 2016. This would reduce the capacity of SCPUH to develop tertiary services to reverse patient flow to Brisbane.
- The emergency facilities at CHS were unsustainable, due to clinical capability and capacity in the period leading to the opening of SCPUH.

QH updated its planning information after clinicians raised concerns and it refined the service demand forecasts, incorporating a reversal of patient flows. It prepared and submitted a strategic business case to government in April 2010 to recommend a solution for the forecast bed shortfall. It included a strategy to purchase up to 110 bed equivalents over a five-year period from a private hospital to open in 2013–14 on the SCPUH site and SCPUH's bed capacity increasing from 507 beds available on opening in 2016–17 to 738 beds by 2021–22.

The health service plan was completed in February 2012 and approved in early 2013, after the contract was signed to construct the new hospital in 2012. This means the output specification of the PPP bid was not informed by an approved health service plan, but rather depended on earlier draft documentation.

Business case

The 2010 strategic business case for SCPUH focused on establishing ‘whether a need exists to expand the Sunshine Coast University Hospital above 533 total inpatient beds (450 overnight beds)…’ It presumed that a new hospital, in line with the government announcement, would be built, and did so without any analysis to determine whether that constituted the best outcome for the state.

The final value for money business case was based on a single solution of building a new hospital at the Kawana site. The business case did not include a summary of the options analysis completed to demonstrate why the preferred solution was selected and how it would deliver the desired outcomes.

The final value for money business case for SCPUH demonstrated that the recommended procurement method would deliver a value for money outcome for the state. It included a financial and economic analysis of the procurement delivery models for the two delivery models under consideration—managing contractor and PPP.

Neither the business case nor QH's briefing to government assessed how the projected operating cost of the new facility compares with a similar hospital. QH's briefing to government provided an estimate of the likely operating cost of the new facility, to 2021–22, when the expansion of the hospital is complete. This does not represent the whole of life costs as required by the state's project assurance framework. QH did not provide the government with sufficient information on the total funding required to operate the new hospital, including clinical services over the life of the hospital.

Procurement delivery method

The value for money framework requires agencies to develop a public sector comparator as part of development of the value for money business case. The public sector comparator provides an estimate of the cost of the public sector delivering the project under a traditional procurement method. This is then compared to bids from the private sector, on a like for like basis, to determine whether a better value for money outcome can be achieved through a PPP delivery model.

The final value for money business case for SCPUH provided adequate justification for the project to be delivered as a PPP.

The actual value for money outcome, following execution of contracts, has delivered a significantly higher than average value for money outcome for projects of this nature. QH and Queensland Treasury and Trade recommended government not release publicly the expected value for money outcome to be achieved until the public sector comparator was reviewed. We found no evidence that QH reviewed the public sector comparator or analysed in detail why the value for money outcome was higher than expected.

QH advised during the audit that it believes a combination of factors contributed to this result including a competitive procurement process, innovation in project delivery, highly competitive market when the contract was awarded and lower life cycle costs arising from assumptions relating to cost increases and maintenance requirements.

QH did not advise the government about the effect of contractual amendments on the risk transferred to the private sector. One change was the key risk event associated with car park revenues and how this and any other changes collectively affected the value for money business case. The lack of analysis on the final risk transfer outcome meant decision makers were not provided with a clear understanding of whether the expected risk allocation was achieved and what deviations occurred during the contract negotiation process.

Delivery

Benefits realisation

Because neither the strategic business case nor the final value for money business case defined the benefits of the SCPUH project, nor included project objectives, the project does not have a documented basis from which to measure its benefits. While it is clear the new hospital will deliver benefits, such as reversing patient flows from Brisbane, these benefits are implicitly, rather than explicitly, defined. This makes it difficult to measure and report on benefits realised.

The project began work on benefits realisation during this audit, but this is late in the project. This reflects the lack of emphasis given to documenting benefits on the project, despite the project having had sufficient time to identify, develop and baseline the benefits in time to measure change after the new facility is operational.

Car park

Car parking for SCPUH will be constructed and operated by a private sector consortium developing the SCPUH site for a term of 28 years—25 years for a SCPUH car park from 2016 and 28 years for a cark park supporting the co-located private hospital. Two car parks will be constructed; the smaller car park opened in November 2013 for the private hospital.

QH has secured some of the benefits of the SCPUH car park. It will make reduced PPP service payments for the hospital as forecast car park revenues offset costs of hospital construction and maintenance. We estimate this benefit is $61.5 million in net present value terms over the length of the contract.

At the end of the PPP contract, the car park management rights and the associated revenues transfer to QH.

Car park revenues

Under the contract with the private sector consortium, QH might be liable to a financial contribution if car park revenues drop below 80 per cent of base case revenues and the project's equity internal rate of return is not met. Redress may need to occur if QH's full time equivalent staff numbers drop below 80 per cent of the staff numbers specified in the PPP contract. The contract specifies certain adjustments to make up the revenue shortfall and a change to the financial contribution from the state is the option of last resort.

This means the state holds some risk if hospital staff numbers are lower than specified in the contract. We could not find evidence that QH completed analysis to understand the probability and consequence of this risk. QH did not highlight the change in risk allocation associated with the car park in its briefing to government.

We could not find evidence that QH sought to establish a symmetrical arrangement requiring redress in the state's favour, should car park revenues exceed forecasts by 120 per cent due to a corresponding increase in staff numbers above those specified in the contract. This would have resulted in a more equitable outcome, with both parties sharing risks, should car park revenues materially differ to those expected.

As the construction of the car park is packaged with the hospital development, the state does not carry the risk of any delays in the hospital opening. This risk has been transferred to the private sector to manage.

Services

QH signed a contract in 2011 with the successful bidder for the private hospital operator tender to provide the equivalent of 70 to 110 public beds over a five-year period starting in 2013–14. This arrangement involved an availability fee, payable to the private hospital operator, in return for providing access to beds and a service fee payable on the treatment of each patient. Part of the availability fee was pre-paid by QH before the hospital was open. QH has agreed to service payments based on a minimum annual activity level with the private hospital entitled to a proportion of the revenue associated with any shortfalls in activity.

The service fee is determined by either the weighted activity unit (WAU) rate specified in the contract or the annual WAU determined under the funding model applied to Queensland public hospital facilities, depending on which is greater. The WAU is the unit measure used by QH to fund applicable hospitals under the activity based funding for health services established by the Council of Australian Governments as part of the National Health Reform Agreement in August 2011.

QH's contractual arrangements with the private hospital operator on the service fee includes a minimum annual cap on the unit rate, which escalates by 3.5 per cent per annum. This means QH has effectively agreed to increase the payment for services on a unit basis by at least 3.5 per cent per annum for the next five years.

This arrangement restricts QH's ability to limit any annual increases to the private hospital operator when the WAU annual increase is below 3.5 per cent. The private hospital operator could potentially earn a WAU above that of a Queensland public hospital if the annual increase in the WAU is below 3.5 per cent. Furthermore, any difference between the WAU for public hospitals and the WAU rate for the private hospital could compound over the five-year term if the WAU increases are below 3.5 per cent per annum in most years.

QH stated in its briefing to government that it assumed the private hospital could achieve efficiency savings and deliver the services more efficiently than a public hospital; however, the service fees have been based on a public hospital price. The commercial arrangements involve the private hospital keeping the efficiency savings, rather than sharing savings with QH. QH did not negotiate an outcome with the private hospital to share in these efficiency savings and deliver a value for money outcome.

We found evidence QH briefed decision makers on legal matters relating to the private hospital operator, but QH could not provide us with the detailed commercial advice which supported QH's briefing to government.

Commercial advice would have given decision makers an understanding of due diligence completed on the arrangements to verify the value for money outcome and ensure obligations and risks were clearly understood.

We have completed a net present value analysis of the availability fee over the 50-year life of the private hospital. Our analysis identified that, in net present value terms:

- the private hospital's expected construction cost was $125.7 million
- the state's share of the construction costs, based on the proportion of beds to be made available, was about $20.7 million; however, the availability fee payable by QH to the private hospital operator totalled $75.2 million for the five-year term
- QH contributed about 60 per cent of the private hospital's construction cost to purchase 16.5 per cent of its capacity over its 50-year life.

This represents a value transfer to the private hospital operator of $54.5 million—the difference between the state's share of construction costs and the new present value of availability fee payments.

QH advised during the audit that the basis for the availability fee was to reimburse the private hospital operator for delivering the hospital (and associated public hospital services) the SCHHS wanted, rather than the hospital a private hospital operator may have traditionally wished to deliver on the site at that time. The state gets the benefits of using the built capacity during the term of the service purchase, while the private hospital operator builds and configures the facility to QH's requirement and then reconfigures the facility to its own requirements at the end of the agreement.

Auditor-General Reports to Parliament

Reports tabled in 2014–15

Number	Title	Date tabled in Legislative Assembly
1.	Results of audit: Internal control systems 2013–14	July 2014
2.	Hospital infrastructure projects	October 2014

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