

11. Asset management and capital works planning to support service delivery

11.1 Overview

- Queensland Health manages an extensive portfolio of assets with a replacement value of some \$6.3 billion and a depreciated value of \$3.5 billion. Seventy nine percent of Queensland Health's assets are buildings, with health technologies accounting for an additional ten percent of the asset base.
- Queensland Health's capital budget for 2005-06 is \$549 million including \$221 million in base funding (for depreciation and amortisation) plus \$328 million for new capital projects. The major focus of the 2005-06 capital program is community and hospital projects, health technology and information and communication technology infrastructure.
- In 2003-04 Queensland Health completed the \$2.8 billion Statewide Hospital Rebuilding Program (SHRP), which replaced and/or refurbished many of the State's metropolitan and regional hospitals. This program was the second largest capital program in Australia, second only to the infrastructure developed for the Sydney Olympics.
- The \$2.8 billion SHRP was unable to address all areas of need, with some areas (eg Mt Isa Hospital and mental health services) being disadvantaged in the setting of priorities with a perception of over-investment in other areas relative to service demand.
- There is a perception that Queensland Health did not receive best value for money from its investment in the SHRP due to a range of factors primarily related to a lack of comprehensive health service planning to inform asset strategic planning and the development of project briefs. In many instances, deficient service planning has resulted in facilities with inadequate capacities.
- Future capital investments will benefit from a greater emphasis on comprehensive health service planning, enhanced asset strategic planning, and development and use of standard design guidelines. This should ensure delivery of health service facilities that integrate best practice design features leading to efficient service delivery. Importantly, the standard design guidelines must reflect the needs of stakeholders ranging from health workers to patients and be informed by learning and experience from previously completed projects from the Statewide Hospitals Rebuilding Program.
- The quality of decision making in relation to selection of locations of new health facilities and whether to build new or refurbish existing facilities was also questioned. Decisions regarding the future location of health facilities must be based on a more transparent patient focused process with location/siting decisions for major new health facilities audited by the Auditor-General on an annual basis.
- The Asset Strategic Plan (ASP) is the primary mechanism for linking service need with asset investment and results in the development of programs of capital works for the department. A more comprehensive asset performance reporting system, supported by post-occupancy evaluations on all projects, is required to facilitate effective monitoring of asset performance and to ensure past learning informs development of better design capability for future projects.

- District concern in relation to a lack of transparency surrounding decision making for the allocation of capital funds and prioritisation of projects on the ASP will be addressed through greater involvement of area health services and districts in the development of the ASP, including increased representation on the Capital Works and Asset Management Committee.
- Queensland Health faces many challenges in funding the capital works program including an unfunded maintenance backlog (once off cost) estimated at over \$300 million. The department has also identified a backlog of maintenance of health technology at between \$7 million to \$10 million.
- There is a general perception within Queensland Health that projects are managed to a budget rather than to a required scope of work. As a consequence, districts across the state have reported that the scope of work delivered did not adequately meet their needs or expectations. The primary cause of this problem is that budgets are set too early in the project development cycle and are based on very preliminary estimates of cost.
- Funding pressures caused by poor project budget definition and unfunded escalation in construction costs on projects has required Queensland Health to redirect base capital funding for use on high priority development projects and to draw on funding from out-years within the rolling capital works budget. These approaches have contributed to under-investment in refurbishment work required to maintain the service capability of existing assets and has created significant shortfalls in funding for the capital works program and ASP in future years.
- The gap between asset funding need and available capital budgets will deteriorate further unless Queensland Health and Queensland Treasury establish a sustainable funding arrangement for the capital works program that will maintain the service capacity of existing assets, the timely replacement of minor and major assets, the recurrent cost associated with capital works projects and to ensure adequate levels of funding are available for the Queensland Health Asset Strategic Plan.
- Several management and organisational characteristics and issues are impacting on the operational efficiency and effectiveness of the Capital Works and Asset Management Branch including a lack of effective business integration and cooperation between some staff and units, and high staff vacancy levels. These management issues are problematic to establishing an organisation adaptable and responsive to delivery of a significant capital works program and meeting the service needs and expectations of health services, and should be addressed.

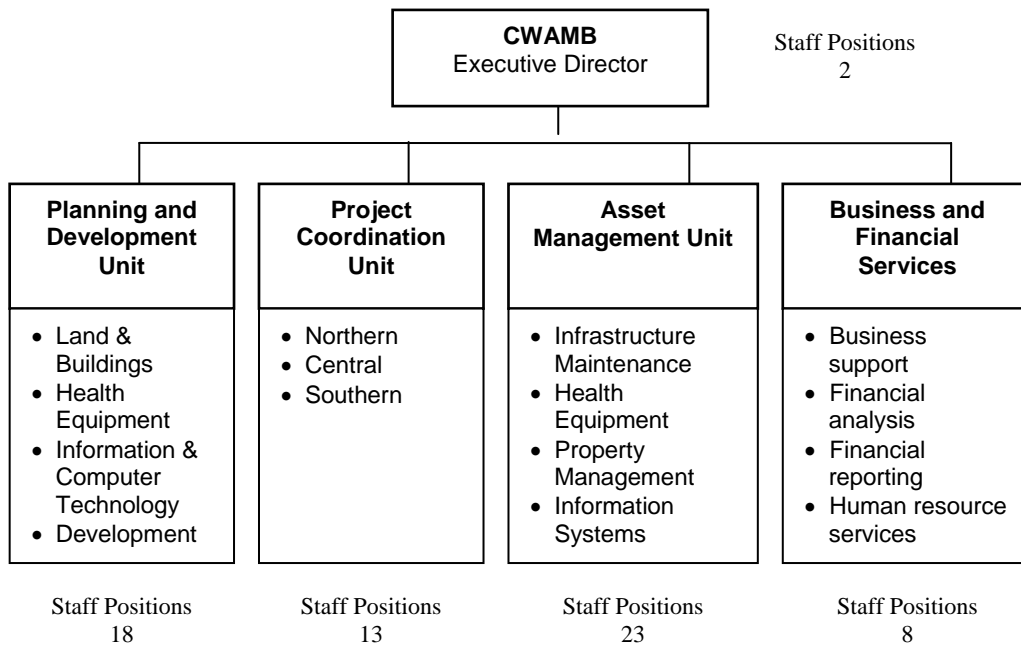
11.2 The focus of the Capital Works and Asset Management Branch (CWAMB)

From 1993/94 the primary focus of CWAMB has been on delivering capital works and asset management projects and services under the \$2.8 billion Statewide Hospital Rebuilding Program. Since completion of this program, several key personnel have left the CWAMB. The loss of corporate and process knowledge and moves to a new organisation structure sees the branch entering a new phase with many management challenges.

The role of CWAMB is to ensure that Queensland Health's physical assets in the form of properties, buildings, and plant and equipment are appropriate for the effective delivery

of health services. A review of CWAMB by external consultants in late 2004 recommended realignment of functions within the branch. The revised structure has an approved staff establishment of 64 permanent positions and five units indicated in the figure below.

Capital Works and Asset Management Branch Current Organisational Structure



Several management and organisational characteristics and issues are impacting adversely on the operational efficiency and effectiveness of CWAMB.

The various organisational units comprising CWAMB appear to have operated historically (personality and culturally based) with a high level of autonomy and insularity which impacts on the effectiveness of communication and cooperation amongst the units. This lack of business integration may partly stem from the recent instability in leadership in the branch which also appears to have hindered development of a team culture in CWAMB.

The recent high vacancy rate (17 percent) in CWAMB, and with approximately 30 percent of total staff positions occupied by short-term acting appointees, together with the current transitional management structures, has undoubtedly contributed to staff uncertainty and impacted on productivity. Not all staff have embraced the new branch structure and management arrangements. Concerningly, some individuals appear to have tended to pursue their own interests and direction and work priorities.

These management issues are problematic to establishing an organisation adaptable and responsive to delivery of a significant capital works program and meeting the service needs and expectations of health services, and should be addressed.

Major building projects for Queensland Health have historically been managed by CWAMB with assistance from the Department of Public Works (DPW) and external consultants. Generally DPW is engaged to manage procurement risk associated with the delivery of built assets. This is in contrast to other Queensland Government departments

where DPW is commissioned and responsible for total project delivery, including project management, design and documentation and procurement risk services.

It is usual practice to outsource the delivery phase of capital works and asset management projects and services. It is more problematic to outsource the planning and design phase, as this work requires a detailed working knowledge of Queensland Health's core business, service plans, asset portfolio structures, and network of relationships with key stakeholders. A model which sees a greater interface and support of CWAMB by DPW and industry is therefore supported. It is also important that specialist knowledge of health service infrastructure design requirements is retained by Queensland Health staff. Although the branch should continue to have a high level responsibility for the three core stages of an asset life cycle (i.e. 'plan it, build it, maintain it'), its involvement should have a strategic planning and coordination focus. The future role of CWAMB should not include the direct management of projects in order to ensure that it maintains a strategic focus and only operates within its demonstrated areas of expertise.

Due to the heavy workload and tight timeframes associated with the Statewide Hospital Rebuilding Program, the branch has not been able to commit sufficient resources to the planning and analysis work required prior to the delivery phase of many projects. If the planning and analysis (strategy) phase is not done well, there is a major risk that the project delivery (implementation) phase will not achieve the desired results, no matter how well project managers manage time, cost and quality or how well service providers deliver services.

The recent restructure of CWAMB strengthens its planning role through creation of a Planning and Development Unit. The new Planning and Development Unit is only partially established. Temporary appointments have been made to senior management roles however many other positions remain unfilled. The role of this unit and linkages to other units (internal and external to CWAMB) has not yet been articulated in sufficient detail to assess whether an appropriate focus on planning and analysis will be achieved.

While the restructure envisaged that enhanced planning would be undertaken within the Planning and Development Unit, the role of the Unit will need to change to reflect the increased responsibility and involvement of districts and areas in project planning and delivery, as recommended in this report.

This shift in responsibilities should lead to a reduction in the Planning and Development Unit's resourcing. To enable the greater devolution of decision making to local levels across Queensland Health will require each area health service to establish capability in asset management. The restructure of Corporate Office recommends the transfer of three planning officer positions from CWAMB to the Area Health Services which will provide a staffing nucleus for the proposed capital works and asset management sections, business support services branches in the areas. The longer term staffing requirement within areas will be determined in the context of the restructure of Queensland Health and the extent of devolution of functions from Corporate Office to the area or district.

As it is expected that creation of the Area Health Services will impact on workload of the CWAMB, staff numbers and skills mix will need regular reappraisal to reflect the shift of responsibility and functions to area and district staff. In this context, once the areas have been established, a review of CWAMB structures, staffing levels and relativity between positions would be warranted.

In hindsight, the lack of standardisation in the design of major health facilities is viewed as a significant shortcoming of the Statewide Hospital Rebuilding Program.

Historically Queensland Health has depended heavily on external architectural expertise for the design of major health facilities. Detailed and considered design briefs were often not provided to architects, instead the department relied on external consultants to confirm current best practice on a project by project basis. This has resulted in the development of health facilities of variable design and criticism that many facilities are not fit-for-purpose or do not support efficiency in infrastructure and health service delivery. It is also purported that, in some instances, the design team was pressured into accommodating design requirements of individual clinicians where views could widely differ, while in other instances the design deficiencies could be attributed to the architectural industry's limited experience and knowledge of the delivery of health services in public hospitals.

CWAMB needs to develop the capacity to provide expert advice and guidance on the design, planning and functionality of health built assets. This expertise is critical in managing the requirements and expectations of clinical personnel and directing health design specialist's inputs to ensure that the built solution considers national and international best practice.

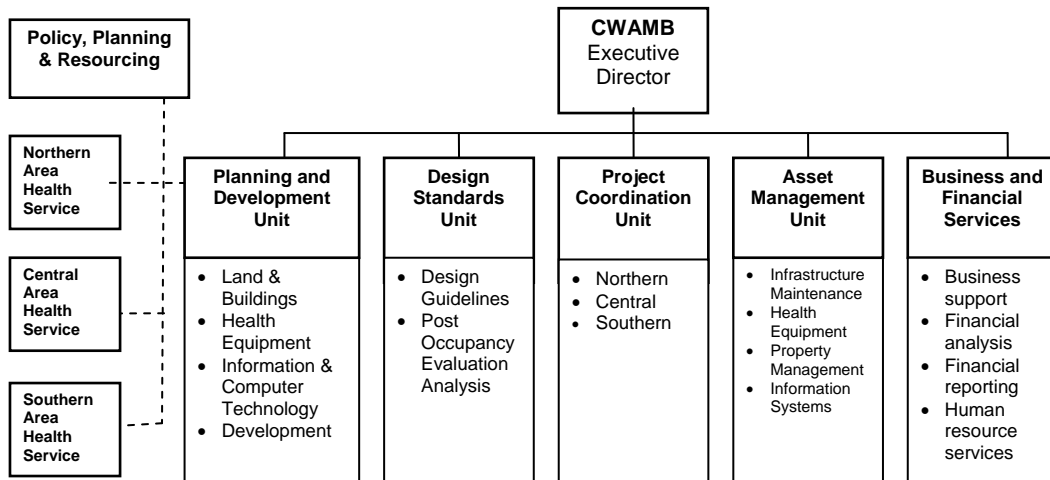
Establishment of a Design Standards Unit within CWAMB is recommended. The unit will be responsible for the development of a comprehensive suite of design guidelines and the maintenance of this asset knowledge through analysis of Post Occupancy Evaluation reviews and stakeholder satisfaction surveys discussed in section 11.7 of this report. The unit will also work with other areas to identify asset planning implications of clinical service best practice approaches.

A unit of five staff positions is envisaged. No increase to the branch staff establishment would be required, with the extra positions sourced from existing units with excess capacity following the transfer of functions to areas and districts.

While it is not envisaged that the unit be staffed by design specialists (eg architects), it would be valuable for staff to possess technical training and understanding of health service delivery and design principles. Staff would be required to brief contract architects on design requirements of health facilities; assist area and district staff to interpret technical plans and project documentation; and facilitate inclusion of health service delivery requirements into capital project design specifications.

A revised organisation chart of the CWAMB incorporating the Design Standards Unit is shown in the following figure.

Capital Works and Asset Management Branch - Proposed Organisational Structure



Recommendation 11.1

- The direct management of construction projects presently undertaken within the Project Coordination Unit should be outsourced to the Department of Public Works who in turn will outsource where appropriate to private sector firms.
- Consolidate Capital Works and Asset Management Branch staffing levels and position relativity in light of expected reduction in workload as area and district health services assume more responsibility for asset management functions.
- Establish a Design Standards Unit within Capital Works and Asset Management Branch with responsibility for developing and maintaining standard design guidelines and planning practices for building health service assets.

11.3 Capital works and asset management governance structures

Concern was expressed by districts in relation to a lack of transparency surrounding decision making for the allocation of capital funds and prioritisation of projects on the Asset Strategic Plan (ASP).

The ranking of projects presented in the ASP often did not reflect priorities assigned by districts and/or zonal offices. Reasons for the reprioritisation of projects were generally not provided giving rise to a sense of disenchantment by district staff with the ASP development process and perceptions of centralised decision making by the Capital Works and Asset Management Branch (CWAMB). Some areas (i.e. Mt Isa Hospital and mental health services) appear to have been disadvantaged in the setting of priorities with a perception of over-investment in other areas relative to service demand.

Prior to December 2004, development of the ASP and capital budget was primarily controlled by the Executive Director, CWAMB with reporting directly to the Director-General. Since December the CWAMB has reported to the Senior Executive Director, Resource Management. This latter position is assisted by the Capital Works and Asset Management Committee (the Committee). The role of the Committee is to ensure that the investment in physical infrastructure and assets is optimized and to achieve the strategic outcomes of Queensland Health, and that the asset base of the department is

sustainable into the long term. Membership of the Committee comprises seven representatives from Corporate Office directorates plus a Zonal Manager. The Committee has no decision making powers, being an advisory committee only.

Under the restructure of Queensland Health recommended in Chapter 5, the CWAMB would form part of Business Services reporting directly to the Chief Operations Officer.

To be fully effective, the Capital Works and Asset Management Committee must have decision making powers to determine individual project priorities and to allocate funding within approved budget limits. Accordingly, in addition to its current responsibilities its governance role must be broadened to encompass performance review of the CWAMB and the monitoring of its accountability for delivering physical infrastructure and assets that support health services outcomes.

Membership of the Committee should be revised to include the Chief Operations Officer responsible for business support services, plus one Area Health Service General Manager and three District Managers (one from each Area Health Service). The area and district members will strengthen health service input and representation and ensure the alignment of investment in capital infrastructure and assets with health service delivery.

Appointment of the Area Health Service General Manager as Chair of the Committee would further encourage a focus on state wide health service outcomes and help to address districts' perceptions that CWAMB has had too much influence over decisions affecting the allocation of capital funding and prioritisation of projects on the ASP.

The CWAMB is dependent on several services provided by the building and construction industry for the effective delivery of Queensland Health's capital works program. Services contracted from industry range from architectural design through to project management and the construction of facilities. The cost and timeliness of completing projects on the program is significantly influenced by the availability and willingness of industry to undertake Queensland Health projects.

Industry is presently reporting that it is operating at near full capacity and facing growing demand nationally and internationally. For the near future, Queensland Health's capital works program will be delivered in competition with other large infrastructure demands in Queensland and interstate which will increase cost pressures and lengthen construction timeframes for projects.

For this reason, it is important that Queensland Health establish closer relationships with industry and seek greater awareness of the challenges faced by the capital works program in the current construction environment. These demand pressures may necessitate that Queensland Health review current infrastructure delivery processes including consideration of closer partnerships with industry and more innovative approaches for project procurement and delivery.

The Department of Public Works, amongst other responsibilities, provides whole of Government advice on planning and investment in government building infrastructure. It is recognised as an authoritative source of advice and intelligence on current developments and emerging trends in the building and construction industry in Queensland that would better inform Queensland Health's current capital works and asset planning processes. To this end, it is recommended that a relevant senior officer from the Department of Public Works be appointed to the Capital Works and Asset Management Committee to provide specialist advice on industry's capability and to guide development

of capital works design and delivery solutions that the contracting sector can most competently deliver. Moreover, the Committee would benefit from appointment of a member with extensive knowledge and experience at a senior level within the building and construction industry. Appointment of a retired senior executive from the industry would avoid any potential conflict of interest issues.

The Committee would have a core structure of eight members with full decision making power. Members on the core committee would be the Chief Operations Officer, one Area Health Service General Manager, three District Managers, Executive Director CWAMB, the representative from the Department of Public Works and the industry expert. The remaining members of the current committee structure would become non-executive (advisory) members with a primary role to contribute to committee deliberations within their areas of special interest.

Recommendation 11.2

- The Capital Works and Asset Management Branch form part of Business Services reporting directly to the Chief Operations Officer.
- The Capital Works and Asset Management Committee be reconstituted as a decision making body (rather than as the current advisory body) with powers to determine project priorities and to allocate funding within the approved limits of the Capital Works Program and Asset Strategic Plan.
- The governance role and functions of the Capital Works and Asset Management Committee be broadened to include responsibility for monitoring performance of the Capital Works and Asset Management Branch for delivering physical infrastructure and assets that support health service outcomes.
- Membership of the Capital Works and Asset Management Committee be revised to strengthen health service delivery representation with inclusion of: the Chief Operations Officer, an Area Health Service General Manager, three Health Service District Managers, a senior officer from the Department of Public Works and an expert from the building and construction industry to provide specialist advice on industry's capability and to guide development of capital works design and delivery solutions that the contracting sector can most competently deliver.

11.4 Health service plans as vital inputs to asset strategic plans

Decisions regarding health facilities in Queensland have often been adversely impacted by a lack of accurate and timely information on current and future health services requirements. Over the last ten years, the main catalyst for the preparation of health service plans has been to support the development of design briefs for specific capital works initiatives (i.e. individual project plans were often not integrated with statewide service needs or priorities). Districts frequently relied on capital works project budgets to fund health service planning as they have had limited funding and expertise in this area. Health service plans were therefore generally prepared by external consultants, engaged by the then Capital Works Branch, with the agreement of the relevant Queensland Health districts.

The lack of an integrated planning approach has contributed to a range of difficulties during the delivery of many capital works projects including scope of work and budget increases, delays to programs and the delivery of facilities with incorrect capacities and functional misalignment. For example, a criticism of the \$2.8 billion Statewide Hospital Rebuilding Program was its failure to provide adequate numbers of acute beds in new and

redeveloped facilities. This has largely been attributed to inadequate service planning including underestimation of future population growth in Queensland, the impact of an ageing population and unrealised expectation that demand for acute beds would reduce as a result of an increased focus on day surgery. Also the expected reduction in service demand at inner-city base hospitals from strategies designed to increase the provision of health services in suburban locations and increase investment in sub-acute and rehabilitation services, has not eventuated. These outcomes have resulted in clinicians being dissatisfied with some facilities provided. A legacy of this previous approach is that health service planning is fragmented and lacks clear corporate leadership within the department.

In recognition of the importance of health service planning to effective delivery of future patient care services, the department formed the Statewide Health Service Planning Unit (SHSPU) in July 2004. SHSPU is responsible for the delivery of discrete health planning projects but is not resourced or responsible for coordinating comprehensive health service planning across all areas of the department.

Some of the larger districts have prepared health service plans, with the zones also assuming some responsibility for health service planning. Whilst this work is to be commended and further work encouraged, Queensland Health personnel report that the quality of the planning is mixed as there is currently a range of different approaches to health service planning used across the department. Service planning needs to be more integrated and the development of a consistent approach is required.

Health service plans should be an integral part of the department's planning processes. Unless there is a commitment to developing and implementing comprehensive patient-focused health service planning, asset plans and the budgets incorporated within them will continue to be flawed. Health service plans not only inform decisions relating to new facilities, but also those relating to existing facilities: what to increase, reduce, modify, replace, what to maintain to a low, average or high quality – in order to provide the right services in the right place at the right time - cost effectively.

Strategies to enhance health service planning within the department are addressed in more detail in Chapter 6 of this report.

The ASP is the mechanism for linking health service need with investment in assets. An analysis of the department's current asset management framework was provided in the Capital Works and Asset Management Branch's (CWAMB) report titled *Capital Investment Review* (November 2004). This report highlights the critical importance of service planning preceding capital planning and the integration of the two processes. The report also found that there is considerable improvement required in the asset strategic plans prepared by health service districts. Identified areas of weaknesses include poor methodologies for estimating capital investment need and failure to link asset need to service requirements. The CWAMB report also notes that ASP has a relatively short time horizon (5 years), relies on a bottom up approach, and lacks a framework for assessing the relative priorities and benefits of different types of services, locations and assets.

CWAMB report that several factors contribute to this situation including:

- The lack of articulation in strategic plans, service plans, and policy documents as to the capital implications or potential capital solutions
- The lack of service plans, particularly at the local level

- Competing forces for the time and attention of senior officers to the ASP process, including a focus on immediate issues rather than long term planning
- Frustration with the level of unmet funding demand
- The lack of skilled officers, and the turnover of those officers, to undertake the ASP process, and more recently
- The structural disconnect from the introduction of the shared services provider model where finance officers in Shared Services, involved in developing the ASP, no longer report directly to asset controllers/owners in districts.

Whilst the current approach relies primarily on districts and business units identifying asset needs, the decision making and notional funding allocation process is centralised in Corporate Office. Alternative models that take account of the corporate strategic position as well as providing local flexibility in decision making are required.

Health planning and asset planning areas need to work collaboratively to explore, understand and agree on the asset implications of their proposals. The CWAMB have recognised the need to liaise closely with Statewide Health Service Planning Unit to ensure that asset planning and asset investment decision making are linked to health service needs. CWAMB will similarly need to link their work to other groups across Queensland Health responsible for developing health service plans, particularly at area health service and district levels and provide a support service to asset controllers/owners.

The Northern Zone has developed a Clinical Services Planning Framework that reflects an approach of defining the service need, determining how the service will be provided and assessing the infrastructure/resources required to deliver the service (human resources, equipment, technology and built assets). This approach would seem to offer a useful model for improving the linkage between health service planning and the asset strategic planning and as such CWAMB should engage with the Northern Zone to define and document the process.

Recommendation 11.3

- The Capital Works and Asset Management Branch develop and implement an improved Asset Strategic Planning process for 2006-07 which recognises the restructure of the department and enhanced capability within areas and revised roles and responsibilities of stakeholders.
- Capital Works and Asset Management Branch conduct an immediate review of the justification and priority assigned to all projects on the current Asset Strategic Plan in the context of Queensland Health's patient service needs and seek re-approval from the revised Capital Works and Asset Management Committee of all Asset Strategic Plan projects.
- Capital Works and Asset Management Branch evaluate the current Northern Zone's Clinical Service Planning Framework as a model for strengthening alignment and linkages between current health service planning and asset planning within Queensland Health.

11.5 Locating facilities to meet health service needs

Several District Managers questioned the quality of decision making in connection with capital works projects including the selection of location for new health facilities and/or whether to build new or refurbish existing facilities. Such decisions should be informed by health service plans that identify what services are required, where and in what quantities and identify the facilities, building services, equipment and other resources needed to deliver those services.

Queensland Health has established health service planning systems that provide high integrity in deciding on locations of new health facilities and ensuring value for money is achieved. Unless location decisions are based on health service planning information, it is all too easy for decision makers to let subjectivity influence the decision, which can lead to dislocation in health service provision and higher capital and operating costs for facilities.

A transparent patient focused decision making process that encourages balanced involvement of stakeholders and technical experts, including clinicians, supported by comprehensive service planning and needs assessment, with independent review by the Auditor-General, is essential to ensure the integrity of decision making surrounding the choice of locations for future health service facilities.

The decision making process should consider a range of factors including those listed below:

- access for patients/consumers to public transport and other transportation infrastructure
- access to other government and non-government health services in the district, area or state
- patient demand drivers
- suitability of sites already owned by the state
- size, accessibility, topography
- suitability of existing buildings for extension or upgrade
- requirement to be collocated with other related entities (such as tertiary teaching institutions)
- space required for future expansion
- nature of development surrounding available sites
- location of a suitable workforce relative to the site.

Judgement will need to be exercised by decision makers about the relative importance of the above factors. Facilitated workshops designed to assist stakeholders work through the evaluation process are an effective mechanism to ensure transparency, document rationale and allow stakeholders to develop a shared understanding. It is important that decisions made in relation to capital works projects are fully documented to enable review from an accountability perspective.

Recommendation 11.4

- Queensland Health base all future decisions regarding the location of health facilities on a transparent, patient focused process that ensures wide community and stakeholder involvement together with relevant advice from technical experts. All decisions should be supported by full documentation, to enable independent review and ensure accountability and probity of decisions.
- It would be appropriate that the Queensland Auditor-General have regard to asset planning and infrastructure decisions in undertaking the annual audit of Queensland Health.

11.6 Capital works program funding arrangements

11.6.1 Alignment of the budget and the scope of work for capital works projects

There is a general perception within Queensland Health that capital works projects are managed to a budget rather than to a required scope of work. As a result, districts and their clinical workforce across the state have reported that the scope of work delivered did not adequately meet patient needs or clinical requirements. Other impacts include higher ongoing maintenance and operating costs and a requirement for further investments in infrastructure shortly after completion of projects. Some districts suggested that it would have been preferable not to proceed with capital works projects rather than deliver them within the constraints of an inadequate budget.

Two main factors contribute to this situation. The first being the process by which the works program is developed and second, the alignment between a project's scope and budget.

Formulating the works program

In the past there have been multiple processes by which projects were identified, approved and allocated capital works budgets within Queensland Health. The department is progressively improving this situation by endeavouring to ensure that the annual asset strategic planning process is the primary mechanism for developing the capital works program. To ensure greater alignment between service need and capital works solutions, it is essential that health districts and areas have a greater role in major facility planning decisions in the context of the annual asset strategic planning process. It is also important that they are closely involved in deciding the priority of projects on the annual works program and the allocating of funding between projects. Bringing the decision making closer to the people delivering and receiving health services should facilitate better outcomes for patients and the health service overall.

Setting budgets for projects

A problem with the current Asset Strategic Plan (ASP) and project approval process is that budgets are often set too early in the project development cycle and are based on very provisional estimates of cost. As a consequence, projects incur budget overruns or their scope is reduced to contain expenditure within budget limits. Budgets associated with capital works initiatives increase in accuracy as project planning progresses. As the design of the site, building and infrastructure progress early assumptions are changed or confirmed and the project cost can be estimated with greater certainty and accuracy. Queensland Health therefore needs to introduce a process that enables capital works initiatives and their associated cost estimates to be progressively refined before a final project budget is formally adopted.

This process for developing appropriate project budgets should be driven at district level and commence with a brief articulation of the specific service need. Such proposals should be incorporated within the District's Asset Strategic Plan and, subject to area endorsement, progress to a more formal business case. The business case is where project scope is better defined and alternative service delivery options canvassed. Area

ASP initiatives should then be refined and prioritised by the Capital Works and Asset Management Committee (CWAMC) to form Queensland Health's ASP. Then and only then should agreed initiatives be subject to a detailed scoping and funding submission and upon endorsement be included in the Department's Capital Acquisition Plan.

Recommendation 11.5

- Health service districts and area health services take a greater role in developing the department's capital works program and associated funding allocations.
- Queensland Health implement a process that enables capital works initiatives and their associated cost estimates to be progressively refined before the final project budget is formally adopted.

11.6.2 Capital and recurrent funding for assets

Maintenance expenditure

The Gross Book Value of Queensland Health's asset base is approximately \$6.3 billion. The department's projected expenditure on maintenance across all asset classes (buildings, information technology, medical equipment and plant and equipment) for 2005-06 is approximately \$100 million and is predicted to average some \$106 million per annum until 2008-09.

Queensland Health's current policy requires a minimum expenditure benchmark of 2.5 percent of operational budgets be spent on maintenance, which is reported as being achieved and in some cases exceeded. Maintenance expenditure on building assets in 2004-05 is reported as \$60 million or approximately 1.2 percent of the gross value of buildings, which appears to be below the level of expenditure recommended by the American Management Association.¹⁰⁸ It recommends that funding at a minimum of 2 percent of replacement value is required to avoid degradation of building inventory over time and recommends funding for maintenance and repair of up to 4 percent of asset replacement value. This appears broadly consistent with Australian research¹⁰⁹ indicating that annual expenditure of 3.77 percent of replacement value is required to maintain the current stock of health assets including buildings, equipment and furniture/furnishings.

Despite Health's current spending level, districts report large backlogs of maintenance tasks and some health facilities are obviously in poor condition. This suggests that maintenance planning processes have failed to identify all priorities or that under funding of maintenance has occurred in the past. Queensland Health has established a backlog maintenance program administered by CWAMB. Base funding for the program is \$3 million per annum. In 2003/04, Queensland Health and Queensland Treasury jointly increased funding for the backlog maintenance program to a total of \$33 million over the three years to 2005/06 with an offer from Queensland Treasury to provide additional (matched) funding of up to \$5 million per annum for the three years to 2008/09. District requests for backlog maintenance funding (for buildings and plant and equipment asset classes) in 2005/06 totalled over \$199 million with approximately \$82 million categorised as priority tasks. The backlog maintenance budget for 2005/06 is \$13.3 million.

¹⁰⁸ American Management Association, D. Coutts, *The Facility Management Handbook*, 1999, p 219.

¹⁰⁹ John Deeble 2002, "Capital Investment in Public Hospitals", *Australian Health Review*, Vol 25, No 5, p 52.

More detailed information is required regarding the current condition and suitability of existing facilities to make an informed assessment of whether this program is adequately funded. CWAMB stated that the district estimates are very conservative and estimate the backlog of maintenance across all districts to be more than \$300 million. Based on these assessments of asset funding need, it would appear that significant additional funding is required to adequately maintain the current built asset base in Queensland Health.

CWAMB are currently working with the Department of Public Works to develop a more useful approach to condition assessments that will provide valuable maintenance planning information. It is important that this issue is pursued to ensure that priority maintenance tasks are identified, funded and addressed before they adversely impact the delivery of health services.

Funding for major assets (new or replacement)

Confusion exists in health districts regarding funding sources for the purchase of major assets (both new or replacement). Queensland Treasury funding of the Queensland Health capital works program has two main components. First an equity component which funds new infrastructure developments, and a second component for maintaining the service capacity of the existing asset base.

In recent years, funding provided as equity has increasingly been tied to specific government initiatives including Election Commitments 2004 and the Smart State Building Fund. For 2005/06, the Capital Acquisition Budget of \$549 million includes an amount of \$328 million equity funding (60 percent) and \$221 million base level of capital funding (40 percent).

Queensland Health is required to prepare submissions (including business cases) as and when required in order to secure special purpose equity/growth funding from Queensland Treasury. This approach allows the Cabinet Budget Review Committee (CBRC) the opportunity to assess whether the investment is consistent with current government policy and consider the priority in a whole-of-government context. In some instances districts have funded significant asset investment projects from operational budgets, in preference to applying for additional funding. This approach reflects the view that there is a significant lead time involved in securing funding and that the likelihood of success is minimal. Whilst expedient, this approach may lead to underspending in other important areas such as maintenance.

Queensland Health has re-directed base capital funds (ie depreciation funding) for use on high priority infrastructure development projects. This practice has contributed to under investment in refurbishment works required to maintain the service capacity of existing assets. Securing adequate levels of funding for the capital works program has been problematic. Factors contributing to past funding pressures include inadequate planning and design guidelines, and poor scope definition and budget setting processes through to impacts largely beyond the control of Queensland Health such as the significant escalation in construction costs.

While Queensland Treasury has provided budget supplementation for some projects in the past, it does not generally provide additional funding for escalation in building costs, thus Queensland Health has been forced to re-scope projects to remain within approved

capital budget allocations and/or to draw funding forward from future base funding provisions within the rolling capital works program budget.

Continued reliance on out-year budgets to fund current projects has created significant shortfalls in funding for the capital works program and ASP in future years. For example, the forward estimates for 2007-08 and 2008-09 of \$242 million and \$191million respectively, are almost fully committed to fund current projects. Uncommitted funding to undertake new works is estimated at only \$49 million for 2007-08 and \$14 million for 2008-09.

The gap between asset funding need and available capital budgets will deteriorate further as facilities constructed over the past 10 to 12 years under the \$2.8 billion Statewide Hospitals Rebuilding Program progressively become due for major refurbishment.

Funding for the routine replacement of assets

The Health Technology Equipment Replacement Program (HTERP) was established by Queensland Health in 1998-99 to provide a mechanism for securing funding to replace major items of health technology equipment. The program's budget varies between \$40 million to \$60 million per annum. The HTERP is funded from within the Department's average annual base capital allocation of \$151 million. There is presently no similar funding provision available to support the replacement of general non-medical equipment. While the HTERP has assisted districts to replace high priority health technology items, CWAMB has identified a backlog of maintenance of health technology at between \$7 million to \$10 million. Currently there is no funding source to address this maintenance backlog.

Comparison between capital demand and available funding

The following table compares the level of funding required to meet capital demand for new and replacement assets with capital budget forward estimates for the period 2005-06 to 2008-09.

Capital Funding Demand vs Budget				
	2005-06 \$M	2006-07 \$M	2007-08 \$M	2008-09 \$M
2005-06 ASP funding requirement	699.6	448.9	329.6	285.1
Budget (Capital Acquisition Plan)	498.9	312.8	241.8	191.2
Shortfall	200.7	136.1	87.8	93.9

Source: 2005-06 Queensland Health Asset Strategic Plan

Based on demand and funding projections presented in the table above, Queensland Health is facing a capital funding shortfall of \$518.5 million over the four years to 2008-09. As highlighted above, the department also has an unfunded infrastructure maintenance backlog (once off cost) of between \$200 million and \$300 million and a backlog of maintenance of health technology estimated at \$7 million to \$10 million. While it is recognised that further work is required to confirm the accuracy of the forecasted demand and funding levels, they provide a useful indication of the magnitude of future capital funding problems that, if not addressed, will see further deterioration of the department's asset stock.

Commitment of funds for recurrent costs

In the capital works planning and approval process there is inadequate recognition given to the recurrent cost implications of projects. There is a poor connection between the processes for approving capital works budgets and those for approving operating budgets within Queensland Health. A recognition and commitment is needed to fund districts and areas for increased non-labour recurrent costs associated with a replacement or new building solution. These costs including cleaning, power, security, gas, maintenance and the like should be based on professional analysis of the operating requirements at the time of project planning. In the past, regardless of whether capital works project submissions identified the predicted (non-labour) recurrent costs, approval of funding for the operating costs has not occurred in conjunction with the project approval. Whilst some factors such as predicting operational efficiencies may make it difficult to pursue budgetary issues at the time of project approval, the issue remains that districts do not receive recurrent funding recognition at the time of project endorsement. They may or may not receive additional funding at a later date after the project has been committed, and where additional funding is not forthcoming or is insufficient, districts are forced to reduce expenditure on health services or commit inadequate funds to maintaining the asset.

Recommendation 11.6

- Queensland Health and Queensland Treasury establish a sustainable funding model designed to maintain the service capacity of existing assets, the replacement and purchase of minor and major assets, the recurrent costs associated with capital works projects and to ensure adequate levels of funding are available for the Asset Strategic Plan.
- Revised funding arrangements for the Asset Strategic Plan be established and implemented for the 2006-07 financial year.
- Queensland Health confirm and further refine cost and funding estimates furnished in the report on the Capital Investment Review (November 2004) in respect of future capital investment need, maintenance of the asset base and backlogs of asset maintenance with a view to submission of a consolidated funding request for consideration and discussion with Queensland Treasury by December 2005.

11.6.3 Funding arrangements for planned future health projects

Public pronouncements by Government of planned future health projects (eg. Smart State Building Fund) have caused funding problems to Queensland Health in the recent past. Public announcements of new infrastructure developments invariably include details of the planned facilities and proposed project cost. Generally, the announcements are made several years before construction is due to commence and often prior to the department having conducted any formal planning studies on the projects. As a consequence, the project cost estimates are often only a “best guess” and are not supported by project briefs, detailed service plans or pre-design studies normally used as the basis for developing accurate cost estimates on physical infrastructure projects.

Experience from the recently completed Statewide Hospital Rebuilding Program shows that provisional project cost estimates included in Government announcements often become the default project cost for Queensland Treasury’s forward estimates and the basis of capital budget allocations to Queensland Health.

Detailed planning studies and design work undertaken to progress projects often reveal that the initial project budgets are significantly underestimated. The response by Queensland Health has generally been to reduce a project's scope to contain costs within available budgets. This budget driven approach to project delivery has, on some occasions, resulted in construction of facilities of sub-optimal design, with compromised serviceability and functionality and significant long-term maintenance cost implications as discussed above.

Clearly, the interest of Queenslanders is not served by developing sub-optimal health service facilities built to an unrealistic budget rather than to meet service need and without due consideration of future maintenance costs and total project cost from a whole-of-service life perspective.

Should the Government and Ministers wish to make pronouncements on planned future health projects which include proposed project costs, then these figures should not be used for the purpose of capital funding allocations to Queensland Health. Project budgets and funding allocations should be based on detailed project scoping and preliminary design work subsequently undertaken by the Department.

An initial project budget would need to be established to fund the preliminary planning work and development of accurate cost estimates. Queensland Treasury may also need to maintain a contingency fund to cover necessary increases in project budgets when cost estimates developed during the detailed planning studies exceed the initial publicly announced cost of a project.

In cases where project budgets are fixed and where budget supplementation is not forthcoming from Queensland Treasury, Queensland Health should have the flexibility to delay the commencement and/or completion dates of previously announced health projects where the additional project costs are to be funded from the department's rolling budget for capital works projects.

Queensland Health recently introduced a long term planning strategy aimed at developing preliminary scoping, demand and cost estimates for projects identified on the Asset Strategic Plan. In the near future, Queensland Health will be better placed to furnish indicative cost estimates for Asset Strategic Plan projects should extra funding become available to meet government election commitments or for new priority initiatives of government (eg. Residential Aged Care Funding Program).

Recommendation 11.7

For planned future capital works projects announced by Government, Queensland Treasury and Queensland Health establish and implement funding approaches that will resolve the present under funding of capital works projects which arises when the initial publicly announced cost of a project is significantly less than the cost required to actually deliver the project.

11.7 Information on the performance of existing assets to support planning

There is currently limited meaningful measurement of asset characteristics or structured analysis of how well assets are supporting the delivery of health services in the department. Current measures, where they exist, are inadequate. Queensland Treasury requires that agencies monitor the performance of their assets and report results annually

in their Asset Strategic Plan. Queensland Health's current Asset Strategic Plan only reports information on asset value and capital and maintenance expenditure. No information is currently provided that would enable assessment of the contribution of assets to meeting service needs or whether value for money was achieved from past investment in assets.

Without access to accurate and timely information about the performance of existing assets, it is very difficult for the department to make informed investment decisions that will ensure value for money and alignment between assets and service need. To this end reporting systems are required that measure and track asset performance from both a financial and non-financial perspective.

An identified weakness in management of the Asset Strategic Plan is the absence of a rigorous post-occupancy evaluation (POE) process for capital works projects. Past experience and learning from projects, including satisfaction surveys from asset users, should be captured in order to prevent the recurrence of problems encountered on earlier projects and to inform decision making on future projects and for development of better design capability. POEs should be part of a continuous improvement cycle and asset performance monitoring and reporting system. POEs should be undertaken at the completion of all major construction projects to evaluate delivery processes and facility functionality and maintainability.

Evaluation of delivery performance should involve reviewing the way in which the facility was delivered including procurement methodology, timeframes and stakeholder engagement. Such reviews should include responses from key project stakeholders including area and district management and clinical staff. Where identified as key project stakeholders community and patient groups should also be included in the review process.

Facility functionality should assess how well the facility meets its intended need and expectations developed during the planning phase. Assessments by key project stakeholders including clinical and nursing staff, patient groups and district administration personnel are a crucial component in the evaluation of functional performance. Where standard design guidelines are utilised to inform capital works planning processes, feedback on functional performance, both positive and negative, should be analysed and used to further refine design standards.

The evaluation of facility maintainability should focus on obtaining feedback from maintenance and cleaning personnel on the acceptability of decisions made in respect of the material finish, colour selection and material serviceability (including whole of life). The evaluation should also include the suitability of major plant and equipment selection decisions. CWAMB should develop and maintain a schedule of acceptable products and materials to inform and support planning on future projects.

For smaller projects (e.g. less than \$5 million) the comprehensiveness of the POE process would vary depending on an evaluation of risk and potential to impact on future project delivery, design and serviceability.

CWAMB has advised that it is represented on the National Health Capital and Asset Management Consortium which has been formed with responsibility to formulate standard design guidelines and to develop a POE methodology for use across all Australian health agencies.

The lack of a comprehensive asset performance reporting system has been identified as a problem for many agencies within the public service. A number of Queensland Government departments, including Queensland Health, have been participating in the Queensland Government wide Facilities Management Improvement Initiative (FMII). The aim of one of the component projects is to develop a building asset reporting framework to enhance performance reporting at an agency and whole-of-Government level. The proposed asset reporting framework would appear to be a useful decision support tool for Queensland Health to prioritise capital investments and assess the performance of existing assets.

The performance metrics and performance indicators identified within the FMII *Asset Reporting Framework Report* (June 2005) are listed below. The report also includes proposed measures and measurement scales for each of the following categories:

- *APPROPRIATENESS* in meeting service delivery requirements
 - Capacity (*physical capacity to support level of current and future service activity*)
 - Functionality of facilities (*suitability and flexibility of internal and external facilities for current and future service delivery*)
 - Location (*physical location relative to current and future demand for services*)
 - Condition (*physical condition appropriate for current and future service activity*)
 - Service Potential (*remaining useful/economic life*)
- *FINANCIAL* impact of asset
 - Operating cost
 - Maintenance cost
 - Deferred maintenance
 - Net return on asset value (*revenue-generating assets only*)
- *STATUTORY COMPLIANCE* liability
 - Extent of compliance with Australian Standards, Codes, Laws and Regulations
- *EFFECTIVE USE* of asset as a resource
 - Utilisation Rate of asset
 - Compatibility of use compared to the design purpose of the asset
- *ENVIRONMENTAL* impact of asset
 - Impact of asset on the environment (including site contamination issues)
 - Status in complying with environmental impact ratings against agreed criteria
- *SOCIAL* significance of asset
 - Significance in meeting Government priorities or community obligations (e.g. iconic, heritage, community attachment, cultural significance, Native title etc)

Recommendation 11.8

- Queensland Health, with assistance from the Department of Public Works, immediately trial the implementation of the asset reporting framework developed under the Facilities Management Improvement Initiative in one health district to test the methodology and assess its potential for statewide implementation.

- Capital Works and Asset Management Branch continue development of standard design guidelines and post occupancy evaluation frameworks and implement both approaches as a matter of priority.

11.8 Asset management systems

Queensland Health currently have a multitude of computer based systems supporting asset management operations across the department.

Such systems include:

- **FAMMIS** A SAP R/3 financial and asset management system which captures asset financial accounting information.
- **CMMS** Computer Maintenance Management System, also a SAP R/3 solution focused on supporting planned and responsive maintenance activities.
- **HTCPS** Health Technology Capital Planning System provides information on the replacement planning for Health Technology assets.
- **ASP** The Asset Strategic Planning system is an application currently being trialled within Queensland Health and focused on providing longer term asset planning information upon which to make informed investment decisions. The Asset Strategic Plan has been developed by the Government Asset Management System team and reflects a whole of government approach.
- **HECS** Health Equipment Control System is used by the Biomedical Technology Services Group in the servicing and maintenance of health technology equipment across the Department.
- **DSS** Queensland Health's enterprise decision support system environment.

The Review has indicated a clear lack of integration across the systems with districts highlighting the need to enter similar data into a number of different computer based applications. This duplication of data entry, together with the limited staffing available within a district to adequately maintain the level of information required, highlights concern with the quality of asset information available to support informed decisions.

Previous consultant reviews have confirmed the lack of system integration and recommended a halt of further system development pending a functional review of all major asset systems. This review concluded with the submission of a final draft report dated 15 August 2005. Within this report a total of eight recommendations are proposed, aimed at eliminating duplication, clarifying roles and responsibilities and interfacing and enhancing current systems. In summary, these recommendations propose:

- the replacement of HTCPS with its current functionality being delivered by enhancements to the existing FAMMIS module (including CMMS) and the corporate DSS system
- establishment of a program governance framework to oversee the new work required in transitioning away from the HTCP system
- development of a consistent set of policies and guidelines on asset management and in particular the financial treatment of assets

- the need to clarify roles and responsibilities between districts and the shared services provider.

It is noted that the recommendation to discontinue HTCPS and enhance the functionality of other systems will require a funding commitment in the order of \$1 million, however the report reflects the view that the investment would likely have a pay back period of less than two years.

Whilst yet to be implemented, the recommendations have received overall endorsement within Queensland Health and an implementation funding proposal is being advanced.

Recommendation 11.9

- Capital Works and Asset Management Branch should continue to develop a program for implementing the approved Asset Management Systems Review recommendations throughout Queensland Health, with a finalisation date no later than December 2006.
- Capital Works and Asset Management Branch report quarterly to the Capital Works and Asset Management Committee on progress of implementation of the approved recommendations.