PERFORMANCE AUDIT 12 AUGUST 2020

Health capital works

NEW SOUTH WALES AUDITOR-GENERAL'S REPORT

audit office
OF NEW SOUTH WALES

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In accordance with section 38E of the *Public Finance and Audit Act 1983,* I present a report titled **'Health capital works'.**

Margaret Crawford
Auditor-General
12 August 2020

contents

Health capital works

Section one – Health capital works

Executive summary 1

Introduction 7

Planning and prioritisation 13

Developing business cases 18

Project governance and management systems 26

Section two – Appendices

Appendix one – Response from agency 32

Appendix two – About the audit 35

Appendix three – Performance auditing 37

Appendix four – Ministry of Health planning tools and guidelines 39

Appendix five – Streamlined investment decision process for Health Capital Projects 41

Appendix six – Timeline of business cases and relevant policy guidelines 42

Section one

Health capital works

Executive summary

Since 2011–12, NSW Health has aimed to improve its facilities and build 'future focused' infrastructure. The NSW Government's 2015–16 election commitments established a four-year $5.0 billion capital program for NSW Health to build and upgrade more than 60 hospitals and health services. The 2019–20 State Budget committed a further $10.1 billion over four years for another 29 projects. This is the largest investment to date on health capital works in New South Wales.

Recent reviews of infrastructure have recognised that population and demographic growth will require a change in the delivery and composition of health infrastructure, including considering greater use of non-traditional, non-capital health service options and assets.

To ensure that expenditure on capital works represents the best value for money, NSW Health's business cases need to be robust and supported by evidence that demonstrates they are worthy investments. The NSW Process of Facility Planning has been the main framework guiding the detailed planning and development of NSW Health's capital works proposals. This framework was developed by the then NSW Department of Health in 2010. Its aim is to ensure investment proposals are supported by rigorous planning processes that address health service needs and provide value for money.

Infrastructure projects of the complexity and scale being delivered by NSW Health carry inherent risks. For example, unplanned cost escalations can potentially impact on the State's finances. Unforeseen delays can also reduce the intended benefits. The growth in the State's health capital spend and project profile, means its exposure to such risks has increased over time.

The objective of this audit was to assess the effectiveness of planning and delivery of major capital works to meet demand for health services in New South Wales. To address this objective, the audit examined whether:

- the Ministry of Health has effective procedures for planning and prioritising investments in major health capital works
- Health Infrastructure develops robust business cases for initiated major capital works that reliably inform government decision making
- Health Infrastructure has effective project governance and management systems that support delivering projects on-time, within budget and achievement of intended benefits.

The audit focused on the Ministry of Health and Health Infrastructure – being the lead agencies within NSW Health responsible for prioritising, planning and delivering major health capital works across the State. The audit examined 13 business cases for eight discrete projects over a ten-year period.

Conclusion

NSW Health has substantially expanded health infrastructure across New South Wales since 2015. However, its planning and prioritisation processes were not assessed against a long-term statewide health infrastructure plan and lacked rigorous assessment against non-capital options creating a risk that they do not maximise value for New South Wales.

The scale of NSW Health's capital investment is significant and has grown substantially in recent years. The NSW Government's election commitments in 2015–16 and 2019–20 collectively set out a $15.0 billion capital program to build and upgrade 89 hospitals and health services. NSW Health developed this infrastructure program in the absence of a statewide health infrastructure strategy and investment framework to focus its planning and decisions on the types of capital investments required to meet the long-term needs of the NSW health system.

Consequently, locally focused priorities of the State's 17 Local Health Districts have been the primary drivers of NSW Health's capital investments since 2015–16. Local Health District investment proposals for hospitals were developed without consideration of alternative health options such as community health service models, technology-driven eHealth care, or private sector options. Without rigorous assessment against a range of potential health service options, there is a risk that selected projects do not maximise value for New South Wales.

In recognition of the need for a statewide approach to infrastructure planning, the Ministry of Health recently developed a 20-year Health Infrastructure Strategy and prioritisation framework in 2019. The strategy was approved by the NSW Government in April 2020.

NSW Health's ability to effectively test and analyse its capital investment options has been compromised by unclear decision-making roles and responsibilities between its Health Infrastructure and the Ministry of Health agencies.

While both Health Infrastructure and the Ministry of Health have responsibilities for the assessment of business cases for proposed infrastructure projects, confusion about the roles of each agency at key steps compromised the efficacy of the process. Health Infrastructure and the Ministry of Health have differing views about which agency is responsible for testing business case inputs and conducting comprehensive options appraisals.

As a result of this confusion, Health Infrastructure and the Ministry of Health did not rigorously test Local Health District capital investment proposals against defined statewide health infrastructure investment priorities. The NSW Process of Facility Planning does not clarify the responsibilities of all parties in validating and prioritising Local Health District's Clinical Service Plans and progressing them to business cases.

NSW Health's infrastructure priorities are not sufficiently supported by transparent documentation of selection methodology and the rationale for decisions. Consequently, there is a risk that recommended options, whilst having some economic and health service merit, do not represent the greatest value.

Substantial delays and budget overruns on some major projects indicate that Health Infrastructure's project governance, risk assessment and management systems could be improved.

Health Infrastructure did not fully comply with NSW Government guidelines for developing business cases and making economic appraisals for proposed capital investments. These weaknesses, along with delays and budget overruns on some projects, demonstrate a need for Health Infrastructure to strengthen its project governance, management and quality control systems.

1. Key findings

NSW Health has developed a significant program of capital works to address ageing health infrastructure and increasing health services due to population growth

NSW Health's approach to capital works planning since 2011–12 has focused on achieving the State's goal of providing timely access to healthcare through increased investment in infrastructure.

During this period, NSW Health has delivered significant hospital infrastructure projects to improve and modernise its ageing health facilities. Our review of a sample of these projects shows NSW Health has sought to prioritise investments in projects offering net economic benefits to the State.

However, the historical absence of a long-term health infrastructure strategy and investment framework for NSW Health, means capital investment decisions have been largely reliant on the priorities determined by Local Health Districts (LHDs). The Ministry has historically accepted these local priorities without assessment against defined statewide directions for infrastructure investment, or the merits of alternative non-capital options.

NSW Health's procedures for prioritising capital investments did not balance the local priorities of LHDs against the long-term needs of the wider health system

The Ministry's role in ensuring NSW Health's capital funds achieve the greatest value for NSW would be improved by balancing the local priorities of LHDs against the long-term needs of the wider health system. This requires knowing the types of capital investments that are needed to optimise systemwide outcomes for New South Wales.

The government's election commitments in 2015–16 and 2019–20 collectively established a $15.0 billion capital program to build and upgrade 89 hospitals and health services. This program was established without advice from the Ministry on how these projects aligned with statewide health infrastructure priorities.

As the Ministry did not assess LHD priorities against defined statewide directions for infrastructure investment, or the merits of alternative non-capital options, it could not demonstrate they optimised benefits for the wider health system. For example, under this approach, health services could be duplicated in instances where infrastructure could be shared or delivered through community health options.

NSW Health's strategic asset planning documents do not transparently show the basis for prioritising capital investment decisions since 2015–16

Our review of Asset Strategic Plans supplied by the Ministry for the years 2016–17, 2017–18 and 2019–20 reveal an incomplete list of projects and a lack of criteria, considerations or rationale for selecting and excluding projects. The Asset Strategic Plans do not show the basis for timing decisions for all projects allocated to the Capital Investment Strategic Plan across the ten-year period.

The Ministry advised its main rationale for decisions relating to the Capital Investment Strategic Plan each year are detailed within the associated NSW Health Asset Strategic Plans. These are high-level strategic documents, not intended for providing detailed project rationales.

The Ministry has developed a 20-year strategy to strengthen its planning and prioritisation processes

In 2019 the Ministry developed a 20-year Health Infrastructure Strategy in response to a recommendation from Infrastructure NSW that aims to prepare New South Wales for significant change across the health sector. The strategy signals the need to shift investment away from traditional acute hospital settings, towards more sustainable integrated services and facilities that make better use of health assets. The strategy was recently approved by the NSW Government in April 2020 but it is not yet public.

The strategy acknowledges limitations in the Ministry's current capital investment prioritisation framework, which focuses heavily on local asset planning encouraging a district centric rather than statewide health network collaborative approach. The Ministry is also developing a new prioritisation framework to complement the new 20-year Health Infrastructure Strategy.

Its effectiveness will ultimately depend on how well the Ministry and health agencies establish and implement it.

Health Infrastructure advised it has been active in developing and updating methods for quantifying health benefits in cost benefit analyses for capital projects since 2008 when it first established an interim guide for economic appraisals. This has been a positive initiative. The guide was finalised in 2010 and updated in 2018 in consultation with the Treasury.

Business cases were developed without appraisal of all health service delivery options

The NSW State Health Plan recognises the importance of delivering the government's committed major investments. However, it also emphasises the need to seek non-capital solutions – such as transfer of patients to other facilities, private sector involvement, community health or technology-driven eHealth care – where possible, to maximise efficiency and value for money.

Although NSW Health devoted significant attention to planning the delivery of capital solutions, a similar focus on non-capital options was not evident in any of the planning processes examined. Health Infrastructure and LHD Chief Executives advised that Clinical Service Plans and business cases for major proposals were developed based on extensive consultation with stakeholders that typically considered the merits of alternative models of care, service delivery arrangements and non-capital solutions.

However, they also acknowledged that detailed assessments of the full range of options considered during planning, including rationale for those selected and rejected were not clearly documented, contrary to the requirements of NSW Health's Process of Facility Planning. This can include options involving a combination of capital and non-capital solutions that collectively seek to maximise value and minimise the need for capital expenditure.

Health Infrastructure could not demonstrate it rigorously examined the full range of feasible options, including non-capital options, before shortlisting the preferred option recommended for each of the business cases we examined. In some of these business cases there was deterioration in the benefit cost ratio between the preliminary and final business case, or a risk the cost of a proposal may exceed the benefits under certain scenarios. Although this does not necessarily mean the investment was unviable, the final business case did not draw attention to this when it occurred, or discuss the risks and merits of proceeding with the investment.

Health Infrastructure advised its assessment of non-capital options and economic appraisals reflects an agreed approach endorsed by NSW Health guidelines. According to Health Infrastructure, this approach requires consideration of only limited forms of non-capital options, involving either Public Private Partnerships (PPPs) or the transfer of patients to other facilities. This view was not supported by evidence.

Unclear decision-making roles and responsibilities between Health Infrastructure and the Ministry

Both Health Infrastructure and the Ministry of Health have roles in assessing business cases for proposed infrastructure projects. Confusion about the responsibilities of each agency at key steps in the process compromised the overall efficacy of the process. Health Infrastructure and the Ministry of Health have differing views about which agency is responsible for testing business case inputs and conducting comprehensive options appraisals.

NSW Health's primary capital planning policy states that Health Infrastructure is responsible for managing the development of options supporting business cases, but Health Infrastructure could not demonstrate that its staff and stakeholders understood these responsibilities. Health Infrastructure staff advised that LHDs and the Ministry of Health are primarily responsible for developing non-capital options because they formulate and endorse the Clinical Service Plans used by Health Infrastructure to support business cases.

The State's guidelines on developing Clinical Service Plans, business cases and cost benefit analyses establish that the business case is the primary document informing the investment decision. The Clinical Service Plan is only an input to the business case. NSW Health's Process of Facility Planning assigns responsibility for developing business cases and related options appraisal to Health Infrastructure, not the Ministry. NSW Health is reviewing its Process of Facility Planning in conjunction with the 20-year strategy and advises there is opportunity to further clarify these roles and responsibilities.

Service forecasts in Clinical Service Plans were not rigorously tested and reviewed

Health Infrastructure and the Ministry could not demonstrate that the capacity forecasts detailed in the Clinical Service Plans were rigorously tested and would meet statewide health infrastructure requirements. Consequently, there is insufficient assurance that the number of beds and clinical spaces described in examined business cases accurately reflected the scale and scope of infrastructure required to effectively and efficiently meet future statewide demand. Health Infrastructure confirmed it relies on the Ministry-endorsed Clinical Service Plans as the initial specification tool to support capital planning and decisions.

A Clinical Service Plan is usually developed by LHDs to support planning for a capital solution. Consequently, there is a risk that Health Infrastructure's reliance on the Ministry's endorsement process, in the absence of testing in the business case, can focus the process on a capital solution before the business case is developed or alternative options are assessed. This situation limits accountability and risks compromising the role of a business case.

Project challenges indicate opportunities for strengthening governance and project management

We examined three major hospital redevelopments in metropolitan, regional and rural areas with a combined Estimated Total Cost of more than $1.2 billion. It comprised of eight discrete projects and 13 separate business cases.

Almost all these projects experienced delivery challenges which impacted on the achievement of their original objectives and intended benefits. This is expected in complex and large-scale health infrastructure programs. However, in some projects the impacts were significant and resulted in substantial delays, unforeseen costs, and the diversion of resources from other priority areas.

Our review of these projects identified opportunities for enhancing governance and project management. Specifically, our assessment indicates a need for strengthening:

- accountability and transparency in the management of contingency funds
- risk management and assessments particularly relating to adverse site conditions and the selection of contractors
- forward planning for options to address unfunded priorities within business cases that risk complicating the delivery of future project stages resulting in unforeseen costs and potentially avoidable budget overruns.

2. Recommendations

By December 2020, the Ministry of Health should:

1. establish effective arrangements to ensure the Health cluster's capital funds are used to deliver the greatest value for New South Wales by:
    - commencing the implementation plan for the new 20-year Health Infrastructure Strategy and related Prioritisation Framework
    - transparently detailing the basis of annual prioritisation decisions relating to NSW Health's forward capital planning
    - effectively coordinating, screening, and aligning the capital priorities of Health cluster agencies with the new Strategy
    - informing the government through advice on their alignment with statewide directions for health infrastructure investment in the 20-year Strategy.

By September 2020, the Ministry of Health should:

2. work with Health Infrastructure and stakeholders to strengthen the Process of Facility Planning by:
    - reviewing the roles and responsibilities of all Health cluster agencies involved in developing business cases to assure they support rigorous consideration of the full range of feasible options including non-capital options
    - developing guidance and an action plan to strengthen the sector's capability for transparently assessing alternative non-capital options aligned with the 20-year Health Infrastructure Strategy
    - strengthening economic appraisals within business cases including assessments of the risks and benefits of all feasible options (including non-capital options), and compliance with relevant NSW Health and Treasury guidelines
    - assuring that demand and capacity forecasts of Clinical Services Plans are accurately described in business cases supporting proposed capital solutions.
3. systematically monitor and publicly report (at least annually) on:
    - the total amount of contingency funds controlled by NSW Health, and the amounts reallocated to individual projects and how compliance was achieved with Treasury policies on the use of contingency funds.
    - all major new works initiated by NSW Health with an Estimated Total Cost of $5.0 million or more, and how compliance was achieved with NSW Government requirements associated with Capital Expenditure Authorisation Limits for the approval of new works.

By September 2020, Health Infrastructure should:

4. enhance its governance and project management systems by:
    - developing a quality framework, and associated key performance indicators for the planning and delivery phases of all projects to support systematic monitoring and transparent reporting on:
        - the quality of developed business cases and economic appraisals based on their compliance with NSW Guidelines
        - the effectiveness and efficiency of project management
        - continuous improvement and the professional development of staff.

1. Introduction

1.1 Overview of health capital works in New South Wales

NSW Health manages a significant asset portfolio including over 230 public hospitals and over 255 ambulance stations across New South Wales.

The value of these assets has grown steadily over the last four years, up from $16.6 billion at 30 June 2015 to $23.5 billion at 30 June 2019 – an increase of almost 42 per cent. This reflects significant capital expenditure over the period on new hospital facilities, upgrades and redevelopments.

The 2015–16 NSW State Budget approved over $5.0 billion in health capital works to 2018–19 for the sector to build and upgrade more than 60 hospitals and health services statewide building on previous investments. The table below shows annual capital expenditure across the Health cluster since has grown steadily reaching $2.3 billion in 2018–19, representing an almost 75 per cent increase on the average annual spend over the preceding four financial years.

The 2019–20 NSW State Budget committed a further $10.1 billion over four years, including $2.9 billion in 2019–20. This is the largest investment to-date on health capital works in New South Wales.

Exhibit 1: Annual capital expenditure across the NSW Health cluster 2015 to 2019

	2015	2016	2017	2018	2019
Value of assets at 30 June ($ billion)	$16.6	$17.6	$18.6	$20.1	$23.5

	2014–15	2015–16	2016–17	2017–18	2018–19
Capital expenditure ($ billion)	$1.3	$1.2	$1.3	$1.5	$2.3

Source: NSW Audit Office - annual Health cluster reports.

Historical investment patterns

In 2018, Infrastructure NSW (INSW) noted around 40 per cent of NSW Health's built infrastructure was over 50 years old necessitating ongoing investment in maintenance and upgrades to meet current needs. It highlighted several challenges and opportunities impacting the State's capacity to address demand for infrastructure. Specifically, it noted population growth and ageing, coupled with the growing fiscal gap between State revenue and demand for expenditure on infrastructure means the state cannot build its way out of increasing demand.

INSW emphasised business cases must demonstrate proposed projects address an identified need and that a full range of options, including non-build solutions, have been considered and thoroughly evaluated.

2018 State Infrastructure Strategy

The 2018 State Infrastructure Strategy emphasises the need for New South Wales to respond proactively to these challenges noting disruption in other industries has shown organisations are exposed to risk if they do not confront uncertainty, embrace innovation, or become constrained by past practices.

In the Health cluster, it recommended NSW Health develop a robust 20-year Health Infrastructure Strategy to achieve a coordinated and integrated response across government, non-government and private sector providers of health services. It noted the strategy should focus on delivering new models of care, investing in fit-for-purpose health infrastructure and accessing the benefits of technology for future services. NSW Health acted on this recommendation in 2019. It developed a new 20-year Health Infrastructure Strategy discussed further in later sections of this report.

2016 NSW Intergenerational report

The 2016 NSW Intergenerational Report similarly identified growth in health spending as a key challenge for the NSW Government. It noted that health services are the largest contributor to projected expense growth over the next decade increasing from around 28 per cent of the State's budget in 2016–17 to 36 per cent by 2055–56.

The report estimated health costs will grow by about six per cent a year over the next decade and beyond, with most of the growth occurring in the hospital system.

The 2018 State Infrastructure Strategy noted this growth rate assumes NSW Health will continue to plan for and deliver health services in the same way that it has to date which does not account for the rapidly changing nature of healthcare delivery.

Based on traditional planning models, existing demographic projections suggest that up to 10,000 new beds may be required by 2030 to meet demand. However, INSW observed the number of hospital beds per thousand people has been declining steadily for decades and will continue to do so as the sector embraces innovative models of care which increasingly deliver more services in people's homes, the community and virtually. It further noted these innovations will require a greater focus on preventative strategies to reduce demand meaning traditional hospital-based care will mainly be reserved for the most urgent surgical interventions and medical conditions.

Realising the benefits from these initiatives will require significant changes to the approaches supporting health infrastructure planning and investment decisions to date.

Institutional and governance arrangements for health capital works

Ministry of Health

The NSW Ministry of Health supports the executive and statutory roles of the Health cluster and Portfolio Ministers. Its 'system manager' role includes responsibility for coordinating the planning of statewide health network services, workforce, population health, asset and capital works planning, and providing advice to the Minister for Health and the Minister for Mental Health on these matters.

The Ministry of Health develops the cluster-wide NSW Health Asset Strategy using the Asset Strategic Plans of LHDs and speciality health networks as a key input. Each year, the Ministry of Health considers the priority projects for capital investment identified by each district for inclusion in its statewide Capital Investment Strategic Plan (CISP).

The CISP identifies proposed capital investments within NSW Health over a ten-year horizon informed by the review of local health service priorities and the capital expenditure authorisation limit set by the Treasury each year. Once the CISP is approved by the Minister for Health it is submitted to the Treasury for consideration as part of the annual State Budget process.

Health Infrastructure

Health Infrastructure is a statewide shared service established under the Health Administration Corporation in June 2007. It is responsible for managing and coordinating approved major health capital works projects and providing capital project delivery support services to public health organisations.

Health Infrastructure manages the planning and delivery of initiated capital projects costing $10.0 million or more. It develops the business case in conjunction with key stakeholders and the relevant Clinical Service Plan to support:

- robust assessment of options, including for design, delivery and procurement
- compliance with NSW Government capital planning and procurement policies and guidelines
- government decision making for proposed investments.

Project options, costs and benefits are assessed in accordance with NSW Government's guidelines for developing business cases and economic appraisals reflected in NSW Health's Process of Facility Planning. This normally involves developing a preliminary business case and, ultimately, a final business case. The preliminary business case aims to examine the indicative costs and benefits of a wide range of options against the base case (e.g. ‘status quo’). The final business case involves a more rigorous assessment of the costs and benefits of the shortlisted and preferred options, including procurement strategy.

In the delivery phase, Health Infrastructure is responsible for implementing the procurement strategy, overseeing construction and commissioning, managing delivery risks, scope changes, and for delivering the project on-time and within budget.

Local Health Districts

Local health districts (LHDs) and specialty networks are responsible for effectively planning health services over the short and long term to enable service delivery that is responsive to the health needs of their defined population. This includes developing various service and related asset and capital investment plans.

Each LHD identifies the assets that should be maintained, disposed of, retained or enhanced through capital investment based on its analysis of current and future service needs. Identified gaps in the performance of assets provide the basis for capital investment priorities listed within its Asset Strategic Plan.

LHDs also develop Clinical Service Plans to inform the scope of proposed new developments by more specifically defining the needs of larger projects and complex clinical services.

Relevant NSW strategic plans

Capital planning in NSW Health aims to follow an integrated process between LHDs and the Ministry of Health with service planning as the foundation. This process also seeks to align with statewide strategies focused on delivering improved outcomes for the New South Wales community (Exhibit 2).

Exhibit 2: Relevant NSW strategic plans

Plan	Overview
NSW 2021: A Plan to Make NSW Number one	The NSW Government's State Plan sets out targets for improved outcomes and service delivery, including health services. Goals 11 and 12 of the plan seek to keep people healthy and out of hospital through a focus on wellness and prevention, and by providing timely access to healthcare through increased investment in infrastructure.
State Infrastructure Strategy (2018)	The 2018 State Infrastructure Strategy describes the challenges NSW Health faces due to the growth in demand and increasingly constrained fiscal environment. It highlights the imperatives of reshaping and effectively prioritising NSW Health's capital program to deliver more sustainable and integrated services in the community better focused around the needs of patients.
NSW State Health Plan: Towards 2021	The NSW State Health Plan: Towards 2021 sets the overall strategy for NSW Health. It aims to align with NSW Government policy and reflect the goals and targets for Health in the NSW State Plan. The whole NSW Health system is responsible for delivering the State Health Plan. The Plan's focus on designing and building 'future focused' infrastructure is particularly relevant to health capital works. Key related initiatives include: • delivering the NSW Government's committed major investments • better planning capital requirements based on service needs • growing partnerships with the private and not-for-profit sectors in developing health facilities and equipment • seeking non-capital solutions to deliver care, where possible, by: – investing in eHealth solutions to deliver new models of care and solutions that improve value for money – releasing capacity within existing facilities by introducing new models of care resulting in shorter hospital stays for patients.
NSW Rural Health Plan Towards 2021	The 2014 NSW Rural Health Plan Towards 2021 sets strategic goals with a focus on rural NSW with the aim of ensuring patients receive care as close to home as possible and in a way that is coordinated and seamless. The strategy encourages contemporary models of care and related infrastructure that efficiently use outreach services to deliver high quality and safe services at the point where rural people need them.

Source: Audit Office research.

NSW Government policies and guidance relating to health capital works

Across the period of review, the NSW Government has consistently required that all government agencies and businesses submit robust business cases for major investment proposals, to support prioritisation, decision making and budget approval (Exhibit 3).

NSW Health has also developed its own cluster-specific guidance for capital planning and analysis of costs and benefits. Exhibit 3 demonstrates relevant policies and guidance for governing health capital works. Appendix six demonstrates the relationship of these policy development over the period of review.

Exhibit 3: NSW Government policies and guidance relating to health capital works

Policy or guidance	Key requirements
NSW Treasury Circular TC12/19 - Submission of Business Cases	NSW Treasury Circular TC12/19 establishes that business cases should include economic and financial appraisals of a range of options to provide a sound basis for resource allocation decisions.
NSW Government Business Case Guidelines (TPP08–05 (superseded) and TPP18–06)	NSW Government's Business Case Guidelines aim to assist agencies prepare business cases in line with best practice. The guidelines establish the primary role of a business case is to reliably inform an investment and/or policy decision. They also describe the characteristics of a good business case noting it includes outlining the relevant information and convincing arguments for a recommended action supported by hard data, including accurate costing of alternative options and expected benefits.
NSW Government guidelines for economic appraisal (TPP–0705) (superseded) and CBA (TPP17–03)	The NSW Government Guidelines for Economic Appraisal, and their update in 2017 (Cost-Benefit Analysis Guidelines) establish a consistent approach to undertaking economic appraisals for significant spending proposals, including capital works. Evidence-based cost benefit analyses help inform decision-makers understand the best means of satisfying a specified objective, impacts to the NSW community and to rank proposals and options when resources are limited.
NSW Health Process of Facility Planning	The NSW Process of Facility Planning was developed by the former NSW Department of Health in 2010 and has been the main framework guiding the detailed planning and development of health capital works proposals within NSW Health. It seeks to ensure proposals are supported by rigorous planning that address service needs. The Ministry of Health initiated a review of the Process of Facility Planning in late 2019.
NSW Health Guide to Cost-Benefit Analysis of Health Capital Projects	NSW Health's guide outlines that cost-benefit analysis (CBA) is required as part of a business case for any new or significantly amending initiative. In 2018, NSW Health refreshed its guidelines to supplement the NSW Government's Guide to Cost-Benefit Analysis by focusing on the application of CBA's to health capital investment proposals. The guide acknowledges CBA's are particularly important at the early planning stage, when a range of alternatives is being considered to inform a major investment decision. It emphasises the value of a CBA lies in promoting sound decision making on capital proposals and highlights the importance of the range of options developed at the early planning phase in shaping the range of options considered by the CBA. The guide states local health districts and speciality health networks should ensure they consider a wide range of service options to meet identified population health needs so the most appropriate options can be assessed.
NSW Treasury Circular TC12/20 - Capital expenditure authorisation limits	The NSW Government requires all government agencies to manage their capital expenditure program within an approved capital expenditure authorisation limit. NSW Treasury Circular TC12/20 sets out the relevant requirements noting that authorisation limits are determined and approved during the annual budget process. The policy requires the Minister for Health, as the coordinating minister for the Health cluster, supported by the Secretary of NSW Health to ensure the capital expenditure program for each agency in the cluster is managed within the approved authorisation limit.

Policy or guidance	Key requirements
	The Minister may approve variances within capital expenditure authorisation limits arising from new works with an Estimated Total Cost less than $5.0 million and/or adjustments to existing works. Approval must be obtained from the Treasurer before initiating any new works with an Estimated Total Cost of $5.0 million or more. The Minister may also approve the addition of new capital projects costing less than $5.0 million and adjustments to existing major projects subject to this not exceeding ten per cent of the originally approved limit, the total authorisation limits for the Budget and the forward estimates years are not exceeded in any one year, and no major project is delayed by more than one year.
Infrastructure Investor Assurance Framework	The Infrastructure Investor Assurance Framework (IIAF) is a risk-based assurance process administered by Infrastructure NSW for the State's capital projects. It does not comprise an audit, approval or an endorsement process but seeks to identify the level of confidence that can be provided to Cabinet that the State's capital projects are being effectively developed and delivered. In respect of health capital works, Gateway reviews conducted at the preliminary and final business case stages provide opportunities for NSW Health to address any identified quality and compliance issues that pose a risk to decision-making and the project.

Source: Audit Office Research 2020.

This performance audit was conducted independently of the Gateway review process.

1.2 About the Audit

The audit examined the effectiveness of planning and delivery of major capital works to meet demand for health services in New South Wales. It focused on the Ministry of Health and Health Infrastructure as the lead agencies within NSW Health responsible for prioritising, planning and delivering major health capital works across the State.

The audit examined how the agencies implement policies, guidelines and frameworks supporting the prioritisation of major health capital works and related investments. It also considered if funded projects are based on robust analysis of options and benefits, and if there are effective arrangements for delivering projects.

To inform our assessments, we also examined three major hospital redevelopment projects in metropolitan, regional and rural areas with a combined Estimated Total Cost of more than $1.2 billion underpinned by eight discrete projects and 13 separate business cases. The three major projects were:

- Hornsby Ku-ring-gai Hospital Redevelopment Stages 1, 1A, 2 and 2A
- Blacktown Mt Druitt Hospital Expansion Stages 1 and 2
- Dubbo Health Service Redevelopment Stages 1, 2, 3 and 4.

These projects were selected on the basis they were 'major', high-value projects (i.e. greater than $50.0 million), were either completed or advanced in delivery to permit meaningful examination, and because they covered a cross-section of Health Infrastructure's metropolitan and regional projects and related practices over the last ten years.

2. Planning and prioritisation

2.1 Planning and prioritising health capital investments

NSW Health's capital planning process occurs annually alongside the State Budget process. It requires health agencies to take a strategic approach to align their service delivery priorities with the NSW State Health Plan including ten-year asset and capital plans.

NSW Health is responsible for coordinating these plans across its related agencies. It is ultimately responsible for ensuring the Health cluster's capital funds are best used to achieve the greatest value for New South Wales.

NSW Health has developed a significant program of capital works to address ageing health infrastructure and increasing demand for health services from population growth

NSW Health's approach to capital works planning since 2011–12 has focused on achieving the State's goal of providing timely access to healthcare through increased investment in infrastructure. During this period, it has delivered significant hospital infrastructure projects to improve and modernise its ageing health facilities. Our review of a sample of these projects shows NSW Health has sought to prioritise investments in projects offering net economic benefits to the State.

However, weaknesses in planning and prioritisation processes mean they do not assure funded projects offer the greatest value to New South Wales or achieve the State's related objective of leveraging non-capital solutions to deliver healthcare wherever possible.

The historical absence of a long-term health infrastructure strategy and investment framework means NSW Health has largely relied on the locally determined priorities of LHDs to guide its capital investment decisions impacting the wider health network. The Ministry has historically accepted these local priorities without assessment against defined statewide directions for infrastructure investment, or the merits of alternative non-capital options.

The NSW State Health Plan recognises the importance of delivering the government's committed major investments. However, it also emphasises the need to seek non-capital solutions, such as transfer of patients to other facilities, private sector involvement, community health or technology-driven eHealth care, where possible, to maximise efficiency and value for money.

Although NSW Health devoted significant attention to planning the delivery of capital solutions, a similar focus on non-capital options was not evident in any of the planning processes examined.

NSW Health's procedures for prioritising capital investments did not balance the local priorities of LHDs against the long-term needs of the wider health system

NSW Health has followed an infrastructure planning approach that is largely reliant on the top five priorities of LHDs. This approach recognises that LHDs are primarily responsible for local asset planning and determining related priorities within their districts.

The Ministry has worked over several years to support LHDs to strengthen local capital planning. It supplied them with common planning tools including guidelines for developing service plans and Asset Strategic Plans. It has also equipped them with templates for conducting preliminary cost benefit analyses and other screening tools to assist with developing and ranking locally determined capital priorities. LHDs and the Ministry have used these tools to strengthen local planning for capital investments focused on delivering additional local capacity and/or improved functionality of facilities in areas experiencing population growth and change.

However, these tools were not developed and used to support a long-term infrastructure strategy and related investment as part of a cohesive framework for the Health cluster. They do not provide clear advice about the types of proposals that NSW Health should invest in to deliver the best health outcomes and value for NSW. In the absence of this framework, LHD determined priorities have been the major driver of NSW Health's investment decisions.

The Ministry of Health is delivering the government's election commitments but did not advise it on how these aligned with the types of investments the health system requires to maximise value for New South Wales

The NSW Government's 2015–16 election commitments established a four-year $5.0 billion capital program to build and upgrade more than 60 hospitals and health services. The 2019–20 State Budget committed a further $10.1 billion over four years for another 29 projects.

The election commitments were not informed by specific advice from the Ministry on their alignment with statewide health infrastructure priorities as these were not defined until late 2019. The Ministry advised they were drawn from LHD Asset Strategic Plans.

The Ministry's role in ensuring NSW Health's capital funds achieve the greatest value for New South Wales requires balancing the local priorities of LHDs against the long-term needs of the wider health system. This requires knowing the types of capital investments needed to optimise system-wide outcomes that LHD priorities can be assessed against for alignment.

The need for this strategic system-wide approach to support better investment decisions at a statewide level was a key driver of INSW's 2018 recommendation for NSW Health to develop a 20-year Health Infrastructure strategy. This recommendation was accepted by NSW Health and the strategy was approved in April 2020.

Specific and sometimes significant funding commitments were made for individual projects before a business case was developed and/or approved. Most major projects (greater than $50.0 million) announced in 2015, have since received State Budget funding with an Estimated Total Cost matching the initial 2015 commitment (Exhibit 4).

Exhibit 4: Major Health Project Funding Commitments 2015 to 2017

Funding recipient	Purpose	Funding committed in 2015 $'000	Year funded	Estimated Total Cost published in the Budget Papers $'000
Westmead Hospital	Redevelopment	480,000	2017	750,000
Blacktown and Mt Druitt Hospital	Redevelopment of Stage 2	400,000	2015	400,000
Gosford Hospital	Redevelopment	368,000	2015	368,000
Shellharbour Hospital	Redevelopment	251,000	2017	250,600
Hornsby Ku-ring-gai Hospital	Redevelopment of Stage 2	200,000	2017	200,000
Wyong Hospital	Upgrade	200,000	2017	200,000
Wagga Wagga Hospital	Redevelopment of Stage 3 and 4	170,000	2017	170,000
Coffs Harbour Hospital	Redevelopment	156,000	2017	156,000
Dubbo Hospital	Redevelopment of Stage 3 and 4	150,000	2016	150,000
Goulburn Hospital	Redevelopment	120,000	2017	120,000
Mudgee Hospital	Upgrade	60,000	2017	70,200
Armidale Hospital	Redevelopment	60,000	2017	60,000
Macksville Hospital	Redevelopment	50,000	2017	50,000
Bowral Hospital	Upgrade	50,000	2017	50,000

Source: State Budget Papers.

The Ministry has sought to optimise delivery of election commitments within the government's four-year term by seeking adjustments to its ten-year Capital Planning Limit (CPL) consistent with expectations for it to deliver more election commitments sooner. The Capital Planning Limit is established by Treasury during the budget process and sets a spending limit for the Health cluster to support long-term planning.

This approach to capital planning is enabled by the new Streamlined Investment Decision Process for major health capital projects – introduced in 2017 following an agreement between the Treasurer and Minister for Health to expedite planning and delivery of major projects (Appendix five).

The new process gives NSW Health an exemption from Treasury Circular TC12/19 requiring general government agencies to submit a final business case to support State Budget approval. NSW Health capital projects can now be approved sooner, based on a simplified Investment Decision Template (IDT) incorporating the essential elements of the Preliminary Business Case.

The agreed principles of the new process require NSW Health to ensure IDTs are supported by robust planning and governance processes in accordance with the Process of Facility Planning. However, there is insufficient assurance planning and governance processes are sufficiently rigorous. Our review of selected business cases developed by Health Infrastructure identified weaknesses with options appraisal and instances of non-compliance with the Process of Facility Planning. This is discussed further in Chapter 3.

Limited evidence to guide and prioritise health capital works investments

The Ministry advised it no longer uses the NSW Health Capital Prioritisation System (CAPRI) tool it previously developed to objectively rate/rank priorities submitted by LHDs, as the 2015–16 election commitments have already established their priorities over the ensuing four-year period.

The audit was not provided with evidence of documented working papers or any records of internal approval processes detailing the basis of prioritisation decisions since 2015–16. The Ministry advised its main rationale for decisions relating to the Capital Investment Strategic Plan each year are detailed within the associated NSW Health Asset Strategic Plan. However, it noted Asset Strategic Plans are high level strategic documents not intended for detailing projects with rationale.

Our review of Asset Strategic Plans supplied by the Ministry for the years 2016–17, 2017–18 and 2019–20 confirmed they do not detail the complete list of projects considered or the criteria, considerations and rationale used for selecting and excluding projects. They also do not show the basis of timing decisions made for all projects allocated to the CISP across the ten-year period.

The Ministry uses a preliminary cost benefit analysis tool to screen submitted LHD priorities as an initial threshold test to provide assurance they offer value. It only further considers projects with a benefit-cost-ratio (BCR) greater than one for inclusion on NSW Health's Capital Investment Strategic Plan. However, a limitation of the tool is that it does not currently assess the merits of the proposed project against non-capital or any other alternatives meaning there is a risk less worthy projects can be prioritised for investment.

NSW Health has lacked a framework or principles for health infrastructure investment to help focus LHD capital planning on the types of facilities offering greatest value to the State. This has limited the Ministry’s ability to reliably advise government about the merit of proposed projects in terms of their alignment with statewide health infrastructure goals. Recent actions by the Ministry to develop a 20-year Health Infrastructure strategy and related prioritisation framework have the potential to address this. These initiatives are outlined below.

The Ministry has developed a 20-year strategy to strengthen its planning and prioritisation processes

In 2019 the Ministry developed a 20-year Health Infrastructure Strategy that aims to prepare New South Wales for significant change across the health sector. The strategy was produced in response to a recommendation in the 2018 State Infrastructure Strategy and aims to offer a clear vision for the future direction of infrastructure investment for NSW Health. It forecasts significant demand challenges, highlighting a need for a new infrastructure response. The strategy was approved by the NSW Government in April 2020.

The 20-year strategy signals the need to shift investment away from traditional acute settings towards more sustainable integrated services and facilities that make better use of assets. It highlights the importance of strengthening the sector’s capability for identifying and leveraging non-capital solutions. It also acknowledges limitations in the Ministry’s current prioritisation framework, particularly its heavy focus on local asset planning which encourages a district-centric rather than statewide health network collaborative approach.

The Ministry is currently developing a new statewide Planning and Prioritisation Framework and is updating its Process of Facility Planning in response (Exhibit 5). The new framework will set out investment principles and a new statewide prioritisation methodology-both of which are intended to provide clear guidance on the types of investment proposals the system requires aligned with directions in the 20-year Health Infrastructure Strategy.

Exhibit 5: Outline of 20-year Health Infrastructure Strategy and prioritisation framework

Purpose

The 20-year Health Infrastructure Strategy aims to prepare NSW for unprecedented consumer, demographic and technological change across the entire health sector. It also seeks to rebalance where and how health care is provided to ensure the long-term financial sustainability of the system.

How will the Strategy be used?

The Strategy will be used to articulate the intended investment trajectory for health infrastructure over the next 20 years, high-level investment priorities and broad funding implications. It is the beginning of a longer reform journey to develop a sustainable health system centred around patients that is digitally enabled.

The Strategy: changing what NSW Health invests in

The Strategy emphasises the challenges and change facing NSW Health over the next two decades will require a shift in State investment. Specifically, all trends point to a future portfolio that provides a wider range of settings and facilities than the current hospital-dominated system, is digitally enabled and better manages current and future assets.

The Strategy: changing how NSW Health invests

The Strategy recognises achieving the shift means reorienting the processes and systems NSW Health uses to make investment decisions. It acknowledges current approaches need to be improved to generate more transformational investment proposals, better leverage network coordination and place-based investment, and respond quickly to the pace and scale of technology and innovation.

New prioritisation framework

The Ministry is developing a new investment framework that will set out a series of investment principles and a new statewide prioritisation methodology which are intended to provide clear guidance on the types of investments proposals the system requires.

LHDs will continue to lead on local planning and prioritisation but the State's investment principles and prioritisation methodology will guide clinical and asset planning and development of local priorities to ensure alignment.

The Ministry will assess LHD priorities against the new prioritisation methodology when determining priorities and sequencing of investment in NSW Health's ten-year Statewide Investment Strategic Plan.

Source: Audit Office of NSW based on information supplied by NSW Health.

The new strategy and related prioritisation framework is an important development with significant potential for addressing the above-noted challenges. However, achievement of the strategy's vision will ultimately depend on effective and sustained implementation by the Ministry and LHDs.

3. Developing business cases

3.1 Identifying and considering alternative options

The primary role of a business case is to reliably inform an investment and/or policy decision. Over the period of review, the NSW Government's guidelines for business cases have consistently established this requires recommendations based on convincing arguments, credible evidence, and rigorous assessments of alternative options. Current and previous business case guidelines are underpinned by guides for economic appraisal and cost-benefit analysis (CBA).

These guides emphasise that business cases should canvass a range of realistic options and it is not sufficient for agencies to assess only a single option.

NSW Health has further developed its own policies for business case development, economic appraisal and capital planning that supplement these centrally issued guides.

Limited transparency and rigour in analysing options in the planning phases

NSW Health's Process of Facility Planning requires a robust assessment of options to meet the endorsed service need during the initial preliminary business case stage, known as the Service Procurement Plan. It prescribes a process managed by Health Infrastructure comprising two phases:

- Phase 1 involves identifying and assessing the full range of options – including non-capital options such as transfer of patients to other facilities, procuring new equipment, or reconfiguring how services are delivered – and shortlisting options for further analysis.
- Phase 2 comprises a 'pre Value Management Study (VMS) check', which considers the level of rigour applied to the options development in Phase 1 and readiness to proceed to a VMS workshop with stakeholders in Phase 2 to determine the preferred option from the shortlist to be considered in the final business case, known as the Project Definition Plan.

Health Infrastructure could not produce records demonstrating the Phase 1 long list options analysis step rigorously occurred for any of the examined projects.

Health Infrastructure and LHD Chief Executives advised Clinical Service Plans and business cases for major proposals are developed based on consultation with stakeholders that typically consider the merits of alternative models of care, service delivery arrangements and non-capital solutions. They also acknowledged detailed assessments of the full range of related options were not systematically documented or acquitted as intended by the 'pre-VMS check'.

Clinical Service Plans for the three case studies examined describe models of care considered optimal and preferred by LHDs, along with specific physical requirements that new facilities will need to meet to support estimated future service needs. Health Infrastructure documented their consideration of these physical requirements and their relative priority when planning the scope of shortlisted capital solutions. However, neither the business case nor Clinical Service Plans clearly detailed how Health Infrastructure and LHDs initially considered the full range of alternative options in each case, and how this influenced selection of the shortlisted capital options.

Health Infrastructure advised it appreciates the importance of improving options development and appraisal. It has been active in developing and updating methods for quantifying health benefits in cost-benefit analyses for capital projects since 2008 when it first established an interim guide for economic appraisals. This has been a positive initiative. The guide was finalised in 2010 and updated in 2018 in consultation with Treasury.

Shortened planning processes limited the depth and rigour of planning in two projects we examined

Health Infrastructure combined the planning process in two projects we examined which limited the extent and depth of planning around alternative options.

Under the NSW Process of Facility Planning, broader options identification, assessment and selection of the preferred option occurs during the normally separate Service Procurement Plan stage equivalent to a preliminary business case. Following endorsement of the Service Procurement Plan, the final business case – known as a Project Definition Plan – focuses on confirming the scope and related costs of the preferred option.

Combining these stages risks giving insufficient attention to assessing the full range of alternatives (including non-capital options) to the preferred solution normally undertaken during the Service Procurement Plan stage. This risk materialised in two cases we examined.

The examined business cases for Stage 1 of the Hornsby Ku-ring-gai Hospital Redevelopment project and for Stages 1 and 2 of the Dubbo Health Service Redevelopment show the Service Procurement Plan and Project Definition Plan stages were collapsed by Health Infrastructure into a single combined process. This limited options identification and consideration to scoping variations of the preferred capital solution only, and is inconsistent with the staged sequential process prescribed by NSW Health's Process of Facility Planning. It is also inconsistent with the requirement to assess a range of realistic options under the NSW Government's guides for economic appraisal and cost-benefit analysis.

The business cases for Hornsby Ku-ring-gai Hospital Redevelopment Stage 1 and for the Dubbo Health Service Redevelopment Stages 1 and 2, including departmental briefings to the then Director-General of the NSW Department of Health seeking their endorsement, do not discuss the rationale for truncating the process and how risks relating to the assessment of options were mitigated.

Unaudited Gateway review reports for both projects concluded the projects were suitably prepared. They did not comment on the risks to options appraisal arising from non-compliance with the Process of Facility Planning and absence of a preliminary business case.

Business cases demonstrated a reliance on LHD priorities

All examined final business cases were supported by a Clinical Service Plan incorporating demand and capacity forecasts. These were endorsed by the Ministry and developed specifically to inform the scope of the proposed capital investment. This was consistent with the Process of Facility Planning.

In business cases we examined, it is not evident that Health Infrastructure tested these capacity estimates through an objective analysis of:

- potential demand management initiatives and how these could mitigate the scale of physical infrastructure required to meet estimated service needs
- the merits of alternative service delivery configurations or arrangements with potential for meeting unmet current and forecast demand
- the efficiency of existing service delivery, and scope for improving this, to reduce the extent of capital investment required
- statewide directions for health infrastructure investment that considered the future role and needs of local facilities within the broader statewide health network.

The absence of this analysis means there is insufficient evidence the number of beds and clinical spaces assumed within business cases as needed accurately equate to the scale and scope of infrastructure required, both locally and statewide, to effectively and efficiently meet demand.

The Process of Facility Planning acknowledges the Clinical Service Plan may need to be validated at both the Service Procurement Plan and Project Definition Plan stages. However, it is not evident this occurred in any of the examined business cases.

Business cases lacked rigorous testing of district-focused demand forecasts

Health Infrastructure advised that it relies on the Clinical Service Plan endorsed by the Ministry as the agreed initial specification to support planning for the proposed capital solution. However, it is not evident Health Infrastructure and the Ministry had assurance the capacity forecasts detailed in the Clinical Service Plans were rigorously tested.

A Clinical Service Plan is usually developed by LHDs to support planning for a capital solution. Consequently, there is a risk Health Infrastructure's reliance on the Ministry's endorsement process, in the absence of testing in the business case, can establish a trajectory towards a capital solution before the business case is developed and investment decision is made. This situation limits accountability and risks compromising the role of a business case.

This indicates a need and opportunity for strengthening assurance over the reliability of demand forecasts within Clinical Service Plans informing the scope of proposed capital investments. The review process for Clinical Service Plans, and how it establishes assurance over demand and capacity forecasts relied upon by Health Infrastructure in business cases was not transparent in any of the examined business cases.

Most business cases we examined clearly set out the locally assessed need and reasons for intervention. This is primarily described in terms of the imperatives of meeting projected growth in demand and for overcoming the capacity and functionality constraints of ageing infrastructure to delivering contemporary models of care. It is also evident some functionality challenges with facilities were considered by LHDs to be longstanding.

The demand and service challenges were consistently described mainly from a local, catchment, or district-centric rather than statewide health network perspective. This situation reflects the emphasis of proposals on addressing local challenges, but also the absence of a system-wide health infrastructure strategy to guide both LHD and Health Infrastructure planning on the types of investment proposals needed to optimise statewide health network outcomes.

Business cases emphasised infrastructure over alternative health delivery options

Examined business cases included the objectives of each proposal reflecting local challenges and the reason for the proposed intervention. However, in almost all cases the objectives were framed specifically in terms of the preferred capital solution. This means there was a risk the business cases, from the outset, were focused on the preferred capital solution. In several cases these projects had previously been publicly announced as an election commitment.

Two business cases referred to the announced election commitment for the project indicating an expectation or assumption the proposal would proceed because of this. This risked reducing the imperatives to explore alternative options.

NSW Government guidelines for business cases over the period of review consistently emphasise the setting of robust objectives as one of the most important elements of a business case. The guidelines state business case objectives should clearly reflect the reason for change, but be outcome focused rather than focused on the potential solution to ensure relevant options are identified. NSW Health’s Guide to Cost-Benefit Analysis of Health Capital Projects similarly acknowledges the importance of excluding any mention of the preferred solution from business case objectives.

The observed focus on the preferred capital solution within business case objectives, and explicit reference to previously announced election commitments, means there is a risk the process gave insufficient attention to considering other valid options. Health Infrastructure advised the examined projects were developed within a policy context focused on modernising and updating the State's health infrastructure.

A better practice example of alternative options appraisal was evident in the Preliminary Business Case for Stage 1 of the Blacktown Mount Druitt Hospital expansion project. The preliminary business case notes the three main objectives of the capital redevelopment project were to:

- deliver the Blacktown Mount Druitt Hospital Clinical Services Plan - by delivering additional capacity
- improve health care service delivery - by improving service access, quality, efficiency and effectiveness, and facility functionality
- meet future service delivery needs - by responding to rapid growth in demand and changing models of care.

Although the objectives of this business case also briefly referred explicitly to the proposed capital solution, they were mainly outcome focused and expressed in terms of the service objectives of the endorsed Clinical Service Plan. In this context, references to improving service efficiency, effectiveness, facility capacity and functionality did not limit consideration of alternative, non-capital options. However, the objectives could have been further improved by eliminating reference to the preferred redevelopment project.

Lack of detailed consideration of alternative (including non-capital) options

The business cases examined did not demonstrate consideration of a broad range of alternative solutions to meeting the service need, particularly non-capital options. In all cases, the main options considered were scoping alternatives to the preferred capital solution only, making its ultimate selection a certainty.

Although non-capital options were mentioned in three examined business cases they were discarded early in the process. It is not evident these options were sufficiently specified and developed to the same level of detail as capital options to support their rigorous assessment and exclusion from further consideration.

For example, the preliminary business case for the Hornsby Ku-ring-gai Hospital Redevelopment Stage 2 project summarises the approach to options development indicating it focused on capital solutions and the preferred Stage 2 redevelopment outcome. It describes a process involving four main considerations outlined below.

- **Prioritisation of clinical service priorities** - Health Infrastructure convened a workshop with hospital staff to identify residual priorities unaddressed by Stage 1 to inform the scope of the Stage 2 capital project. Workshop participants were asked to consider if service delivery would be compromised if their service priorities were not included in Stage 2 – indicating the proposed Stage 2 capital project was the main frame of reference.
- **Review of the Zonal Master Plan** - the business case similarly notes the Master Plan was updated consistent with the proposed 2014 Clinical Service Plan and preferred Stage 2 redevelopment project.
- **Preferred site massing options** - five site massing options for the proposed Stage 2 redevelopment were considered mainly reflecting capital options for orienting related Stage 2 proposed building works on site. These options were equivalent to examining scoping alternatives for the preferred solution normally detailed in the Project Definition Plan (i.e. final business case) after the longlist of possible alternative options have been assessed.
- **Non-capital solutions** - related options considered in the business case were limited and mainly focused on assessing potential alternative uses for existing buildings vacated due to the completion of Stage 1 works. Some recent changes to models of care, service improvement initiatives and existing partnerships with the private sector were also briefly described. However, the business case did not clarify the purpose of these descriptions and their relevance to options assessment.

However, Health Infrastructure's capability and expertise in developing capital solutions was effectively applied to formulating and evaluating capital options in the three case studies examined. This was clearly reflected in the extensive consultation with LHDs, hospital administrators and clinicians on service and functionality requirements for proposed facilities. Relevant commercial knowledge and expertise was also consistently leveraged to inform the scope, staging and cost of proposed capital solutions.

Weaknesses with options appraisal identified by Gateway reviews in business cases were not effectively addressed

Infrastructure NSW prepared Gateway review reports under the Investor Assurance Framework for three of the examined projects. These unaudited reviews in most cases concluded the projects were suitable to proceed but also highlighted similar risks to those found by this audit, particularly relating to observed weaknesses in options appraisal. It is not evident Health Infrastructure addressed these risks.

Health Infrastructure supplied two separate Gateway reviews for the Dubbo Health Service Redevelopment Stages 1 and 2. The first was conducted in December 2010 based on the August 2011 combined Service Procurement Plan/Project Definition Plan (SPP/PDP). The second was conducted during June 2012 of the final May 2013 combined SPP/PDP. Both reviews highlighted weaknesses in economic appraisal, and the assessment of options.

A 2014 Gateway review of the Hornsby Ku-ring-gai Hospital Redevelopment Stage 2 project identified similar issues with options appraisal for the Preliminary Business Case for this project indicating it was not sufficiently developed. Other issues raised by the Gateway review supported by findings from this audit include:

- inadequate attention was given to options for meeting the service needs other than by public procurement (i.e. limited consideration of alternative options to the proposed capital solution)
- lack of evidence private sector or partnering options for the project were considered. As noted above, the reviewers noted this should be further explored in the final business case to realise the project benefits.

A Gateway review of the preliminary business case for the Dubbo Health Service Redevelopment Stages 3 and 4 in October 2014 raised similar issues across almost all examined dimensions. It found the preferred solution offered value relative to the other capital options considered in the business case but questioned some of the assumptions underpinning the economic appraisal. It noted stakeholders advised the reviewers alternative options involving outsourcing through third party arrangements were considered but deemed unviable.

A Gateway review of the final business case was similarly conducted in March 2016. A table summarising the key review findings was attached to the final business case and lists a total of 45 review notes reflecting the issues raised by the reviewers that, among other things, demonstrated that the reviewers had ongoing concerns about the quality of the options and economic appraisal.

Health Infrastructure's response did not directly address the issue. It referred to the options development process already outlined in the final business case focused on scoping variations of the preferred capital solution only, and which prompted the issues raised by the reviewers in the first instance. On this basis, Health Infrastructure reported the action was 'closed'. However, it was not evident Health Infrastructure had acted to resolve the issue.

Both the Ministry and Health Infrastructure acknowledged there is an opportunity and need to strengthen the sector's capability to develop and assess non-capital options going forward particularly given the heightened imperatives for doing so under the State's new 20-year Health Infrastructure Strategy.

Non-capital options were considered in service delivery in some cases

Health Infrastructure supplied details of two separate initiatives where it considered non-capital solutions for delivering services on the expanded Blacktown campus after the Stage 1 final business case was approved in May 2012.

These initiatives were commendable and explored alternative service delivery options for delivering nuclear medicine and anatomical pathology services on the redeveloped campus. However, they were not considered within the Stage 1 preliminary or final business cases as alternative non-capital options to the proposed Stage 1 capital scope.

Alternative service delivery arrangements were explored during Hornsby Ku-ring-gai Hospital Redevelopment Stage 1 for outsourcing delivery of medical imaging services including supply of major medical equipment. This service initiative, which was considered in 2017 after the Stage 1 capital project was approved and substantively delivered in 2015, did not ultimately proceed.

3.2 Assessing the costs and benefits of options

Impact of limited options appraisal and cost-benefit analysis

NSW Health's guides to economic appraisal for health capital projects across the period of review highlights the importance of rigorous options appraisal to the CBA process. These policies consistently emphasised that the set of options generated in the earlier planning stages is a key input into the CBA which should assess a range of options rather than focus on a preferred option.

The main measures used to compare project options in the CBA are:

- **Net Present Value (NPV)**: the difference between the present value of benefits and the present value of costs. A positive NPV indicates that the project would generate net economic benefits.
- **Benefit Cost Ratio (BCR)**: the ratio of the present value of total benefits to the present value of total costs. A BCR greater than one indicates that the project has economic merit, generating net economic benefits.

We found cost benefit analyses in the examined business cases were focused on the preferred capital solution, reflecting the limitations of options appraisal processes. Although the CBA usually showed the preferred capital option had economic merit over the 'do nothing' option with a BCR greater than one and positive NPV, the lack of comparison to alternatives including non-capital options means the CBA did not reliably demonstrate the preferred option offered the greatest value to the State.

For example, a limitation of the CBA in Stage 2 of the Hornsby Ku-ring-gai Hospital Redevelopment project was that it compared the preferred option to an unviable alternative being the full Clinical Service Plan (full CSP) option. This option was unviable because it significantly exceeded the scale and scope of the preferred option and known budget envelope for the project.

The election commitment and capital funding envelope endorsed by the Ministry of Health for Stage 2 of the Hornsby Ku-ring-gai Hospital Redevelopment was $200 million. The preliminary business case shows assessed alternatives to the base case in the economic appraisal were limited to considering two shortlisted variations of the preferred capital solution.

The final business case shows ongoing support for the preferred option identified in the preliminary business case but notes the updated capital cost estimate was greater than the $200 million funding commitment. Because of this, the project's governance committee determined an affordable version of the preferred option that met the capital funding commitment was required for submission in the final business case, and ultimately endorsed this as the preferred option.

The updated economic appraisal notes the following refined shortlist of options were considered in the final business case:

- **Option 1 (Base Case - 'Keep safe and operating')** - with an updated estimated capital cost of $6.5 million
- **Option 2a (Preliminary Business Case Option)** - with an updated estimated capital cost of $214.6 million
- **Option 2d (Capital Affordable Option)** - with an estimated capital cost of $200 million
- **Option 3 (Full CSP)** - with an updated estimated capital cost of $280 million.

These options were generally consistent with those considered in the preliminary business case. This means that weaknesses in the options development and appraisal process affecting the preliminary business case also impacted the final business case because they were not detected and addressed.

The decision to consider the full CSP option (i.e. Option 3) was not sound given it was clear it would far exceed the cost of Option 2 including known cost constraints of the Stage 2 project.

This means Option 3, from the outset, was neither realistic nor viable as an alternative to the preferred Option 2 and its inclusion in the business case, in effect, only served to reinforce selection of the preferred Option (i.e. Option 2).

Assessing the costs and benefits of non-capital solutions in CBAs can be a challenging exercise. However, it remains essential for demonstrating the merits of recommended options and public expenditure.

The growing importance of non-capital solutions highlighted by the 20-year Health Infrastructure Strategy indicates a need for Health Infrastructure to strengthen its capability in this area.

Lack of discussion of the risks and benefits of proceeding with the investment

Some business cases we examined showed deterioration in the CBA results between the preliminary and final business case. This usually occurred because updated estimates of the costs and benefits were used from those employed in the preliminary business case and does not necessarily mean the investment was unviable.

However, the final business case did not draw attention to this when it occurred or discuss the risks and merits of proceeding with the investment in the circumstances. For example:

- The BCR for the Blacktown Mt Druitt Hospital Expansion Stage 1 declined from 1.2 to 1.03, with sensitivity testing showing it could lie in the range 0.75 to 1.15. This means there was a risk it could fall below one under certain circumstances and the costs of the proposal could potentially outweigh the benefits, making it a questionable investment. These circumstances warranted further discussion in the business case not evident at the time.
- The BCR for the Dubbo Health Service Redevelopment Stage 3 and Stage 4 declined from 2.13 to 1.35 with sensitivity testing showing all assessed options were sensitive to variations in the discount rate and other assumptions yielding a negative NPV and a BCR less than one under those scenarios. The business case briefly noted the sensitivity test results, however it did not discuss the associated risks and merits of proceeding with the proposed investment. Instead, it emphasised the economic benefits expected from the investment only in circumstances unaffected by the sensitivity testing scenarios. This limited the extent and quality of advice to decision-makers.

Limitations in management advice

Advice contained in covering briefings from executive management to the Secretary, NSW Health or then Director-General of the former Department of Health offered little critical analysis of the content and assurance that a business case was sufficiently robust to reliably support an investment decision.

The briefings recommending approval of business cases were typically succinct, and mainly outlined the funding and scope parameters of proposed projects. They also outlined the nature of any amendments to business cases suggested by stakeholders.

These briefings generally did not discuss the risks and benefits of proceeding with the investment in light of any issues concerning the adequacy of options considered, extent of compliance with the Process of Facility Planning and NSW guidelines on business cases, results of economic appraisals, Gateway reviews and adequacy of actions taken against recommendations.

3.3 The importance of role clarity

Confusion around the role and purpose of a business case relative to the Clinical Service Plan

Health Infrastructure staff advised that the endorsed Clinical Service Plan reflects the agreed specification for a capital solution, and that the Clinical Service Plan was the process that considered non-capital options. Health Infrastructure staff also noted that Health Infrastructure was usually commissioned to develop a business case for a capital solution.

This view does not accord with the Process of Facility Planning, or the State's guidelines on developing business cases or CBAs. These guidelines establish the business case – not the Clinical Service Plan – is the primary document informing the investment decision. The Process of Facility Planning also indicates the Clinical Service Plan is only an input to the business case and may need to be validated.

Health Infrastructure and the Ministry acknowledged there was an opportunity to address this issue as part of the Ministry's current review of the Process of Facility Planning.

Confusion on the role of Health Infrastructure vs the Ministry in relation to assessment of non-capital options

NSW Health's obligations under its own and the State's policies to develop effective business cases and statewide plans require it to transparently establish assurance that options have been rigorously assessed. Current confusion around assigned roles for its coordinating agencies – the Ministry and Health Infrastructure – poses a risk to effective planning.

The Ministry advised that Health Infrastructure is the delivery agency for capital programs valued at over $10.0 million. This view is supported by the Process of Facility Planning. However, the policy also assigns additional responsibilities to Health Infrastructure for planning and development of business cases, including related options appraisal as opposed to the Ministry.

In contrast, Health Infrastructure staff advised that assessment of non-capital options was the Ministry's responsibility and not Health Infrastructure's, citing the Ministry' role in endorsing the Clinical Services Plan including earlier options appraisal undertaken by LHD's that occurs during that process. However, the Process of Facility Planning places a positive obligation on Health Infrastructure to rigorously assess options supporting a proposal within a business case, not the Ministry or the LHD.

This gap between documented policy and the views of both Health Infrastructure and the Ministry indicates confusion around roles. NSW Health is reviewing its Process of Facility Planning in conjunction with the 20-year strategy and advises there is opportunity to further clarify and define these roles and responsibilities.

4. Project governance and management systems

Over the period of review, NSW Government policies for business case development and submission have emphasised that effective governance arrangements are critical to a proposal's successful implementation.

NSW Health's Process of Facility Planning similarly highlights the importance of effective governance and project management for achieving good outcomes. It prescribes a general governance structure managed by Health Infrastructure that can be tailored to the planning and delivery of health infrastructure projects greater than $10.0 million.

Project challenges indicate opportunities for strengthening governance and project management

The three major hospital redevelopments examined in metropolitan, regional and rural areas had a combined Estimated Total Cost of more than $1.2 billion and comprised eight discrete projects and 13 separate business cases.

Almost all these projects experienced delivery challenges which impacted achievement of their original objectives and intended benefits. This is expected in complex and large-scale health infrastructure programs. However, in some projects the impacts were significant and resulted in substantial delays, unforeseen costs, and diversion of resources from other priority areas.

Our review of the selected case studies highlighted opportunities for enhancing governance and project management. Specifically, it indicates a need for improving transparency in the management of contingencies, risk management and assessments particularly relating to adverse site conditions and the selection of contractors. There is also a need to strengthen forward planning for options to address unfunded priorities within business cases that risk complicating the delivery of future project stages resulting in unforeseen costs and potentially avoidable budget overruns.

Need for increased transparency and accountability in the management of contingency funds

In February 2017, the Ministry's Capital Strategy Group approved the use of surplus funds of $13.76 million from Stage 1 of the Hornsby Ku-ring-gai Hospital Redevelopment for new works deemed needed to support Stage 2. Following this decision, Health Infrastructure finalised and submitted a business case addendum for Stage 1 to the Ministry in March 2017, addressing the new works comprising a two-storey building for medical imaging and paediatric floors. The business case addendum also addressed options to fit out and procure major medical imaging equipment. The Ministry approved the Stage 1 business case in July 2017, noting the Ministry's Capital Strategy Group had already approved the use of remaining Stage 1 funds to deliver the new works.

Stage 1 was completed in 2015, almost two years before the Stage 1 business case addendum was prepared in February 2017.

The Ministry's decision to approve the new works using $13.76 million of surplus Stage 1 funds did not comply with the NSW Treasury Circular TC 12/20. This policy establishes the Treasurer's approval must be sought and received before a new capital project with an Estimated Total Cost of $5.0 million or more can be approved by NSW Health. The Ministry therefore exceeded its delegated authority in making this decision, as it was not evident it had sought and received the Treasurer's approval prior to doing so.

Consequently, the surplus Stage 1 funds should not have been used by the Ministry to deliver new works in the circumstances. Instead, they should have been released from the Stage 1 project in accordance with established NSW Health procedures, and the Stage 1 Estimated Total Cost revised down accordingly. This did not occur, and NSW Health ultimately directed $11.0 million in surplus Stage 1 funds to the new works.

These circumstances indicate a need to strengthen transparency and accountability within NSW Health for the approval of new projects, and how contingency funds are used in the management of major health capital works. They also demonstrate the impact of weaknesses with options appraisal as the initial Stage 1 business case did not consider alternative options for addressing the initially unfunded works later covered by the Stage 1 business case addendum and ultimately funded from the Stage 1 contingency provision.

Weaknesses in service delivery planning resulted in unaccounted-for costs

In addition to proposing the above-noted new works, the 2017 Stage 1 Business Case Addendum for the Hornsby-Ku-ring-gai development sought to retrospectively address the estimated funding gap of around $14.0 million for the internal fit out, supply of major medical imaging equipment, and cost to operate the medical imaging service at Hornsby Ku-ring-gai Hospital also not addressed in the originally Stage 1 business case.

The Stage 1 business case addendum considered various procurement options to purchase and run the medical imaging services ranging from State operation purchase options to private operation purchase options.

It recommended outsourcing the operation and provision of equipment to the private sector based on estimated savings to the public sector initially of around $650,000 per annum reducing over time to $270,000. The Ministry endorsed this option in June 2017, but it did not ultimately proceed.

A July 2018 report to the Executive Steering Committee on the project shows NSW Health later decided to deliver operation of the medical imaging unit 'traditionally' with an updated estimate of the cost at approximately $16.4 million. The report also shows the Ministry supported the costs now being met by the Northern Sydney Local Health District.

This means the funding gap previously identified in the Stage 1 business case addendum for fitting out the medical imaging building and supply of major medical equipment would need to be met fully by the State, representing a $16.4 million cost overrun for the project.

Examined reports to the Executive Steering Committee show this was largely funded by the Northern Sydney Local Health District via the disposal of land realising approximately $15.0 million in proceeds.

This initially unforeseen cost, along with the additional $11.0 million for the new works approved under the Stage 1 business case addendum, were ultimately merged with the Stage 2 project initially approved in 2017–18 with an Estimated Total Cost of $200 million.

The extent of budget variation on the Hornsby Kur-ring-gai development has not been transparent

The 2019–20 State Budget provided an additional $65.0 million for a further Stage 2A to deliver additional built capacity to support outpatient services, enhanced allied health services, re-housed community health services and the delivery of prioritised clinical services unfunded as part of Stage 2. The funds were approved based on an Investment Decision Template (IDT) that examined two options in addition to the base case representing scoping alternatives to the preferred master planned capital solution.

However, we found the IDT showed around 23 per cent of the $65.0 million sought (i.e. $15.0 million) was to be allocated to fund the deficit in Stage 2, which had arisen as a result of project delays due to adverse site conditions. This was not discussed in the IDT.

The February 2020 report to the Executive Steering Committee shows a combined Stage 2 and 2A final forecast cost of $292.6 million against a potential budget of $290.7 million representing an overall deficit for the project of around 0.6 per cent.

However, this favourable final budget position does not transparently show the funding challenges experienced over the project's implementation to-date. The three major budget issues include:

- inappropriate use of around $11.0 million in Stage 1 contingency for originally unfunded works contrary to Treasury policy
- the additional $16.4 million cost unforeseen in the Stage 1 business case for delivering medical imaging services mostly funded through the sale of land
- an additional $15.0 million from Stage 2A to cover the budget overrun in Stage 2 due to adverse site conditions.

The cumulative impact of these events is that Stages 1 and 2 of the Hornsby project cost approximately $42.4 million than it should have in the circumstances around 14 per cent more than what the revised combined Estimated Total Cost for both stages should have been after releasing the $11.0 million in surplus Stage 1 funds, with Stage 2 delayed by around 14 months.

Opportunity for strengthening risk management for adverse site conditions

Major construction projects often experience adverse site conditions which can be difficult to fully detect in advance. However, we found this was a common occurrence in the projects we examined sometimes with significant time and/or budget impacts indicating scope to enhance related risk and cost assessments. Specifically:

- **Hornsby Ku-ring-gai Hospital Redevelopment Stage 2**: adverse site conditions during demolition works resulted in an 11-month delay for delivering the medical imaging unit and 14-month delay completing Stage 2 main works including need for additional $15.0 million in funds to cover the resultant budget deficit for the project.
- **Blacktown Mt Druitt Hospital Redevelopment Stage 2**: adverse site conditions combined with project complexity delayed completion of the early works by approximately five months. This contributed to the delay in completing the main construction works which occurred around nine months later than planned in the business case.
- **Dubbo Health Service Redevelopment Stages 3 and 4:** Health Infrastructure advised adverse site conditions including asbestos containing materials and ground conditions delayed works for the main building with completion forecast for March 2021, around 21 months later than planned in the final business case. This resulted in the need for additional $13.5 million to cover increased construction costs and risks, increasing the Stage 3 and 4 forecast final cost from $150 million to $163.5 million as at February 2020.

These examples indicate a risk the cumulative impact of adverse site conditions may be substantial when measured across both time and Health Infrastructure's full delivery program. They also point to potential for Health Infrastructure to achieve efficiencies and improved outcomes from strengthening its approach to assessing and mitigating the risks from adverse site conditions.

Limited due diligence with prospective contractors risks avoidable delays and costs

Main construction works on Stage 1 of the Dubbo Health Service Redevelopment were completed in October 2015, approximately 13 months later than planned in the final business case. Delays were mainly due to insolvency of the early works contractor resulting in their departure from the project. The ensuing 11-month delay in completing the early works significantly impacted the overall schedule and delivery of main construction works.

The insolvency event was significant as it affected nine separate Health Infrastructure projects – three of which had yet to reach practical completion. It also affected state-funded projects in other sectors. It resulted in the need for additional funding of $11.5 million that was provided in the 2014–15 State Budget increasing the total Stage 1 and 2 budget from $79.8 million to $91.3 million.

Health Infrastructure’s analysis of lessons learned shows it worked actively to mitigate the impacts of the insolvency event across all affected projects. However, it also indicates a risk the lessons were mainly focused on mitigating the impacts after an insolvency event occurred rather than on prevention.

Although Health Infrastructure initially commissioned a financial assessment of the now insolvent early works contractor before engagement, it did not detect any risks of the impending insolvency and instead concluded the contractor was in a strong financial position. However, the contractor became insolvent shortly after commencement approximately seven months later. This indicates a risk of weaknesses in the assessment performed that was not explicitly addressed by the lessons learned.

Delivery of the main construction works were further impacted by disputes with the main works contractor over the scope of works for the renal unit resulting in Health Infrastructure terminating the contract in November 2016 following lengthy negotiations over several months.

The scope of works relating to the renal unit were ultimately transferred to Stages 3 and 4 and were delivered in December 2019, around five years later than originally planned in the business case.

Health Infrastructure advised the delay was ultimately beneficial to the project because the refurbishment works for the renal unit, initially scheduled for Stages 1 and 2, would have been demolished to accommodate the new Western Cancer Centre proposed after Stages 1 and 2 and currently being delivered in parallel with Stages 3 and 4.

Health Infrastructure advised the actual cost of Stages 1 and 2 was $84.7 million against the budget of $91.3 million. The residual $6.6 million relates to the renal works not delivered during Stage 1 and 2 and transferred to Stage 3 and 4.

Health Infrastructure advised the contractual provisions for mitigating insolvency events 'in-flight' are limited highlighting the importance of proactive and effective due diligence prior to engaging contractors for significant construction projects.

Need for a quality framework linked to staff training and capability development

Health Infrastructure's 2017-20 Corporate Plan identifies the development of a quality framework to support delivery of future-focused outcomes as a key organisational priority. Related initiatives within the Corporate Plan describe a framework underpinned by a Quality Committee providing advice on:

- records management, to meet the requirements of the *State Records Act 1998*
- project assurance, to ensure future focused outcomes and enhance Health Infrastructure's Standards, Policies, Procedures and Guidelines, Templates and Design Guidance Notes
- knowledge management and library services, to promote and leverage from project learnings.

Although Health Infrastructure has some elements of a quality framework it is not yet fully in place. Health Infrastructure advised it had yet to establish the quality framework and related committee described in its Corporate Plan due in part to its focus on responding to the growth of its capital program.

Health Infrastructure's Development and Innovation team has been active in supporting continuous improvement in knowledge and project management including development of business cases. Although useful, these initiatives have relied heavily on leveraging and disseminating insights from Gateway reviews and have not formed part of a systematic quality and continuous improvement framework.

The limited focus on the quality of business cases is reflected in internal performance monitoring and reporting which focuses mainly on tracking the delivery of projects against internal benchmarks, often revised from the baselines in the business case, and expenditure against cashflow targets. There is no evident internal monitoring and/or reporting to the Chief Executive and Board on defined quality metrics linked to business case development and staff capability.

Performance reporting on balanced scorecard metrics has similarly focused mainly on process rather than quality and has been inconsistent in recent years.

Section two

Appendices

Appendix one – Response from agency

NSW GOVERNMENT | Health

Ms Margaret Crawford
NSW Auditor-General
NSW Audit Office
GPO Box 12
SYDNEY NSW 2001

Our ref H20/78119

Dear Ms Crawford,

Final Performance Audit Report – Health Capital Works

Thank you for your letter of 22 July 2020 inviting NSW Health to provide formal comments on the Health Capital Works performance audit report.

I have reviewed the provided report and appreciate the efforts of your team in reviewing this complex area. NSW Health is delivering a capital program of $10.1 billion over four years (starting in 2019/20), governed through a series of frameworks and standards which provide assurance on decision-making. Within this context, I would like to offer additional information to assist in the reading of the report findings.

I am pleased to note that the audit report has acknowledged the 20-Year Health Infrastructure Strategy which was recently approved by NSW Government. This will address several points raised in the report. In addition, I would like to highlight the following:

Health capital planning in context of NSW Government process
The NSW Health methodology, process and tools used to develop business cases, determine options and decide on preferences is informed by whole-of-government functions, predominantly facilitated by NSW Treasury, the NSW Department of Premier and Cabinet and Infrastructure NSW (INSW), among others. Planning and delivery for capital projects is required to operate within and comply with the INSW Investor Assurance Framework and government policies, as well as governance through the Infrastructure Investor Assurance Committee (IIAC) and previously Major Projects Executive Committee (MPEC).

NSW meets the requirements of these frameworks and engages with our NSW Government partners to ensure the effective governance of our decision-making processes. Additionally, these broader requirements have evolved over the last ten years and it needs to be noted that new whole-of-government processes were introduced during the time period reviewed as part of this audit. In reviewing the projects highlighted, it is important to view them within context of the structures and frameworks in place at the time that each was commenced.

Clarification of the role of the Ministry of Health and Health Infrastructure
The roles and responsibilities of Health Infrastructure and the Ministry of Health are clearly understood by the NSW Health System. The Ministry of Health manages asset planning and prioritisation and business case appraisals. Health Infrastructure is the delivery agent for capital programs over $10 million.

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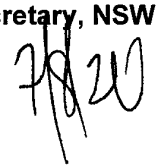
Health capital projects cost benefit analysis

NSW Health welcomes the improvement opportunities identified in the report and will work to respond to the listed recommendations. In doing so, I wish to acknowledge the strength and maturity of the NSW Health capital planning framework and our capability in business case development and economic appraisals. It needs to be highlighted that in 2014, NSW Health in collaboration with NSW Treasury, was the first State jurisdiction to develop a suite of benefit valuation methods for capital projects cost benefit analysis. This delivered a comprehensive evaluation of alternative capital and non-capital solutions which has been adopted as a model for capital project evaluation. NSW Health will continue to strengthen our processes as our Health system evolves.

In addition to the above points, please find attached to this letter a summary of NSW Health's responses to the individual recommendations made in this report. I thank you and your staff for your ongoing engagement with NSW Health and its representatives during this audit program.

Yours sincerely

Elizabeth Koff
Secretary, NSW Health



NSW Health Response to Recommendations

Audit Recommendation	NSW Health Response	Comment
1. By December 2020, the Ministry of Health should:		
Establish effective arrangements to ensure the Health Cluster's capital funds are used to deliver the greatest value for New South Wales by: • commencing the implementation plan for the new 20-year Health Infrastructure Strategy and related Prioritisation Framework • transparently detailing the basis of annual prioritisation decisions relating to NSW Health's forward capital planning • effectively coordinating, screening, and aligning the capital priorities of Health Cluster agencies with the new Strategy • informing the government through advice on their alignment with statewide directions for health infrastructure investment in the 20-year strategy.	Accepted	NSW Health will commence the implementation plan for the new 20-year Health Infrastructure Strategy and related Prioritisation Framework. NSW Health has developed a state-wide Investment and Prioritisation Framework. The Framework was issued to all health entities in late July 2020 to: • outline the basis for which Ministry will review and prioritise investment proposals in the 10-year Capital Investment Strategic Plan, and • provide clear guidance on the types of investment proposals required to respond to the long-term health challenges facing the NSW health system. NSW Health will inform the government through a reprofiled 10-year Capital Investment Plan based on investment proposals which align with the state-wide directions for health infrastructure investment in the 20-year Health Infrastructure Strategy.
2. By September 2020, the Ministry of Health should:		
Work with Health Infrastructure and stakeholders to strengthen the Process of Facility Planning by: • reviewing the roles and responsibilities of all Health Cluster agencies involved in developing business cases to assure they support rigorous consideration of the full range of feasible options including non-capital options • developing guidance and an action plan to strengthen the sector's capability for transparently assessing alternative non-capital options aligned with the 20-year Health Infrastructure Strategy • strengthening economic appraisals within business cases including assessments of the risks and benefits of all feasible options (including non-capital options), and compliance with relevant NSW Health and Treasury guidelines	Accepted	NSW Health has revised the previous Process of Facility Planning Guideline to NSW Health Facility Planning Process (FPP). The Guideline was issued to all health entities in late July 2020. The FPP outlines the roles and responsibilities of all Health Cluster agencies involved in developing business cases. NSW Health has developed the state-wide Investment and Prioritisation Framework. The Framework was issued to all health entities in late July 2020 to provide clear guidance on the types of investment proposals including non-capital options required to respond to the long-term health challenges facing the NSW health system. Ministry of Health will work with Health Infrastructure to: • strengthen economic appraisals within business cases including assessment of the risks and benefits of all feasible

Audit Recommendation	NSW Health Response	Comment
• assuring that demand and capacity forecasts of Clinical Services Plans are accurately described in business cases supporting proposed capital solutions.		options (including non-capital options) and comply with relevant NSW Health and Treasury guidelines, and • ensure that the demand and capacity forecasts of Clinical Services Plans are accurately described in business cases supporting proposed capital solutions.
3. By September 2020, the Ministry of Health should:		
Systematically monitor and publicly report (at least annually) on: • the total amount of contingency funds controlled by NSW Health, and the amounts reallocated to individual projects and how compliance was achieved with Treasury policies on the use of contingency funds. • all major new works initiated by NSW Health with an Estimated Total Cost of $5.0 million or more, and how compliance was achieved with NSW Government requirements associated with Capital Expenditure Authorisation Limits for the approval of new works.	Not accepted	This recommendation is seen as duplication of existing structures which provide assurance on the highlighted areas and which have been established in agreement with key NSW Government stakeholders. Specifically: • NSW Health already has an effective arrangement for contingency management in line with Treasury Circular (NSW TC 14/29) Management of Contingency Provisions for Major Project and INSW Contingency Management Guidebook (February 2014). • The report does not recognise existing whole of government processes. NSW Treasury introduced Prime financial system in November 2016 to systematically monitor and manage Government Agencies' financial data. Recommendation is a request to duplicate an existing practice.
4. By September 2020, Health Infrastructure should:		
Enhance its governance and project management systems by: • developing a quality framework, and associated key performance indicators for the planning and delivery phases of all projects to support systematic monitoring and transparent reporting on: – the quality of developed business cases and economic appraisals based on their compliance with NSW Guidelines – the effectiveness and efficiency of project management – continuous improvement and the professional development of staff	Accepted	The enhancements to the governance and project management systems will be incorporated into the Health Infrastructure Corporate Plan for 2021-2023.

Appendix two – About the audit

Audit objective

This audit assessed the effectiveness of planning and delivery of major capital works to meet demand for health services in NSW.

Audit criteria

We addressed the audit objective by assessing agencies against the following criteria:

1. The Ministry of Health has effective procedures for planning and prioritising investments in major health capital works.
2. Health Infrastructure develops robust business cases for major capital works that reliably inform government decision making.
3. Health Infrastructure has effective project governance and management systems that support delivering projects on time, within budget and achievement of intended benefits.

Audit scope and focus

In assessing the criteria, we checked the following aspects:

1. The Ministry of Health has effective procedures for planning and prioritising investments in major health capital works that:
    a) are transparent, reliable, and evidence-based
    b) effectively assure capital priorities are reliable and have the greatest merit.
2. Health Infrastructure develops robust business cases for major capital works that reliably inform government decision making by demonstrating:
    a) robust, transparent processes and controls for evaluating options, costs and benefits
    b) compliance with NSW policies and guidelines and good practice
    c) advice on recommended solutions is supported by rigorous assessments of all options.
3. Health Infrastructure has effective project governance and management systems that support delivering projects on-time, within budget and achievement of intended benefits demonstrated by:
    a) effective oversight of compliance with policies, guidelines and good practice
    b) effective monitoring and reporting on project progress, cost and quality
    c) effective monitoring and management of risks to planning and delivery of projects.

This audit focused on health capital works worth $10.0 million or more.

Audit exclusions

The audit did not:

- examine whole-of-government prioritisation processes supporting NSW State Budget deliberations
- examine statewide inter agency strategic planning initiatives for growth, regional, and local government areas
- examine the probity and management of tender processes
- examine contract management capability and systems
- validate the assumptions of service and capital priorities identified by LHDs/SHNs
- examine detailed asset management and maintenance activities
- question the merits of government policy objectives.

Audit approach

Our procedures included:

- interviews with key staff and senior officers
- examining relevant documents for prioritising health capital works including:
  - asset strategic plans
  - prioritisation frameworks and related policies
  - Ministry analyses and assessments
  - executive management, ministerial and/or Cabinet briefings
- examining documents for developing and delivering major capital projects including:
  - business cases
  - analyses of options/benefits
  - project governance, management and monitoring reports
  - related advice to government including ministerial/Cabinet briefings
  - detailed documentation for a selection of projects
- analysing agency data and/or reports relating to the progress major health capital projects.

The audit approach was complemented by quality assurance processes within the Audit Office to ensure compliance with professional standards.

Audit methodology

Our performance audit methodology is designed to satisfy Australian Audit Standard ASAE 3500 Performance Engagements and other professional standards. The standards require the audit team to comply with relevant ethical requirements and plan and perform the audit to obtain reasonable assurance and draw a conclusion on the audit objective. Our processes have also been designed to comply with requirements specified in the *Public Finance and Audit Act* and the *Local Government Act 1993*.

Acknowledgements

We gratefully acknowledge the cooperation and assistance provided by NSW Health.

Audit cost

The estimated total cost of the audit is $420,000.

Appendix three – Performance auditing

What are performance audits?

Performance audits determine whether State or Local Government entities carry out their activities effectively, and do so economically and efficiently and in compliance with all relevant laws.

The activities examined by a performance audit may include a government program, all or part of an audited entity, or more than one entity. They can also consider particular issues which affect the whole public sector and/or the whole local government sector. They cannot question the merits of government policy objectives.

The Auditor-General's mandate to undertake performance audits is set out in section 38B of the *Public Finance and Audit Act 1983* for State Government entities, and in section 421D of the *Local Government Act 1993* for Local Government entities.

Why do we conduct performance audits?

Performance audits provide independent assurance to the NSW Parliament and the public.

Through their recommendations, performance audits seek to improve the value for money the community receives from government services.

Performance audits are selected at the discretion of the Auditor-General who seeks input from parliamentarians, State and Local Government entities, other interested stakeholders and Audit Office research.

How are performance audits selected?

When selecting and scoping topics, we aim to choose topics that reflect the interests of parliament in holding the government to account. Performance audits are selected at the discretion of the Auditor-General based on our own research, suggestions from the public, and consultation with parliamentarians, agency heads and key government stakeholders. Our three-year performance audit program is published on the website and is reviewed annually to ensure it continues to address significant issues of interest to parliament, aligns with government priorities, and reflects contemporary thinking on public sector management. Our program is sufficiently flexible to allow us to respond readily to any emerging issues.

What happens during the phases of a performance audit?

Performance audits have three key phases: planning, fieldwork and report writing.

During the planning phase, the audit team develops an understanding of the audit topic and responsible entities and defines the objective and scope of the audit.

The planning phase also identifies the audit criteria. These are standards of performance against which the audited entity, program or activities are assessed. Criteria may be based on relevant legislation, internal policies and procedures, industry standards, best practice, government targets, benchmarks or published guidelines.

At the completion of fieldwork, the audit team meets with management representatives to discuss all significant matters arising out of the audit. Following this, a draft performance audit report is prepared.

The audit team then meets with management representatives to check that facts presented in the draft report are accurate and to seek input in developing practical recommendations on areas of improvement.

A final report is then provided to the head of the audited entity who is invited to formally respond to the report. The report presented to the NSW Parliament includes any response from the head of the audited entity. The relevant minister and the Treasurer are also provided with a copy of the final report. In performance audits that involve multiple entities, there may be responses from more than one audited entity or from a nominated coordinating entity.

Who checks to see if recommendations have been implemented?

After the report is presented to the NSW Parliament, it is usual for the entity's audit committee to monitor progress with the implementation of recommendations.

In addition, it is the practice of Parliament's Public Accounts Committee to conduct reviews or hold inquiries into matters raised in performance audit reports. The reviews and inquiries are usually held 12 months after the report received by the NSW Parliament. These reports are available on the NSW Parliament website.

Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards.

The Public Accounts Committee appoints an independent reviewer to report on compliance with auditing practices and standards every four years. The reviewer's report is presented to the NSW Parliament and available on its website.

Periodic peer reviews by other Audit Offices test our activities against relevant standards and better practice.

Each audit is subject to internal review prior to its release.

Who pays for performance audits?

No fee is charged for performance audits. Our performance audit services are funded by the NSW Parliament.

Further information and copies of reports

For further information, including copies of performance audit reports and a list of audits currently in-progress, please see our website www.audit.nsw.gov.au or contact us on 9275 7100.

Appendix four – Ministry of Health planning tools and guidelines

Clinical Service Planning Analytics (CaSPA)

CaSPA is a NSW Ministry of Health IT platform that provides the NSW Health planning community with online resources. CaSPA hosts a range of data analytics tools including activity projections and modelling tools, resources and training material to support evidence-based service planning. The CaSPA portal was introduced in June 2015 and includes data on population growth and ageing, changing patterns of disease and clinical practice that may affect demand for services.

Clinical Services Planning (CSP) Guide

This guide identifies the information to be included in a Clinical Service Plan (CSP) developed to inform the scope of a capital investment decision and related priorities in the LHDs Asset Strategic Plan. The guide emphasises the CSP should specify the changes in models of care, technology, support services, staffing and other enablers relevant to the proposed investment to meet current and projected service needs but does not need to determine infrastructure delivery options.

NSW Health Capital Prioritisation System (CAPRI scorer tool)

The CAPRI tool, developed by the Ministry of Health, was consistently used to rank and prioritise capital projects proposed by LHDs and health agencies up until 2015–16. The tool provided a framework for LHDs to self-assess their capital projects against criteria and guidelines developed by the Ministry. The criteria focused on demonstrating projects aligned with statewide strategies, improved service access and efficiency, or supported improvements in the condition and functionality of local assets. The Ministry then aggregated these ratings and ranked projects across agencies to determine the highest investment priorities for NSW Health.

Source: NSW Health.

Preliminary Cost Benefit Analysis (CBA) Framework

The Ministry of Health developed the Preliminary Cost Benefit Analysis (CBA) framework in 2016, also known as the preliminary short form CBA, to help assess projects submitted to the Ministry for capital funding consideration.

The Preliminary CBA has since been used as a threshold test to assess whether proposed projects demonstrate value. The test is applied before a project progresses for further consideration and prioritisation for inclusion on NSW Health's ten-year Capital Investment Strategic Plan.

Local Health Districts (LHDs), Speciality Health Networks (SHNs), NSW Ambulance, NSW Health Pathology and eHealth NSW identify their five highest priority projects for funding consideration as part of the annual Asset Strategic Plan submissions to the Ministry. Each priority project is accompanied by a completed input template which contains information required to complete the short from CBA.

The template details the capital and recurrent costs of a project compared to a base case scenario (i.e. the status quo) as well as the anticipated benefits, measured from a range of categories such as reductions in morbidity and mortality, efficiencies, improved access, and workforce benefits. The template seeks to ensure the consistent application of cost-benefit principles and assumptions across all projects.

Guide to the Development of the 2018 Asset Strategic Plans

The Ministry of Health developed this guide to assist LHDs/ SHNs and other health services develop their Asset Strategic Plans in support of NSW Health's annual Capital Planning Submission. It outlines NSW Health's capital planning cycle and the main associated steps and responsibilities for agencies. It also identifies the key elements and content of local Asset Strategic Plans needed to support robust local planning and inform NSW Health's Asset Strategic Plan and related capital planning submission. Specifically, the guide emphasises the need for evidence-based service planning aligned with local and statewide strategic plans. It also acknowledges the importance of examining non-asset strategies/ options for meeting service needs when assessing gaps in the performance of assets and determining related capital investment priorities.

Source: NSW Health.

Appendix five – Streamlined investment decision process for Health Capital Projects

Rationale for new process

NSW Health proposed a streamlined investment decision process to NSW Treasury in 2017 for health capital projects with an Estimated Total Cost above $10.0 million. The proposal noted NSW Health was spending a significant amount of time and resources compiling information for business cases, including concept design and detailed construction information, it did not consider critical to the Government's investment decision.

It proposed an Investment Decision Template (IDT) be provided for these projects instead of a final business case to support the investment decision. The template includes only key project information required for State Budget approval.

Application of investment decision process

The new process applies to health capital projects above $10.0 million rated as Tier 2-4 by Infrastructure NSW. It enables NSW Health to progress to detailed project planning and consultation following the Expenditure Review Committee's (ERC) approval and publication in the Budget Papers.

A final business case must still be submitted for a high profile/ high risk Tier 1 project unless it is within NSW Health's capital planning limits and Treasury agrees to using an IDT.

Planning and governance principles

The agreed principles for the new streamlined process require NSW Health and Treasury to review it regularly and ensure compliance with government policies and processes and that it is working effectively.

They also require NSW Health to ensure that all IDTs are supported by robust planning and governance processes in accordance with NSW Health's Process of Facility Planning.

Estimated Total Cost

The Estimated Total Cost (ETC) for the project should be based on Health Infrastructure's cost planning standards and include recurrent cost impacts expected at the time of facility commissioning.

NSW Health must comply with TC/12 Budget Controls Capital Expenditure Authorisation Limits by operating within approved Capital Planning Limits and seeking Treasurer agreement for any variations in ETCs above ten per cent from the original project approval.

Release of funds

The project approval for Tier 2-4 projects will enable ETCs to be published in the Budget Papers and release of funds for planning, enabling and early works on 1 July of the budget year of project commencement.

Funding for main construction is released following provision of the final business case to NSW Treasury.

Changes following initial project approval

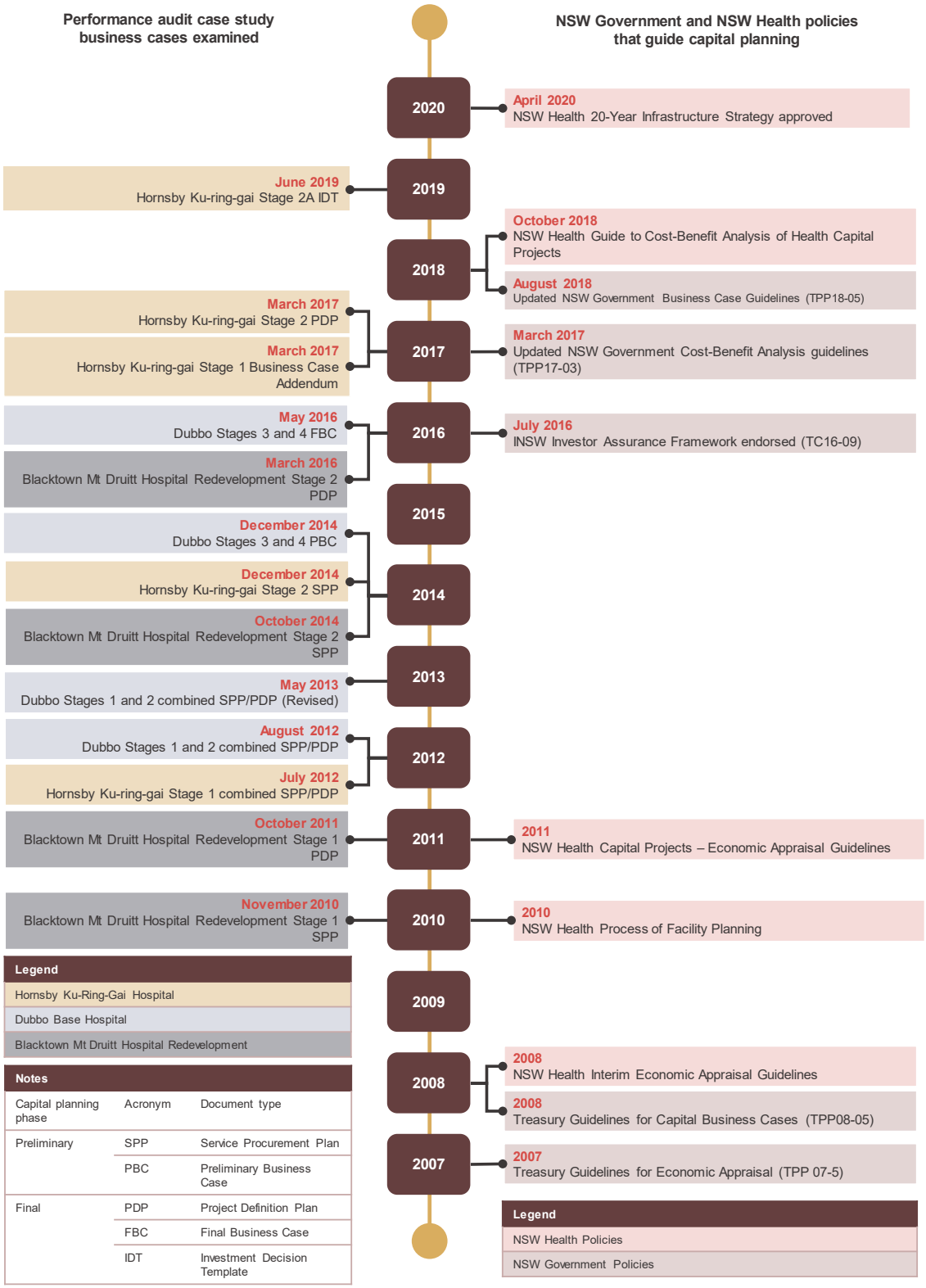
On submission of the final business case to NSW Treasury, NSW Health is required to explain any major changes to project scope, program or budget initially approved with the IDT. Significant changes should be supported by robust governance and approval processes.

Any changes requiring ERC approval will only occur in exceptional circumstances, and the streamlined process will be revised if material costing variations emerge.

Source: NSW Health.

Appendix six - Timeline of business cases and relevant policy guidelines

Exhibit 6: Timeline of examined business cases and relevant applicable policy guidelines



Source: Audit Office 2020, from NSW Health.

Professional people with purpose

OUR VISION

Our insights inform and challenge government to improve outcomes for citizens.

OUR PURPOSE

To help parliament hold government accountable for its use of public resources.

OUR VALUES

Pride in purpose

Curious and open-minded

Valuing people

Contagious integrity

Courage (even when it's uncomfortable)

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