

FOI18-114



Dear

# Freedom of information request: FOI18/114

I refer to your application under section 30 of the *Freedom of Information Act 2016* (the Act), received by ACT Health on 7 November 2018 and you revised the scope of your request on 5 December 2018.

In your application you requested:

"The table of contents of both below reports as well as the executives summaries.

The business case prepared by KPMG for the main tower and adjacent building at the Canberra Hospital, referred to in the below article:

https://www.canberratimes.com.au/national/act/hospital-project-manager-slamsgovernment-handling-of-tenders-as-unconscionable-20150727-gil42y.html

and;

-A report commissioned by the government to evaluate the condition of existing assets 1, 10 & 12."

I am an Information Officer appointed by the Director-General of ACT Health under section 18 of the Act to deal with access applications made under Part 5 of the Act.

ACT Health was required to provide a decision on your access application by 29 January 2019.

#### Decision on access

Searches were completed for relevant documents and four documents were identified that fall within the scope of your request.

I have included as <u>Attachment A</u> to this decision the schedule of relevant documents. This provides a description of each document that falls within the scope of your request and the access decision for each of those documents.

I have decided to grant full access to three documents and partial access to one document as the document identified as relevant to your request contains information that I consider to be

information that would, on balance, be contrary to the public interest to disclose under the test set out in section 17 of the Act.

My access decisions are detailed further in the following statement of reasons and the documents released to you are provided as Attachment B to this letter.

In reaching my access decision, I have taken the following into account:

- the FOI Act, Schedule 1 and Schedule 2;
- the content of the documents that fall within the scope of your request; and
- the views of relevant third parties.

I have decided to grant access, under section 50 of the Act, to copies of documents identified below, with deletions applied to information that I consider would be contrary to the public interest to disclose.

My reasons for deciding to grant partial access to the information in Document Number 2 of the identified documents is that the document comprises of, or contains information that I consider, on balance, to be contrary to the public interest to disclose under the test set out in section 17 of the Act.

The following factor was considered relevant in favour of disclosure of the identified information under Schedule 2, section 2.1:

• Schedule 2, 2.1 (a) (iv) Ensure effective oversight of expenditure of public funds.

The following factor was considered relevant in favour of non-disclosure of the identified information under Schedule 2, section 2.2:

 Schedule 2, 2.2 (a) (xi) Prejudice trade secrets, business affairs or research of an agency or person.

If the redacted information concerning Arup was released, it could reasonably be expected to have an adverse effect on the trade secrets and business affairs of the company, as their intellectual property could be used by a competitive firm.

The public interest would not be advanced by the release of this information. As such, I have decided that on balance, disclosure of the information would be contrary to the public interest

# Charges

Processing charges are not applicable for this request under Section 104 (4) of the Act.

# Online publishing – disclosure log

Under section 28 of the Act, ACT Health maintains an online record of access applications called a disclosure log. Your original access application, my decision and documents released to you in response to your access application will be published in the ACT Health disclosure log

not less than three days but not more than 10 days after the date of this decision. Your personal contact details will not be published.

You may view ACT Health's disclosure log at <a href="https://www.health.act.gov.au/about-our-health-system/freedom-information/disclosure-log.">https://www.health.act.gov.au/about-our-health-system/freedom-information/disclosure-log.</a>

# Ombudsman review

My decision on your access request is a reviewable decision as identified in Schedule 3 of the Act. You have the right to seek Ombudsman review of this outcome under section 73 of the Act within 20 working days from the day that my decision is published on ACT Health's disclosure log, or a longer period allowed by the Ombudsman.

If you wish to request a review of my decision you may write to the Ombudsman at:

The ACT Ombudsman GPO Box 442 CANBERRA ACT 2601

Via email: ACTFOI@ombudsman.gov.au

# ACT Civil and Administrative Tribunal (ACAT) review

Under section 84 of the Act, if a decision is made under section 82(1) on an Ombudsman review, you may apply to the ACAT for review of the Ombudsman decision.

Further information may be obtained from the ACAT at:

ACT Civil and Administrative Tribunal Level 4, 1 Moore St GPO Box 370 Canberra City ACT 2601 Telephone: (02) 6207 1740 http://www.acat.act.gov.au/

If you have any queries concerning the ACT Health's processing of your request, or would like further information, please contact the FOI Coordinator on 5124 9831 or e-mail HealthFOI@act.gov.au.

Yours sincerely

Karen Doran

Deputy Director-General

K.Da\_

Corporate

29 January 2019



# FREEDOM OF INFORMATION REQUEST SCHEDULE

Please be aware that under the *Freedom of Information Act 2016*, some of the information provided to you will be released to the public through the ACT Government's Open Access Scheme. The Open Access release status column of the table below indicates what documents are intended for release online through open access.

Personal information or business affairs information will not be made available under this policy. If you think the content of your request would contain such information, please inform the contact officer immediately.

Information about what is published on open access is available online at: <a href="https://www.health.act.gov.au/about-our-health-system/freedom-information/disclosure-log">https://www.health.act.gov.au/about-our-health-system/freedom-information/disclosure-log</a>

NAME	WHAT ARE THE PARAMETERS OF THE REQUEST	File No
	"The table of contents of both below reports as well as the executivies summeries.  -The business case prepared by KPMG for the main tower and adjacent building at the Canberra Hospital, referred to in the below article: https://www.canberratimes.com.au/national/act/hospital-project-manager-slams-government-handling-of-tenders-as-unconscionable-20150727-gil42y.html and;  -A report commissioned by the government to evaluate the condition of existing assets 1,10 &12."	FOI18/114



Document No	No of Folios	Description	Date	Status	Reason for non- release or deferral	Open Access release status
1	1-3	Canberra Hospital Audit Buildings 1, 10 and 12 – Table of Contents	9/09/2014	Full		Yes
2	4 - 9	Canberra Hospital Audit Buildings 1, 10 and 12 – Executive Summary	9/09/2014	Partial	Schedule 2, 2.2 (a) (xi)	Yes
3	10 - 12	KPMG ACT Health Directorate CH Building 2/3 Development Business Case - Table of Contents	April 2018	Full		Yes
4	13 - 29	KPMG ACT Health Directorate CH Building 2/3 Development Business Case - Executive Summary	April 2018	Full		Yes

Total No of Docs

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# Volume 3

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Structural Upgrade drawings

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Prioritisation assessment of Option 1 scope items

# Volume 6

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**Detailed Audit Sheets** 

# Volume 7

Building 10:

**Detailed Audit Sheets** 

# Volume 8

Building 12:

**Detailed Audit Sheets** 

# 1 Executive Summary

# 1.1 Overview

Arup has been commissioned to undertake a condition audit of three buildings at The Canberra Hospital campus: Building 1 (B1), Building 10 (B10) and Building 12 (B12). The audit is to test the viability of retaining buildings B1, B10 and B12 for a further occupancy period of 25 years as clinical and clinical support buildings integrated into The Canberra Hospital Re-development.

The objective of the review is to:

- Provide a detailed picture of the condition of the three buildings, both in terms of the existing assets and also their compliance with current building codes.
- Provide a cost led analysis of three possible development options for each of the buildings to function for a further 25 years. The options will include a review of whole life costs to enable an assessment of value for money for continued use.
  - 1. Minimum Intervention Option
  - 2. Staged Refurbishment Option
  - 3. Whole Building Refurbishment Option
- Provide a 'Future Functionality Matrix' for each building, indicating the extent of modification required to the buildings' infrastructure to house different clinical functions.

# **1.2** High Level Outcomes

# 1.2.1 Condition of Buildings

We found that the majority of assets are in a good condition, commensurate with their age and operating conditions. Many of the assets are in a reasonable / good condition, despite exceeding their design life expectancy. This can be attributed to a good maintenance regime coupled with critical component replacement prior to failure. However, due to a number of the assets and systems operating beyond their design life, enhancements and/or upgrades are recommended in the short term to ensure failure of critical systems does not cause unplanned outages for the Hospital.

A number of non-compliances with BCA and the Hospital's standards are identified for each building but this is to be expected for the age of the buildings assessed. Some of these that relate to Fire or Health and Safety risks have been identified in the main body of the report and we would suggest these need further investigation to ensure appropriate management plans or remedial works are implemented.

# 1.2.2 Value for Money for Continued Use

In evaluating the Value for Money for continued use, we have taken a cost led approach looking at initial capital and whole life costs for the following options:

# 1. Minimum Intervention Option

The minimum intervention' option will analyse how each building can continue to be used in its current capacity by employing a periodic upgrade and maintenance program to ensure the buildings can be used for the next 25 years. The building would not be brought into line with current building codes.

# 2. Staged Refurbishment Option

The staged refurbishment option will assess how each building could be developed in line with the proposed ACT Health masterplan for the Hospital that has been shared with the project team (Aurora Future Facility Profile 2012). The buildings will not necessarily be brought into line with current building codes.

# 3. Whole Building Refurbishment

The Whole Building Refurbishment option will analyse how each building could be fully upgraded to ensure it can be used for a further 25 years whilst also being compliant with current building code. System upgrades will also be proposed in this option to provide improved performance of the buildings.

For detail scopes and analysis of each option please see Section 7. The 25 year whole lift costs of each of the options are summarised below:

	Option 1 Minimum intervention	Option 2 Staged Refurbishment	Option 3 Whole Building Refurbishment
Building 1			
Building 10			
Building 12			

# What's included in these costs:

- Construction costs
- Major Plant Replacement
- Inspections/surveys of specific items
- Preparation of reports
- Builder's preliminaries and margin
- Associated professional fees
- Associated risk / contingency

# What's excluded from these costs

- Fit Out Costs for change of use
- Regular planned redecoration
- Operational costs and staffing
- Cleaning
- Utilities
- Insurances
- FF&E
- End of Life a or disposal costs
- Phasing/Decant costs and disruption
- Temporary facilities

For Building 1, the increase in cost between Option 1 and Option 2 is due to the MAPU/SAPU fit out proposed on Level 2 of the podium. The significant increase in cost for Option 3 is due to the structural upgrades, lift upgrades, extensive services upgrades and cost estimates to address all the BCA non-compliances raised.

For Building 10, there is no increase in cost between Option 1 and 2 as the use of the building is assumed to remain unchanged for the 25 year life of the building. The significant increase in cost for Option 3 is for the same reason as for Building 1

For Building 12, the increase in cost between Option 1 and Option 2 is due to the expansion of the Emergency Department. The significant increase in cost for Option 3 is for the same reasons as for Building 1 and 10.

# 1.2.3 Cost comparisons with a New Build Facility

The three options that have been assessed under the scope of the report review the possible ways in which the buildings could be retained for a period of 25 years. It was deemed appropriate to compare these option costs against a new build clinical facility of a similar size and function. By providing this comparison, the ACT Health would be better informed to make a decision on whether to retain or replace the buildings.

One of the main assumptions in the scope of this report was that the use of the building was not to change for the 25 year period. This means that the costs presented for Option 3 do not allow for redecoration, upgrading furniture or equipment or a change of use of the internal spaces (apart from the identified fit outs under Option 2). As it is highly likely that redecoration and changes of use would occur during the 25 year life of the building, it was deemed appropriate to provide an 'enhanced' option 3 ('Option 3+'), to provide a more realistic comparison with the new build costs.

As the scope of the fit outs are not known at this stage, Option 3+ provides a cost range. The low end comprising the upgrade works as scheduled in the audit scope together with a moderate amount of associated refurbishment and architectural refit works that would likely be carried out concurrently with any major services upgrade. The upper end of the range would allow for a full refurbishment and architectural refit in addition to the code compliance and services upgrade works. The costs presented below are whole of life costs for a 25 year period.

	Option3+ Code Compliance incl Architectural Refit	Indicative Building Replacement Cost
Building 1		
Building 10		
Building 12		

# 1.2.4 Disruption to Hospital Operations

In addition to providing cost information, the report provides an indication of the system outages and disruption that would result from the scope items proposed under Option 1. This assessment provides a complete overview for consideration with respect to 24/7 clinical operations of B1, B10 and B12. The results of this assessment are shown in full in Appendix E.

Whilst Option 1 is a 'minimum intervention' option, the scopes will result in system and area shutdowns. For the mechanical and electrical upgrades in particular, there will be extensive shutdowns required to complete the works and while these may seem prohibitive, if these the works are effectively planned, disruption to hospital operations can be kept to a minimum.

As some of the plant items are nearing end of life, significant planning is required in the short term to ensure unplanned outages do not occur. The unplanned outages would cause a greater level of disruption to hospital activities than the planned upgrades described.

The scope items have been prioritised, combining an assessment of the condition of the asset and the criticality rating, which has been based upon a number of factors including functional criticality, disruption if the plant breaks down (resilience), the availability of spares and how difficult it is to replace and / or undertake the works. The highest priority items for each building are listed below:

Building 1	Building 10	Building 12
<ul> <li>Replace 6no. AHUs and associated fans</li> <li>Replace MCCs</li> <li>Reinstate Blackstone generator, removing temporary generator set-up currently in place</li> <li>Relocate Comms Room and replace all systems</li> <li>Replace HV and LV chillers</li> <li>Replace Lifts 7-9</li> </ul>	<ul> <li>Replace MSB</li> <li>Replace main MCCs</li> <li>Install surge protection</li> <li>Replace AHUs</li> <li>Upgrade controllers and inverters for Lifts 18-19</li> </ul>	<ul> <li>Replace/upgrade existing MSB</li> <li>Replace Intercom backbone</li> <li>Upgrade door systems for Lifts 22-23</li> <li>Ensure duress system has a redundant server installed.</li> </ul>

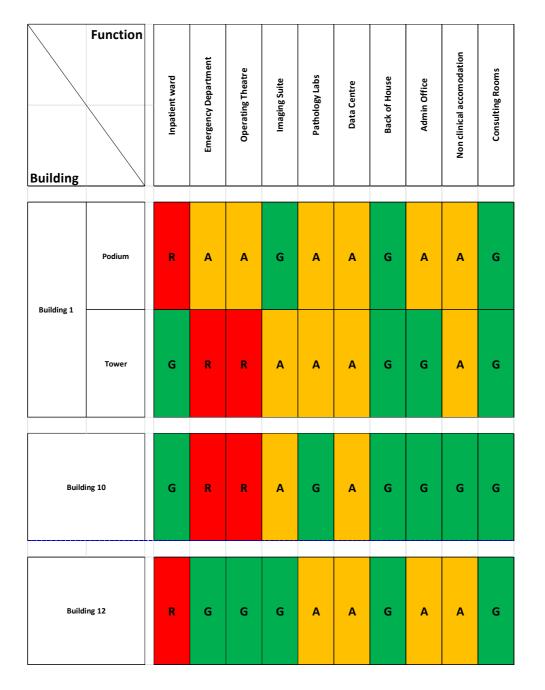
# 1.2.5 Assessment of the future flexibility of each building

In order to assist the Hospital's development of the masterplan, we have reviewed the feasibility of locating various clinical and support functions in each of the three buildings, taking into account the existing base build and the condition of the existing infrastructure. The following RAG chart provides a summary of the outcomes of this study using the following ratings:

Red "R" – Not recommended to house this function in the building due to the extent of the works required to be undertaken which would likely result in significant disruption to hospital operations.

Amber "A" – Possible with major interventions.

Green "G" – Possible with minor interventions, in line with usual hospital fit out projects.



The future flexibility matrix summary above can be broadly aligned with the costing analysis of Option 3+ as described below:

- Where an "R" rating is provided, we would not recommend the hospital pursues this option.
- Where an "A" rating is provided, we would broadly expect the costs of the works to fall in line with the upper end of the range provided for Option 3+.
- Where a "G" rating is provided, we would broadly expect the costs of the works to fall in line with the lower end of the range provided for Option 3+.



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# 1 Executive Summary

# 1.1 Project outline

The pressures that are being experienced by the ACT public health system are widely recognised and are well documented in a range of ACT Government reports. Factors such as population growth and ageing, changing disease profiles, emerging models of care and workforce recruitment and retention difficulties are presenting considerable challenges to the delivery of health services. These sector-wide demand driven issues, together with Canberra Hospital (CH) facing its own challenges such as ageing facilities, out-of date designs, under supply of beds and risks associated with overcrowding, have necessitated a commitment by the ACT Government to make a significant investment in the infrastructure expansion and reconfiguration of CH.

As this Business Case demonstrates, demand management strategies and other strategic solutions (such as efficiency and effectiveness initiatives) are not sufficient to address the forecast growth in demand or to permit the necessary changes in models of care and operational improvements. The preferred strategic solution of this Business Case is, therefore, to redevelop the main clinical services blocks of the hospital.

The proposed project, referred to as 'Building 2/3 Redevelopment' (the Redevelopment or the Project) will create enhanced capacity in a modern facility and ensure that CH can effectively respond to the future health needs of the ACT and surrounding region. The Project will:

- Deliver significant accommodation featuring an efficient, sustainable design that easily facilitates changes in models of care and service delivery improvements
- Provide increased functional space for key clinical services including the Emergency
   Department, Ambulatory Care Centre, Same Day Services and integrated medical imaging
- Improve vehicle and public transport access by relocating the Main Entrance to front Yamba Drive
- Drive significant recurrent savings due to efficiency improvements
- Increase the range of services delivered on a same day basis
- Support the implementation of new technologies
- Provide a contemporary teaching environment.

At an estimated capital cost of \$1.2b this Project would be the largest social infrastructure project embarked on by the ACT Government.

# 1.2 The need for the Redevelopment

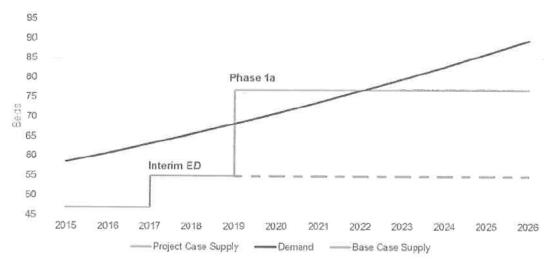
The existing available infrastructure on the CH campus is unable to meet current and future demand for health care services, and is no longer suitable for contemporary service delivery. The Investment Logic Workshop held in July 2014 summarised this challenge into four key 'Problem' areas:



**Problem 1:** Insufficient capacity to meet growing demand for health care services which cannot be met by existing CH infrastructure.

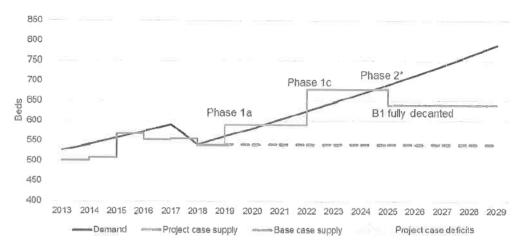
The extent of 'Problem 1' and the time constraints facing CH is summarised by the graphs below which clearly show demand outstripping supply in the essential emergency department and in admitted activity (inpatient units).

Figure 1-1: Demand and supply for Emergency Department beds – Base Case supply versus Project Case supply



Source: Demand and supply data provided by ACT Health, Health Services Planning Unit (HSPU), January 2015. Projections up to 2021-22 were supplied by the Health Services Planning Unit. Projections past 2021-22 are for illustrative purposes only using historic growth rates and do not represent demand modelling forecasts.

Figure 1-2: Demand and supply for inpatient beds – Base Case supply versus Project Case supply



Source: Demand and supply data provided by ACT Health, HSPU, January 2015. Projections up to 2021-22 were supplied by the Health Services Planning Unit. Projections past 2021-22 are for illustrative purposes only using historic growth rates and do not represent demand modelling forecasts.

Note: \* indicates that although Phase 2 will deliver 128 new beds, the closure of B1 results in a net drop in supply.



Although the Redevelopment will deliver some temporary bed surpluses during the projected demand period, the availability of spare capacity is not long lived and as part of routine forward planning ACT Health will explore all options to respond to future requirements (for example necessary changes to model of care, relocation of various services, redevelopment or refurbishments to the original Inpatient Unit tower building).

**Problem 2:** The existing hospital structure is restricting the ability to deliver appropriate models of care and poses a risk to community access to quality, safe health services.

The existing layout of the CH campus is the result of numerous ad hoc projects which have progressively provided additional capacity. As on-campus services have expanded over the past twenty years, piecemeal add-ons to various buildings has resulted in extended patient flows and is impacting on staff efficiencies. For example, patients moving to and from interventional suites (Building 12) to inpatient units (Building 3 or Building 1) require two staff to navigate significant lengths of public corridors between buildings.

The physical structure of the existing clinical services and inpatient buildings inhibits the ability to reconfigure or refurbish them into best practice spatial allowances that are needed to implement contemporary models of care. A redeveloped CH would deliver more efficient ward designs, with benefits for nursing activities, infection control and patient flow. A more flexible design also allows the buildings to adapt easily to new models of care as they evolve. In particular capacity will be created to support a significant shift from overnight to same day services and to support ambulatory and home-based care.

Indicators of potential risks to community access to quality and safe health services can be found, for example, by comparing CH's performance against national benchmarks. The May 2014 National Health Performance Authority report on the "Percentage of patients leaving EDs within four hours of arrival in 2012 and 2013" finds CH falling behind the ACT target of 65% (for 2013), with just 54% of CH patients meeting the four hour benchmark. The national target for 2015 is a much higher rate of 90%. The March 2014 National Health Performance Authority report on "Healthcare-associated *Staphylococcus aureus* bloodstream infections in 2012-13 in public hospitals" finds CH has a higher than average rate of infection at 1.72 per 10,000 patient bed days, compared with the average rate of 1.35. A physical increase in the ratio of single bed rooms, and improvements to ED configurations provided by the Redevelopment, will be key factors in helping CH to ensure it is able to provide the community with access to quality, safe health services.

**Problem 3:** Outdated and poorly structured facilities are inhibiting the efficient delivery of health services, thereby reducing productivity and increasing the cost of services.

The CH campus is currently structured as a number of separate facilities linked via a complex network of passages, tunnels and bridges. This dysfunctional layout and outdated facilities are hindering the implementation of new models of care and improvements in patient flows. This, in turn, is impacting productivity and is contributing to CH's relatively high average cost of service per acute separation (\$6,871) compared to its peer hospital group (\$5,502)<sup>1</sup>.

An independent Efficiency Assessment of the efficiencies and performance improvements that could be gained from the Redevelopment was conducted by Health Projects International (HPI) as part of this Business Case. The review highlights a number of benefits from delivery of new models of care including, for example, the shift from overnight care to same day services which has positive impacts on costs and staffing profiles. Overall, the efficiency assessment found that, by completion of the Redevelopment in 2024-25, the efficiency improvement under a 'medium' scenario will be around 2.4% and will grow to around 3.6% by 2034/35. This

Efficiency Assessment Report, HPI, February 2015.
 COMMERCIAL-IN-CONFIDENCE



improvement assumes that ACT Health is able to drive important reforms in workforce, technology and models of care as part of continued planning for the Redevelopment.

**Problem 4:** Engineering infrastructure is at the end of its useful life, increasing the risk of system failures and the potential for future partial service closures.

A Building Condition Audit report conducted in September 2014 found that many assets, plant and engineering infrastructure items within the existing buildings that accommodate inpatient wards (Building 1) and the Emergency Department (Building 12) were either the end of their useful life; non-compliant with current BCA and Hospital standards; or at capacity with utilities failing. Within the next five years, ACT Health will need to invest a minimum of at least \$12m on Building 1 and Building 12 in maintenance in order to continue operating these buildings. This is an investment that will not deliver any additional bed capacity nor improve the dysfunctional layouts that are preventing the efficient delivery of health services. There are also drawbacks associated with operational disruptions from time to time as maintenance works are carried out. Capital investments in new infrastructure will deliver more cost effective, energy efficient outcomes and substantially reduce the risk of system failures and disruption to services.

## Summary

As the only role delineation Level 6 hospital in the ACT region, CH must be able to continue providing access to its services. Demand management strategies and reuse of non-clinical space in existing buildings will not be sufficient alone to address these four 'problems'. In order to ensure that patient outcomes are not sacrificed while the hospital is operating within a challenging environment, there is an imperative to respond with the proposed redevelopment at the earliest opportunity.

# 1.3 Development solution

# 1.3.1 Development options

This Business Case demonstrates that demand management strategies and other strategic solutions alone, such as efficiency and effectiveness initiatives, are not sufficient to address the four 'problems' identified above. Therefore, an infrastructure response is essential to ensure that CH has the capacity to meet future demand, and to address the issues of operating in ageing, out-of-date hospital buildings that inhibit delivery of appropriate models of care. The costs and risks of inaction are high. Failure to advance the Redevelopment will further exacerbate supply issues, result in CH continuing to operate at relatively high operating costs and risks impacting patient care.

In response to the need for an infrastructure solution, ACT Health has undertaken extensive planning work to progress delivery of the Redevelopment. This has included considering a range of development options to deliver the Project:

- Option 1 Two Phase staged 'vertical' solution as described by the Proof of Concept
- Option 2 Two Phase staged 'horizontal' approach
- Option 3 Delay option, with reuse of existing buildings
- Option 4 Concept Master Development Plan (CMDP) option
- Option 5 Greenfield site new development.

The Proof of Concept (POC) proposes a development site of approximately 25,700m² located in the centre of the CH campus where ageing buildings B2 (Main Entry block) and B3 (Outpatients), and temporary Building 15 are located. A primary objective of the POC design is



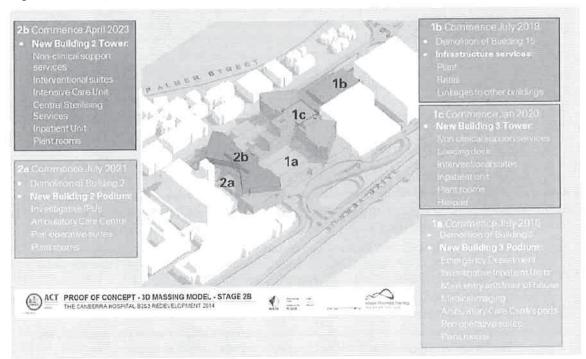
to enhance the integration of the new buildings with existing campus assets and to optimise opportunities for further and sustainable redevelopment in the medium to long term.

# Option 1

This preferred option (Option 1) involves a two-phase 'vertical' development that firstly delivers podium, tower and plant infrastructure on the site of Building 3 (Phase 1), followed by the demolition of Building 2 to facilitate the development of an adjoining second podium and tower (Phase 2). Under this approach, the Redevelopment would be progressively delivered over five sequential stages of works, with a construction duration of eight years commencing in July 2016 and reaching completion in June 2024.

The staging approach optimises the process of decanting, demolition and rebuilding and enables a functioning Main Entry to be maintained during the construction works. Importantly, this solution assures operational continuity of on-campus services at all times with minimal disruption to the delivery of patient services. The staging of the preferred option and the accommodation to be delivered by each stage is shown in the figure below.

Figure 1-3: Stages of the Redevelopment



Source: Proof of Concept - Design Report, Silver Thomas Hanley, November 2014 and ACT Health

# Option 2

The 'horizontal' approach (Option 2) is not materially different in cost from the 'vertical' (option 1) and is able to offer some functional benefits.

## Preferred option

Although both solutions would be acceptable, ACT Health has adopted the 'vertical' Option 1 in the interim as a basis for the preferred option in this Business Case. This approach meets immediate accommodation needs and allows workable functional relationships during the construction timeframe. The final preferred approach will be made at an appropriate time and is not expected to materially impact project capital costs, but will reflect the optimum solution to

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manage issues of constructability, functional relationships and associated operating cost impacts.

# Option 3

The delay option (Option 3) involves delaying the Redevelopment by one year. This option poses a number of risks and presents various drawbacks including: further constraints on bed supply, potential impacts on patient safety, reputational damage associated with overcrowding and high occupancy, prolonging existing operational disadvantages and inefficiencies in service delivery. Taking into account the impact of these and other limitations, ACT Health strongly opposes a delay option.

#### Option 4

Since the preparation of the 2013 CMDP, further demand data and building condition reports have become available resulting in this option no longer being considered a feasible approach.

## Option 5

A greenfield option (Option 5) would overcome some of the risks involved in managing a staged redevelopment within a functioning hospital site. However, Cabinet Decisions in 2010 and 2011 provided the endorsement to proceed with redevelopment activities on CH campus. An option to abandon this approach in favour of a greenfield option would be inconsistent with the ACT Government's previous decisions including to expand emergency services on campus (through the interim ED project) and to commence decanting works (under the Staging and Decanting Plan) in preparation for future redevelopment. The replication of services and support services, and the lack of connectivity with the existing and extensive campus services that would occur in a new-build scenario, also supports ACT Health's decision not to further explore option 5.

# 1.3.2 Scope of services

The preferred option for the Redevelopment would provide increased capacity in all major clinical departments including, broadly:

- An overall increase of 70 general and specialist beds from 539 beds in 2014-15 to 639 beds by 2024-25. This includes an additional 17 Intensive Care Unit (ICU) beds.
- Nineteen (19) operating theatres will be provided. The Redevelopment provides the opportunity to converge surgical and interventional services within a multi-speciality environment consistent with contemporary service delivery.
- The Ambulatory Care Centre will more than double in capacity from 107 to 232 consultation rooms, treatment rooms and patient bays.
- Supporting the shift in model of care from overnight care to same day services, the Redevelopment grows same day capacity from the current supply of 77 to 140 beds/functional spaces<sup>2,</sup> a growth of around 82%. Overnight services will increase current supply of 565 beds/functional spaces to 722 post redevelopment.
- The Emergency Department (ED) will be expanded through an additional 21 treatment bays and other treatment areas. It will be supported by a 25 bed Emergency Management Unit to streamline emergency services and increase throughput of presentations to the ED.
- Capacity in diagnostic services will grow with much needed enhanced and integrated medical imaging services.
- The percentage of inpatient single bed rooms will increase from an average of 20% to an indicative rate of 65%, with ACT Health currently considering an increase to 75% which is

<sup>&</sup>lt;sup>2</sup> Source: Efficiency Assessment Report, Appendix 2, Health Projects International (HPI), February 2015
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more in line with similarly sized hospitals<sup>3</sup>. The increased proportion of single-bed rooms will enable CH to reduce operating costs associated with multi-bed rooms which are associated with an increased risk of adverse events.

New models of care have informed the design and functional requirements of the Redevelopment. The specific requirements for each Health Planning Unit (HPU) are set out in the detailed Functional Brief (located at Appendix A). The importance of sustainable designs, future proofing and compliance with Australian Hospital Facility Guidelines, amongst other features, are described in the Project Brief (located at Appendix B). Further work on these areas, including sustainable design, will occur during the design phase.

# 1.4 Cost and contingency

# 1.4.1 Approach to project costing

Capital cost estimates were developed throughout the POC phase by the Consultant Project Cost Planner, Donald Cant Watts Corke (DCWC). A peer review cost estimate was also prepared by ACT Health's Master Cost Planner, Rider Levett Bucknall (RLB). As part of this Business Case process, the project contingency contained in the cost plan estimates was replaced with a more detailed probability-weighted risk adjustment based on the findings of a risk quantification workshop with ACT Health representatives.

Hospital operating costs have been estimated by ACT Health for each of the Base Case ("do nothing" scenario) and Project Case. These estimates reflect ACT Health's projections of activity under each case and allow for significant shifts from non-same day to same day treatment and for increases in emergency capacity under the Project Case. The operating costs reflect current average costs per case mix weighted separation although, under the Project Case, these average costs have been reduced by an efficiency factor, as assessed by HPI. The annual efficiency factors are additional to the model of care changes reflected in the change from the Base Case to the Project Case and they incorporate additional benefits of the Project Case associated with demand management, workforce changes, introduction of new technologies and building maintenance improvements.

# 1.4.2 Capital costs

The following table summarises the real (2014-15 dollars) risk-adjusted capital cost of the project, including implementation costs, by Phase.

Table 1-1: Risk adjusted capital cost by Phase (real \$'000)

Risk adjusted capital cost by Phase (real \$'000)				
Cost	Phase 1	Phase 2	Total	
Raw capital cost	560,510	273,247	833,757	
Transferred risk	40,607	22,916	63,523	
Retained risk	76,514	38,897	115,412	
Total risk-adjusted Capital Cost	677,631	335,060	1,012,691	
Project Support Costs	23,790	11,597	35,387	

<sup>&</sup>lt;sup>3</sup> Single bed percentage sourced from IPU Functional Brief, November 2014. Benchmark comparisons are located in section 2.1.6.

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Risk adjusted capital cost by Phase (rea	al \$'000)	The same of the sa	- 30 - 3
Cost	Phase 1	Phase 2	Total
Total Development Cost	701,421	346,657	1,048,078

Source: DCWC Cost Plan, ACT Health, ACT Health risk workshop

Note: The estimated capital costs are likely to be within the same order of magnitude, regardless of the procurement model (assuming the same reference design).

The following table summarises the nominal (i.e. escalated) risk-adjusted capital cost of the project, including implementation costs, by Phase. Construction price escalation is estimated at 3.5% per annum, based on the rate used in the Cost Plan.

Table 1-2: Risk adjusted capital cost by Phase (Nominal \$'000)

Risk adjusted capital cost by Phase (Nomi	nal \$'000)	THE RESERVE	
Cost	Phase 1	Phase 2	Total
Raw capital cost	636,155	356,604	992,759
Transferred risk	47,016	28,915	75,931
Retained risk	89,705	51,037	140,742
Total risk-adjusted Capital Cost	772,875	436,556	1,209,432
Project Support Costs	27,000	15,135	42,135
Total Development Cost	799,876	451,691	1,251,567

Source: DCWC Cost Plan, ACT Health, ACT Health risk workshop

# 1.4.3 Operating costs

The following tables summarise, respectively, the real and nominal annual operating costs of the Project, over the period to 2025-26, being the first year of full operations following the completion of Phase 2. The tables show the estimated annual cost of the Base Case, reflecting the cost of services without the Project, and the estimated incremental annual cost associated with each of Phase 1 and Phase 2 of the Project.

Table 1-3: Annual Operating Cost under the Base Case and Project Case to 2025-26 (Real \$m)

Annual Oper	ating Co	st (Real	\$m)	-177	21 002		77.3	18 24	1	18 8	463
	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	2022 -23	2023 -24	2024 -25	2025 -26
Base Case cost	512.2	525.7	519.1	536.1	553.6	570.3	585.4	600.9	610.6	616.1	621.8
Phase 1 incremental operating cost	-	-	11.9	(7.7)	(26.4)	(26.0)	(23.6)	(21.1)	(12.3)	1.3	15.2
Phase 2 incremental operating cost	-	-	-	-	-	-	-		-	-	
Project Case cost	512.2	525.7	531.0	528.4	527.2	544.2	561.8	579.8	598.3	617.4	637.0

Source: ACT Health



Phase 1 delivers savings during most of this period due to a redirection of activity from non-same day to same day services and due to efficiency savings under the "medium" scenario calculated by HPI. Phase 2 does not add incremental costs or savings because it does not add incremental activity in the relevant period, that is, demand is able to be met within the Phase 1 capacity.

Table 1-4: Annual Operating Cost under the Base Case and Project Case to 2025-26 (Nominal \$m)

Annual Oper	ating Co	st (Non	inal \$m	)							
	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	2022 -23	2023 -24	2024 -25	2025 -26
Base Case cost	512.2	541.4	550.7	585.8	623.1	661.1	698.9	739.1	773.5	803.9	835.7
Phase 1 incremental operating cost	-	-	12.7	(8.4)	(29.8)	(30.2)	(28.2)	(26.0)	(15.5)	1.7	20.4
Phase 2 incremental operating cost	-	-	-	-	-	-	-	-	-	-	-
Project Case cost	512.2	541.4	563.3	577.4	593.3	630.9	670.8	713.1	758.0	805.6	856.1

Source: ACT Health

# 1.4.4 Budget impact of Phases 1 and 2 of the Project

The following table shows the estimated budget impact of the Project. The Project operating costs are assumed to be partially offset by Commonwealth revenues which contribute funding equivalent to approximately 34% of ACT Health expenditure.

Table 1-5: Estimated budget impact of the Project Case to 2025-26 (nominal \$m)

Estimated budget impact of the Project Case to 2025-26 (nominal \$m)	of the Projec	t Case to 2	2025-26 (no	minal \$m)				Total S	STATE OF THE PARTY OF	S. Diego	
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Base Case operating cost	512.2	541.4	550.7	585.8	623.1	661.1	698.9	739.1	773.5	803.9	835.7
Phase 1 incremental operating cost	1	1	12.7	(8.4)	(29.8)	(30.2)	(28.2)	(26.0)	(15.5)	1.7	20.4
Phase 2 incremental operating cost		1		1	'	'	'	'			-
Commonwealth funding of operating costs	(174.1)	(184.1)	(191.5)	(196.3)	(201.7)	(214.5)	(228.1)	(242.4)	(257.7)	(273.9)	(291.1)
Project support cost	1	4.6	8.5	2.2	3.7	8.1	9.0	5.2	6.0	1	
Recurrent cost	338.0	361.9	380.3	383.3	395.3	424.5	446.6	475.8	506.3	531.7	565.0
Risk adjusted capital cost	1	123.2	228.4	61.7	110.1	249.4	106.9	148.0	181.6	,	•
Total estimated budget impact	338.0	485.1	608.7	445.0	505.4	673.9	553.5	623.9	687.9	531.7	565.0

Source: ACT Health

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# 1.5 Economic analysis

The following table summarises the results of the Cost Effectiveness Assessment and highlights that:

- Only the Project Case meets the project objective of meeting the current and future needs
  of the population in the Australian Capital Region for high quality, safe and efficient health
  care services in acute and ambulatory care settings
- The Project Case provides for an additional 2,824 non-same day separations, 54,775 same day separations, 151,199 emergency presentations and 202,699 outpatient occasions of service over a 20 year period
- The Project Case incurs an incremental NPC of \$772 million at a 7% discount rate. It may be noted that this Project NPC is comparable to the NPC of the capital cost which is \$739 million.

Table 1-6: Cost effectiveness of the Base Case and Project Case

Cost effectiveness of the Base Case	and Project Case		
	Base Case <sup>4</sup>	Project Case	Incremental Impact of Project Case
Project objective	Not met	Met	Met
Non same day separations	554,977	557,801	2,824
Same day separations	553,381	608,156	54,775
Emergency attendances	1,721,736	1,872,935	151,199
Outpatient occasions of service	4,073,045	4,275,744	202,699
NPC (\$m)	6,462.1	7,234.0	771.9
NPC (4% p.a. discount rate)	8,252.9	9,165.9	913.0
NPC (10% p.a. discount rate)	5,217.8	5,882.7	664.9

Source: ACT Health

<sup>&</sup>lt;sup>4</sup> Base case represents the capacity, outputs and cost of existing services at CH.



# 1.6 Delivery model assessment

# 1.6.1 Approach to the evaluation

KPMG facilitated a workshop on Friday 30 January 2015 with representatives from the ACT Health Project Team and the Treasury and Economic Development Directorates to identify key project drivers and risks, to short-list a selection of procurement options from the nine delivery models in the Single Assessment Framework (SAF) Guidelines and to conduct a preliminary assessment of the shortlisted procurement options. The full assessment report (Delivery Model Options (Procurement) Assessment) is contained as Appendix C.

In addition, market sounding interviews were conducted on 12 and 13 February 2015 with key participants in the construction and investment markets to assess initial market interest and capacity for the Project and to obtain market feedback on suitable delivery models.

# 1.6.2 Evaluation of delivery models

The procurement options workshop short-listed five options for consideration in this report:

- Design & Construct (D&C) a private sector consortium designs and constructs the facility
- Design, Construct, Maintain (DCM) a private sector consortium designs and constructs the facility and maintains it under a long term contract
- Public Private Partnership (PPP) a private sector consortium designs, constructs and finances the facility and provides facilities management services under a long term contract
- Early Contractor Involvement (ECI) a private sector contractor designs the facility in close collaboration with the government and constructs the facility
- Managing Contractor a private sector contractor designs the facility in close collaboration with the government and constructs the facility on a "cost plus" basis.

These options are defined in the Delivery Model Assessment report. In addition to this shortlist, two potential hybrid variants to the ECI model were raised at the procurement options workshop and have been developed and evaluated in this report. These incremental options are summarised below and have the potential to address key objectives of the Territory in terms of cost minimisation, innovation and whole-of-life asset management:

- ECI and Maintenance (ECI + M) a private sector consortium designs and constructs the facility under an ECI contract and provides maintenance services under a separate, longterm contract.
- Competitive ECI and Maintenance (Competitive ECI + M) two private sector consortia
  develop designs for the facility during the planning phase of the ECI contract before one is
  selected to construct the facility. The winning consortium provides maintenance services
  under a separate, long-term contract.

These procurement options have been evaluated against a range of value for money criteria, drawing on input from the workshop as well as the market soundings. The main conclusions are summarised below with respect to each objective. Unless stated otherwise, references to ECI options are inclusive of ECI + M and Competitive ECI + M options.



Table 1-7: Assessment summary of procurement options

Evalu	uation criteria	
No.	Grigeria	Assessment Summary
1.	Expected timeliness of procurement	ECI and MC options are likely to achieve the deadline for project commencement, D&C and DCM options may struggle to meet this timeline and the PPP option is not likely to do so.
2.	Certainty of completion and operational commencement	There is a risk that more conventional, MC, ECI or D&C type contracts may experience construction delays whereas evidence supports that this is less likely to occur with PPP contracts. PPP contractors may seek a more conservative program at the outset.
3.	Opportunity to innovate and to deliver better operational and service solutions	ECI provides the greatest opportunity, in principle, to permit beneficial interaction and collaboration to ensure that facility designs deliver required service outcomes. Competitive ECI may further may stimulate innovation by harnessing competitive forces during the planning phase.
4.	Whole-of-life design and maintenance	The PPP option is a proven method of achieving whole-of-life asset management in the health sector and is likely to be more effective than the other options. However, the other methods can also be effective and may allow more flexibility in managing long-term maintenance obligations on a whole of site basis.
5.	Cost efficiency and budget certainty	The PPP option is likely to deliver greater certainty of capital cost outcomes. However, other options can also deliver fixed lump sum prices and are likely to involve a lower risk premium for a complex project of this nature. This is particularly the case if a Competitive ECI process can be followed. The bundling of FM services may raise affordability concerns but can still be value for money relative to conventional delivery if assessed on a truly like-for-like basis over the long-term.
6.	Level of risk transfer	The PPP option is generally recognised as achieving the highest level of risk transfer.
7.	Industrial relations implications	Industrial relations issues are probably unlikely to arise with D&C, DCM and ECI + M options. These issues should also be able to be managed in relation to PPP options.
8.	Market appetite and capability	While contractors expressed clear opinions about the respective merits of different procurement options for this project, there is likely to be strong capacity, experience and interest from the market for this project under all the options under consideration.

# 1.6.3 Recommended Delivery Model

The evaluation of these short-listed procurement options has focussed on the extent to which each option is likely to deliver value for money for the Territory. However, value for money is not an absolute concept and determining value for money ultimately depends on the priority that the Territory places on certain procurement objectives over others and the trade-offs that it is prepared to make between competing objectives. Accordingly, this Business Case can provide insights about the extent to which procurement options may be likely to achieve certain



objectives, but it is a matter for the Territory Government to determine which objectives are most important, and therefore which options should be pursued.

Subject to the above proviso, it may be noted that some delivery models do perform relatively strongly across a range of procurement objectives. The following table provides a (necessarily simplistic) summary of the extent to which the most favoured options perform relative to the various evaluation criteria.

Table 1-8: Rating of procurement options

		-			Rating		
					EC	l Variant	Options
No	Criteria	Priority	PPP (A)	ECI	ECI+M	C-ECI	C-ECI+M
1.	Expected timeliness of procurement and delivery	High	1	111	111	111	111
2.	Certainty of completion and operational commencement	Madium	111	11	41	44	11
3.	Opportunity to deliver better operational and service solutions	High	11	111	444	111	111
4.	Whole-of-life design and maintenance	Medium	111	1	111	1	111
5.	Cost efficiency and budget certainty	High	11	11	41	111	111
6.	Level of risk transfer	High	111	11	11	11	11
7.	Industrial relations implications	Medium	11	111	111	111	111
8.	Market appetite and capability	Medium	11	111	111	11	11
Rani	King	1	2	1		1015	1170

Source: Procurement options workshop, January 2015 and Delivery Model Options (Procurement) Assessment, April 2015

As indicated in the above table, a PPP approach can deliver a number of the procurement objectives sought for this project. However, it is likely to be subject to a much longer procurement duration and it is likely to be a relatively expensive solution given the risks that must be borne by the private sector. A PPP option may also lack the levels of flexibility and responsiveness to client needs that are likely to be necessary for this critical project.

The ECI model is likely to be most suited to this project given its size and complex staging and the need for close collaboration with the client to ensure that user requirements can be met fully. The ECI option allows timely procurement and provides a high level of confidence that the Territory's design outcomes will be achieved. ECI enables the parties to work together to de-risk the project to minimise the construction cost with any savings relative to the initial project budget being shared between the parties.

An area where ECI is shown as scoring low relative to PPP is in relation to the criterion for wholeof-life maintenance. This deficiency reflects the fact that bundling of lifecycle maintenance is inherent in the PPP option while it is not normally or easily associated with ECI. However, this deficiency may be more apparent than real for two main reasons:

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- As discussed in this report, it may be difficult to develop an effective maintenance regime
  across the whole site comprising new and existing assets and consequently different levels
  of risk transfer and contract duration. This problem is compounded by delivering new assets
  in two separate phases. Consequently, the advantage of whole-of-life design and
  maintenance ascribed to PPP in the above analysis is somewhat theoretical and there is a
  question as to whether it would be worth pursuing in the context of this project.
- Alternatively, if these difficulties with multiple or two-tier maintenance contracts are able to be managed in this project, then consideration should also be given to a variant of ECI which does permit integration of lifecycle maintenance. While this approach is not seen in practice in the health sector, it may be possible by adapting contractual models used elsewhere in DCM projects in other sectors. A variant option of ECI + M is shown in the above table to reflect the evaluation if ACT Health does wish to pursue a bundled maintenance approach.

The ECI model is also open to criticism that the construction price is not determined through a competitive process at the contractor level (as distinct from obtaining trade quotes) and, while there are incentives (share of savings) and protections (pre-agreed preliminaries and margins) in the model, these may not be sufficient to minimise costs, particularly if there has been some movement in the design brief during the planning phase.

# Competitive ECI approach - variant option

A Competitive ECI approach can mitigate some of the concerns (such as the standard ECI model not minimising construction costs or stimulating contractor innovation). While a Competitive ECI approach requires more effort and engagement from the client agency, it is not significantly more resource intensive than other competitive options (such as PPP) and the extra commitment of effort may be warranted given the magnitude of the overall investment in this project. A variant option of Competitive ECI is shown in the above table to reflect the evaluation if ACT Health is able to commit more resources to conduct the ECI planning phase on a competitive basis.

# 1.7 Project implementation

ACT Health has established a Project Governance structure to oversee the effective delivery of the Project and to ensure there are clear lines of communication, reporting and decision making. An indicative timeline showing the approvals and procurement activities, including an ECI design planning phase if the ACT Government were to choose to adopt this approach, is shown below. The construction timeline past Phase 1a is not depicted but extends for a further six years, with the entire Redevelopment scheduled to be completed by June 2024.

Figure 1-4: Project implementation timetable





# 1.8 Conclusion and recommendation

Assuming that the Redevelopment progresses as proposed by the preferred option, the earliest date that CH is able to fully meet its demand for ED treatment bays and inpatient beds is in four years' time (June 2019) when a small surplus is projected. The availability of this spare capacity is only temporary; as early as 2022-23 (2024-25 for inpatient beds), demand will again outstrip supply and further expansion activities will need to be considered. With this backdrop, failure to advance the work that has already gone into planning the Redevelopment, and/or a delay to the procurement process, will further exacerbate the supply issues and the other infrastructure and efficiency 'problems' identified.

There are many risks and drawbacks associated with a delay to progressing this important project, a summary of which includes:

- Unmet demand for beds is leading to overcrowding and consistently high occupancy rates.
   As a result, quality of care may be compromised with detrimental outcomes for patients. For example, the need to re-admit to hospital which also impacts on the overall cost of care.
- There is risk that CH continues to perform below national benchmarks, for example in relation to key indicators identified earlier (ED wait times and rates of HAIs). Community access to services may also suffer. In addition to the patient care risks, underperformance in key performance metrics may lead to reputational damage.
- CH maintains an integral teaching role with ANU Medical School and University of Canberra. As such, there is a need for the hospital to be able to facilitate modern teaching approaches in a contemporary environment. A delay to the Redevelopment may impact the ability of CH to effectively deliver the teaching program which may, in turn, lead to reputational and relationship risks, with potential attrition to other teaching hospitals.
- The Redevelopment is a key priority contained in the Clinical Services Plan, and is a major component of the Health Infrastructure Plan. A delay to the Project would have an impact on health service delivery and infrastructure planning more broadly, with potential negative flow-on effects to other hospitals and community health care centres.
- The Staging & Decanting Plan is underway and various commitments have been made, for example Building 15 has already been demolished and is soon to be replaced with a temporary demountable to house outpatients currently accommodated in Building 3. A project delay would mean prolonging the temporary style accommodation with negative impacts on patient and staff comfort and would undermine costs already invested in these enabling works.
- Prolonging the use of existing out-of-date buildings with poor configurations and engineering
  infrastructure that has past, or is nearing the end of its useful life, will lead to higher energy
  and maintenance costs.
- The ability to implement new models of care, improve patient flow or embrace new innovative techniques and technologies is not possible within the hospital's existing configurations. A project delay means there will be a delay in achieving the efficiencies generated by such initiatives, estimated to be in the order of 5.2% by 2024-25.
- A project delay may impact workforce sustainability. With a scarce resource pool, there is a risk of attrition to competing hospitals that can offer a more contemporary working environment.



#### Recommendation

ACT Health is seeking approval in principle for the full scope of the two-phase Building 2/3 Redevelopment project, recognising that the proposed staging approach will progressively deliver accommodation milestones over an eight year construction program, commencing in July 2016. The recommendation of this Business Case is that Phase 1 funding be approved so that procurement for an ECI Contractor can be planned to enable capital works to commence in July 2016.

ACT Health is seeking approval for funding for Phase 1 of the project at an estimated capital cost of \$799.9 million (including project support costs of \$27 million). The following table shows the estimated annual budget impact of the Phase 1 capital cost and the Phase 1 incremental recurrent cost.

Table 1-9: Phase 1 capital cost and incremental recurrent cost (nominal \$m)

Phase 1 budge	t impact t	to 2025-2	6 (nomir	ial Sm)							
	2015- 16	2016- 17	2017- 18	2018- 19	2019- 20	2020- 21	2021- 22	2022- 23	2023- 24	2024- 25	2025- 26
Capital cost	-	127.8	236.9	63.9	113.8	257.5	-	-	-	-	-
Incremental recurrent cost	-	-	12.7	(8.4)	(29.8)	(30.2)	(28.2)	(26.0)	(15.5)	1.7	20.4
Total Budget impact	-	127.8	249.6	55.5	84.0	227.3	-28.2	-26.0	-15.5	1.7	20.4

Source: ACT Health