Briefing

Health New Zealand
Te Whatu Ora

Auckland City Hospital Interventional Radiology Stage 1

Due to MO:	9 April 2025	**Reference**	**HNZ00077520**
To:	Hon Simeon Brown, Minister of Health		
From:	Jeremy Holman, Chief Infrastructure and Investment Officer, Infrastructure and Investment Group Mark Shepherd, Deputy Chief Executive – Northern Region		
Copy to:	N/A		
Security level:	In Confidence	**Priority**	Urgent
Consulted	Ministry of Health		

Action sought	**Action required by**
Approve the Business Case to invest $41.2 million from Health New Zealand | Te Whatu Ora depreciation funding for the first stage of investment in Interventional Radiology at Auckland City Hospital.	16 April 2025

Contact for further discussion (if required)			
Name	**Position**	**Phone**	**1st contact**
Aaron Matthews	Head of Infrastructure Planning and Investment	s 9(2)(a)	x
Jeremy Holman	Chief Infrastructure and Investment Officer		

Attachments	
Appendix 1:	Single Stage Business Case – Auckland Interventional Radiology - Stage 1: Stabilise Interventional Neuroradiology Service

Purpose

1. This paper seeks approval from the Minister of Health (Minister) for the Auckland Interventional Radiology: Stabilise Interventional Neuroradiology Service Single Stage Business Case for $41.2 million, to be funded from Health New Zealand | Te Whatu Ora (Health NZ) depreciation funding.

Summary

2. All existing Interventional Radiology equipment at Auckland City Hospital (ACH) is 12-16 years old – 4-8 years beyond end-of-life and will be end-of-support from 31 December 2025. s 9(2)(f)(iv), s 9(2)(g)(i)

   . Current facilities are not fit-for-purpose or sized for new, modern replacement equipment.

3. s 9(2)(f)(iv), s 9(2)(g)(i)

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4. In order to mitigate immediate clinical risks in the timeliest manner for the more vulnerable Interventional Neuroradiology service, the recommended solution is to stage the design and build of one new and three replacement Interventional Radiology operating rooms. Stage 1 will stabilise the Interventional Neuroradiology service while concurrently planning for an end-state four-theatre angiosuite. This approach will also mitigate regrettable spend, subject to approval of a subsequent Stage 2 Business Case, which will be submitted following the completion of preliminary design and robust cost estimates.

5. The Stage 1 Single Stage Business Case was endorsed by the Health NZ Commissioner on 13 March 2025, who also agreed in principle to fund Stage 2 following submission of an appropriate business case.

Recommendations

Health New Zealand | Te Whatu Ora recommends that you:

a)	**Note** the proposal is to address the immediate critical needs for the Auckland Interventional Radiology service through investment in Stage 1 of the programme for the Interventional Radiology.	**Noted**
b)	**Note** that a Stage 2 business case will be submitted by December 2025 following completion of preliminary design to fully realise the investment objectives.	**Noted**
c)	**Note** a philanthropic donation of $2 million has been pledged for the purchase of a new biplane machine to support this investment.	**Noted**
d)	**Approve** the Single Stage Business Case for $41.2 million (Whole of Life Cost s 9(2)(b)(ii), s 9(2)(i) calculated over 20 years), to build a new Interventional Neuroradiology Operating Room and associated services at Auckland City Hospital, while concurrently planning for Stage 2: fit-for-purpose four-theatre angiosuite.	**Yes/No**

Hon Simeon Brown, Minister of Health

Date:

Jeremy Holman, Chief Infrastructure and Investment Officer
Health New Zealand | Te Whatu Ora

Date: 9 April 2025

Background

6. ACH has the largest Interventional Radiology service in New Zealand and is one of the largest and busiest in Australasia. The service provides lifesaving inpatient and outpatient services, tertiary services for the region and some national quaternary services, such as interventional radiology support for organ transplantation and advanced endovascular services. It is also the primary training facility for interventional radiologists in the country.

7. The service incorporates Interventional Neuroradiology, including the rapidly expanding supra-regional Percutaneous Stroke Intervention (PSI) service, and peripheral Interventional Radiology, i.e., intervention to all other parts of the body bar cardiac intervention. It is delivered via a suite of operating, procedure and recovery rooms.

8. ACH has the only service in the Northern Region to provide interventional neuroradiology, including the hyperacute stroke service, acute coiling of ruptured intracranial aneurysms and all paediatric neuro-intervention. This lifesaving service is also provided supra-regionally and – when Wellington Hospital has no service available – for the entire North Island. It is the only site in the country that performs paediatric neurointerventional procedures.

9. All existing equipment is 12-16 years old – 4-8 years beyond end of life and will be end-of-support from 31 December 2025. This will ultimately render this lifesaving equipment unusable when it fails, creating unacceptable clinical risks to patients.

10. Building A32 at ACH was constructed in 2003. It is built structurally to Importance Level (IL) 4 standard and is fitted-out to IL3. The current three-theatre angiosuite (two single plane (peripheral) and one biplane (neuro) was designed 24 years ago as part of the construction of this building and no longer meets the service needs of a rapidly-evolving specialty. This means that replacing equipment in the current angiosuite is not viable as modern Interventional Radiology equipment demands more space than current operating rooms are designed to accommodate. There are no alternatives, new or fit-for-purpose second-hand options available.

11. s 9(2)(g)(i)

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12. Due to the increasing volumes and complexity of patients treated at ACH, together with the highly-specialised nature of this work and critical timeframe from symptom onset to treatment, there is no national alternative to provide these services for patients in the Northern Region.

13. s 9(2)(f)(iv), s 9(2)(g)(i)
for the service as a result of significant non-conformity issues. ACH is at risk of losing accreditation entirely if it does not commit to resolve facility issues and plan for future sustainability.

Discussion

14. The immediate action is to address the pressing risk of significant patient harm due to equipment failure for the region's only interventional neuroradiology service. The Single Stage Business Case proposes to stabilise capacity for the interventional neuroradiology

the existing angiosuite: two single plane and one biplane.

Options assessment

15. Four shortlisted options were carried forward (including discounted 'Do Nothing'). All other options will deliver against investment objectives. The key considerations to determine the preferred option were timeliness to mitigate ongoing and increasing clinical risk, and affordability. All options are detailed in the Single Stage Business Case and summarised in Table 1 below. Each option assumes Health NZ Capital Plan funding, with a charitable donation for a second biplane machine.

Table 1 – Auckland Interventional Radiology Shortlist Options Summary

Option	Overview	Risk Mitigation Indicative Timing		Capital Cost Estimate
		INR	Full service	
1	***Do nothing:*** This option has been rejected as it will result in the existing equipment being unsupported after December 2025 and a complete withdrawal of a lifesaving Interventional Radiology service that serves a local, regional and national need.	N/A	N/A	$0
2	**RECOMMENDED OPTION** **Staged construction of four-theatre angiosuite and associated services. Stage 1: Stabilise Interventional Neuroradiology and plan Stage 2:** This option provides the timeliest solution to reduce significant clinical risk by stabilising the more vulnerable Interventional Neuroradiology service while also designing and planning for Stage 2. There will be no regrettable spend for this option if funding is subsequently approved for Stage 2.	Feb 2027	May 2028	$41.2m
3A	s 9(2)(b)(ii), s 9(2)(j)			
3B				

16. Due to the significant clinical risk associated with this service, Health NZ recommends Option 2 as the quickest way to mitigate risk of significant patient harm for the Interventional Neuroradiology service. Health NZ also accepts that there remains a residual clinical risk with this option until the replacement and expansion of the existing Interventional Radiology Operating Rooms is completed.

17. To mitigate ongoing clinical risk, Health NZ agrees in principle to fund Stage 2 from depreciation funding, subject to submission of an appropriate business case by the end of 2025, following completion of preliminary design cost estimate.

component of the Northern Region Interventional Radiology service and is supported by all regional Clinical Leads. The National Radiology Advisory Group and National Hyper-Acute Stroke Programme Leads have also been consulted, are aware of the significant risks to the service and support this development to end-state four-theatre angiosuite.

19. Should the interventional neuroradiology service fail before it can be stabilised, clinical risks will be mitigated by relocating cases to other interventional radiology theatres at ACH, including the Hybrid Operating Room, fluoroscopy unit, and Child Health biplane. Other regional Health NZ hospitals or private providers will be used when available, noting there are very limited opportunities across the region and capacity is restricted to single plane (peripheral) equipment. This reliance on other services will add to the risk of clinical service failure if, and when, they are not available when required.

Implementation and delivery

20. The key milestones timeline (indicative) shown in Table 2 demonstrates the importance of planning for the full end-state angiosuite. Planning Stage 2 concurrently with Stage 1 will mitigate the risks of further significant patient harm as a result of end-of-support equipment that cannot be repaired, reworks and regrettable spend.

Table 2: Key Project Milestones – Indicative based on approval March 2025

Milestone	Indicative Dates
Engagement of design consultants	March 2025 – April 2025
Design and documentation	May 2025 – February 2026
Decant services	June 2025 – December 2025
Submit Stage 2 business case for endorsement/approval	November 2025
Current equipment end-of-support	December 2025
Construction	December 2025 – October 2026
Go live: new interventional neuroradiology theatre	February 2027

21. Senior Interventional Radiologists are the driving force behind this proposal and have provided strong direction on the physical design and service delivery model. The detailed facility, service design, decant and relocation of other services and Stage 2 Business Case will continue to be developed with key stakeholders.

Financial implications

22. Implementing the recommended option requires a whole-of-life cost of s 9(2)(b)(ii), s 9(2)(j), s 9(2)(g)(i), including a total capital budget of $41.2 million. This project has been reprioritised by Health NZ and funding has been provisioned in the approved Health NZ Capital Plan funded in full by depreciation.

23. As capital costs are based on 'test of fit' which carries an element of risk around design requirements, a construction contingency of s 9(2)(b)(ii) has been provisioned. This will be reviewed at each stage of the design process. Drawdown of the contingency is subject to approval from the Commissioner.

24. A philanthropic donation of $2 million has been pledged irrevocably via the Auckland Hospital Foundation for purchase of a new biplane machine for use in the fourth interventional radiology operating room at ACH.

25. A one-off operating cost of $4.2 million has been requested to provide outsourcing of Cardiothoracic surgery for potentially affected beds should it be required during

construction. This funding will be factored into the 2026/27 Opex budget. In the Profit & Loss, the $2.0 million philanthropic funding will partially offset these additional costs.

s 9(2)(b)(ii), s 9(2)(j)

26. Ongoing incremental Opex of per annum is required for clinical supplies associated with a fourth Interventional Neuroradiology operating room and will be budgeted by the service once the Interventional Neuroradiology operating room is operational in 2027.

Ministry of Health comments

27. The Ministry supports the clinical drivers and agrees with the need for urgent investment to address interventional radiology services at Auckland City Hospital. However, we consider that Health NZ has not sufficiently progressed its planning to ensure the successful delivery of this project to time and budget, and the realisation of the anticipated benefits.

28. We do not understand the rationale for the proposed two-stage approach, given the need to complete sufficient planning and design work to ensure both stages can be successfully accommodated in the proposed location. Health NZ has only completed the “test to fit” design (i.e. pre-concept, the first design stage) for Stage 1. Concept and preliminary design for both investment stages will be completed by November 2025.

29. The completion of preliminary design will provide assurance that the preferred location can support the full Interventional Radiology department. Further design will also increase cost certainty.

30. Health NZ has not provided sufficient evidence of planning to address operational risk of construction works adjacent to the existing Interventional Radiology suite, nor has it addressed the potential impacts of the Hot Water Remediation project.

31. We recommend that you approve the investment in principle but require Health NZ to urgently progress the full business case for stages 1 and 2, supported by preliminary design.

Health NZ response to Ministry of Health comments

32. The two-stage approach is the fastest way to mitigate increasing and ongoing risk of significant patient harm by delivering a new interventional neuroradiology operating room without further delay. It enables Health NZ to design the full end-state angiosuite to 100% preliminary design and continue to design and deliver a new interventional neuroradiology operating room while Stage 2 investment is progressed to approval.

33. The test of fit design work to date encompasses both Stage 1 and Stage 2, providing a reasonable degree of certainty about project delivery that the preferred location can support the full Interventional Radiology department. Design of the full angiosuite from the outset will ensure that building services and workflow are considered early and will provide sufficient planning and design work to ensure both stages can be successfully accommodated in the proposed location. It will also include strategies for minimising disruption to all clinical services, including the existing interventional radiology operating rooms during construction. Designing Stage 2 to 100% preliminary design will also provide cost confidence in the investment proposal to deliver Stage 2.

34. The delay of progression into full design and construction for Stage 1 until the approval of a business case would add eight months to the delivery of that stage. Health NZ’s

approach provides cost assurance at each design stage to preliminary design for full end state and to detailed design for Stage 1.

35. The delivery methodology and programme have been developed to balance project delivery risk with the increasing and ongoing risk of equipment failure, which would have significant clinical delivery impact. Considerations include:

    a) Learnings from similar projects that have been undertaken in a live hospital environment, e.g. Te Toka Tumai Ward 51 and the inflight relocation of Acute Radiology at Middlemore Hospital (from Galbraith building to Harley Gray building).

    b) Assessment of the required works staging to minimise clinical disruptions.

    c) Assessment of room closure requirements to Cardiovascular Intensive Care Unit, including operating expense / provision for outsourcing of services, if required.

    d) Expediating enabling works / decanting packages to minimise risks of critical path delay.

    e) Early Contractor Engagement to improve buildability and disruption management within the live clinical environment.

36. The approved Hot Water Remediation (HWR) project will not impact delivery of Stage 1 or Stage 2 of the Interventional Radiology project. The business case for Stage 1 proposes to change existing local domestic hot water plastic pipework with copper, which will remove the risk of additional remediation to angiosuite pipes during the HWR works. The HWR programme will proactively work with all services in the building to manage service disruption risk.

37. Health NZ therefore continues to seek the Minister of Health's approval to proceed with the recommended staged option, funded from Health NZ depreciation, as stated in the Business Case. This approach will deliver a second interventional neuroradiology operating room in the quickest way, which will reduce the risk of failure of end-of-support equipment. Slowing this process down will increase the risk of significant patient harm.

Next steps

38. Following full approval of this Business Case by the Minister of Health, the Project Team will immediately start procurement and engagement of a design consultant while simultaneously beginning the decant process for impacted services.

39. Planning for Stage 2 Business Case to replace the existing three Interventional Radiology operating rooms will begin.