



**REPORT TO THE MINISTER OF RESEARCH,
SCIENCE AND INNOVATION, DR AYESHA
VERRALL, CONCERNING THE WELLINGTON
RSI PROPERTY PROJECT (WELLINGTON
SCIENCE CITY)**

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Report to the Minister of Research, Science and Innovation, Dr Ayesha Verrall, concerning the Wellington RSI Property Project (Wellington Science City)

The Project

In early August 2022, officials from the Ministry of Business, Innovation and Employment (MBIE) met with Steve Maharey, Dr Charlotte Severne and Professor Peter Hunter (the 'Panel') to discuss what became known as the "Wellington Science City Project – WSCP".

The purpose of the Project is to:

Make Wellington a vibrant, resilient, and adaptable centre of research, science and innovation before 2030 by bringing scientists closer together to increase collaboration and performance.

The Panel was asked:

To develop options and a recommended configuration for the institutional footprint within the Wellington region that best supports enhanced performance of the RSI system, a plan that outlines the process and decision points to achieve this and an estimate of potential costings for consideration by Ministers.

SECTION 1: CONTEXT

The New Zealand science system is highly fragmented: 8 Universities and 7 Crown Research Institutes (CRIs) compete for a very limited pool of Government research funding, with the result that the research infrastructure is inadequate to tackle the science challenges and few groups have the critical mass and resources to be internationally competitive. There is some, but not nearly enough, collaboration between the universities and CRIs to ensure that students are being exposed to research and employment opportunities. The number of start-up companies being generated by the universities and CRIs is well below international benchmarks, with the consequence that the science system is not contributing to the NZ economy sufficiently to encourage Government investment on the scale that many of our international competitors enjoy.

The recently released *Te Ara Paerangi Future Pathways* White Paper provides a clear signal of the Government's intent to create a research system that is better resourced, more internationally linked, more outcome (impact) focussed, with better training opportunities and career pathways for young scientists including Māori scientists, and with a much greater degree of coupling between the educational and basic research capabilities provided by universities and the outcome focus of CRIs.

The White Paper was not publicly available during the Project. This led to some of the participants wondering if the Project might be better delayed until the 'big picture' was clear. While there is some validity in this view, the Panel believes that the 'direction of travel' for science policy has been known for some time. With the White Paper now released, we are comfortable that the work being reported on here is consistent with the intentions of Government.

The presence in the Wellington region of three CRIs (ESR, GNS Science and NIWA), three universities (VUW, Otago and Massey), two independently funded research institutes (Cawthron and Malaghan), and several other Government organisations (Te Papa, the MetService and Callaghan Innovation), many of whom are badly in need of building renovation, presents an opportunity to forge closer research collaborations between the CRIs themselves and between CRIs and universities. The goals of

the Wellington Science City proposal are more use of shared resources, better linkages for career development (including for Māori) and, with the help of Callaghan Innovation, a greater focus on innovation leading to more start-up companies and an environment that nurtures and facilitates the scaling up of these start-ups to become significant contributors to the NZ economy.

Establishing a less fragmented and more cohesive science ecosystem in the Wellington region will also provide a model for the wider science system in Aotearoa New Zealand.

Note that the current project follows on from considerable earlier work:

In early 2021, MBIE commissioned Sapere to explore the possibility of a more integrated approach to capital investment in property in the Wellington region. CRIs were asked to take a “Crown perspective” rather than an individual institution perspective to enhance the opportunity for greater integration.

Sapere concluded that:

- The timing is right to consider the opportunity for change;
- The Wellington science system would be strengthened by focusing on regional strengths; and
- There is evidence from international literature in support of co-location of science capability.

In late 2021, Wellington-based CRIs and universities participated in a process aimed at determining key capabilities and possible locations. The subsequent report identified a number of options for co-location with the preferred configuration being:

- Public health and wellbeing – based at Newton with a “corridor” extending to the Massey University campus at Mt Cook through to the Victoria University campus at Kelburn
- Climate resilience and adaption, natural hazards and ecosystem health, conservation and natural resources – based at Kelburn and/or Greta Point
- Advanced manufacturing and materials, energy futures and biotechnology – based at Gracefield

The intention was that the locations be networked and that “cross-cutting” issues such as Māori researchers, student pathways and innovation/ commercialisation would be included in any proposal.

The Process

This report is concerned with Phase 1 of the Project. If the recommendations are accepted, Phase 2 will involve the preparation of budget bids for Budget 23.

The main activities were:

- The Panel met with the Chairs and Chief Executives of ESR, GNS, Callaghan and NIWA; and representatives from VUW, Otago, and Massey universities, the MetService and Te Papa on the 30th of August 2022 to outline the Project and answer questions. The Minister also addressed the participants and outlined the Government’s commitment to the project.
- Clusters groups were formed based on the three identified groups of capability. The Clusters were coordinated by Dr Richard Blaikie of Otago University (OU), Hayden Whelan (Callaghan) and Dr Margaret Hyland and Dr Ehsan Mesbahi (VUW). Throughout the process, Clusters (later referred to as Collaboration Centres) met frequently and ran in-depth workshops.
- The Clusters were asked to produce a report outlining a preferred configuration for research and associated infrastructure in the Wellington region.
- Each week, Coordinators of the Collaboration Centres met with the Panel, the Programme Organiser and MBIE to review progress.
- The Panel members visited all sites and discussed the project with all participants.
- At a mid-way point in the Project, the Panel met with the Minister and produced advice to the Centres identifying what questions needed to be answered in their reports. The advice

included what investment might be made by the Government in addition to any other funding coming from participants and other sources.

- A meeting, hosted by Wellington NZ and facilitated by Steve Maharey, was held for key opinion leaders.
- Dr Severne liaised with mana whenua leaders in the Wellington region.
- Professor Hunter discussed the project with science leaders.
- Clusters (Collaboration Centres) delivered their final reports on the 9th December. Reports were also received on a Collaboration and Engagement Hub at Victoria University and a Māori researchers' network.
- Several individual conversations took place during the process to address specific issues.

This was a demanding schedule, so thanks are due to the coordinators and the many people who took part.

SECTION 2: CENTRE PROPOSALS

The Centres were asked to produce a report that responded to a number of key areas of interest, which they have done. In this section of the report, the Panel has summarised the essential features of the Reports. In the following section, we provide an overview of how the Wellington Science City might look in its entirety.

Summary of proposed Science Collaboration Centres

The proposals are aimed at consolidating science in the Wellington region around three new centres for collaborative research:

- A Health and Wellbeing Research Corridor from Kelburn to Newtown
- A National Centre for Research on Oceans, Climate and Hazards at Greta Point
- A Research, Innovation and Technology Park at Gracefield

For each of them we summarise the specific proposal made by each of the working groups, including the costs.

Centre 1: A Health and Wellbeing Research Corridor from Kelburn to Newtown

The long-term ambition for the WSCP is to create a health research corridor from Kelburn to Newtown through Mt Cook. Kelburn is proposed as the **preclinical hub** with the biomedical research strengths of VUW and the Malaghan Institute. Newtown is proposed as the **clinical hub**, including both Wellington Hospital and the University of Otago's Wellington based Medical School, and housing a proposed new Pandemic Response Centre. It will also house a policy and community facing research centre. A third **surveillance hub** (e.g., wastewater surveillance) is also proposed at Kenepuru (hosted by ESR), strongly linked with the Pandemic Response Centre at Newtown. There is also a health policy dimension to the proposal, via VUW's Pipitea campus in the Wellington CBD.

In the shorter term the focus is on the preclinical facilities at Kelburn and the clinical facilities at Newtown, but this is the first stage of establishing a more comprehensive health precinct in Wellington that also includes Massey University's more social health science focussed activities at Mt Cook, which are seen as complementary to the other components.

The participants in the discussions for this centre were VUW, the University of Otago, ESR, the Malaghan Institute, and Callaghan Innovation. The link with basic biomedical science at Kelburn (both VUW and Malaghan) and to the associated undergraduate and postgraduate student engagement is seen as vital to ensuring a sustainable pipeline of research scientists. The opportunities for a greater focus on spinout companies in both biotechnology and medical technology (particularly in collaboration with the national Medtech-iQ initiative) will be enhanced by strong engagement with Callaghan Innovation and the facilities for commercial scale-up at Gracefield under Centre 3 (including the GMP facility and the manufacturing resources at the Ferrier Institute and the Robinson Institute).

Three options were considered: (i) The status quo – discounted as being too distributed, having too much duplication of resource and, without shared space and facilities, having insufficient incentive to collaborate; (ii) the preferred and therefore proposed health corridor with outreach at Kenepuru; and (iii) a single site at Newtown – discounted as too disconnected from the biomedical science capability and students at VUW and too vulnerable to earthquake risk.

Costs

The proposed occupancy and construction costs are shown in Table 1. There are no operating costs being sought from the Crown for Centre 1.

Table 1: Occupation and construction costs

Hub	Location	# People	Area sqm	Capital Cost
Health and Wellbeing Research Centre	Likely Newtown	To be determined	6,000	Confidential advice to Government
Preclinical hub	Kelburn	506 total Commercial Information	12,600	
Clinical hub	Newtown	243	6,510	
Surveillance hub	Kenepuru	Commercial Information	3,850	

Centre 2: A National Centre for Research on Oceans, Climate and Hazards at Greta Point

A multi-institutional centre for collaborative research on oceans, climate and hazards is proposed based primarily at Greta Point but with a footprint at VUW in Kelburn and some specialist facilities at Gracefield (e.g., the particle accelerator). This would effectively define a national centre for marine research at Greta Point with each CRI and university contributing its complementary expertise in a vitally important area of research for Aotearoa NZ and one that would greatly benefit from much greater cross-institutional collaboration.

The key players in this area are NIWA, GNS Science, VUW and the MetService who are currently spread over five sites at Greta Point, Gracefield, Avalon, the CBD and Kelburn. It should be noted that the primary contributors to the proposal were NIWA and VUW. GNS were participants in this discussion but proposed that they maintain their capabilities at the Gracefield site while ensuring there would be collaboration with scientists located at the Greta Point site.

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Both GNS Science and the MetService were invited to participate and strongly encouraged by the panel to take advantage of this opportunity to consolidate capability and resources for the national benefit.

Endorsements of the proposal were made by the National Emergency Management Agency (NEMA; Te Rākau Whakamarumarū), the Greater Wellington Environment (Te Pane Matua Taiao), and the Director of Collections and Research at Te Papa Tongarewa.

Much of Aotearoa NZ’s climate, oceans and hazards capability is located in Wellington. The majority of Aotearoa NZ’s specialist expertise and facilities in bio-physical climate science, environmental forecasting and weather hazards, and marine and fisheries science are located at NIWA’s Greta Point site; geological hazards and paleoclimate at GNS Science at Gracefield; and disaster research and risk reduction, informed and shaped by mātauranga Māori research, at Massey University. VUW hosts the Antarctic Research Centre (that includes NIWA and GNS Science) and is a participant in the QuakeCoRE, a TEC-funded Centre of Research Excellence. With appropriate coordination by the Mīmīro-Wellington Science City Centre at VUW, the proposal should significantly strengthen these cross-institutional collaborations.

Costs

The proposed occupancy and construction costs are shown in Table 2.

Table 2: Centre 2, Occupancy and construction costs

Hub	Location	People	Area sqm	Capital Cost
Oceans, Climate and Hazard Research Centre	Greta Point	To be determined	25,128 sqm (over two titles - incl. outdoor experimental area, boat mobilisation areas etc), 60,246 sqm workshop, laboratories, workshops etc	Confidential advice to Government
	Kelburn	To be determined	2,348 sqm workspace, laboratories, workshops	

Centre 3: A Research, Innovation and Technology Park at Gracefield

With VUW’s Ferrier Institute, the GMP drug development and fermentation expertise and resources at Callaghan’s GlycoSyn facility, and the involvement of the Malaghan Institute, the Gracefield Innovation Quarter (GIQ) currently provides substantial research and development capacity in biotechnology. Since it is also the only location that has significant space for colocation of biotech companies, Gracefield is proposed as the only logical location in the Wellington region for a biotech innovation precinct. The GIQ also hosts engineers and physicists from Callaghan Innovation, VUW’s Robinson Research Institute and GNS Science, who are working on advanced manufacturing, advanced materials and energy futures research (including green hydrogen and decarbonisation technologies).

The partners involved in Centre 3 (Callaghan Innovation, VUW, GNS Science and the Malaghan Institute) argue that more infrastructure is needed to help early-stage deep technology companies scale up their activities to make the GIQ competitive with Australia and the US for supporting commercial investment by companies such as Bridgewest Ventures and Thermo Fisher Scientific. There is much evidence from around the world showing that creating ecosystems for start-up companies leads to higher levels of connectivity, collaboration and ultimately commercial success. It is argued that Gracefield should be the innovation precinct for the Wellington region with incubator space and support services to help nurture spinout company activities across all areas of science and to help start-up companies mature and scale-up as they move away from their co-location within the research groups that spawned them.

Another argument for developing the Gracefield site (as opposed to downtown sites) as a research, innovation and technology park is the number of people who live in the areas north of Wellington. This will become particularly important as the number of spinout companies grows and therefore the requirements for access to work and associated facilities (schools, shops, etc) increase for a growing number of employees.

Costs

The proposed occupancy and construction costs are shown in Table 3.

Table 3: Centre 3: Occupation and construction costs

Hub	Location	People	Area sqm	Capital Cost
Research, Innovation and Technology Centre	Gracefield	To be determined	19,545 sqm excl. ION beam and Particle accelerator facilities	Confidential advice to Government

The Centre 3 proposal also involves operating costs sought from the Crown rising to Confidential advice to Government before levelling off at Confidential advice to Government in outyears (driven largely by depreciation and maintenance expense).

Note

The Panel believes that taken together the Centre proposals, adequately funded and coordinated, will have an overall net positive impact on regional and national development. At a regional level, the construction of new buildings, the possibility of linking to other projects and the identification of Wellington as a centre of world excellence will be beneficial. At the national level, the Centre proposals represent a major step forward for research, science and innovation as well as providing a clear signal for the direction of future capital investment.

The Māori Network proposal

Included within the Terms of Reference was the need to consider ‘the special relationship with Māori under te Tiriti o Waitangi, including the aspirations of mana whenua’. Further direction provided by the Panel requested consideration be given for operational expenditure to establish a sustainable Māori network. Institutions that have participated in the development of that proposal include Callaghan Innovation, GNS, NIWA, ESR and VUW. It was indicated that the Māori network should be considered complementary to centre proposals, the Mīmiro Engagement Hub proposal and established initiatives such as Te Pūnaha Hihiko: Vision Mātauranga Capability Fund, and Ngā Pae o te Maramatanga: Kanapu Programme.

The Māori Network proposal has two key pou:

- 1) **Support across and beyond centres:** A Rōpū Māori is established which aims to rangahua (raise or lift with a lever) outcomes for Māori within the Wellington Science City centres and beyond. The Rōpū Māori would be made up of senior Māori leaders from across the Wellington Science City organisations and supported with appropriate resources (funding and FTE). The Rōpū Māori would sit alongside the proposed Mīmiro Engagement Hub at VUW’s Kelburn campus to partner in setting direction, priorities and coordination of the Wellington Science City.
- 2) **Additional resources within centres:** Additional resources dedicated to Māori-focused teams in each of the three centres (funding and FTE) to continue to deliver existing workstreams for each respective entity, while responding to priorities that are identified by the Rōpū Māori.

The establishment of the Rōpū Māori is thought to provide an avenue that supports increased effective engagement between Māori and non-Māori on matters of mutual interest within the Wellington Science City. The timing and extent of engagement will be guided by the engagement framework developed by Te Arawhiti outlining guidance for when the Crown engages with Māori.

It is proposed that the focal point for Rōpū hui and wananga would be within the Living Pā at VUW. In addition, an expectation has been relayed to centre leads to incorporate a physical environment that is welcoming to Māori in each respective proposal. The physical spaces in each centre will support the existing decentralised model with Māori capability residing across each of the centres to continue to tautoko kaupapa Māori in line with the centre's focus.

It is suggested that Te Rōpū Māori would be primarily focused on ensuring timely and coordinated engagement which is complementary to the engagement being led by Māori capability in each of the centres. Greater coordination within the Wellington Science City will be achieved in partnership with the Mīmiro Engagement Hub. Given the expectation for demand on Māori capability in each collaboration centre to increase, Confidential advice to Government

Mīmiro Collaboration and Engagement Hub

The proposed Mīmiro Collaboration and Engagement Hub (“the Mīmiro Hub”) has a role to play in the integration and coordination of the three centres in the WSC. The intent of the Hub is to facilitate purposeful and serendipitous collaboration and enable innovative student training and capability building to meet the need of our future workforce. It will build future collaborations, capabilities and capacities, allowing us to address global, societal, and industrial challenges through a culture of collaboration and innovation.

The Mīmiro Hub presents a unique opportunity to super-charge collaboration across Wellington's research environment, create efficiencies as a result of scaling up our infrastructure and activities, and raise the profile of Wellington and the excellent and impactful research done in the region. It intends to develop a culture of innovation that looks beyond commercialisation into innovative policy and solutions and strengthen the cross-disciplinary research that is needed to solve the problems faced here in Aotearoa New Zealand and globally.

The Mīmiro Hub will be hosted by Te Herenga Waka – Victoria University of Wellington as part of the Mīmiro-Wellington Science City. It is proposed that it can be initiated before the physical infrastructure is in place. In the first year, the focus will be on bringing the Wellington Science City partners together in a forum to agree the governance and oversight arrangements and establish the key roles including a Director that will support its establishment and functions. Co-funded by member organisations, Confidential advice to Government

Cross-cutting activities

The Mīmiro Collaboration and Engagement Centre and the Māori Research network proposals have the support of all Collaborations Centres. All Centres have included evidence of how they will support innovation/commercialisation and enhanced student pathways in their proposals.

SECTION 3: PANEL VIEW OF CENTRE PROPOSALS

Overview

In this section of the Report, the Panel wants to provide a coherent overview of the Wellington Science system drawing on the papers prepared by the Centres and summarised above.

Our priority, as required by the Government, is to focus on how best to organise the science capabilities in the region to encourage collaboration and high performance.

We noted that this Project began as a result of Wellington-based CRIs either tabling business cases to Government for capital development or indicating that they would be doing so in the near future.

All CRIs share the challenge of aged, non-compliant and inadequate capital assets. During this Project (extending back through 2021), CRIs have indicated that the issues they are facing have become more urgent.

An important dimension of this Project is the interest shown by universities based in Wellington (VUW, MU, OU) exploring colocation with CRIs as many of their assets were also not fit for purpose and non-compliant.

Mīmiro

We believe the appropriate place to begin our overview is with Mīmiro – the Collaboration and Engagement Hub proposed by VUW and supported by all the Centres.

If the Wellington Science City Proposal is to maximise collaboration, Mīmiro offers:

- the opportunity to coordinate the activities of the Centres;
- a central point for seminars, conference and similar activities;
- a liaison point for Te Ropu;
- links to Government and private organisations;
- access to the wider disciplines within the University;
- collaboration with Otago and Massey universities, and;
- a student pathway through to careers in research, science, technology and innovation.

In short, Mīmiro would operate as the Hub for the Wellington science community.

The Hub is seeking no funding at this point. It anticipates co-funding from the Centres to support staffing. Revenue would also come from other activities. The Panel supports this proposal.

Centre 1 - Health and Wellbeing

The Panel supports this proposal as it stands with one reservation that we explain below. In essence, the Centre is already in operation with collaborations between various public and private institutions at Newtown and through Mt Cook to Kelburn.

However, many of these assets are seismic risks, out of operation, or outdated. During its visits to the sites, the Panel saw at first hand the unsatisfactory state of these buildings.

The compelling case for Government investment is that the parties are willing and able to make a financial contribution. With funding from the Government, this Centre (and the corridor it will evolve into) could grow rapidly to be one of the leading health and wellbeing areas of focus in the world attracting private and Government interest.

The Centre would also house a new Pandemic Centre, through the relocation of staff from ESR, to ensure New Zealand is well prepared for any future emergencies.

The inclusion of a policy and community facing research centre at Newtown will encourage greater interaction with the public sector and the community.

Our reservation is that while ESR has indicated as part of the Centre proposal that they intend to relocate ^{Commercial Information} staff from Kenepuru to Newtown, the Panel believes that this could be reviewed given the need to ensure critical mass is present on site. We should note here that ESR will retain capacity for its other services at Kenepuru ^{Commercial Information}

The Malaghan Institute, which is predominantly located at VUW, would also strengthen its footprint at Newtown.

In short there is pressing need to move forward with this proposal because of the state of assets and the already existing collaborations between public and private institutions which can be built on for considerable gain.

This proposal may need to be progressed in the immediate future given that Otago University has an urgent need to replace its main building as it is a seismic risk making it unable to be occupied. Otago has indicated that it is ready to invest alongside other funding.

Centre 2 - Oceans, Climate and Hazards

The panel supports this proposal although it has some concerns. The proposal indicates the Centre would include the capabilities of NIWA and VUW with links to GNS and MU. Most activity would be located at Greta Point with a small footprint on the Kelburn campus of VUW.

NIWA has for some time now been planning an upgrade of the Greta Point site that it occupies on its own. NIWA was able to self-fund this development. They are still in a position to make a considerable contribution to costs.

Originally, this Centre was proposed to be sited in Kelburn. However, it quickly became clear that the costs of building and disruption to staff in CRIs made this unattractive. ^{Commercial Information}

This level of co-location is feasible given that a development at Greta Point could potentially accommodate 600 people. The wet collections currently located at Greta Point could be co-located with Te Papa's newly purchased facility.

GNS has however indicated that, while it wants to collaborate in the area of hazards, it believes that its capabilities should be retained at Gracefield. It is the view of the Panel that co-locating GNS's hazards capability at Greta Point is still worthy of exploration because there will be better day-to-day opportunities for collaboration in hazards science (for example, in the areas of marine geology, planning and social science, and landslide modelling) directly related to climate and ocean science.

GNS has consistently raised concerns about the resilience of the Greta Point site. This is a valid concern, but the Panel understands that mitigations have been clearly identified by NIWA. This should be independently assessed should a business case be developed. It is worth noting that there are very few sites in the Wellington region that do not have resilience issues.

Legal professional privilege

^{Commercial Information} However, it is the view of the panel that the Government should consider further if there is merit in co-locating NIWA and the MetService because, from a scientific perspective, the institutions have compatible climate and weather forecasting capabilities.

It is the Panel's view that the Government consider ensuring hazards related science capability at GNS is located at Greta Point, and we think that consideration should be given to the MetService being located at Greta Point.

The proposal includes a small footprint at Kelburn where 20-30 people and 2-3 specialist laboratories would be located. Should the pre-clinical proposal outlined in the Centre 1 report be accepted, there would be useful links between this development and Centre 2 activities.

The Panel notes that this proposal could be advanced in the immediate future given that NIWA is in a position to fund initial development.

Centre 3 – Research, Technology and Innovation Park

The Panel supports this proposal, although it does have some concerns. The Centre has proposed an Innovation Park concept which, fully developed would require something in the order of [Confidential advice to Government] investment.

The Panel believes that this vision is worthwhile, but not able to be funded at this time. The approach favoured is to invest in a way that lays the foundation for future development.

The proposal has been reworked within a budget of [Confidential advice to Government]. It includes Callaghan, GNS, VUW, Malaghan and has support from the investors, private business and local government.

Callaghan has already received [Confidential advice to Government] in funding to develop aspects of the site which include seismic risks, flooding risks and a range of renovations for buildings that are not fit for purpose. What is proposed now would result in a complete reorientation and upgrade of the lower campus.

The area of concern to the Panel is the way the proposal might be best configured. Gracefield is comprised of a lower and upper site. The proposal is for the development to take place at the lower site except for a 2,800 m² new build for the Ion Beam and Particle Accelerator facilities at the upper site. The proposal is for development to take place across both sites. While it is possible to see activity located on both sites over future years, it is the view of the Panel that priority should be given to funds being used for development of the lower site.

To be clear, we are suggesting that all interested parties are integrated onto the lower site. At a later date, it may be of value to develop the upper part of the site. This would make best use of available funding.

VUW has suggested that elements of the Ferrier Institute be shifted from Gracefield to the Kelburn site. The Panel understands that the rationale for this is that the Ferrier Institute has synergies with Centre 1. However, there are also significant synergies with Centre 3 activities where the Ferrier Institute also provides critical mass. Whether the net benefits of a shifting outweigh the net benefits of staying on the Gracefield site will need to be explored.

We have noted that there is interest from the investment sector, specifically Bridgewest, and from local Government.

We also want to draw attention to the significant investment being made to resilience, urban regeneration and access by a range of parties (inclusive of local and regional government) through already committed infrastructure projects. These developments will ensure that a large community of businesses and skilled workers can be located in the vicinity of Gracefield. The Panel has made available background work to MBIE on this matter.

There are concerns with resilience on the lower site, but the panel understands that considerable mitigation against these risks is in place. This can be mitigated by careful building placement, as well as engineering solutions that respond to the most up-to-date Greater Wellington Regional Council data, and in particular the best available science. The Panel believes that there is considerable incentive to fast track this development given the unprecedented construction to be undertaken in Lower Hutt.

The Māori Network proposal

The Panel connected with mana whenua groups early in the process. There was significant interest by the parties to be involved as they have property, significant development capacity and are committed to growing their research capacity. For funding reasons, utilising land not owned by the Crown and / or participating organisations limited our ability to progress the utilisation of Iwi whenua.

The opportunity to consider their development capacity should not be overlooked but was out of scope for the Panel.

We found it challenging to involve Māori researchers and administrators in this exercise and, consequently, it was difficult to define what might be done about the need to promote Māori research and researchers. To avoid misalignment of Māori interests in individual centre proposals, the Panel agreed to the development of an overarching response to create a sustainable Wellington Science City Māori Network.

The Panel supports a Rōpū Māori being established to improve outcomes for Māori within the Wellington Science City centres and beyond. In addition, we agree that Rōpū Māori would be made up of senior Māori leaders from across the Wellington Science City organisations and supported with appropriate resources (funding and FTE). The Rōpū Māori would sit alongside the proposed Mīmiro Engagement Hub at VUW's Kelburn campus to partner in setting direction, priorities and coordination of the Wellington Science City.

We believe the development of manawhenua researchers and associated research programmes would be greatly enhanced through the proposed Rōpū Māori and Mīmiro Hub

The proposed operational funding of Confidential advice to Government per annum would assist an already identified area of critical underinvestment. Legacy issues in the RSI system for Māori research and researchers will not be entirely addressed through the Māori Network proposal. However, it will provide much needed space and funding for researchers who have struggled within their organisations for visibility and voice. If operationalised and supported through good governance, this opportunity can be rolled out into our other cities and regions.

Student pathways

It is critical that the Wellington science system brings together universities and CRIs to build an accelerated pathway for students into related careers.

All the Centre proposals have built this into their plans. Mīrimo at VUW can provide the overarching links needed and the three Wellington based universities (VUW, MU, OU) can provide the pathways.

Innovation

It is clear that not only the Wellington science community but the whole New Zealand science system is underperforming in the area of innovation and commercialisation. The problem is partly the lack of incentives and a sophisticated system that supports these activities.

Callaghan Innovation is key to resolving this issue and the Panel believes the Centre proposals indicate there is support for much greater coordination of innovation and commercialisation activities. Callaghan can also coordinate with the resources found at VUW and some of the CRIs. The aim should be to provide a highly collaborative approach to innovation and collaboration.

WSCP Funding

By way of summarising the Panel's view of how this system would fit together, the thinking above is represented in the following table.

Confidential advice to Government



Confidential advice to Government



SECTION 4: DELIVERY OF PROPOSED INFRASTRUCTURE

There will be numerous challenges in delivering the scale and complexity of the WSCP projects Confidential advice to Government due to the tight labour market, supply chain and shortage of some construction materials, and rising cost escalation. However, there are established management approaches to ensure that these challenges are planned for and mitigated where possible.

Given the nature of the WSCP centres being spread across multiple locations, the scale and complexity of the proposed builds, and the benefits that it brings, there is a strong case that a Programme management approach be used in the development and delivery of the WSCP projects, governed by a WSCP Implementation Group. A programme approach would mean advancing the three Centres together (rather than each Centre individually) and provide a wide range of benefits including a consistent approach to management, cost savings through shared resource, improved management of cost contingencies, risk allocation, programme reporting, and measuring benefits at a programme rather than a project level.

There are opportunities for 'quick-wins' and fast-tracking proposals, but funding certainty is required for the partners to progress proposals.

Opportunities for fast tracking delivery include using the partners' contributions to capital costs to commence planning and early works. At a programme level this is approximately Confidential advice to Government



For Gracefield, there is the potential to piggyback on the significant investment in the Lower Hutt region in providing resilience and improved access to the area. Given the unprecedented level of

workload in/around Hutt City, and there is an opportunity to optimise the resource levels through smart procurement including packaging the work. Packaging procurement, will attract considerable interest and the consortia could be procured quickly within 5-6 months to progress planning, design, and construction.

If traditional procurement is undertaken, looking at a wide range of recent vertical construction projects delivering a build of a Confidential advice to Government, construction is taking four to six years. Allowing for the development (and approval) of the business cases, the design of the builds, and the procurement of the main construction contractor(s), it is anticipated that the construction works for the WSCP projects would not likely commence until 2026. Confidential advice to Government

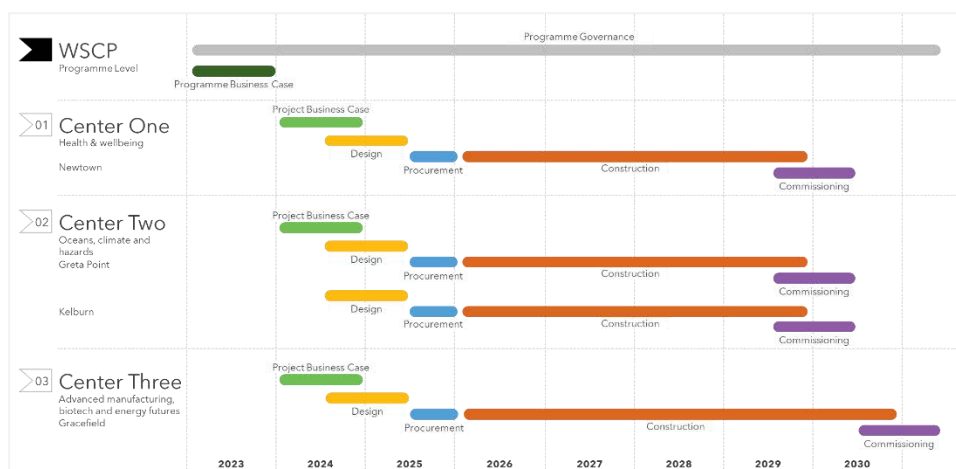
██████████ So, whilst funding certainty is required at the outset, and there are opportunities for ‘quick wins’ the large spend is unlikely to occur until 2027 and 2028.

Indicative Delivery Timelines

To successfully deliver a construction project in the New Zealand public sector there are established best practice processes required to be undertaken to ensure that a project will be appropriately considered, planned, funded, and delivered to achieve the agreed project objectives and desired outcomes.

The key steps of the life of a construction project include i) the development, and approval, of a business case for the project to be funded, ii) designing the building, iii) procuring the construction contractor, iv) the construction of the building, and v) commissioning the building so that it is ready for operational use.

Figure 1: Indicative timeframes



The diagram above illustrates an indicative timeline of the main activities required if opportunities are not undertaken to fast track to complete the builds based on the scale and complexity of the WSCP projects.

Indicative Construction Costs Cashflow (Programme approach)

While sufficient funds to pay for the entirety of the WSCP projects is essential, and will need committed funding from the outset, an additional consideration is the timing of when the funds are to be spent over the life of the project(s).

Confidential advice to Government

SECTION 5: NEXT STEPS

If Ministerial approval is obtained and funding secured in Budget 2023, the suggested actions required, and key milestones to be met, to ensure the success of the WSCP projects include:

- Continue the integrated pathway and agree to a Programme approach to manage the collection of WCSP projects.
- Continue the consultation and engagement with Treaty Partners and key stakeholders.
- Engage a delivery partner that:
 - Has experience in managing and delivering large scale infrastructure projects.
 - Has experience in managing multiple interfacing projects within a Programme to deliver an integrated approach to managing the projects.
 - Has established systems and processes to ensure good project controls over cost, time, scope, and quality.
 - Is appropriately funded to be able to provide the required service.
 - Can provide the relevant governance forum with the necessary confidence that the projects can be successfully delivered.
- Establish a Programme governance group to oversee the WCSP projects.
- Develop a programme business case that describes the overarching WSCP strategy, considers the challenges the projects face, and ascertains realistic expected costs and timeframes for the WCSP projects to be successfully delivered. Obtain approval to proceed.
- Develop individual project business cases, to be aligned with the WSCP overarching programme business case, and approval obtained to proceed.
- Develop business and user requirements and design building.

^[1] The projects sampled include Massey University Innovation Complex Albany Campus, Parakiore Recreation and Sport Centre, University of Auckland New Recreation and Wellness Centre (B310), Te Wao Nui Wellington Children's Hospital and The Otago University Christchurch Campus Development.

- Procure main works contractor(s).
- Commence construction.