Eastern Porirua Community Regeneration

Single Stage Business Case

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TE TĀHUHU O TE MĀTAURANGA

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TE MANATŪ WHAKAHIATO ORA

Housing New Zealand
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HLC

Single Stage Business Case

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Executive Summary

Introduction

This single-stage business case seeks a commitment to invest up to $241.403m over the first 10 years of the project to regenerate eastern Porirua. Over the 25-year life of the project, funding requirements reach a cumulative maximum of $494.194m in 2037, with a final net requirement of $246.132m as the project begins to run large cash surpluses and return funds to the centre.

Investing in housing assets, community infrastructure and better social services has the potential to deliver significant benefits.

This business case is divided into five sections, each with a different purpose:

a. The **Strategic Case** brings together the views of stakeholders across Government, Porirua City Council (PCC) and Ngāti Toa to confirm the strategic context and the case for change.

b. The **Economic Case** identifies a wide range of potential options and undertakes analysis of the costs and benefits (including fiscal, economic and wellbeing benefits). A preferred option is then chosen which optimises the impact of investment on net wellbeing and community resilience.

c. The **Commercial Case** assigns roles, responsibilities and governance arrangements.

d. The **Financial Case** determines the funding requirements for the project.

e. The **Management Case** sets out a benefits realisation framework, key risks and next steps.

NOTE: The scenarios and analysis used in this business case are indicative and do not represent firm and final plans. To determine whether there is a case for investment, it was necessary to develop scenarios to understand the scale of the issue and the types of actions and investment that could be taken. If this business case is approved, the detailed plans for implementation will be developed through processes including community and tenant engagement.

Strategic Case

Background

Porirua City has a diverse population, with one of the highest average household incomes in New Zealand. However, there are large distributional differences. Eastern Porirua has some of the highest levels of deprivation and household crowding in the country, while new developments such as Whitby and Aotea are some of the least deprived.

Eastern Porirua today is a low socio-economic status area, with mainly decile one schools and a score of 10 (most deprived) on the NZ Deprivation Index. For many people, eastern Porirua has a bad

reputation, but not among the people who live there. For the area's 18,000 residents, 'Eastside' is home and has strong and vibrant communities.

The strategic context

Eastern Porirua is in need of community regeneration. Other large areas of public housing around New Zealand are already undergoing regeneration or redevelopment, particularly where market conditions are favourable. At present, Housing New Zealand (HNZ) is not funded to undertake a regeneration in eastern Porirua and investment will not occur without a whole-of-Government approach to realising the potential benefits.

The strategic opportunities for Porirua that are presented by Transmission Gully and changes to the planning environment mean that the timing is right for an integrated approach incorporating housing, community infrastructure and social services.

A regeneration programme aligns with multiple strategic objectives for Central and Local Government, including:

a. delivering affordable housing in a time of worsening shortage in supply

b. improving the wellbeing of eastern Porirua public housing tenants and addressing the current renewal liability for HNZ stock

c. improving amenities, community infrastructure and connectivity in a way that benefits the wellbeing of all eastern Porirua residents, and

d. building resilience in the community.

Investing in these outcomes is expected to deliver fiscal, economic and wellbeing benefits.

The case for change

Key stakeholders identified four investment objectives for this proposal. Potential benefits were determined based on local and international evidence of the likely impacts of investment.

The largest quantifiable benefits are related to improving public housing stock. There are many potential benefits from better neighbourhoods and a more resilient community, but these are of smaller magnitude and are harder to quantify.

Investment Objective One	Better housing choices
Existing Arrangements	People in eastern Porirua have limited options for housing typologies and quality is poor. Eastern Porirua and the Wellington Region are experiencing rapid growth in both house prices and rents, resulting in negative social impacts. There is insufficient land supply or development capacity to change this under prevailing planning and market conditions.
Community Needs	Well-planned optimisation of the use of Government land that delivers a range of public, affordable and market housing supply at scale. Regulatory, economic and social pressure to improve the quality of private market stock.
Potential scope	**Potential Benefits**
• New public, affordable and market housing with a range of tenure options	Improved housing stability Recruitment and training of people in Eastern Porirua in the construction sector, reduced jobseeker benefit

	Increased housing supply in an area of increasing shortage

Investment Objective Two	Public housing is built for the needs of people now and in the future
Existing Arrangements	Most of the Porirua public housing portfolio is old and not fit-for-purpose. The existing portfolio does not match demand, and causes significant asset and tenancy management issues for Housing New Zealand.
Community Needs	A portfolio that is warm, safe, dry and meets modern design standards.
Potential scope	**Potential Benefits**
• Retrofitted public houses • Redeveloped public houses	Subjective wellbeing gained from better mental health, better housing, living in a warmer home and feeling more healthy Fewer hospitalisations from infectious diseases due to overcrowding and fewer incidences of respiratory illness from damp or overcrowded homes Fewer specialist visits from improved mental health and reduced rates of depression Improved school attendance from better health outcomes and improved performance at school with less disruption in the home environment Optimised housing portfolio for HNZ Decreased Income Related Rent Subsidy (IRRS) costs through improved matching of public housing to tenant needs and reduced electricity costs from more energy efficient homes

Investment Objective Three	Neighbourhood quality
Existing Arrangements	Porirua has areas of high concentration of public housing, schooling challenges and poor neighbourhood amenity with perceived safety issues. Urban form does not support and enable connectivity and active transport.
Community Needs	Less concentrated areas of disadvantage, with good public and neighbourhood amenity that supports people feeling safe and connected to each other. Urban form supports connectivity and active transport. Local schooling is perceived as an asset in the community.

Investment Objective Four	Prosperous and resilient community
Existing Arrangements	Social capital in eastern Porirua is a strength, but the area suffers from concentrated economic disadvantage.
Community Needs	Regeneration will attract new people into the community, but this needs to be done in a way that enables local people to stay, achieves community buy-in through reflecting their identity and culture, and identifies opportunities for the community to be better-served by public funding.
Potential scope	**Potential Benefits**
	Subjective wellbeing gained from better connection with neighbours, improved physical health and feeling safer.

- Masterplanning with reduced concentration of public housing
- Road realignment
- Pedestrian and cycling infrastructure
- Enhancement of parks
- 3 Waters infrastructure
- Renew and invest in schooling
- Changes to social service delivery

Being more active via walk and cycle ways improves fitness, reduces diabetes and cardiovascular disease risk.

Improved productivity from reduced rates of depression

Better school attendance and progression to higher education from neighbourhood effects

Recruitment and training of people in Eastern Porirua in the construction sector, reduced jobseeker benefit

Reduced incidence of crime

Community resilience from more effective services and better social interactions

Economic sustainability from a more mixed-income community

Improved environmental sustainability from more efficient houses and better urban form

Economic Case

A range of options have been explored for investment in eastern Porirua, ranging from minimal investment to full redevelopment at high density. A modelled counterfactual was developed based on the potential approach that HNZ might take based on its long-term asset management strategy.

This business case incorporates three levels of benefit analyses:

a. **Fiscal**: Direct monetary benefits to the taxpayer, such as a reduction in health costs associated with reduced hospitalisations.

b. **Economic**: Monetary benefits to private individuals, such as increased earnings due to construction procurement that seeks to hire local people.

c. **Wellbeing**: Here we express the monetised, intangible benefits to individuals. For example, the amount of extra money a person would need to earn to make their wellbeing as good as if they had better mental health.

The table on the following page shows the economic analysis of the four shortlisted options. The net present values (NPV) include all capital costs, as well as fiscal, economic and wellbeing benefits. In general, the total benefits increase for each option from left to right, but the costs increase at a greater rate. We also undertook qualitative analysis of benefits that were unable to be quantified. Options were ranked against each criterion, with points assigned depending on the ranking (for example, four points for being ranked first).

Estimated costs and benefits ($m)

	Option 1: Counterfactual		Option 2: Counterfactual & key moves		Option 3: Focused regeneration		Option 4: Full regeneration	
Discount rate	6%	3%	6%	3%	6%	3%	6%	3%
Capital Costs	288	386	400	515	551	723	748	997
Fiscal benefits	56	93	65	108	100	165	117	194
Economic benefits	33	51	41	62	91	157	113	197
Wellbeing benefits	348	630	381	705	387	737	390	764
Total benefits	437	773	487	875	578	1,059	620	1,155
Cost-benefit analysis of monetary costs and benefits:								
Total NPV/rank 1 2 3 4	149	387	87	360	27	336	(128)	158
Multi-criteria analysis of non-monetised benefits: rank (score)								
Housing Supply	3 (1.5)		3 (1.5)		2 (3)		1 (4)	
Optimised housing portfolio	3 (1.5)		3 (1.5)		2 (3)		1 (4)	
Community resilience	4 (1)		3 (2)		2 (3)		1 (4)	
Economic sustainability	3 (2)		4 (1)		2 (3)		1 (4)	
Environmental sustainability	4 (1)		3 (2)		2 (3)		1 (4)	
Total score/rank 1 2 3 4	7		8		15		20	

For the four options assessed, fiscal and economic benefits are outweighed by costs. The primary benefits relate to the wellbeing impacts on individuals. This means that investment in regeneration in eastern Porirua should not be expected to generate direct monetary benefits. Instead, investment represents a transfer from the taxpayer to a particular community in need that aims to achieve an increase in overall net wellbeing for New Zealand.

This is a fundamentally different way of thinking about economic analysis for an investment proposal. Applying this approach has been enabled by recent innovations in the area of wellbeing valuation by HNZ, The Social Investment Agency and the Treasury.

On balance, the preferred option is Option 3: Focused Regeneration. This option delivers well against qualitative criteria, with a quantifiable increase in net wellbeing as a result of the investment. Considering the qualitative and quantitative benefits together with the costs, Option 3 scores better than the other three options (as shown in the figures on page 57).

This involves redeveloping most of the housing in Waitangirua, Cannons Creek East and Cannons Creek West, while retrofitting the better-quality freestanding homes in Ascot Park and Porirua East. This reduces the concentration of HNZ properties to a more sustainable level while maintaining the

number of public houses, delivers high-quality and fit-for-purpose public housing stock, at least 1500 new private dwellings (with a total net increase in supply of 1950 dwellings), and a range of investments in community infrastructure that unlock development potential, including:

a. [3]

b. **Cannons Creek neighbourhood centre**: Revitalisation of the centre based around Cannons Creek School, Park and shopping centre would provide a hub for community activities and a focus for better social connectivity. This could include co-location of key social services.

c. **Greenways**: Walking and cycling connections enabled through improving the condition and safety of greenways enable people to be more connected to each other and will promote active transport.

d. **Upgrading Mungavin/Warspite Avenues**: Redevelopment would form a key transport corridor and neighbourhood 'front yard'. This would be an important part of creating visible change early to build community confidence.

e. **Connection to city centre**: An improved pedestrian and cycling connection to Porirua city centre would enable connection to both commercial areas and the train to Wellington City, unlocking potential in eastern Porirua.

Investment in schooling has been identified as both a key means of better serving the existing community and an enabler of attracting people to the area. Lessons from the Tāmaki regeneration and Hobsonville Point developments highlight that getting schooling right is critical to the success of a large-scale development. In addition to the potential impacts on network capacity, the perception of schooling quality in an area is a major driver of households' decisions about where to live.

[2]

Even spread over 25 years, a regeneration proposal represents a big change for the community of eastern Porirua. To manage this change, implementation will need to include a strong focus on **building social cohesion**. This will include community engagement, involvement in elements of design, place-making and the employment of local people within the implementation of the project.

Commercial Case

The preferred commercial structure of the project is based on lessons from other redevelopment projects, and aims to enable delivery agents to operate with clear mandates, and a minimum of additional bureaucracy. There are seven key roles:

a. **Regeneration Board**: Joint Crown, PCC and Ngāti Toa appointments.

b. **Master Developer**: Homes, Land, Community (HLC, formerly Hobsonville Land Company).

c. **Developers and Contractors**: To be procured.

d. **Public housing owner and tenancy manager**: HNZ.

e. **Bulk infrastructure provider**: PCC/Wellington Water.

f. [2]

g. [2]

The Regeneration Board will provide oversight and own the vision, spatial strategy and relationships between key partners. It will also make recommendations to Ministers and delivery entities to shape masterplanning, community engagement and social service provision. The Regeneration Board will own the key strategic and political risks to the project.

Delivery entities will be responsible for their individual objectives within the programme, with their existing Boards responsible for operational and financial performance. Funding streams will be direct to individual delivery entities and monitored centrally.

This structure is designed to balance integration of the overall project objectives against transparency about performance of individual components. Accountability is allocated to the strengths and weaknesses of each delivery entity in managing particular risks.

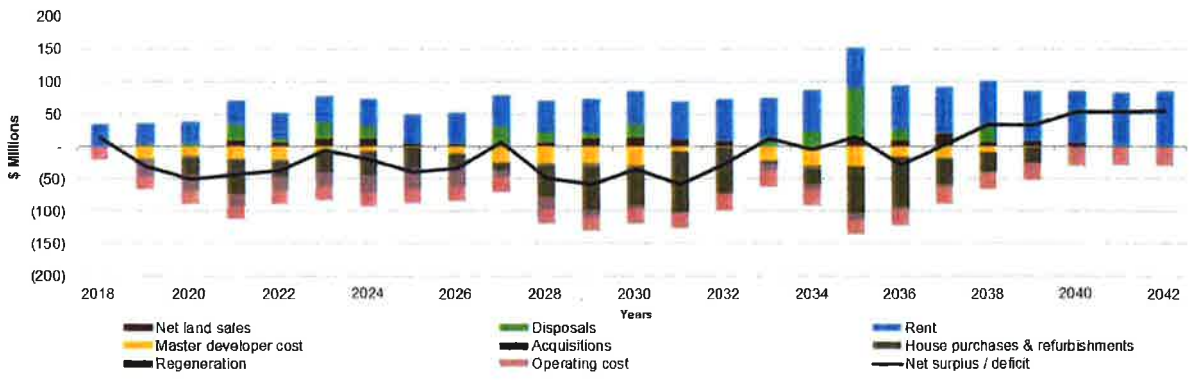
The delivery programme is estimated to span 25 years, including activities from the appointment of the Master Developer through to all planned assets 'going live' and being utilised by the community.

There will be some key commercial considerations to support this approach, most notably being speed of delivery, the market and economic value of delivery, and the market confidence of being involved, through appropriately managed commercial risks.

Financial Case

The capital funding required to regenerate eastern Porirua is $241.403m over the first 10 years. Over the 25-year life of the project, funding requirements reach a cumulative maximum of $494.194m in 2037, with a final net requirement of $246.132m as the project begins to run large cash surpluses and return funds to the centre. We propose that a portion of Crown capital is repaid throughout the 25-year modelled period using surplus cashflow from land sales and rents.

Project cash



Annual project net capital funding requirement

Year	2018	2019	2020	2021	2022	2023	2024	2025
Yearly net requirement	1.168	46.061	38.937	25.749	36.929	6.200	19.895	39.238
Cumulative net requirement	1.168	47.229	86.166	111.916	148.844	155.044	174.939	214.178

Year	2026	2027	2028	2029	2030	2031	2032	2033
Yearly net requirement	33.684	(6.458)	48.663	59.271	35.140	58.313	26.806	(11.592)
Cumulative net requirement	247.862	241.403	290.067	349.338	384.478	442.791	469.597	458.005

Year	2034	2035	2036	2037	2038	2039	2040	2041-2
Yearly net requirement	5.079	(15.054)	28.282	(2.559)	(33.832)	(32.399)	(53.968)	**(107.421)**
Cumulative net requirement	463.084	448.030	476.312	473.752[1]	439.920	407.521	353.553	**246.132**

There are fairly limited options for financing the project. This is because:

a. the Master Developer does not have an ongoing source of revenue, so it is not practical to take on additional finance for this project, and

b. market rent will not support sufficient borrowing to fund the new public houses.

The preferred structure is for all revenue from land sales and IRRS to be used in funding the project, with Crown loans to cover the net requirements. This can be extended out to cover the maximum $494.194m, in capital funding requirements, and paid off as the project begins to run surpluses in later years. The net requirement of $246.132m at the end of the project could be covered by Crown equity injections.

This does not utilise rents that are collected after the development period, or cross-subsidisation by HNZ through borrowing against the cashflow of other portfolios. Other finance options could be explored, but because of the long-term nature of the project this is unlikely to substantially reduce impacts on capital allowances.

Capital funding requirements could be reduced by increasing the rent that is paid to HNZ. This would require a change in policy by The Ministry of Social Development (MSD) and increased funding to the Public housing Purchasing Multi-Category Appropriation.

[1] Note that financial analysis has been conducted on a quarterly basis. The maximum funding requirement of $494.194m occurs in the 3rd quarter of 2037, after which a forecast cash inflow reduces the cumulative net requirement to $473.752m at year end.

To avoid excess capital requirements in any one year, capital funding should be spread across years and dispersed on a yearly basis as required depending on project costs and revenue, rather than in a lump sum.

Management Case

In the event that this investment proposal receives formal approval, a specific project will be established to deliver the required services centred around the Master Development role. This will mean HLC owning the programme, working closely with HNZ, MOE and PCC in developing the detail of workstream requirements. Governance and project management will largely be achieved through existing structures and processes, alongside the establishment of the Regeneration Board.

A comprehensive benefits management framework has been developed using the Treasury Living Standards Framework (detailed in Appendix 5). This sets out key metrics for monitoring and evaluation of the programme throughout its lifecycle to ensure that the expected wellbeing benefits of the regeneration proposal are achieved.

Next Steps

This Single Stage Business Case seeks a commitment from Cabinet to initiate the regeneration programme and appropriate the required funding through Budget 2019.

Appropriate arrangements will be put in place between Treasury and HLC to transition the masterplan to HLC and appoint them as the central programme management entity. All documentation, drawings and financial models will be transferred.

The Regeneration Board will be formed based on joint recommendations from the Treasury, PCC and Ngāti Toa.

A draft communications and engagement strategy has been developed to facilitate the communication of messages to the community once the business case is approved. This has been developed based on consultation with all key delivery agencies and is attached as Appendix 6.

HLC is not currently active in the Wellington/Porirua area. To implement the Eastern Porirua Community Regeneration Programme, it will need to establish a local office with the required personnel as soon as practicable.

Introduction

1. This single-stage business case seeks formal approval to invest up to $241.403m over the first 10 years of the project to regenerate eastern Porirua. Over the 25-year life of the project, funding requirements reach a cumulative maximum of $494.194m in 2037, with a final net requirement of $246.132m as the project begins to run large cash surpluses and return funds to the centre. Investing in housing assets, community infrastructure, schooling and better social services has the potential to deliver significant benefits.

2. This business case has used innovative approaches to measuring the impact of interventions on people's life satisfaction. In anticipation of Budget 2019 having a central focus on enhancing wellbeing, we have quantified the potential wellbeing benefits of investment, in addition to fiscal and economic benefits. This enables a focus on the total net wellbeing that is being generated as the result of investment. This is not about the direct financial return, but about how taxpayer funds can be used to enhance the overall wellbeing of New Zealand.

3. This business case is divided into five sections, each with a different purpose:

    a. The **Strategic Case** brings together the views of stakeholders across Government, Porirua City Council (PCC) and Ngāti Toa to confirm the strategic context and the case for change.

    b. The **Economic Case** identifies a wide range of potential options and undertakes analysis of the costs and benefits (including fiscal, economic and wellbeing impacts). A preferred option is then chosen which optimises the impact of investment on net wellbeing and produces a sustainable impact.

    c. The **Commercial Case** assigns roles, responsibilities and governance arrangements.

    d. The **Financial Case** determines the funding requirements for the project.

    e. The **Management Case** sets out a benefits realisation framework, key risks and next steps.

NOTE: The scenarios and analysis used in this business case are indicative and do not represent firm and final plans. To determine whether there is a case for investment, it was necessary to develop scenarios to understand the scale of the issue and the types of actions and investment that could be taken. If this business case is approved, the detailed plans for implementation will be developed through processes including community and tenant engagement.

Strategic Case – making the case for change

Key points

4. Eastern Porirua today is a low socio-economic status area, with mainly decile one schools and a score of 10 (most deprived) on the NZ Deprivation Index. For many people, eastern Porirua has a bad reputation, but not among the people who live there. For the area's 18,000 residents, 'Eastside' is home and has strong and vibrant communities.

5. Eastern Porirua is in need of community regeneration. Other large areas of public housing around New Zealand are already undergoing regeneration or redevelopment, particularly where market conditions are favourable. At present, Housing New Zealand (HNZ) is not funded to undertake a regeneration in eastern Porirua and investment will not occur without a whole-of-Government approach to realising the potential benefits.

6. The strategic opportunities for Porirua that are presented by Transmission Gully and changes to the planning environment mean that the timing is right for an integrated approach incorporating housing, community infrastructure and social services.

7. A regeneration programme aligns with multiple strategic objectives for Central and Local Government, including:

    a. delivering affordable housing in a time of worsening shortage in supply

    b. improving the wellbeing of eastern Porirua public housing tenants and addressing the current renewal liability for HNZ stock

    c. improving amenities, community infrastructure and connectivity in a way that benefits the wellbeing of all eastern Porirua residents, and

    d. building resilience in the community.

8. Investing in these outcomes is expected to deliver fiscal, economic and wellbeing benefits.

Strategic context

Background

9. Porirua City has a diverse population. New developments such as Whitby and Aotea are some of the least deprived, with some of the highest average household incomes in New Zealand. In contrast, eastern Porirua has some of the highest levels of deprivation and household crowding in the country.

10. Eastern Porirua has the highest relative concentration of low income renters (private and social renters combined) in the wider Wellington Region. Low income[2] Māori households account for 16% of all households in Eastern Porirua compared to 3% in the wider Wellington

[2] Households earning less than $50,000 per annum.

Region and low income Pacific households account for 16% compared to 2% in the wider Wellington Region.

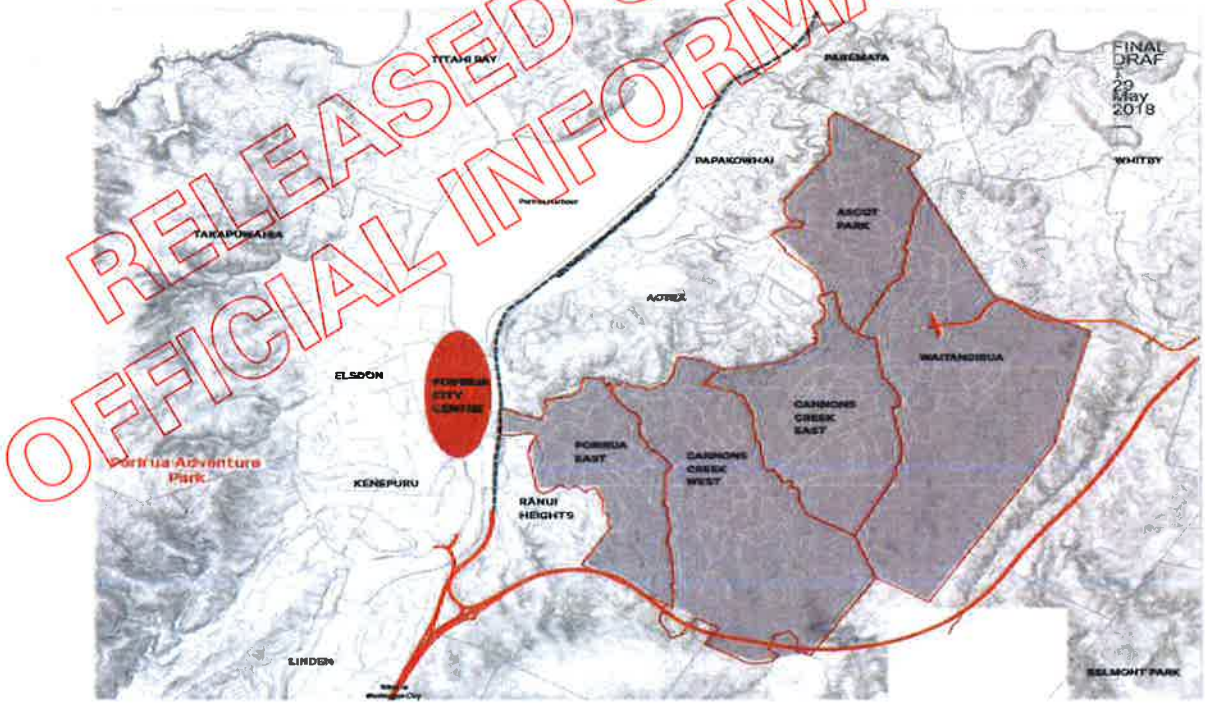
11. In eastern Porirua, around half the population is of Pacific descent, with around 20% Māori, 20% European and a relatively small number of people of Asian, Middle Eastern and African descent.

12. Porirua City experienced a surge in Government-led residential development activity during the 1950s, and 1960s with the objective of meeting the increased demand for affordable housing in the wider Wellington Region. Houses were built quickly, but with little recognition of the need for community infrastructure, social cohesion or good neighbourhood design.

13. Initially, the area was constructed to house workers employed in the manufacturing plants in Porirua City and their families. Since the 1960s, housing assistance has been increasingly targeted at low-income families. As a result, some suburbs became increasingly stigmatised. Disadvantage was concentrated in areas such as eastern Porirua and arguably perpetuated through an ongoing lack of investment.

14. Eastern Porirua today is a low socio-economic area, with mainly decile one schools and a score of 10 (most deprived) on the NZ Deprivation Index. For many people, eastern Porirua has a bad reputation, but not among the people who live there. For the area's 18,000 residents, 'Eastside' is home and has strong and vibrant communities.

Figure 1: Eastern Porirua



Eastern Porirua presents a rare opportunity for community regeneration

15. Eastern Porirua has one of the highest concentrations of public housing in New Zealand, with nearly 2000 units across the suburbs of Ascot Park, Waitangirua, Cannons Creek and Porirua East. Similar areas such as Tāmaki, Mangere and Mount Roskill have already been selected for investment in regeneration or redevelopment. Key pre-conditions are met for a successful regeneration initiative:

a. **Large scale**: Eastern Porirua has approximately 2000 public houses, enabling Government investment to impact on whole neighbourhoods.

b. **High concentration**: HNZ owns a large proportion of the housing stock in the area. At present this causes negative spill-over effects by concentrating economic disadvantage. This means that investment that de-concentrates public housing can have positive spill-over effects.

c. **Low density**: Section sizes are large, with low site coverage. This enables the Crown to reduce public housing concentration and deliver additional housing supply by using the land that it owns better.

d. **Poor public amenity**: The design of neighbourhoods in the area is archaic and has a significant number of poorly-configured areas that exacerbate safety issues. The current urban design and low-density urban form of neighbourhoods also contributes to poor accessibility, impacting on the ability to deliver frequent and convenient public transport services, and to provide easily accessible community facilities that can be reached by active modes of transport. The concentration of economic disadvantage in the area also means that the community struggles to access good education and other key services.

16. HNZ has a long-term asset management strategy that sets out how it will manage its housing portfolio to ensure that it has the number and location of houses that are needed. To do this, HNZ has to make decisions about redeveloping current properties, purchasing new properties, selling properties where they are not needed, and building new properties.

17. The public housing portfolio in Porirua is one of the oldest in the country, with an average age of over 50 years. Approximately 85% of the portfolio was built in the 1950's and 60's. Figure 2 shows the especially tight age distribution of public houses in Porirua. Porirua properties are reaching major lifecycle decision points around whether HNZ will:

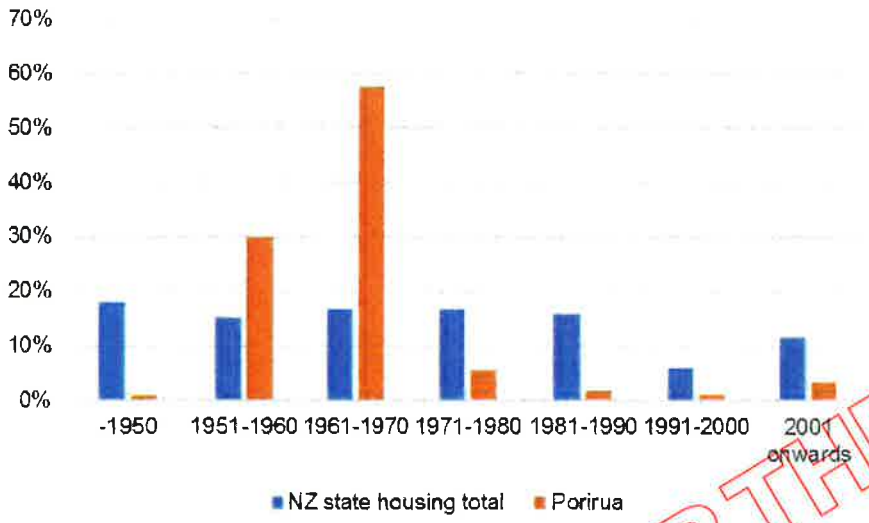
a. continue to maintain the asset in its current configuration

b. retrofit the existing asset and make it fit for another 30-50 years

c. redevelop the asset to make best use of its land, or

d. sell and replace the asset with a modern equivalent.

Figure 2: Age of public housing stock in Porirua



18. HNZ has previously initiated some investment in the area to address this, including redevelopment, upgrades and community initiatives. However, HNZ is not funded to undertake regeneration on the scale that is required, under prevailing market conditions.

19. A number of responses have been made in the past, independently addressing housing issues, social service coordination or public amenity. However, none have been able to embed fundamental and lasting change.

20. An integrated approach that addresses all of these factors has the potential for positive outcomes for the whole community, including a step-change in the quality and quantity of housing that is available.

The Wellington Region faces a housing shortage

21. Porirua, Lower Hutt and Wellington City are treated together in this business case for the purpose of understanding demand and supply. This is because the three areas are within commutable distance, with interconnected housing and labour markets making isolated analysis at the Territorial Local Authority (TLA) level potentially misleading. The Ministry of Social Development (MSD) treats the three TLAs as a single unit for the purpose of public housing demand and supply for this same reason.

Demand

22. Wellington's housing market has historically been relatively subdued. However, a spike in population growth has resulted in rapidly escalating rents and house prices since 2015, with an emerging shortage of housing due to inadequate land supply.

23. Based on projections from the 2013 Census, Porirua, Lower Hutt and Wellington households are forecast to grow overall by 27% (34,104 Households) between 2013 and 2043. At the same time, household sizes are expected to decrease (as shown in Figure 3). Decreasing household size means that demand will be for different kinds of houses in the future. Smaller, denser and more affordable developments are likely to form an increasing proportion of demand.

Supply

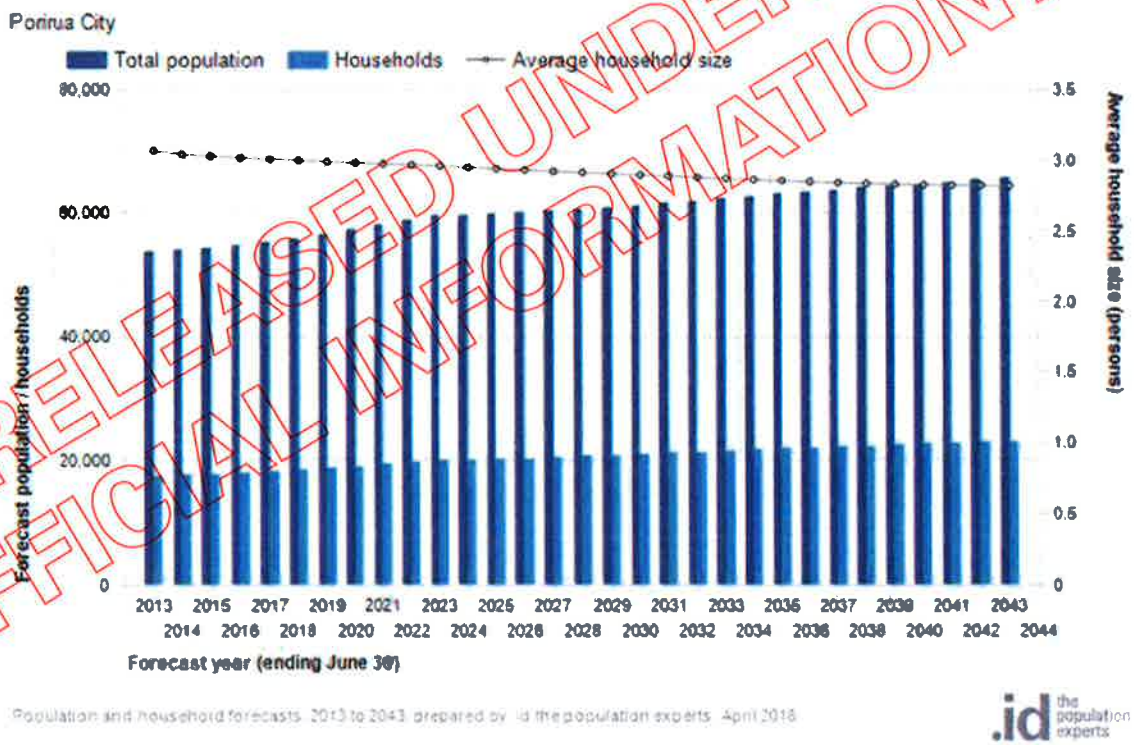
24. While significant, supply is still insufficient to meet demand. The number of dwellings is forecast to grow by 24% (32,483 Dwellings) between 2013 and 2043. Across the Wellington

Region, property experts CBRE have identified 32 different residential development locations that are planned or in progress currently. The aggregate collection of these sites amounts to practical capacity of roughly 10,300 individual dwellings. The largest of these is the Aotea development at around 2,000 units, while the largest yet to commence is Plimmerton Farm at 1,600 units. The current supply of sections is limited with prices reaching $150k-$250k, making the delivery of affordable housing uneconomic.

Demand/supply mismatch

25. There is now significant underlying unmet demand for housing in the Wellington Region, particularly for smaller and more affordable dwellings. Analysis by CBRE indicates that there is already existing demand for over 1,000 terraced dwellings around $500,000 from households across Wellington that could be met specifically by housing in eastern Porirua. In addition to this existing demand, the population of Porirua City is projected to grow by a further 3,000 households over the next 20 years.

Figure 3: Forecast population and household dynamics in Porirua



Kiwibuild and new institutional arrangements will transform the Government's role in housing

26. The Kiwibuild programme is intended to deliver 100,000 affordable dwellings for first home buyers over the next 10 years, ranging from $300,000 to $650,000, depending on typology and location. Government has allocated $2 billion of funding for this programme, which will be leveraged with private (including iwi and institutional) investment, and be recycled as houses are sold.

27. Kiwibuild dwellings are intended to fill an 'entry level gap' in the residential property market. To achieve the price points which have been established for the Programme, they are likely, in

the short term, to be mainly one and two bedroom units, built in medium to high density typologies, and significantly smaller than the average new house built in New Zealand.

28. The Kiwibuild Unit within the Ministry of Business, Innovation and Employment (MBIE) is in the process of identifying and leveraging opportunities to procure Kiwibuild dwellings via:

    a. existing government-led housing initiatives, such as those being undertaken by HNZ

    b. acquiring and on-selling vacant and underutilised Crown-owned land, as well as land purchased from the private sector and others, to developers for the delivery of Kiwibuild dwellings (the Land for Housing Programme, which is already underway)

    c. purchasing (or underwriting) new homes off the plans, to de-risk suitable developments that the private sector or others are leading, and

    d. identifying around five of the signalled 12 to 15 major greenfield and urban regeneration projects that could be progressed by the Housing Commission.

29. A project for urban regeneration in eastern Porirua would be a good fit for the major projects workstream (d. above), with significant capacity to deliver Kiwibuild homes, particularly given the low current land prices in the area. The low density of eastern Porirua means that there is potential to produce 1500-3000 new private market dwellings, including Kiwibuild homes.

30. A new Ministry of Housing and Urban Development is to be established later in 2018. This new Ministry will provide a new system leadership role with the mandate to work across agencies to coordinate the social, economic and environmental aspects of housing and urban development. This is likely to include:

    a. MBIE's housing and urban policy functions, the KiwiBuild Unit and the Community Housing Regulatory Authority

    b. MSD's policy for emergency, transitional and public housing, and

    c. monitoring of HNZ and Tāmaki Redevelopment Company (TRC) currently in Treasury.

31. As part of delivering institutional reform, there is intent to establish a Housing Commission – an independent Crown-entity with a fast-tracked planning process and other statutory powers. The Housing Commission is intended to undertake major greenfield and urban revitalisation projects in partnerships with Councils, private developers and iwi. While not essential to initiate a regeneration project, the Housing Commission could have a significant positive impact on delivery when it is formed due to the potential to apply enhanced powers.

Changes in the strategic environment mean the timing is right

Porirua City Council is producing a District Plan focused on growth

32. PCC is currently in the process of reviewing its District Plan. This presents a good opportunity to align renewal with the planning process, ensuring that zoning and spatial planning maximises opportunities for growth, development and flexibility over time. Public engagement has begun, with feedback so far indicating that a renewal project would align with community aspirations.

33. Key messages focused on strong support for diverse housing options, affordable housing and acceptance of the need to grow. The community did not want to see low-density sprawl as the future growth model. Instead, they supported moving into medium density intensification, and increasing height limits in the City centre.

Transmission Gully will transform Porirua's connectivity

34. With Transmission Gully expected to open in 2020, Porirua is poised not only to have improved access to employment opportunities in Wellington City, but to leverage improved connectivity to create more local economic development and employment opportunities.

35. Eastern Porirua in particular will benefit from PCCs investment in the planned link road in Waitangirua. This creates an opportunity to rethink the current land use mix to provide for commercial and industrial uses.

36. In addition, PCC is considering zoning industrial land in Pauatahanui. This would take advantage of the improved connectivity to the area and could create a hub around the northern link roads which gives Porirua City a regionally strategic position, being accessible to the Hutt Valley, Wellington City and Kapiti Coast. Supply and demand analysis indicates this could realise demand for up to 63 hectares of industrial land. This would create a significant economic boost to the area and generate much-needed local employment.

Regeneration aligns with Porirua City Council strategic priorities

37. Renewal of public housing in Porirua has the potential to contribute to four of PCC's key strategic priorities:

    a. Children and young people at the centre of city decisions by ensuring they have affordable housing to either rent and/or buy and a healthy environment to recreate in.

    b. A healthy and protected harbour and catchment by creating provisions that manage sediment and contaminants from development into the harbour.

    c. A growing, prosperous and regionally connected city by leveraging the Transmission Gully opportunity to accelerate residential and business growth and create more employment in the city.

    d. A great village and city experience by creating communities that are more liveable and enabling businesses to flourish.

38. PCC is intending to invest in line with these key strategic priorities, which will provide for good alignment with any complementary Central Government initiatives. Funding for a community hub in eastern Porirua has just been confirmed through the Long Term Plan, as well as initiatives to support the development of children and young people.

Investment will not occur without Government leadership

A whole-of-Government approach is required

39. Eastern Porirua has particularly low property values. This is despite proximity to Wellington City, an ongoing shortage of housing supply and upcoming transport improvement with a connection to the Transmission Gully through Waitangirua. The pronounced value difference (as shown in Table 1) suggests the pricing reflects a neighbourhood effect.

40. Without Government-led investment, there is a risk that private properties in the area will suffer from under-investment, due to land prices being suppressed by poor neighbourhood amenity, created by the spill-over effect of the very high concentration of public housing. Other property owners will continue to have poor incentives to invest in improving housing assets if Government does not invest, as amenity values in land will remain low.

41. Conversely, investment that improves the quality of the neighbourhood amenity could lift the land values of Government housing stock and improve the opportunities for market-led development in the future. International experience of renewal projects indicates that removing the 'stigma' associated with an area leads to improved private sector investment[3].

Table 1: House prices in Porirua

Area	Median house price[4]
Paremata/Mana/Pukerua Bay	$640,000
Papakowhai/Whitby/Pauatahanui	$676,000
Titahi Bay/Onepoto/Elsdon	$437,000
Porirua East/Waitangirua	**$343,000**

The current public housing funding model will not support renewal

42. The model for existing public housing is based on ensuring the provider receives a private market rent. However, these rent levels provide a low cash return on assets. This means that:

    a. any redevelopment or significant upgrade of existing properties requires additional sources of funding, and

    b. any increase in the number of public houses requires additional sources of funding.

43. Existing cashflows are not sufficient to finance major renewal. HNZ is able to finance renewal and redevelopment in some areas (such as Auckland) by using a combination of cashflow and selling land that has accumulated significant value.

44. This model also will not support renewal where land values are low (such as in eastern Porirua). Additional capital is required to fund renewal at scale where there is insufficient land value. Because of the neighbourhood effect in eastern Porirua, market-led development will not occur until the housing shortage becomes acute enough for land values to lift significantly despite the neighbourhood effect. The social and economic impacts of the housing shortage reaching this point are likely to be severe, including significant increases in material hardship and a drain on productivity in the region.

[3] Superu.

[4] QV, June 2018.

Investment objectives, existing arrangements and community needs

Investment objectives

45. A facilitated case for change workshop was held with key stakeholders on 7 February 2018 to identify investment objectives and gain a better understanding of the relative priorities for investment.

46. Investment objectives (outlined in Table 2) were developed based on common themes from the workshop and tested with PCC, Government and Ngāti Toa representatives.

47. Each objective is linked to an outcome domain from the Government Outcomes Catalogue, based on the OECD better life index and Treasury Living Standards Framework. Using this framework allows us to make connections from objectives to outcomes, and to account for the broad impacts on wellbeing that result from investment.

Table 2: Investment Objectives

Investment objective one: Better housing choices
Result: Porirua people have more and better housing choices.
Outcome domain: Housing affordability
Stakeholders expressed that delivery of more houses alone would not be enough. Consideration is also needed for provision of a mix of different types of houses, a mix of tenures and options that enable the existing community to remain, rather than be displaced by gentrification of the area.
Investment objective two: Public housing is built for the needs of people now and in the future
Result: Public housing in the area is warm, dry and configured to meet the needs of tenants and HNZ.
Outcome domain: Housing quality
The HNZ portfolio in the area needs to be upgraded, but also redesigned in a way that is driven by the needs of tenants.
Investment objective three: Eastern Porirua is a great place to live
Result: Eastern Porirua has a well-connected and attractive environment with good access to key services and amenities.
Outcome domain: Neighbourhood quality
Alongside housing, investment in key public and commercial spaces, and education facilities is needed to enhance the community's access to services.
Investment objective four: Prosperous and resilient community
Result: Eastern Porirua retains its identity and culture while people experience better outcomes.
Outcome domains: Social connections and cultural identity
Asset investments are ultimately in service of better outcomes for the people that live in eastern Porirua. Success in achieving this objective is the ultimate measure of the other three.

Existing arrangements and community needs

48. Table 3 below summarises the analysis of the existing arrangements in eastern Porirua, and the community needs to deliver a successful regeneration project. This gap analysis was developed through extensive research and stakeholder consultation and formed the basis of the potential service requirements.

Table 3: Summary of the existing arrangements and community needs

Investment Objective One	**Better housing choices**
Existing Arrangements	People in eastern Porirua have limited options for housing typologies and quality is poor. Eastern Porirua is experiencing rapid growth in both house prices and rents, resulting in negative social impacts. There is insufficient land supply or development capacity to change this under prevailing planning and market conditions.
Community Needs	Well-planned optimisation of the use of Government land that delivers a range of public, affordable and market housing supply at scale. Regulatory, economic and social pressure to improve the quality of private market stock.
Investment Objective Two	**Public housing is built for the needs of people now and in the future**
Existing Arrangements	Most of the Porirua public housing portfolio is old and not fit-for-purpose. The existing portfolio does not match demand, and causes significant asset and tenancy management issues for HNZ.
Community Needs	A portfolio that is warm, safe, dry and meets modern design standards.
Investment Objective Three	**Eastern Porirua is a great place to live**
Existing Arrangements	Porirua has areas of high concentration of public housing, poor neighbourhood amenity and schooling is not perceived as good. Urban form does not support and enable connectivity and active transport.
Community Needs	Less concentrated areas of public housing, with good public and neighbourhood amenity that supports people feeling safe and connected to each other. Urban form supports connectivity and active transport. Local schooling is perceived as an asset in the community.
Investment Objective Four	**Prosperous and resilient community**
Existing Arrangements	Social capital in eastern Porirua is a strength, but the area suffers from concentrated economic disadvantage.
Community Needs	Regeneration will attract new people into the community, but this needs to be done in a way that enables local people to stay, achieves community buy-in through reflecting their identity and culture, builds social cohesion and identifies opportunities for the community to be better-served by public services.

Objective 1: Better housing choices

Existing housing choices

49. The Wellington Region has a housing shortage, which is projected to worsen even with the development of all feasible land.

50. The quality of housing stock in eastern Porirua is poor. The condition of private market rentals is particularly bad and there is little incentive for landlords to upgrade properties.

51. There is a limited range of choice in housing typologies, with the housing stock dominated by free-standing homes on large sections, or small units (including a large proportion of poor-quality multi-unit typologies). There are more three bedroom properties than required and too few one, two, four and five bedroom properties available. The large section sizes have an adverse impact on affordability (and accessibility for residents with disabilities) and the lack of larger homes results in overcrowding.

52. Housing affordability has declined as a result of housing costs increasing faster than household incomes. Eastern Porirua's private renters are experiencing high levels of housing stress with 43% paying more than 30% of their gross household income in rent[5] and 20% paying more than 50%.

53. Rents and house prices in eastern Porirua are both rising rapidly at 13% and 20% per annum respectively. Without additional housing supply in the area, affordability is likely to worsen.

54. Based on 2013 Census data, Porirua City in general had the highest level of overcrowding in private renter households in any New Zealand city. Overcrowding was even worse in eastern Porirua, where levels were over 50% higher than the average for Porirua City[6].

55. Given the low density of the existing portfolio in Porirua, there is significant theoretical capacity for intensification development. However, there are few commercially viable opportunities based on the current land values and market rents. Waiting until land values are high enough is likely to have significant negative social impacts.

Housing needs

56. A regeneration in eastern Porirua needs to deliver a large number of new dwellings, including smaller and larger typologies to address affordability and overcrowding, with a denser urban form to support ongoing affordability and better access to amenities.

57. A range of tenure options is needed, including public housing (for both HNZ and Community Housing Providers), affordable rentals, Kiwibuild homes and market housing.

58. Without increased housing supply, the current rapid increases in house prices and rents are likely to displace current residents and create worsening housing stress. However, investing in regeneration is likely to create upward pressure on land values and rents in the area, as it becomes more desirable. This carries a risk of displacing current residents if the additional housing supply and density is not sufficient.

59. As land values increase, the need to respond with increased density grows greater, if gentrification and displacement of current residents is to be avoided. Any plans will need to be flexible and responsive to the community's needs over time.

60. The existing private market housing (particularly rental stock) is also in need of attention. While Government development will create economic and social pressure to improve quality, regulatory action and enforcement is also likely to be required.

[5] In general, households spending more than 30% of their income on housing costs are considered to be experiencing housing stress. This is used as a rough affordability threshold.

[6] Porirua City Council Housing Needs Assessment, 2018.

Objective 2: Public housing is built for the needs of people now and in the future

Existing public housing portfolio

61. Eastern Porirua is characterised by a large stock of undesirable housing. HNZ staff report that much of the stock is outdated and does not meet modern-day living expectations. The continually high churn rate of multi-units and houses in less desirable streets is evidence of this. In 2002 development planning[7], HNZ identified a series of key problems, including:

    a. unsuitability of housing

    b. undesirability of housing

    c. negative image of the area

    d. the cost of ownership associated with having a portfolio characterised by unsuitability and undesirability, and

    e. the cost to the community of the results of social and economic disadvantage.

62. There are problems with a large proportion of the housing stock being out-dated, unsuitable and undesirable. There are issues with inappropriateness of design and functional use. Multi-units (as shown in Figure 4) have historically been the hardest to let due to concerns about privacy, safety and the practicality of the configuration including stairs in a small space. The multi-units are viewed as unattractive and are often used as temporary accommodation until something more desirable is available either through HNZ or the private sector.

63. The breakdown of properties within the renewal area is detailed in Table 4 on the following page. Note that 32% of the stock is two-storey multi or double-unit flats, the property types that are most resisted. These typologies are concentrated within Waitangirua and Cannons Creek in particular.

[1]

[7] HNZ, July 2002, *Community Renewal Programme: Development Planning Analysis, Porirua East*

Table 4: Typology composition of eastern Porirua portfolio

Property Type	Number of Units	% Total of Units
Two storey flat, three or more units joined together	250	13%
Two storey unit, two units joined together	369	19%
Single storey flat, three or more units joined together	14	1%
Single storey unit 2 units joined together	203	10%
Standalone house	1,128	57%
Total	1,964[8]	100%

64. As is typical for public housing portfolios in New Zealand, there is a significant amount of overcrowding and under-utilisation within the existing portfolio. This is shown in table 5 below (blue indicates underutilisation and orange indicates overcrowding, with small numbers replaced with an asterisk).

65. Overcrowding is linked to conditions such as rheumatic fever, particularly if houses are also cold and damp. Anecdotal evidence from community workers suggests that overcrowding is significantly under-reported, due to tenants not wanting to be evicted for breaching the conditions of their tenancy.

66. Poor matching of the portfolio also results in direct costs to Government, as a significant amount of money is paid for empty bedrooms. This results in waste through both operating expenditure (subsidising higher rents of houses with empty bedrooms) and Government capital (in holding inappropriate assets).

Table 5: Matching of tenants and houses in Porirua City

	Actual bedrooms					
Bedrooms required	1	2	3	4	5	6
1	99	352	252	8	*	
2	*	131	608	41	*	
3		25	475	78	9	
4		6	171	105	10	*
5		*	46	59	18	*
6			11	14	10	*
7				8	*	*
9						*

[8] Excludes Community Group Housing and Emergency Housing.

67. The Porirua public housing portfolio is fairly typical of much of New Zealand's housing stock in terms of thermal performance. These older houses are difficult and expensive to heat. Inadequate warmth in the home can have health consequences for the occupants.

68. HNZ properties have been retrofitted with ceiling and floor insulation where possible. This is likely to have had a significant impact on the warmth and dryness of the homes. However, retrofitted insulation does not bring houses anywhere near modern design standards. While being an improvement on uninsulated homes, significant issues remain. Table 6 illustrates the severity and persistence of issues associated with typical older housing stock, despite having retrofitted insulation. These issues are typically worse for more vulnerable cohorts such as beneficiaries or the elderly.

Table 6: Typical housing performance issues in older houses with retrofitted insulation[9]

Issue	% of houses
Mould	38%
House cold always or most of the time	17%
Condensation	59%
Other dampness	30%
Heating ineffective	16%

Public housing needs

69. HNZ's primary objective is to ensure all tenants have access to well matched, dry, warm and safe homes that they can operate within their means. Homes built prior to 1986 generally fail to provide living environments and a mix of typologies conducive to this objective. Despite being maintained in good condition, these properties need to be retrofitted or redeveloped to continue in public housing use.

70. Effectively retrofitting some housing may require a much more extensive (and expensive) change than simply retrofitting ceiling and floor insulation. Table 7 outlines what this means in practice. Retrofits of this standard bring houses as close as practicable to the new Building Code and fully reset the property's lifecycle. New builds already meet these requirements.

Table 7: Potential HNZ retrofit actions

Exterior	Interior
Recladding and reroofing where necessary Wall insulation Double glazing Upgrading sub-floor ventilation to meeting the building code New boundary and privacy fencing Exterior pathways Weather-protect entry door Upgrade balustrades to build code	Wet-wall line all bathroom walls and ceiling, replace vanity Install pantry, extra drawer banks and fridge space LED fittings, install internal storage, repaint, vinyl thresholds, reduce chimney height Remove existing gas appliances Consider configuration and structural changes to make house fit for purpose (e.g. moving internal walls)

[9] Chapman et al (2007), *Effect of insulating existing houses on health inequality: cluster randomised study in the community*

71. In some cases, even retrofitting to this standard may not resolve all the issues identified with particular housing typologies. In particular, configuration of two-storey units and flats may be difficult to change to a level where it is fit-for-purpose. These properties will remain undesirable to current and future tenants and redevelopment of the properties is required to provide new fit-for-purpose housing stock.

Objective 3: Eastern Porirua is a great place to live

Existing public housing concentration

72. HNZ currently owns 39% of properties in eastern Porirua. The predominant clusters of public housing in eastern Porirua are centred in Waitangirua, Cannons Creek West, and Cannons Creek East as shown in Table 8 and Figure 5. In places, the concentration of public housing is near 100%. Figure 6 shows an example with very high concentrations of HNZ properties. In this case, the properties are predominately two-storey typologies that are no longer considered fit-for-purpose.

Table 8: Public housing concentration in eastern Porirua

Neighbourhood	Public housing concentration
Porirua East	27%
Cannons Creek West	34%
Cannons Creek East	63%
Waitangirua	48%
Ascot Park	19%
Total	**39%**

[1]

Existing schooling network

73. Porirua City has 9,067 students enrolled in schools from year 1-13 and a further 814 attending preschool. There are socioeconomic disparities in schooling that reflect the broader population, with the majority of schools being decile 9-10 (least deprived) or decile 1-2 (most deprived).

74. There are no high decile schools in eastern Porirua, and schools are underutilised. The primary network (including Brandon Intermediate) is operating at 68% with 846 surplus student spaces, as at October 2017. Porirua College is operating at 66%, with 259 surplus student spaces as at March 2017.

75. Eastern Porirua schooling is characterised by a large number of students being sent to schools outside the area [6]
This worsens as children get older. As shown in Table 9 below, 27% of eastern Porirua primary-aged students go to schools outside eastern Porirua, however by secondary school nearly half the secondary population go to school outside the area.

Table 9: Location of schools attended by students living in Eastern Porirua

Location	Primary		Intermediate		Secondary	
	Count	Percent	Count	Percent	Count	Percent
In eastern Porirua	1316	73%	338	60%	745	53%
Outside eastern Porirua	482	**27%**	228	**40%**	655	**47%**
Total	1798	100%	566	100%	1400	100%

76. As the population of surrounding areas increases (Wellington North, Porirua North) students who are out of zone for these schools are likely to be pushed back into eastern Porirua as other options are removed. [6]
[6]

Existing urban form and amenity

77. The urban form and amenity in eastern Porirua has a number of issues in addition to housing. While poor amenity causes impacts in terms of convenience and access to shops, more serious impacts on wellbeing are caused by the reduction in real and perceived safety caused by some of these areas.

78. [3]

79. Eastern Porirua has a number of parks, reserves and green spaces. However, these are not necessarily configured to meet community needs. Quality is variable, and some are arranged so that houses all face away from the area, which leads to safety concerns at night.

80. The street layout is problematic in some areas. Cul-de-sacs originally designed for privacy have become a safety concern. Large blocks have made infill development difficult and there a number of internal areas where there is no visibility from the street (as shown in Figure 7, with

HNZ properties marked with orange dots). Access to and from these areas is flanked by houses, which makes the access ways a concern for both crime and traffic safety.

81. The layout is car-centred and cut off from the rest of Porirua City. There are limited opportunities for active transport for the residents and accessing the city centre means navigating an underpass that is perceived to be unsafe.

[1]

Neighbourhood quality needs

82. There are a number of key tenets of neighbourhood quality which could be addressed through a public housing renewal project. These range from minimal intervention through to community regeneration initiatives and include:

    a. improving amenity through doing up houses

    b. reducing the public housing concentration

    c. investing in education facilities, and

    d. investing in public assets.

83. Renovating the exteriors of existing housing would have some impact on neighbourhood amenity, but this is likely to be fairly limited. The unbroken lines of identical houses and colloquially named 'shoebox alleys' would remain.

84. Redevelopment that reduces the concentration of public houses could have a significant impact on neighbourhood quality. Typically, concentration over 25-30% is avoided in public housing development, and reducing it to this level through increased provision of mixed-tenure housing would have a marked impact.

85. For the existing residents, education is a high priority and the patterns of where children are enrolled indicate a perception that what is available locally is not good. For potential new residents, redeveloped properties will not be perceived as attractive without access to good quality schools. If schools can be made into an attraction, rolls will increase, which would help

in attracting high-quality teachers to the schools. If this does not occur, schooling quality may become difficult to maintain.

86. Lessons from the Tāmaki regeneration and Hobsonville Point developments highlight that getting schooling right is critical to the success of a large-scale development. In addition to the potential impacts on network capacity from population growth, the perception of schooling quality in an area is a major driver of households' decisions about where to live. This has implications for development economics.

87. Investment in public assets may form part of a full community regeneration project. This could include:

    a. commercial spaces (to catalyse private investment)

    b. parks and recreation spaces

    c. community assets for location of key services (including potential co-location), and

    d. reconfiguration of streets and improvement of infrastructure for active transport.

Objective 4: Prosperous and resilient community

Social capital

88. Despite socioeconomic disadvantage, eastern Porirua has a rich cultural diversity and strength of social capital. Eastern Porirua is made up of numerous dynamic and vibrant communities encompassing, in addition to the geographic community, communities of interest based on cultural, religious, ethnic, sporting, school, church and business interests, and gangs. There are numerous cultural groups, performing arts groups, sporting clubs, environmental groups, church groups, interest groups and service clubs.

89. A summary population profile is provided in Appendix 1. In general the community is young, with a low average age and a large number of children. Around half the population is of Pacific descent, with around 20% Māori, 20% European and a relatively small number of people of Asian, Middle Eastern and African descent.

Existing social service access

90. Eastern Porirua has a large number of social services, though effectiveness and coordination on cross-sector issues is mixed.

91. As is frequently found in areas of high deprivation, there are a large number of agencies, many very small and under-resourced, often unable to attract, retain and develop well-trained staff. There is a large amount of duplication of services. This is in part likely to be driven by operating and funding models that focus on individual contracts and do not encourage cooperation.

92. This model means services are often of poor quality, broken up and complex for clients to access. This is likely to be a particular issue for clients with high needs but low capability to access services.

Service needs for a prosperous and resilient community

93. There are four key elements which a regeneration project in eastern Porirua will need to ensure a prosperous and resilient community:

a. regeneration, not gentrification (delivering high quality but affordable housing that avoids displacing the current community, as covered in relation to Objective 1: Better Housing Choices)

b. community engagement and buy-in

c. building social cohesion and community resilience, and

d. improving the delivery of social services to increase their impact on peoples' lives.

94. Achieving good community engagement and buy-in into the project starts with how it is announced. The eastern Porirua community has been repeatedly used to test new Government programmes, and is understandably wary of new initiatives as a result. There have been a number of false starts in relation to redevelopment of housing in the area. This means that it is best that funding be secured and a level of Government commitment made before launching engagement with an already fatigued community. This business case is intended to undertake the high-level work required to make this commitment, while recognising that the practical implementation will require extensive community engagement.

95. If this business case is approved, an ongoing community engagement strategy will be put in place, including the establishment of a local office to ensure people are able to connect with the project. A draft communications plan is included as Appendix 6 to cover the initial stages following an announcement.

96. Buy-in can also be achieved by increasing levels of direct involvement in the project through social procurement. If a regeneration is undertaken, there will be a large flow of capital into the community. The degree to which this benefits local people can be enhanced by valuing how suppliers create opportunities to employ and to train local people in procurement.

97. Improving social services is a significant challenge. Recent learning from the Tāmaki regeneration suggests that the use of nested local, regional and national responses can help to improve feedback and better direct resources. This must be coupled with better use of integrated data about outcomes, and provision for learning from skilled practitioners to be communicated back and used for adapting programmes over time.

98. New operating and funding models will need to be developed over time that are responsive to the needs of the community and do not create cross-cutting incentives for individual agencies. However, this is a complex, long-running and challenging problem. There is no readily-available solution to this and it is likely to be necessary to incrementally improve the system over time as part of the regeneration project.

Potential scope and key service requirements

99. The overall approach to the regeneration initiative was discussed in a facilitated case for change workshop on 7 February 2018. Stakeholders participated in a game designed to tease out key trade-offs and priorities for investment in a regeneration initiative. A series of key messages were identified:

    a. The counterfactual is not doing nothing. In practice, HNZ will need to retrofit or redevelop all the properties in the area over the next 30 years to make them fit for purpose.

    b. The overall vision should be masterplanned and set out based on a cohesive vision for the area, rather than picking off housing investments in isolation. This requires a spatial strategy for development as well as a financial strategy.

    c. The vision should be driven by community well-being and the needs of the people that live in it.

    d. Investing in housing alone is not enough. While there is already a significant amount of investment in social services in the area, operating and funding models are not producing the best outcomes that they could.

    e. Education is a high priority for the area and is critical for the success of a regeneration initiative.

100. Following this workshop, a working group of key organisations was formed including representatives from PCC, Ngāti Toa, HNZ, Homes Land Community (HLC, formerly Hobsonville Land Company), MSD, MBIE, The Ministry of Education (MOE) and the Treasury to develop the detailed service requirements and masterplanning principles.

101. There are four main groups of requirements for a successful eastern Porirua regeneration initiative:

    a. **Master development**: This includes masterplanning, identifying key moves that will catalyse change, investment in public assets and neighbourhood amenity, and the wholesale redevelopment of superlots. This will help to deliver better housing choices and make eastern Porirua a great place to live.

    b. **Public housing renewal**: Depending on the level of investment and the nature of particular sites, public housing renewal can be delivered through a combination of retrofits, the development of vacant sites, infill development and redevelopment of clusters of HNZ properties. This will ensure public housing is built for the needs of people now and in the future.

    c. **Social service improvement**: Even with an uplift in the number of homes in eastern Porirua and a significant reduction in the concentration of public housing, the area will still be home to a large number of vulnerable people, with a high percentage of people with complex needs. We know that our current operating and funding models do not always serve these people well and that there is a need for more integrated and client-centred delivery.

    d. **Building social cohesion**: The regeneration proposal represents a big change for the community of eastern Porirua. To manage this change, implementation will need to include a strong focus on building social cohesion. This will include community

engagement, involvement in elements of design, place-making and the employment of local people within the implementation of the project.

Approach to scoping

102. Based on the four Investment Objectives, stakeholders developed a series of potential key service requirements, summarised Table 10.

103. A community regeneration initiative involves multiple, interconnected actions. No individual investment can succeed without the others. Accordingly, rather than adding or removing elements completely, the scope of the regeneration varies the emphasis on different actions, the timeline for progress and the degree to which the Government attempts to catalyse change, rather than directly implement change itself.

104. The scope and key service requirements were used to develop long-list options for the economic case, summarised in Table 12 and Table 13.

Table 10: Potential scope and key service requirements

Service Requirements	Scope Assessment				
	Status Quo	Minimum Scope	Intermediate Scope	Maximum Scope	Out of Scope
Masterplan		✓	✓	✓	
Road realignment		✓	✓	✓✓	
Pedestrian and cycling infrastructure		✓	✓	✓	
Enhancement of parks		✓	✓	✓✓	
Key moves		✓	✓	✓	
3 Waters infrastructure			✓	✓✓	
Retrofit HNZ properties	✓	✓✓✓	✓✓		
Redevelop HNZ properties	✓	✓	✓✓	✓✓✓	
Affordable housing options		✓	✓✓	✓✓✓	
Renew and invest in primary schools			✓	✓✓	
[21					
Changes to social service delivery			✓	✓✓	
Changes to road network to respond to Transmission Gully					✓
Adjacent industrial or commercial zoning					✓
Adjacent greenfields development					✓
Existing HNZ development at Ixion Lane					✓

Expected benefits and intervention logic

105. The potential benefits of a regeneration project have been identified using reviews of international and local evidence. Investing in regeneration of eastern Porirua would deliver benefits across three main areas:

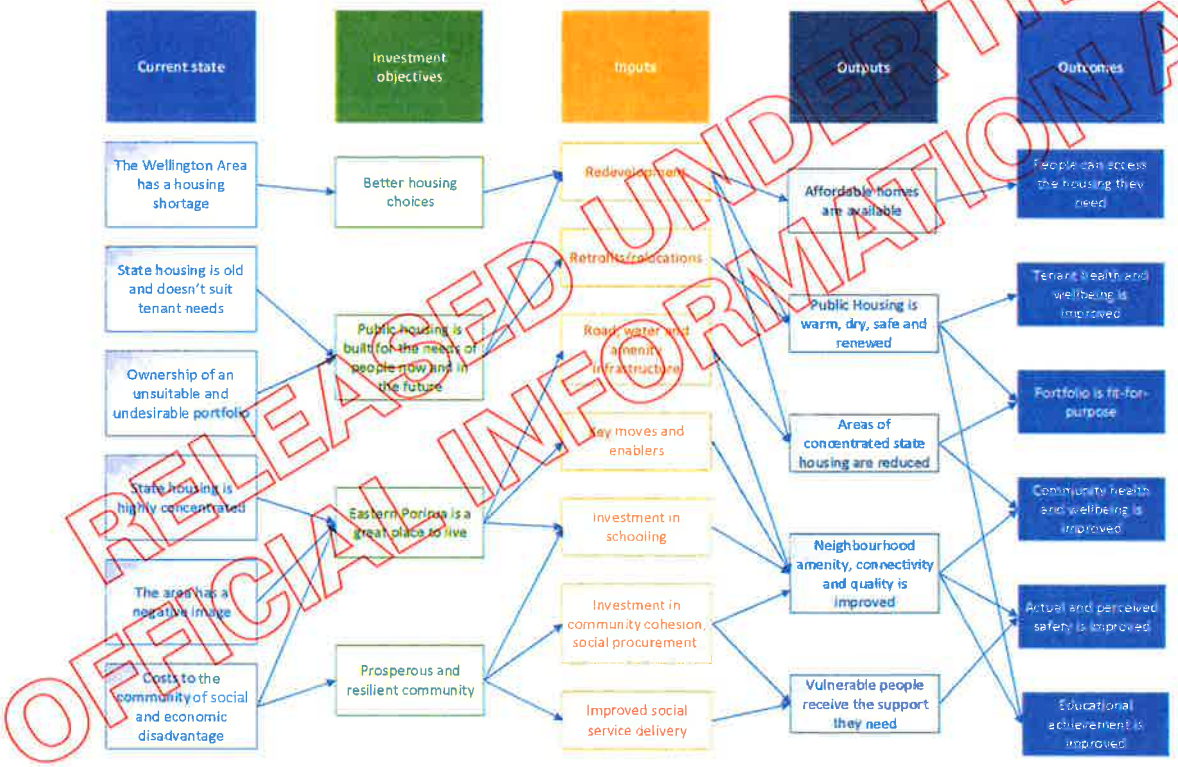
    a. **Housing supply**: The Wellington Region has a shortage of affordable housing supply which intensification of the area could contribute to addressing.

    b. **Housing improvements**: Tenants would benefit directly from living in better-quality accommodation from renewal.

    c. **Neighbourhood improvements**: People who live in the area would benefit from the de-concentration of public housing stock, improved amenity, connectivity and housing, and improved social connectivity and resilience.

106. The assumptions and evidence used to establish benefits are detailed in Appendix 3. This includes monetised assessment of fiscal, economic (local and national) and wellbeing impacts, as well as qualitative assessment of impacts we were unable to monetise. The economic case uses cost-benefit analysis of direct monetary and wellbeing impacts, and multi-criteria analysis of qualitative impacts. The management case establishes a framework for measuring and tracking these benefits, detailed in Appendix 5.

Figure 8: High-level intervention logic (detailed individual social benefits in Appendix 3 and Appendix 5)



Economic Case – developing the preferred way forward

Key points

107. A range of options have been explored for investment in eastern Porirua, ranging from minimal investment to full redevelopment at high density. Four shortlisted options for master development were selected for cost-benefit analysis:

    a. **Option 1 – Modelled counterfactual**: Focus on renewing all existing housing public housing.

    b. **Option 2 – Modelled counterfactual and key moves**: Renew all existing housing as for Option 1, and undertake a series of investments in community infrastructure.

    c. **Option 3 – Focused regeneration**: Undertake the same investments in community infrastructure as for Option 2. For housing investment, retrofit better-quality freestanding homes, redevelop problematic multi-unit typologies and high-uplift sites, and divest sites with low development potential (for example, slope constraints).

    d. **Option 4 – Full regeneration**: Undertake the same investments in key enabling infrastructure as for Options 2 and 3. For housing investment, demolish and redevelop all 1978 HNZ units.

108. Options that involve significant increases in housing supply without investment in community infrastructure are not considered. Without these investments, newly-developed houses are unlikely to be attractive and the economics of development would be significantly worse, or result in project failure (for example, being unable to find buyers for superlots).

109. Options for social service enhancements are considered separately to the capital expenditure.

110. In general, fiscal and economic benefits are outweighed by costs. The primary benefits relate to the wellbeing impacts on individuals. This means that investment in regeneration in eastern Porirua should not be expected to generate direct monetary benefits. Instead, investment represents a transfer from the taxpayer to a particular community in need that aims to achieve an increase in overall net wellbeing for New Zealand in the long term.

111. This is a fundamentally different way of thinking about economic analysis for an investment proposal. Applying this approach has been enabled by recent innovations in the area of wellbeing valuation by HNZ, the Social Investment Agency and the Treasury.

112. On balance, the preferred option is a focused regeneration (referred to as Option 3: Focused Regeneration). This option delivers fairly well against qualitative criteria, with a quantifiable increase in net wellbeing as a result of the investment.

113. This involves redeveloping most of the housing in Waitangirua, Cannons Creek East and Cannons Creek West, while retrofitting the better-quality freestanding homes in Ascot Park and Porirua East. This reduces the concentration of HNZ properties to a more sustainable level while maintaining the number of public houses, delivers high-quality and fit-for-purpose public housing stock, 1504 additional affordable and market dwellings, and a range of investments in community infrastructure including:

a. [3]

b. **Cannons Creek neighbourhood centre**: Revitalisation of the centre based around Cannons Creek School, Park and shopping centre would provide a hub for community activities and a focus for better social connectivity. This could include co-location of key social services.

c. **Greenways**: Walking and cycling connections enabled through improving the state and feeling of safety enable people to be more connected to each other and to promote active transport.

d. **Upgrading Mungavin/Warspite Avenue**: Redevelopment of Mungavin/Warspite Avenues would form a key transport corridor and neighbourhood 'front yard'. This is an important part of creating visible change early to build community confidence.

e. **Connection to city centre**: An improved pedestrian and cycling connection to Porirua city centre would enable connection to both commercial areas and the train to Wellington City, unlocking potential in eastern Porirua.

114. **Investment in schooling** has been identified as both a key means of better serving the existing community and an enabler of attracting people to the area. [2]

115. [3]

116. Even spread over 25 years, a regeneration proposal represents a big change for the community of eastern Porirua. To manage this change, implementation will need to include a strong focus on building social cohesion. This will include community engagement, involvement in elements of design, place-making and the employment of local people within the implementation of the project.

Critical success factors

117. The following critical success factors were identified by stakeholders through a series of meetings and workshops throughout April and May 2018. These were used alongside the investment objectives to filter long-list options to develop a shortlist.

Table 11: Critical success factors

Generic Critical Success Factors	Broad Description	Proposal-Specific Critical Success Factors

Strategic fit and business needs	How well the option meets the agreed investment objectives, related business needs and service requirements, and integrates with other strategies, programmes and projects.	De-concentrates public housing Maintains current level of public housing Achieves HNZ target mix of typologies Delivers affordable housing De-stigmatises neighbourhood Provides urban form that supports health and connectivity Improves social services Maintains social cohesion
Potential value for money	How well the option optimises value for money (i.e., the optimal mix of potential benefits, costs and risks).	Optimise use and value of current built assets Deliver sufficient early change to lift stigma over the area Provide for flexibility in implementation (e.g. avoid strategies which might result in stranded assets) Maximise positive social/wellbeing impact
Supplier capacity and capability	How well the option matches the ability of potential suppliers to deliver the required services, and is likely to result in a sustainable arrangement that optimises value for money.	Crown retains risks that the market will not accept Reflects construction market constraints Utilises market to ensure the right product mix
Potential affordability	How well the option can be met from likely available funding, and matches other funding constraints.	Optimises staging over time to match market conditions Balances local and central government contributions
Potential achievability	How well the option is likely to be delivered given the level of available skills required for successful delivery.	Delivers market-attractive and realistic levels of new homes Sets pace that can be achieved within house construction and infrastructure provision constraints

Long-list options and initial options assessment

Process for identifying options

118. Given the scale of the proposal, generating all potential options within a single options workshop was not attempted. Instead a wide range of options were generated by stakeholders beginning with the Case for Change workshop on 7 February, and followed by workshops and working group meetings covering masterplanning principles and scenario-building. Targeted engagement was undertaken in relation to commercial structure, risk allocation, social service provision and funding models. Options for service delivery are considered within the Commercial Case and funding and finance options are considered within the Financial Case.

Options for pace

119. There are three potential approaches to setting the pace of implementation for this project.

a. Supply constrained: How quickly the construction market is able to deliver new or retrofitted dwellings, or key infrastructure.

b. Demand constrained: How quickly the houses can be sold into the market.

c. Rehousing constrained: How quickly redevelopment could occur if all tenants must be rehoused within the portfolio.

120. Setting a constraint based on rehousing is likely to mean a very slow pace to development. This could mean a regeneration does not have sufficient momentum to change perceptions of the area and achieve the expected benefits. Accordingly, we have set the implementation timeline based on a combination of supply and demand considerations to be 20 years. This provides time for construction to ramp up and ensures that the market can absorb houses as they are delivered.

121. This choice means that rehousing becomes a critical dependency. While some may be accommodated within the portfolio, additional funding is required to provide additional capacity.

Options for master development and community infrastructure

122. Table 12 and Table 13 summarise the assessment of the long-list options against the investment objectives and critical success factors. Note that numbers are approximate and exclude around 60 houses that are not in need of renewal. A number of key moves are consistent to several options:

a. [3]

b. **Cannons Creek neighbourhood centre**: Revitalisation of the centre based around Cannons Creek School, Park and shopping centre would provide a hub for community activities and a focus for better social connectivity. This could include co-location of key social services.

c. **Greenways**: Walking and cycling connections enabled through improving the state and feeling of safety enable people to be more connected to each other and to promote active transport.

d. **Upgrading Mungavin/Warspite Avenue**: Redevelopment of Mungavin/Warspite Avenues would form a key transport corridor and neighbourhood 'front yard'. This is an important part of creating visible change early to build community confidence.

e. **Connection to city centre**: An improved pedestrian and cycling connection to Porirua city centre would enable connection to both commercial areas and the train to Wellington City, unlocking potential in eastern Porirua.

123. If a regeneration proposal goes ahead, the additional housing development will mean that expansion of capacity (for secondary schooling in particular) will be necessary at some point. [2]

[2]

In order to identify specific options there will need to be a consultation process with the community on its vision for education in light of the housing redevelopment proposed. If that process identified network change there will also need to be consultation under the Education Act with specific school communities.

125. At present, capital investment for education is prioritised towards accommodating growth, particularly in Auckland. Investment that falls outside these priorities will need to have a compelling case.

126. Options were filtered down to a viable short-list for detailed economic assessment and financial modelling. Detailed descriptions and assessments are provided in Appendix 2.

Table 12: Assessment of long-list options for master development and housing renewal

	Long-list option	Summary of assessment
Status quo	**Modelled counterfactual** • Retrofit 1650 properties • Redevelop 300 properties • 450 affordable and market houses	• Least cost option that delivers warm, dry houses. • Typology issues would remain. • No opportunity to address broader social issues and amenity in the area • Little affordable housing. • Achieves few investment objectives but forms a good counterfactual – focuses the business case on the incremental spend that is necessary rather than the overall amount, which would not reflect the latent liability associated with a portfolio of this age.
Minimum scope	**Sell-down of HNZ portfolio** • Progressively divest in the area until HNZ concentration is reduced to 25-30% of housing stock • Acquire/build substitute properties elsewhere in the Wellington Region	• Simple solution to reducing the concentration of public housing • Community may perceive this as Government abandoning it, after having created a series of problems. • High risk that neighbourhood effect persists or worsens with private landlords, resulting in worse social outcomes. • Potentially high cost – selling eastern Porirua properties low to buy properties high elsewhere. No value capture • Poor outcomes and value for money. However, this may need to be re-examined should a regeneration effort fail and if more affordable housing stock can be supplied elsewhere.
	Modelled counterfactual and key moves • Retrofit 1650 properties • Redevelop 300 properties	• Good amenity input for the community while minimising costs.

	• 450 affordable and market houses • Invest in town centres, community hubs, upgrading main road, walking and cycling infrastructure and schooling	• Public housing concentration would not be reduced to a level that would mean less exacerbation of social issues, • Little affordable housing. • No support for ongoing maintenance of infrastructure. • Unlikely to deliver sustainable change.
Intermediate scope	**Focused regeneration** • Retrofit 400 houses (mostly Ascot Park and Porirua East) • Redevelop 1500 houses (mostly Waitangirua and Cannons Creek) • 1500 affordable and market houses • 450 disposals • Invest in town centres, community hubs, upgrading main road, walking and cycling infrastructure and schooling	• Achieves most of the investment objectives (affordable housing, renewed housing, de-concentrates public housing, invests in community infrastructure). • Makes the most of existing assets to keep costs down. • Less affordable housing than full redevelopment • Significant number of disposals of HNZ properties (strategic risk) • Uneven typology distribution across the five neighbourhoods (strategic risk)
Maximum scope	**Full regeneration** • Redevelop 1950 houses • 2600 affordable and market houses • Invest in town centres, community hubs, upgrading main road, walking and cycling infrastructure and schooling	• Greatest impact on amenity. • Even typology distribution. • Large amount of affordable and market housing. • Potentially high cost.
	High yield regeneration • Redevelop 1950 houses • 3900 affordable and market houses • Invest in town centres, community hubs, upgrading main road, walking and cycling infrastructure and schooling	• Large amount of affordable and market housing. • Potentially very high cost. • Serious risk in relation to feasibility and market capacity.

Short-listed Options for master development and public housing renewal

127. Table 13 on the following page sets out the assessment of long-list options against investment objectives and critical success factors.

128. On the basis of this analysis, four shortlisted options for master development were selected for cost-benefit analysis:

    a. **Option 1 – Modelled counterfactual**: Focus on renewing all existing housing public housing. This option was included as a proxy for what might be undertaken based on HNZ's long-term asset management plan. This is designed to show that HNZ will face significant cost in renewing the area, even without a regeneration project.

b. **Option 2 – Modelled counterfactual and key moves**: Renew all existing housing as for Option 1, and undertake a series of investments in community infrastructure.

c. **Option 3 – Focused regeneration**: Undertake the same investments in community infrastructure as for Option 2. For housing investment, retrofit better-quality freestanding homes, redevelop problematic multi-unit typologies and high-uplift sites, and divest sites with low development potential (for example, slope constraints).

d. **Option 4 – Full regeneration**: Undertake the same investments in key enabling infrastructure as for Options 2 and 3. For housing investment, demolish and redevelop all 1978 HNZ units.

129. Options that involve significant increases in housing supply without investment in community infrastructure are not considered. Without these investments, newly-developed houses are unlikely to be attractive and the economics of development would be significantly worse, or result in project failure (for example, being unable to find buyers for superlots).

130. As the master development and public housing renewal forms the vast majority of the costs, all four options were taken forward for detailed analysis of costs and benefits.

Table 13: Assessment of long list options against investment objectives and critical success factors

Assessment criteria	Assessment Scores for Choices within the Scale, Scope and Location Dimension					
	Status quo	Minimum scope		Intermediate scope	Maximum scope	
	Modelled counterfactual	Sell down	Counterfactual and key moves	Focused regeneration - partial redevelopment	Full regeneration - full redevelopment	High-yield regeneration
Investment objectives:						
• Better housing choices	No	Partial	No	Partial	Yes	Yes
• Public housing is built for the needs of people now and in the future	Partial	Partial	Partial	Yes	Yes	Yes
• Eastern Porirua is a great place to live	No	Partial	Partial	Partial	Yes	Yes
• Prosperous and resilient community	No	No	No	Partial	Yes	Yes
Critical Success Factors:						
• Strategic fit and business needs	No	No	Partial	Yes	Yes	Yes
• Potential value for money	Partial	No	Partial	Yes	Partial	No
• Supplier capacity and capability	Yes	Yes	Yes	Yes	Yes	Yes
• Potential affordability	Yes	Partial	Yes	Partial	Partial	Partial
• Potential achievability	Yes	Yes	Yes	Yes	Yes	No
Advantages and Disadvantages:	More affordable, doesn't achieve target distributions or typologies, doesn't address social issues	Addresses concentration, breaks up community, requires selling cheap houses to buy more expensive ones	Potential to achieve some objectives but significant risk due to and residual concentration and lack of additional funding (rates) to maintain higher service levels.	Potential to achieve most objectives but some risk due to typology distribution.	Achieves objectives but affordability may be challenging	Achieves objectives but significant risk that market will not absorb supply
Overall Assessment	Carry forward to short-list	Discard (revisit in case of project failure)	Carry forward to short-list but carefully examine potential financial sustainability.	Carry forward to short-list	Carry forward to short-list	Discard (revisit in case of unexpected level of success)

Options for improving social service outcomes

The status quo: Continued silos

Description

131. In general, social services for mainstream clients are provided acceptably through the familiar service 'silos'. Funding and services are provided through individual Government agencies such as health, education, or justice. Mainstream clients approach these agencies, or non-government organisations contracted by them, to receive whatever service they need at the time.

132. The experience is quite different for clients with complex needs, particularly when these needs are inter-dependent so that treating some needs but not others is likely to be ineffective. A significant degree of coordination across the services is required for good outcomes. Unfortunately, the provision of services separately through government silos rarely achieves good coordination[10].

133. The social services system in eastern Porirua is not operating efficiently. Previous Government policies have focused on a competitive funding model that has created barriers to information-sharing and placed most of the burden of joining up services on clients. There has also been an inability to defund/exit ineffective services.

Assessment

134. Continuing with the status quo is likely to result in ineffectiveness, poor value for money and the continuing proliferation of services that do not meet clients' needs.

Local coordination

Description

135. The goal of local coordination is to link different frontline service providers together, to help them better refer clients to each other. Local responses are often trialled, but are seldom sustainable for a number of reasons.

136. First, the channels for engaging with social service agencies (both regionally and nationally) are not entirely clear. In practice local responses are relying heavily on ad hoc engagements and relationships. This creates delays, rework and risk of higher cost and lower effectiveness initiatives. It also makes it difficult for barriers identified at the local level to be addressed because national assistance is often required.

137. Second, they don't always have access to regional or national insights, methodologies and approaches and it can be expensive and time-consuming to produce these themselves. Time and money spent developing resources and approaches could be better invested in programmes or initiatives which directly help the local population.

138. Third, local responses do not solve the fundamental problem of the misalignment of incentives for different social agencies with independent funding mechanisms. This can lead to promises being broken, resulting in initially well-meaning staff becoming disillusioned as agency priorities undermine outcomes.

[10] Productivity Commission, 2014.

Assessment

139. Placing the burden of linking service offerings on frontline staff is unlikely to deliver sustainable change.

Regional Response

Description

140. Investment has been made in recent years in the development of regional responses (for example, in relation to the Tāmaki regeneration). In principle, the intention of a Regional Response is to enable a local response to be more effective by:

    a. supporting local response decision-making

    b. providing resource to support local response priorities

    c. providing knowledge or intelligence where appropriate

    d. providing a forum to discuss regional needs

    e. establishing regional priorities, and

    f. investing in regional initiatives to deliver on priorities.

141. A Regional Response is designed to enable better local coordination by improving alignment of resources, improving efficiency and enabling better links to national coordination.

Assessment

142. Regional responses are a promising but untested model. There is potential to improve the sustainability of local responses, but also significant potential to add complexity, cost and administrative burden. Regional responses may also suffer from similar issues of competing priorities to local responses that make the practical reality less effective than the theory.

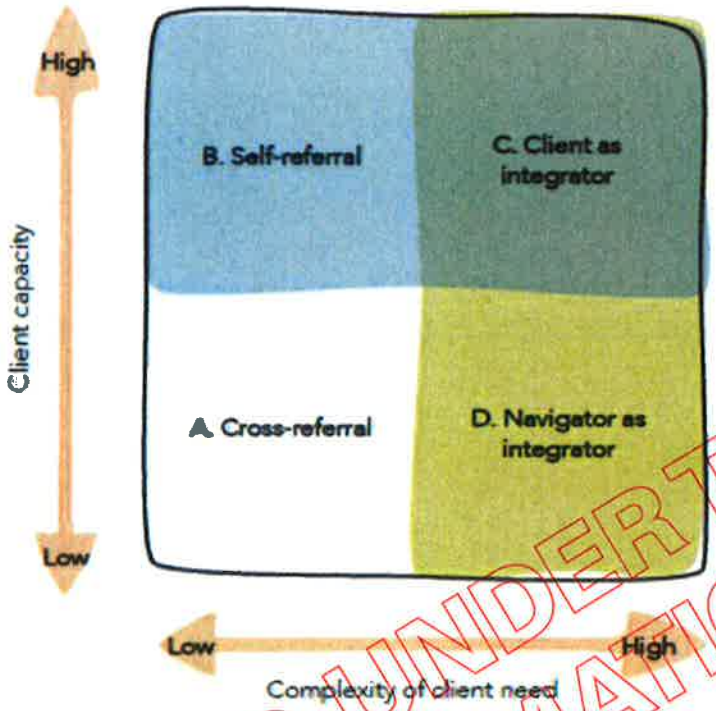
143. An alternative approach could be to create a regional advocacy role. Rather than attempting to link the priorities of different delivery agencies under a regional response, this would mean an advocate acting on behalf of a community across all its needs, to improve prioritisation and resourcing at the regional and national levels.

Navigator response

144. In 2014, the Productivity commission published the report *More effective social services*. This identified the need for navigator roles within social service delivery designed to help clients with high needs, but low capacity to access services (shown in Figure 9).

145. Navigators are employed to act on behalf of the client and assist them to access the services they need. While needing general social work skills, navigators do not necessarily directly deliver services themselves. This enables them to improve the client experience while operating within the existing system, including the current operating and funding models.

Figure 9: Characteristics of clients of the social services system



Assessment

146. While relatively resource intensive, Navigators overcome the fundamental problem of poor incentives for integration within the existing system of silos. This is because rather than being primary delivers of services that have an interest in growing their funding, they are employed to act on behalf of clients.

147. Without a conflict of interest in relation to service delivery, Navigators are also ideally-placed to gather information about which services within a community are more or less effective, and what gaps exist in resourcing or service offerings.

[2]

[2]

Economic Assessment of the Short-Listed Options

Assumptions

155. For the purposes of the cost-benefit analysis we have taken a whole-of-Crown view. This focuses on the total cost of development and infrastructure (including education infrastructure), the cost of retrofitting and building new houses, and the proceeds from land sales. Community infrastructure [2] is constant across Options 2, 3 and 4, so does not have a major impact on the relative difference between these options. However, including these costs enables benefits from community-scale impacts to be included, rather than focusing only on housing benefits.

156. Options for social service enhancements are considered separately to the capital expenditure.

157. Income Related Rents paid by tenants are assumed to be the same across scenarios, and are thus netted out.

158. The Income Related Rent Subsidy represents revenue to HNZ, but also cost to MSD, so has been netted out. This has implications for the balance of capital and operating costs and cash flows, which are addressed in the financial case.

159. The Crown is expected to bear infrastructure costs that relate to growth and the initial establishment of key assets. Backlog infrastructure costs to PCC that can be funded through rates have been excluded. Maintenance costs to PCC and NZTA have been excluded.

160. We have undertaken analysis of the economic stimulus effect of construction activity. Our view is that this does represent a real economic activation to eastern Porirua, since similar activity would not occur without Government investment. However, this cannot be counted in the cost-benefit analysis, as a similar stimulus would be created elsewhere if Government were to invest in a different project.

A note on the use of fiscal, economic and wellbeing benefits

161. This business case incorporates three levels of benefit analyses:

a. **Fiscal**: Direct monetary benefits to the taxpayer, such as a reduction in health costs associated with reduced hospitalisations.

b. **Economic**: Monetary benefits to private individuals, such as increased earnings due to construction procurement that seeks to hire local people.

c. **Wellbeing**: Here we express the monetised, intangible benefits to individuals. For example, the amount of extra money a person would need to earn to make their wellbeing as good as if they had better mental health.

162. These three lenses provide for different ways of thinking about what is achieved through investment. Because fiscal benefits accrue directly to Government, they should offset some of the costs of the investment. This means spending money in one sector to save money in another. Economic benefits reflect that when Government spends money, it is not lost (aside from the deadweight cost of taxation). Money is being redistributed from the taxpayer to private individuals.

163. The wellbeing benefits we have used reflect the fact that Government expenditure can enhance aggregate wellbeing of a population if it is spent in the right way. The values are derived by determining how much additional income a person would need to have to feel as

happy as if they received the intervention[11]. If the benefits are more than the cost, there is a net gain in wellbeing. If the benefits are less than the cost, it would have been better to just give people the money. This is important as the overall level of expenditure needs to consider the amount of wellbeing that could be generated by investing in something else.

164. This represents a new approach to economic analysis for this type of investment. This has been enabled by innovative work in the area of wellbeing valuation recently undertaken by HNZ, The Social Investment Agency and the Treasury.

Assessment period

165. The start date for valuation purposes is assumed to be 1 July 2019.

166. The project is expected to last 25 years and costs are assessed over the full period. Benefits are expected to persist beyond the life of the project inputs and are assessed over a 50-year period.

Discount and inflation assumptions

167. Because the capital investments deliver long-term benefits beyond the life of the project, NPVs are presented as both 6% and 3%. This is to reflect the fact that social benefits are accruing to future generations and higher discount rates can result in status quo bias.

168. As these are real discount rates, all costs and benefits are expressed in today's dollar terms.

Estimated costs

169. Depreciation, capital charges, interest and other financing costs are excluded from the analysis.

170. The financial modelling encapsulates all direct monetary flows associated with building and operating the housing assets. A number of direct monetary benefits (e.g. reduction in operating costs for new assets) are also captured within the costs. Because of the mixture of positive and negative benefits and costs, NPV analysis is used instead of cost-benefit ratios to avoid distortions.

Taxation

171. All dollar figures are expressed in GST exclusive terms.

Optimism bias

172. People have a bias towards optimism when preparing business cases. This might come from underestimating costs, overestimating revenue and benefits, or ignoring constraints on the pace of delivery. We have attempted to identify and actively mitigate against key sources of optimism bias, particularly where analysis is sensitive to expectations about a particular outcome. This is detailed in Table 14.

[11] The values are primarily derived from Davies, 2018, as detailed in Appendix 3.

Table 14: Key optimism bias risks and mitigations

Optimism risk area	Mitigations
Development uplift	If we expected it to be easy to achieve a large uplift in density total costs for the project could be underestimated. To combat this we have employed masterplanners (Isthmus) to lot the area at a fine-grained level, taking into account constraints such as slope, aspect and shape of lots. This has resulted in lower than expected achievable uplift.
Rehousing costs and pace	Rehousing could be significantly limited by any commitments to rehouse people within Porirua. Some capacity will be created by developing vacant land and through natural turnover of tenancies (likely around 2% per annum). However, rather than attempt to rehouse people within the existing portfolio as development proceeds, additional funding will be allocated for HNZ to acquire land and houses in greater Porirua and Tawa.
Demand for market sales	Regeneration cannot be achieved without private market sales. To determine the scale and pace of demand, we have employed property experts (CBRE) to undertake effective demand and supply studies of the whole Wellington Region. To set prices at a point that enables this demand to be realised, we have set initial price expectations based on existing land values, reflecting the existing amenity value of the area. Long-run average rates of price increase are high at 6% real per annum, with recent price increases in the Eastern Ward reaching 20% per annum. These price increases are unlikely to be sustainable. Accordingly, we have assumed 5% per annum increases for the first 10 years, and that income levels will become limiting, reducing increases to 3% per annum thereafter.
Demolition and decontamination	Sites are likely to have significant decontamination requirements. Costs have been derived from estimates based on similar sites elsewhere.
Infrastructure requirements	Infrastructure costs (especially wastewater) can vary a lot in brownfields redevelopment, with costs escalating rapidly. For eastern Porirua, we are starting from a worst-case scenario in that local infrastructure is past its useful life and will require replacement. Modelling was undertaken by Wellington Water with costs derived by PCC using SPM Asset Management.
Construction costs	Development and construction costs can vary significantly across different types of project. We have used a combination of information provided by HNZ, HLC and TRC to understand development and construction costs based on similar types of developments. The costs we have used are Auckland-based, so are likely to be conservative compared to current costs in Wellington. However, it is expected that construction market constraints in the Wellington Region will affect the project which would result in higher costs than currently experienced. The conservative costs mitigate this impact.
Retrofit costs	HNZ has been undertaking trials to retrofit houses to achieve very high standards of quality. Costs from these trials have been used (rather than desktop studies) to ensure expectations are realistic.
Social benefits	Social benefits of interventions are often overstated due to optimism of people involved in delivery. Rather than build up the expected benefits through workshops, we started from a data-driven evidence base and tested assumptions with key stakeholders.

Monetary and non-monetary benefits

173. The following benefits have been identified by gathering a broad set of baseline data about the community using the Integrated Data Infrastructure (IDI), and using evidence about the known impacts of the proposed interventions to determine likely changes. Fiscal, economic and wellbeing impacts were then quantified and included in the cost-benefit analysis.

174. In general, we have been conservative with estimates and attempted to offset rather than compound error where possible. These benefits were tested with stakeholders to ensure the assumptions are reasonable. Assumptions, cohorts targeted and individual monetary amounts are detailed in Appendix 3.

Table 15: Analysis of potential benefits that can be expressed in monetary terms

Main Benefits	Description
Subjective wellbeing	• Subjective value gained from better mental health with better housing • Subjective value gained from living in a warmer home and feeling more healthy • Subjective value gained from better connection with neighbours • Subjective value gained from improved physical health from being more active • Subjective value gained from feeling safer
Physical health	• Fewer hospitalisations from infectious diseases due to overcrowding • Fewer incidences of respiratory illness from damp or overcrowded homes • Being more active via walk and cycle ways improves fitness reduces diabetes and cardiovascular disease risk
Mental health	• Fewer specialist visits from improved mental health • Better employment outcomes and a more productive workforce from reduced feeling of depression • Improved productivity from reduced feeling of depression
Education	• Improved school attendance from better health outcomes • Improved performance at school with less disruption in the home environment • Better school attendance and progression to higher education from neighbourhood effects
Cost savings	• Decreased Income Related Rent Subsidy (IRRS) use through improved matching of public housing to tenant needs • Reduced electricity costs from more energy efficient homes
Jobs/training	• Recruitment and training of people in Eastern Porirua in the construction sector • Reduced jobseeker benefit
Safety	• Reduced incidence of crime

175. The following benefits could not be reliably quantified. Qualitative criteria were developed for each benefit type. Options were ranked against each criterion, with points assigned depending on the ranking (for example, four points for being ranked first) to support comparison against the cost-benefit analysis.

Table 16: Analysis of potential benefits that cannot be reliably expressed in monetary terms

Main Benefits	Description
Housing Supply	Housing affordability has a significant impact on people's well-being. Increased housing supply will mitigate potential displacement of people from the community and generate an impact on the broader market. We can be fairly confident of the additionality of the dwellings delivered under each scenario, since it involves the release of Government land and is calibrated within demand constraints. **Criterion: delivers affordable housing**
Optimised housing portfolio	New, fit-for-purpose houses will make it easier for HNZ to place tenants. Lower concentration will reduce the exacerbation of social issues and make tenancies easier to manage. **Criterion: portfolio is optimised to HNZ requirements**
Community resilience	In addition to absolute impacts on people's wellbeing, a regeneration initiative has the potential to make the community more resilient. Greater resilience would mean aggregate wellbeing is not only higher, but more sustainable. The greater the investment in social procurement and positive social interactions, the more likely this is to occur. **Criterion: supports a more resilient community**
Economic sustainability	Regeneration involves investing a large amount of money in community infrastructure. These assets ultimately have to be owned and maintained by the community, via rates paid to PCC. Options which do not deliver a more mixed-income community carry a risk that key community assets cannot be maintained and become a burden. **Criterion: supports a more mixed-income community**
Environmental sustainability	Regeneration offers a number of opportunities to deliver environmental benefits by reducing the footprint of homes (through improving energy efficiency, water use and stormwater management) and people (by enabling greater use of active and public transport options). **Criterion: delivers direct environmental benefits and homes that use less energy and water.**

Identifying the preferred option

Options analysis

176. Table 17 below shows the economic analysis of the four shortlisted options. We have undertaken two complementary approaches:

    a. **Quantitative cost-benefit analysis**: The net present values (NPV) include all capital costs, as well as fiscal, economic and wellbeing benefits.

    b. **Qualitative multi-criteria analysis**: We also undertook qualitative analysis of benefits that were unable to be quantified. Options were ranked against each criterion, with points assigned depending on the ranking (for example, four points for being ranked first).

Table 17: Estimated costs and benefits ($m)

	Option 1: Counterfactual		Option 2: Counterfactual & key moves		Option 3: Focused regeneration		Option 4: Full regeneration	
Discount rate	6%	3%	6%	3%	6%	3%	6%	3%
Capital Costs	288	386	400	515	551	723	748	997
Fiscal benefits	56	93	65	108	100	165	117	194
Economic benefits	33	51	41	62	91	157	113	197
Wellbeing benefits	348	630	381	705	387	737	390	764
Total benefits	437	773	487	875	578	1,059	620	1,155
Cost-benefit analysis of monetary costs and benefits:								
Total NPV/rank 1 2 3 4	149	387	87	360	27	336	(128)	158
Multi-criteria analysis of non-monetised benefits: rank (score)								
Housing Supply	3 (1.5)		3 (1.5)		2 (3)		1 (4)	
Optimised housing portfolio	3 (1.5)		3 (1.5)		2 (3)		1 (4)	
Community resilience	4 (1)		3 (2)		2 (3)		1 (4)	
Economic sustainability	3 (2)		4 (1)		2 (3)		1 (4)	
Environmental sustainability	4 (1)		3 (2)		2 (3)		1 (4)	
Total score/rank 1 2 3 4	7		8		15		20	

177. Figure 11 and Figure 12 show the quantitative and qualitative analyses plotted against each other. The two types of analysis show different things so should be considered alongside each other, rather than attempting to assign weights or preferences. In general, options closer to the top right corner are better scoring, while those closer to the bottom left are worse scoring.

Figure 11: Combined NPV and multi-criteria analysis at 3% discount rate

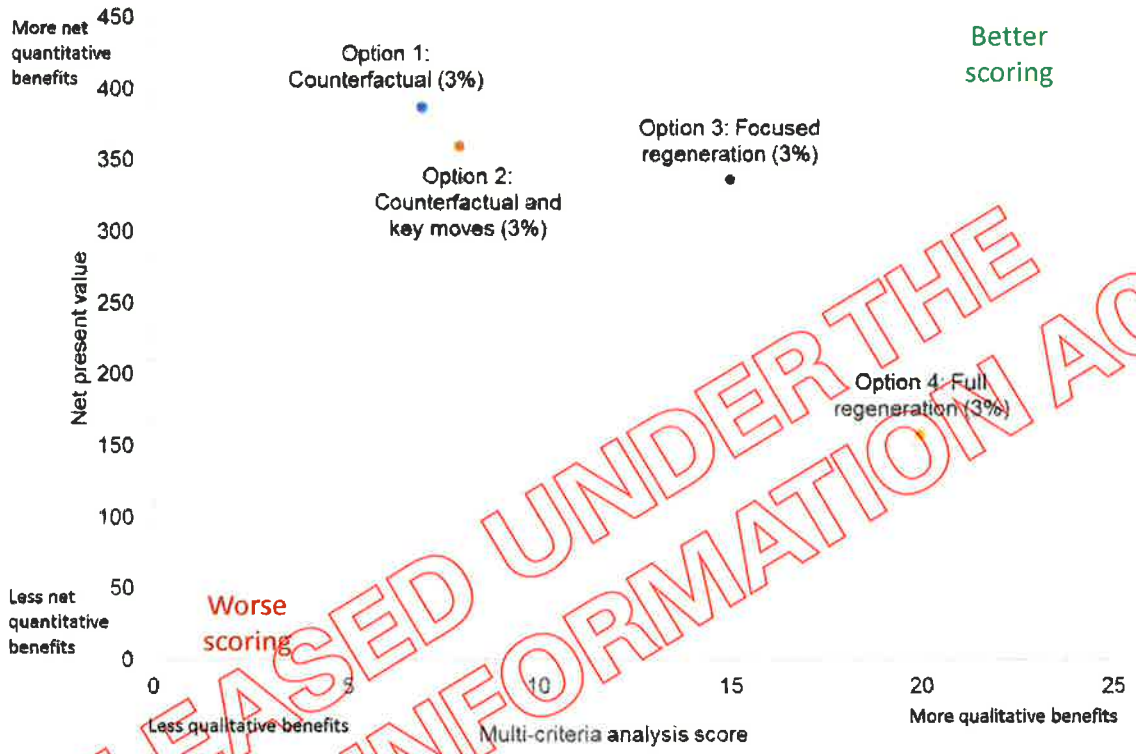
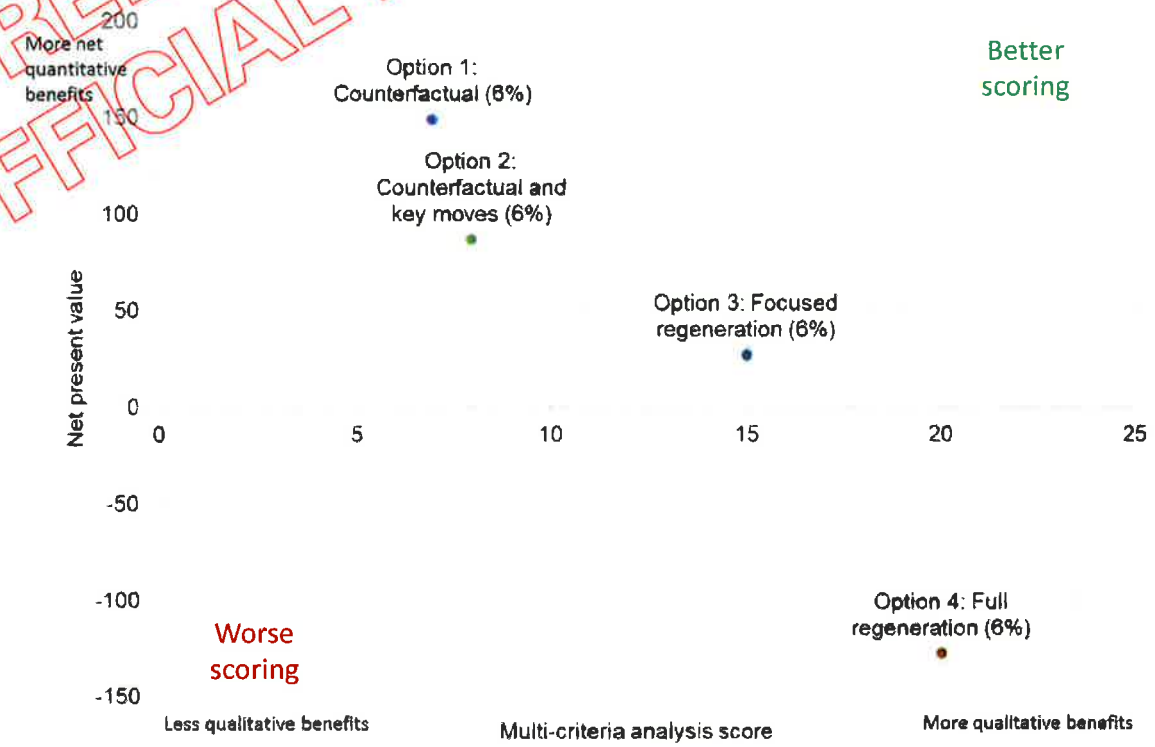


Figure 12: Combined NPV and multi-criteria analysis at 6% discount rate



The preferred option

178. In general, fiscal and economic benefits are outweighed by costs for all of the options. The primary benefits relate to the wellbeing impacts on individuals. This means that investment in regeneration in eastern Porirua should not be expected to generate direct monetary benefits. Instead, investment represents a transfer from the taxpayer to a particular community in need that aims to achieve an increase in overall net wellbeing for New Zealand in the long-term.

179. Analysis of the options shows a difference between the quantifiable net benefit of the options and the qualitative benefit scores in multi-criteria analysis. This reflects the fact that higher investment generates higher qualitative benefits and certainty of achieving key objectives, but diminishing quantifiable returns to investment.

180. Option 1: Modelled Counterfactual presented the lowest quantifiable benefits, but due to it being relatively low cost showed the highest net benefits. This also partially reflects the fact that most of the benefits we were able to monetise related to the benefits to tenants of better quality housing, and avoiding investment in community amenity significantly reduces cost. Option 1 scored worst against qualitative criteria.

181. Option 2: Counterfactual with Key Moves also provides a relatively good net present value. However, stakeholders have significant concerns about the sustainability of this option. Without growth in the population or a change in incomes for the people that live there, the additional infrastructure investment could become a burden rather than an asset. This is reflected in the fact it scored poorly on qualitative analysis.

182. Stakeholders are generally of the opinion that Option 4: Full Regeneration was the best delivery against the investment objectives, with the greatest certainty of delivering the expected benefits. This is shown by it producing the highest level of quantitative benefits and being first ranked against all qualitative criteria. However, the additional benefits delivered by Option 4 are very expensive under our current assumptions. Of particular concern is that the net wellbeing impact is negative under the 6% discount rate assumption. This indicates that Government could potentially generate more wellbeing by spending the money elsewhere. For context, for the same amount of money, we could deliver Option 3 and give every household in an eastern Porirua public house $114 per week in perpetuity.

183. On balance, the preferred option is Option 3: Focused Regeneration. This option delivers fairly well against qualitative criteria, with a quantifiable increase in net wellbeing as a result of the investment. However, there are a number of important caveats.

184. First, a less even distribution of typologies is modelled across neighbourhoods under this scenario compared to Option 4. Further work on typology mix to achieve more balanced distribution would be valuable, and the ultimate owners of the masterplanning role should be given the flexibility to adjust this if improved outcomes can be delivered within the same cost envelope.

185. Second, there is a significant number of disposals under this option (around 450). At present these are modelled as spaced throughout the duration of the project as each precinct is developed. However, the timing of these disposals needs to be carefully managed to ensure that it does not have a negative impact on other parts of the renewal programme. It may also be of benefit to invest in some upgrades or refurbishment of these properties before they are disposed of to improve the overall quality of the private housing stock. There are also options relating to who the properties are sold to (for example, prioritising local people and owner-occupiers rather than absentee landlords). Accordingly, this is another matter for which the

delivery agents need to be empowered to take a strategic approach that maximises the overall net benefits of the project.

186. Finally, the choice of Option 3 over Option 4 is largely driven by assumptions about construction costs and land value. To set the project up for success, we have attempted to use reasonable and conservative assumptions. However, given the duration of the project, there may be significant savings in construction costs (for example, through improved use of pre-fabrication) or land values may increase faster than anticipated. Based on sensitivity analysis, the gap between Option 3 and Option 4 would close if construction costs are around 20% lower than expected and land values increase at the historical average.

187. The proposed masterplan is high-level and is designed to remain flexible over time. Beginning the project with a plan based on current assumptions does not preclude more ambitious development should the economics improve. The initial stages of Options 3 and 4 are similar, so in practice beginning with the implementation of Option 3 does not preclude the implementation of Option 4.

188. As the additional benefits of undertaking further redevelopment are not in dispute, there is a strong case that in the event that costs are less than anticipated, savings should be invested in driving further redevelopment rather than reducing the level of funding. This could increase the overall net benefits of the project and reduce the risk that outcomes are not achieved.

Commercial Case – preparing for delivery

Key points

189. The preferred commercial structure of the project is based on lessons from other redevelopment projects, and is aiming to enable delivery agents to operate with clear mandates, and a minimum of additional bureaucracy. There are seven key roles:

    a. Regeneration board

    b. Master developer

    c. Developers/Contractors

    d. Public housing owner and tenancy manager

    e. Bulk infrastructure provider

    f. [2]

    g. [2]

190. The Regeneration Board will provide oversight, coordination and ownership of the vision and master plan. Delivery agents will be responsible for their individual objectives, with respective boards and CEs responsible for separate funding streams, monitored centrally.

191. This structure is designed to balance integration of the overall project objectives against transparency about performance of individual components. Accountability is allocated to the strengths and weaknesses of each delivery agent in managing particular risks.

192. The delivery programme is estimated to span 25 years, including activities from the appointment of the Master Developer through to all planned assets 'going live' and being utilised by the community.

193. There will be some key commercial considerations to support this approach, most notably being speed of delivery, the market and economic value of delivery, and the market confidence of being involved, through appropriately managed commercial risks.

Requirements

194. The preferred option is Option 3: Focused Regeneration. A high-level masterplan has been developed describing the development scenario and key infrastructure investment.

Housing

195. The housing component of the preferred option includes:

    a. retrofitting 462 public houses to a level close to that of a new build, primarily in Ascot Park and Porirua East

    b. redeveloping 1516 units, primarily in Waitangirua, Cannons Creek East and Cannons Creek West to produce 1516 new public houses and 1504 for market sales

c. strategic divestment of 452 properties, and

d. 150 net new public houses in the greater Porirua area.

196. As shown in Figure 13, this is designed to provide for a more mixed community and a reduction in the concentration of HNZ properties, while enabling the existing community to stay. The preferred option delivers an overall net increase in housing supply of 1950 overall across eastern Porirua (a change from 5070 dwellings to 7020).

Figure 13: Changes in property numbers and distribution

*Includes additional supply within greater Porirua area to enable rehousing.

197. This is only an initial high-level plan for the purposes of understanding the scale of the issue and possible solutions, and it is based on current market conditions and assumptions. As contextual conditions change, the plan will need to respond. For example, if land values increase significantly more than anticipated, it may be necessary to pursue higher density to avoid displacement of current residents. Similarly, as the benefits of Option 4: Full Regeneration are well-established, if there is a positive change in the costs of delivery, more redevelopment may be able to be undertaken.

Rehousing

198. Ensuring current tenants have an appropriate place to move to is a critical part of enabling retrofits and redevelopment. Based on the modelled development schedule, the peak public housing deficit is expected to be 285 places in 2028.

199. There are four key factors which will affect the total requirement:

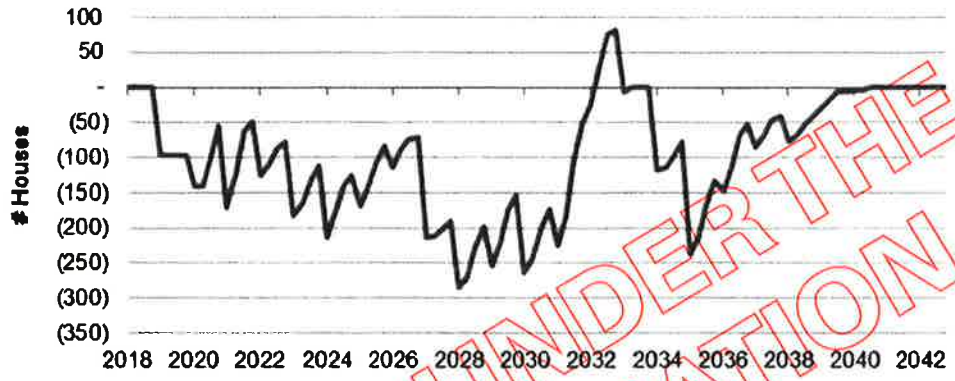
a. **Existing planned development**: The planned HNZ development of vacant land at Ixion Lane in Cannons Creek will provide 52 additional places.

b. **Turnover**: Tenancies do turn over, though at the relatively low rate of around 2% per year. This will reduce rehousing pressure over time.

c. **Latent demand in the area**: The redevelopment process is likely to uncover unmet demand. For example, properties may be housing a number of unknown boarders or additional family members. This may mean additional properties are required for housing a single household.

d. **Wider demand**: Demand for public housing is growing across Wellington. This means it will be difficult to find places for eastern Porirua tenants to transfer to within HNZ's broader portfolio.

Figure 14: Net change in public housing stock over time (base = 1978)



200. The heaviest pressure for rehousing will be in the early stages of the project, with the requirement reaching 142 places by 2020, after allowing for the Ixion Lane development, which could provide 52 places in the short-term. Turnover will lessen this pressure over time. For the additional component, we believe it is better to provide for net new places upfront, to take a conservative approach to how this requirement will be affected by turnover or wider demand.

201. Funding will be needed for MSD and HNZ to provide additional capacity of 150 places, in addition to the Ixion Lane development that is underway. These 150 places will be additional net new upon completion of the project. Funding should be made available through MSD to support HNZ to undertake new developments, purchase existing houses, or lease properties within Porirua or the Wellington Region more broadly, as appropriate. This will enable flexibility to provide places in response to tenant demand. For example, tenants with children attending school in other areas may wish to relocate to be nearby.

202. In the short-term, PCC has three sites available in the city centre which could be available for housing development. The sites would need to be developed as mixed-tenure (to not create an adverse impact on the surrounding area) but there is potential to fulfil a significant amount of the rehousing requirements within these sites.

Key moves

203. The housing component is complemented by a range of investment in community infrastructure:

a. [3]

b. **Cannons Creek neighbourhood centre**: Revitalisation of the centre based around Cannons Creek School, Park and shopping centre would provide a hub for community

activities and a focus for better social connectivity. This could include co-location of key social services.

c. **Greenways**: Walking and cycling connections enabled through improving the condition and safety of greenways enable people to be more connected to each other and to promote active transport.

d. **Upgrading Mungavin/Warspite Avenues**: Redevelopment would form a key transport corridor and neighbourhood 'front yard'. This would be an important part of creating visible change early to build community confidence.

e. **Connection to city centre**: An improved pedestrian and cycling connection to Porirua city centre would enable connection to both commercial areas and the train to Wellington City, unlocking potential in eastern Porirua.

Schooling

204. Investment in schooling has been identified as both a key means of better-serving the existing community and an enabler of attracting people to the area.

205. If the regeneration goes ahead, the additional housing development will mean that expansion of capacity, for secondary schooling in particular, will be necessary at some [2]

206. Current primary schooling capacity can accommodate the population growth associated with Option 3. However, additional resourcing would be required to increase capacity if growth is higher than expected. [2]

Building social cohesion

207. The regeneration proposal represents a big change for the community of eastern Porirua. To manage this change, implementation will need to include a strong focus on building social cohesion. This will require several key elements:

a. **Community engagement**: Multiple channels will need to be utilised to engage the community about the project. This will require an ongoing local presence in addition to periodic engagement events about specific aspects of the built environment.

b. **Involvement in elements of design**: While it is not practical for the community to co-design every element of the project (for example, specific housing typologies) there are a number of opportunities for community involvement. For example, shared spaces such as the greenways or town centre revitalisations offer significant scope for the community to set objectives for space and input into design.

c. **Place-making**: Building on the existing sense of place and community in eastern Porirua requires more than just infrastructure investment. The design of spaces and events that create opportunities for the community to come together will help people to engage with the new spaces.

d. **Social procurement**: The employment of local people within the implementation of the project is a key opportunity to promote community ownership of the change and

to ensure that the expenditure associated with the project stays within the community it is intended to benefit. This is particularly important for a community like eastern Porirua with a large number of adults in need of work, and young people not in education, employment or training.

[2]

[1]

Delivery strategy

210. Because the project is large, long-term and involving significant uncertainty, there are a number of risks which the private market will be unwilling to take, or would demand a large risk premium to protect returns.

211. [3]

To bring community-wide regeneration that achieves the desired social outcomes requires the Crown to retain responsibility for strategic roles in the programme.

212. It does not mean that the Crown needs to carry out every role, but rather where possible harness private sector expertise. In general, the Crown would be responsible for governance, programme management, engagement and delivery of community assets, while the private sector would be utilised to deliver housing assets.

Commercial structure and high-level risk allocation

213. The commercial structure utilises a mixture of operational/financial and political/strategic accountabilities. Delivery entities will maintain existing accountabilities in relation to their financial and operational performance to their existing Boards, monitoring agencies and responsible Ministers. Political and strategic accountability for delivery against the vision will be between the proposed Regeneration Board and the delivery entities. Figure 16 shows the overall structure.

214. This structure is to avoid creating cross-cutting accountabilities with the existing Boards of HLC and HNZ in particular. In practice, accountability to the Regeneration Board will be strong, since delivery is highly-visible and there are multiple lines of reporting to monitoring agencies and Ministers. However, because funding will flow direct to delivery agencies, we are able to avoid creating additional complexity or burden on the Regeneration Board in relation to financial management, so that it is better-able to focus on key strategic and political risks.

Governance role: Regeneration Board

215. A Regeneration Board will be established to provide overall governance of the project.

216. Members of the Board will be jointly appointed by the Crown (Treasury to facilitate), PCC and Ngāti Toa. While members may have other roles in relation to the key delivery agencies, membership will be in the interest of the project, rather than representative of different partners. The membership will need a core mix of skills relating to development, public housing, social services and community engagement, in addition to specific local knowledge in relation to eastern Porirua.

217. The Board will be responsible for:

a. owning the vision and the Strategic Spatial Framework Plan (as shown in Figure 15)

b. ensuring integration of the delivery entities

c. identifying what is working well within the community and what gaps might exist, and

d. advocating for reprioritised or additional resourcing to meet the community's needs.

218. The highest-level masterplan (referred to as the Strategic Spatial Framework Plan in Figure 15) will be produced by the Master Developer and agreed by the Regeneration Board based on community engagement and the concepts used in this business case. This is to recognise the dependences across the different components of delivery that are not under direct control by the Master Developer. The Regeneration Board will set key performance measures for the programme, in consultation with the delivery entities and responsible Ministers.

219. To ensure integrated delivery, the Board will manage the relationships between delivery entities and assess any real or perceived conflicts with any stakeholder's existing organisational governance arrangements. Where any real or perceived conflict occurs, the Regeneration Board will attempt to resolve the conflict, and if unsuccessful will escalate to the responsible Ministers as appropriate.

220. [2]

Over time, the Board will be expected to form a view on the community's needs and how social services might be better delivered.

221. Having formed a view, the Board will make recommendations to Ministers about how social service provision in the area needs to change to deliver on the vision. This forms a key feedback loop to drive change over time, and to link the delivery of improved community assets with improved social service delivery. Ministers are ultimately responsible for delivering a response to the community's needs.

222. The Board will not be required to manage the funding for the overall project and it will not have direct accountability for overall financial performance. However, the Regeneration Board will require funding for a small secretariat role to support the board members.

223. The Board is responsible for overall programme oversight, and key strategic and political risks. The Board is expected to report directly to responsible Ministers, PCC and Ngāti Toa as the key strategic partners.

Delivery roles

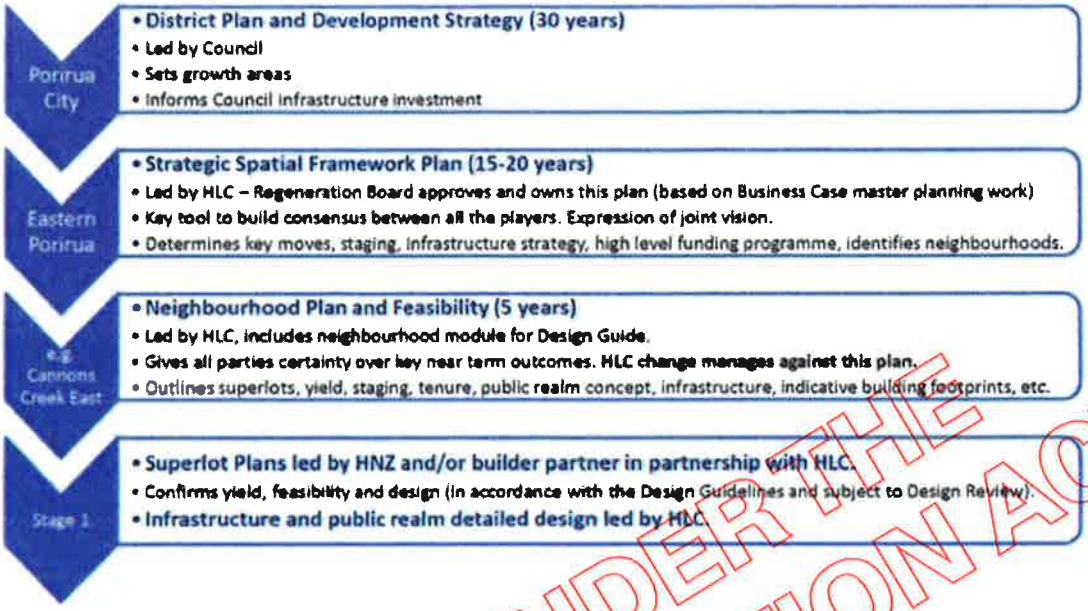
Master Developer

224. The Master Developer role will be undertaken by HLC. This is a critical role that needs to be retained by the Crown and HLC is the best available candidate.

225. The Master Developer will develop the Strategic Spatial Framework Plan for agreement by the Regeneration Board. The Master Developer will be responsible for neighbourhood plans, feasibility and superlot plans (as shown in Figure 15). While changes to the Strategic Spatial Framework Plan must be agreed by the Regeneration Board, changes to the more detailed plans that do not impact on HNZ developments can be agreed by the HLC board.

226. The Master Developer will be responsible for setting requirements, rules, guidelines, outputs and specifications that will govern and guide Developer and Contractor activities. While the master planning role will be consistent throughout the programme, they will need to maintain some flexibility in development and construction roles to ensure superlots are developed and delivered appropriately.

Figure 15: Spatial planning hierarchy



227. The master development component includes accountability for delivering the agreed outcomes and benefits sought by the Government. Responsibilities of the Master Developer include:

    a. community engagement
    b. masterplanning
    c. programme-level resource consenting and regulatory requirements
    d. asset acquisition (including compulsory acquisition if and where required)
    e. design principles and development rules
    f. site demolition, remediation and preparation
    g. civils
    h. key moves (including town centres)
    i. delivery timing & phasing
    j. land sales and marketing, and
    k. identifying and undertaking common procurements (goods and/or services) including social procurement.

228. The Master Developer will be directly responsible for delivering some projects within the programme (e.g. the 'key moves') but will maintain only a monitoring role over other projects within the programme (e.g. bulk infrastructure and school construction).

229. The Master Developer is responsible for risks relating to:

    a. programme outputs (including physical assets and local infrastructure)
    b. delivery timing and phasing

c. community and industry engagement

d. media management and communications

e. delivery of assets including procuring Developers, and Contractors where necessary, and

f. masterplanning.

230. The Master Developer will be responsible for developing a programme risk register, monitoring and managing the included risks, and reporting the Regeneration Board as required.

231. The HLC Board will be responsible for performance in relation to the Master Development role. The HLC Board will be have financial and operational accountability for this performance to the HNZ Board and Minister for Housing and Urban Development, as it does currently. The Master Developer will have strategic accountability to the Regeneration Board for delivery.

Developers and Contractors

232. The **Developers** are accountable to the Master Developer and are responsible for procuring products and services, including Contractors, as necessary to develop the assets agreed with the Master Developer. The Developers are also responsible for undertaking developed design to meet the Master Developer's specifications, health and safety on development sites, required consents, and funding sourcing for asset development.

233. The **Contractors** are accountable to the Developers (or in some circumstances the Master Developer) and are responsible for leading the construction of assets including health and safety on work sites, any regulatory requirements including consents, delivery timing and detailed design to meet the Developer's developed design and the Master Developer's specifications and master planning.

Public housing owner and tenancy manager

234. HNZ is expected to continue in its current role, in addition to managing parts of the regeneration that relate to public housing. This will include:

a. asset management

b. tenancy management

c. tenant engagement

d. rehousing (providing the Master Developer with vacant properties ready for development)

e. transferring properties to the Master Developer for demolition, remediation and civils to ready land for private or public housing construction, and

f. contracting the construction of new public houses (making HNZ the largest Developer within the programme).

[2]

[2]

236. As the public housing owner and tenancy manager, HNZ will be responsible for all risks relating to maintenance, upgrade and construction of public houses, in addition to normal asset and tenancy management. The HNZ Board will be responsible for core financial and operational accountabilities.

Bulk infrastructure

237. While much of the local infrastructure and key moves can be delivered by the Master Developer, it is expected that bulk infrastructure will be managed by PCC (according to a development agreement and associated funding stream) to ensure integration with other parts of the city's Infrastructure Strategy.

[2]

[2]

Key contracts and relationship agreements

243. The commercial structure outlined above leads to a relatively simple contracting structure. There will be several key contracts supporting the delivery programme.

HLC – PCC

244. A development agreement will need to be put in place covering what aspects of local infrastructure are to be undertaken by the Master Developer, and what elements are to be undertaken by PCC and its contractors.

245. Given the scale of the proposal relative to the scale of PCC, it is likely necessary for the Crown to be flexible in how development contributions are paid in total, rather than on a per-property basis. This could help to smooth revenue flows and finance constraints to PCC in order for them to ensure sufficient capacity is in place. Ideally, this would enable resourcing for the project to have a key account manager.

246. A similar approach could be put in place in relation to consenting and administration fees. Given the scale and duration of the project, smoothing cashflows to PCC would assist in resource planning and help mitigate potential capacity constraints.

HNZ – MSD

247. MSD will contract to purchase public housing capacity from HNZ. The value of this capacity contract over an agreed term can be leveraged by HNZ if required to access additional borrowing to purchase the new public housing assets.

HNZ – HLC

248. HLC will have an agreement with HNZ for development of current public housing assets. Arrangements will also need to be made in relation to the flows of funding for the Master Development and Public Housing Construction roles (for example, whether funds can be paid directly to HLC or need to be channelled through HNZ). The commercial and legal details are yet to be finalised.

HLC – Developers/Contractors

249. Developers will have a sale and purchase agreement with HLC for remediated plots of land, made ready for development.

Procurement

Procurement strategy

250. The Master Developer will develop and maintain a procurement strategy that will identify and capture opportunities to generate value across the programme and drive innovate approaches from the development market. The procurement strategy will be reviewed by the Regeneration Board, which will advise on opportunities to deliver social outcomes through procurement.

251. The Master Developer will maintain a programme-level procurement strategy and develop a procurement plan for each project detailing the tactics, approach and objectives that will achieve the best value outcome for that specific project. To maximise economies of scale or to aid more efficient delivery, some procurements may apply to multiple projects.

Social procurement

252. All procurements relating to development will be expected to include a focus on social procurement. All construction, development and other activities will make best endeavours to recruit and train local people, so that investment stays within the community. According with best practice, this will involve seeking innovative approaches from contractors rather than specifying particular targets, to avoid creating perverse incentives or cost inflation.

Procurement plans

253. The Master Developer will also develop a procurement plan for each project within the programme, targeting specific goals and outcomes relevant to that project, and supporting the wider goals in the programme's procurement strategy.

Constraints and dependencies

254. The proposal is subject to the following constraints and dependencies that will be considered in detailed planning and monitored throughout the project.

Table 18: Key constraints and dependencies

Constraints	Notes
Feasible market-attractive uplift	Eastern Porirua has a large theoretical capacity. However, there are three constraints on whether these units will be perceived as market-attractive: 1. Timing: Delivery must be spread over a period of time to ensure market uptake. 2. Alternatives: The housing delivered is likely to be relatively compact terrace-type housing. In a market with relatively cheap land, it is commonly difficult to achieve market density when comparably priced lower density housing is available in proximity. 3. Neighbourhood stigma: It may be difficult to attract new residents to the area if there is not a demonstrable improvement in neighbourhood quality. Whether the theoretical capacity of the area can be achieved will in part be dependent on the market-feasible capacity.
Construction sector capacity	This is a large project and it is expected that construction sector capacity will be a factor, especially in early stages. It should be expected that construction will need to ramp up over time to manage this and enable a capacity response from the market.
Social service capacity	[2]

Dependencies	Notes and Management Strategies
Planning, zoning and regulation	PCC is in the process of reviewing its District Plan. This offers opportunities to include mixed-use and commercial zoning that could aid in regeneration, and to ensure that residential zoning does not unnecessarily restrict the types of development that can go ahead. This will be particularly crucial to ensuring that increased density than planned for in this business case can be implemented if land prices escalate faster than expected. As PCC are supportive of a renewal project, there is not cause to expect significant planning or zoning barriers. However, it is likely that the Housing Commission (a

	national Urban Development Authority) will be operational within the life of the project. In the event of major planning obstacles, there is potential for the Housing Commission to exercise its powers to rezone land if necessary.
Education	Schools in eastern Porirua are currently underutilised so there is unlikely to be major issues with capacity resulting from intensification, but there will still be a need for investment. In addition, investment in the quality of facilities is likely to form a key part of any regeneration action by improving perceptions of the area. MOE will need to be considered as a key delivery agency as part of the overall project structure.
Acquisition of non-HNZ land	HNZ currently has multiple contiguous land holdings that would support scale development. However, even the most concentrated holdings have private property mingled with public housing. Acquisition of private land to form super-lots would enable much more integrated development, with more efficient land use and infrastructure installation. Super-lotting would also enable a more planned approach to neighbourhood amenity and urban design, delivering more strongly against the objective of neighbourhood quality. Acquisition of private land should be planned and incorporated as part of masterplanning. Acquisition by agreement should be sought in the first instance, but appropriate time periods should be allowed for Prior Negotiation under s18 of the Public Works Act should it be necessary. A balance will need to be struck between allowing sufficient time and minimising potential extended periods of holding land, particularly if this results in vacancy, which tends to have a negative (though temporary) impact on neighbourhood quality.
Rehousing	Natural tenancy turnover rates in Porirua (and public housing generally) are low at around 2%. The pace and scale of redevelopment, or even retrofitting properties, is dependent on how public housing tenants can be adequately rehoused. Implementation planning will require detailed consideration of rehousing. Failure to acquire land or houses for rehousing would result in the entire project needing to be re-scoped as the change in timelines would affect the economics and marketability of affordable properties.
Infrastructure	Local wastewater infrastructure in eastern Porirua is of sufficient capacity, but is mostly at the end of its design life. Replacement of this local infrastructure will be required regardless of whether the project goes ahead, but the project may need to cover some incremental increases in capacity. Trunk infrastructure in Porirua is at full capacity. It is unlikely that any significant renewal projects can be undertaken without major infrastructure upgrades (in particular, key upgrades to wastewater treatment and trunk infrastructure) but these are largely within the existing Long Term Plan. PCC has a relatively high dependence on rates as its principal source of revenue. To avoid the need to raise rates in the event of unexpected costs, it runs a relatively conservative borrowing strategy to maintain borrowing headroom. The current Long Term Plan estimates borrowing peaking in 2021 to fund completion of the Transmission Gully link roads. This indicates that PCC borrowing to fund infrastructure upgrades within the life of this project may be relatively constrained. Alternative infrastructure funding and finance tools currently under development could assist in easing these constraints.
HLC Capacity	HLC does not currently have a presence in Wellington. Successful implementation will require the development of additional capacity and integration within the broader corporate structure.

Porirua City Council Capacity	PCC is relatively small. Accordingly, capacity to respond to the regulatory and consenting requirements of a large, long-term project of this scale is limited. Integrated planning will be required between development scheduling, payment of fees for services and Council staffing, to ensure consents can be effectively processed and building inspections undertaken.
Ngāti Toa Capacity	While Ngāti Toa is not a core delivery entity in this project, there will be some demands on key people associated with the Regeneration Board and secretariat. Funding will need to be made available to support these roles.

Financial Case - affordability and funding requirements

Key points

255. The capital funding required to regenerate eastern Porirua is $241.403m over the first 10 years. Over the 25-year life of the project, funding requirements reach a cumulative maximum of $494.194m in 2037, with a final net requirement of $246.132m as the project begins to run large cash surpluses and return funds to the centre. We propose that a portion of Crown capital is repaid throughout the 25-year modelled period using surplus cashflow from land sales and rents.

256. There are fairly limited options for financing the project. This is because:

    a. the Master Developer does not have an ongoing source of revenue, so it is not practical to take on additional finance for this project, and

    b. market rent will not support sufficient borrowing to fund the new public houses.

257. The preferred structure is for all revenue from land sales and IRRS to be used in funding the project, with Crown loans to cover the net requirements. This can be extended out to cover the maximum $494.194m in capital funding requirements, and paid off as the project begins to run surpluses in later years. The net requirement of $246.132m could be covered by Crown equity injections.

258. In order to avoid excess capital requirements in any one year, Crown capital funding should be spread across years and dispersed on a yearly basis as required depending on project costs and revenue, rather than in a lump sum. This also provides an opportunity for meaningful review points as the project develops.

259. This does not utilise rents that are collected after the development period, or cross-subsidisation by HNZ through borrowing against the cashflow of other portfolios. Other finance options could be explored, but because of the long-term nature of the project, this is unlikely to substantially reduce impacts on capital allowances.

260. Capital funding requirements could be reduced by increasing the rent that is paid to HNZ. This would require a change in policy by MSD and increased funding to the Public housing Purchasing Multi-Category Appropriation.

Assumptions

261. To understand the funding requirement for the regeneration programme, the costs and revenues have been modelled over 25 years and presented separately for:

    a. the project as a whole

    b. the master developer role undertaken by HLC, and

    c. the purchase and ownership of public housing by HNZ.

262. The analysis in this financial case is focused on the preferred option, with sensitivity testing of key drivers of cost and revenue. The base case that is described in this financial case reflects the following key masterplanning principles:

a. Deliver key enablers early (e.g. upgrade Mungavin/Warspite Ave, Bothamley Park greenways connectivity, regenerate local centres, improve schools).

b. Density strategy makes the most of borrowed amenity, locating the highest density toward main centres.

c. Tenure is balanced across neighbourhoods.

d. Build schedule does not saturate the local housing market.

e. Rehousing schedule minimises the rehousing deficit at any time.

263. Further assumptions are detailed in Appendix 4.

Financial analysis of project

Analysis of the preferred option capital funding requirement

264. Table 19 shows the project net capital funding requirement by year, excluding financing costs (interest). Ten year, maximum and final net requirements are highlighted in bold. Note that financial analysis has been conducted on a quarterly basis. The maximum funding requirement of $494.194m occurs in the 3rd quarter of 2037, after which a forecast cash inflow reduces the cumulative net requirement to $473.752m at year end.

Table 19: Annual project net capital funding requirement

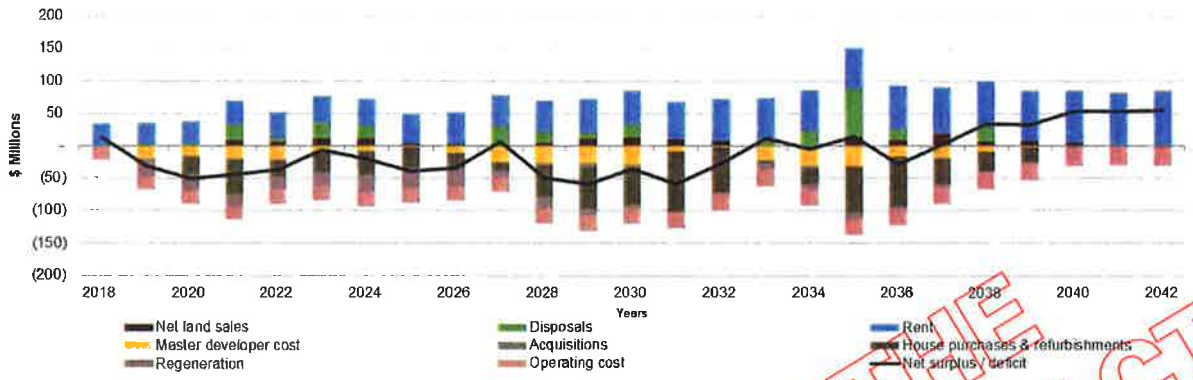
Year	2018	2019	2020	2021	2022	2023	2024	2025
Yearly net requirement	1.168	46.061	38.937	25.749	36.929	6.200	19.895	39.238
Cumulative net requirement	1.168	47.229	86.166	111.916	148.844	155.044	174.939	214.178

Year	2026	2027	2028	2029	2030	2031	2032	2033
Yearly net requirement	33.684	**(6.458)**	48.663	59.271	35.140	58.313	26.806	(11.592)
Cumulative net requirement	247.862	**241.403**	290.067	349.338	384.478	442.791	469.597	458.005

Year	2034	2035	2036	2037	2038	2039	2040	2041-2
Yearly net requirement	5.079	(15.054)	28.282	**(2.559)**	(33.832)	(32.399)	(53.968)	**(107.421)**
Cumulative net requirement	463.084	448.030	476.312	**473.752**	439.920	407.521	353.553	**246.132**

265. Figure 17 illustrates the Base Case project cashflows by year, excluding financing costs.

Figure 17: Annual project cash flows



266. The forecast impacts on the capital funding reflect the following:

a. An approximate 20% uplift in rental income when public houses are redeveloped or refurbished.

b. A 15% allowance has been assumed for the contingency of land development costs, in alignment with HLC's current practice. This totals $43.579m.

c. HNZ operates at a surplus throughout the project's lifecycle in relation to the provision of public housing.

d. There is a funding shortfall of $246.132m in capital requirements, split between HLC ($205.858m) and HNZ ($40.274m).

267. The forecast impacts on operating funding for the regeneration reflect the following:

a. Rehousing capacity will be funded through the Public housing Purchasing Multi-Category Appropriation. This would include funding for IRRS and a sufficient operating supplement to enable HNZ to finance new developments, or the purchase of existing houses. These places will be net new upon completion of the project. The funding will be tagged to the project and the requirement is estimated at $5.071m[12] per annum, beginning in 2019 and rising in line with the house price index over time.

b. [2]

c. The Regeneration Board is funded at $0.200m per annum.

d. Evaluation is funded at $0.050m every three years throughout the life of the project.

e. This regeneration operating expenditure makes up a total requirement of $7.536m beginning in FY2019.

[12] Based on 150% of market rent of $500pw, with an income related rent of $120pw. At the time of writing, MSD purchasing intentions are not confirmed for 2018/19 so this number is preliminary.

Total project funding requirements

Table 20: Total project financial costing (nominal)

Financial Year	2018	2019	2020	2021	Average 2022-2042	Total nominal
Capital expenditure						
• *Housing acquisitions*	-	6.959	2.220	2.797	1.628	46.173
• *Refurbishment*	-	-	-	1.089	3.835	81.631
• *Land development*	1.168	18.070	14.934	18.251	13.925	344.857
• *New house purchases*	-	-	26.624	51.903	32.514	761.325
• *Community infrastructure*	-	22.723	24.892	18.445	9.772	271.276
Total	1.168	47.752	68.669	92.484	61.676	1505.263
Operating expenditure						
Public housing provision operating expenditure:						
• *Asset management*	11.835	11.820	12.165	12.079	11.252	284.192
• *Tenancy management*	1.988	1.986	2.067	2.175	3.471	81.103
• *Council rates*	5.863	5.858	6.105	6.439	10.271	239.947
Total	19.686	19.663	20.337	20.693	24.993	605.242
Regeneration operating expenditure:						
• *IRRS for rehousing capacity* [2]	-	5.071	5.232	5.399	7.615	168.006
• *Regeneration board*	0.200	0.204	0.208	0.212	0.216	6.084
• *Evaluation*	0.017	0.017	0.017	0.018	0.018	0.507
Total	2.417	7.536	7.747	7.964	10.230	241.525
Total expenditure	23.271	74.951	96.752	121.141	96.899	2352.030
Total revenue	34.201	35.827	38.712	69.929	80.277	1864.479
Net capital required*	1.168	46.061	38.937	25.749	6.391	246.132
Net operating required	2.417	7.536	7.747	7.964	10.231	241.525

* Net capital required is equal to total capital expenditure minus net operating revenue over the 25 year project, subject to rounding, but will not necessarily match on a yearly basis due to timing of cashflows and the build-up and use of surplus cashflow by different entities.

Financial analysis of master development

Modelling of neighbourhood stage development

268. For the purposes of master planning, Isthmus has separated Eastern Porirua into five distinct neighbourhoods: Ascot Park, Cannons Creek East, Cannons Creek West, Porirua East and Waitangirua. Within each neighbourhood, master-planned mega lots have been grouped into different stages in order of importance.

269. The 'key moves' such as [31] construction of a pedestrian bridge over the motorway have been grouped with specific neighbourhood stages early in development, reflecting their importance in unlocking development potential.

270. Each neighbourhood stage has a certain number of existing public houses and a planned yield of new public houses and new private or affordable houses. The average number of existing public houses in a stage is 51. The average yield of new public houses is 51 per neighbourhood stage, with the average number of new affordable and private houses being 69.

271. HNZ is assumed to decant existing HNZC public houses, passing them to HLC to demolish them and then remediate and develop the land and infrastructure. HLC then sells the prepared mega-lots that are planned for affordable and private houses, to developers for a land sales value. Land for new HNZ houses is passed back at zero value.

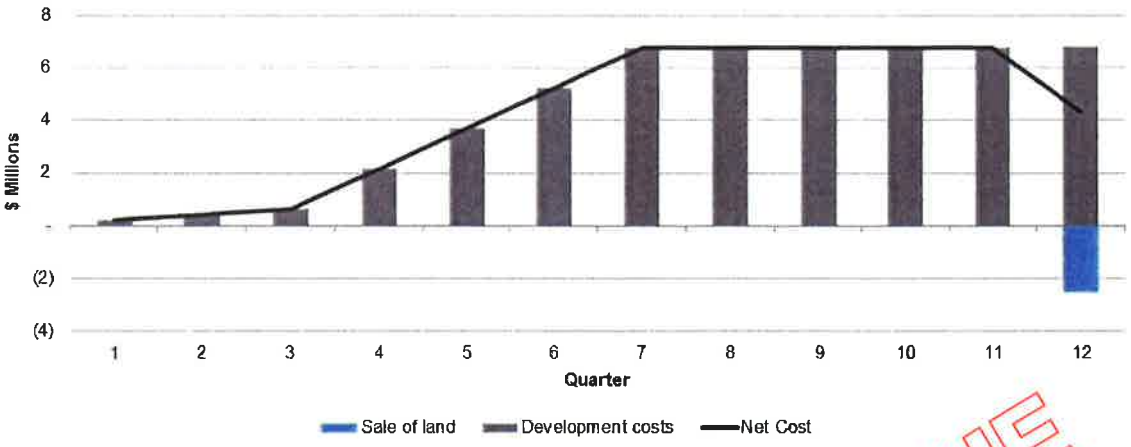
272. Table 21 sets out the main master developer costs and revenues. While some of the infrastructure works may be delivered by Porirua City Council or NZTA, we include all works for which the master developer would be expected to pay through development contributions.

Table 21: Master Developer costs and revenue

Master Developer costs	Master Developer revenue
Lead-in (e.g. design, consents) Demolition Remediation Infrastructure Sales and marketing for prepped mega-lots Acquisitions and development of key commercial assets to develop amenity	Receipts from sales of prepped mega-lots Receipts from sales or rentals of key commercial assets

273. The modelling uses a generic neighbourhood stage timetable assumption with the total length from decant of existing public houses to completion of new public houses being 30 months. The number of existing public houses and yield of new houses varies by neighbourhood stage. Figure 18 illustrates the timing and cumulative master development cost net of land sales receipts for the average neighbourhood stage.

Figure 18: Timing and cumulative net real cost of generic neighbourhood stage



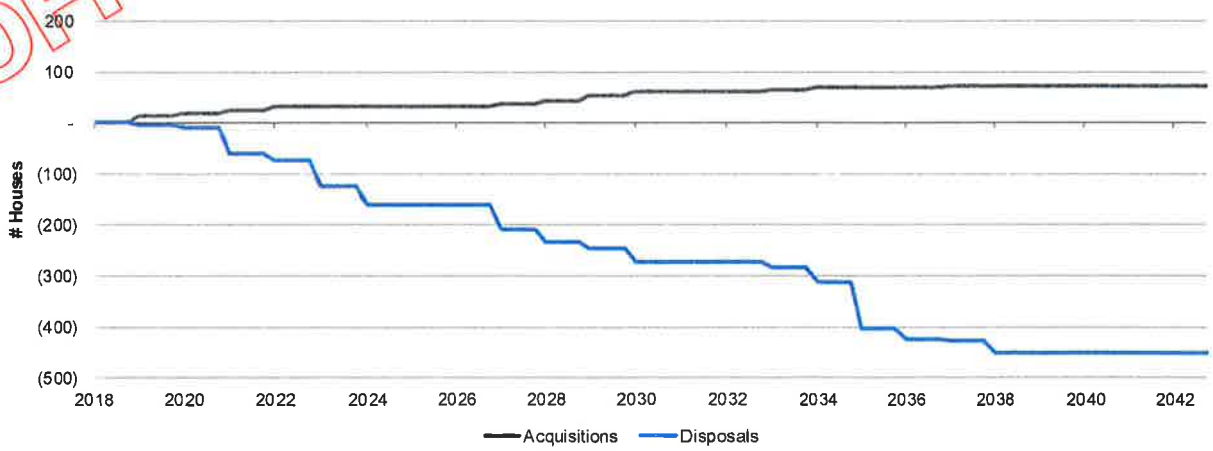
274. The chart above illustrates that for the average neighbourhood stage:

a. Land development is loss-making even if the land is provided to HLC for no cost, with a cumulative net cost of $4.334m. This is a factor of the low existing land value in the area, only selling a portion of the redeveloped land for private development, and the high cost of demolishing public houses and remediating the land.

b. Land development requires a significant amount of working capital funding given that HLC incurs land development expenses in the lead-in and remediation phases, but does not receive any revenue from private land sales until the end of the home build phase, when the private land is assumed to be sold. In reality, HLC may sell a proportion of the private land before the end of the assumed 36-month development period.

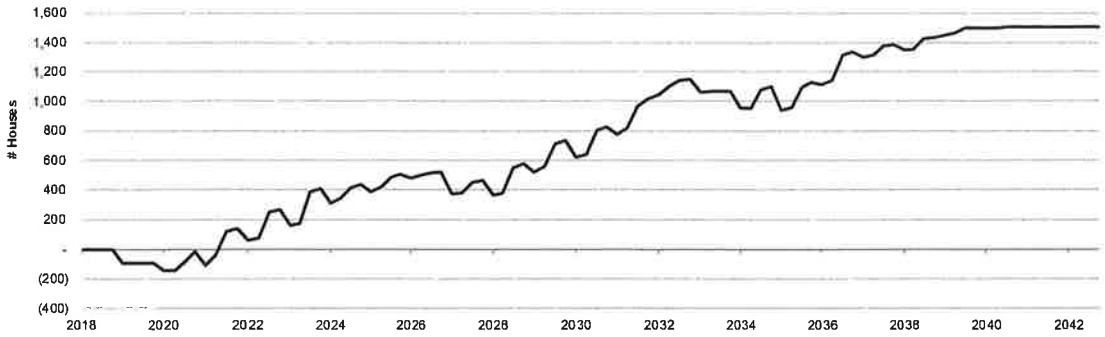
275. The master developer function also includes the strategic disposal of certain HNZC properties and the acquisition of existing private properties to optimise the impact of the redevelopment, though ownership falls to HNZ. The profile of disposals and acquisitions is provided in Figure 19.

Figure 19: Profile of HNZ acquisitions and disposals



276. Figure 20 illustrates the change in housing stock between the beginning and end of the redevelopment and includes the new affordable and private houses.

Figure 20: Change in housing stock over time



Analysis of the master development funding requirement

277. Figure 21 illustrates the Base Case master development net funding requirement by year, excluding financing costs.

Figure 21: Annual master development funding requirement

278. The total net funding requirement excluding financing costs over the whole redevelopment is $205.858m. The total net funding requirement is substantially reduced due to the net revenue from acquisitions and disposals, which totals $250.644m.

Scenario analysis

279. Table 22 on the following page shows the total master developer revenue, cost and net funding requirement over the 25 years of the project that have been modelled. This excludes public housing ownership costs. It also sets out the results of a number of sensitivities which have a material impact on the net funding requirement for the master developer function.

280. The total net funding requirement over the 25 year modelled period is lower than the maximum net funding requirement due to the time lag between incurring land development costs and receiving private land sales revenue.

Table 22: Master Developer sensitivities

Scenario	Development Revenue	Development Cost	Net funding requirement
Base Case	454.520	(660.378)	(205.858)
25% increase in land development cost	454.520	(746.083)	(291.564)
Construction cost inflation increase by 1%	454.254	(719.071)	(264.817)

Financial analysis of public housing ownership

Modelling of ownership

281. The modelling of the public house ownership function, including tenancy management and asset management is distinguished by whether the property is an old or new (or retrofitted) house, allowing for different cost and revenue assumptions to be applied to them:

    a. **Old public houses**: public houses that are currently owned and operated by HNZ, which will be decanted and retrofitted, or demolished to make way for new public, affordable and market housing.

    b. **New public houses**: public houses that will be built to replace the old public houses, or old houses that have had a comprehensive retrofit. HNZ will purchase these houses, from the development/build partner. The expenditure and revenue assumptions used are set out in detail in Appendix 4.

282. Table 23 sets out the main ownership costs and revenues.

Table 23: Ownership costs and revenue

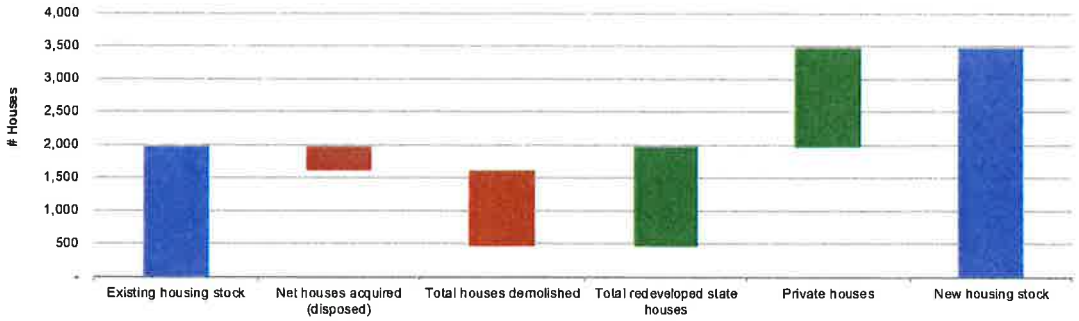
Ownership costs	Ownership revenue
Purchase of new public houses	Market rent existing/new houses
Retrofit of existing public houses	
TM existing/new houses	
AM existing/new houses	
Rates	

283. Over the 23-year redevelopment period, 1,516 of the 1,978 existing public houses will be redeveloped, with the remaining 462 being retrofitted. The balance of existing to new public houses is presented in Figure 22.

284. When an existing public house is decanted in order for it to be redeveloped, it stops receiving market rent for the redevelopment period until it is purchased back by HNZC, a period of approximately 2.5 years.

285. For existing public houses that are being retrofitted rather than redeveloped, retrofitting is assumed to take 3 months, and completed linearly across neighbourhood stages over a period of 1.5 years. While a house is being retrofitted it stops receiving market rent.

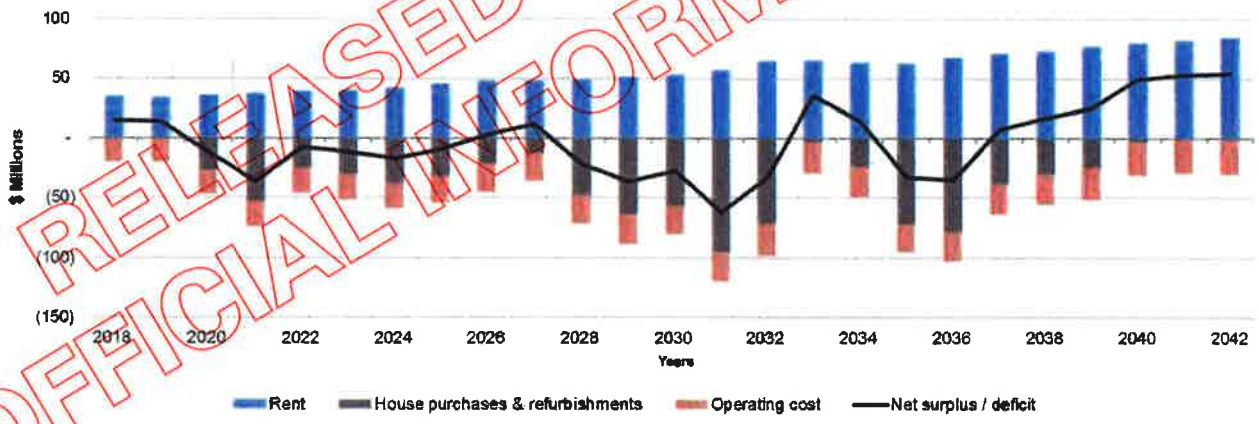
Figure 22: Number of existing vs new public houses



Analysis of the Base Case ownership funding requirement

286. Figure 23 illustrates the Base Case ownership cashflows by year, excluding financing costs.

Figure 23: Ownership cash flows



Scenario analysis

287. Table 24 on the following page sets out the results of a number of sensitivities which have a material impact on the net funding requirement for the ownership function. This excludes Master Developer costs.

288. The results above illustrate how sensitive the net funding requirement is to house build cost and market rent. There is a large degree of uncertainty around both of these assumptions, in particular due to the length of the period being modelling.

Table 24: Owner sensitivities

Scenario	Owner Revenue	Owner Cost	Net funding requirement
Base Case	1,407.925	(1,448.199)	40.274
25% increase in house build cost	1,407.925	(1,638.530)	230.605
25% increase in retrofit cost	1,407.925	(1,468.607)	60.682
10% reduction in market rent	1,267.132	(1,448.199)	181.067
25% increase in AM/TM costs	1,407.925	(1,599.509)	191.585
Market rent escalation reduced by 1%	1,232.965	(1,379.158)	146.193

Capital structure analysis

289. The total funding requirement, including financing costs, will be influenced by the capital structure which is overlaid. Regardless of capital structure, the master developer and ownership functions on this project are both estimated to be loss making:

    a. The main factors that cause master development to be loss making are the low existing land values in Eastern Porirua and the high cost of land remediation and development.

    b. The primary factor in making the purchase and ownership of public houses loss making is the level of rental income received on new public houses, driven by MSD's position that it will not pay above market rent for public houses that are not net new supply.

290. This means that any financing costs incurred by either entity will increase the net Crown equity requirements over the project lifetime.

Capital structure options

291. The master developer role lacks an ongoing revenue stream beyond the project and over the life of the project, is loss-making. Given this, it is not practical to leverage HLC's balance sheet to finance their role. HNZ has an ongoing revenue stream through rents. This means that there is a possibility of finishing the project with some debt to pay down, but the capacity to do this will be limited by the final free cashflow.

292. There are several finance options to cover the overall requirements, broadly including:

    a. Crown equity injections for some or all of the capital requirements

    b. Crown loans (interest bearing or concessionary), or

    c. private borrowing.

Crown equity injections

293. Significant free cashflow from rents and land sales is generated over the course of the project. To reduce the capital requirements of the project, we propose that this cashflow be used to fund capital improvements, rather than use capital funding for the whole project.

294. The preferred option has additional funding requirements ($246.132m) beyond what could be serviced by the portfolio's revenue over the life of the project. Regardless of capital structure, this net requirement requires a Crown equity injection if the project is to be funded within its lifetime. Financing costs would increase this net funding requirement.

295. The maximum funding requirement ($494.194m) is higher than the final net requirement. This means that there is significant potential for surpluses to be returned to the centre over the course of the project. Crown equity injections provide less certainty that these returns will occur.

Crown loans

296. The use of borrowing through the Debt Management Office is a good option for funding the maximum requirements of the project, while providing greater certainty that surpluses will be returned to the centre.

297. Whether a Crown loan should be interest-bearing or not is a marginal consideration. There would be several consequences of a commercial loan from the Debt Management Office:

    a. The net Crown equity injection requirements would have to rise to cover the interest.

    b. Because of the combination of debt and equity input on a long-term and uncertain project, the imposition of interest is likely to have a minor effect on commercial behaviour.

    c. Even minor incentives to repay debt sooner may be counter-productive, as the project relies on large amounts of patient capital to be commercially successful (driving value in to get value out).

298. Based on the capital requirements of the project, the present value of the total interest on a Crown loan for the maximum amount would be $104.578m (assuming a $246.132m equity injection for the net requirement). For an interest-free loan, this concession would be reflected as an upfront operating cost. For an interest-bearing loan, this would form part of the capital appropriation and be spread across years.

Private borrowing

299. The table below presents the total funding requirement using two viable capital structures:

    a. Master development and public house ownership net funding requirements met by Crown equity or an interest-free loan.

    b. Master development costs funded by Crown equity, with HNZ financing purchase of public houses by leveraging its balance sheet (assumed interest rate of 6% on 100% of HNZ funding requirement).

Table 25: Total net funding requirements with and without financing cost

Role	Scenario A ($m)	Scenario B ($m)
Master Development	205.858	205.858
Ownership	40.274	310.641
Total net capital requirement	246.132	516.499

300. As shown in Table 25, the use of private borrowing has the effect of increasing the net Crown equity requirements. This could be reduced if HNZ were to finish the project with some debt to be paid off in subsequent years, but there is likely to still be some requirement for Crown equity.

301. [2]

302. As a matter of overall Government borrowing strategy, unless financial risk can be transferred through decentralisation, borrowing should be centralised. Risk transfer is present when there is a realistic possibility of creditors incurring financial loss in the presence of financial distress of the borrowing entity. Clearly, this requires the willingness of Ministers to let the entity encounter financial distress in the first place, putting the delivery of services at risk. Departure from this principle incurs unnecessary borrowing costs.

303. We consider this unlikely for entities delivering regeneration activities in eastern Porirua. This is exacerbated by the proposal being loss-making and requiring a net funding injection over 25 years. The proposal is largely a social intervention rather than a commercial proposal, with undesirable social impacts resulting from failure.

Preferred capital structure

304. The preferred structure is for all revenue from land sales and IRRS to be used in funding the project, with Crown loans to cover the net requirements. This can be extended out to cover the maximum $494.194m in capital funding requirements, and paid off as the project begins to run surpluses in later years. The net requirement of $246.132m could be covered by Crown equity injections.

305. To avoid excess capital requirements in any one year, Crown capital funding should be spread across years and dispersed on a yearly basis as required depending on project costs and revenue, rather than in a lump sum. This also provides an opportunity for meaningful review points as the project develops.

306. This does not utilise rents that are collected after the development period, or cross-subsidisation by HNZ through borrowing against the cashflow of other portfolios.

307. Other finance options could be explored, but because of the long-term nature of the project this is unlikely to reduce impacts on capital allowances.

Potential impact on HNZ borrowing

308. HNZ has recently begun a phase of raising capital from markets. This is based on a long-term view of likely renewal costs and revenues, and requires careful management of the commercial viability of individual projects.

309. The eastern Porirua proposal is necessarily designed to lead the housing market, rather than follow it, and includes significant investment in other infrastructure [2]
This means that it will not fit within the investment criteria set by HNZ. Because of the non-commerciality of the proposal, it is our view that core HNZ borrowing should not be used to finance the project. However, the free cashflow from the portfolio could be recycled to fund renewal with relatively minimal overall impact on overall HNZ Debt Service Coverage Ratios.

Alternative capital and operating funding structure

310. From a whole-of-Crown perspective, public housing is funded through a mix of capital and revenue. HNZ's borrowing capacity is limited by the low cash return on properties at market rent. This means that unless there is significant land value to release and subsidise new houses, the return on renewed houses is unlikely to cover the cost of capital.

311. In the case of eastern Porirua, market rent will not support sufficient borrowing to fund the new houses. MSD currently will pay up to 150% of market rent for net additional new public houses, which bridges the gap between cash returns and capital costs. However, this is not currently contemplated to fund renewal of older housing stock, which means HNZ requires capital injections.

312. An alternative structure to reduce capital injections would be to increase the rent that is paid to HNZ. This would require increased funding to the Public housing Purchasing Multi-Category Appropriation and a change in policy by MSD. The impact of HNZ agreeing a higher level of rent for new and refurbished public houses is illustrated in Table 26. This assumes a lower rate of rent escalation as in previous contracts including operating supplements, MSD has contracted an indexed rent. This still reduces the net requirement:

    a. The cumulative capital funding requirement in the first 10 years is $222.766m, down from $241.403m.

    b. The maximum requirement is $451.330m in 2032, down from $494.194m in 2037.

    c. The final net funding requirement is $205.858m, down from $246.132m.

Table 26: Annual project net capital funding requirement - new/refurb houses at 150% market rent ($m)

Year	2018	2019	2020	2021	2022	2023	2024	2025
Yearly net requirement	1.168	46.061	38.937	24.101	34.976	3.881	16.980	35.927
Cumulative net requirement	1.168	47.229	86.166	110.267	145.244	149.125	166.105	202.032

Year	2026	2027	2028	2029	2030	2031	2032	2033
Yearly net requirement	30.267	(9.533)	45.885	56.236	31.978	54.911	23.166	(14.963)
Cumulative net requirement	232.299	222.766	268.651	324.887	356.865	411.776	434.942	419.979

Year	2034	2035	2036	2037	2038	2039	2040	2041-2
Yearly net requirement	2.078	(17.769)	25.887	(4.454)	(35.123)	(33.023)	(53.852)	**(97.863)**
Cumulative net requirement	422.056	404.287	430.174	425.720	390.597	357.574	303.721	**205.858**

Alternative infrastructure funding and financing structure

313. The Treasury is currently investigating models for funding and financing the cost of infrastructure (e.g. three waters) by securitising and borrowing against rates revenue from new development. This model is in the early stages of development, but depending on its progress, it may have the potential to provide both funding and financing to cover a substantial amount of the project's infrastructure costs.

314. This is not likely to affect the overall economics of the project, since savings in development contributions are likely to be offset by a lower asking price for new homes that carry additional rates or taxes associated with infrastructure finance. However, this would have a major impact on PCC, by reducing the demands on its balance sheet placed by growth infrastructure.

315. New infrastructure funding and finance tools are likely to be introduced at some point during the project. However, because of the complexity associated with brownfields development (for example, contamination issues associated with asbestos pipes), the level of uncertainty is likely to make the project unsuitable as a pilot. The bond yields required to induce investment are likely to be high.

316. Given the early stages new infrastructure funding and finance mechanisms in New Zealand, it may be better to wait until programmes are more established and bond yields are more reasonably-priced before introducing a new structure. It would be best to plan for the use of traditional funding and finance models (e.g. development contributions) in the initial stages of the project. When a model is proven for brownfields development within the life of the project, this could be substituted for a portion of the expected funding requirements.

Management Case – planning for successful delivery

Key points

317. In the event that this investment proposal receives formal approval, a specific project will be established to deliver the required services, centred on the Master Development role. This will mean HLC owning the programme, working closely with HNZ, MOE and PCC in developing the detail of workstream requirements. Governance and project management will largely be achieved through existing structures and processes, alongside the establishment of the Regeneration Board.

318. A comprehensive benefits management framework has been developed using the Treasury Living Standards Framework and is attached as Appendix 5. This sets out key metrics for monitoring and evaluation of the programme throughout its lifecycle to ensure that the expected wellbeing benefits of the regeneration proposal are achieved.

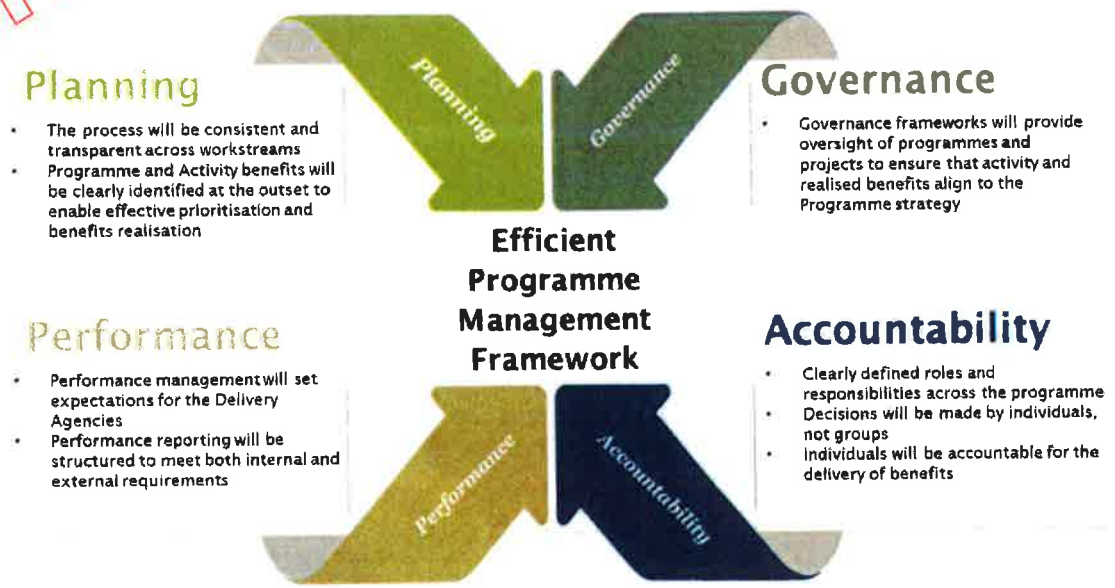
Project management planning

Project management arrangements

319. In the event that this investment proposal receives formal approval, a specific project will be established to deliver the required services, centred on the Master Development role. This will mean HLC owning the programme, working closely with HNZ, MOE and PCC in developing the detail of workstream requirements.

320. Each workstream within the regeneration programme will be governed by individual planning arrangements between the Master Developer and the relevant partnering and contracted parties. A programme management methodology will be selected and applied by the Master Developer, HLC, and will include the relevant Planning, Governance, Performance and accountability elements in Figure 24, including various existing Standard Operating Procedures.

Figure 24: Programme management framework



Proposed governance and monitoring arrangements

321. Following the commercial structure, there are several different levels of governance associated with each workstream. Each governance entity will have accountability for its own allocated objectives and risks.

Regeneration Board

322. A Regeneration Board will be created to form and own the vision, ensure integration between delivery entities, identify community priorities and advocate regionally and nationally.

323. Members of the Board will be jointly appointed by the Crown (Treasury), PCC and Ngāti Toa. While members may have other roles in relation to the key delivery agencies, membership will be in the interest of the project, rather than representative of different partners.

324. As funding will not flow through the Regeneration Board, it will not have direct accountability for financial performance or delivery. The Regeneration Board will be responsible for owning the vision and agreeing the high-level masterplan, ensuring coordination across the different delivery roles.

HNZ Board

325. The existing HNZ Board will have accountability for financial performance in relation to the delivery of new public housing, and for ensuring rehousing meets development timelines.

HLC Board

326. The existing HLC Board will own the delivery of the Master Development and be accountable for financial performance and delivery in relation to demolition, development and land sales.

Treasury/Ministry of Housing and Urban Development monitoring role

327. The Treasury currently has a monitoring role in relation to the financial performance of HNZ and TRC (among other Crown entities). With the establishment of a funding stream to HLC, the Treasury will monitor performance more directly than is currently undertaken as part of monitoring of HNZ. This is expected to be managed within baselines.

328. Upon formation of the new Ministry of Housing and Urban Development, these monitoring roles are expected to be transferred, with the Treasury's role reducing to that of normal Vote monitoring.

Benefits management planning

329. This business case has established a comprehensive set of expected benefits, largely driven by social outcomes. However, while we can use evidence to determine what outcomes are likely to result from the interventions, direct attribution of outcomes is difficult to establish.

330. Accordingly, we have established a three-tiered approach to benefits realisation. This takes a simple approach of establishing metrics and monitoring several different points of the intervention logic at once. This is aligned to the Treasury Living Standards Framework.

331. This includes monitoring at multiple levels:

    a. **Tier 1**: Direct measurement of the outcomes of interest (for example, health statistics). These outcomes will be monitored using a series of metrics based on administrative data. Trends and patterns can be analysed to determine if outcomes

are generally proceeding as expected, but benefits are not directly attributable to the actions of the programme or its delivery entities. This will still be valuable information for the use of the Regeneration Board and monitors.

b. **Tier 2**: Outputs of the programme (for example, the percentage of people that can afford to heat their home properly). Some of these outputs can be directly attributed to the programme for the purpose of setting programme-level performance metrics.

c. **Tier 3**: Inputs (for example, number of new houses delivered). These are all at early stages of the intervention logic and are directly attributable to individual delivery entities. Tier 3 metrics would be expected to feature as targets within Statements of Intent for delivery entities.

332. Appendix 5 shows each metric by tier, its source, and how it links to the intervention logic in the strategic case and benefits described in the economic case.

333. Most metrics are readily available from operational data or the Quality of Life Survey that is run by PCC and other TLAs. However, a number of metrics require use of the Integrated Data Infrastructure (IDI). These have been aligned to the Tāmaki dashboards and can be produced by the Treasury for use by the Regeneration Board and delivery entities. Ultimately this role may move into another agency, but at present the key skills reside within the Treasury Insights team.

Risk management planning

Strategic risks

334. Five strategic risks could collectively or individually generate significant negative impact and need specific management. The five strategic risks are:

a. Incomplete delivery

b. Time slippage

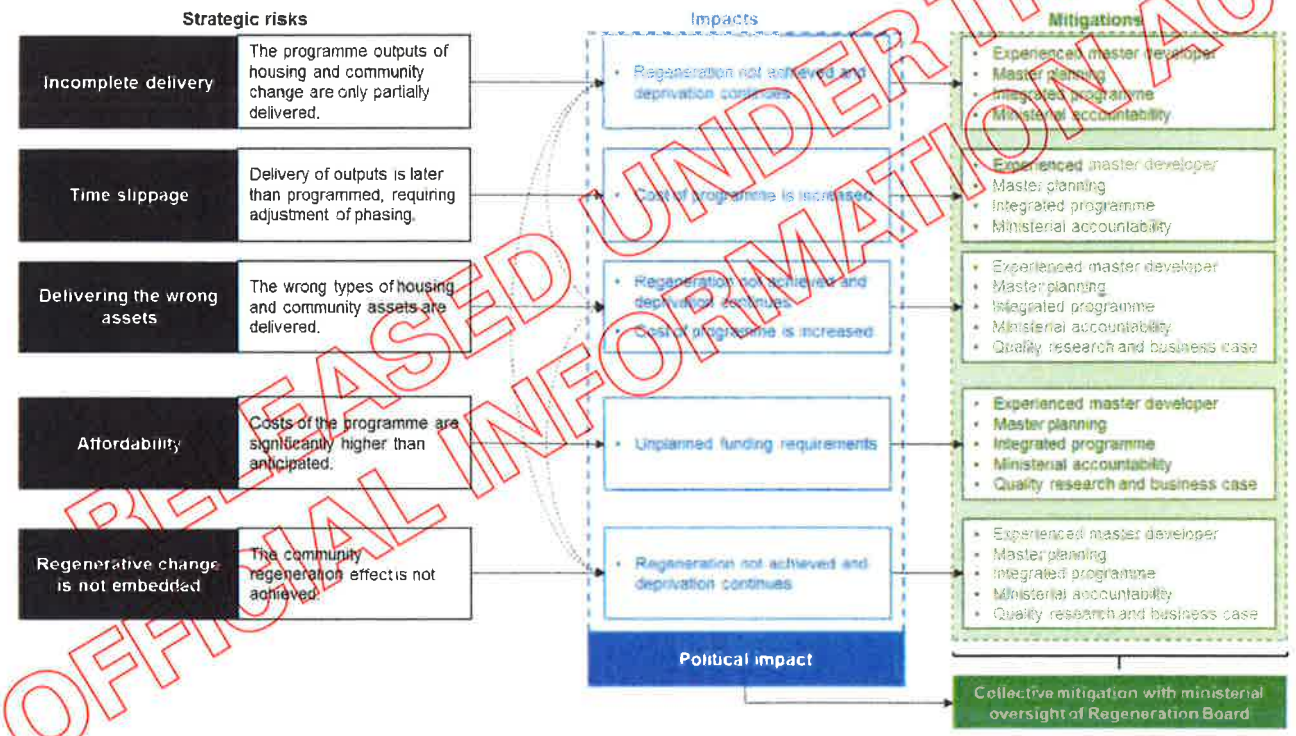
c. Delivering the wrong assets

d. Affordability

e. Regenerative change is not embedded.

335. Strategic risks are mitigated primarily through ministerial oversight via the Regeneration Board, quality preparation and initiation of the programme, input and advice from a variety of views, and leading an integrated master plan and programme of works with the right capabilities. The Master Developer will be responsible for proactively mitigating the five strategic risks, with the overall political risk being managed by the Regeneration Board. The strategic risks are highlighted in Figure 25, with their respective impacts and planned mitigations.

Figure 25: Strategic risk management



Programme risks

336. A high-level assessment of key programme risks is outlined below.

Table 27: Indicative risk register

Theme	Risk	Mitigations
Political	Policy setting change required	• Programme structure and activities will be aligned with current policy settings, requiring no changes.
	Ongoing Ministerial support	• Ministerial authorisation is required to initiate and maintain the ongoing project. • Regeneration Board reporting directly to Responsible Ministers.
	Delivery timing slippage and misalignment of phases	• The Crown-controlled Master Developer will own and maintain the master plan and programme.
Economic	Unaffordable housing	• The Master Developer will set housing specifications and relevant controls on delivery costings to ensure affordability.
	Unsaleable housing	• Regularly refreshed expert market, demography and typology demand analysis will inform the programme.
	Low interest from the development market	• Regularly refreshed demand analysis will inform the programme, ensuring the programme is structured to be attractive to the market.
	Insufficient market capability and/or capacity in the development market	• Industry capacity analysis will inform the timing of the programme. • An experienced Master Developer will ensure the programme considers delivery feasibility.
	Changing demographic trends	• Regularly refreshed demographic trend analysis and forecasting will inform the Master Developer's planning for housing typology and delivery timing.
	Harmful behaviours and inadvertent social outcomes	• The Terms of Reference for the Master Developer and Eastern Porirua programme will clearly outline stakeholders, and their roles and responsibilities. • Expert master planning will be developed and maintained. • The Eastern Porirua community will be engaged with, and effective communications will be maintained. • [2] • HLC will establish a local office within the community as a base for engagement.

	Changing social service delivery models	• [2]
	Resource and building consent issues	• Consenting will be proactively planned and informed by the delivery programme. • PCC will be closely engaged and can advise on any potential consenting issues.
	Rehousing capacity	Acquisitions to support additional public housing capacity in the area will be essential to address this.
Social	Social impact is less than expected	• The proposed programme is well researched and informed with input from central and local government, external experts and Ngati Toa. • The Terms of Reference for the Master Developer and Eastern Porirua programme will explicitly include social outcomes as an imperative driver. • [2]
	Unexpected infrastructure issues and ground contamination	• Water infrastructure condition is well informed from a recent PCC study. • The Master Developer will be experienced in researching, recognising and remediating ground contamination. • PCC will be closely engaged and can advise on any known issues.
Technological	Community assets are poor quality e.g. location and design of green spaces, transport and public amenities.	• The Master Developer will engage professional master planning services to apply good practice community design.
	Housing assets are poor quality	• All housing will adhere to specified building consent requirements and the building code. • Housing will meet the Government's Healthy Homes standards. • The Master Developer will develop urban and housing specifications. • The Developer and construction Contractors will be responsible for applying detailed good practice architectural and construction design. The Master Developer will provide review and oversight.

Legal **Regulatory, Legal ownership**	Community design and engagement	• The Master Developer will engage professional master planning services to apply good practice community design. • [2] • District Plan controls.
	Zoning does not enable redevelopment	• The current District Plan does not allow for appropriate development of the area. This will need to be changed. If the District Plan is opposed and is not enabling, development will have to proceed as non-complying activities resulting in delays. This can be mitigated by transferring responsibility for Master Development to an Urban Development Authority with zoning powers when possible.
Environmental **Ecological, Community/ Urban environment**	Environmental pollution	• The Master Developer will undertake suitable environmental impact assessments to inform delivery planning and will be required to apply good practice environmental controls. • Limited civil works. • Resource consent conditions and requirements.

Project evaluation planning

337. While delivery and implementation will have ongoing monitoring, periodic outcome evaluations will also be of value. An independent evaluator should be appointed to develop a snapshot of progress at 3-yearly intervals.

338. It is proposed that these evaluations focus on two key questions.

Question 1: What outcomes occur for residents within the area of interest?

339. Attribution of the interventions directly to resident outcomes is not able to be clearly determined, since it is not possible to construct a proper control. It will be possible however, to compare the outcomes of people within the area over time, and to observe change in states and trends relative to similar cohorts.

340. The evaluation will necessarily be long-term, since actual changes in outcomes are likely to take a long time to appear. The focus will be the Tier 1 metrics outlined in Appendix 5.

341. Given one of the chief concerns of the programme is to avoid negative impacts on current residents or displacement, longitudinal analysis of individuals present within the intervention area at the beginning of the programme should be undertaken.

Question 2: What might be driving any observed differences in outcomes?

342. This second evaluation questions will require more qualitative evaluation, including interviews with key people in delivery entities and tenants.

Next steps

343. This Single Stage business case seeks formal approval from Cabinet to initiate the regeneration programme and appropriate the required funding.

Transitioning of the Masterplan from Treasury to HLC

344. Appropriate arrangements will be put in place between Treasury and HLC to transition the masterplan to HLC and appoint them as the central programme management entity.

345. All documentation, drawings and financial models will be transferred.

Establishing the Regeneration Board

346. The Treasury, Ngāti Toa and Porirua City Council will need to make appointments to the Regeneration Board prior to commencement of the project.

Communications and community engagement

347. A draft communications and engagement strategy has been developed to facilitate the communication of messages to the community once the business case is approved. This has been developed based on consultation with all key delivery agencies and is attached as Appendix 6. Key responsibilities include the following:

    a. **Treasury**: Responsibility for drafting all announcement material and collating initial lists of community stakeholders.

    b. **HLC**: Lead responsibility for finalising announcement material, planning and implementing of community engagement strategy post-announcement.

    c. **HNZ and MSD**: Joint lead responsibility for communication and engagement with HNZ tenants.

    d. **PCC**: Advise Crown agencies about key stakeholders and approach to communications, support community engagement and link project to existing community engagement initiatives.

Recruitment and resourcing

348. HLC is not currently active in the Wellington/Porirua area. To implement the Eastern Porirua Community Regeneration Programme, it will need to establish a local office with the required personnel.

Change management

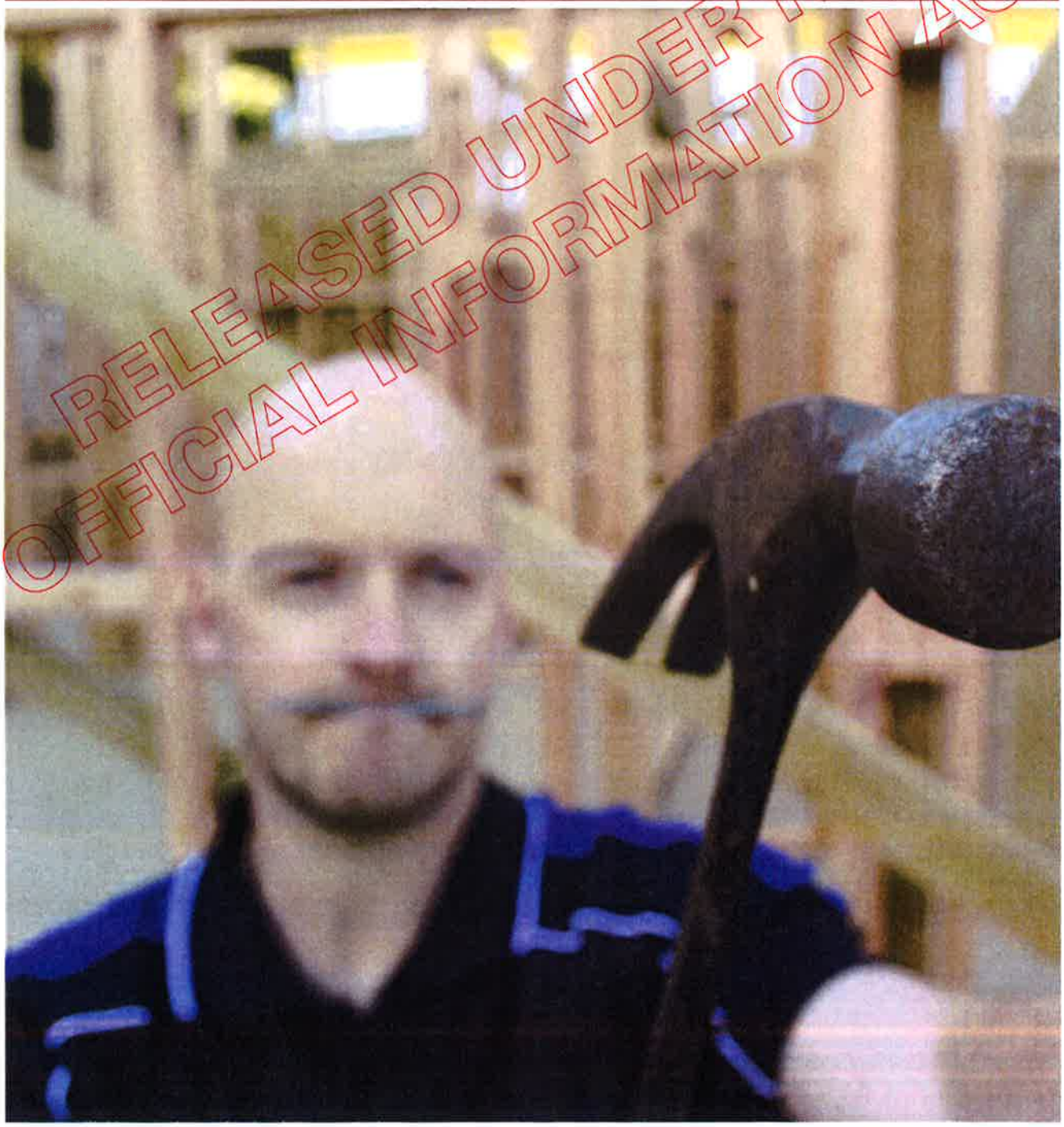
Transition to Ministry of Housing and Urban Development

349. A new Ministry of Housing and Urban Development is to be established later in 2018. This new Ministry will provide a new system leadership role with the mandate to work across agencies to coordinate the social, economic and environmental aspects of housing and urban development.

350. The Treasury will support the transition of roles in the programme to the new Ministry of Housing and Urban Development.

[2]

Appendices



Appendix 1: Eastern Porirua population profile

Statistics NZ disclaimer in relation to usage of data from the Integrated Data Infrastructure (IDI)

The results in this report are not official statistics, they have been created for research purposes from the Integrated Data Infrastructure (IDI) managed by Statistics New Zealand.

The opinions, findings, recommendations and conclusions expressed in this report are those of the author(s) not Statistics NZ or The Treasury.

Access to the anonymised data used in this study was provided by Statistics NZ in accordance with security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business or organisation and the results in this [report, paper] have been confidentialised to protect these groups from identification.

Careful consideration has been given to the privacy, security and confidentiality issues associated with using administrative and survey data in the IDI. Further detail can be found in the Privacy impact assessment for the Integrated Data Infrastructure available from www.stats.govt.nz.

The results are based in part on tax data supplied by Inland Revenue to Statistics NZ under the Tax Administration Act 1994. This tax data must be used only for statistical purposes, and no individual information may be published or disclosed in any other form, or provided to Inland Revenue for administrative or regulatory purposes.

Any person who has had access to the unit-record data has certified that they have been shown, have read, and have understood section 81 of the Tax Administration Act 1994, which relates to secrecy. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

Eastern Porirua demographics (from 2013 census)

As shown in Table 28, Porirua is a comparatively young city and eastern Porirua is even younger. Households are generally larger than average, with larger than average numbers of children.

Table 28: Age of Eastern Porirua residents

Five year age groups (years)	Number	% Eastern Porirua	% Porirua City	% Wellington Region
0 to 4	1,668	9.8	8.6	6.7
5 to 9	1,527	9.0	8.1	6.5
10 to 14	1,608	9.5	7.8	6.4
15 to 19	1,641	9.7	7.4	7.0
20 to 24	1,443	8.5	6.4	7.5
25 to 29	1,071	6.3	5.3	6.5
30 to 34	1,023	6.0	6.1	6.6
35 to 39	1,059	6.2	7.1	6.8
40 to 44	1,158	6.8	7.8	7.6
45 to 49	1,065	6.3	7.3	7.3
50 to 54	942	5.6	6.8	7.0
55 to 59	741	4.4	5.9	5.8
60 to 64	723	4.3	5.1	5.2
65 to 69	537	3.2	4.0	4.3
70 to 74	378	2.2	2.8	3.2
75 to 79	228	1.3	1.6	2.3
80 to 84	114	0.7	1.1	1.8
85 and over	39	0.2	0.8	1.6
Total	16,965	100.0	100.0	100.0

Porirua has a large population of Pacific peoples, particularly within the context of the broader Wellington Region. Eastern Porirua in particular is home to a large proportion of Pacific peoples, making up nearly half the population.

Table 29: Ethnicity of Porirua residents (2013 Census multi-response)

Ethnic group	Number	% Eastern Porirua	% Porirua City	% Wellington Region
European	4,461	23.2	60.0	73.2
Māori	3,954	20.5	19.6	12.4
Pacific peoples	9,348	48.6	24.6	7.7
Asian	1,212	6.3	6.0	10.0
Middle Eastern/Latin American/African	180	0.9	0.7	1.4
New Zealander	87	0.5	1.2	1.7
Other ethnicity	*	0.0	0.1	0.0

Public housing tenant demographics (from MSD data)

The demographics of the public housing population within Porirua have similar patterns to the broader demographics in the community. The primary occupants are younger than average, with a high proportion of Māori and Pacific peoples.

Primary tenants are predominately female (68%), though this is not unusual for public housing due to the large number of single parent households with the mother as primary caregiver.

Households in Porirua public housing are larger than usual and have more children (Table 30). This is in addition to the primary tenants being younger than average.

Table 30: Children in Porirua public housing

# Children in HH (age 0-18yrs)	TLA Porirua	Rest of NZ
0	44%	50%
1	21%	18%
2	17%	14%
3	10%	9%
4	5%	5%
5	2%	2%
6	1%	1%
7	1%	0%

The level of Income Related Rent Subsidy (IRRS) that is provided in Porirua is lower than the average for New Zealand. This is positive, in that it means tenants are generally not as far from being able to

afford the private market as the average, but these results should be read with caution. First, Auckland has around half of the public housing in New Zealand so exerts a strong influence on these statistics, due to IRRS levels being very high. Second, the level of IRRS does not necessarily correspond to other needs besides housing. For example, tenants may be unable to sustain a tenancy in the private market due to a mental health condition or other needs.

Table 31: Level of Income Related Rent Subsidy for Porirua public housing

Weekly IRRS	TLA Porirua	Rest of NZ
0-$99	15%	10%
$100-$199	40%	26%
$200-$299	44%	34%
$300-$399	2%	23%
$400-$499	*	6%
$500-$599	*	1%
$600-$699	*	0%

Social outcomes (from IDI)

The Treasury has undertaken analysis of key social indicators for eastern Porirua using the Integrated Data Infrastructure (IDI). This provides a good overview of the baseline outcomes for people in the area. Multiple factors are likely to be driving these outcomes, including:

a. poverty effects, primarily driven by socio-economic status and interacting with ethnicity

b. housing effects, directly caused by the quality of housing itself, and

c. neighbourhood effects, caused by spill-overs from the high concentration of economic deprivation in the area.

People in eastern Porirua experience worse than average social outcomes across most key measures. Health indicators show very high rates of preventable hospitalisations and justice indicators show high rates of both victimisation and offending. The per-capita amounts of tier three benefits (predominantly hardship assistance such as Temporary Additional Support) claimed by HNZ tenants in eastern Porirua are among the highest in the country. This indicates that many households are under severe financial strain.

Education outcomes are of particular concern in eastern Porirua. As shown in Table 32, young people in eastern Porirua public housing are around twice as likely to be not in employment, education or training, have no NCEA qualifications or have a history of truancy, suspensions or stand-downs at high school, compared to the national average. Rates of NCEA achievement are also lower than for other public housing populations, though rates of behavioural issues are also lower. Note that this sample cohort won't necessarily align with total NCEA qualification rates but the ratios will be similar.

Table 32: Education indicators for young people aged 18 to 21 inclusive (2015)

	All NZ	All Porirua	Eastern Porirua non-HNZ properties	Eastern Porirua HNZ properties	All NZ HNZ properties
No NCEA qualifications	17.9%	19.5%	22.3%	36.6%	34.6%
No level 2 NCEA qualifications	24.3%	26.6%	29.8%	47.4%	33.9%
History of truancy, suspensions or stand-downs at high school	22.4%	25.4%	27.7%	40.2%	42.6%
Not in employment, education or training	15.7%	20.3%	23.1%	34.5%	46.1%

The use of mental health services, hospitalisations, and outpatient visits are all high in eastern Porirua's HNZ properties. As shown in Table 33, hospitalisations are 13% higher for adults and 21% higher for children than for non-HNZ houses in the same area. Overall health expenditure is 24% higher than in non-HNZ houses, though not as high as national averages for HNZ properties.

Table 33: Health indicators (2015)

	All NZ	All Porirua	Eastern Porirua non-HNZ properties	Eastern Porirua HNZ properties	All NZ HNZ properties
Percent with hospital event in 2015 (adults, aged 18 plus)	9.0%	9.4%	9.9%	11.2%	12.2%
Percent with hospital event in 2015 (children, aged under 18)	4.3%	5.0%	5.3%	6.4%	6.2%
Per person health sector costs (including publically funded hospital events, subsidised medicines and mental health services)	$1,086	$1,336	$1,186	$1,469	$1,609

Children under five typically spend most of their time in the home, so are most affected by housing quality. Preventable hospitalisations of children under five in Porirua are 26% higher than the national average, at 859 per 10,000 people. Eastern Porirua has 46% of Porirua's children under five and a large proportion of the costs from hospitalisations. Wheezing due to asthma and respiratory infections are common reasons for admission, which are conditions commonly-linked to housing quality.[13]

[13] Porirua City Council (2017), *Status Report: Children and young people in Porirua*

Table 34 summarises key justice sector indicators. Eastern Porirua public housing tenants are less likely to be an offender than average public housing tenants. However, eastern Porirua public housing tenants are more likely to be victims of a crime. People living in the same area in non-HNZ houses are also more likely to be victims than for other parts of Porirua. Note that these figures are for recorded crimes only, which generally are only a small fraction of the total burden of crime on society.

Table 34: Crime and safety indicators for adults (2015)

	All NZ	All Porirua	Eastern Porirua non-HNZ properties	Eastern Porirua HNZ properties	All NZ HNZ properties
Victim of a crime reported and recorded in police data	3.6%	3.8%	4.0%	5.5%	5.1%
Offender recorded in police data	0.8%	0.9%	1.0%	2.6%	3.1%
Department of Corrections costs	$212	$244	$303	$608	$713

Table 35 shows that outcomes for children's safety are poor. Victimisation for children in non-HNZ houses in the area is much lower than for public houses. For example, 19% of children not in a public house have had a notification to child protection services compared to 16.2% nationally. For public houses this figure is 34.7%. These outcomes are not as bad as for other public housing populations.

Table 35: Crime and safety indicators for children (2015)

	All NZ	All Porirua	Eastern Porirua non-HNZ properties	Eastern Porirua HNZ properties	All NZ HNZ properties
Child ever notified to child protection	16.2%	16.7%	19.0%	34.7%	39.9%
Child ever placed in care of CYF	1.7%	1.8%	1.8%	4.0%	4.4%
CYF Family conference or whanau agreement ever in place	4.6%	4.8%	4.4%	12.6%	15.3%

Appendix 2: Assessment of long-list options for master development and public housing renewal

The status quo: Modelled counterfactual

Description

According to the HNZ asset management strategy, there are few properties within the eastern Porirua portfolio that would not be redeveloped, retrofitted or divested over the next 30 years. Accordingly, the counterfactual is not to do nothing, but for HNZ to undertake a series of upgrades or redevelopments.

Due to the prevailing market conditions in the area, it is more likely that HNZ would undertake retrofits of existing properties rather than redevelopments. This would also not include masterplanning of the area, or investment in public assets.

While there is not yet a specific asset renewal plan for the area we have developed a counterfactual scenario for the purposes of this business case based on consultation with HNZ. This includes mostly retrofits, with redevelopment of 300 properties.

Assessment

The main advantage of the status quo is that it is likely to be a least cost option that delivers warm, dry houses, though some typology issues would remain.

The main disadvantage of this option is that there is no opportunity to address broader social issues and amenity in the area or to deliver affordable housing.

This option achieves few investment objectives but forms a good counterfactual. Critically, it focuses the business case on the incremental spend that is necessary rather than the overall amount, which would not reflect the latent liability associated with a portfolio of this age.

Sell-down of HNZ portfolio

Description

This option is an alternative approach to reducing the concentration of public housing in eastern Porirua. This would involve a progressive sell-down of stock in the area, with no masterplanning or investment in public assets. To replace the houses that are sold, HNZ would need to purchase or build new houses elsewhere.

Assessment

The main advantage is this provides a fairly simple solution to reducing the concentration of public housing and removes the need to deal with brownfield infrastructure issues and contamination.

The main disadvantages are that the community may perceive this as Government abandoning it, after having created a series of problems. There is also a high risk that reducing the concentration of public housing in the area does not de-stigmatise it. If the neighbourhood effect persists, HNZ

properties are likely to be purchased by private landlords operating the assets on a run-to-fail model. This could result in significantly worse social outcomes.

The cost is also potentially very high. Eastern Porirua currently has some of the lowest land prices in the Wellington Region. To maintain a comparable level of service, HNZ would be selling property at a low value to buy property at a high value. Without investing in the neighbourhood there would be no potential to capture uplift.

This option would provide poor outcomes and value for money. However, this may need to be re-examined should a regeneration effort fail.

Modelled counterfactual and key moves

Description

This option would involve undertaking a series of key moves, including:

a. [3]

b. Cannons Creek neighbourhood centre

c. Greenways walking and cycling infrastructure

d. upgrading Mungavin/Warspite Avenues

e. pedestrian and cycling bridge across the motorway connecting eastern Porirua to the city centre and train station, and

f. [2]

Housing investment would be confined to counterfactual retrofits and redevelopment.

Assessment

The main advantages of this option are that it offers good amenity input to the community, while minimising costs.

The main disadvantages are that public housing concentration would not be reduced to a level that would mean less exacerbation of social issues, and there would be little opportunity to deliver affordable housing. In addition, while upfront investment in the community is occurring, there is no provision for ongoing maintenance. Without growth to accompany the new infrastructure, costs would fall to the existing ratepayers, meaning the level of service may not be possible to maintain.

While providing investment in community assets, this option is unlikely to deliver sustainable change.

[14] This has been done for financial modelling purposes. In order to identify specific options there will need to be a consultation process with the community on its vision for education in light of the housing redevelopment proposed. If that process identified network change there will also need to be consultation under the Education Act with specific school communities.

Focused scope regeneration – partial redevelopment

Description

This option involves the same key moves, but undertakes focused redevelopment and densification of HNZ holdings across Waitangirua, Cannons Creek East and Cannons Creek West. Less problematic typologies such as standalone homes would be retrofitted, while more problematic multi-unit typologies would be redeveloped into new housing. Properties with standalone homes and less potential uplift would also be divested, while only the higher-uplift areas would be selected for redevelopment for market sales. Ascot Park and Porirua East housing is assumed to remain in its current typology mix and location, to undergo refurbishment, as these properties are largely good-quality freestanding homes.

Assessment

The main advantages of this option is that it could achieve most of the investment objectives, while making the most of existing assets to keep costs down.

There are a number of disadvantages to this option that relate to the surety of achieving the investment objectives:

a. There is a lower delivery of affordable and market housing than would be achieved under a full redevelopment scenario, which could potentially result in more displacement of current residents.

b. There is a requirement for a significant number of disposals of HNZ properties with undesirable typologies, which are at risk of being purchased by private landlords operating the assets on a run-to-fail model (ultimately threatening the overall regeneration).

c. Due to the distribution of age and typologies in the current portfolio, the properties suitable for retrofitting are predominately three-bedroom and concentrated in Ascot Park and Porirua East. This means that to achieve HNZ's preferred typology mix, one and two-bedroom typologies are concentrated within Cannons Creek and Waitangirua. This creates a potential risk to the overall success of the regeneration by limiting the degree to which communities can be fully-integrated with wider Porirua.

This option could achieve the investment objectives, but carries some risk.

Full scope regeneration – full redevelopment

Description

This option would involve undertaking the key moves and redeveloping all public housing within the eastern Porirua area with a relatively modest uplift in density.

Assessment

The main advantages are that this enables the greatest impact on the amenity of the area, the reallocation of public housing to achieve mixed communities and a large amount of affordable and market housing.

The main disadvantage of this option is that it is relatively high cost.

This option would achieve the investment objectives to the greatest degree though value-for-money may be an issue.

High-yield regeneration

Description

This option would involve undertaking the key moves and redeveloping all public housing within the eastern Porirua area at the highest practically achievable level of density.

Assessment

The main advantage to this option is that it would provide a large amount of affordable and market housing that would potentially have effects on housing affordability across the region.

The main disadvantages of this option are that it is likely to be high cost and risky, as the market may not absorb the mix of typologies offered within the eastern Porirua portfolio.

This option would achieve the investment objectives but would struggle to meet critical success factors in relation to value for money and achievability.

Appendix 3: Assumptions for assessing benefits

Initiative Description:

This CBAx model analyses the benefits that would be realised from an investment in regenerating Eastern Porirua housing and community facilities. The regeneration of Eastern Porirua will involve retrofits of public housing and redevelopment to public and private housing. The CBAx considers four different regeneration scenarios with different cohort assumptions.
 	
• Option 1 (Modelled counterfactual): It is assumed that the public housing in eastern Porirua would eventually be regenerated as part of the Housing New Zealand (HNZ) long-term asset management plan. This is modelled as the status quo case. Under this scenario, it is assumed that there will not be any significant community effects and positive impacts from tenants moving into new housing will be delayed.
 	
• Option 2 (Modelled counterfactual plus key moves): This is the same as the above scenario plus key moves for redeveloping community infrastructure in eastern Porirua. Key moves in this Eastern Porirua regeneration project include:
  ○ The renewal of [3] and the Cannons Creek neighbourhood centre
  ○ The creation of better cycle way and walk way connections in and to Eastern Porirua
  ○ [2]
 	
• Option 3 (Focused regeneration): This scenario is less intensive than Option 4. It involves constructing 1504 private houses and renovating/reconstructing 1978 HNZ public houses, with 452 properties divested. This regeneration is expected to begin in 2020 and be implemented over approximately 20 years.
 	
• Option 4 (Full regeneration): This is the most intensive regeneration scenario for Eastern Porirua. It involves constructing 2625 private houses and renovating/reconstructing 1965 Housing New Zealand public houses. In addition, some Housing New Zealand public houses will be divested. This regeneration is expected to begin in 2020 and be implemented over 20 years. In addition to renovating and building new housing, this scenario also involves the renewal of community facilities.

Overarching CBAx Assumptions	
Length of Impact	The length of the impact is assumed to be 30 years. For the improved housing quality and reduced overcrowding/underutilisation benefits the impacts begin when the house is built. The community effect impacts begin when all new houses are built and the lower public housing concentration is achieved in 2035. Housing is a long-lived asset and therefore its useful life and the benefits gained from it are expected to continue for a long period of time.
Cohort Assumptions	The cohort population is the number of houses, multiplied by the average number of occupants (3.0197). This average number of occupants per household is sourced from Housing New Zealand

	data and is based on public housing. This average is also applied to private housing, as the average number of occupants per household in Porirua as a whole, is similar[15]. The different scenarios considered in the CBAx have different housing numbers and therefore the cohort is adjusted for each scenario. The current cohort in Eastern Porirua is made up of 1963 public houses and 3107 private households, a total of 5070 households in the neighbourhood. **Option 4:** In this scenario there is expected to be 1978 regenerated public housing households and 2625 new private households. The total amount of new units in the area is 4603. **Option 3:** In this scenario there is expected to be 1978 regenerated public housing households and 1504 new private households. The total amount of new units in the area is 3482.
Private Impact Assumptions:	In the different regeneration scenarios, there will be additional private housing built in Eastern Porirua. This private housing will be filled with a combination of owner-occupiers and private renters. It cannot be known whether these new private housing tenants have moved from houses of significantly poorer quality. It is therefore assumed that the private tenants themselves have weighed up the costs and benefits of moving to the new housing in Eastern Porirua. It is assumed that any private benefits associated with moving into a new Eastern Porirua house will net off with any private costs associated with this move. We do not model any private benefits into the CBAx.
Neighbourhood effect assumptions for the different scenarios:	The neighbourhood effect benefits assume that the reduction in public housing concentration achieved through the introduction of more private households in Eastern Porirua will increase the overall income status of the neighbourhood. It is assumed that there will be a reduction in the concentration of poverty in the area, which will have positive flow on effects to the residents. The research indicates that benefits are gained from individuals relocating to lower poverty areas (moving to opportunity research). It is assumed that eastern Porirua becoming a lower poverty neighbourhood and having improved community infrastructure will provide the same benefits. It is assumed that the current eastern Porirua residents will gain the same benefits from this project as they would from being relocated to another lower-poverty neighbourhood. A significant reduction in public housing concentration is achieved under both Option 4 and Option 3. Option 4 has the lowest concentration of public housing, however Option 3 has a public housing concentration that is only 2 percentage points higher. No research has been found that suggest that there is a specific value, or tipping point, to achieve positive neighbourhood effects. The research indicates that the positive results are achieved when the average income of the neighbourhood increases and the overall quality of the neighbourhood improves. Based on this, the CBAx assumes that the neighbourhood impacts will not have different success rates for the different scenarios. The size of the final cohort in Option 3 is smaller than that in Option 4. The housing regeneration strategy also differs, with there being more divestments and less new housing builds in Option 3. The community effects in the CBAx rely on there being a significant change to the community, which is achieved through a change in cohort and housing typology mix. There is the potential that Option 3 may not achieve the required neighbourhood change and the community effects may not be realised to the same extent. To account for this, risk ratings are applied to the Option 3 CBAx which adjust the benefits accordingly. In addition to the risk ratings, the lower community benefits that are likely to be observed in Option 3 are also accounted for through the lower cohort size. For the modelled counterfactual and modelled counterfactual plus key moves scenarios, the CBAx assumes there are no neighbourhood effects associated with reductions in concentration of public housing, as these scenarios do not include such reductions. The modelled counterfactual plus key moves scenario includes the neighbourhood effects that directly link to the key moves, and obviously, the modelled counterfactual does not. These are the health benefits that are associated

[15] Statistics New Zealand.(2014). 2013 Census QuickStats about families and households. Retrieved from http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/qstats-families-households/households.aspx

	with the cycle ways and the wellbeing benefits associated with improved community hubs. There is however, the potential that the wellbeing benefits will not be achieved from just the modelled counterfactual plus key moves scenario. This is because although the key moves associated with the wellbeing benefits are made, there are no other changes to the cohort or housing mix. Some benefits from the key moves rely on private investment as well as public, e.g. [31] This private investment is less certain without changing the housing in Eastern Porirua as well. To account for this potential, a risk rating is applied to the wellbeing benefit in the modelled counterfactual plus key moves CBAx.

Impact Summary Tables

Impacts - Identify and list	Assumptions and evidence
Reduced overcrowding/ underutilisation	The renewal of public housing in Eastern Porirua will generate a new public housing portfolio, which will be better utilised to match public housing needs. It is assumed that these changes to the public housing portfolio will result in reduced overcrowding in Eastern Porirua public housing and reduced underutilisation of public housing properties.
Better quality public housing stock	The renewal of public housing in Eastern Porirua will involve both cosmetic improvements and capital improvements to public housing stock. These capital improvements will result in their being better quality public housing stock in Eastern Porirua.
Better housing choices available	The construction of new housing in Eastern Porirua on Housing New Zealand land will result in there being increased housing stock available. This results in there being better housing choices available for private purchase in Eastern Porirua. The increase in new builds increases construction activity and will generate more skilled workers in the region.
Community Effects	This intervention will have community effects. Making Eastern Porirua a better place to live will involve increasing the private housing stock and owner-occupiers in the area. It will also involve making the high-poverty neighbourhoods open to private housing investment. The changes will enable families to build networks with lower poverty households. Investment in upgrading the community hubs and social services in Porirua East is also a part of the regeneration plan. These key moves will also result in community effects as it will improve the attractiveness in the area and increase inflow of visitors. The investments will improve the appearance of the neighbourhood and result in there being increased positive interactions amongst residents. It is assumed that the updated facilities and services will increase the pride associated with living in the area. The community effects will result in the following positive outcomes for Eastern Porirua: • Better health outcomes • Improved economic effects • Enhanced justice outcomes These outcomes are explained in detail below.

Government Benefits	
Benefits	**Research and Assumptions**
Reduced overcrowding/ underutilisation: Fewer hospitalisations and reduced health costs from diseases associated with overcrowding	Household crowding is a risk factor for the transmission of infectious diseases within New Zealand[16]. Research from the New Zealand Healthy Homes study identified that reduced overcrowding was associated with a 61% reduction in acute and arranged hospital admissions for children[17]. **CBAx Assumptions:** The impact used is the CBAx value for the cost of inpatient hospital visits. The modelling assumes a success rate for reduced inpatient hospital visits of 61%. This impact is applied to the children and infants that are in overcrowded public housing.
Reduced overcrowding/und erutilisation: Avoided costs of child maltreatment	Household crowding is one factor that can cause stress within a household[18] [19]. It is also a factor that can increase the risk of a child being neglected or maltreated[2021]. A reduction in overcrowding and stress in a household will reduce the incidence and cost of child maltreatment.
Reduced overcrowding/und erutilisation: Increased tax revenue as a result of children having improved educational outcomes due to improved mental health	Studies have identified that children who experience anxiety or depression are more likely to have lower educational attainment and leave school early[22]. An American study identified that children with behavioural disorders were 3.4% less likely to complete school[23]. Overcrowding is one risk factor that can be detrimental to a child's development. Research indicates that removing a risk factor, in this case overcrowding, can reduce the risk of a child exhibiting diagnosed mental health disorders by 15%[24]. **CBAx Assumptions:** A student completing NCEA Level 3 rather than a lower level qualification will increase the tax revenue for the Government. The impact used is the CBAx value for 25% of income tax and ACC levy for the marginal value of moving from no qualification to NCEA Level 3. The success rate for this impact is the reduced behavioural disorder multiplied by the improved school completion rate. This is applied to the children in the public housing cohort that are in overcrowded households. A lag of 6 years is applied to this effect as this is the average time taken for the children to complete school and obtain a job.

[16] Baker, M. G., McDonald, A., Zhang, J., & Howden-Chapman, P. (2013). Infectious diseases attributable to household crowding in New Zealand: A systematic review and burden of disease estimate (Vol. 1, No. 1.26, p. 33). Wellington: He Kainga Oranga/Housing and Health Research.

[17] Baker, M., Zhang, J., Keall, M., & Howden-Chapman, P. (2011). Health Impacts of the Healthy Housing Programme on Housing New Zealand Tenants: 2004-2007. Wellington: He Kainga Oranga/Housing and Health Research Programme, University of Otago.

[18] Solari, C. D., & Mare R. D. (2012). Housing Crowding Effects on Children's Wellbeing. Retrieved February 01, 2018, from https://www.ncbi.nlm.nih.gov/

[19] Glasgow K, Fanslow JL. 2006. Family Violence Intervention Guidelines: Elder abuse and neglect. Wellington: Ministry of Health.

[20] Statistics New Zealand. (2012). Vulnerable children and families: Some findings from the New Zealand General Social Survey. Retrieved from http://archive.stats.govt.nz/

[21] Child Matters. (2018). Risk Factors of Child Abuse. Retrieved from http://www.childmatters.org.nz/57/learn-about-child-abuse/risk-factors

[22] Suhrcke M, de Paz Nieves C (2011). The impact of health and health behaviours on educational outcomes in high-income countries: a review of the evidence. Copenhagen, WHO Regional Office for Europe

[23] Sagatun, A., Heyerdahl, S., Wentzel-Larsen, T., & Lien, L. (2014). Mental health problems in the 10th grade and non-completion of upper secondary school: the mediating role of grades in population-based longitudinal study. BMC Public Health, 14(1), 16.

[24] Gerwitz, A. H. & Edleson, J. L. (2007). Young children's exposure to intimate partner violence: Towards a development risk and resilience framework for research and intervention. Journal of Family Violence, 22(3), 151-163.

Reduced overcrowding/underutilisation: Decreased income related rent subsidies paid as a result of improved matching of public housing to tenant needs	If public houses are allocated more effectively this will reduce IRRS costs. The new portfolio of public housing will better match the tenants needs. Rents will be reduced for those tenants that have larger houses that they are not fully utilising. This will in turn reduce IRRS costs, as the Ministry of Social Development will not be paying for unused space. **CBAx Assumptions:** The total IRRS cost per household that is saved in a year is calculated using a provided data set on mismatched housing in Eastern Porirua and the average IRRS for the properties based on bedroom size. It is calculated from this data that the average IRRS saving per household, per year is $719.28 once adjusted to 2018 dollars. We have applied this per public housing household (not per person).
Reduced overcrowding/underutilisation: Reduction in health costs because of a reduction in respiratory illnesses.	Overcrowding has been linked to respiratory illnesses with a study identifying that 9.8% of hospital admissions are attributed to household crowding[2]. **CBAx Assumptions:** Based on research surrounding the costs associated with respiratory illnesses in New Zealand, the CBAx assumes a respiratory illness cost per person of $783 per year, in 2018 dollars. The success rate is assumed to be the hospital admissions multiplied by the proportion of overcrowding. This impact is applied to 17% of the public housing cohort, which is the prevalence rate of Asthma within the New Zealand population[25].
Better housing choices: Increased tax income gained from the additional employment opportunities generated by housing construction.	It is assumed that the construction of new houses will increase employment in the construction industry. It is also assumed that a proportion of the new employment opportunities will be allocated to local Eastern Porirua residents in the construction contract. This will provide additional income for some moving from a benefit to skilled employment and for others moving from unqualified employment to trade-qualified employment. **CBAx Assumptions:** Based on the 2016 PwC report, there will be an additional 0.128FTE per $1,000 of construction spending[26]. It is assumed that 5% of these new employees will be from the Eastern Porirua community and that 3 percentage points of these are those moving from an NCEA level 3 qualified job to a trade-qualified job. The remaining 2 percentage points will moving from the Jobseeker support benefit to a trade-qualified job. The hiring of new FTE's is assumed to be spread out over the first 5 years of the project, as they will not all be required at the start of the project. The benefit for the government is an increase in tax income. The impact that is the CBAx value for 25% of Income tax and ACC Levy based on the marginal value of moving from NCEA level 3 to a trade and from moving from the Jobseeker Support benefit to a trade. This is applied to 100% of the cohort specified above with a success rate of 100%.
Better housing choices: Reduced welfare benefits from additional employment	It is assumed that the construction of new houses will increase employment in the construction industry. It is also assumed that a proportion of the new employment opportunities will be allocated to local Eastern Porirua residents in the construction contract. For a portion of these employees, this will provide additional income from being unqualified to obtaining a trade qualification.

[25] Barnard and Zhang (2016) The impact of respiratory disease in New Zealand: 2016 update. University of Otago, prepared for the Asthma and Respiratory Foundation New Zealand. https://s3-ap-southeast-2.amazonaws.com/assets.asthmafoundation.org.nz/documents/REPORT-The-impact-on-respiratory-disease-in-New-Zealand-2016-update.pdf

[26] PwC. (2016, September). Valuing the role of construction in the New Zealand economy. Retrieved from https://infrastructure.org.nz/resources/Documents/Reports/CSG PwC Value of Construction Sector_final report_2016_10_16.pdf

opportunities generated by housing construction.	**CBAx Assumptions:** Based on the 2016 PwC report, there will be an additional 0.128FTE per $1,000 of construction spending. It is assumed that 5% of these new employees will be from the Eastern Porirua community and that 2 percentage points of these are those moving from the Jobseeker support benefit to a trade-qualified job. The hiring of new FTE's is assumed to be spread out over the first 5 years of the project, as they will not all be required at the start of the project. The benefit for the government is the reduction in spending on the Jobseeker support benefit in relation to those now in employment. This is applied to 100% of the cohort specified above with a success rate of 100%.
Better quality public housing stock: Reduction in health costs because of a reduction in respiratory illnesses.	Housing quality is linked to respiratory illnesses, with a New Zealand study finding that an improvement in housing quality is associated with a 33% reduction in respiratory symptoms[27]. **CBAx Assumptions:** Based on research surrounding the costs associated with respiratory illnesses in New Zealand, the CBAx assumes a respiratory illness cost per person of $783 per year in 2018 dollars. The success rate is the reduction in respiratory symptoms. This impact is applied to 17% of the public housing cohort, which is the prevalence rate of Asthma within the New Zealand population[28].
Better quality public housing stock: Increased tax revenue as a result of children having improved educational outcomes due to improved mental health	Improvements in public housing stock has been linked to improved mental health outcomes. One study found that 7% fewer residents reported mental health issues after moving into a newly renovated home[29]. This can have a positive flow on effect to their education, as children that have behavioural disorders are 3.4% less likely to complete schooling[9]. It is assumed that a reduction in mental health issues due to moving into a renovated house will improve educational attainment and increase school completion. **CBAx Assumptions:** A student completing NCEA Level 3 rather than a lower level qualification will increase the tax revenue for the Government. The success rate for this impact is the reduced incidence of mental health issues multiplied by the improved school completion rate (7% x 3.4% = 0.2%). This is applied to the school-aged children and youth in the public housing cohort. A lag of 6 years is applied to this effect as this is the average time take for the children to complete school and obtain a job.
Better quality public housing stock: Reduced mental health costs as a result of improved mental health following a move into a new house	Improved public housing quality will help to improve mental health outcomes for adults and children. One study found that residents reported 7% less mental health issues after they moved into a newly renovated home[30]. A reduction in mental health issues will in turn reduce visits to a specialist and therefore reduce the governments mental health costs. **CBAx Assumption:** It is assumed that the success rate is 7% and this is applied to the residents in new public housing. It is assumed that infants do not make visits to a specialist for mental health issues therefore this effect is only applied to those over the age of 5.

[27] Keall MD, Crane J, Baker MG, et al. A measure for quantifying the impact of housing quality on respiratory health: a cross-sectional study. Environ Health. 2012;11:33. doi: 10.1186/1476-069X-11-33.

[28] Barnard and Zhang (2016).

[29] Ricketts, E. (2015). Understanding the Benefits of Stable Housing Tenure and Quality Housing. New Zealand Treasury

[30] Keall et al (2012).

Better health outcomes (community effects): Reduced health costs as a result of a reduction in the prevalence of diabetes	A more cohesive community with a greater income spread generates community effects. Community effects can result in better health outcomes for residents within the community. Studies have highlighted that movement from a high poverty to a low poverty neighbourhood can reduce incidences of diabetes for residents, by 3 to 6%[31] [32]. **CBAx Assumptions:** The modelling assumes a gain from avoided diabetes, with a success rate of 3% based on research mentioned previously. This is applied to the whole community cohort.
Better health outcomes (community effects): Reduced health costs as a result of a reduction in cardiovascular disease	Research has indicated that investment in cycle ways increases the proportion of individuals that cycle as a means of transport[33]. Active transport and increased cycling by an individual, has also been linked to a 46% reduction in the risk of cardiovascular disease compared to individuals that do not cycle[34]. **CBAx Assumptions:** It is assumed that the investment in cycle ways as a part of the Eastern Porirua regeneration programmes key moves will result in an increased number of individuals cycling. The Wellington wide incidence of cycling is 1.5%. The modelling assumes the new cycle ways will increase an individual's propensity to cycle from 0%, to the Wellington average of 1.5%. This will reduce the health costs associated with cardiovascular disease for those individuals. The CBAx input that is applied is the Marginal Value of avoided cardiovascular disease and the success rate is the percentage reduction in cardiovascular disease risk multiplied by the 1.5% increase in cyclers. This is applied to the adult segment of the community cohort.
Improved economic effects (Community effects): Increased tax revenue because of improved education outcomes	Research has indicated that moving to a better quality neighbourhood can result in better education outcomes for the individuals. One study found that Bachelor of Arts attainment increased by 4% following a move to a better quality community[35]. **CBAx Assumptions:** It is assumed that this improved attainment of a tertiary qualification will increase the income of the effected individuals which will in turn result in increased tax revenue. The impact is an increase in Income Tax and ACC levy, gained from the marginal value of moving from NCEA level three to tertiary. The success rate is 4% and it is applied to the segment of the population that is between 16 and 64 (48%). A time lag of 4 years is applied to the cohort to account for the time it takes to obtain the qualification.
Improved economic effects (Community effects): Increased tax revenue	Research has indicated that moving to a better quality neighbourhood can result in better education outcomes and higher income for individuals that move before the age of 13. Incomes were on average 31% higher for those individuals who moved before the age of 13, compared to

[31] Sanbonmatsu, L., Katz, L. F., Ludwig, J., Gennetian, L. A., Duncan, G. J., Kessler, R. C., ... & Lindau, S. T. (2011). Moving to opportunity for fair housing demonstration program: Final impacts evaluation.

[32] Ludwig, J., Sanbonmatsu, L., Gennetian, L., Adam, E., Duncan, G. J., Katz, L. F., ... & McDade, T. W. (2011). Neighborhoods, obesity, and diabetes—a randomized social experiment. New England journal of medicine, 365(16), 1509-1519.

[33] New Zealand Transport Agency. (2016). Benefits of investing in cycling in New Zealand communities. Retrieved from https://www.nzta.govt.nz/

[34] Celis-Morales, C. A., Lyall, D. M., Welsh, P., Anderson, J., Steell, L., Guo, Y., ... & Gill, J. M. (2017). Association between active commuting and incident cardiovascular disease, cancer, and mortality: prospective cohort study. bmj, 357, j1456

[35] Aliprantis, D., & Richter, F. G. C. (2016). Evidence of neighborhood effects from Moving to Opportunity: LATEs of neighborhood quality. FRB of Cleveland WP.

because of improved income trajectories for children.	those that did not move[36]. This increased income will result in government receiving increased tax revenue. **CBAx Assumptions:** The impact is an increase in income tax and ACC levy for minimum wage and the impact rate has a 31% success rate. This effect is applied to 41% of the cohort, which includes the children and infant segments. A lag of 10 years is applied to this impact to account for the time it takes for the individuals to start working.
Enhanced justice outcomes (community effects): Reduced crime costs as a result of a reduction in crime	Moving to a more cohesive and better quality community has also been linked to a reduction in violent crime. Research by identified that that moving to a better community reduced lifetime arrests for violent crime by 15%[37]. **CBAx Assumptions:** This reduction in violent crime will reduce the public portion of costs associated with violent offences. This is applied in the CBAx with a success rate of 15%. This impact is applied to the segment of the population that are offenders (2.6%).

Private Monetized Benefits:	
Benefits	**Research and Assumptions**
Reduced overcrowding/ underutilisation: Improved educational outcomes for children due to improved physical and mental health	Studies have identified that children who experience anxiety or depression are more likely to have lower educational attainment and leave school early[38]. An American study identified that children with behavioural disorders were 3.4% less likely to complete school[39]. Overcrowding is one risk factor that can be detrimental to a child's development. Research indicates that removing a risk factor, in this case overcrowding, can reduce the risk of a child exhibiting diagnosed mental health disorders by 15%[40]. **CBAx Assumptions:** The assumption based on research is that children that no longer experience crowding in their households will have better health and in turn are more likely to complete secondary school and obtain NCEA level 3. The success rate is assumed to be the percentage improvement in mental health multiplied by the increased likelihood of children completing school. This impact is applied to the cohort of school-aged children who are exposed to overcrowding (3%).
Reduced overcrowding/und erutilisation: A	Household crowding is one factor that can cause stress within a household[41 42]. It is also a factor that can increase the risk of a child being neglected or maltreated[43]. A reduction in overcrowding and stress in a household will reduce the incidence and cost of child maltreatment for the private sector.

[36] Chetty, R., Hendren, N., & Katz, L. F. (2016). The effects of exposure to better neighborhoods on children: New evidence from the moving to opportunity experiment. American Economic Review, 106(4), 855-902.

[37] Kling, J. R., Ludwig, J., & Katz, L. F. (2004). Neighborhood Effects on Crime for Female and Male Youth: Evidence from a randomized housing voucher experiment (No. w10777). National Bureau of Economic Research.

[38] Suhrcke and de Paz Nieves (2011).

[39] Sagatun et al (2014).

[40] Gerwitz and Edleson (2007).

[41] Solari and Mare (2012).

[42] Glasgow and Fanslow (2006)

[43] Child Matters. (2018). Risk Factors of Child Abuse. Retrieved from http://www.childmatters.org.nz/

reduction in child maltreatment	
Better quality public housing stock: Improved educational outcomes for children due to improved mental health	Improvements in public housing stock are linked to improved mental health outcomes. One study found that residents reported 7% less mental health issues after they moved into a newly renovated home[44]. This can have a positive flow on effect to their education, as children that have behavioural disorders are 3.4% less likely to complete schooling. It is assumed that a reduction in mental health issues due to moving into a renovated house will improve educational attainment and increase school completion. **CBAx Assumptions:** A student completing NCEA Level 3 rather than a lower level qualification is assumed to earn a higher level of income. The success rate for this impact is the reduced incidence of mental health issues multiplied by the improved school completion rate (1%). This is applied to the children in the public housing (12%). A lag of 6 years is applied as this is the average time take for the children to complete school and obtain a job.
Better quality public housing stock: Improved economic outcomes with less work days missed due to improved mental health	Improved public housing quality will help to improve mental health outcomes for adults and children. One study found that residents reported 7% less mental health issues after they moved into a newly renovated home[45]. Another study shows that an individual with depression can be 8% less productive at work[46]. **CBAx Assumptions:** It is assumed in the CBAx that an improvement in productivity and less work days missed will have a positive private effect on the individual's income. The success rate is the reduction in mental health percentage multiplied by the improvement in productivity associated with reduced incidence of depression. This impact is applied to the public housing segment of the population that is of working age (Between 16 and 64).
Better quality public housing stock: A reduction in energy costs	It is assumed that improving the quality of the public housing stock will make the public housing warmer and more energy efficient. This will in turn result in a reduction in the energy usage by tenants and result in reduced energy costs. **CBAx Assumptions:** Research by Preval et al.[47], identified that energy savings from an improved heating intervention were $15.02 per household. This value is adjusted for inflation in the CBAx and is applied to public housing households (not applied to individuals).
Better housing choices: Increased income due to increased employment opportunities in the construction industry.	It is assumed that the construction of new houses will increase employment in the construction industry. It is also assumed that a proportion of the new employment opportunities will be allocated to local Eastern Porirua residents in the construction contract. This will provide additional income for some moving from a benefit to skilled employment and for others moving from unqualified employment to trade-qualified employment.

[44] Keall et al. (2012).

[45] Keall et al. (2012).

[46] Lerner, D., & Henke, R. M. (2008). What does research tell us about depression, job performance, and work productivity?. Journal of Occupational and Environmental Medicine, 50(4), 401-410

[47] Preval, N., Chapman, R., Pierse, N., & Howden-Chapman, P. (2010). Evaluating energy, health and carbon co-benefits from improved domestic space heating: A randomised community trial. Energy Policy, 38(8), 3965-3972.

	CBAx Assumptions: Based on the 2016 PwC report, there will be an additional 0.128FTE per $1,000 of construction spending[48]. It is assumed that 5% of these new employees will be from the Eastern Porirua community and that 3 percentage points of these are those moving from an NCEA level 3 qualified job to a trade-qualified job. The remaining 2 percentage points will moving from the Jobseeker support benefit to a trade-qualified job. The hiring of new FTE's is assumed to be spread out over the first 5 years of the project, as they will not all be required at the start of the project. The benefit for the private sector is 25% of the marginal value of moving from NCEA level 3 to a trade and from moving from the Jobseeker Support benefit to a trade. This impact is applied to 100% of the cohort specified above with a success rate of 100%..
Better health outcomes (community effects): Increased employment and productivity from reducing incidences of depression	Living in a disadvantaged community has been linked to an increased risk of depression. A Moving to Opportunity study found that moving to lower poverty neighbourhoods was associated with a decrease in depression by 3%[49]. Depression has been found to reduce on-the-job productivity, with workers suffering from depression having 8% less productivity than those workers without depression[50]. **CBAx Assumptions:** It is assumed that the community effects will help to reduce incidence of depression and in turn improve employment and productivity. This assumption is applied to a minimum wage impact, with a success rate equal to the reduction in depression (3%) multiplied by the improvement in productivity (8%). This impact is applied to the adult segment of the community cohort (45%).
Improved economic effects (community effects): Increased private income because of there being improved education outcomes for residents.	Research has indicated that moving from a better quality neighbourhood can result in better education outcomes for the individuals. One study found that BA attainment increased by 4% following a move to a better quality community. **CBAx Assumptions:** It is assumed that this improved attainment of a tertiary qualification will increase the income of the individuals. The success rate for this impact is 4% and is applied to the segment of the population from 16 years of age to 64 years of age (48%). A time lag of 4 years is applied to account for the time it takes to obtain a qualification.
Improved economic effects (community effects): Increased private income because of there being improved income trajectories for residents.	Research has indicated that moving from a better quality neighbourhood can result in better education outcomes and higher incomes for individuals that move before the age of 13. Incomes were on average 31% higher for those individuals who moved before the age of 13, compared to those that did not move. **CBAx Assumptions:** The increased income is applied to the CBAx value, which is 25% of Minimum Wage annualised after tax impact with a 31% success rate. This effect is applied to 41% of the cohort, which includes the children and infant segments. A lag of 10 years is applied to this impact to account for the time it takes for the individuals to start working.
Enhanced justice outcomes (community	Moving to a more cohesive and better quality community has also been linked to a reduction in violent crime. Research by identified that that moving to a better community reduced lifetime

[48] PwC. (2016, September). Valuing the role of construction in the New Zealand economy. Retrieved from https://infrastructure.org.nz/resources/Documents/Reports/CSG PwC Value of Construction Sector_final report_2016_10_16.pdf

[49] Baker et al (2011).

[50] Chetty et al (2016).

effects): Reduced private crime costs as a result of a reduction in crime	arrests for violent crime by 15%[51]. Another study also found that improvements in neighbourhood quality were associated with reductions in reported crime. Across 2 redeveloped areas, the reduction in reported crime was 25%[52]. **CBAx Assumptions:** This reduction in violent crime will reduce the private portion of costs associated with violent offences. This is applied in the CBAx with a success rate of 15%. This impact is applied to the segment of the population that are offenders (2.6%). In addition to this, it is assumed there is an impact of a reduction in other reported crime. This effect is assigned to the Theft CBAx impact and the success rate is 2.5% (25% over 10 years) multiplied by the proportion of offenders recorded. This is applied to the whole Eastern Porirua cohort.

Private Wellbeing Benefits/(Costs)	
Benefits	**Research and Assumptions**
	All wellbeing dollar value benefits outlined below are based on wellbeing measures from Davies (2018)[53]. This research measured the impact on wellbeing of different situations for public housing tenants. This included changes in physical and mental health and housing quality. The research cohort only included those over the age of 15 and therefore we have only applied the benefits to those over 15. All wellbeing values have been adjusted to 2018 dollars.
Reduced overcrowding/underutilisation: Positive welfare impact as a result of improved physical health	The improvement in physical health gained from a reduction in overcrowding also has a wellbeing impact. **CBAx Assumptions:** It is assumed that there will be a one-point improvement in physical health for the cohort benefiting from reduced overcrowding. This one point improvement is equal to a wellbeing benefit of $1077 per person, based on the wellbeing framework. The success rate is 100% and the wellbeing impact is applied to the individuals in the cohort who are currently living in overcrowded public housing and are over the age of 15. This is in accordance with the wellbeing frameworks application specifications.
Reduced overcrowding/underutilisation: Positive welfare impact as a result of improved in mental health	The improvement in mental health gained from a reduction in overcrowding also has a wellbeing impact. **CBAx Assumptions:** It is assumed that there will be a one-point improvement in mental health for each individual that benefits from reduced overcrowding. This one point improvement is equal to a wellbeing benefit of $4284 per person, based on the wellbeing framework. The success rate is 100% and the wellbeing impact is applied to the individuals who are currently living in overcrowded public housing and are over the age of 15. This is in accordance with the wellbeing frameworks application specifications.

[51] Kling, J. R., Ludwig, J., & Katz, L. F. (2004). Neighborhood Effects on Crime for Female and Male Youth: Evidence from a randomized housing voucher experiment (No. w10777). National Bureau of Economic Research.

[52] Chaskin, R. J., & Joseph, M. L. (2013). 'Positive'Gentrification, Social Control and the 'Right to the City'in Mixed-Income Communities: Uses and Expectations of Space and Place. International Journal of Urban and Regional Research, 37(2), 480-502.

[53] Davies, C. (2018). Wellbeing Valuation of Public housing Provision by Housing New Zealand.

Better quality public housing stock: Positive welfare impact as a result of improved physical health	The improvement in physical health gained from an improvement in the quality of public housing also has a wellbeing impact. **CBAx Assumptions:** It is assumed that there will be a one-point improvement in physical health for the cohort benefiting from improved quality of housing. This one point improvement is equal to a wellbeing benefit of $1077 per person, based on the wellbeing framework. The success rate is 100% and the wellbeing impact is applied to the segment of the public housing cohort that is above 15 years of age. This is in accordance with the wellbeing frameworks application specifications.
Better quality public housing stock: Positive welfare impact as a result of improved mental health	The improvement in mental health gained from an improvement in the quality of public housing also has a wellbeing impact. **CBAx Assumptions:** It is assumed that there will be a one-point improvement in mental health for each individual that benefits from improved quality of housing. This one point improvement is equal to a wellbeing benefit of $4284 per person, based on the wellbeing framework. The success rate is 100% and the wellbeing impact is applied to the segment of the public housing cohort that is above 15 years of age. This is in accordance with the wellbeing frameworks application specifications.
Better quality public housing stock: Positive welfare impact as a result of improving housing condition and reducing cold	The new public housing stock has a number of quality improvements including improvements to reduce cold. **CBAx Assumptions:** It is assumed that the new housing stock will have a one-point improvement in housing quality, which has a direct wellbeing effect of $5624 per person. In addition to this, it is assumed that there will be a reduction in cold for the new housing; this has a wellbeing impact of $6247 per person. These wellbeing impacts are applied to the segment of the public housing cohort that are above the age of 15 This is in accordance with the wellbeing frameworks application specifications.
Better health outcomes (community effects): Positive welfare impact from improved physical health	A more cohesive community with a greater income spread generates community effects. Community effects can result in better health outcomes for residents within the community. Studies have highlighted that movement from a high poverty to a low poverty neighbourhood can reduce incidences of extreme poverty and diabetes for residents, by 3 to 6%[54] [55]. **CBAx Assumptions:** It is assumed that there will be a one-point improvement in physical health due to community effects. This one point improvement is equal to a wellbeing benefit of $1077 per person, based on the wellbeing framework. The success rate is 100% and the wellbeing impact is applied to the segment of the cohort in Eastern Porirua that are over the age of 15. This is in accordance with the wellbeing frameworks application specifications.
Better health outcomes (community effects): Positive	Living in a disadvantaged community has been linked to an increased risk of mental health problems. A Moving to Opportunity study found that moving to lower poverty neighbourhoods was associated with a decrease in depression by 3%[56].

[54] Baker et al (2011).

[55] Solari and Mare (2012).

[56] Baker et al (2011).

welfare impact from improved mental health	**CBAx Assumptions:** It is assumed that there will be a one-point improvement in mental health due to community effects. This one point improvement is equal to a wellbeing benefit of $4284 per person, based on the wellbeing framework. The success rate is 3% and is applied to the segment of the cohort in Eastern Porirua that are over the age of 15. This is in accordance with the wellbeing frameworks application specification.
Enhanced justice outcomes (community effects): Positive welfare impact for every victim of crime avoided	Moving to a more cohesive and better quality community has also been linked to a reduction in crime. A study found that across 2 redeveloped areas, the reduction in reported crime was 25% on average over 10 years. A reduction in crime will result in their being less victims of crime in the Eastern Porirua community which will provide wellbeing effects. **CBAx Assumptions:** It is assumed that there will be less victims of crime and being a victim of crime has a wellbeing value of $7970. The success rate for this impact is the reduction in crime (2.5%) multiplied by the proportion of people that have been a victim of crime (5.5%). This impact is assigned to the segment of the cohort in Eastern Porirua that are over the age of 15.
Improved wellbeing (community effects): Positive welfare impact for due to residents having more contact with neighbours.	Research indicates that investment in improving social hubs, green spaces and community facilities within a community help to improve social cohesion and connectedness amongst residents[57] [58]. The key moves that are going to occur during the regeneration of Eastern Porirua will improve community facilities, which will in turn improve social cohesion and increase interactions amongst residents. **CBAx Assumptions:** A one-point improvement in the amount of contact someone has with their neighbour has a wellbeing value of $3578. It is assumed that the improved community facilities will generate a one point increase in the contact an individual has with neighbours. This impact is assigned to the segment of the cohort in Eastern Porirua that are over the age of 15.

[57] Local Government New South Wales. (2016). Final Report Literature Review into the Benefits of Investment in Human and Cultural Infrastructure and Services. Retrieved from https://www.lgnsw.org.au/

[58] Teriman, S., Yigitcanlar, T., & Mayere, S. (2011). Social infrastructure planning and sustainable community: example from south east Queensland, Australia. In Proceedings of the Business and Social Science Research Conference 2011 (pp. 1-12). World Business Institute Australia.

Appendix 4: Assumptions used in developing the financial case

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Key drivers of financial performance

Table 36 sets out the key drivers of financial performance, their potential impact on the funding requirement and the main factors which will influence each of them.

Table 36: Key drivers of financial performance

Key driver of financial performance	Impact on funding requirement	Factors which influence the driver
Private land sale value achieved	• Lower than anticipated private land sale value will increase the total funding requirement	• Starting land value • Standard of master development • Housing market conditions at time of sale • Affordable/KiwiBuild stipulations
Cost of land remediation and civil/infrastructure works	• Higher than anticipated land remediation and infrastructure works costs will increase the total funding requirement	• Existing state of the land and infrastructure, particularly underground • General cost inflation • Ability of HLC to commission/deliver the work efficiently • Ability of HLC to work with other parties e.g. PCC, NZTA
Lag between decant of old public houses and tenanting of new public houses	• Longer than anticipated period between decant of old houses and tenanting of new houses will increase the funding requirement	• Level of in ground land remediation required (unknown until after old houses have been decanted) • Time taken to complete civil/infrastructure works
Pace of development	• Slower than anticipated pace of development may increase the funding requirement	• Infrastructure constraints • Rehousing • Housing market conditions
Public house purchase price	• Higher than anticipated cost of build for public houses will increase the total funding requirement	• Specification of public houses • Size of public houses • Construction cost inflation
Rental income received from MSD on new public houses	• Lower than anticipated Market Rent will increase the funding requirement	• Starting position for Market Rent • Escalation assumptions for Market Rent • Performance/availability regime attached to rental stream
Structure and cost of financing	• Higher than anticipated cost of financing will increase the funding requirement	• Base interest rates • Current cost of borrowing for HNZ and HLC. • Extent to which their general cost of borrowing is influenced by borrowing on this project

Key sources of risk and variability

Table 37 sets out the key sources of risk and variability for the master developer and public house owner and potential ways to mitigate them.

Table 37: Key sources of risk and variability

Key risk / source of variability	Description	Potential risk mitigation
Housing market	• A housing market downturn could impact the funding requirement by delaying the pace of the redevelopment and/or the value received from development/build partners for private land	• Ability to flex the level of public and affordable housing upwards for neighbourhoods during market downturn in order to continue pace of building
In-ground remediation costs	• As minimal redevelopment has been carried out in Eastern Porirua, little is known about the level of in-ground remediation that will be required • There is no way of knowing what the cost of in-ground remediation is until old houses have been decanted and demolished	• Build in a master developer margin to account for such risks • Build up a database of information based on experience of early mega-lots to inform pricing going forward and best ways of solving in-ground issues
Construction cost inflation	• Given the length and size of the programme HLC and HNZ will be exposed to substantial risk of construction cost inflation – HLC for land development costs and HNZ for new public house purchase costs	• Given that the c. 2000 public houses will sit within HNZ's wider portfolio it should be able to manage this risk relatively effectively • Market rent should also start to reflect a degree of any sustained increase in construction costs
Interest rate	• If HLC and HNZ leverage their balance sheets they will be exposed to the risk of movements in interest rates, potentially increasing its financing costs and leaving them without sufficient cash flow to service their debt	• Given that the c. 2000 public houses will sit within HNZ's wider portfolio it should be able to manage this risk relatively effectively • Market rent should also start to reflect any sustained increase in interest rates

Appendix 5: Benefits realisation framework

Total benefits of the preferred option

Investment Objective 1: Better housing choices

Intervention logic and benefits by wellbeing outcome domain	Inputs	Outputs	Outcomes	Benefits to Government $NPV over 50 years	Benefits to Economy $NPV over 50 years	Benefits to wellbeing $NPV over 50 years
Subjective Wellbeing Housing Ukaipotanga – Cultural identity Social connections Income and consumption Jobs Leisure Health Knowledge and skills Safety and security Environment Civic engagement and governance	Redeveloped affordable housing Redeveloped market housing	Social procurement Increased density Additional housing supply and construction	**Total impact**	6% discount: $64.6m 3% discount: $95.7m	6% discount: $68.9m 3% discount: $102.1m	6% discount: - 3% discount: -
			Jobs and training • Recruitment and training of people in Eastern Porirua in the construction sector (5% of FTEs required based on construction spend) • Reduced jobseeker benefit	6% discount: $64.6m 3% discount: $95.7m	6% discount: $68.9m 3% discount: $102.1m	6% discount: - 3% discount: -
			Increased housing supply • Reduces market pressure in an area of increasing shortage	Qualitatively considered		
			Improved housing stability • Enables people to be more connected to the communities in which they live	Qualitatively considered		

Investment Objective 2: Public housing is built for the needs of people now and in the future

Inputs	Outputs	Outcomes	Benefits to Government $NPV over 50 years	Benefits to Economy $NPV over 50 years	Benefits to wellbeing $NPV over 50 years
Intervention logic and benefits by wellbeing outcome domain Subjective Wellbeing Housing Ukaipotanga – Cultural identity Social connections Income and consumption Jobs Leisure Health Knowledge and skills Safety and security Environment Civic engagement and governance	Renewed public housing stock that matches tenant demand through: • Cosmetic improvements • Capital improvements • Strategic reconfiguration	Reduced overcrowding and underutilisation Warmer and drier public housing Operational benefits	**Total impact**	**6% discount: $27.7m** **3% discount: $51.1m**	**6% discount: $3.9m** **3% discount: $7.2m**	**6% discount: $334.9m** **3% discount: $617.7m**
		Mental health • Fewer specialist visits from improved mental health • Better employment outcomes and a more productive workforce from reduced feeling of depression	6% discount: $0.6m	6% discount: $3.6m	6% discount: $152.4m
		Subjective wellbeing • Subjective value gained from better mental health with better housing	3% discount: $1.1m	3% discount: $6.6m	3% discount: $281.1m
		Physical health • Fewer hospitalisations from infectious diseases due to overcrowding • Fewer incidences of respiratory illness from damp or overcrowded homes	6% discount: $16.2m	6% discount: -	6% discount: $182.5m
		Subjective wellbeing • Subjective value gained from living in a warmer home and feeling more healthy	3% discount: $29.8m	3% discount: -	3% discount: $336.6m
		Education • Improved school attendance from better health outcomes • Improved performance at school with less disruption in the home environment	6% discount: $0.004m 3% discount: $0.01m	6% discount: $0.02m 3% discount: $0.04m	6% discount: - 3% discount: -
		Cost savings • Decreased IRRS use through improved matching of public housing to tenant needs • Reduced electricity costs from more energy efficient homes	6% discount: $11m 3% discount: $20.2m	6% discount: $0.3m 3% discount: $0.6m	6% discount: - 3% discount: -
		Optimised housing portfolio • Reduces the exacerbation of social issues and makes tenancies easier to manage	Qualitatively considered		

Investment Objectives 3&4: Prosperous and resilient community and Eastern Porirua is a great place to live

Inputs	Outputs	Outcomes	Benefits to Government $NPV over 50 years	Benefits to Economy $NPV over 50 years	Benefits to wellbeing $NPV over 50 years
Intervention logic and benefits by wellbeing outcome domain Subjective Wellbeing Housing Ukaipotanga – Cultural identity Social connections Income and consumption Jobs Leisure Health Knowledge and skills Safety and security Environment Civic engagement and governar	Enhancement of the area through • Roads, amenity • Key moves/enablers • Schooling • Social services • Social cohesion Reduced concentration of public housing	Enhanced amenity results in • More positive interactions • Greater use of facilities and satisfaction • More pride associated with living in area • Improved attractiveness for private investment More owner-occupiers in the area Families have improved opportunities to build networks Community becomes more mixed income while minimising displacement of existing residents	**Total impact**	**6% discount: $7.6m** **3% discount: $18.9m**	**6% discount: $17.8m** **3% discount: $47.4m**	**6% discount: $52.1m** **3% discount: $119.1m**
		Mental health • Improved productivity from reduced feeling of depression	6% discount: -	6% discount: $1.9m	6% discount: $51.6m
		Subjective wellbeing • Subjective value gained from improved mental health and better connection with neighbours	3% discount: -	3% discount: $4.4m	3% discount: $117.9m
		Physical health • Being more active via walk and cycle ways improves fitness reduces diabetes and cardiovascular disease risk	6% discount: $3.9m	6% discount: -	6% discount: $0.4m
		Subjective wellbeing • Subjective value gained from improved physical health	3% discount: $9.0m	3% discount: -	3% discount: $1.0m
		Education • Better school attendance and progression to higher education	6% discount: $2.8m	6% discount: $12.7m	6% discount: -
			3% discount: $7.7m	**3% discount: $35.7m**	**3% discount: -**
		Safety • Reduced incidence of crime	6% discount: $0.9m	6% discount: $3.2m	6% discount: $0.1m
		Subjective wellbeing • Subjective value gained from feeling safer	3% discount: $2.2m	3% discount: $7.3m	3% discount: $0.2m
		Community resilience • From more effective services and better social interactions	Qualitatively considered		
		Economic sustainability • More mixed-income community enables greater level of infrastructure to be supported	Qualitatively considered		
		Environmental sustainability • Improved environmental outcomes from more efficient houses and better urban form	Qualitatively considered		

Metrics for tracking benefits realisation from the preferred option

Investment Objective 1: Better housing choices

Metrics for tracking benefits realisation from better housing choices	Tier 3: Input measures Easily measured, directly attributable, further from outcome sought	Tier 2: Output measures Intermediary measures	Tier 1: Outcome measures Hard to attribute, closest to outcome sought
Sources of measurement metrics: 1. Master Developer operational data 2. StatisticsNZ 3. PCC National Policy Statement for Urban Development Quarterly Report 4. Census 5. PCC Residents Satisfaction Survey 6. MBIE construction data	**Redeveloped affordable housing/Redeveloped market housing** Number of new houses broken down by typology and price[1]	**Social procurement** #of local people employed[1] #of local people in training[1] **Density** Development yield achieved[1] **Additional housing supply and construction** Number of new builds in total Porirua/Greater Wellington areas[2]	**Housing affordability** Housing affordability index[3] Rental affordability index[3] **Housing stability** Average length of tenure by tenure type[4] **More efficient service and infrastructure provision** Satisfaction with overall services and facilities[5] Satisfaction with image and reputation[5] Satisfaction with value for money[5] **Economic activity** Regional investment in construction[6]

Investment Objective 2: Public housing is built for the needs of people now and in the future

Metrics for tracking benefits realisation from improved public housing	Tier 3: Input measures Easily measured, directly attributable, further from outcome sought	Tier 2: Output measures Intermediary measures	Tier 1: Outcome measures Hard to attribute, closest to outcome sought
Sources of measurement metrics: 1. HNZ operational data 2. IDI Dashboard 3. PCC Quality of Life Survey 4. HNZ Tenant Satisfaction Survey 5. MSD Public Housing analytics	**Renewed public housing stock** # or % of public houses that are new or retrofitted[1]	**Reduced overcrowding/underutilisation** % Overcrowding[1] % Underutilised[1] # of required bedrooms vs number of actual bedrooms[1] **Warmer and drier public housing** Heating system keeps home warm when used[3] Home has a problem with damp or mould[3] Can afford to heat home properly[3] **Operational benefits** Number of declines[1] Occupancy rate[1] # or % of HNZ tenants satisfied with their home[4]	**Subjective wellbeing** Self-reported wellbeing[3] **Mental health** had at least one MH event[2] **Physical health** Spent at least one day in hospital[2] **Education** Educational attainment[2] Recorded days off school[1] Transience[2] **Safety** # of incidents youth justice/child protection services have been notified[2] # of incidents youth justice/child protection services involved/acted on[2] **Cost savings** Total IRRS cost of mismatch[5] Household residual income[5]

Investment Objectives 3&4: Prosperous and resilient community and Eastern Porirua is a great place to live

Metrics for tracking benefits realisation from Prosperous and resilient communities Eastern Porirua is a great place to live	Tier 3: Input measures Easily measured, directly attributable, further from outcome sought	Tier 2: Output measures Intermediary measures	Tier 1: Outcome measures Hard to attribute, closest to outcome sought
Sources of measurement metrics: 1. Master Developer operational data 2. PCC Quality of Life Survey 3. PCC Residents Satisfaction Survey 4. IDI Dashboard 5. Census	**Delivery of infrastructure** Greenways[1] [3] Cannons Creek Community Hub[1] Relocated/reconfigured schools[1] Pedestrian/cycle bridge to city centre[1] Concentration % of public housing by neighbourhood[1]	**More positive interactions** Participation in social networks and groups[2] Sense of community experienced[2] **More pride associated with living in area** Use of community facilities and satisfaction[1] Self-reported pride in look and feel of the area[1] **More owner-occupiers in the area** Tenure type and proportion[5] **Community becomes more mixed income while minimising displacement of existing residents** In/out migration[5] Perceived impact of cultural diversity on the city[2] **Perceived safety is improved** Perception about crime and safety issues as a problem[2] Feel safe walking alone at night[2]	**Subjective wellbeing** Overall quality of life rating[3] Life satisfaction[2] Loneliness[3] **Mental health** had at least one MH event[4] **Physical health** Overall health[2] Frequency of doing physical activity[2] Prescribed diabetes medicines or diagnosed in hospital[4] Latest cohort classified as obese in before school check[4] **Education** Population of young people not in employment, education or training[4] **Safety** Victim of crime reported and recorded in Police data[4] Offender as recorded in Police data[4] **Economic effects** Private investment in area # of businesses (new)

Appendix 6: Draft communications and engagement plan

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