

**BEFORE THE GREATER WELLINGTON REGIONAL COUNCIL AND HUTT
CITY COUNCIL
EASTERN BAYS SHARED PATH PROJECT**

Under the Resource Management Act 1991

In the matter of applications for resource consents by Hutt
City Council under section 88 of the Act, to
carry out the Eastern Bays Shared Path Project

**STATEMENT OF EVIDENCE OF MICHAEL CAMPBELL COPELAND
(ECONOMICS) ON BEHALF OF THE APPLICANT**

30 November 2020

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QUALIFICATIONS AND EXPERIENCE

1. My name is **Michael Campbell Copeland**.
2. I am a consulting economist and managing director of Brown, Copeland and Company Limited, a firm of consulting economists which has undertaken a wide range of studies for public and private sector clients in New Zealand and overseas.
3. My evidence is given on behalf of Hutt City Council ("**HCC**") in relation to its applications under section 88 of the Resource Management Act 1991 ("**RMA**") for resource consents for the proposed Eastern Bays Shared Path Project (the "**Project**").
4. I have the following qualifications and experience relevant to the evidence I shall give:
 - (a) I hold a Bachelor of Science degree in mathematics and a Master of Commerce degree in economics from the University of Canterbury;
 - (b) I have over 45 years' experience in the application of economics to various areas of business, including transport economics and resource management matters. A summary of my curriculum vitae is attached as **Appendix A**;
 - (c) prior to establishing Brown, Copeland and Company Limited in 1982, I spent six years at the New Zealand Institute of Economic Research and three years at the Confederation of British Industry;
 - (d) during the period of 1990 to 1994, I was a member of the Commerce Commission;
 - (e) during the period of 2002 to 2008, I was a lay member of the High Court under the Commerce Act; and
 - (f) I have been engaged in a number of areas of road transport and urban infrastructure economics and my curriculum vitae contains details of some of the assignments relating to these topics I have undertaken. With respect to the RMA, I have prepared evidence for clients covering a number of projects and policies. A selection of these is listed at the end of my curriculum vitae in **Appendix A**.
5. I confirm that I have read the 'Code of Conduct' for expert witnesses contained in the Environment Court Practice Note 2014. My evidence has been prepared in compliance with that Code. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

BACKGROUND AND ROLE

6. I am familiar with the area that the Project covers, and the local roading network in the vicinity of the Project.
7. In preparing my evidence I have reviewed:
 - (a) Wellington Regional Trails for the Future: A strategic framework for trails in the Wellington Region; Tourism Resource Consultants; September, 2017;
 - (b) Detailed Business Case Eastern Bays Shared Path ("**DBC**"); Stantec; October, 2017 (as well as the updated DBC economic analysis prepared in 2019 to form part of the *Transport Assessment* for the resource consent application documents. References in this evidence to the DBC economic analysis are to the updated DBC economic analysis that was relied on and referred to in the resource consent application documents);
 - (c) Eastern Bays Shared Path Resource Consent Applications and Assessment of Effects on the Environment ("**AEE**"); Stantec; April, 2019;
 - (d) the following reports appended to the AEE:
 - (i) Appendix K: Eastern Bays Shared Path *Recreation Assessment*; Rob Greenaway & Associates; January, 2019; and
 - (ii) Appendix L: Eastern Bays Shared Path *Transport Assessment*; Stantec; February, 2019; and
 - (e) the draft evidence of:
 - (i) **Robert Greenaway** (recreation effects);
 - (ii) **Jamie Povall** (transport and safety effects and project design);
 - (iii) **Ihakara Puketapu-Dentice** (strategic overview and engagement); and
 - (iv) **Michael Allis** (coastal processes).

SCOPE OF EVIDENCE

8. My evidence addresses the following matters:
 - (a) an overview of the Project, including its context;
 - (b) the RMA context for my economics evidence;
 - (c) the Project's effects on economic activity during its construction;

- (d) the Project's economic benefits during its operation;
- (e) a response to submissions; and
- (f) a response to the Greater Wellington Regional Council's ("**GWRC**") and HCC section 42A reports.

EXECUTIVE SUMMARY

9. The economic well-being of people and communities and the efficient use of resources are relevant considerations under the RMA. The Project will enable people and communities to provide for their economic well-being and represents an efficient use of resources.
10. The Project is estimated to cost \$30 million. Of this, \$15 million (50%) will be covered by an allocation from the Crown Shovel Ready Projects allocations and the remainder (\$15 million) will be split between Waka Kotahi NZ Transport Agency ("**Waka Kotahi**") (approximately 50% or \$7.5 million) and HCC (approximately 50% or \$7.5 million).
11. During the construction of the Project, there will be increased expenditure, employment and incomes, with associated economic benefits, for businesses and residents of Hutt City and the Wellington Region. Over the anticipated 3.5-year Project construction period for Hutt City there will be an estimated 20 additional jobs, \$1.5 million per annum additional wages and salaries and \$8.6 million per annum additional expenditure with local businesses. For the Wellington Region (including Hutt City) there will be an estimated 27 additional jobs, \$2 million per annum additional wages and salaries and \$15.2 million per annum additional expenditure with local businesses.
12. Once operational, the Project will also contribute economic benefits to businesses and residents of Hutt City and the Wellington Region, as a consequence of:
 - (a) savings in travel time costs and accident costs from safer and more efficient commuting, recreational opportunities for pedestrians and cyclists, and improved connectivity for local residents;
 - (b) health improvements from increased walking and cycling;
 - (c) greater resilience for Marine Drive and the lifeline utilities within the road corridor including the Main Outfall Sewer Pipeline ("**MOP**"), which conveys secondary treated wastewater from the Seaview Wastewater Treatment Plant to the outfall at Bluff Point near Pencarrow Head, water supply, stormwater, electricity, gas and telecommunications services. If the Project does not proceed upgrading and renewal works of the existing seawall would need to be undertaken at an estimated cost to HCC of \$15.7 million, to protect the road and services located within the road corridor;

- (d) climate change resilience benefits;
 - (e) tourism economic benefits for Hutt City and the Wellington Region as a result of the Project's part in helping to establish the Wellington Region as a recreational cycling destination; and
 - (f) potential travel benefits for residents from the knowledge that walking and cycling trips can be undertaken more safely and efficiently and that the road is more resilient and less prone to closure when emergency travel is required (even where they may not choose, or need, to undertake such trips). Potential travel benefits mean that there is a willingness to pay for improved access, even if it is not used. Residents benefit from feeling less isolated and from the knowledge that they have a broader range of recreational activities or commuting options available to them.
13. The economic analysis prepared for the AEE estimated a benefit cost ratio ("**BCR**") for the Project of 1.3¹ – ie the quantified benefits are 1.3 times the quantified costs. However, this quantitative economic analysis excluded a number of significant economic benefits and, in addition, 75% of the Project's estimated total capital cost will be funded by central government. Therefore, from a narrower Hutt City or Wellington Region perspective the Project's BCR is much higher, and the Project represents an efficient use of resources and provides for the economic well-being of local residents and businesses.
14. I have reviewed the submissions raising economic issues. None of the issues raised in submissions alter my view that the Project will have significant overall net positive economic benefits for the Wellington Region and especially Hutt City.
15. The GWRC section 42A report identifies a number of positive effects of the Project, including a number of economic effects, and assesses these as being significant. The HCC section 42A report records that its author took into account the positive effects of the Project, including economic effects, in making its positive recommendation on the application.

OVERVIEW AND CONTEXT OF THE PROJECT²

16. HCC proposes to construct a 4.4 km shared path for pedestrians and cyclists along the seaward side of Marine Drive in two sections: (i) between Point Howard and the northern end of Days Bay; and (ii) between the southern end of Days Bay (Windy Point) and Eastbourne (Muritai Road/Marine Parade intersection) ("**Shared Path**"). No new path is proposed in Days Bay as Days

¹ See Appendix L to the AEE at section 4.3.1 (page 21).

² Material in this section is taken from the AEE.

Bay already "provides a lower speed limit, some safe facilities for pedestrians and increased widths for on-road cyclists."³

17. As discussed in the evidence of **Mr Povall** and **Mr Greenaway**, the Project will provide safer and more efficient commuting and recreational opportunities for local resident and visitor pedestrians and cyclists by providing increased separation from motorised transport using Marine Drive. Along the route of the Shared Path are a number of bays that collectively comprise the Eastern Bays. These include Sorrento Bay, Lowry Bay, York Bay, Mahina Bay, Sunshine Bay, Days Bay and Rona Bay, as well as Eastbourne itself. In addition to safety and recreational benefits, the Project will also provide improved interconnectivity for local residents in these localities, as discussed in the evidence of **Mr Puketapu-Dentice**.
18. The Project forms a part of the Great Harbour Way / Te Aranui o Pōneke, a walking and cycling route around Te Whanganui-a-Tara (Wellington harbour), as well as completing the circular link for the Remutaka Cycle Trail. Therefore, in addition to providing safer and more efficient commuting and recreational opportunities for local residents, the Project will help to establish Hutt City and the wider Wellington Region as a recreational cycling destination for visitors.⁴
19. The Project, by replacing the existing seawalls along Marine Drive, will also improve the resilience of the existing road and underground services within the road corridor. Marine Drive provides the only access to the Eastern Bay suburbs and is therefore a key transport route for Hutt City and the Wellington Region. Traffic volumes are estimated at approximately 6,000 - 8,000 vehicles per day.⁵ Located within the road corridor is the MOP, which conveys secondary treated wastewater from the Seaview Wastewater Treatment Plant (which services 146,000 residents and a large number of local businesses) to the outfall at Bluff Point near Pencarrow Head. Other important lifeline utilities within the road corridor include water supply, stormwater, electricity, gas and telecommunications services.
20. Finally, in upgrading and renewing sections of the seawall along Marine Drive, the Project will provide a basis for future protection works should that be the community desired response to climate change and sea level rise.

ECONOMICS AND THE RMA

Community economic well-being

21. Economic considerations are intertwined with the concept of the sustainable management of natural and physical resources, the promotion of which is the

³ AEE, at 2.

⁴ Discussed in more detail in the evidence of **Mr Greenaway**.

⁵ The Eastern Bays Shared Path *Transport Assessment*; Stantec; February, 2019. Appendix L to the AEE used a figure of 8,000, however as discussed in the evidence of **Mr Povall**, this figure is now assessed as 6,000 – 8,000 due to higher volumes being recorded closer to Seaview with reductions closer to Eastbourne.

purpose of the RMA. In particular, section 5(2) of the RMA refers to enabling "*people and communities to provide for their (...) economic (...) well-being*" as part of the meaning of "*sustainable management*".

22. In addition to the inclusion of economic effects as relevant considerations in terms of the RMA's sustainable management purpose, section 5 also refers to "*people **and communities***" (emphasis added). This highlights that, in assessing the effects of a proposal, effects on the community – not just the applicant or particular individuals or organisations – must be taken into account. This is underpinned by the RMA's definition of "*environment*" which also extends to include people and communities.⁶
23. The Project will provide a range of economic benefits which will contribute to the economic well-being of residents and businesses of Hutt City and the wider Wellington Region. These economic benefits are described later in my evidence.

Economic efficiency

24. Section 7(b) of the RMA directs that in achieving the purpose of the Act, all persons "*shall have particular regard to (...) the efficient use and development of natural and physical resources*" which includes the concept of economic efficiency.⁷ Economic efficiency can be defined as:

*"the effectiveness of resource allocation in the economy as a whole such that outputs of goods and services fully reflect consumer preferences for these goods and services as well as individual goods and services being produced at minimum cost through appropriate mixes of factor inputs."*⁸

25. More generally, economic efficiency can be considered in terms of:
 - (a) maximising the value of outputs divided by the cost of inputs;
 - (b) maximising the value of outputs for a given cost of inputs;
 - (c) minimising the cost of inputs for a given value of outputs; and
 - (d) minimising waste.
26. For reasons I explain later in my evidence, I consider that the Project is consistent with the efficient development and use of resources.

⁶ RMA, s 2.

⁷ See for example, *Marlborough Ridge Ltd v Marlborough District Council* [1998] NZRMA 73 at [86], where the Court noted that all aspects of efficiency are "*economic*" by definition because economics is about the use of resources generally.

⁸ Christopher Pass and Bryan Lowes *Collins Dictionary of Economics* (2nd edition, Harper Collins, 1993) at 148.

Viewpoint for economic assessment

27. An essential first step in carrying out an evaluation of the positive and negative economic effects of a project is to define the appropriate viewpoint that is to be adopted; in other words, the people or community/communities that will be interested in, or affected by, the project. This helps to define which economic effects are relevant to the analysis. Typically, a city (district) or wider regional viewpoint is adopted. Sometimes a nationwide viewpoint might be considered appropriate (for example, for a new power station which will supply electricity throughout New Zealand).
28. For the Project, the Hutt City community's viewpoint is relevant, because the economic effects of the Project will largely (but not solely) affect the residents and businesses in Hutt City. The wider Wellington Region's viewpoint is also relevant in that the Project will also provide economic benefits for residents and businesses outside Hutt City, but within the Wellington Region.
29. Generally, with projects considered under the RMA,⁹ the financial or commercial 'business case' analysis undertaken from the viewpoint of the applicant is considered to be irrelevant. This is because that 'business case' analysis is an analysis of private costs and benefits, rather than the costs and benefits for "*people and communities*", which is more closely aligned to the RMA's purpose. In those RMA project cases, it is only the so-called 'externalities' (ie those side effects of the project which affect third parties other than the buyer and seller) that are relevant.
30. In this respect, the quantified economic analysis undertaken for HCC in relation to the Project as part of the DBC¹⁰ and updated in the *Transport Assessment* (Appendix L to the AEE) is unusual (compared to typical 'business case' analyses) in that the analysis is undertaken not from a HCC-centric perspective, but from a broader community perspective with the costs of the Project compared to pathway user benefits and any other benefits for non-users.
31. However, the quantified economic analysis only partially addresses "*(...) people and communities (...) economic (...) well-being*" and "*the efficient use and development of natural and physical resources*" in that:
 - (a) not all costs and benefits have been included in the quantified economic analysis; and
 - (b) the quantified economic analysis does not account for much of the costs of the Project being met by central government, rather than the ratepayers of HCC and the GWRC.

⁹ For example, new supermarkets for Foodstuffs, a new cement plant for Holcim (NZ) Limited, renewal of gold mining resource consents for Oceana Gold (NZ) Ltd and a new power station for Meridian Energy Ltd.

¹⁰ Detailed Business Case Eastern Shared Path; Prepared for Hutt City Council; Stantec; October, 2017.

32. In that respect, I consider the Project's net economic benefits are greater than indicated by the results of the quantified economic analysis.
33. These factors are considered later in my evidence.

With and without analysis

34. In analysing the economic effects of the Project, it is necessary to compare two forward looking scenarios ('with Project' versus 'without Project'), rather than a 'before' and 'after' comparison. This means the proper baseline for evaluating future economic (and non-economic) effects of the Project are the economic effects with the Project in place, as compared to the economic effects without the Project in place. This comparison is particularly relevant in the context of the expected need, at some time in the future, to rebuild the existing seawall if the Project (which will incorporate replacement seawalls and revetment structures) is not constructed.

Intangible or non-monetarised effects

35. In economics, 'intangible' costs and benefits are defined as those which cannot be quantified in monetary terms. For any project such effects may include amenity effects, landscape effects, ecological effects, Māori cultural and relationship effects and recreational effects. Such effects may be positive or negative – ie a benefit or a cost for a particular community of interest.
36. Sometimes attempts can be made to estimate monetary values for these 'intangibles' using techniques such as 'willingness to pay' surveys¹¹ or inferring values on the basis of differences in property values. However, these techniques are frequently subject to uncertainty and criticism.
37. In my opinion, it is generally better not to attempt to estimate monetary values for these effects but rather to leave them to be assessed by RMA decision makers along with other relevant RMA effects. This avoids the danger of 'double-counting' – ie including them within a quantified measure of efficiency *and* treating them as a separate consideration in the assessment of effects under the RMA.¹² The 'intangible' effects of the Project are considered in the AEE,¹³ in a number of the Technical Reports appended to the AEE¹⁴ and in the evidence of other experts on behalf of HCC.¹⁵

¹¹ Willingness to pay surveys involve questioning members of the community as to the monetary value they place on particular environmental outcomes or effects.

¹² This view appears to be consistent with that of the Board of Inquiry for the MacKays to PekaPeka Expressway Project. See paragraph 1,137 of Final Report and Decision of the Board of Inquiry; April 2013.

¹³ See AEE at section 23 (beginning at page 89).

¹⁴ See, for example, Appendices A-H to the AEE.

¹⁵ See, for example, the evidence of **Mr Puketapu-Dentice** (connectivity and social benefits) and **Morris Love** (cultural benefits).

EFFECTS ON ECONOMIC ACTIVITY DURING PROJECT CONSTRUCTION

38. During the Project's anticipated 3-4 year construction period (expected to start 1 July 2021) there will be increased economic activity for Hutt City and the wider Wellington Region. This will be a consequence of the additional expenditure, employment and incomes directly generated by the Project's construction and the indirect (or multiplier) expenditure, employment and incomes generated as a consequence of impacts on suppliers of goods and services to the Project and those employed on the Project.
39. The Project has a total estimated construction cost of \$30 million including contingencies. Of this, \$15 million (50%) will be covered by an allocation from the Crown Shovel Ready Projects allocations and the remainder (\$15 million) split between Waka Kotahi (approximately 50% or \$7.5 million) and the HCC (approximately 50% or \$7.5 million). Construction is expected of 1-2 bays per year over the 3-4 year construction period, and with an estimated 8-10 fulltime equivalent ("**FTE**") employees engaged on each bay. Taking the mid-point of these ranges implies a 3.5 year construction period,¹⁶ 13.5 additional FTE jobs (ie 1.5 bays each year times 9 FTE employees per bay), circa \$1 million per annum additional wages and salaries¹⁷ and circa \$7.6 million per annum in other expenditure with Wellington Region businesses over the Project's 3.5 year construction period from mid-2021 onwards. Assuming 75% of this expenditure is spent within Hutt City¹⁸ there would be \$5.7 million in additional expenditure from the Project with local Hutt City businesses providing construction materials and services.
40. These are the direct economic impacts for the Hutt City and Wellington Region economies. However, in addition to these direct economic impacts, there are indirect impacts arising from:
- (a) the effects on suppliers of goods and services provided to the Project from within the city (Hutt City) and region (Wellington Region) (ie the "forward and backward linkage" effects); and
 - (b) the supply of goods and services from within the city and region to employees at the work sites and to those engaged in supplying goods and services to the work sites (ie the "induced" effects). For example, there will be additional jobs and incomes for employees of supermarkets, restaurants and bars as a consequence of the additional expenditure by employees directly employed at the work sites.

¹⁶ Where I refer to a "3.5 year" construction period in my evidence that is the mid-point between the anticipated 3-4 year construction period.

¹⁷ Assuming an average construction workforce salary of \$75,000 per annum, based on data provided in relation to other construction projects.

¹⁸ The businesses to benefit will include concrete suppliers, quarries, steel fabricators, traffic management firms and environmental and ecological consultants. Some, but not all, of the goods and services required will be able to be sourced locally.

41. Multipliers can be used to estimate the size of these indirect effects. The size of the multipliers is a function of the extent to which an area's economy is self-sufficient in the provision of a full range of goods and services and the area's proximity to alternative sources of supply. Multipliers typically fall in the range of 1.5 to 2. Taking the conservative, bottom end of this range (1.5) for Hutt City, the total impacts (ie direct plus indirect impacts) over the 3.5 year construction period from mid-2021 onwards are estimated as:
- (a) 20 additional FTE jobs for Hutt City residents;
 - (b) \$1.5 million per annum additional wages and salaries for Hutt City residents; and
 - (c) \$8.6 million per annum additional expenditure with local Hutt City businesses.
42. For the Wellington Region there are the same direct employment, income and expenditure effects, but the direct expenditure on goods and services with local businesses within the region increases to \$7.6 million per annum. For the regional multiplier, 2 is used to estimate the direct plus indirect effects because of the greater level of self-sufficiency of the Wellington Region, as compared to Hutt City, which has a smaller economic base. The total regional impacts (ie direct plus indirect impacts) over the 3.5 year construction period are estimated as:
- (a) 27 additional FTE jobs for Wellington Region residents;
 - (b) \$2 million per annum additional wages and salaries for Wellington Region residents; and
 - (c) \$15.2 million per annum additional expenditure with local Wellington Region businesses.
43. As indicators of levels of economic activity, economic impacts in terms of increased expenditure, incomes and employment within the local economy are not, in themselves, measures of improvements in economic welfare or economic well-being. However, there are economic welfare enhancing benefits associated with increased levels of economic activity. These relate to one or more of increased economies of scale, increased competition, reduced unemployment or underutilisation of resources and increased quality of central government provided services.
44. Taking a Hutt City or Wellington Region perspective, there are likely to be increased levels of economic activity as a consequence of the Project's construction (as well as operational benefits – see the next section of my evidence), since without it, the central government funds earmarked for it (ie the Crown Shovel Ready Projects allocation and Waka Kotahi funding which together contribute \$22.5 million or 75% of the Project's total estimated cost)

may be used elsewhere in New Zealand. Taking a national viewpoint, the level of economic activity (ie expenditure, employment and incomes) is likely to be the same with or without the Project – if funds are not utilised for the Project they are likely to be utilised on alternative Crown Shovel Ready projects and Waka Kotahi projects, even if in a different region in New Zealand. However, the Project has met the funding criteria for both Crown Shovel Ready projects and Waka Kotahi projects. Also, as discussed above in my evidence, it is typically the district or regional – rather than the national – viewpoint that is adopted in assessing effects under the RMA.

ECONOMIC BENEFITS DURING PROJECT OPERATION

Quantitative Cost Benefit Analysis

45. The AEE at section 23.2 (pages 90-91) reports on an updating of the economic evaluation of the Project undertaken as part of the DBC back in 2017. This was done in accordance with Waka Kotahi's Economic Evaluation Manual ("**EEM**") guidelines¹⁹ to conduct quantitative cost benefit analyses of transport projects. The EEM sets out the procedures and data to use to compare project benefits (including vehicle operating cost savings, travel time cost savings, accident cost savings and trip travel time reliability improvements) with project costs (including capital costs and changes in operation and maintenance costs).
46. The methods used to estimate the benefits and the costs, together with the procedures to adopt for their evaluation set out in Waka Kotahi's EEM (and the subsequent Monetised Benefits and Costs Manual), are based on considerable local and international research. The methods and data have been refined over a number of years. They are consistently applied over all road improvement project evaluations and alternatives²⁰ to roading project evaluations seeking funding from Waka Kotahi. This is done to assist with the prioritisation of alternative Waka Kotahi and local authority projects²¹ which are proposed to be funded from the National Land Transport Fund.²²
47. A discount rate is used to cover the time value of money and the opportunity cost of funds (ie the returns available from alternative road improvement projects, other government projects or programmes and/or private sector use of funds). The discount rate required to be used by the EEM was 6%, but this was recently (August 2020) revised downwards to 4% by Waka Kotahi in its Monetised Benefits and Costs Manual.²³

¹⁹ In August 2020, the EEM was superseded by Waka Kotahi's Monetised Benefits and Costs Manual, which is for the economic evaluation of business cases that commenced on or after 31 August, 2020.

²⁰ For example, public transport projects.

²¹ Ie those seeking Waka Kotahi funding.

²² The EEM procedures and databases are not used to determine the overall size of the budget for investment in road improvement projects – in other words the analysis is not used to determine the relative priorities of transport and non-transport related projects.

²³ Note the discount rate is in real terms – ie the previous 6% and now the 4% excludes the effects of inflation.

48. The benefits of a project are divided by the costs of the project where both benefits and costs are expressed in present value terms (ie incorporating a cost of funds (the discount rate)) to derive a BCR. If the BCR is greater than 1, project benefits exceed project costs and generally this is interpreted as meaning that the use of funds for the project will be an efficient use of resources.
49. The cost benefit analysis for the Project reported in the AEE gave a BCR of 1.3, based on a total net present value of benefits of \$14.1 million and a total present value of costs of \$10.7 million (based on a 2017 Project cost estimate of \$14.3 million) over a 40 year analysis period and using a 6% discount rate as required by the EEM.²⁴ This means the quantified benefits are 1.3 times the quantified costs of the Project. The quantified benefits included in the analysis were health benefits from increased walking and cycling (\$10.7 million in present value terms), travel time benefits for cyclists (\$2.7 million in present value terms) and safety benefits for cyclists (\$0.6 million in present value terms).²⁵ Since the AEE economic analysis for the Project was undertaken the cost estimate for the Project has increased to \$30 million, in part due to inflation but also due to increases in the Project's scale and scope – these changes are discussed in the evidence of **Mr Povall**. The health, travel time and safety benefits of the Project will also have increased in value since that time, although not to the same extent.
50. However, a number of significant economic benefits were not included in the quantitative cost benefit analysis, in particular:
- (a) road and road corridor resilience benefits – these are described in detail in section 23.6 of the AEE, section 4.8 of the Transport Assessment (Appendix L to the AEE) and in the evidence of **Mr Povall** (in terms of the structure) and **Dr Allis** (in terms of sea level rise predictions and effects). Given the significance of these benefits, it is likely that, even without the Project being implemented, upgrading and renewal works of the existing seawall would be undertaken by the HCC given the importance of the road and the lifeline services located within the road corridor.²⁶ **Mr Povall** has estimated the cost of such works, absent the shared pathway, to be \$15.7 million.²⁷ This cost would need to be 100% funded by HCC. The present value of this cost would be reduced²⁸ if the implementation of the seawall improvements, without the Project, was delayed to some future date after the proposed construction period for the Project. However, in the interim there are likely to be higher operation and maintenance ("O&M") and road closure disruption costs as a consequence of the delay in improving

²⁴ See Appendix L to the AEE at section 4.3.2 and Table 4-4; and 2.5-2.6 of the EEM, First edition, Amendment 2.

²⁵ Details on the base assumptions made to derive these benefits are outlined in Appendix H of the DBC.

²⁶ The alternative would be significant ongoing repair or replacement costs for the road and services located within the road corridor.

²⁷ This cost estimate excludes any allowance for contingencies – see the evidence of **Mr Povall**.

²⁸ Due to the effects of the discount rate, since discounting reduces the present value of future costs and benefits.

protection of the road corridor. All of these costs (ie the seawall upgrading and renewal costs and the higher O&M and road closure disruption costs) would need to be met by the HCC and local residents and businesses. Saving those costs can be taken to be the minimum value of the road resilience economic benefits, since this is the cost that would be incurred without the Project and if the benefits of the seawall upgrading and renewal were less than these costs the work would not be undertaken. An alternative interpretation is that the net cost to HCC of the Project is reduced by the \$15.7 million cost of the seawall upgrading and renewal without the Project.

- (b) climate change resilience benefits – as discussed earlier in my evidence, the Project will provide a base for more extensive seawall upgrade works necessitated in the future by climate change, rising sea levels and more frequent extreme weather events. The Project will also benefit the local community by providing for a range of options and "buying time" before an option to address climate change effects need to be addressed (see the *Coastal Physical Processes Assessment* (Appendix E to the AEE) and the evidence of **Dr Allis**).
- (c) tourism benefits – as discussed in the evidence of **Mr Greenaway**, the Project will form part of the Great Harbour Way / Te Aranui o Pōneke and provide a link to the Remutaka Cycle Trail, enhancing the Trail's reputation and the Wellington Region's reputation as a recreational cycling destination. Therefore, the Project will help attract additional visitors to the Wellington Region, encourage those visitors to extend their stay and perhaps discourage Wellington Region residents from venturing outside the region for recreational activities. As a result, the Project will increase the Wellington Region's employment, incomes and expenditure with local businesses. As with the additional economic activity generated during the construction phase of the Project, these increases in economic activity are not of themselves increases in economic well-being or economic efficiency. However, there are economic benefits associated with increased economic activity from increased economies of scale, increased competition, reduced unemployment or underutilisation of resources and increased quality of central government provided services.
- (d) potential travel benefits – these relate to the benefits for residents from knowing that walking and cycling trips can be more safely and efficiently undertaken and the road is more resilient and less prone to closure when emergency travel is required, even when such trips are not undertaken. Residents benefit from feeling less isolated and from the knowledge that they have a broader range of recreational activities or commuting options available to them. It is likely the Project will give rise to such potential travel benefits and this is reflected in a number of

the submissions from local residents received in support of the Project – see below in my evidence.

- (e) through its encouragement of active modes of transport, the Project is consistent with Waka Kotahi's strategic plans for giving effect to the Government Policy Statement on Land Transport 2018 and other major regional transport investment projects, including the \$200 million Te Ara Tupua – Ngā Ūranga ki Pito-One shared path and the \$430 million RiverLink project²⁹ – see the evidence of **Simon Cager, Mr Povall and Mr Puketapu-Dentice**.

- 51. Also, as covered earlier in my evidence, the quantified cost benefit analysis has adopted a national viewpoint and not a narrower Hutt City or Wellington Region viewpoint. Most of the benefits of the Project will accrue to Hutt City and to a lesser extent Wellington Region residents, whereas the costs of the Project will be largely funded from a national pool of resources – \$22.5 million (75%) of the Project's costs will be met by the Crown Shovel Ready Projects allocation and Waka Kotahi funding. Therefore, from a Hutt City or Wellington Region viewpoint, the BCR will be much higher, even excluding non-quantified additional benefits, since the costs in the denominator of the BCR are only 25% of the Project's total cost.
- 52. Further, adopting the lower 4% discount rate now recommended for use by Waka Kotahi would lead to the BCR for the Project increasing since the effect of discounting future benefits over the 40 year analysis period will be reduced, relative to the discounting of Project costs, which only occur in the first 3-4 years of the analysis period.
- 53. Having regard to these various factors, ie:
 - (a) the BCR (1.3) being greater than one;
 - (b) the inclusion of additional benefits – road and utility resilience benefits, climate change resilience benefits, tourism economic benefits and potential travel benefits;
 - (c) the 75% funding of the Project by central government; and
 - (d) a lower discount rate of 4% now recommended by Waka Kotahi having the effect of raising the BCR;

in my view it is evident that the Project is consistent with enabling *"people and communities to provide for their (...) economic (...) well-being"* and having regard to *"the efficient use and development of natural and physical*

²⁹ The total (rounded) \$430 million cost is made up of \$258 million from Waka Kotahi, \$121-125 million from GWRC and \$46.3 million from HCC. As part of the RiverLink project Waka Kotahi is developing a new Melling Interchange and bridge over the Hutt River (which will also include shifting the Melling train station), GWRC is installing new stop banks alongside the Hutt River to respond to the effects of climate change and HCC is redesigning its CBD to connect to the Hutt River and to grow residential and commercial development. (Sources: HCC and GWRC Long Term Plans and <https://www.nzta.govt.nz/planning-and-investment/nz-upgrade/wellington-package/melling-interchange/>)

resources" and will have significant overall net positive economic benefits for Hutt City and the Wellington Region.

RESPONSE TO SUBMISSIONS

Submissions in support

54. I have read the submissions on the Project that relate to economic effects. A number of submissions received that supported the Project were on the basis of economic benefits. Many of the reasons given in those submissions for supporting the Project are consistent with the economic benefits I have discussed earlier in my evidence. These include:
- (a) improved transport options and safety;
 - (b) reduced traffic congestion, vehicle operating costs and emissions;
 - (c) improved resilience against extreme weather events and other impacts of climate change;
 - (d) the protection of infrastructure within the road corridor;
 - (e) the encouragement of active forms of recreation and transport and the associated health benefits, as well as a reduced strain on health services (saving the community money);
 - (f) the encouragement of visitors and tourism spending within the Eastern Bays, Petone, Hutt City and the Wellington Region; and
 - (g) reductions in the cost of maintaining road sections currently affected by waves and debris.
55. Other reasons given in submissions of support for the Project, that I have not addressed in my evidence above, include that improved resilience will ensure continuous operation of the road in a civil defence emergency (David and Alison Carew (77)) and reduced chance of road closures and being cut off from Wellington Hospital (Katherine Good (123)). These reasons are linked to the concept of potential travel benefits – ie there are benefits to local residents from feeling less isolated and from the knowledge that there is greater likelihood of future emergency trips being possible if and when the need arises.
56. In addition, John Selwyn (61) lists increases in property values as a benefit in support of the Project, however any such increases in property values are a reflection of other benefits already identified, rather than additional benefits.³⁰

³⁰ See for example, *Foot v Wellington City Council* EnvC Wellington W73/98, 2 September 1998 at [249] – [256] which dealt with the impact of height restrictions on properties in Oriental Parade; and *Tram Lease Ltd v Auckland Transport* [2015] NZEnvC 137 at [57] – [60].

Submissions in opposition

57. Two submissions were received in opposition to the Project for economic reasons. These submissions were received from:
- (a) Richmond Esmond Atkinson (168), who considers that if faster users stay off the path and choose to use the road the financial and ecological costs of the Project are not justified since the path will be underutilised. I do not have the expertise to comment on the Project's ecological costs. However, I consider the economic benefits of the Project greatly exceed the economic costs of the Project especially from a local Hutt City and Wellington Region perspective. I consider this will be the case even if some of the faster users stay off the Shared Path; and
 - (b) Michael Sheridan (66), who considers that a low-cost option of the cycle lane has not been sufficiently explored. I understand from the evidence of **Mr Poval** that a thorough investigation of alternative options was undertaken as part of the application process, which included a consideration of costs of each option, and that ultimately the Project was selected as the preferred option.

RESPONSE TO SECTION 42A REPORTS

Wellington Regional Council

58. I have read the GWRC section 42A report's section 12.15³¹ covering positive effects of the Project. The positive economic effects of the Project identified in this and earlier sections of the GWRC section 42A report include:
- (a) delaying the effects of sea level rise and climate change;
 - (b) increased pedestrian and cycle trips along Marine Drive;
 - (c) mode shift from private vehicles to walking, cycling and/or public transport;
 - (d) reduced congestion;
 - (e) reduced CO₂ emissions;
 - (f) encouragement of walking and cycling to school;
 - (g) safety benefits and perceived reduction in risk;
 - (h) improved physical and mental health; and
 - (i) recreational and tourism benefits.

³¹Pages 107-109.

59. The report notes that the positive effects of the proposal were identified and heavily supported through the submissions in support of the Project and concludes:³²

"The positive economic and health and safety effects of the proposal for the Wellington Region (and NZ) have been identified as being significant."

Hutt City Council

60. I have read the HCC section 42A report's section 7.10³³ covering positive effects of the Project. The report identifies that section 23 of the AEE identified the following key transportation outcomes of the Project:
- (a) improved safety for pedestrians and cyclists;
 - (b) increased numbers of pedestrians and cyclists; and
 - (c) increased availability of the route through reducing the times it needs to be cleared following storm events.
61. The report also notes that the AEE economic analysis of the Project included the following benefits:
- (a) accessibility and connectivity;
 - (b) choice of transport mode and travel time;
 - (c) safety benefits for cyclists;
 - (d) resilience;
 - (e) health and environmental benefits; and
 - (f) recreation and tourism benefits.
62. The report acknowledges these benefits and accepts the AEE economic analysis results. The report states that the positive effects of the Project were taken into account in making its positive recommendation on the application.

Michael Campbell Copeland

30 November 2020

³²Section 12.16, page 109.

³³Pages 34-35.

APPENDIX A–CURRICULUM VITAE OF MICHAEL CAMPBELL COPELAND

DATE OF BIRTH 3 October 1950

NATIONALITY New Zealand

EDUCATIONAL QUALIFICATIONS

Bachelor of Science (Mathematics) 1971

Master of Commerce (Economics) 1972

PRESENT POSITIONS

(Since 1982) Economic Consultant, Brown, Copeland & Co Ltd

(Since 2017) Trustee, Trade Aid, Kapiti

PREVIOUS EXPERIENCE

1978-82 Contracts Manager/Senior Economist, NZ Institute of Economic Research

1975-78 Industrial Economist, Confederation of British Industry

1972-75 Research Economist, NZ Institute of Economic Research

1990-94 Member, Commerce Commission

2001-06 West Coast Regional Council Trustee, West Coast Development Trust

2002-08 Lay Member of the High Court under the Commerce Act 1986

2003-11 Director, Wellington Rugby Union

2010-13 Director, Southern Pastures

2010-17 Director, Healthcare New Zealand Holdings Limited

GEOGRAPHICAL EXPERIENCE

- New Zealand
- Australia
- Asia (Cambodia, India, Indonesia, Kazakhstan, Malaysia, Nepal, Pakistan, People's Republic of China, Philippines, Tajikistan, Sri Lanka, Uzbekistan, Viet Nam)
- South Pacific (Cook Islands, Fiji, Kiribati, Tokelau, Tonga, Tuvalu, Vanuatu, Western Samoa)
- United Kingdom

AREAS OF PRIMARY EXPERTISE

- Agriculture and Resource Use Economics (including Resource Management Act)
- Commercial Law and Economics (including Commerce Act)
- Development Programme Management
- Energy Economics
- Industry Economics
- Transport Economics

RESOURCE MANAGEMENT ACT SPECIFIC PROJECTS

- Port storage facilities at Westport;
- The proposed Clifford Bay ferry terminal;
- The proposed pipeline and related facilities to utilise water from the Waikato River for metropolitan Auckland;
- A container terminal expansion by the Ports of Auckland;
- The proposed Variation No. 8 to the Wellington City District Plan covering height and other controls on development of the airspace above the Wellington railway yards;
- Proposed expansion of Paraparaumu town centre within the Kapiti Coast District;
- Wellington City Council's heritage preservation policy;
- Solid Energy's proposed West Coast Coal Terminal at Granity;
- Solid Energy's Mt William North coal mine at Stockton in the Buller District;
- The proposed Waimakariri Employment Park;
- The designation of land for a proposed motorway extension in the Hawke's Bay;
- The Hastings District Council's Ocean Outfall – two consent renewal applications;
- A proposed new shopping and entertainment centre in Upper Hutt;
- Rezoning of land in Upper Hutt from Business Industrial to Residential;
- New regional correctional facilities in Northland, South Auckland, Waikato and Otago;
- Proposed controls on wake generation by vessels travelling within the waterways of the Marlborough Sounds;
- The expansion of marina facilities within the Marlborough Sounds;
- Southern Capital's proposed new township at Pegasus Bay, north of Christchurch;

- Renewal of water resource consents for the Tongariro Power Development Scheme;
- Economic analysis inputs to a Section 32 report for the Waitaki Water Allocation Board;
- The imposition of land use restrictions within noise contours surrounding Christchurch International Airport;
- The expansion of the Whangaripo Quarry in Rodney District;
- The economic significance of Winstone's proposed quarry at Wainui, in the north of Auckland City;
- A proposed five star hotel development for Wanaka;
- Holcim's proposed new cement plant near Weston in the Waitaki District;
- TrustPower's proposed new wind farm at Mahinerangi in Central Otago;
- TrustPower's proposed new Arnold hydroelectric power scheme on the West Coast;
- McCallum Bros and Sea Tow Limited's appeal before the Environment Court regarding extraction of sand from the Mangawhai-Pakiri embayment north of Auckland;
- The development of the Symonds Hill pit at Winstones' Hunua Quarry;
- The rezoning of land for residential development at Peninsula Bay, Wanaka;
- The rezoning of land for more intensive residential development at PekaPeka on the Kapiti Coast;
- A gondola development for the Treble Cone ski-field;
- A gondola development for the Snow Farm and Snow Park skiing and snowboarding facilities;
- The extraction of gravel from the bed of the Shotover River;
- The proposed Hilton hotel development on Wellington's Queen's Wharf;
- Land use restrictions in relation to the Runway Extension Protection Areas for Christchurch International Airport;
- A new residential and commercial development by Apple Fields at Belfast on the outskirts of Christchurch;
- A proposed business park development on land at Paraparaumu Airport;
- The proposed redevelopment of Wellington's Overseas Passenger Terminal;
- The proposed Central Plains irrigation scheme in Canterbury;
- The staging of residential and business development at Silverdale North in the Rodney District;
- The redevelopment of the Johnsonville Shopping Centre;

- A Plan Change enabling the relocation of existing development rights for a residential and commercial development on Mount Cardrona Station in the Queenstown Lakes District;
- A new Pak'n Save supermarket at Rangiora;
- New supermarkets at Kaiapoi, Whitby, Silverstream and Havelock North;
- The extension of the TeRereHau wind farm in the Tararua District;
- MainPower's proposed new wind farm at Mount Cass;
- Fonterra's proposed new milk processing plant at Darfield and its subsequent expansion;
- Fonterra Pahiatua milk powder plant expansion;
- Fonterra's Studholme milk processing plant expansion;
- Renewal of resource consents at Fonterra's Edgecumbe, Edendale, Te Rapa and Te Awamutu milk processing plants;
- Fonterra's proposed new coal mine in the Waikato District;
- Assessment of the economic significance of ANZCO's Canterbury operations to the Canterbury regional economy;
- Resource consent extensions for Oceana Gold (New Zealand) Limited's gold mining operations at Macraes Flat in north-east Otago, the Globe Mine at Reefton and a proposed underground gold mine at Blackwater on the West Coast;
- Designation of land for NZTA's Waterview motorway project in Auckland;
- Designation of land and resource consents for NZTA's Transmission Gully motorway project in Wellington;
- Designation of land and resource consents for NZTA's MacKays to PekaPeka Expressway;
- Designation of land and resource consents for NZTA's PekaPeka to Otaki Expressway;
- Resource consents for NZTA's Basin Reserve Bridge Project;
- Resource consents for NZTA's Puhoi to Warkworth motorway extension;
- Assessment of the economic effects of a Queenstown Airport Corporation's proposed Notice of Requirement for the designation of additional land for aerodrome purposes;
- Assessment of the retail effects of proposed Plan Change 19 to the Queenstown Lakes District's District Plan;
- Assessment of the regional and national economic significance of Lyttelton Port;

- The economic benefits of utilising a Recovery Plan under the Canterbury Earthquake Recovery Act for the rehabilitation and enhancement of facilities at Lyttelton Port;
- The economic effects of the Lyttelton Port Company's Capital Dredging Project;
- Meridian's proposed new Mokihinui hydro scheme;
- Assessment of the economic effects of alternative wreck recovery options for the MV Rena and preparation of evidence for Environment Court hearing;
- Assessment of the economic benefits and costs of Transpower's corridor management approach to giving effect to the National Policy Statement on Electricity Transmission in District and City Plans;
- Assessment of economic effects of a proposed extension to Arrowtown's urban boundary;
- Assessment of the economic benefits of overhead deployment of ultrafast broadband infrastructure;
- Assessment of the economic benefits of the proposed Ruataniwha Water Storage Scheme;
- Preparation of evidence for Transpower in relation to the proposed Ruakura development on the outskirts of Hamilton City;
- Preparation of two reports reviewing the economic benefits of the Hobbiton movie set at Matamata;
- Assessment of the economic benefits of renewal of a water discharge consent for Silver Fern Farm's Belfast meat processing plant;
- Assessment of the economic effects of renewal of consents for the Alliance Group's Lorneville meat processing plant;
- Preparation of evidence for Winstone Aggregates in relation to the proposed extension of the Otaki quarry;
- An assessment of the economic benefits of NZTA's Waitarere Beach Road Curves Project, north of Levin;
- An assessment of the economic effects of enabling deeper quarrying in the Greater Christchurch sub-region;
- Preparation of evidence for Transpower in relation to the Proposed Auckland Unitary Plan;
- Preparation of evidence for Transpower, Ngāi Tahu Property Limited, the Lyttelton Port Company, Canterbury International Airport Limited, Tailorspace Limited, Church Property Trustees, the Roman Catholic Bishop of the Diocese of Christchurch, Pacific Park Limited, Fulton Hogan and the Christchurch

Aggregates Producers Group in relation to the Proposed Christchurch Replacement District Plan;

- Preparation of evidence for Darby Planning LP, Soho Ski Area Limited, Treble Cone Investments, Lake Hayes Ltd, Lake Hayes Cellar Ltd and Mount Christina Limited in relation to economic issues concerning the Rural and Rural Recreation and Rural Lifestyle Chapters of the Proposed Queenstown Lakes District Plan;
- Preparation of evidence for Coastlands Shoppingtown Limited in relation to the proposed Kapiti Coast District Plan;
- Preparation of evidence for Tinline Properties Limited in relation to a proposed plan change to enable the establishment of an out of centre supermarket;
- The assessment of the economic effects of a proposed Plan Change for safeguarding the future efficient operations of the Rangiora Airfield;
- The assessment of the economic effects of proposed changes to Queenstown Lakes District Plan covering the Jack's Point resort area;
- The assessment of the economic benefits of the development of a marquee golf course in Christchurch;
- Economic assessment of Waitemata Harbour Crossing Project alternatives;
- Assessment of economic effects of proposed State Highway 3 Mount Messenger upgrade project;
- Assessment of economic effects of the proposed options for disposal of overburden from GBC Winstone's Otaika Quarry in Northland;
- Assessment of economic effects of Stevenson's proposed Te Kuha coal mine near Westport;
- Assessment of the economic effects of Road Metals proposed extension of its Yaldhurst Quarry in Christchurch;
- Assessment of the economic benefits from the continued operation of the Barracks Road quarry in Marlborough;
- Assessment of the economic effects of the Bay of Plenty Regional Council's proposed Plan Change 10 restricting the nutrient runoff into Lake Rotorua;
- Assessment of the economic effects of Fulton Hogan's proposed new Roydon Quarry at Templeton, Selwyn District;
- Assessment of the economic effects of the proposed Twin Rivers residential development adjacent to the Highlands Motorsports Park in Cromwell; and
- Assessment of the economic effects of the Te Awa Lakes residential development adjacent to Fonterra's Te Rapa milk processing plant.