

CentrePort Shipping Channel Deepening Project

ECONOMIC ASSESSMENT

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Prepared for
CentrePort Limited
By:
Mike Copeland
Brown, Copeland & Co Ltd

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1. EXECUTIVE SUMMARY

- 1.1 CentrePort Limited ("**CentrePort**") is investigating the deepening of the Wellington Harbour entrance shipping channel and the approach to, and berth at, the Thorndon Container Wharf ("**TCW**") (together called the "**Project**"). The purpose of the Project is to enable the future generation of larger container ships to access CentrePort, thereby maintaining CentrePort's existing container service, providing for its future growth and providing exporters and importers access to a big ship capable port within Central New Zealand.
- 1.2 Merchandise trade enables New Zealand to specialise in the production of certain products in which New Zealand has a comparative advantage enabling production surplus to domestic consumption to be exported. These exports in turn provide the foreign exchange to enable New Zealand to finance the purchase of competitively priced imported goods and services. Seaports provide an essential service to New Zealand's merchandise trade, which remains heavily skewed towards products with a relatively low value to volume ratio and therefore dependent upon transport by sea.
- 1.3 CentrePort plays a significant role in the current and future economic well-being of Wellington City, the Wellington and Horizons¹ regions and Central New Zealand² in that:
- (a) it facilitates the efficient movement of goods and people internationally and between the North and South Islands;
 - (b) it purchases goods and services from local businesses and provides local residents employment opportunities and incomes through its own operations and investment in assets;
 - (c) it generates profits which are distributed as dividends to its owners, the Greater Wellington Regional Council (GWRC) and the Horizons Regional Council, to the benefit of the regions' ratepayers, businesses and residents;
 - (d) organisations servicing the port such as shipping agents, transport firms and government border control agencies purchase goods and services from local businesses and provide local residents employment opportunities and incomes;
 - (e) CentrePort customers that put freight through the port purchase goods and services from local businesses and provide local residents employment opportunities and incomes; and
 - (f) ferry and cruise tourism operators dependent upon the port purchase goods and services from local businesses and provide local residents employment opportunities and incomes.
- 1.4 Central New Zealand has 25.1% of New Zealand's population, 26.0% of New Zealand's workforce and contributes 26.3% of New Zealand's gross domestic product (GDP). It is heavily dependent upon agriculture and primary product processing and the efficient movement of containerised exports and imports is important to the regional economy.
- 1.5 The Wellington region's key economic driver is its office sector. However given the challenges faced by this sector (e.g. the possible downsizing of central government employment in the capital and the drift north and overseas of private sector head office functions), the significance of CentrePort's contribution to local economic activity is likely to increase in future years.

¹ The area covering the Manawatu-Whanganui region.

² Defined to include the regions of Tasman/Nelson, Marlborough, Wellington, Taranaki, Horizons and Hawke's Bay.

- 1.6 Through the Project, Wellington harbour's natural deep sea port attributes and the advent of larger container ships on New Zealand's international trade routes, CentrePort expects to significantly increase the volume of containers it handles. This projected growth is based on the likely rationalisation of port visits by shipping lines utilising the larger container vessels and the physical constraints limiting the extent to which other central New Zealand ports (i.e. the ports of Taranaki, Napier, Marlborough and Nelson) will be able to accommodate the larger vessels.
- 1.7 The value of cargo exported through CentrePort in 2015 totalled \$1,412 million in value (or 2.8% of New Zealand's total merchandise exports) and the value of imports totalled \$1,868 million (or 3.6% of New Zealand's total merchandise imports).
- 1.8 If CentrePort is not made big ship capable, the advent of larger container vessels on New Zealand trades will mean that containers that would otherwise have been exported or imported via larger vessels berthing at the Port will instead need to be diverted to an alternative port in New Zealand which is big ship capable. There will be cost penalties for exporters and importers who would otherwise use CentrePort.
- 1.9 On the basis of the Future Freight Scenario Study³ analysis:
- (a) if CentrePort is not made big ship capable cargo owners:
 - (i) in the Wellington region face an increase in freight costs between 50 and 100% if Napier becomes the big ship capable port for Central New Zealand and over 100% if Tauranga and/or Auckland are the only big ship capable ports in the North Island;
 - (ii) in the Horizons region face an increase in freight costs between 11 and 50% if Napier becomes the big ship capable port for Central New Zealand and between 50 and 100% if Tauranga and/or Auckland are the only big ship capable ports in the North Island;
 - (b) in the Taranaki region a change from the status quo port arrangement will result in cargo owners facing an increase in freight costs between 11 and 50%;
 - (c) in the Tasman/Nelson/Marlborough regions a change from the status quo port arrangement will result in cargo owners facing an increase in freight costs of at least between 11 and 50%;
and
 - (d) in the Hawke's Bay region if Tauranga and/or Auckland are the only big ship capable ports in the North Island cargo owners will face an increase in freight costs between 11 and 50%.
- 1.10 Without a big ship capable port hub in Central New Zealand there will be increased costs for producers and consumers and reduced economic activity, employment and incomes. Some producers may be forced to relocate, downsize or close their activities.
- 1.11 The Project is consistent with the efficient use of resources because CentrePort has:
- (a) existing modern infrastructure capable of achieving the highest productivity in New Zealand on big ships;
 - (b) a naturally deep harbour and unobstructed berth access and wharf length for larger vessels;

³ Future Freight Scenarios Study; Deloitte; for the Ministry of Transport; November, 2014, Figure 28, page 95.

- (c) an existing container terminal that can handle approximately triple the current container volumes;
 - (d) a cost effective CentreRail agreement with KiwiRail to service much of its Central New Zealand cargo base of 400,000 to 500,000 TEUs per annum;
 - (e) a location adjacent to State Highway 1 and the main trunk rail line infrastructure;
 - (f) centrality requiring only 4 hours steaming each way from the route between the North Island and the South Island providing good intermediacy and minimal extra cost to shipping lines;
 - (g) additional capital investment costs of \$37-\$44 million to become bigger ship capable (14.5m draught vessels). This compares to \$50-200million for Auckland, \$50-80million for Tauranga, \$40-80million for Lyttelton, \$100million for Otago and \$50-\$100 million for Napier;
 - (h) the potential for North Asia shipping services to make Wellington the final port of call and depart via the Tasman Sea, providing significant steaming savings such that the cost to shipping lines of adding CentrePort in their schedule is therefore minimal;
 - (i) the ability to provide a superior hub port (as opposed to Napier or Tauranga) for Nelson cargo given significantly reduced transit times between Nelson to Wellington enabling a more regular 'shuttle' service between Nelson and Wellington improving reliability, increasing refrigerated capacity and reducing supply chain costs; and
 - (j) a balanced trade providing shipping lines with greater revenue per box by negating the need to reposition empty containers.
- 1.12 During the year ended 30 June 2015, the company earned \$69.8 million in revenue, of which \$66.2 million (an increase of 9% from 2013/14) was from port operations; provided 223 jobs, of which 219 jobs were in port operations; and paid \$19.8 million in salaries and wages, of which \$19.0 million were to employees engaged in port operations. A dividend of \$6.3 million was paid to CentrePort's two shareholders, the Greater Wellington Regional Council and the Horizons Regional Council.
- 1.13 From a local Wellington and Horizon's regional economic perspective, the Project will also underpin and enhance the economic benefits generated by CentrePort's operations, since without the Project the number of containers handled at the Port is likely to initially reduce by 30-40,000 TEUs - i.e. by 28-37% of TEUs handled in FY2015. That will result in CentrePort initially losing around \$9.2 million in revenue and 15 to 20 jobs. With multipliers this would result in an initial decline in regional output of \$17.9million and 30 to 40 jobs. Through economies of scale and scope, a reduction in containers handled at the Port would increase the unit costs for the remaining containers and other trades handled at the Port, placing in jeopardy the financial viability of CentrePort's international trade operations. Also the Project will facilitate visits to Wellington by larger cruise ships and fuel tankers.
- 1.14 CentrePort's proposed Shipping Channel Deepening Project will:
- (a) enable the residents and businesses of the lower North Island region and Central New Zealand "to provide for their ... economic ... well being" (section 5(2) of the RMA); and
 - (b) be consistent with "the efficient use and development of natural and physical resources" (section 7(b) of the RMA).

2. INTRODUCTION

Project description

- 2.1 CentrePort is planning to deepen the Wellington Harbour entrance shipping channel and the approach to, and berth at, the TCW. The purpose of the Project is to enable larger ships to access CentrePort thereby maintaining CentrePort's existing container service and providing for its future growth. Globally, container ships are increasing in size and all major New Zealand ports are preparing for their potential arrival.
- 2.2 Wellington Harbour (Te Whanganui-a-Tara) is naturally deep. This has reduced the historical need to deepen the harbour and means that the scale of deepening works is significantly less than for other ports in New Zealand resulting in infrastructure costs at or well below other ports.
- 2.3 CentrePort holds consents enabling the deepening of the harbour entrance to Chart Datum ("CD") 12.4 metres and the TCW berth to CD 12.5 metres. However, the anticipated arrival of larger ships will require a greater depth than the present consents provide.
- 2.4 The Project involves:
- (a) Deepening the harbour entrance shipping channel to CD 16.5-17.2 metres. Currently the shallowest part of the harbour entrance shipping channel is CD 11 metres (and CD 11.3m in the current shipping lane i.e. along the line of the navigation leads). The harbour entrance deepening will potentially involve the removal of up to 6 million cubic metres of sediment over an area of 184 hectares.
 - (b) Deepening the northern approach to the TCW and TCW berth to CD 15.2 metres. This will involve the removal of up to 270,000 cubic metres of sediment over an area of 14 hectares.
 - (c) The removed material will need to be disposed. The planned option for disposal is at sea in the vicinity of the presently consented Fitzroy Bay site for material from the harbour entrance and disposal adjacent (to the south east of) to the TCW for the TCW northern approach and berth.
- 2.5 The depths described above are sufficient to safely accommodate a 14.5m draught vessel at 10 knots, and include a 0.5m overredge allowance.
- 2.6 It is most likely that a Trailing Suction Hopper Dredge will be used to undertake the deepening works. This commonly used dredging process involves a vessel moving across the area trailing a suction head and pipe which sucks the sediment off the seabed and onto the vessel. At the berth or if hard material is encountered a different type of method may be needed such as a back hoe dredge. The deepening may be done in one campaign, a number of campaigns staged over time or as a multi-year programme using a smaller dredge vessel. Afterwards, target depths will be monitored over time and maintenance dredging may be required.

Background to the Project

- 2.7 CentrePort is 76.4% owned by the GWRC and 23.6% owned by the Horizons Regional Council.⁴

⁴ The regional council covering the Manawatu-Wanganui region.⁵ A 20 October, 2015 Westpac publication: Industry Insights - Transport, Logistics and Distribution states: "Ships of 5,000 to 8,000 Twenty-foot Equivalent Units (TEUs) are

Deleted: ¶

- 2.8 The deepening of CentrePort's channel and container terminal berth is required because the international, and specifically the New Zealand, container trades are trending towards larger vessels and fewer port calls to reduce international shipping costs. At present the largest sized ships calling at New Zealand ports regularly have a capacity of approximately 4,500 TEUs. It is expected in future more ships with capacities in the range of 5,000 to 7,000 TEUs and possibly up to 9,000 TEUs will be used on New Zealand trade routes as larger vessels are used on the more significant international trade routes.⁵ The Project will enable the Port to continue to be an international port servicing Central New Zealand. Also bigger ships are more fuel efficient and therefore have a reduced carbon footprint. On a per TEU basis, a 6,500 TEU vessel gives a 31% reduction in CO₂ emissions compared to a 2,600 TEU vessel.⁶
- 2.9 Over the past 20 years, the number of containers moved through CentrePort has been relatively flat at around 90,000 TEUs per annum, although in the year to 30 June 2014 this increased to 95,000 TEUs and, in the year to 30 June 2015, increased to 107,400 TEUs. CentrePort has established a competitive inland transport service to collect and deliver containerised cargo from and to New Plymouth, Whanganui, Palmerston North and Blenheim. Inland container hubs in these centres have been established by CentrePort and a daily rail service (in conjunction with an inter-island ferry service in the case of Blenheim) is used to transport this freight to and from Wellington. An agreement ("CentreRail") between CentrePort and KiwiRail has been established providing a set amount of wagon space between CentrePort and these centres and providing competitive inland transport rates for shippers. This, together with the ongoing rationalisation of New Zealand port visits in conjunction with the advent of larger international container ships on New Zealand trade routes, is the basis for CentrePort forecasting significant growth in its container trade if, through the Project, it is able to become bigger ship capable.
- 2.10 Conversely, if CentrePort does not take steps to make itself "big ship capable" it risks losing much of its container trade to those ports which do make themselves "big ship capable". The Westpac Industry Insights publication states:

"Smaller ports are unlikely to be served by the large vessels, making coastal shipping, road and rail more important as a means of ferrying products to and from a smaller number of international ports.

A potential outcome is 4 to 6 ports in New Zealand able to handle larger vessels, with the rest being served by coastal shipping or other means of bringing products to and from ports.

A further challenge with coastal shipping, over and above the limited number of operators today, is that it does take a lot longer for product to move around the country this way. For instance, a trip that might take 5 hours by road could take a day or two by rail, and 3 to 5

expected to be the norm within the next 5-10 years, up from 2,500 to 4,000 TEUs today", and "NZTA data indicates that in 6 ports in New Zealand, more than 20% of international port visits were already by vessels of more than 4,000 TEUs in the year to June 2015". CentrePort was one of these 6 ports with 39 out of 181 ship visits (21.5%) by vessels of more than 4,000 TEUs.

⁵ A 20 October, 2015 Westpac publication: Industry Insights - Transport, Logistics and Distribution states: "Ships of 5,000 to 8,000 Twenty-foot Equivalent Units (TEUs) are expected to be the norm within the next 5-10 years, up from 2,500 to 4,000 TEUs today", and "NZTA data indicates that in 6 ports in New Zealand, more than 20% of international port visits were already by vessels of more than 4,000 TEUs in the year to June 2015". CentrePort was one of these 6 ports with 39 out of 181 ship visits (21.5%) by vessels of more than 4,000 TEUs.

⁶ See 'The Question of Bigger Ships; Securing New Zealand's International Supply Chain'; Update - April, 2012; New Zealand Shipper's Council.

days by sea. This matters if you are an exporter of meat or fruit products, for instance. While we expect to see an increase in coastal shipping, time-sensitive freight will be served increasingly by road between areas of production and the smaller number of international ports (or their inland ports)."

- 2.11 Therefore without the Project, CentrePort existence is threatened since containerised cargo generate around one-third of its revenue. The loss of a substantial proportion of its revenue generated by international cargo container handling would likely result in the loss of much of its international trade as there would be insufficient revenue to cover fixed costs. If CentrePort is not bigger ship capable the Operations and Commercial Report estimates that on the arrival of larger ships it would lose 30-40,000 TEUs - 28-37% of containers handled in FY2015.
- 2.12 This would raise the costs for exporters and importers of goods in Central New Zealand as additional on-land and/or coastal shipping costs (and additional time costs for time-sensitive freight) would be incurred utilising alternative more distant ports. In some cases this may force some local businesses to change their business activities, relocate, close or downsize their operations.
- 2.13 The Project requires resource consents from the GWRC and this requires an Assessment of the Environmental Effects (AEE) of the Project to be prepared.

Purpose of this report

- 2.14 The purpose of this report is to examine the economic benefits of the Project, focussing on:
- (a) the economic significance of CentrePort to Wellington and Horizons regions and more broadly, Central New Zealand; and
 - (b) the role of the Project in the continuation and enhancement of CentrePort's contribution to the economic well-being of these regions.
- 2.15 The report will form part of the AEE.

Experience and expertise

- 2.16 I hold a Bachelor of Science degree in mathematics and a Master of Commerce degree in economics. I have over 35 years' experience in the application of economics to various areas of business, including resource management matters. A summary of my curriculum vitae is attached as **Appendix 1**.
- 2.17 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. During the period 1990 to 1994, I was also a member of the Commerce Commission and during the period 2002 to 2008 I was a lay member of the High Court under the Commerce Act. 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.
- 2.18 With respect to the Resource Management Act 1991 (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 1**.

Report format

2.19 The remainder of this report is in seven parts and covers:

- (a) the relevance of economic concepts under the Resource Management Act (RMA);
- (b) the economic significance of merchandise trade to the New Zealand economy;
- (c) the economic significance of CentrePort;
- (d) the lower North Island and Central New Zealand regional economies;
- (e) the implications of the introduction of bigger container ships on New Zealand's trade routes;
- (f) the economic benefits of the Project; and
- (g) the report's conclusions.

3. ECONOMICS AND THE RMA

Community economic wellbeing

3.1 Economic considerations are intertwined with the concept of the sustainable management of natural and physical resources, which is embodied in the RMA. In particular, Part II section 5(2) refers to enabling "*people and communities to provide for their ... economic ... well being*" as a part of the meaning of "*sustainable management*", the promotion of which is the purpose of the RMA.

3.2 The Project will contribute to the economic wellbeing of people and communities within the Wellington and Horizons regions and Central New Zealand as it will:

- (a) enable CentrePort to continue and enhance its contribution of expenditure, employment and incomes within the local Wellington economy;
- (b) reduce the costs associated with the movement of international container exports and imports; and
- (c) contribute to the retention and growth in economic activity, employment and incomes for businesses and residents in Central New Zealand.

Economic efficiency

3.3 Part II section 7(b) of the RMA notes 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 economic concept of 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

3.4 More generally economic efficiency can be considered in terms of:

- (a) maximising the value of outputs divided by the cost of inputs;

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

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

- (b) maximising the value of outputs for a given cost of inputs;
- (c) minimising the cost of inputs for a given value of outputs;
- (d) improving the utilisation of existing assets; and
- (e) minimising waste.

3.5 The Project is consistent with the efficient use and development of resources since it will reduce costs and better utilise CentrePort's existing assets. Without the Project, it is likely a number of CentrePort's existing assets will become "stranded", in that its container handling facilities will become substantially underutilised. The Operations and Commercial Report estimates that without the Project, assets having a value of \$65 million would become stranded.

Viewpoint

- 3.6 An essential first step in assessing the economic significance of the infrastructure and associated activities of CentrePort is to define the appropriate viewpoint that is to be adopted. This helps to define which economic effects are relevant to the analysis. In this case clearly the lower North Island, consisting of the Wellington and Horizons regions is an appropriate regional viewpoint to consider since this is the primary catchment for CentrePort's freight. However, as explained in the previous section, CentrePort catchment has recently expanded (or will expand) to include the top of the South Island (Marlborough, Tasman and Nelson) and the central North Island (Taranaki and Hawke's Bay). Therefore a wider "Central New Zealand" viewpoint is also relevant.
- 3.7 In adopting broad regional viewpoints, the financial impacts for a company such as CentrePort are generally not relevant. Instead the focus is on the wider economic impacts for the region's businesses and residents. However, since CentrePort is owned by the GWRC and the Horizons Regional Council, the dividend returns from CentrePort's operations flow through to lower North Island ratepayers, businesses and residents in the form of improved services and/or lower rates and therefore are of relevance from a regional perspective.

Intangible or non-monetarised effects

- 3.8 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 - i.e. a benefit or a cost for a particular community of interest.
- 3.9 Sometimes attempts can be made to estimate monetary values for so-called 'intangibles' using techniques such as willingness to pay surveys or inferring values on the basis of differences in property values. However these techniques are frequently subject to uncertainty and criticism.
- 3.10 It is generally better not to attempt to estimate monetary values for these effects but to leave them to be part of the overall judgment under section 5 of the RMA. This also avoids the danger of 'double-counting' - i.e. including them within a quantified measure of efficiency and treating them as a separate consideration in the overall judgement under section 5.⁹ The 'intangible' effects of the Project are considered in a number of the other Technical Reports included as appendices to the AEE.

⁹ 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.

4. THE IMPORTANCE OF MERCHANDISE TRADE TO NEW ZEALAND¹⁰

- 4.1 Merchandise trade is extremely important to the economic wellbeing of New Zealanders because the relatively small size of our population, labour force and economy limits the range of commodities that can be efficiently produced in New Zealand. In addition, we are reliant on imports of commodities which can be produced more efficiently overseas. Lower cost imports help maintain the competitiveness of New Zealand producers as well as providing cost savings to consumers.
- 4.2 Merchandise trade enables New Zealand to specialise in the production of certain products in which New Zealand has a comparative advantage enabling production surplus to domestic consumption to be exported. These exports in turn provide the foreign exchange to enable New Zealand to finance the purchase of competitively priced imported goods and services.
- 4.3 The alternative model of "fortress New Zealand" would see higher priced goods and services, reduced choice in the range of goods and services available in New Zealand and a less efficient use of our physical and natural resources. This would result in lower incomes and a lower standard of living for New Zealanders. Although the New Zealand economy has diversified with growth in non-agricultural industries, it remains heavily dependent upon the agricultural sector and the export of agricultural commodities. In the year ending 30 September 2015, dairy products, meat, fruit, wool and raw hides, skins and leather made up 45% of the value of New Zealand's commodity¹¹ export trade. Petroleum and petroleum products, mechanical machinery and equipment, vehicles, parts and accessories and electrical machinery and equipment are the most important import commodities making up 46% of the value of New Zealand's commodity import trade in the year ending 30 September 2015.
- 4.4 New Zealand's reliance on overseas trade and sea transport is highlighted by the total volume of containers handled across all New Zealand ports representing almost 1% of annual global container throughput.¹²New Zealand's population of 4.6 million people is only 0.06% of the world's population.
- 4.5 In 2012/13, 99.6%¹³ of New Zealand's exports and imports of goods by volume and 85.6% by value was transported by sea. This highlights the significant role played by New Zealand sea ports.

¹⁰ Data sourced from Statistics New Zealand unless stated otherwise.

¹¹ A distinction is made between "commodity trade" (or "merchandise trade") and total trade. Commodity trade relates to the exporting and importing of goods only, whereas total trade includes the exporting and importing of both goods and services. For the year ending 30 June 2015 New Zealand's export of services made up 28% of the total export of goods and services. Most of these relate to earnings from services related to tourism.

¹² Source: The Question of Bigger Ships. Securing New Zealand's International Supply Chain. New Zealand Shippers' Council; August 2010.

¹³ Source: Ministry of Transport website: www.transport.govt.nz/ourwork/tmif/freighttransportindustry/ft100

5. THE ECONOMIC SIGNIFICANCE OF CENTREPORT

Port operations and facilities

- 5.1 CentrePort is recognised as a "lifeline utility"¹⁴ and is "significant infrastructure" at the local and national level.¹⁵ It plays a significant role in the current and future economic and social well-being of Wellington City, the Wellington and Horizon regions and Central New Zealand in that:
- (a) it facilitates the more efficient movement of goods and people between the North and South Islands and internationally;
 - (b) it purchases goods and services from local businesses and provides local residents employment opportunities and incomes through its own operations and investment in assets;
 - (c) it generates profits which are distributed as dividends to its owners, the GWRC and Horizons, to the benefit of the regions' ratepayers, businesses and residents;
 - (d) organisations servicing the port such as shipping agents, transport firms and government border control agencies purchase goods and services from local businesses and provide local residents employment opportunities and incomes;
 - (e) CentrePort customers that put freight through the port purchase goods and services from local businesses and provide local residents employment opportunities and incomes; and
 - (f) ferry and cruise tourism operators dependent upon the port purchase goods and services from local businesses and provide local residents employment opportunities and incomes.
- 5.2 As at 30 June 2015, CentrePort had \$180.7 million worth of property, plant and equipment, used for port activities. During the year ended 30 June 2015, the company earned \$69.8 million in revenue, of which \$66.2 million (an increase of 9% from 2013/14) was from port operations; provided 223 jobs, of which 219 jobs were in port operations; and paid \$19.8 million in salaries and wages, of which \$19.0 million were to employees engaged in port operations.¹⁶ It spent \$34.7 million on goods and services, much of this going to local Wellington region suppliers. Net after tax profits were \$14.0 million, of which \$9.5 million was from port operations. A dividend of \$6.3 million was paid to CentrePort's two shareholders, the Greater Wellington Regional Council and the Horizons Regional Council.¹⁷
- 5.3 By volume, containers make up the largest share of trade through the Port followed by forestry products (logs, veneer and pulp), fuels and chemicals, cement, wheat, fruit and vehicles. For the year ending 30 June 2015, 107,400 TEUs were moved through the port, an increase of 13% on the previous year, the log trade increased by 8% from the previous year to 875,028 tonnes, vehicle imports increased by 3% and petroleum imports were 1% down on the previous year.
- 5.4 In the containers moving through CentrePort were manufactured goods, including processed agricultural commodities from the Wellington and Horizons regions and Central New Zealand.

¹⁴ See Schedule 1 of the Civil Defence Emergency Management Act 2002.

¹⁵ See New Zealand Government's 2011 National Infrastructure Plan.

¹⁶ In addition, CentrePort capital expenditure on port infrastructure has, or is projected to, average \$11.9 million per annum over the period 2009-26. This is estimated to create an additional 33 fulltime equivalent (FTE) jobs. (Source: Economic Impacts of CentrePort on Central New Zealand 2015; May 2016; Berl (Berl report). The number of jobs has been reduced from the 48 shown in the Berl report to exclude non-port related construction activity.

¹⁷ Source: CentrePort.

Export values

- 5.5 In calendar year 2015, exports through CentrePort totalled \$1,412 million in value, or 2.8% of New Zealand's total merchandise exports. This is up from \$824 million in 2005 and which represented 2.6% of New Zealand's exports in 2005. By way of comparison exports in 2015 from Port Napier were valued at \$3,607 million (7.1% of New Zealand's total merchandise exports, up from 7.4% in 2005); exports through Port Taranaki were valued at \$1,711 million (3.4% of New Zealand's total merchandise exports, down from 5.6% in 2005); and exports through Port Nelson were valued at \$842 million (1.7% of New Zealand's total merchandise exports, down from 2.2% in 2005) and exports through Port Marlborough were valued at \$83 million (0.2% of New Zealand's total merchandise exports, up from 0.1% in 2005).
- 5.6 The main export trades by value through CentrePort Port in 2015 were dairy products (\$109 million and 0.9% of the total for New Zealand); meat (\$505 million and 7.4% of the total for New Zealand); wood and wood products (\$155 million and 4.4% of the total for New Zealand) beverages (\$30million and 1.7% of the total for New Zealand) and raw hides and skins (\$51 million and 9.9% of the total for New Zealand).

Import values

- 5.7 In calendar year 2015, imports through CentrePort totalled \$1,868 million in value, or 3.6% of New Zealand's total merchandise imports. This is down from \$2,054 million in 2005 and which represented 5.7% of New Zealand's imports in 2005. By way of comparison in 2015 imports through Port Taranaki were valued at \$306 million (0.6% of New Zealand's total merchandise imports, the same as in 2005); imports through Port Napier were valued at \$593 million (1.2% of New Zealand's total merchandise imports, down from 1.8% in 2005); imports through Port Nelson were valued at \$268 million (0.5% of New Zealand's total merchandise imports, down from 0.6% in 2005); and there were no imports through Port Marlborough.¹⁸
- 5.8 The main import trades by value through CentrePort in 2015 were fuels (\$309 million and 5.9% of the total for New Zealand); vehicles (\$329 million and 4.7% of the total for New Zealand); and plastics and plastic articles (\$127 million and 6.2% of the total for New Zealand).
- 5.9 The value of imports through CentrePort is significantly greater than through other Central North Island ports - in 2015, 3.2 times the value of imports through Port Napier, 6.1 times the value of imports through Port Taranaki and 7.0 times the value of imports through Port Nelson. This contributes to Wellington having a good balance of export and import volumes as compared to other New Zealand ports. This has positive implications with respect to freight handling efficiency. The 20 October 2015 Westpac Industry Insights publication in commenting on port trade imbalances states:

"These mismatches create significant challenges for ports in terms of managing container flows; for instance NZTA estimate that around 29% of containers imported into, and 15% of containers exported from New Zealand in the year to June 2015 were empty."

18 No imports were recorded through Port Marlborough in 2005.

Coastal trade

- 5.10 CentrePort is home to two inter-islander ferry services which carry passengers and freight to and from Picton. The Cook Strait services move approximately 950,000 passengers, 360,000 vehicles and 56,000 rail wagons each year.¹⁹
- 5.11 About 15% of New Zealand's other inter-regional domestic trade is transported by sea by dedicated coastal vessels (85%) and international vessels (15%).²⁰The main coastal trades are cement, fuel and containerised cargo on the Pacifica service and international services.

Cruise ship visits

- 5.12 In 2014/15, 77 cruise ships visited Wellington bringing 140,000 passengers. A recent study²¹ has estimated that in 2014/15 cruise ships, their passengers and their crews contributed \$53.2 million to gross domestic product (GDP) or value added (i.e. including wages and salaries and profits for local businesses) for the Wellington economy and supported 877 jobs.

Aggregate port economic impacts

- 5.13 A recent report²² prepared for CentrePort estimated the overall contribution to Central New Zealand of CentrePort's operations. This took into account not only CentrePort's own operations but also the activities of organisations that service the Port (e.g. CustomsNZ and transport and logistics firms based at, or near, CentrePort); customers freighting through the port; and ship-based tourism operators (covering both inter-island ferry services and international cruise ship visits).²³
- 5.14 The Berl study identified both the direct plus indirect effects to take into account the so called "multiplier" effects resulting from:
- (a) the effects on suppliers of goods and services provided to these firms (i.e. the "forward and backward linkage" effects); and
 - (b) the supply of goods and services to employees of these firms (i.e. 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 by these firms.
- 5.15 For the Central New Zealand region, the Port underpins 6,781 jobs directly and 15,468 jobs when multiplier effects are included; contributes \$927 million in gross domestic product (GDP)²⁴rising to \$1,852 million when multiplier effects are included; and \$2,002 million in direct output rising to \$3,907 million when multiplier effects are included.²⁵

¹⁹ See Operations and Commercial report, Appendix 2.

²⁰ Source: Sea Change. Transforming Coastal Shipping in New Zealand. Ministry of Transport; November 2007.

²¹ 'Economic Impact of the 2014–2015 Cruise Sector in New Zealand and Forecasts to 2017', Cruise New Zealand. 2015, Table 5. <http://cruisewzealand.org.nz/wp-content/uploads/2015/01/2014-2015-SUMMARY-Economic-Impact-Report-FINAL.pdf>.

²² Economic Impacts of CentrePort on Central New Zealand 2015; May 2016; Berl Economics (The Berl report). (The data related to calendar year 2015.)

²³ The study also took into account CentrePort's property division activities and those of its tenants in its Harbour Quays development. These have been omitted from the results presented here as they are not based on CentrePort's port activities.

²⁴ GDP includes wages and salaries and profits.

²⁵ As noted earlier, the data presented here have the Harbour Quays property impacts deducted so it relates on to CentrePort's port operations. Employment data presented in the Berl report have the Harbour Quays and CentrePort

- 5.16 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 wellbeing. However, there are economic welfare enhancing benefits associated with increased levels of economic activity. These relate to one or more of:
- (a) Increased economies of scale: Businesses and public sector agencies are able to provide increased amounts of outputs with lower unit costs, hence increasing profitability or lowering prices;
 - (b) Increased competition: Increases in the demand for goods and services allow a greater number of providers of goods and services in markets and there are efficiency benefits from increased levels of competition;
 - (c) Reduced unemployment and underemployment²⁶ of resources: To the extent resources (including labour) would be otherwise unemployed or underemployed, higher levels of economic activity can bring efficiency benefits when there is a reduction in unemployment and underemployment. The extent of such gains is of course a function of the extent of underutilized resources within the local economy at the time and the match of resource requirements and those resources unemployed or underemployed within the local economy; and
 - (d) Increased quality of central government provided services: Sometimes the quality of services provided by central government such as education and health care are a function of population levels and the breadth and quality of such services in a community is higher with higher levels of economic activity, particularly to the extent they lead to or maintain higher levels of population.
- 5.17 CentrePort gives Wellington City and the lower North Island region greater economic critical mass and as a consequence the residents and businesses within the City and region benefit from economies of scale, greater competition, increased resource utilisation and better central government provided services.

CentrePort's future growth prospects

- 5.18 Through the Project, Wellington harbour's natural deep sea port attributes and the advent of larger container ships on New Zealand's international trade routes, CentrePort is expected to significantly increase the volume of containers it handles. This projected growth is based on the likely rationalisation of port visits by shipping lines utilising the larger container vessels and the physical and other²⁷ constraints limiting the extent to which other Central New Zealand ports (i.e. the ports of Taranaki, Napier, Marlborough and Nelson) will be able to accommodate the larger vessels.

property employment staff deducted. GDP and output data have been adjusted downwards by a factor of 0.74 to estimate port related direct and indirect effects. The 0.74 factor is the ratio of port related to total employment figures given in the Berl report.

²⁶ Underemployment differs from unemployment in that resources are employed but not at their maximum worth; e.g. in the case of labour, it can be employed at a higher skill and/or productivity level, reflected in higher wage rates.

²⁷ For example, Napier, Taranaki and Nelson are principally export ports, with an inferior "balance" of export and import volumes to CentrePort.

6. THE WELLINGTON, LOWER NORTH ISLAND AND CENTRAL NEW ZEALAND REGIONAL ECONOMIES

Wellington Regional Economy

- 6.1 Statistics New Zealand's June 2015 population estimate for the Wellington region is 496,900. In 2006, population in the region was estimated to be 466,300, implying growth of 6.6% over the period 2006 to 2015, as compared to growth of 9.8% for New Zealand as whole. Statistics New Zealand's 'medium' population projections²⁸ have the Wellington region's population increasing to 544,700 in 2038- i.e. an average rate of increase of 0.4% per annum over the period 2015-38, compared to an average rate of growth for New Zealand of 0.8% per annum.
- 6.2 Statistics New Zealand estimate total employment in the Wellington region in February 2015 at 241,870, which represents 11.8% of the total persons employed in New Zealand. The "office" sector is the dominant driver of employment in the region with 33,680 (13.9%) employed in public administration and safety, 28,800 (11.9%) employed in professional, scientific and technical services, 11,810 (4.9%) in financial and insurance services and 11,820 (4.9%) employed in administrative support services.²⁹ Manufacturing accounts for 13,040 (5.4%) persons employed, with the majority engaged in food products manufacturing (3,190 persons employed), fabricated metal products manufacturing (1,370 persons employed), machinery and electrical equipment manufacturing (1,330 persons employed), printing (1,340 persons employed) and polymer and rubber products manufacturing (1,030 person employed). Other important sectors are health care and social assistance (25,620 persons employed or 10.6%), retail trade (21,150 persons employed or 8.7%) and education and training (21,510 persons employed or 8.9%).
- 6.3 Employment in tourism is difficult to identify from official statistics since the relevant sectors for which data is collected service domestic and international visitors, business travellers and local residents and businesses. However, tourism is an important economic driver for the Wellington regional economy as it is for the national economy.
- 6.4 Apart from the tourism related aspects of sectors such as retail trade, education and training and accommodation and food services, the key driver of the Wellington regional economy remains largely the office sector.

The Manawatu-Wanganui (Horizons) Regional Economy

- 6.5 Statistics New Zealand's June 2015 population estimate for the Horizons region is 234,500. In 2006 population in the region was estimated to be 229,400, implying growth of 2.2% over the period 2006 to 2015. Statistics New Zealand's 'medium' population projections have the Horizons region's population increasing to 237,300 in 2038- i.e. an average rate of increase of 0.1% per annum over the period 2015-38, compared to an average rate of growth for New Zealand of 0.8% per annum.
- 6.6 Statistics New Zealand estimate total employment in the Horizons region in February 2015 at 97,310, which represents 4.8% of the total persons employed in New Zealand. The agriculture,

²⁸ Statistics New Zealand prepare three sets of projections – high, medium and low – according to natural population change (i.e. the net effect of birth and death rate assumptions) and net migration assumptions. These projections do not explicitly incorporate assumptions about different rates of economic development.

²⁹ These sectors account for 30.7% of total employment. In addition a number of employees identified as being engaged in other sectors will be office workers.

forestry and fishing industry group employed 9,130 persons (9.4%) of which 8,430 were engaged in agriculture and 270 engaged in forestry and logging. Other significant sectors are manufacturing employing 11,080 (11.4%) (of which the most significant subsectors are food products manufacturing (4,920 persons employed), textiles, clothing and footwear manufacturing (1,040 persons employed), fabricated metal products manufacturing (1,150 persons employed) and machinery and equipment manufacturing (1100 persons employed)), health care and social assistance (12,430 persons employed or 12.8%), retail trade (10,120 persons employed or 10.4%) and education and training (10,320 persons employed or 10.6%).

- 6.7 The key economic drivers of the Horizons regional economy are agriculture, manufacturing (in particular agricultural product processing) and education and training with Massey University drawing students from elsewhere in New Zealand to Palmerston North. Employment in other sectors is to a large extent driven by the demand for goods and services by these industry groups and its employees with the so called "multiplier" effects creating additional jobs for the region's economy.

Central New Zealand

- 6.8 Central New Zealand, defined to include the regions of Taranaki, Horizons, Hawke's Bay, Wellington, Tasman/Nelson and Marlborough has:
- (a) 25.1% of New Zealand's population;
 - (b) employs 26.0% of New Zealand's workforce;
 - (c) contributes 26.3% of New Zealand's GDP;
 - (d) through its ports (Port Taranaki, Port Napier, CentrePort and Port Nelson), exports 14.9% of New Zealand's exports by value; and
 - (e) through its ports, imports 5.9% of New Zealand's imports by value.
- 6.9 The region is reliant on Auckland and to a lesser extent Lyttelton (for the upper South Island) as distribution centres for imports. CentrePort has estimated that by around 2020 the Central New Zealand region will generate around 400,000 to 500,000 TEU movements.

Summary

- 6.10 Population is expected to grow in the combined lower North Island region over the next 20 years. However this growth in population will be at a rate of less than the national average. The Horizons regional economy is heavily dependent on the agriculture and agricultural product processing sectors and to this extent the efficient movement of containerised exports is important to the regional economy.
- 6.11 The Wellington region's key economic driver is its office sector. However, given the challenges faced by this sector (e.g. the possible downsizing of central government employment in the capital and the drift north and overseas of private sector head office functions), the relative significance of CentrePort's contribution to local economic activity is likely to increase in future years.

6.12 The Central New Zealand region is heavily dependent upon the agricultural and primary products manufacturing sectors. For the region as a whole these sectors accounts for 11.8% of GDP,³⁰ but this is higher for Hawkes' Bay (19.9%), Taranaki (15.4%), Horizons (14.6%), Tasman/Nelson (15.8%) and Marlborough (25.9%). The region accounts for 25.1% of New Zealand's population, 26.0% of New Zealand's employment and 26.3% of New Zealand's GDP.

7. THE IMPLICATIONS OF BIGGER CONTAINER SHIPS ON NEW ZEALAND'S TRADE ROUTES

7.1 At present the average sized container ship calling at New Zealand ports has a capacity of approximately 2,700 TEUs. The largest sized ship calling at New Zealand ports regularly has a capacity of approximately 4,500 TEUs. It is expected in future more ships with capacities in the range of 4,000 to 7,000 TEUs will be used on New Zealand trade routes as even larger vessels are used on the more significant international trade routes.

7.2 The New Zealand Shippers' Council³¹ has undertaken a study³² on the economic benefits of introducing bigger container ships (5,000 - 7,000 TEUs) on New Zealand trade routes and the economic costs of not introducing them. Among the conclusions of this study were:

- (a) If New Zealand ports are not bigger ships capable within five years (of 2010), there is a risk only relatively small and old vessels with a higher operating cost per container will visit New Zealand ports;
- (b) New Zealand could realise up to \$144 million per annum net supply chain benefits from 2015/16, with bigger ships operating on the South East Asia route only and with infrastructure developments at two ports to become 7,000 TEUs capable;
- (c) In addition two New Zealand ports being bigger ship capable would protect New Zealand against the risk of shipping companies' hubbing through Australian ports such as Melbourne, Sydney and Brisbane, all of which are undertaking development to become bigger ship capable. It is estimated this would cost New Zealand importers and exporters additional net supply chain costs of up to \$194 million per annum by 2015/16 if only South East Asia services were affected and it would increase transit times to market;
- (d) The total benefit to New Zealand of having two ports bigger ship capable are therefore estimated at \$338 million per annum from 2015/16 increasing up to \$381 million per annum by 2020. These estimates exclude multiplier effects for the broader economy;
- (e) Although all four major container ports in New Zealand (Auckland, Tauranga, Lyttelton and Otago) will be required over time to increase their capability to support cargo growth, not all four will need to make the investment initially, to become bigger ships capable;
- (f) A bigger ship service would be required to call at a North Island port, due to the large export and import volumes, and a South island port, for growing export volumes, including

³⁰ Source: Statistics New Zealand; year ending March, 2013.

³¹ The New Zealand Shippers' Council is an association of major New Zealand-based cargo owners – both importers and exporters. It includes companies and organisations with major interests in industries such as forest products, fruit, steel, dairy, meat, coal and cement. Collectively the Council accounts for more than 50% of New Zealand's total annual volume of exports.

³² The Question of Bigger Ships. Securing New Zealand's International Supply Chain. New Zealand Shippers' Council; August 2010.

refrigerated export cargo. Based on the Council's research and analysis Tauranga and Lyttelton are the two New Zealand ports recommended to become bigger ships capable.

- 7.3 However, the New Zealand Shippers' Council study did not include the capital costs required to make the hub ports big ship capable and nor the additional road and rail infrastructure costs associated with significantly increased on-land transporting of containers.
- 7.4 More recently, the Ministry of Transport commissioned a report by Deloitte entitled Future Freight Scenarios Study³³ (the Future Freight Scenarios Study). The study examined the impacts that larger ships would have on the New Zealand freight system. It concluded that combining together the benefits from cheaper international freight costs (assuming these are passed on to New Zealand shippers of cargo) with the additional costs associated with hubbing - i.e. the additional land transport and costal shipping costs and capital costs for port, rail and road infrastructure improvements- the net effects would be substantially negative. The study concludes:

"The economic cost benefit analysis indicates that the projected BCR for all scenarios is less than 1 and eight of the scenarios have a projected BCR less than zero. This means that the increase in broader economic costs associated with port hubbing, as well as operating costs and capital investments, outweigh the economic benefits (incremental to the Status Quo - Scenario 1) under the port hubbing."

- 7.5 Significantly with respect to the Wellington region and broader Central New Zealand region, the study did not consider a scenario with Wellington as a hub port and states:

"The impact of hubbing does not affect all supply chains equally. Generally, the further from a hub port that a producer is the bigger the impact on their supply chain costs. For example, cargo owners in Wellington and Taranaki are likely to be significantly worse off under the port hubbing scenarios considered in this study. Cargo owners in Auckland, Waikato and Bay of Plenty are all better off under the scenarios where hub ports are located in or adjacent to these regions."

- 7.6 The Operations and Commercial report considers in greater detail the findings of the Future Freight Scenarios Study in relation to the impacts on CentrePort and its customers and the Central New Zealand economy generally. The report identifies that:

- (a) without a big ship capable hub port in Central New Zealand, container freight would need to be shipped through Tauranga or Auckland in the north and Port Chalmers or Lyttelton in the south;
- (b) this would significantly increase freight costs for shippers - from the Future Freight Scenarios study it is estimated freight costs for the Wellington region would increase by over 100%, for the Horizons region by between 50 and 100%, and for the other regions in Central New Zealand by between 11% and 50%.³⁴ In addition, shippers of time sensitive freight would be further disadvantaged;

³³ November, 2014.

³⁴ Under the scenario 3 freight costs for the Taranaki region would increase by between 50 and 100%. This scenario involves no Central New Zealand big ship capable port, but presumably the number of other big ship capable ports means significant increased infrastructure costs which are not sufficiently offset by reduced international shipping costs.

- (c) additional freight costs for producers would reduce their competitiveness and profitability. In some instances this would result in producers relocating, downsizing and/or closing down;
- (d) consumers would face increased costs for imported products;
- (e) congestion and time delays may necessitate additional road and rail infrastructure to be constructed;
- (f) there would be a negative impact on levels of economic activity, employment and incomes in Central New Zealand;
- (g) if Napier, rather than CentrePort became the big ship capable port for Central New Zealand, on the basis of the Future Freight Scenarios study analysis, freight costs for the Wellington region would increase by between 50 and 100% and for the Horizons region by between 11 and 50%; and
- (h) CentrePort is the best placed to provide a big ship capable hub port in Central New Zealand because of:
 - (i) its existing modern infrastructure is capable of achieving the highest productivity in New Zealand on big ships;
 - (ii) its naturally deep harbour and unobstructed berth access and wharf length for larger vessels;
 - (iii) it is an existing container terminal that can handle approximately triple the current container volumes;
 - (iv) the capital infrastructure investment cost of \$37-44 million compared to \$50-200million for Auckland, \$50-80million for Tauranga, \$40-80million for Lyttelton, \$100million for Otago and \$50-\$100 million for Napier;
 - (v) its hinterland, with a substantial cargo base of over 400,000 - 500,000 TEU are serviced by CentrePort's efficient and cost effective daily train service, CentreRail, except for Tasman/Nelson;
 - (vi) its location adjacent to State Highway 1 (which is presently being significantly upgraded) and the main trunk rail line infrastructure;
 - (vii) its ability to provide Marlborough shippers with its CentreRail offering through the two Cook Strait shipping services;
 - (viii) the requirement for port calls in both the North and the South Islands (a single hub port if Tauranga does not adequately or efficiently service New Zealand's shipping demands)and its centrality requires only 4 hours steaming each way from the route between the North Island and the South Island providing good intermediacy and minimal extra cost to shipping lines;
 - (ix) its potential for North Asia shipping services to make Wellington the final port of call and depart via the Tasman Sea, providing significant steaming savings such that the cost to shipping lines of adding CentrePort in their schedule is therefore minimal;

- (x) its ability to provide a superior hub port (as opposed to Napier) for Nelson cargo given significantly reduced transit times between Nelson to Wellington enabling a more regular 'shuttle' service between Nelson and Wellington improving reliability, increasing refrigerated capacity and reducing supply chain costs; and
- (xi) its balanced trade provides shipping lines with greater revenue per box by negating the need to reposition empty containers.

7.7 The Operations and Commercial report also discusses the potential benefits of the Project in terms of facilitating visits to Wellington of larger cruise ships and tankers.

7.8 Finally, the Project will also underpin and enhance the economic benefits generated by CentrePort's operations (see Section 5 of this report), since without the Project the number of containers handled at the Port will significantly reduce. As set out in section 2 CentrePort estimates that if the port is not made big ship capable, on the arrival of larger ships it would lose 30-40,000 TEUs - 28-37% of containers handled in FY2015. That will result in CentrePort initially losing around \$9.2 million in revenue and 15 to 20 jobs. With multipliers this would result in an initial decline in regional output of \$17.9 million and 30 to 40 jobs.³⁵ Through economies of scale and scope, a reduction in containers handled at the Port would increase the unit costs for the remaining containers and other trades handled at the Port, placing in jeopardy the financial viability of CentrePort's international trade operations. The Project will not only safeguard CentrePort's current levels of trade but enable the Port to realise its potential for future growth.

8. CONCLUSIONS

8.1 CentrePort's proposed Shipping Channel Deepening Project will:

- (a) ensure CentrePort can respond to the advent of larger container vessels on New Zealand's international trade routes, realise the Port's potential for growth and more efficiently utilize the Port's existing assets;
- (b) reduce the costs of container movements for lower North Island and other Central New Zealand importers and exporters of goods;
- (c) provide economies of scale and scope for CentrePort, reducing its unit costs for handling containers and non-containerised cargo;
- (d) maintain and enhance CentrePort's financial viability;
- (e) maintain and enhance the levels of expenditure, employment and incomes generated by CentrePort for Wellington City;
- (f) enable the residents and businesses of the lower North Island region and Central New Zealand "to provide for their ... economic ... well being" (section 5(2) of the RMA); and
- (g) be consistent with "the efficient use and development of natural and physical resources" (section 7(b) of the RMA).

³⁵ Multipliers derived from Table 4.1 of the 2016 Berl Report.

APPENDIX 1: 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 2010) Director, Healthcare New Zealand Holdings Limited

(Since 2012) Director, Healthcare Rehabilitation Limited

PREVIOUS EXPERIENCE

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

1975-78 Confederation of British Industry
Industrial Economist

1972-75 NZ Institute of Economic Research
Research Economist

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

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, Tokelau, Tonga, 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 skifield;
- 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 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;
- Resource consents for the Ruataniwha Water Storage Scheme;
- 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;
- 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;
- Assessment of the economic effects of renewal of river discharge consent for Silver Fern Farms' Belfast Meat Processing Plant.