MEMO

Project	NZ North Island Container Port Review
Subject	High Level Additional Comments on Trade and Northport (not for reliance)
Date	25th May 2020
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Memo Introduction

Black Quay Consulting (Black Quay) has been engaged by Sapere Research Group Ltd in New Zealand (Sapere) to provide various advisory services regarding the Upper North Island Supply Chain Strategy.

These services and the terms and conditions surrounding them have been concluded. However, Sapere has asked Black Quay to provide some additional high-level general advice for the study without supporting technical analysis.

This is restricted to the following:

> High-level and brief summary of our opinions around the near-term and longer term impacts of Covid19 on global container trade and associated supply chains. This only touches on the surface of the Black Quay are delivering globally.

> Brief opinion on longer term global and regional growth outlooks for containerised trade. This and the above are not verifications or peer reviews of Sapere's trade forecasts, which would require additional work.

> Cursory high-level opinion on the general notion of a competing container port at Northport (i.e. competing with Tauranga to collectively accommodate long-term POAL trade). Also providing comment on Auckland and Tauranga doing the same in the 'meantime' before a new port was built. This is presented as brief opinion and does not represent study, but rather some high-level views only.

This memo provides Black Quay's responses to these. It should be noted that due to the high-level nature of this work, it does not represent detailed study or opinions that can be relied upon professionally. Rather, the responses provided are opinionative only.

Furthermore, the comments within this memo do not constitute a peer review, verification or endorsement of the trade forecasting undertaken by Sapere for the study, which Black Quay have not viewed or reviewed in any way.

The comments have been provided in statement form to assist Sapere in quickly absorbing the opinions and the factors and subtleties surrounding them.

Finally, Black Quay have been working on several high profile trade outlook adjustments that consider the current economic climate and drivers. This work is particularly detailed and does not follow the basic trend of CAGR curves. Rather, they consider multiple complex scenarios over time driven by determined factors, both as a result of Covid19 and otherwise.

Accordingly, it is unhelpful to use generalised outlook figures. However, in this memo, Black Quay has attempted to do so in a considered manner, whilst making the point that regions and factors differ considerably, and the detailed work that Black Quay has or is preparing is highly detailed and quite different from the generalised comments made herein.

Opinion on Covid19 Container Trade Impacts

- The general opinion emerging in the Ports & Maritime sector is that the pain from Covid19 on the global economy has not yet manifested and that things will get considerably worse before they get better. Black Quay share this view.
- Nonetheless, the current impacts are game changing for the global economy and the shipping industry. Black Quay estimate that more than 10% and up to 17% of global sailings have been cancelled in the first two quarters of 2020 (varies by lines). Over the same period, primary container port throughput (as a generalised average) has reduced between 15% and 40% (highly variable across different port types and import/export splits).
- Blanked sailings are currently commonplace for all primary lines. The good news with this is that it represents a relatively calm approach to the crisis, based on lessons learned from the GFC when panic price dropping etc almost collapsed the industry.
- Black Quay expect these figures to worsen for the rest of 2020 given current bookings, culminating in approximately 20% to 26% cancellations.
- Lines are rationalising their routes accordingly, which is seeing vessels being laid up or redirected and services reduced.
- The WTO has stated that global merchandised trade will drop between 13% and 32% in 2020 (the latter being influenced by a possible emergence of a second wave). Black Quay feel that the figure will most likely be worse than this and have predicted global container trade to drop by between 20% and up to 35% in the near term. This recognises that global port trade is a visible coal face of economic health (or sickness).
- Drewry have predicted more positive outlooks of between -8% and -16% (worst case based on second wave of pandemic). Black Quay feel that this is considerably optimistic.
- Black Quay expects Australasian trade trends to mirror global trends in the near term (and therefore expect a drop of up to 35% - port and country dependant).
- Generally speaking, ports that have a relatively balanced trade ratio (i.e.50/50 import/export) have remained reasonably insulated for the first two quarters of 2020, whilst export heavy ports have suffered significant losses well above this and up to between 10% and 20%. This aligns with merchandise export heavy countries such as Germany suffering particularly badly.
- Black Quay predict that this will also worsen through the remaining year in line with shipping expectations. Global economic health can be predicted in terms of close alignment with shipping sentiment and performance.
- Global box figures so far, whilst amongst the worst ever seen, could have been much worse, and have been saved from the abyss by increases in online ordering of merchandise (Amazon trade has increased for instance).
- Black Quay believe that this will at least partially represent a permanent change in the supply chain with a continued move away from the high street. This will be exacerbated by the potential drag-on of Covid19 through 2021 and possibly beyond. It

is Black Quay's opinion that severe downturns will be experienced to 2023 before starting to flatten out by around 2025.

- Landside logistics organisations have also scaled back their operations in line with ports and shipping, resulting in altered nodes across the chain.
- The US China trade war had already been impacting on global trade health, and the timing of Covid19 has exacerbated this.
- There has been an impact on backlogs at ports due to supply chain disruption. Whilst this is a very serious issue in its own right and has the potential to swamp ports (made worse as port staff numbers have been directly affected), Black Quay believe that this is a shorter term impact from Covid19 and that ports and the wider supply chain will quickly adapt to deal with the issue.
- In Black Quay's opinion, global supply chains were much too complicated before Covid19. Black Quay predict a permanent shift where the need for many middle parties will dissolve and the supply chain will simplify and become more efficient. There is a growing realisation that shipping has been and will always remain a key component of this. Indeed, the essential nature of ensuring a country's ability to handle sea based trade has been amplified (also see comments in next section regarding globalisation).
- Asian trade is and will remain the global trading priority, despite the large losses suffered there. This will be driven largely by China. As China recovers (which is happening before the rest of the world), there will be considerable backed up trade release. The country's ability to adapt quickly and the raw might of the Chinese economy and its growing influence on global economic health, will directly drive recovery of container trade. This is despite any downturn in overseas demand for Chinese products.

Showing the rapid recovery of Post Panamax carried containers (China to Global) – VesselsValue, 2020

Long Term Container Outlook

> As stated in the introduction, Black Quay's various global and regional forecasts are complex pieces of individual work and cannot be provided and summarised in this memo. However, generally speaking, Black Quay believe that Asia will represent more than 90% of Australasian trade by the medium term, and possibly even within the short term.

> Given that global trade is increasingly becoming 'Asian-centric' or at least Asian influenced, both Australia and New Zealand are in a good position geographically at least.

> Whatever the future is for global containerised trade, it will be driven by Pacific trade in the short to medium term, and then at least some of future growth will emerge from the Indian Ocean.

> Globalisation, although impacted by current trends, will endure. As it does, the complexities of international trade will mean that containerised trade health will be interrelated by countries and regions. With New Zealand falling within the Pacific sphere of influence, NZ trade health will relate to that of primary Asian nations (growth will nevertheless continue to differ by country naturally).

> However, protectionism is clearly on the rise. Black Quay see localised manufacturing making a return by the medium term as disruptive technologies emerge. To some extent this might be driven by protectionism. However, it is occurring commercially at any rate.

> Countries that are export based will suffer most and may never fully recover. Services focused countries will fare better.

> Outlooks for primary western nations over the last 5 years have roughly followed a CAGR of between 2.6% and 3.4% for containerised trade.

> The reality is that container growth rates will reduce over time. This is as a result of the market maturing and less potential for additional products to be containerised. There are some pessimistic views on what this means in simple CAGR terms, including for the Australasian region.

> Black Quay do not share the low-end view and consider the rationale to be flawed. Without getting into specifics, Black Quay expect a generalised low-end long-term reduction from 2.6% (short to medium term) to between 2% and 2.26% (long term) for Australia. This reflects an increase in globalised trade volumes, and growing reflection of Australasia effectively being part of Asia from an economic perspective.

> Black Quay consider a CAGR of 1% or less into the long term to be implausible. This would not appear to give any meaningful consideration to long-term population trends, consumerism trends, ageing and disruptive manufacturing techniques and development of emerging industries.

> Over the last 5 years, Black Quay have identified what we believe to be key potential disrupters for container trade. This includes a move towards more localised manufacturing as a result of programmable matter and additive manufacturing becoming 'large scale. This has the potential to reduce container volumes further

than the range suggested, but this would then theoretically result in an increase in raw material shipping. This could have even greater impact on port capacity and in any case, much of this could end up being containerised (to countries that don't have large raw mineral deposits of their own). After considerable research, it is Black Quay's view that this would not slow container growth considerably beyond the long-term local range suggested, and instead would occur over and above modest container growth (as above).

> Black Quay make the point that a focus on obtaining CAGR growth rates over time for containerised trade and then basing the Upper North Island Supply Chain Strategy on these is highly risky and is not good practice. Instead, what Black Quay normally do as part of longer term masterplans and trade studies is to identify and study solid potential changes and disrupters and then attempt to quantify their impact, the timing of impacts is then largely irrelevant to the validity of the masterplan. In other words, let's say for arguments sake that a large unforeseen factor (like we are experiencing today with Covid19) emerges in time, the plan will have trigger points built in to cater for trade reductions or growth, regardless of their timing. This needs to include consideration of the ultimate best case goal (for instance a new consolidated container port) and then work back to identify timing and needs for this, as well as volumetric triggers (as opposed to uncertain time triggers). This said, what you would never do is consider the low growth scenarios as primary ones. This is highly risky, and poor planning can result in the creation of capacity and operational legacy issues that can last for hundreds of years given the extent of costs to fix major infrastructure mistakes.

> Applying for instance a 1% or below outlook for containers and then basing a region's plans on these would be high risk to say the least. In considering study based higher growth rates, the plan can adapt in suitable time. If trade ends up being lower than predicted, the timing for any proposed change is simply delayed until a point when it does increase sufficiently. In short, nothing gets built until it's justified and needed.

BLACK QUAY CONSULTING

The Notion of Competing North Island Ports

> The North Island already has competing container terminals. Auckland's import and export costings and capabilities have not improved as a result of this, and the main benefactors have been the shippers. Whilst that is important, it is not a well-rounded strategy for the future trading regime of the city. Nor does it result in a more globally competitive Auckland.

> The notion of developing a competing container port at Northport was examined as part of the Port Future Study in 2016 (PFS). The PFS clearly showed that this was not economical or strategically beneficial through detailed cost benefit analysis.

> The size of any container port at Northport is irrelevant. In fact, the notion of building a smaller port of less expense is flawed. Ports rely on critical mass. The development of a port there would still cost many millions even if built as a small regional container terminal. Landside transport costs would be required regardless, and these would be particularly high. But the terminal itself would be expensive too.

> More importantly though, that port would find it almost impossible to compete with either Auckland or Tauranga. It is geographically in the wrong place. Northport is over 150km away from the primary market locations to the south of Auckland. It is also on the wrong side of Auckland which would mean all trade would pass through Auckland, increasing congestion, emissions and time/costs to and from markets.

> Aside from this, Northport would struggle to attract shipping if shipping lines have a choice. As it's in the wrong place, this results in increased transport costs. This is an absolute fact that needs to be absorbed by the Government. In competing with Tauranga then, you would have a port that is around 165km away from primary markets in the south of Auckland. This is slightly less than Tauranga, but Tauranga is on the right side of the city at least. It's important to understand the implications of this. Building a port that knowingly brings all trade through the primary city would be highly questionable and go against all modern port planning principles. Tauranga also largely has the infrastructure already in place, so there would be less of a need to pass on any development costs (more than it already does), whereas Northport would be paying for its development costs for many years.

> Assuming a halving the container task and then relying on this 50% of trade to pay for the port is equally highly dubious. Without doing a business case (recognising that the PFS did consider split tasks), there is almost no way this would ever add up. This along with increased logistics costs all adds up to higher costs per box.

> The notion of building a smaller port at Northport makes things even worse. It means that port would have no future. It would have no ability to compete based on capacity. If you look at what Port of Tauranga have already done to the Port of Auckland this becomes more apparent. Tauranga have already out-competed Port of Auckland by ensuring it has better terminal, berth and land capacity. What we are talking about here is building yet another port to do just the same.

- As Black Quay have already described through this study, Auckland is dying as a result of its inability to compete with Tauranga without being allowed to expand (regardless of its short term improvement works). With Northport, you would be building another Auckland (constrained by cost and scale) but 165km further away from your markets.
- Splitting ports does not drive down costs for port customer industries or for consumers. It drives them up potentially and only favours the shippers. It's important to understand the distinction between having multiple competing container terminals as opposed to having multiple competing container ports. Competing terminals need to do so on a level playing field (or as much as possible at least). In other words, these should be at the same port. Furthermore, even if they are at the same port, they are still vulnerable if things aren't as even as possible. Melbourne is a perfect example of this (the new terminal clearly at an advantage to the constrained incumbents). Good port planning for the future of Auckland will include fair and even terms for multiple terminals (we would estimate two to start with and expanding to three over time), but all at the same port, or at least in the same port district. This is another reason why a new combined port would directly contribute to Auckland in international trading terms.
- The answer after many years of study (much of it unnecessarily repetitive) is that:
    - The notion of a competing port at Northport makes no sense whatsoever. The port would struggle to compete and pay for itself. Making the port smaller would only make this worse.
    - The notion of all of Auckland's trade going to Northport is equally baseless. The tax payer and the consumer would pay for this without any foreseeable benefits, other than perhaps some localised jobs in the north. The economic, social and environmental costs of building this port on the wrong side of Auckland and many kilometres away from the industries it's supposed to serve would be high to say the least.
    - Auckland has no future unless it is allowed to expand over and above its proposed plans. It is and will continue to lose ground to Tauranga. Expanding it doesn't make much sense as its ultimately constrained (not considering non-port demand for the waterfront land it sits on and related political views).
    - Tauranga does not provide a plausible solution to take its own task alongside that of Auckland in the long term and have never shown any plans to enable it to do so.
    - Both Tauranga and Port of Auckland can continue to take the upper North Island task into say the medium term (volume dependant obviously), but Auckland will become increasingly constrained. Tauranga would then also likely end up facing the same problem (given it is constrained from infinite expansion).
    - The need for a new consolidated port solution is obvious and its enshrinement in government policy is critical given the time it would take to organise how it would be delivered and actually build it.

  - The new port would provide for multiple operators who would compete for trade. The influence of the shippers on box costs would be better controlled whilst the consumer would benefit from competing costs. The new port could be built under special arrangement with investors so that the tax payer is not overly exposed to initial high capital costs.

- There is nothing for Government to be scared off with this. Its solid planning where the risks can be managed with good strategy and the benefits would be seen for perhaps 100 years or more.

Conclusions

> Black Quay believe Covid19 trade impacts can be divided into two categories; immediate near term impacts, and lingering impacts. We believe that the immediate impacts whilst currently very serious, have not yet played out and will worsen through the rest of 2020, into 2021 and drag on to 2023 (albeit reducing by that point). We also believe that long term impacts will linger for up to ten years.

> We believe global merchandise trade will drop to between 20% and 35% in the near term. It is possible that if Covid19 worsened again, things could be even more severe.

> The immediate impacts are a result of obvious trade downturns, impacts on shipping and service availability, port capability and wider logistics capability.

> We believe that the notion of supply chain disruption and permanent change are real, but that much of the predictions of what this would actually mean are inaccurate and not informed by industry experience. We are of the opinion that the supply chain will change to reflect more trade away from the high street and a simpler overall chain mechanism. We think this would have happened anyway, but this has accelerated it massively. This will see a reduction of 'middlemen' and a consolidation of landside logistics, similar to what has been happening in the shipping industry (which is also now accelerating as a result in our opinion).

> We believe that this won't spell the end to globalisation (and therefore no dramatic turn away from boxed international trade). Instead we see regional trade developing more, and none more so than in Asia and in the Indian Ocean. Australasia is naturally aligned with Asia and will therefore benefit from this.

> Black Quay have been pressing the potential for a change to globalisation and inter-regional trade patterns as a result of increased localised technology based manufacturing. Whilst we think this will have an impact on the entire sea trade sector, we believe it will happen alongside more modest containerised trade volumetric growth.

> The notion of a long-term sustained drop in containerised trade below 1% is something that was started by one of the big 4 advisory consultancies. In our opinion, this has no studied basis. Black Quay has developed numerous detailed and evidence based sea trade studies over the last number of years, including recently.

> Whilst we have concluded a drop in containerised trade growth as a result of a maturing market, we can see no evidence of how this is quantified or considered in terms of natural global trade growth (due to consumerism, population etc) in the publicised worst case scenarios. The studies we have done are region specific and confidential, however as a generalisation, we see long term global container trade dropping to between 2% and 2.26% by 2050. Whilst we have not studied NZ, our studies in Australia generally align somewhere in this spectrum. It is hard to see any reason why NZ would be dramatically different, unless it becomes left behind in the Asian context.

- In developing a permanent strategy for the Auckland port question, Black Quay strongly recommend against simplistic consideration of CAGR growth curves and impending timeframes for capacity needs. Whilst growth curves are important, developing port capacity around them (capacity which the city itself will rely on for its economic health and supply) is fraught with risk. This is made worse when only considering a base case or low case scenario. Instead, the plan should be based around volumetric trigger points and consider high case trade scenarios. Decisions are then mapped out and made based on when trade reaches a certain point. The time is largely irrelevant (unless there is a notion that capacity needs are immediate). For Auckland, this would be a coincidental point where trade and port capacity at Auckland and Tauranga reached a certain point, and recognised any planned capacity projects. The trigger point for a new port then for instance would be based on when this point was reached minus the time it would take to plan, legislate, design, build and activate the new port (likely 10 to 15 years).
- The notion behind a new port at Northport is flawed when considered against even the most basic modern port planning principles. Furthermore, the notion of building a smaller port there to compete for trade with Tauranga and/or Auckland is even more dubious. The port is far from where the primary markets serving Auckland are and will be positioned (south of Auckland). This inarguably adds costs per box. As it is to the North of the city, trade would need to pass through Auckland, increasing congestion and city emissions alongside the raw transport costs. The cost of developing the port and associated landside transport infrastructure would be high as with any option, but for Northport, this would be without any strategic benefit. Again, the smaller the port the worse its business case would be. This port would struggle to ever compete with Auckland never mind with Tauranga.
- Auckland having a two port strategy is far from optimal and does not result in reduced costs for port users and consumers. This can already be seen from Auckland and Tauranga with the results of competitive tension not trickling down to users and Auckland being strangled out of the market. It is hard to see how building yet another port more than 150km away would improve this. Instead, Auckland needs competing terminals rather than competing ports.
- A centralised port would deliver this and result in reduced costs per box. The costs to develop would be high, but the strategy for Auckland requires an alternative approach. Black Quay can near guarantee an interest for the private investment sector in developing a port and privatising the authority. This would include amalgamation of the port Authority in our opinion.
- As time ticks on with no agreement on a sensible strategy and time is spent looking at Northport again, the need to enshrine a sensible strategy in government policy is becoming more critical.