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Te Araroa Barge Facility Working Group - Port Development Project

1. Introduction

1.1 You asked that I:

(a) Assess two reports related to social and economic development in the Bay of Plenty and in respect of port and forestry development; and,

(b) Provide a broad estimate of likely total jobs to emerge from a successful implementation of the project as conceived at present.

1.2 Provide an assessment of viability in respect of the overall objectives of the project.

2. Approach to Objectives

2.1 There has been a considerable amount of work undertaken in recent years on:

(a) Regional benefits of development projects;

(b) Those studies have examined economic, social, environmental and cultural benefits;

(c) These have included extensive work in areas of interest and relevance to the Te Araroa Facility Working Group (TAFWG) most notably the reports of Deloitte and Sapere;

(d) I have completed expensive work on economic costs and benefits of marine farming developments in respect of the Gulf and regional economies; and,

(e) Various benefits of projects related to the "Shovel Ready" policies implemented during the previous Coalition Govt's time in power.

2.2 The result is that further extensive time, effort, resource and funding is not, in my view necessary or greatly helpful. Brent Wheeler Group has a policy of actively avoiding "activity" deemed to be useful "work" which consumes such resource but is much more likely to be simply redundant in the sense that little of substance is added.

2.3 In this case, there is a wealth of information which the Working Group can rely on. I briefly review that work below with the main conclusion being that the findings still hold within the assumptions adopted and limitations disclosed.

ASSESSMENT OF REPORTS AND CURRENT CONDITIONS

3. **Changes**

3.1 There have been two simple but substantive changes since the time of those reports were published:

(a) Significant alterations in the market for lumber, timber and related products. I review the simple consequences of those changes; and,

(b) The emergence of covid19 and the related pandemic which is generating short term impacts which the Working Group need to factor into decisionmaking.

3.2 Having noted these changes I estimate job numbers for the Barge Facility proposal.

4. **Existing Assessments**

4.1 As noted two key reports (one including a review of other previous reports) were undertaken in the years leading up to and including 2017. These were:

4.2 **The Deloitte Report**

(a) Deloitte reported in 2017 on the Te Rimu Trust's proposed development of a port facility at the mouth of the Karakatuwhero River.

(b) Their work included a review of feasibility reports commissioned to date by Te Rimu, a gap analysis in relation to this information and recommendations on next steps, including presentation of this opportunity within a Better Business Case (BBC) framework.

(c) A financial assessment, including scenario-based assessments and sensitivity analysis was also undertaken in a comprehensive evaluation entirely appropriate to the circumstances of the time and conditions then prevailing.

(d) The key findings were that:

(i) A viable development option exists though with quite narrow margins of benefit relative to the established road alternative;

(ii) That the sensitivity of the project was high – particularly in respect of volume of product and costs – large swings in potential profitability were possible given the values of these parameters (volume and cost) at the time;

(iii) Deloitte did note that other assessments (notably that of Opus) suggested considerable net benefits were available and that a strong case for public funding could be established readily.

(e) For themselves, Deloitte considered that with then prevailing levels of cost and volume, taking into account the scenarios they examined, further research would be required to refine the defining levels for success.

4.3 **Sapere / Corydon Consultants**

(a) Analysts from these consultancies assessed the social and community benefits of proposed harbour and aquaculture industry developments in Opotiki. The relevance to TAFWG is that in this report, social and community benefits were seen as flowing primarily from employment generation.

(b) Much of the improvement expected through development is attributable to on shore processing and the considerable employment that would bring both directly and through provision of intermediate goods and services. The key proviso is that processing remains a local activity.

(c) The key benefits through development were identified as:

(i) Increased employment including more full time work, less under employment, greater range of occupations and better retention;

(ii) Lessened welfare dependency through more comprehensive employment. This was expected to spill out into better support for business and service providers, greater expenditure and associated benefits; and,

(iii) An obvious corollary was expected to be improved household income allowing additional expenditure in health, education, general welfare (and standards of living) and discretionary expenditure.

(d) Commensurate savings in welfare payments was expected bringing national level benefits through savings.

(e) More general social benefits were seen as including reduction in age structure imbalances, retention of young people in the area, reductions in housing shortages and overcrowding and a reduction in crime.

5. **Relevance to TAFWG**

5.1 The relevance of the Deloitte work is relatively obvious – a case existed for a viable barge facilities project subject to acknowledging and managing volume and cost parameters adequately. With the Sapere/Corydon work, while the comparison with the TAFWG project is less direct, the social benefits arising from localized processing and development are relatively clear.

5.2 Probably of particular interest in this latter case is the fact that there are social as well as commercial and economic benefits to be had through development.

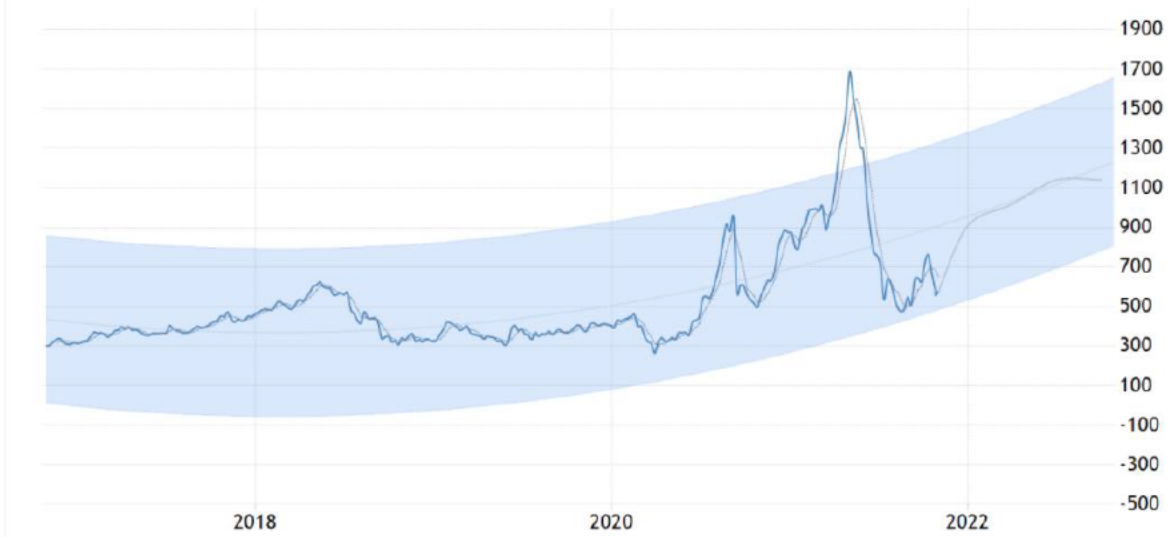
6. Changes since 2017

6.1 As noted two significant changes have taken place since 2017 – market changes and the changes wrought by covid19. These present, in summary, confirmation and uplift for the business case on the one hand, and, short term management challenges to be dealt with on the other.

7. Changing Markets

7.1 The graph below shows by way of summary, the alterations in lumber prices since 2017. The impact and potential impact of these is considerable.

Lumber USD/1000 board feet — Historical and Forecast averages



Source: Lumber | 2021 Data | 2022 Forecast | 1978-2020 Historical - (tradingeconomics.com)

7.2 Critical Points:

- The original assessments were undertaken some time ago (circa 2017) when prices were around USD$100; and;
- The swathe shows average in a trend and sees a future with an average above 1,100 which, even allowing for supply chain issues and related, offers sound prospects and growth.

7.3 This means that. much of the initial, and well justified, uncertainty and hesitation associated with the earlier reports on the development has been overtaken by significant changes in the relevant markets. Prices for lumber in particular have increased dramatically and a set of strong market prices can be observed both now and in the forecasts for the future.

7.4 There are several reasons for this and attempts at "final" explanations tend to be speculative. Of much greater importance are the facts that:

(a) The growth shown is considerable even with a broad swathe of outcomes shown;

(b) There are a number of reasons forestry as a sector has good prospects (lumber market, carbon market, construction boom etc); and,

(c) Even conservative forecasts show a strong range of growth.

7.5 It will be recalled that the Deloitte models showed great sensitivity to volume. Given the alterations in price volumes seem set to continue their very considerable growth and together with price allow viability to be assured and improved.

7.6 The related factor in NZ has been the boom (finally) in the supply side of timber consuming construction and related sectors. Consents are at an all time high, demand (funded through low interest rates and subsidies) is strong and the shortage induced property price rises have driven up funding.

7.7 The TAFWG project should benefit from this demand providing it can:

(a) Capture it to this mode of transport; and,

(b) The hefty cost on the competitive alternative (road) remains difficult.

8. **Covid and Related Impacts**

8.1 Amongst myriad impacts, there have been two impacts from covid which are of significance for TAFWG as follows:

(a) Shortages and Supply Chain Disruption

(i) Worldwide, in spite of the wide range of responses to the pandemic, there have been and continue to be significant breakdowns in the logistics of the supply side value chain;

(ii) Some products and raw materials are simply "not available" regardless of the considerable price hikes which have ben seen The very considerable dependence of NZ on imports means that these disruptions are of significance;

(iii) Recent months have seen "supply side" inflation with the most recent annualized CPI estimate reaching 5.9%.

(iv) Demand for the services which the TAFWG project is to provide are likely to experience the effects of this inflation. For the most part this ought to favour the TFAWG mode and nature of its operation relative to the competition.

(v) It will, nonetheless make cost structures more expensive and careful management will be required to ensure both the meeting of demand (in the core business) and ability to provide ancillary services.

(b) Costs – Notably Labour Costs

(i) Governments across the world have subsidised and supported labour and employment costs. In NZ that has been by way of simple and direct large sum subsidy of payrolls.

(ii) Shortages of labour are evident throughout the NZ labour market. These are seen most severely in:

- Managerial and skilled labour areas where experience and qualifications are critical; and,
- Regions not regarded as attractive by comparison with metropolitan NZ and with sparse population and services.

8.2 These are both short term problems – although lack of a skilled and experienced workforce is a more systematic problem for NZ and to that extent TAFWG.

8.3 The Working Group will need to devise and manage carefully a set of strategies which address these two issues.

ASSESSMENT OF LIKELY EMPLOYMENT NUMBERS

9. **Basis**

9.1 Information for job number estimates was drawn from experts in a forest industry technical advisory firm specialising in providing advice on forest management planning, operations and logistics. This source is known to and considered reliable by TAFWG.

9.2 FTE numbers (used because of the capacity of that measure to assess people with part time and part employment relationships but expressed as equivalent to full time, coupled with the methods used historically by Statistics NZ in their inter-industry studies identifying multipliers) were derived.

9.3 The structure of employment equates to that proposed by (and close adaptations of that) TAFWG in proposals assessed in the reports referred to above but adjusted for today's conditions. Conventional input output analysis was used to produce the following estimates.

10. **Employment Estimates 2021**

10.1 The following table shows a standard input-output analysis for raw job estimates provided by Ata Marie Group Ltd (technical advisory as above) showing direct, indirect and induced employment likely to be generated (see table notes). By the proposal.

10.2

Estimated Employment Totals (FTE) - Logging and Transport Operation

Activity Occupation	Jobs Direct	Factor Indirect	Jobs	Factor Induced	Jobs	Factor Total	Jobs Total
Barge operators (3 crews)	20	2.48	49.6	0.95	19.0	3.43	68.6
Logging (6 full time crews)	50	4.70	235.0	1.37	68.5	6.07	303.5
Log truck drivers	30	1.64	49.2	0.48	14.4	2.12	63.6
Workshop	6	1.39	8.3	0.33	2.0	1.72	10.3
Port - weighbridge	1.5	1.39	2.1	0.33	0.5	1.72	2.6
Stevedore / log marshals	9	2.48	22.3	0.95	8.6	3.43	30.9
Port captain	1	1.44	1.4	0.34	0.3	1.78	1.8
Office	2	2.44	4.9	0.34	0.7	2.78	5.6
Management	1	3.44	3.4	0.34	0.3	3.78	3.8
TOTAL FTE	120.5		376.3		114.3		490.6

Direct Persons employed directly in the activity noted (e.g. logging, road transport)

Indirect Persons employed directly in activities supporting direct activity (e.g. fuel for or repairs to trucks)

Induced Persons supporting the households of direct and indirect employees (e.g. landlords, grocery suppliers and all household suppliers)

Based on NZ Stats Inter-Industry Studies

10.3 The numbers show the estimated flow on effects from direct employment in the barge operation, through the suppliers of intermediate goods and services including the goods and services required to support the households in which all those involved live (note this includes one person households since their "living" generates demand for shelter, food etc just as a more conventional several person household does.

11. Caveats in Interpretation

11.1 It should be noted that the standard issues of interpretation apply and care should be exercised in quoting or relying (most importantly with the precision of estimates) on the figures:

(a) The exact numbers forecast may not necessarily eventuate in the form of "new", additional jobs. Some will reflect the formalisation of existing work which is informal, unrecognized, not fully or formally remunerated or involves various "off market" remuneration through sharing of resource or non-monetary sharing etc;

(b) All multiplier estimates are subject to change – at times dramatic change – through technological innovation, new labour pricing, re-organisation of work patterns, availability of differently priced intermediate inputs and similar substitution effects;

(c) Data always suffers from "lags" thus some input data may be out of date in various largely unknown ways. Such deficiencies have a tendency to lead to over estimates of requirements although in this case the multipliers are relatively strong and the conclusion that there are likely to be "significant flow on effects" is unlikely to be affected;

(d) There are likely to be (depending largely on prices) losses from competing activities. In such cases transfers rather than net new jobs may be created. Typically some significant loss from other industries is experienced. Levels of loss in the order of 25% are not unknown and thus the estimate of totals may overestimate to this extent.

11.2 Principal Conclusion

11.3 The main source of additional employment comes from the core (over 80%) activity of barging. Consequently, and given that this is a new activity, the estimate for additional employment from this source is likely to be robust.

12. **Conclusion**

12.1 This note has:

(a) Examined the two key reviews undertaken to date and concluded that their findings remain relevant subject to the changes in the market noted;

(b) The key changes have been a growth in the market for product and significantly improved conditions for the industry. Secondly the pandemic has created some constraints;

(c) In respect of covid constraints and the current state of the economy the effect has been supply chain disruption and rising labour costs with significant shortages in various areas;

(d) These are expected to be short term in duration (perhaps 3 years) and should be able to be managed in various ways;

(e) The estimate of jobs shows, overall, some 120 direct jobs estimated as involving flow ons leading to a total of 490 FTE positions – subject to up to 25% loss through transfers (as opposed to complete net new job creation).

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