

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the Proposed Canterbury Air Regional
Plan

**STATEMENT OF EVIDENCE OF JOHN REID FOR CARTER HOLT HARVEY
PULP & PAPER LIMITED**

DATED 22 SEPTEMBER 2015

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1. QUALIFICATIONS AND EXPERIENCE

- 1.1 My full name is John Donald Reid.
- 1.2 I am employed by Carter Holt Harvey Pulp & Paper Limited (“CHHP&P”) or “the Company”) as the Engineering Manager for Carter Holt Harvey’s Pulp and Paper operations in New Zealand. I hold a bachelor of engineering degree from the University of Auckland. I am a member of the Australasian Pulp and Paper Technical Association (APPITA) and have in the past been a member of the IPENZ and a Registered Engineer.
- 1.3 I have worked in the pulp and paper industry for 35 years, starting as an electrical project engineer with NZ Forest Products Ltd (“NZFP”). Subsequently I have held management positions in maintenance engineering, project engineering, and more general management for NZFP and its successor companies ERNZFP Ltd and Carter Holt Harvey Ltd.
- 1.4 I have been in my current position for 6 months and within the company I have responsibilities for:
- (a) the development and delivery of capital and other engineering projects;
 - (b) the development and economic analysis of future manufacturing options and major capital planning within the New Zealand businesses;
 - (c) maintaining CHHP&P’s interests in significant external engineering matters;
 - (d) contract negotiation;
 - (e) the engineering organisation.
- 1.5 Immediately prior to becoming engineering manager I held the position of strategic projects manager for 10 years.

2. SCOPE OF EVIDENCE

2.1 This evidence is presented in relation to submissions made on the Proposed Canterbury Air Regional Plan (“pCARP”).

2.2 The purpose of my evidence is to address the following matters:

- (a) The background to CHHP&P’s assets in the Region; and
- (b) The necessity for the pCARP to recognise and provide for existing industry, particularly in terms of the impact of regulation on on-going decisions for continuing investment.

3. CARTER HOLT HARVEY PULP & PAPER LIMITED

Background to CHHP&P

3.1 CHHP&P is a pulp paper and packaging company with facilities in New Zealand and Australia. CHHP&P utilises wood-pulp based paper from sustainability managed forests and recycled sources to produce renewable, biodegradable packaging for domestic and international customers. Paper packaging is used extensively by other sectors for the packaging of products including primary agricultural commodities for export. The recyclable attributes of paper packaging make it an attractive substrate for packaging destined for domestic and international customers with costs and obligations related to ‘extended producer responsibility’ (EPR) including recycling. CHHP&P maintains paper collection and recycling facilities as a contribution to the NZ paper packaging sectors EPR obligations. CHHP&P’s Shands Road converting facility (“the Shands Road facility”) needs to be considered as a part of the wider supply chain to domestic and export industries.

CHHP&P Shands Road, Hornby

3.2 The Shands Road facility is located at 85 Shands Road in the suburb of Hornby. It is zoned Business 5 (General Industrial) under the Christchurch City Plan. The zone is characterised by a wide range of both light and heavy industry, processing and warehousing. Industrial activities are permitted in the Business 5 zone. The site itself is located outside of the town centre and is surrounded by other

industrial and warehousing activities. There is a residential zone to the North West.

- 3.3 CHHP&P has operated at the Shands road facility for 57 years. At the time the plant was built there was very little else in the area, and I understand the housing estate came later. The company manufactures commodity and specialist paper-based packaging in competition with other local, national and international suppliers. The Shands Road facility manufactures over 120 million cartons (cardboard boxes) every year. In doing so it consumes over 30,000 tonnes per year of containerboard (heavy duty Kraft paper). The cartons are used by many industries in the South Island in such sectors as meat, fruit, other horticulture, dairy, fish, manufactured products and so on. Much of the produce and manufactured material placed in these boxes is exported. The Shands Road plant is an important part of the South Island's land-based prosperity.
- 3.4 The manufacturing process at Shands Road requires steam to be used for the lay-up of the corrugated cardboard sheets from which the final containers are made. The steam is produced by means of two boilers, one coal fired and one oil fired. There is no viable alternative to the use of steam for this purpose. The site obtained a discharge to air consent in 2003 for a period of 25 years (until 2028). The resource consent authorises the discharge of contaminants to air associated from these boilers operated to a combined maximum heat output of 2750 kW. The consent is potentially subject to annual review to address any adverse effect on the environment, require the adoption of the best practicable option ("BPO") or to comply with the requirements of a regional plan.
- 3.5 As already stated, CHHP&P has operated its plant on the Christchurch site for many years and has a good record of compliance and clean operation. The plant has the ability to operate 24 hours, 7 days for approximately 360 days of the year, depending on factors such as seasonal and market changes for our customers' products. The site employs approximately 130 permanent staff in a full range of roles from semi-skilled operators right through to professionally qualified managerial and technical positions. My understanding is that

the jobs provided by the plant are well regarded and relatively well paid in the local market.

- 3.6 In addition the Company estimates that there are likely to be around 100 jobs in Christchurch which wholly or mainly depend on the CHHP&P Shands Road operation – for example people in the various maintenance companies, transport operations, and organisations supplying professional services such as engineering and accountancy. Over and above the direct and indirect employment provided in Christchurch by the Shands Road facility, it also directly injects over \$9M/a into the city economy in the form of purchased good and services.

Issues raised in relation to the pCARP

- 3.7 CHHP&P seeks to ensure that the pCARP appropriately enables the Canterbury community to manage the region’s air quality while providing for economic and related social benefits.

- 3.8 We have elected to provide evidence in support of our submissions as we consider that the pCARP needs further amendments before it achieves the necessary balance. We acknowledge that these issues are recognised in the Section 42A report, although in places further drafting of the provisions has been recommended. We therefore provide:

- (a) This evidence to highlight our concerns for our continuing operations in the region; and
- (b) Planning evidence responding directly to the matters outlined in the Section 42A report.

4. RECOGNITION AND PROVISION FOR EXISTING INDUSTRY

- 4.1 The Company has made submissions seeking that the BPO be clearly referenced in the pCARP. Recognition of the BPO is important in the context of existing or new industrial discharges. BPO is a way of balancing the benefits of the existing industrial activities with the expectations of the community in regard to its living environment. A high standard of living requires a prosperous community as well as a

clean environment, and a healthy manufacturing sector underpins a great deal of that prosperity. To add to the community's economic wellbeing new industry should be encouraged, but unless Christchurch also encourages and enables its existing industries to remain and thrive, there may well be a nett loss of economic value. Put simply, a new factory with the economic benefits of the Shands Road facility is not established every day in the South Island.

- 4.2 Industries need a certain amount of 'regulatory space' in order to operate, whether they are new or old. The regulations and rules should recognise the practicalities and economic reality of what can actually be done in Christchurch. Airborne emissions are a case in point. Using the CHHP&P Shands Road facility as an example, I have stated that it is necessary to use a relatively large amount of process heat in the form of steam in the manufacturing process. This steam is produced in two boilers, which in turn rely on the energy available in some kind of primary fuel or energy source.
- 4.3 Primary fuels available in the North Island of NZ include coal, fuel oil, natural gas, biomass and geothermal energy. The use of natural gas is widespread due to its economic value, the ease with which it can be deployed, and the relatively low capital cost of the plant that burns it. CHHP&P is a major consumer of natural gas on many North Island sites. It uses a large amount of geothermal steam at its Tasman Mill in the Bay of Plenty and is by far New Zealand's largest producer of fully renewable energy made from biomass (by an order of magnitude). Both natural gas and geothermal steam are generally considered to be clean energy sources and their use can allow very low air discharge limits to be put in place by communities. Coal, oil and biomass energy production are not as "clean" in this respect.
- 4.4 In the South Island however there is no reticulated natural gas available, nor is there geothermal energy. Manufacturers and other users of large amounts of thermal energy are constrained to use the fuels that are available. These are coal and industrial fuel oil, and both are in widespread use throughout the South Island. Coal and industrial fuel oil when combusted generate emissions in the form of particulates and sulphur compounds.

4.5 This practical reality needs to be appropriately recognised within the pCARP. As it simply isn't feasible to operate coal or oil combustors in a way that achieves the performance of a gas fired unit, our concern is to ensure that the pCARP does not contain objectives, policies and rules that have the effect of limiting or controlling such existing emissions in a way that is impractical and uneconomic, and which could have the eventual effect of preventing the on-going use of coal or fuel oil within the Clean Air zones.

4.6 By way of background I note that small heat units such as homes or dry cleaning plants may also have the choice of transport diesel fuel, but the use of transport diesel in large plants is unaffordable.

Biomass as Fuel for Thermal Energy Plants

4.7 The use of trees or woodwaste for boiler fuel has been very much to the fore in Christchurch since the earthquake, and in the minds of some, biomass heating may present the answer to the perceived problems of coal and oil. To illustrate the realities faced by the operators of thermal plants, I shall provide a brief perspective on the use of wood or woodwaste for fuel.

4.8 It can be seen that a very few large energy consumers are today considering using biomass fuels when building new plant. The Canterbury District Health Board ("DHB") is one such entity. There are two practically available forms of biomass – "green" biomass in the form of wood chips or bark and the like, and processed biomass in the form of wood pellets such as can be purchased in hardware stores and burned in the special home pellet fire units now available.

4.9 Wood pellets are not economic for large plants and large scale use is generally limited to applications where there is an over-riding social imperative or even a subsidy. The use of wood pellets in public schools is a good example.

4.10 Large heat consumers considering biomass must rely on green biomass. This is the kind of biomass fuel which the DHB has considered using to heat its main hospital and which it has decided to use at Burwood.

- 4.11 As I have stated, CHHP&P owns and operates New Zealand's largest biomass energy plants and has considerable knowledge and expertise in this area. CHHP&P actively supports the development of biomass energy plants and a senior CHHP&P manager is a member of the Bioenergy Association of New Zealand executive committee and Board. I can say that for most cases biomass will be selected over coal and fuel oils only where the initial capital investment and ongoing opex are not over-riding considerations in the investment decisions. I can also say that the use of biomass for fuel brings its own problems which are not always fully appreciated at first sight. As examples:
- (a) The nett heating value of woodwaste is only about one third to one quarter that of coal, or less than one sixth that of oil. As a consequence the on-site storage piles and the number of heavy lorries required to transport in the fuel and truck out the ash can be overwhelming.
 - (b) It is also not usually appreciated that wood contains sulphur and so biomass boilers emit SO₂ just as do coal and oil boilers.
- 4.12 The boiler technology and combustion control equipment required to burn biomass efficiently are complex, bulky and costly. In part this is because biomass is, unlike gas, coal and oil, a non homogeneous material with variable fuel properties. Simply firing woodwaste into a coal boiler is not usually a recipe for success. As a result biomass units are larger and more costly than units burning fossil fuels.
- 4.13 Biomass boilers generate considerable airborne and other emissions and any new plant designed to run on biomass will require sophisticated and costly emission control equipment.
- 4.14 These factors have now been recognised by the Canterbury DHB. I note that a Press online article dated the 18th of July 2015 states that for economic and practical reasons the main hospital will continue to be heated by coal even though biomass was strongly pushed by many in the community.¹ The article hints at the practical and economic

¹ <http://www.stuff.co.nz/the-press/news/70256605/new-christchurch-hospital-building-to-be-heated-with-coal>

difficulties I explained above. The decision to burn biomass at the much smaller Burwood facility was made several years ago, perhaps in different times. The publically available material for the Burwood boiler did indicate that social criteria were an important factor in the DHB's investment decision.

Reverse Sensitivity

- 4.15 Several submissions made by the Company relate to reverse sensitivity. In this regard, I am concerned to avoid situations where neighbours may seek to curtail a pre-existing activity. Many of these people have in effect 'come to the nuisance'. As I said earlier in my evidence, the Shands Road plant has been at its present location longer than most of its neighbours. The recent spread of the city since the earthquakes is an additional risk to us in this context if our ongoing operational requirements are not specifically recognised and provided for.
- 4.16 Situations involving reverse sensitivity effects have previously arisen with respect to the company's industrial activities. I am advised that one example occurred at Carter Holt Harvey Woodproducts' facility at Eves Valley (near Nelson) where the pre-existing sawmill faced protracted debate and associated costs arising from significant proposed changes to the noise limits in the relevant district plan. A striking example provided to me was Carter Holt Harvey's decision to close its plywood mill operations in the Auckland suburb of Mt Eden in the early 1990s. A sawmill and the plywood mill had originally been located on what was then industrially zoned land in close proximity to other compatible land uses including the rail corridor, an ammunition factory and Mt Eden prison. In the face of the changing residential nature of the area and the need to increase the scale of the operation a decision was made to relocate this operation.
- 4.17 Carter Holt Harvey is concerned that an increase in numbers of residents or businesses such as retail hubs at the interface of the heavy industry and light industry zones could result in increased complaints. I accept that there is a duty to internalise the effects of an
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activity, but the degree to which this is practical or possible is recognised by zoning certain areas as industrial and others as commercial or residential. If the industrial areas are subsequently encroached upon then their purpose is negated, so they must be freshly recognised in the proposed new planning rules. The company's experience with neighbours and councils has illustrated the importance of ensuring that the appropriate planning documents recognise reverse sensitivity as an effect that can impact the day to day management and longer term investment decision making of a company. In my experience adequate recognition and provision for existing industrial activities in industrial zones is likely to result in the efficient operation of and reinvestment in existing businesses. Clear provision for existing industrial activity in the relevant plans provides the necessary certainty with respect to regulatory and operating costs for investment and reinvestment decisions.

- 4.18 Carter Holt Harvey's review of the pCARP is that there is a concerning expectation that new sensitive activities locating close to existing industrial activities could force the relocation of that industry (refer policy 6.7). There also seems to be an implied focus on new industry, rather than recognition that existing industry can be adversely affected by sensitive neighbours. This issue is addressed further by Mr Matthews (para 4.7).
- 4.19 The Section 42A report has recommended some changes to the "Introduction" of the pCARP in order to recognise the investment and significant contribution of industry to economic and social well-being. This recognition is welcome, but as proposed by Mr Matthews, I support the incorporation of this change into a new objective.

5. DECISIONS FOR CONTINUING INVESTMENT

- 5.1 If businesses such as the Shands Road facility are to remain in Canterbury, it is important that there is no regulatory or financial disincentive to do so.
- 5.2 Packaging is a capital intensive activity. The products (of other manufacturers) which are placed in our boxes are often commodities for an international market that experiences substantial price

fluctuations and the returns fluctuate even more as a result of foreign exchange volatility. The result is that the typical investor in the packaging industry is one with a long investment horizon who is prepared to accept that returns fluctuate in the short term and in the long term are dependent on operational costs staying aligned with international industry trends.

- 5.3 CHHP&P has put over \$7M into Shands Road in the last 4 years alone, and at present plans continued significant investment in future years.
- 5.4 However a decision to re-invest for continuing operation will always include an assessment as to whether the appropriate long-term operation of the manufacturing facility will be sufficiently probable to ensure the risk adjusted financial returns meet the required threshold. In this regard regional plans and considerations as to conditions that might be imposed as a result of consent reviews, or whether a consent might be renewed, will factor into the decision making process. In the case of the pCARP, provisions which appear to discourage existing industrial activities in a given location (eg Policy 6.7) or which do not provide sufficient recognition of the contribution of industrial activities, will be considered.
- 5.5 In the usual way, reinvestment which involves millions of dollars will not be made if there is more than the normal business risk for that type of operation.
- 5.6 Relocation of heavy industry to new industrial areas seems to be a scenario contemplated by the present version of the pCARP. This is very problematic. When establishing completely new plants any manufacturer will look at its options, and sometimes a greenfields construction will be the best. If it is, we will do it anyway. But more often than not the process of keeping industrial factories up to date involves only partial replacement of the machinery or fixed plant, with other machinery and assets having a long remaining economic life ahead of them. In these more normal cases if there is uncertainty about realising the full investment life required, then new investment won't be made and the plant will eventually be closed. Picking up an

entire heavy industrial plant and shifting it somewhere else is hardly ever viable.

6. SUMMARY

- 6.1 Existing employment and economic opportunities are crucial to the economic success of the city and must go hand in hand with growth. I presume that there is less to be achieved from growth in new areas if there is a simultaneous reduction of industrial activities due to plant closures in existing industrial areas.
- 6.2 Heavy industry, such as the Shands Road facility, provides employment and economic activity more generally for large numbers of lesser skilled people and those new to the work force. Relocation of such employment opportunities outside Christchurch would presumably be to the region's disadvantage.
- 6.3 In this sense I consider that it is essential to the planning framework that there is provision made to recognise the importance of existing industry to achieving economic prosperity for the region.
- 6.4 While the Section 42A report has made a number of recommendations which I generally support, I consider that there are some further useful amendments to the document as outlined in the evidence of Mr Matthews.

John Reid

22 September 2015