# *LignoTech Developments Limited*
# Independent adviser's report on the merits of the proposed transaction with KAAPA

*LignoTech Developments Limited*

*14 November 2014*

STATEMENT OF INDEPENDENCE

PricewaterhouseCoopers confirms that it:

(a) has no conflict of interest that could affect its ability to provide an unbiased report; and

(b) has no direct or indirect pecuniary or other interest in the proposed transaction considered in this report, including any success or contingency fee or remuneration, other than to receive the cash fee for providing this report.

PricewaterhouseCoopers has satisfied the Takeovers Panel, on the basis of the material provided to the Panel, that it is independent under the Takeovers Code for the purposes of preparing this report.

**Private & Confidential**

The Shareholders
LignoTech Developments Limited
PO Box 11
Ashburton
New Zealand

14 November 2014

Dear Sirs

In accordance with the terms of our engagement letter dated 11 February 2014 and our subsequent addendum to this engagement letter dated 20 October 2014, we are pleased to attach our independent adviser's report on the merits of the proposed transaction with KAAPA.

If you require any clarification or further information, please do not hesitate to contact us.

Yours faithfully

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# Table of contents

# 1. Introduction

## Background

1.1. LignoTech Developments Limited (LDL, LignoTech or the Company) is a New Zealand registered company that has over the last 12 years researched, tested and developed technology which can utilise a variety of cellulosic feed stocks to produce a lightweight, highly engineered bio-filler (Xylemer). This organic filler can be used as an alternative to traditional calcium carbonate fillers and also to displace light weight glass spheres used in thermoset plastic applications.

1.2. LDL's New Zealand based research and production facility burnt down in December 2012. The board of LDL made a strategic decision to establish new manufacturing capability closer to its potential customers, feedstock from ethanol plants and manufacturers (primarily the automotive market).

1.3. The ethanol industry is primarily located in the Midwest of the United States of America (USA).

1.4. In April 2014, LignoTech unsuccessfully sought to raise capital to build an 8 million pound capacity production facility in Kearney, Nebraska, USA. The primary reason for the capital raising being unsuccessful was the inability to secure debt financing and the cost of the facility being more than originally forecast.

1.5. LignoTech has now proposed a phased approach to its capital raising with the ultimate goal of establishing a research and production facility in Kearney.

1.6. LignoTech is considering entering into the capital raising arrangement with Kearney Area Ag Producers Alliance a Cooperative Corporation which has established four funds (the Funds, together "KAPPA") to purchase shares in LDL. We note the first fund currently holds convertible preferred stock in LignoTech, the proceeds from which were used to purchase the proposed site of the pilot plant in Nebraska. It is proposed that this investment is to be converted to ordinary shares over the two phases of the capital raising.

1.7. Phase 1 of the capital raising involves the construction of a pilot plant in Nebraska to produce 10,000 pounds of Xylemer product for trial purposes to facilitate the entry into the marketplace at the least cost. The estimated cost of Phase 1 is US$2.4m (excluding the US$1m already raised to purchase the site) which will be funded via an initial issue of equity (Tranche 1).

1.8. Upon meeting certain conditions, LDL propose to proceed with Phase 2 of the capital raising to upgrade the Kearney Plant to a facility capable of producing up to 4 million pounds of the Xylemer product. The estimated cost of Phase 2 is US$4.7m, to be funded via a second tranche of equity (Tranche 2).

1.9. The subscription price to be paid by the four KAAPA funds for shares in LignoTech is US$2.95 per share for Tranche 1 and US$4.18 per share for Tranche 2.

1.10. Although the Funds are separate legal entities from the current KAAPA shareholder, we understand your legal advisor has confirmed that they should be viewed as one shareholder.

1.11. KAAPA currently holds a 5.1% shareholding in LDL.

1.12. The proposed capital raising is expected to result in the allotment of shares to the Funds which would result in entities associated with KAAPA holding greater than 20% (but less than 50%) of the share capital of LDL.

1.13. Given LDL has 50 or more shareholders and 50 or more share parcels, it is subject to the Takeovers Code Approval Order 2000. This independent report is prepared on the merits of the proposed allotment under rule 18 of the Code.

## *Scope of our work*

1.14. Rule 18 of the Code requires the directors of a code company to obtain an Independent Adviser's Report on the merits of the proposed capital raising.

1.15. The term 'merits' has no definition either in the Takeovers Code itself or in any statute dealing with securities or commercial law in New Zealand. While the Takeovers Code does not define the term 'merit', guidance provided indicates it includes assessing both positive and negative aspects of the proposed transaction.

1.16. In this independent report we:

a) Summarise the proposed capital raising;

b) Assess both the monetary and non-monetary aspects of the proposed capital raising; and

c) Explain the likely counter-factual scenario, i.e. where the capital raising does not occur with KAAPA.

# 2. Overview of LignoTech

## Summary

2.1. The idea behind LignoTech was developed by a steam engineer in the 1990s. A group of investors introduced capital to advance the research project in late 1990s with further capital investments along the way. In early 2002 LignoTech was formed involving three shareholder companies.

2.2. LignoTech has spent the last 12 years developing technology which utilises a variety of feedstocks to produce highly engineered, lightweight, fillers, known as Xylemer. LDL has three approved patents and several pending patents, as well as other intellectual property in relation to the process for producing bio-fillers.

2.3. During the research and development (R&D) phase LignoTech successfully conducted evaluation tests and trials on a variety of feedstock materials including saw dust, wood shavings, wheat straw, distillers dried grains, soluble corn hulls, sugar beet pulp shreds and soy flake feedstock.

2.4. LignoTech has engaged Scion, a New Zealand Crown Research Institute with expertise in biomaterials, as its research partner and continues to work closely with them on resolving technical matters in addition to assisting with product development.

2.5. Given the fillers developed are lighter and stronger than current fillers being used in the plastic filler market, it is envisaged that there will be strong demand from the automotive industry. However, LignoTech has not yet produced commercial quantities of its unique filler, nor has it secured any confirmed customer orders.

2.6. LDL's research facility (based in Ashburton) was extensively damaged in a fire in December 2012. The board of LDL made a strategic decision that their next facility must be based closer to ethanol plants (for raw materials) and the end users of LignoTech's thermoset materials (likely to be the automotive market).

2.7. Xylemer BioProducts Inc (a 100% subsidiary of LignoTech), has been established to build and manage a USA based production and testing facility.

2.8. LignoTech has entered into negotiations with KAAPA to assist in the development and building of a plant in the USA. It is envisaged that this will be done in a two phase process, whereby:

   a) Phase 1 consists of the purchase of equipment pertaining directly to the IP (and the first 2 stages of the production process) with the remaining processing being performed by others through a toll processing arrangement. This is envisaged to produce 10,000 pounds of Xylemer to facilitate entry into the marketplace and discussions with potential customers, with twelve key potential end users already identified; and

   b) Phase 2 consists of the purchase and installation of the balance of equipment required in order to construct a plant with an estimated capacity of 4 million pounds per annum.

   Phase 1 and Phase 2 will be funded via Tranche 1 and Tranche 2 equity issues respectively.

2.9. It is envisaged that upon the success of phase one and two and upon securing a customer base, the Company's goal is to build a full sized plant with a capacity of around 40 million pounds per annum in order to provide commercial quantities of Xylemer, as well as the opportunity to licence its technology to others and generate a profit for the Company.

2.10. Prior to the current capital raising proposal, LDL had previously intended to raise US$8.4m of equity and US$3.3m of bank debt to fund a plant with the capacity to produce 8 million pounds of the bio-filler product per annum. LDL encountered difficulty obtaining the required debt and subsequently provided the alternative plan to ultimately construct a plant capable of producing 4 million pounds of Xylemer product, over the two phase process.

2.11. We note that the equipment required under Phase 2 for the upgraded facility has a lead time of around 6 months from its purchase to its manufacture and delivery. Consequently, the two largest shareholders and directors of LDL, Mr Philip Quaid and Mr Garry Haskett, have communicated that they are willing to personally order and purchase the equipment with no obligations to LDL, providing LDL with the opportunity to commence production promptly to advance Phase 2.

## Financial Overview

2.12. As shown below, LDL's revenue has historically been derived only from either New Zealand Trade and Enterprise grants or interest income from funds held in trading banks. LDL, as yet, has not made any operating income from either the licence or sale of its bio-filler technology.

2.13. Costs have been driven by research and development expenses, management fees and administration costs.

2.14. As a result of the relatively fixed cost base, LDL has historically incurred operating losses and negative cashflows. These losses have been funded by share capital issues. Furthermore, the plant fire in December 2012 resulted in insurance proceeds of NZ$812k being received by LDL in FY13.

2.15. Although losses are not unusual for an entity at this early stage of development, it indicates that it may be a number of years before shareholders receive dividend payments (if at all),that there is no proven business model as yet and therefore the operational risks are material. However we note LDL are forecasting sufficient free cashflows for either repayment of bank debt or dividends from 2018.

### LDL Profit and Loss

| NZ$ | 12 months to 31-Mar-12 | 12 months to 31-Mar-13 | 12 months to 31-Mar-14 |
|---|---|---|---|
| NZTE Funding | 34,687 | - | |
| Exchange Rate Gain/(Loss) | 965 | (3,406) | 6,407 |
| Processing Plant hire | - | 1,630 | - |
| Insurance Proceeds | - | 812,000 | - |
| Other/Sundry Income | - | - | 2,058 |
| **Total** | **35,652** | **810,224** | **8,465** |
| Management Fees | (240,000) | (240,000) | (240,000) |
| Research and Development | (195,105) | (450,302) | (537,601) |
| Other Expenses | (191,223) | (330,506) | (313,745) |
| **Total** | **(626,328)** | **(1,020,808)** | **(1,091,346)** |
| **EBITDA** | **(590,676)** | **(210,584)** | **(1,082,881)** |
| Depreciation & impairment | (74,846) | (59,551) | (8,047) |
| Loss on Sale of Assets | - | (788,836) | (2,863) |
| **Total** | **(74,846)** | **(848,387)** | **(10,910)** |
| **EBIT** | **(665,522)** | **(1,058,971)** | **(1,093,791)** |
| Interest received | 12,297 | 4,522 | 11,270 |
| **NPBT** | **(653,225)** | **(1,054,449)** | **(1,082,521)** |

Source: LDL consolidated financial statements

### LDL Statement of Financial Position

| NZ$ | As at 31-Mar-12 | As at 31-Mar-13 | As at 31-Mar-14 |
|---|---|---|---|
| Cash & cash equivalents | 395,839 | 387,614 | 1,503,309 |
| Receivables | 87,760 | 735,675 | 18,455 |
| Capital raising costs | - | - | 75,032 |
| Other | 6,881 | 1,647 | 3,546 |
| **Total current assets** | **490,480** | **1,124,936** | **1,600,342** |
| PPE, furniture and fittings | 423,259 | 79,761 | 1,163,461 |
| Intangibles | 615,423 | 626,573 | 641,676 |
| Other | 15,344 | - | - |
| **Total non-current assets** | **1,054,026** | **706,334** | **1,805,137** |
| **Total assets** | **1,544,506** | **1,831,270** | **3,405,479** |
| Payables | 39,765 | 182,692 | 100,699 |
| **Total current liabilities** | **39,765** | **182,692** | **100,699** |
| Convertible notes | - | - | 1,157,220 |
| **Total non-current liabilities** | **-** | **-** | **1,157,220** |
| **Total liabilities** | **39,765** | **182,692** | **1,257,919** |
| Share capital | 6,290,108 | 7,488,394 | 9,069,897 |
| Retained earnings | (4,785,367) | (5,839,816) | (6,922,337) |
| **Total equity** | **1,504,741** | **1,648,578** | **2,147,560** |
| **Liabilities plus equity** | **1,544,506** | **1,831,270** | **3,405,479** |

Source: LDL consolidated financial statements

# Forecast Financial Information

2.16. It is estimated that under Phase 2, the 4 million pound capacity plant will likely operate at a small loss until it is at maximum production, upon which it will be break even. The production facility under Phase 2 provides the platform for research and development, to meet initial demand and validate the market such that the company can grow and generate a profit with an expanded facility (Phase 3).

2.17. The Company in conjunction with its advisors has produced forecast financial statements. LDL is expecting to produce a positive EBITDA by 2018 with the production of an assumed 10 million pounds of Xylemer for a part year of production from commercial facilities.

2.18. The financial projections under Phase 3 are based on a licensing model whereby LDL licences the technology to others under a toll processing arrangement.

2.19. LDL suggests there could be further upside by way of research and development grants from various agricultural industry bodies in the USA which have been excluded from financial projections.

2.20. As is typical with any start-up business, there are risks that can have a material impact on the outcome of the forecasted earnings. It is not uncommon for there to be a material increase in earnings forecast as start-up companies reach a critical mass for revenues to exceed costs. Conversely, there can be a material negative variance to earnings if orders are not achieved. As such we highlight to shareholders that LDL is still in the start-up and development phase of a company lifecycle.

# Current Shareholding

2.21. LignoTech currently has 82 shareholders with Biotech Investment Group holding the largest parcel of shares. This entity is owned by Garry Haskett who is a current director of LDL. Mr Haskett also owns shares in his own right.

2.22. Currently KAAPA holds 5.1% of the total ordinary shares and options. We note there are an additional 227,273 preferred shares owned by a KAAPA related entity, to be converted to 284,121 ordinary shares upon the issue of Tranche 1 and Tranche 2.

### LDL Shareholding

| Shareholder | Shares | Options | Total shares | Shareholding |
|---|---|---|---|---|
| Biotech Investment Group | 493,760 | - | 493,760 | 11.7% |
| Phillip Quaid | 475,028 | - | 475,028 | 11.2% |
| NZ High-Tech Enterprises | 344,786 | - | 344,786 | 8.1% |
| Lignin Group Ltd | 298,931 | - | 298,931 | 7.1% |
| KAAPA Investments LLC | 217,400 | - | 217,400 | 5.1% |
| Other | 2,375,794 | 30,000 | 2,405,794 | 56.8% |
| **Total** | **4,205,699** | **30,000** | **4,235,699** | **100.0%** |

# 3. Overview of KAAPA

## Summary

3.1 KAAPA, short for 'Kearney Area Ag Producers Alliance', is a farmer-owned cooperative with a membership base of over 440 farmers, located primarily in central Nebraska. One of KAAPA's goals is to find and invest in suitable agricultural projects that add value to its members.

3.2 KAAPA facilitates the investment of its farmer members by establishing funds (generally limited liability companies) into which its members and others can invest. It then aggregates those funds to purchase shares in companies. This is done for a number of reasons, one of which is to have the ability to purchase a larger, single percentage of ownership in the target company.

3.3 Furthermore creating new entities as investment vehicles enables KAAPA to bring in external capital to 'green field' projects. When KAAPA develops a project on its own, it creates a new entity and launches the company with KAAPA members generally remaining the majority shareholders of the created business.

3.4 Projects undertaken by KAAPA must be in the agriculture sector and have the potential to benefit KAAPA members through a return on investment, offering a new or expanded market, or by creating efficiency in farming and ranch operations (*source: www.kaapacoop.com/index.html*). Examples of such projects include:

- new or specialty crops;
- fuel-reduction applications for irrigation motors or farm equipment;
- double crop opportunities;
- regional and/or international trade of farm commodities;
- sustainable agriculture practices;
- innovative technologies;
- renewable energy and energy efficiencies;
- utilisation of agriculture residue and co-products from the processing of crops; and
- special or unique processing of commodities such as soy bean oil, specialty wheat flours and others.

3.5 KAAPA's philosophy is to assess the future prospects of the agricultural industry as it continues to develop with new technologies, markets and other innovations. Consequently, KAAPA has a focus on technology and research based investments. Successful examples of this include KAAPA Ethanol, and KAAPA Aqua Ventures Alliance.

## KAAPA Ethanol

3.6 KAAPA Ethanol is located between Minden and Axtell in south-central Nebraska and is considered one of the USA's most successful ethanol plants. The US$52 million KAAPA Ethanol plant began production in 2003. In 2010, KAAPA Ethanol purchased the facility in Elm Creek that is operated as KAAPA Grains. (*Source: 2014 Factiva, Inc*)

3.7 KAAPA Ethanol now operates as a stand-alone entity.

3.8 KAAPA Ethanol produces around 60 million gallons annually, pays its suppliers an average of US$0.05 to US$0.10 more than the general market price on bushels of corn and has expanded its original operation to include its own rail bay for unit trains. KAAPA Ethanol has been a financial success, returning its original investors their investment many times over. (*Source: KAAPA Cooperative, Projects Report 1996-2012*).

3.9 Other investments of KAAPA Ethanol include an ownership share in a North Dakota ethanol plant, and part ownership of plants in Lima, Ohio, and Janesville, Minnesota.

3.10 It is envisaged that the by-product of KAAPA Ethanol's production could be the primary input used to produce LDL's Xylemer product.

# 4. The proposed transaction

## Terms of the offer

4.1. In this proposed investment, KAAPA has set up four separate funds to invest in LignoTech, one of which already holds preference shares in LignoTech which are to be converted to ordinary shares upon the issue of Tranche 1 and Tranche 2.

4.2. The conditions in relation to the issuance of Tranche 1 shares include:

a) Raising a minimum of US$2.4m under the Tranche 1 issue;

b) The assurance that no further shares or options will be issued by LignoTech aside from those agreed under Tranche 1 and Tranche 2 and up to 300,000 additional ordinary shares (issued at not less than US$2.95 each) to other interests as agreed by the board, unless that issue gives each existing shareholder the right to apply for the issue in proportion to the existing number of shares held; and

c) KAAPA have the right to appoint (and remove) one director of the Company if the KAAPA shareholders apply for the shares in Tranche 1 with the existing KAAPA director on the board deemed to be this appointee.

4.3. The conditions to be reached prior to the issuance of shares under Tranche 2 include:

a) LignoTech are to have obtained market validation of the Xylemer product by either;

*i* An understanding from potential buyers confirming that the Xylemer product meets their expectations and is likely to be purchased following the availability of commercial quantities (these discussions to include a representative from KAAPA); or

*ii* An order being received by LignoTech for the Xylemer product of 100,000 pounds from one or more buyers;

b) The budget provided by LignoTech for the Phase 1 project being materially met and the actual cost being not more than 20% over the budget;

c) The funding for Phase 2 having been secured and confirmed by LignoTech;

d) Raising a minimum of US$4.7m under the Tranche 2 issue;

e) Upon the completion of Tranche 2, the KAAPA shareholders shall have the right to appoint and remove one further director of the Company (subject to the KAAPA interests holding at least 1,000,000 ordinary shares); and

f) Obtaining all required shareholder approvals from the shareholders of LignoTech under the Code and such other approvals necessary and required for the Tranche 2 issue.

4.4. In addition to the right to issue a further 300,000 shares at not less than US$2.95, the agreement allows that LDL will issue a further 67,117 shares in lieu of a capital raising fee, being 45,731 shares to KAPPA and 21,386 shares to other interests (see table below). This capital raising fee is set at 3.0% of funds raised (including 3.0% of the funds already received from the issue of preferred stock to KAAPA).

4.5. The proposed price per share is US$2.95 and US$4.18 for Tranche 1 and Tranche 2 respectively with the same price applied to all KAAPA funds, other interests and preferred stock conversions.

4.6. As shown below, total proceeds for both Phase 1 and Phase 2 will be US$7.2m, at an average price per share of US$3.64 (including those shares converted from existing preferred stock). This excludes US$244,510 of capital raising fees. The implied pro rata value for 100% of LDL's equity therefore equates to US$23.8m or NZ$29.1m.

**Propsed share capital summary**

| | Total NZD* | Total USD | Phase 1 | Phase 2 |
|---|---|---|---|---|
| Price per share (US$) | | | $ 2.95 | $ 4.18 |
| Share capital from the Funds | $ 5,537,244 | $ 4,540,540 | $ 1,543,785 | $ 2,996,755 |
| Share capital from other investors | $ 3,182,686 | $ 2,609,803 | $ 887,333 | $ 1,722,469 |
| **Total capital raised** | **$ 8,719,930** | **$ 7,150,343** | **$ 2,431,119** | **$ 4,719,224** |
| Marketing fees paid to the Funds (via shares) | $ 202,703 | $ 166,216 | $ 59,814 | $ 106,402 |
| Marketing fees paid to other investors (via shares) | $ 95,480 | $ 78,294 | $ 26,621 | $ 51,673 |
| **Total marketing fees** | **$ 298,183** | **$ 244,510** | **$ 86,435** | **$ 158,075** |

*Note: NZD converted at a rate of 0.82 US$/NZ$

4.7. Post subscription, KAAPA related entities would have 27.3% of the shares and voting rights. We note that if LDL also issues the additional 300,000 shares as is its right under the agreement, then KAAPA's holding would equate to 26.1%.

**Potential Shareholding Summary**

| | # Shares | *Phase 1* | *Phase 2* |
|---|---|---|---|
| Existing shares on issue | 4,205,699 | | |
| Existing options on issue | 30,000 | | |
| **Total existing shares & options** | **4,235,699** | | |
| Plus shares issued to the KAPPA funds | 1,240,244 | *523,317* | *716,927* |
| Conversion of convertible preferred shares (KAAPA) | 284,121 | *152,542* | *131,579* |
| Plus shares issued to KAAPA for marketing fee | 45,731 | *20,276* | *25,455* |
| Plus shares issued to other investors | 712,865 | *300,791* | *412,074* |
| Plus shares issued to other investors for marketing fee | 21,386 | *9,024* | *12,362* |
| **Total new shares** | **2,304,347** | ***1,005,950*** | ***1,298,397*** |
| **Total shares & options post capital raising** | **6,540,046** | | |
| Existing KAAPA shares | 217,400 | | |
| Plus shares issued to KAPPA (incl capital fee shares) | 1,570,096 | | |
| **Total KAAPA shares** | **1,787,496** | | |
| **KAAPA perentage of total shares (post capital raising)** | **27.3%** | | |

4.8. We note that in the event that the allotment of 712,865 shares (plus the additional marketing fee of 21,386 shares) to "other investors" does not eventuate and the options are not exercised, KAAPA's shareholding would be 30.9% of the total shares and voting rights of Lignotech.

4.9. Although KAAPA would have board representation and the ability to block special resolutions such as major transactions (due to their greater than 25% shareholding) they would not have control of LDL. Post this proposed transaction; the non-KAAPA related shareholders' shareholding would be diluted from 94.9% to 72.7%. This would result in non-KAAPA shareholders, acting in concert, relinquishing the ability to pass special resolutions, albeit no one shareholder would have effective control of LDL post the proposed equity raise.

4.10. Given the widely held nature of the non-KAAPA shareholdings, we do not consider the issue of shares to the Funds would materially impact upon the individual non-KAAPA shareholders' level of control.

4.11. As shown below, since FY12 shares and options have been issued at NZ$2.30 each. In addition, during FY14, 227,273 preferred shares were issued to KAAPA at US$4.40 each. Note that no further shares have been issued for the current financial year.

**LDL Share Issues**

| | FY12 | FY13 | FY14 |
|---|---|---|---|
| Number of shares issues | 181,971 | 521,003 | 687,613 |
| Price per share (NZ$) | $ 2.30 | $ 2.30 | $ 2.30 |
| **Total Proceeds** | **$ 418,533** | **$ 1,198,307** | **$ 1,581,510** |

4.12. Given LDL is at an early stage of its business cycle, we have not valued the company as a whole as the likely result would be a very wide range in values. We understand the subscription price per share offered to the Funds was based on a view reached by the board of LDL (with guidance from their financial advisors) with this value being agreed by KAPPA. No formal valuation of LDL was conducted, albeit LDL's business plans and financial forecasts formed part of the negotiations between the parties.

4.13. The proposed transaction with KAAPA is an important development for LDL which may have a significant impact upon the future market value of the Company. If LDL's financial forecasts are achieved then it is reasonable to expect that the market value will increase very significantly above the issue price of the shares to the Funds. There is, however, significant risk surrounding these forecasts given the early stage nature of the business. These risks include technological risks and commercial risks. Capital is required to fund the proposed development and it is possible that further funding may be required to complete the development if the development progresses differently from that forecast. Depending upon the progress of the development, any future capital raise may be at a share price higher or lower than the proposed issues to the Funds.

4.14. As compared with not proceeding with the proposed transaction, the proposed transaction should enhance the value of the non-associated shareholders' shareholdings as it introduces new capital necessary to fund future developments at an average price of US$3.64 per share (or NZ$4.44 per share at a conversion rate of US$0.82 / NZ$). This is a material increase in average price per share in comparison to recent share transactions.

# 5. Merits of the proposed transaction

## What does LDL need?

5.1. As mentioned previously in Section 2: Overview of LDL, to move their strategy forward, LDL needs more than simply access to capital. While capital is important, LDL is seeking investors that can bring a mix of non-financial attributes in addition to capital. Some key 'success factors' include:

- Access to raw materials and relationships with key stakeholders such as crop farmers;
- Operating proximity to, and relationships with, ethanol producers;
- A commercial scale processing plant to prove the technology; and
- Ethanol market experience and expertise.

5.2. Set out below, we discuss the merits of the Proposed Transaction, with a focus on how it contributes to the above critical success factors.

## Relationships with raw material providers

5.3. KAAPA has developed a trusted standing in its community, with suppliers and end users. This strong network of interrelated parties is a key benefit of being in a cooperative business model such as KAAPA. KAAPA also has standing and past relationships with grant and funding organisations within the US agricultural, primary and processing industries.

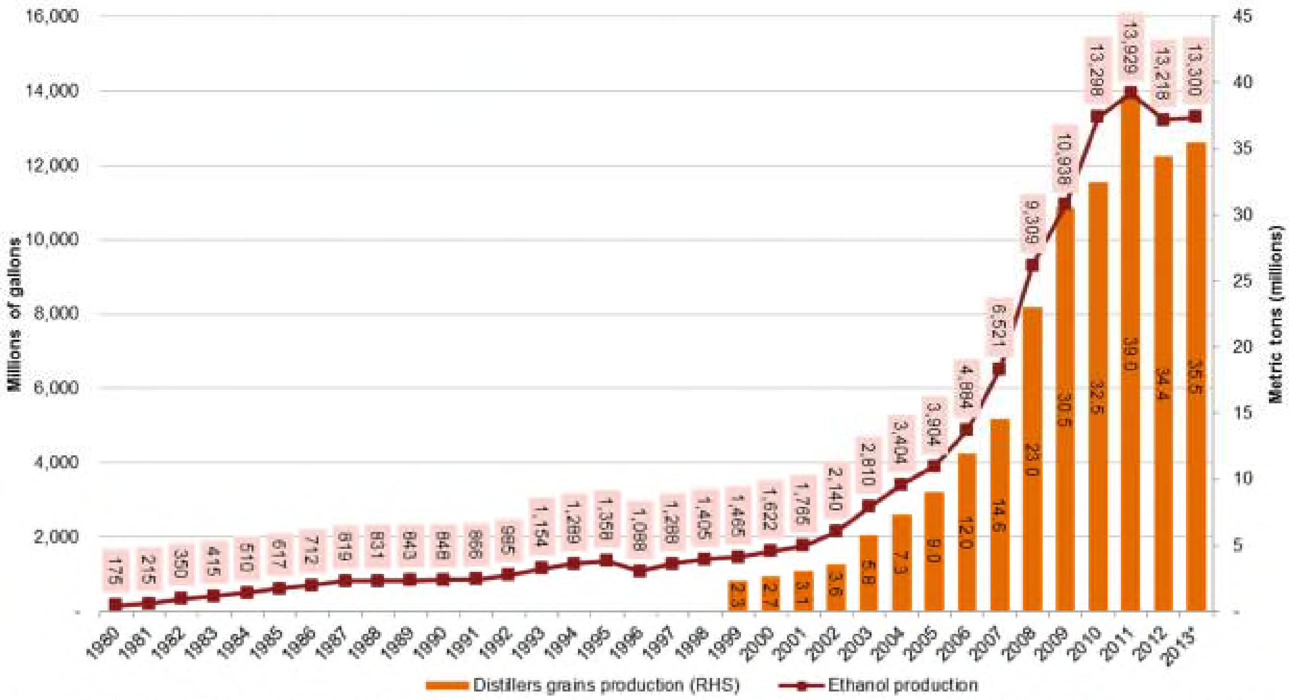
5.4. We understand KAAPA's previous executive director (Marge Lauer), is now the CEO of Xylemer BioProducts Inc. Given her long relationship with KAAPA and it suppliers, this is likely to give LignoTech an advantage with its potential suppliers.

## Proximity to ethanol producers

5.5. The primary suppliers in the LDL strategy are ethanol production plants. The USA is one of the largest ethanol markets in the world and has experienced significant growth in domestic production in the last decade. The figures set out below, taken from the Renewable Fuels Association '2013 Ethanol Industry Outlook', illustrate the growth in the production of ethanol and its by-product, distillers grains, as well as the geographic concentration of the USA's ethanol production plants.

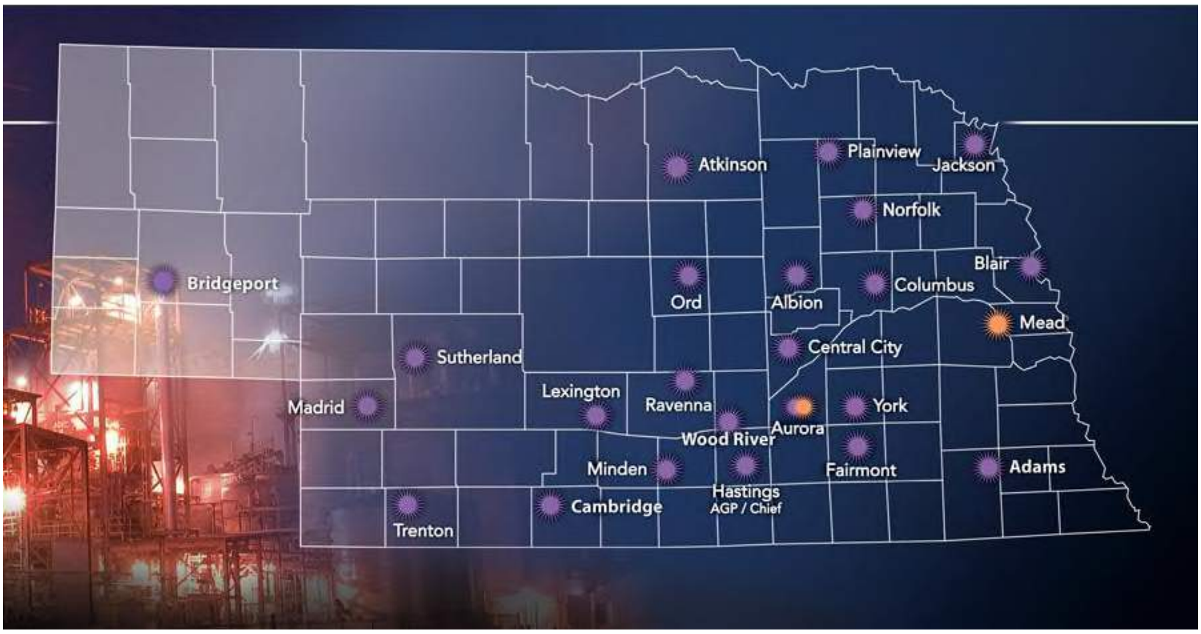
5.6. Given it is envisaged LignoTech will enter into off-take agreements to purchase Xylemer inputs produced by the ethanol plants, it is logical and cost effective for it to be located in close proximity to this market.

**US historic ethanol and distillers grains production**




Source: Renewable Fuels Association - 2014 Ethanol Industry Outlook (http://ethanolrfa.3cdn.net/2704ddcafa38cadd54_mlbicbx7o.pdf) *estimate

5.7. KAAPA is based in Nebraska, close to the geographic centre of ethanol plants and containing over 20 ethanol production plants itself. The map below shows the approximate location of the state's plants. KAAPA Ethanol owns the plant at Minden as well as shares in 7 other plants in separate states.




Source: Nebraska Ethanol Board (http://www.ne-ethanol.org/?page=industry)

5.8. KAAPA has a strong advantage in its proximity to the target market of LDL – ethanol production plants. Further, as they are already active in the ethanol production sector, KAAPA has a number of existing relationships that can be leveraged to gain entry for LDL to the sector.

## Commercial scale

5.9. To earn an appropriate return on the investment in its technology, LDL considers that it requires its technology to be applied with significant scale. As outlined above, KAAPA is located in a region with a high level of ethanol production. This means that KAAPA has access to production plants with considerably larger scales of production than LDL would be able to achieve with a New Zealand based processing facility. To put this scale difference into context, the state of Nebraska produces 1.29 billion to 1.57 billion bushels of corn a year compared to approximately 8 million a year in New Zealand.

## Ethanol market experience and expertise

5.10. KAAPA has nearly 20 years of experience doing project work and investments in the corn sector and related industries. Through KAAPA Ethanol, KAAPA has previous experience in large scale plant construction and servicing, having previously built ethanol plants, therefore bringing these construction and development relationships with it. As a cooperative company focussed on adding value, they have embraced the value prospects of expanding their involvement in the ethanol production sector. This means that KAAPA has a strong base of experience and expertise in the ethanol production marketplace, a critical element that LDL will need to implement their strategy.

## Complementary philosophy

5.11. KAAPA has a history of investing in R&D based projects. KAAPA has previously researched advanced polymer opportunities through their Rivas Technologies project. Its base philosophy of embracing value-adding technologies and practices is well aligned with the philosophy and objectives of LDL. This is an important factor in any cornerstone investor-investee relationship if they are to have a positive experience, working together to implement the company strategy.

5.12. Another fortunate consequence of their progressive technological focus is that they have experience forming a relationship with primary industry government funding agencies in the USA.

## Capital and investment

5.13. Finally, KAAPA provides an opportunity to LDL through their ability to access further capital in the USA. Through corporate investment, as well as member investment, KAAPA has the ability to raise the initial investment funds for set up and working capital requirements that would serve LDL's current needs. These same sources can be further utilised to raise additional capital for future expansion.

5.14. Any further capital raise from cooperative members and/or external investors is likely to be significantly easier with a trusted, local (American) company rather than a foreign company.

5.15. Also, as briefly mentioned above, KAAPA's prior experience with US government funding agencies may be able to be leveraged for future investment in R&D projects in the USA.

5.16. As discussed earlier there are risks associated with LignoTech's business. LDL does not make positive operating cashflow nor has it sold any commercial quantities of its bio filler. Given the new facility is to be funded primarily by new equity, in the event the facility costs more than is budgeted for, additional equity may have to be raised. Those shareholders that cannot participate in any additional capital raisings will be diluted to a lesser shareholding.

# 6. Consideration of alternatives

6.1. It is important that the shareholders of LDL consider not just the merits of the proposed capital raising, but also the implications of not proceeding with the capital raising. This is commonly referred to as the ‘counterfactual’ scenario.

6.2. To achieve its strategy, LDL will have the same critical success factors:

- Access to raw materials and relationships with key stakeholders such as crop farmers
- Operating proximity to, and relationships with, ethanol producers
- A commercial scale processing plant to prove the technology, and

6.3. If the proposed capital raising is not approved, LDL will still need to:

- Establish a base with close proximity to farmers and ethanol production plants
- Target a geographical area with a high volume of ethanol production to achieve scale and close proximity to the likely end user, (the automotive industry); the most likely choice would be the USA
- Find an appropriate partner or invest in organically growing expertise in the ethanol production sector
- Engage a financial advisor to assist in the preparation of a detailed information memorandum, with a view to conducting a ‘road show’ to raise sufficient capital to fund the development of a commercial plant and associated working capital requirements, and
- Develop relationships with key parties in the ethanol production sector.

6.4. Given LDL’s existing relationship with KAAPA we understand LDL has not conducted any market testing for an alternative industry or equity partner. However we understand LDL management have discussed opportunities on an ad hoc basis with financial investors. It is therefore unclear if there are alternative investors with the same credentials as KAAPA. As discussed earlier, Xylemer BioProducts Inc has previously tried to raise debt funding from US based commercial banks without success. This indicates LignoTech will have to rely on equity funding to meet its strategic objectives.

6.5. As noted in Section2 of this report, LDL has historically incurred operating losses and negative cashflows. In the event this capital raise is not approved by the shareholders, based on historical operating losses, alternative equity sources will need to be established. If alternative sources are not secured and changes are not made to the current operating losses, LDL will continue to experience cashflow shortfalls and may ultimately experience solvency issues.

# 7. Summary

## Summary

7.1. LDL's New Zealand based research facility was extensively damaged in a fire in late 2012. The board of LDL made the strategic decision that their next research and production facility must be based closer to ethanol plants (the by-product of which being its core production input) and likely end users of LignoTech's thermoset materials (primarily the automotive market).

7.2. In April 2014, LignoTech unsuccessfully sought to raise capital to build an 8 million pound capacity production facility in Kearney, Nebraska, USA. The primary reason for the capital raising being unsuccessful was the inability to secure debt financing and the cost of the facility being more than originally forecast.

7.3. Given KAAPA (a USA based agricultural investment cooperative) were already a 5.1% shareholder of LDL and have expertise and investments in the ethanol industry, negotiations subsequently occurred where KAAPA agreed to purchase additional capital through two Tranches of equity issues at US$2.95 and US$4.18 per share, respectively. This capital is required to fund the proposed two phases of the project, being an initial pilot plant which will be built in Kearney to facilitate entry into the market, followed by an extension of the facility to provide sufficient samples to key potential customers and secure customer orders.

7.4. For the past three years, LDL has raised capital at a price of NZ$2.30 per share, with options being exercised at NZ$2.30 per share. The weighted average price of the price per share being offered to KAAPA is NZ$4.44 (US$3.64).

7.5. In addition to the significant increase in the issue price per share, there are a number of benefits that KAAPA can provide LDL as a shareholder that are non-monetary. These include:

a) KAAPA Ethanol own (or part own) eight ethanol plants and as such have existing knowledge of LDL's technology;

b) KAAPA has previously built production facilities in Nebraska and have had prior dealings with construction contractors and related counter parties associated with the building of a facility;

c) Their current CEO (Marge Lauer), has resigned and has started as CEO of Xylemer BioProducts Inc (a 100% subsidiary of LDL); and

d) KAAPA is one of the largest corn (raw materials for ethanol production) suppliers in Nebraska, and therefore can create greater influence over the supply of ethanol by-product for LignoTech.

7.6. Other factors that the shareholders should consider when assessing this proposed issue of shares to KAAPA include the:

a) Key business relationships and experience KAAPA has in Nebraska;

b) The fact that KAAPA will not have control of LignoTech, albeit they may have influence;

c) The ability (although no obligation) of KAAPA to fund further expansion or cost over runs; and

d) In the event shareholders do not approve this share allotment, alternative source of funding will be required as LDL may experience cashflow shortfalls and may ultimately experience solvency issues

# Appendix A – Restrictions

This report (or extracts from it) is not intended for general circulation, distribution or publication nor is it to be reproduced or used for any other purpose other than to provide the shareholders of LignoTech with a report on the merits of the proposed transaction with KAAPA, without our written permission in each specific instance.

In providing our advice we have relied solely on the financial information and explanations provided to us. We will not conduct anything in the nature of an audit of the information and explanations provided. Accordingly, we will not seek to verify any of the information presented or explanations made to us and upon which we will rely.

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We reserve the right (but will be under no obligation) to review our analysis and if we consider it necessary, to revise our opinion in the light of any information existing at the date of this report which becomes known to us after that date.

# Appendix B – Statement of Qualifications

This Independent Report has been prepared by the Corporate Finance division of PricewaterhouseCoopers ("PwC"), which provides advice on mergers, acquisitions and divestments, valuations, independent expert's reports and appraisals, financial investigations and strategic corporate advice.

The Partners responsible for this Independent Report are Justin Liddell B.Com, LLB, CA and Craig Armitage B.Com, CA, both of whom have extensive experience in relation to the preparation of independent expert's reports for the benefit of investors.